

# The letters of Thomas William Webb to Arthur Cowper Ranyard

VOLUME I

1858-1873



T.W.Webb  
from Mee's Observational Astronomy



A.C Ranyard  
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## Introduction

The letters transcribed here were written by **Thomas William Webb** – with some by his wife Henrietta (and one by Sir John Herschel) - to **Arthur Cowper Ranyard**. They cover the years between 1858 and 1885. Letter 1, written when Ranyard was thirteen years old, may well not have been the first, though it is unlikely that many preceded it. What prompted the boy to write is not known. It is likely that having become interested in astronomy his teacher, Augustus de Morgan at University College school may have suggested that he wrote for advice. De Morgan was an eminent mathematician, an active Fellow of the Royal Astronomical Society. He would have read Webb's contributions to the Monthly notices and perhaps met him at a meeting. As will be seen, the first formal, though encouraging, letters: "My dear Sir", gradually became more informal and a thoroughgoing friendship developed. There is the sense that both Thomas and Henrietta saw in Ranyard the son they never had. It must be said that Thomas importuned the younger man by asking him to do all sorts of errands. They always wanted more of his company than he could give, or was prepared to give. However, that Ranyard valued the friendship can be deduced from his preserving so many of the letters which were deposited in the library of the RAS after his death.

The transcription of these letters has been made possible by the kind agreement of the library committee of the RAS to allow digital imaging of the manuscripts. The cost was borne by a grant to the Webb-Share project by the Heritage Lottery fund to whom we express thanks. The work of transcription was done by a small research group in Hardwicke: Julie Jones, Astrid Mick, Irene Orchard, John Tittley, Paul Haley, Mark and Janet Robinson. The last named, with the help of the group, has edited the letters.

It is hoped that the letters will be found of interest – probably to two main groups of people: those interested in the history of astronomy and those local and social historians interested in the life of a Victorian country vicar. Consequently both groups will probably be annoyed by too much or too little explanation.

Also, apologies should be made for assuming that the reader cannot translate the French, German, Latin in the letters but once I had started to work out a rough translation (and some are very rough) it seemed a consistent rule to follow.

I apologise for any errors in the placing of the footnotes – and they may be many. While it is no excuse, Microsoft word is not keen on files of 250 pages in length but at least the whole document is searchable.

For those wishing to know more about the astronomers mentioned in the text we have appended brief biographical notes at the end of Volume II with a separate entry for Ranyard.

And for those wanting to place Webb in the context of his parish of Hardwick there is a further appendix.

Finally I would like to quote the same Augustus de Morgan mentioned at the beginning of the introduction. When writing a paper on Newton and his niece in 1885 he made the following remark:

I have lengthened this paper by many digressions on collateral points, and have punctuated my title accordingly: the colons denote that the paper contains matters relative to the parties separately, as well as to their connexion. These offshoots may attract attention and may lead to evidence. Should anyone object to this accumulation of details, I remind him that he may skim or skip. Little matters, which give or revive knowledge of the times, are very useful additions; the smallest of them may be a clue.

Janet Robinson  
March 2014

Letter 1.

[June 21, 1858]

Dear Sir,

I am glad you persevered in your experiment with the little Telescope. I am not at all surprised that you could not distinguish Saturn's Ring with the eye-lens that you have, as it requires a power of 30 or 40 times to bring it out and I should not suppose that the eye-lens would give you anything like so high a power. – that it will be worth while to try whether the object glass will not bear a higher power, as I think it probable it would. The rule for finding the magnifying power is very simple – it is the quotient obtained by dividing the focal length of the object glass by that of the eye-lens and if you have leisure, it might be instructive and amusing to you to ascertain the power you now have. In order to do this, you must take the object glass out of the tube, hold it up straight before the sun (or moon) and measure the distance in inches to a piece of paper or card, held exactly in the focus, where the image is formed smallest and sharpest defined – this is very easy with the crescent moon, as there is less uncertainty with it, than with the sun, where the image is most sharply formed. This is the principal focal distance, or focus for parallel rays.-

Then you will have to do the same by the eye glass – and to divide the one by the other. Thus if the object glass has a focal length of 20 inches, and the eyeglass, one of 2 inches, you have at present a power of 10. And having the focal length of the object glass you will know what focus you will want for the eye-lens, to give you a chance of seeing the ring of Saturn – for instance, if your object glass has a focal length of 20 inches, and you want a power of 40 to shew the ring, an eye-~~les~~ lens of half an inch focus will give it you – that is, always provided the Object Glass has perfection sufficient to bear it – which I should hope it would. You might find it worth while to go to M<sup>r</sup> Baker's the Optician<sup>1</sup> [space] Holborn, and see if you could get an old eye-piece of the focal length you wish – or of an equivalent focal length, by which I mean, as astronomical eyepieces are frequently made with two lenses, such an one that the combined power of the two will equal the focal length you want. - You can, if you please, make use of my name to him, as I sold a large telescope to him a few months ago, (in order to purchase one larger still, which I am soon expecting from America)<sup>2</sup> and I dare say you will meet with much civility and attention. I should suppose that as he deals in second-hand ~~eyepie~~ apparatus, he would let you have an eyepiece cheaper than Slater<sup>3</sup>. And such an eye-piece, if it should be too powerful for your present object glass, might yet be serviceable with a more perfect one, when you are able to procure one, as I hope you may do before long. I should think, if you were to make use of my name to Baker, he would tell you where you might get a little second-hand object glass cheaply, if he has not one of the kind himself. Slater is very cheap, for new work, but I should think you might get second- hand more reasonable still. -

I have found the study of Astronomy productive of so much interest and gratification, and that of so noble a kind, that it always gives me especial pleasure to assist any young or inexperienced student, and therefore I was very glad to hear from yourself, and beg that, if you feel so disposed, you would write to me at any time, and tell me of any difficulty that may occur to you, though I am well aware that five minutes talk is worth many letters; but I am so seldom in London, that I fear we have not much chance of meeting. I shall be publishing a book on Astronomy<sup>4</sup> next

<sup>1</sup> Charles Baker: 244 High Holborn. Fl. From c.1850 as optician and instrument maker

<sup>2</sup> Webb is buying from Alvan Clark

<sup>3</sup> Thomas Slater 1817-1889. Well known for building the Craig telescope and at that time living at 4 Somers Place, West Euston Square According to some (but not Webb! See Letters 5b and 6b) Slater was probably one of the finest optical technicians living in London in the 1840s.

<sup>4</sup> Webb is referring to his work *Celestial Objects for the Common Telescope*. Pubd. by Longmans, August 1859

season – probably about November, expressly for the use of young students and amateurs but I do not think you would find it very useful to yourself, till you are somewhat better provided with a telescope.

Wishing you all success in your studies,  
I remain

Dear Sir  
Yours very faithfully  
Thomas William Webb

Hardwick Parsonage,  
Hereford,  
June 21. 1858

P.S. I thought I had M<sup>r</sup> Baker's numbers and left a blank to fill it in, but I cannot find it – I fancy however it is something like 277 – and I know you will find it on the South side, between Little Queen Street and Chancery Lane – I think nearest the former.

[Pdfs 1001, 1002, 1003, 1004](#)

Letter 2.

Three months later

Hardwick Parsonage  
Hereford

Sept. 27. 1858

My dear Sir,

It gave me great pleasure to hear from you again, and I shall always be glad to do so, whenever you are disposed to write. I am glad to find at any rate that you have got an astronomical Eyepiece, and still more glad that it has shewn you the objects you mention; your Object Glass cannot be a bad one to bear so high a power. – You will find it necessary occasionally, though not very frequently, to clean the eyepiece, and where this is the case you will find that it all unscrews in several places, and it becomes easy to wipe the glasses, but some caution is necessary in doing this, as they are very easily scratched or damaged – the best way is to use always either a piece of very soft wash leather, or an old real silk handkerchief – but in either case it ought to have been kept out of the dust. A little spirits of wine is a safe application to remove dirt from the glass. If the lenses are very small, and difficult to get at, a camel's hair pencil, such as landscape painters use (with water colours) is the best thing to employ.

I wish I could tell you where to look for Encke's Comet<sup>1</sup>. I had instructions sent to me some time ago, but I have not been able to find them for you, and I have not seen it myself. I should scarcely think you would be able to see it with your glass. But I hope you will make all that you can, of every opportunity of studying the great Comet<sup>2</sup> now visible, as it may be many years before we are permitted to witness such a brilliant one again. These objects are generally seen best with a low power – and if you can manage to take one of the old glasses belonging to the eye-end of your telescope and fit it into a paper tube, so as to turn it into an eye-piece, you will probably find it will give you a more beautiful view than a higher power – and for shewing the tail well a low power is absolutely necessary – in order that there may be field enough, and contrast enough with the surrounding dark sky.

If your telescope performs as well as I should expect, you will be able to see some of its interesting features – for instance, the greater brightness of the two edges of the tail, indicating its real structure to be a hollow Cone - a form frequently observed in the tails of large Comets – the greater condensation of the left side of the tail (to the naked eye) as well as its curvature backwards – both which are generally referred to the resistance of the ether in which it moves – which though exceedingly slight, is not inappreciable. You might compare the length of the tail with the distance between any two stars in the Great Bear, and so ascertain how many degrees it appears to you to extend, by ~~tracing~~ measuring the distance of the stars upon a globe. It is likely too that as it draws nearer the sun it may exhibit some other curious phenomena, such as have been formerly seen in great comets for instance – the coma or hazy light surrounding the nucleus may possibly be lifted up from it so as to form an envelope, or hemispherical cap, from the borders of which the tail will seem to arise – when the appearance may be something like this

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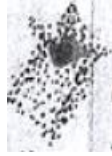
<sup>1</sup> A periodic comet that completes an orbit of the sun once every three years — the shortest period of any known comet. First recorded by Pierre Méchain in 1786, it was not recognized as a periodic comet until 1819 when its orbit was computed by Johann Franz Encke.

<sup>2</sup> Donati's Comet named after the Italian astronomer Giovanni Battista Donati who first observed it on June 2, 1858. After the Great Comet of 1811, it was the most brilliant comet that appeared in the 19th century. It was nearest the Earth on October 10, 1858 and is expected to return in 39th century.



(black for white, and inverted as in the telescope) - something such an envelope has been doubled, with a corresponding multiple tail arising from it. – Or, as in Halley’s comet in 1835, the nucleus under the powerful action of the unwonted solar heat, may throw out jets of light, fans or sectors, as they have been called – into the surrounding coma or haze

to issue opposite as it is called, of which I You have no doubt observed been watching it, when the excellent telescope of 2¼



something in this way or a streak of light may appear to the tail, and towards the Sun – an “anomalous tail” believe M<sup>r</sup> Hind<sup>1</sup> has already observed some trace. the yellowish colour of the whole phenomenon. I have very cloudy weather has permitted, with a small but aperture; but it has not light enough to shew many of

its details. I have received from America a very fine 5½ inch Achromatic Object Glass<sup>2</sup> – I forgot whether I mentioned it to you my expectation of it: the maker speaks of it in very high terms and I should have been very glad to have got it into work before this time – but the people whom I employed in Birmingham to make a tube for it – 7 feet long – did it so badly that I had to send it back, and have not yet received it again – however if it does not come soon, and we should get a little clear sky, I shall be disposed to alter an old wooden tube so as to carry ~~the~~ the Object Glass, sooner than lose so beautiful a Comet altogether. When complete I believe I shall have a very noble instrument, and one capable of bearing a very high power.

I am glad you saw one of the great meteors which have been noticed lately. I have not been fortunate enough to see any of them – but my time has been very much occupied, and excepting when the Comet has been visible I have ~~not~~ scarcely been out of doors.

Have you looked at the middle star of the Tail of the Great Bear? If your telescope behaves well, you will not only see it double, as it is to the naked eye – but the large star will be found to consist of two very close together – a real double star.

With many good wishes for your success in your studies I remain

My dear Sir,

Yours very faithfully,

Thomas William Webb

[Pdfs 1005,1006,1007,1008](#)

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<sup>1</sup> John Russell Hind. 1823-1895 Obit.MNRAS

<sup>2</sup> From Alvan Clark



**Letter 3****Two weeks later**


*This letter is addressed to ACR's father, Mr Benjamin Ranyard*

Hardwick Parsonage  
Hereford  
Oct. 11 1858

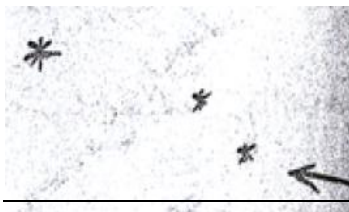
Dear Sir,

I think the idea contained in your favour is well worthy of consideration, and at any rate ought to be entertained as in part the cause of the curvature in the Comet's tail – it is obvious, as you have very clearly pointed out, that some part of the curve, at least, is due to that cause – at the same time it is so complicated with the probable effect of a resisting medium as to render the solution of the problem less satisfactory than might be wished. For though the existence of such a medium need not, as you observed, be assumed to account for the curve, it is indicated, as you are probably aware, by the diminished period of Encke's Comet<sup>1</sup> – as well as by the comparative density of the two sides of the tails of larger Comets – so that since, if it does exist, it must add to the curvature of the tail, it would be difficult to discriminate how much as this phenomenon was due to the one, and how much to the other cause, and hence the method – perfectly correct in theory – which you have proposed, of finding the rate of ascent of the tail, becomes embarrassed – and in the present state of our knowledge, inadequate. Yet it would be interesting to try its results. I do not think we have yet got matters at all strait as to Cometary phenomena.

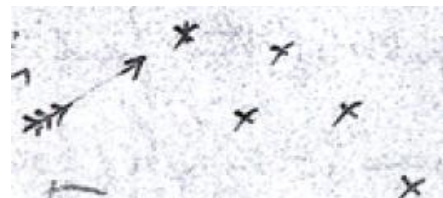
Though it is easy to speak of this resistance, and to see effects which look like it, the very striking and obvious fact that the branch of the tail which “precedes” – (that is according to the real or orbital, not the diurnal apparent motion of the Comet) has been very much denser and broader ~~that~~ than the other. This gives no indication of resistance - & seems unintelligible. – A curious feature has been that above a certain point the tail has been deflected from the regular curve, and bent into quite a fresh direction. This has happened in comparatively a faint region, and consequently may not have been universally taken notice of. But it has been so evident to my own and other eyes since first we caught it that I have no doubt of the fact – it looks as if the propulsive force, whatever it may be, failed beyond a certain point and the luminous matter was more than ever left behind. – In my great Telescope – barely useable at present for want of a Tube – the head was a magnificent sight – something of this kind –



The nucleus pulsating with a low but diffused with a high magnifier was surrounded by a circle of light, very strangely notched by the central dark space, indicating the hollowness of the tail, which extended close up to the nucleus. It did not seem quite consistent with the commonly received idea of a hemispherical envelope. Please to tell your Son, with my kind regards, that I am much pleased with his telescopic success – and if he will find out on a Globe or Map, the Constellation Delphinus, now easily to be recognised on the meridian – the stars of which are something like this



he will find the most Easterly star double - & I think his glass will shew it. – So also



<sup>1</sup> See Letter 2

the most Westerly star of Aries – thus:

Please excuse this wild scrawl and with best wishes for the improvement and success of your Son believe me, Dear Sir,

Yours very faithfully

Thomas W Webb

[Pdfs 1009,1010,1011,1012](#)

Letter 4

Almost a year later

Hardwick Parsonage

Hereford

Aug. 12. 1859

My Dear Sir,

Having had occasion to remain in London for six weeks during the late spring, I had intended to call upon you, but the severe and unremitting illness of my dear Father<sup>1</sup>, on whose account I went there, kept me in such constant attendance upon him, that I found it (in connexion with a good deal of other business) impossible to find you out. I have not however forgotten your taste for astronomical pursuits, and am induced to send you a line to say that should you at anytime wish to become the possessor of a cheap and good astronomical Telescope I think I can put you in the way of obtaining one more reasonably than at a London optician's. I know a man in Birmingham who sells very good instruments, very neatly fitted up, at a comparatively low price – or if you do not care for appearances, I could get one still cheaper, fitted up in a rough but effective way, by a very ingenious friend of mine in Hereford<sup>2</sup>. ~~Perhaps at some future time~~ though it must be owned, in either case, that the long railway carriage will somewhat diminish the advantage. I know also a working optician in London, whose prices, though something higher than those I have mentioned, are lower than those of the shops. Perhaps at some future period, should you feel a disposition to pursue the study, you would let me know what sum you could conveniently afford, and I would then endeavour, as far as I know how, to put you in the way of laying it out to better advantage than with an ordinary London optician. At present, however, I could do little, as we are about starting for the Continent next Monday week, to remain about 6 weeks.

I have at length obtained a very fine telescope, the Object Glass 5½ inches in diameter, the work of the celebrated American optician Alvan Clark of Boston; but for want of a steady stand, ~~I have~~ as well as of time which is a very scarce commodity with me, I have been able to make very little use of it. Next winter I trust I may turn it to some account. The focal length is 7 feet, and magnifying power 5 or 600.

A little work of mine, "Celestial Objects for Common Telescopes", will be published by Longman very shortly. I have had it in hand for a long ~~time~~ while, having had so many things to attend to which took up unavoidably a great deal of time that I could make but slow progress. At first I made it too long, so that my publisher thought the expense would be too great – so I had to abridge it – which occupied me 6 weeks – and then he considered that I had overdone it in point of brevity, and I had to expand it somewhat again. I am very glad that it is at an end at last.

I trust you are making satisfactory progress with your studies, and are laying up treasures of information which will be of value to you throughout your after life. There is nothing like taking time by the forelock, and making the foundation good in youth – as years advance, and business comes on, the opportunities of gaining knowledge diminish, while the mind, in many cases is less capable of acquiring it with ease.

With sincere good wishes believe me,

My dear Sir,

Yours very faithfully,

Pdfs 1013,1014,1015,1016

Thomas William Webb.

<sup>1</sup> Revd John Webb then 83 years old.

<sup>2</sup> Webb is almost certainly referring to George Henry With

Letter 5

Four years later

Hardwick Parsonage,  
Hay,  
Nov. 25. 1863.

Dear Sir,

The circumstances you mention are quite fresh in my recollection; and in fact I have repeatedly thought of you since our last communication – especially since I have had reason to suppose that you are nearly connected with one whose writings are so well known, and are so eminently calculated to be beneficial<sup>1</sup>. I do not know the degree of relationship in which you stand, but had I no other notice, this alone would have induced me to do the very best in my power to aid you; and I assure you I attempt it with very great pleasure.

I am very glad to find that you have so fair a prospect of prosecuting our noble subject to such great advantage – and I earnestly hope you will meet with perfect satisfaction.

I have not had many opportunities of seeing Slater's<sup>2</sup> work, but what has come to my notice has not been first-rate. I have heard I think from our first authority, M<sup>r</sup> Dawes<sup>3</sup>, that his small instruments are good, but I should hesitate to employ him for anything of the size you a right to expect. He is certainly very cheap – but an article is too cheap if it does not give full satisfaction, and that, I should recommend you to seek elsewhere.

If you have any friend in Paris who could look out for you among Bardou's<sup>4</sup> stock, & test his glasses, & pick out for you one of his best, you would have, I believe, a very fine instrument, cheaper than it could be procured in England. ~~But~~ If so you can let me know, & I would give you a note to Bardou, who knows me. – But should this not be the case, we have plenty of alternatives.

Alvan Clark, (9, Tremont St: Boston, United States) was the maker of my object glass, as well as many others of first rate excellence, & I am sure you would be quite satisfied with his work.

Cooke & Sons, (Southampton St. Strand,) is his English rival, & I believe there is little, if any, difference between them. ~~A friend~~ I have never seen any of his telescopes, but a friend of mine has one of the exact size of mine, & from his report I should conclude that there is no perceptible difference between them. Cooke's celebrated size is 4<sup>1</sup>/<sub>8</sub> inches, & I believe he makes that ~~size~~ aperture of extraordinary perfection.

As to price, I believe there is no great difference between them – carriage from America to this house I found only 16s or 17s. – If you were to call at Cooke's, & enquire his price for a 5<sup>1</sup>/<sub>2</sub> inch achromatic Object Glass in brass cell, you make an exact comparison, as Alvan Clark charged me £47.5.2 for mine. I do not know, however, whether his price may have varied since.

I do not mention Dallmeyer<sup>5</sup>, as his price is very high, while I do not believe his work would be superior ^ to Clarks or Cooke, - certainly not in proportion to his charge for it.

Parkes and Son (5, St Mary's Road, Birmingham) would sell you a glass at once both cheap and good. Their price for 4<sup>1</sup>/<sub>4</sub> inches unmounted used to be £15 – but the brass cell would both reduce the aperture a little, & add perhaps £1.10. or £2. to the price. (His larger sizes are not cheap.) I have looked through one of his which I thought very good, but I cannot say whether

<sup>1</sup> Webb is probably referring to Professor Augustus De Morgan (1806-71) See Ranyard family

<sup>2</sup> See Letter 1

<sup>3</sup> Revd Dr. William R. Dawes 1799-1868 Obit.MNRAS

<sup>4</sup> Bardou & Son. Firm estb.1819 at 55 Rue de Chabrol,, Paris.

<sup>5</sup> Dallmeyer, John Henry, German by birth but a British manufacturer (1830-1883) ODNB

they are equal to Clarke's or Cooke's. Unless I had an opportunity of choosing my own glass, I think I should prefer one by one of these two great makers, who are both fully to be trusted.

A man called Wray who used to work for other opticians, has now come out as a maker on his own account. He lives somewhere at Camden or Kentish Town. If I am to believe what I have heard about a 5-inch of his, it must be one of the most extraordinary ever made – but I know nothing personally of his work, or of him. Were I in London, I should be induced to try to find him out.

Steinheil of Munich<sup>1</sup>, the rival of Fraunhofer's[sic]<sup>2</sup> successor Merz, makes telescopes on Fraunhofer's construction much cheaper than Merz<sup>3</sup>, & cheaper ~~than~~ I believe than Cooke or Clark. But I do not mention him on that account, but on account of a new construction, the Gauss<sup>4</sup> achromatic, so called after a great German mathematician, now deceased, which hitherto has been entirely in his hands. I know of only one specimen in England, which is in the possession of the Editor of the Intellectual Observer<sup>5</sup>, and which I have seen. It is certainly a most beautiful glass - & not very expensive. The Editor sent his own tube over to Munich to have it fitted, & for object-glass, cell, and fitting, Steinheil charged him £10 – the aperture being I think 3 French (rather more than 3 English) inches. He has made some of a larger size – I believe about 4½ inches - & the Editor was so obliging as to mention me as a proper person to try one of them & bring it into notice in this country – But though it was promised me in December last, I have never yet “set eyes upon it”, as our country people say, & I fear Steinheil is either very careless or very dilatory. I think I must write to him about it. Should you think it worth while to wait for the chance of this trial?

You would save something worth while by having your object glass “in cell” from the maker you may select, & having it fitted up with tube & eyepieces & finder by a “working optician” - & I could ~~??~~ give you the address of such a one. Of course the work would not look quite so neat, but it would be equally effective. I should not, for myself, care if the tube were made of tinned iron by a whitesmith (which I could easily manage) ~~with the optics~~ made to fit the brass cell of the object glass at one end - & closed with a cheap brass (or even wooden) “head” as it is called, to receive the eyepieces at the other and this would perfectly well, but you might not like the trouble, or the look of it. –

Now, about a stand. You have first of all to consider your own wishes. If you have it in contemplation [sic] to make micrometrical measurements, a “driving movement” by clockwork is of great importance – but even for that I should recommend you to wait, as I think some great improvement (by a friend of mine) may come out in that way. But, for any other purpose, I should think a good smooth tangent-screw measurement would answer quite as well, with practice. At any rate I would not have a clock-movement at first, as it could be added at a future time. If you were to call at Cooke's in Southampton St. Strand, you would see his plain equatorial stands, & ascertain their prices. If high, you could have a stand of Slater's<sup>6</sup> without taking

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<sup>1</sup> Carl August von Steinheil 1801 –1870, German physicist. He founded the optical-astronomical company *C.A. Steinheil und Söhne* to build telescopes, spectrosopes and photometers (his invention, used to measure brightness). From 1852, he added refractors and reflectors with silver-covered mirrors to the production. The silvering was done in a process developed by his friend Justus Liebig.

<sup>2</sup> Joseph von Fraunhofer 1787-1826. German optician and maker who invented the spectroscope.

<sup>3</sup> Merz & Sons The company of Merz and Mahler was a direct inheritor of the, 'Optical Mechanical Institute' of Munich, previously operated by Fraunhofer and Reichenbach. From 1826 Merz managed the 'Optical Mechanical Institute' with J. Mahler and in 1845 Merz took sole charge of the business. .

<sup>4</sup> Johann Carl Friedrich Gauss 1777-1855

<sup>5</sup> Norman Lockyer

<sup>6</sup> See Letter 1

anything more of him. I think my friend, whom I referred to on the subject of a “driving movement”, may do something valuable with respect to Equatorial stands: & I might be able to get some hints for you as to the best & cheapest design for an Observatory.

There is a little Monthly publication called the *Astronomical Register*, which contains, in addition to correspondence & a list of Astronomical occurrences for the month, a number of advertisements of instruments for sale. I see among these, two, which might be worth your consideration. One is N<sup>o</sup>. 18 - & described thus “Equatorial telescope, 5½ ft focus, 4 in. aperture, powers 60, 340, & 450, on extra stout mahogany tripod stand, steadying rods, levels, large findery &c. complete. - (The aperture looks like either a Cooke, or Munich, or Paris glass) – The other is (N<sup>o</sup>. 5) Equatorial Mounting, (for Latitude 51 or 52) , adapted for a telescope of 6 or 7 foot focus, - 12 inch circles, Driving apparatus, &c. all of the most approved construction.”

Applications respecting prices & other particulars to be made to the Editor of this paper [ S. Gorton, Esq: Stamford Villa, Downs Road, Clapton, NE.] – if by letter, enclosing stamp for postage of answer. – If you could see these for yourself, or make out anything quite satisfactorily about them, it might answer well – but it would not do, I need scarcely say, to purchase anything unseen & untried. –

You might call upon M<sup>r</sup> Baker, Optician, 244 High Holborn, making use of my name, if you like, & ask him if he has any second-hand Equatorial. It might be at any rate worth looking at - & if you should not like it, or its price; you would thus <sup>^</sup>still<sup>^</sup> acquire useful information.

One thing I must not forget to mention. You are aware that the common English Equatorial mounting, such as is commonly set on the top of a wooden tripod, is limited in its range, being incapable of reaching the polar regions without moving the stand when required. If the latter is objected to, the German equatorial <sup>^</sup>in<sup>^</sup> which the telescope projects on one side (with a counterpoise on the other) must be adopted – this construction commands all the heavens without removing the stand. Horne & Thornthwaite<sup>1</sup> (121 Newgate St.) make an Equatorial stand on the latter plan, to carry telescopes up to 3½ feet focus, for £10.10.0 It might be worth your while to go to see this (or you may see a print of it on the cover of the “Intellectual Observer” if you or any of your friends take that publication. Horne & Thornthwaites’ prices are well known to be high – (for instance I could tell you where to get finders or eyepieces at little more than 2/3<sup>rds</sup> of their price, and will do so if you want them) but still this seems to me seems cheap as compared with Slater’s price, & at the same rate, even if made as large & strong as Slater’s, I think it would not be equally dear.

Yeates & Son, 2 Grafton St. Dublin<sup>2</sup> advertise (without price) an Equatorially mounted Telescope for students & Amateur Astronomers. Possibly, if you have any friend there, he might find out whether they, or Grubb<sup>3</sup>, another celebrated Dublin optician, would sell you a stand separate, cheaper than those London prices. But I should be shy of their object-glasses without knowing more about them.

I think I have nothing more to tell you on this head, & I fear you will ~~be~~ find it very tedious to read & compare it all. But before we have quite done, I must mention another matter.

I do not know what branch of astronomy you feel inclined to take up – but upon this, in some, degree, the choice of an instrument would depend.

If you wish to make micrometric measurements – or to find stars or planets in the day time – or minute objects at night, not readily discoverable by maps, then there can be no question that the equatorially mounted achromatic is the instrument you ought to possess - & the sum you have mentioned – especially with an object-glass in cell from Clarke or Cooke, & a tube,

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<sup>1</sup> Flourished 1854-86. Newgate St.

<sup>2</sup> In 2 Grafton St from 1827. The business became Yeates and Son "Instrument Makers and Opticians" in 1865

<sup>3</sup> Company was originally founded in Dublin by Thomas Grubb ODNB as the Grubb Telescope Company in 1833. Thomas Grubb was joined in 1864 by his son Howard 1844–1931. ODNB

eyepieces, & stand by some cheaper maker would do it very nicely – or a second hand instrument might be met with at a low price answering every purpose. -

But if your object is – like mine – merely what is called Stargazing – the viewing of the wonders & glories of Creation under ordinary circumstances, it might be worth your while to consider, before finally deciding, the comparative merits of the silvered glass reflector. You have probably heard of this beautiful instrument which has for some years sold in Paris, & is now beginning to attract attention in this country. At present it is only in the hands of amateur makers, but their success has been remarkable. One of at least 8 inches clear aperture may now be purchased in Hereford<sup>1</sup> for about £26 or £27, (carriage & packing not included.) As far as looks go, it is certainly a very common & clumsy looking affair – being merely a great square tube of stained deal, mounted on a very plain ^wooden^ stand. & if you regard appearances I could not say much for it. But the Newtonian reflector, under any circumstances, is a singular looking instrument, & there is nothing peculiarly awkward about this but the squareness of so large a tube. – (you might of course have it made octagonal, but not for so small a price – or circular of tinned iron, but with no advantage.) I must tell you however that I have never seen anything with it, or with any silvered glass speculum of this size. I have had a 5¼ inch on trial, which I found very good. It was not indeed equal to my beautiful 5½ Alvan Clark but that was an unfair criterion. This 8 inch one probably would be so, or nearly so – defining nearly or quite as well, with more light. The exact proportion of light has not been ascertained. I guessed that of the 5¼ equal at least to 4 inches achromatic – at which rate the 8 inch would fully match 6 inches, & would give you glorious views of the Moon, planets, nebulae &c. – In fact for the moon & planets, reflectors, for some unknown reason, are thought to have some advantage over achromatics, tho' for stars the reverse. There are some inconveniences, however, attendant upon this construction. Finding is-of-a & management are & following are of course more difficult than with the achromatic - & some persons may not like the sideway view into the tube – (to others, the constant horizontal position of the eyepiece is an actual advantage, reaching the zenith without twisting one's neck & head.) and there is no doubt that the increase of aperture, to gain equal light with the achromatic, is attended with the great disadvantage ~~that~~ of exhibiting much more atmospheric disturbance – just in the same way that a 4 inch achromatic can be used in nights not good enough for 6 or 8 inches. The film of silver is also liable to tarnish, unless it is taken care of – but with due precaution Dr Frankland<sup>2</sup> of the Royal Institution who has made one of these instruments, finds this will not happen – but if it does, resilvering may always be effected, without the least injury to the figure of the glass, & at a very trifling cost indeed. Such an instrument requires a shed, or summerhouse, to keep it in, but there is ~~no adv~~ little if any advantage in an observatory – especially during wind. If you would like further particulars about this instrument, which is certainly an extraordinary bargain, I will get them for you. – The 5¼ in might be had for £12 or £14 – but I sh<sup>d</sup> for myself adopt the larger size at once. – I have spun so long a yarn that I fear you will hardly like to ask me questions again, but I can only say, pray make any use of me that you like in any further way, & believe me,

My dear Sir, Yours very faithfully,

T. W. Webb

[Pdfs 1017,1018,1019,1020,1021,1022,1023,1024](#)

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<sup>1</sup> Reference to G.H.With

<sup>2</sup> Dr.Frankland (1825–1899),Chemist ODNB

## Letter 6

One month later

Gloucester, Dec.8.1863

My dear Sir,

You are very kind & considerate about my time – which at home is often much engrossed by the care of a large parish – but just now I am upon a journey, & have leisure to answer you as to one or two points which it might be helpful for you to know.-

1. With regard to Clock Motion. Tho' I have no doubt it is a very great convenience in measurement, it is not necessary where there is equatorial mounting, as a practised hand with tangent screw will keep the object exactly central while the other hand manages the microm<sup>er</sup>.- I believe all Herschel jun<sup>r's</sup><sup>1</sup> measures of double stars were made in this way. And, tho' I am no judge whatever, from want of practice, I am inclined to think that for perfect vision, & for stimulating the retina, it may be even better to have the object shift its place in the field – But however this may be, - unless you can get it a marvellous bargain second-hand, I would strongly advise you not to have a Clock at present, as a friend of mine has devised an admirable motor power which is at present a secret, but will I dare say be patented – be still very much cheaper than Clockwork & perfectly equable. It w<sup>d</sup> pull at the end of a cord, the other end of which w<sup>d</sup> be attached to some part of the frame – so any elaborate attachment w<sup>d</sup> be mere waste of money<sup>2</sup>. The Equatorial Ladder described by Smyth<sup>3</sup> is perfectly cheap & effectual – but in that form will not reach the Polar regions – I think however it w<sup>d</sup> not be difficult to apply a counterpoise to that form.

2. About Slater<sup>4</sup> – please be very cautious. M<sup>r</sup> Dawes told me he had made nothing good – except some small things – I have only looked thro' 3 of his – that at Wandsworth – bad – one at his own shop – bad (but I must say he did not profess to offer it as good) – another at a friend's – I saw only by day – but I did not at all like either what I saw, or what my friend said – of it. He is very careless, obviously, as the great splinters at the edge of the spare discs that you & I saw together proved - & his polish is not good. He would be too cheap.

I know M<sup>r</sup> Birt<sup>5</sup>, & as he has been used to the celebrated 5.9 inch Tulley<sup>6</sup> at D<sup>r</sup> Lee's<sup>7</sup> (formerly the property of Adm<sup>l</sup> Smyth with which all the Bedford Catalogue was made - & has besides a Cooke of his own, I have no doubt he can give you a good opinion. But NB – from all I can make out, I believe my 5.5 inch Clark is a superior glass, considerably, notwithstanding its smaller aperture, to D<sup>r</sup> Lee's celebrated telescope. At least it readily & fully elongates  $\gamma^2$  Andromeda, which Smyth speaks of as a work of great difficulty.

3. As to Dawes & Clark & Cooke – I must tell you all about this – I heard that Dawes was so delighted with the obvious elongation of  $\gamma^2$  Androm: in a 4 1/8 inch sent him for trial ( which I fancy is Cooke's special size) that he determined on ordering an 8 inch forthwith from him – but per contra, I must tell you what he told me himself – That he was anxious to try one more kind of mounting – having tried almost all before - & he had no doubt Cooke c<sup>d</sup> make a good glass – but still Clark's was “so near perfection” – that he did it with trembling, & feared he might repent it, - as to Cooke's prices, I had this same price list many years ago, & find it unaltered – but someone

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<sup>1</sup> John Herschel See biographical notes

<sup>2</sup> See Letter 8

<sup>3</sup> Admiral Smyth 1788 –1865 Obit MNRAS

<sup>4</sup> See Letter 1

<sup>5</sup> William Birt 1804-1881

<sup>6</sup> Family of telescope makers. Flourished London c. 1800-46

<sup>7</sup> John Lee. 1783-1866



had told me that he had reduced his charges – which seems unfounded – possibly he allows discount. – I have Steinheil's prices but not here – my notion is that his ordinary construction is cheaper than Cooke or Clark – his Gauss<sup>1</sup>  $\frac{1}{3}$  or  $\frac{1}{4}$  more than his ordinary – but by no means dear. If he sends me one for trial – ~~whi~~ and I mean to rub up his memory very shortly - & I find it equal to my expectations, it might suit you well – perhaps you can wait a little, & I will let you know. If it were my own case I sh<sup>d</sup> be quite satisfied with any approximate equatorial – accurate division of circles being so very immaterial for finding an object. But the motion sh<sup>d</sup> be smooth , or measurement w<sup>d</sup> be defeated & that is so easily attained that I think Slater c<sup>d</sup> mount for you – But I w<sup>d</sup> on no account have a glass of his unless it had been well tried by some competent observer – he may have once or twice blundered into excellence – but that is another matter. – Since I wrote before I have somewhere seen another high commendation of Wray.

Don't scruple about troubling me – it will be a pleasure, tho' I can't always answer speedily.

Yours very sincerely,

T.W. Webb

Pdfs 1025,1026,1027,1028

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<sup>1</sup> See Letter 5

**Letter 7**

**Two months later**

Hardwick Parsonage

Feb.1 /64

My dear Sir,

Tho' much pressed for time this morning, I am anxious to send you an extract from a letter which I received on Saturday from one of our very best observers Mr. Dawes – in which he says –

“I am much pleased to find that you continue to value your Alvan Clark 5½ inch so highly. I cannot at all doubt that it is capable of doing all that is within the reach of that aperture: & indeed I have found this to be the case with every O.G.[Object Glass]of his which has ever come under my observation. From all I have seen of his work in O.G. making I do not think there is any better even in the present day.”

I thought you might like to hear this opinion from so eminent an observer – I am also able now to send you A. Clark's prices for OGs in brass cell which came to me indirectly the other day

¾ inches clear aperture = 50 dollars

4 \_\_\_\_\_ = 100 .\_\_\_\_\_

5 \_\_\_\_\_ = 200 .\_\_\_\_\_

6¼ \_\_\_\_\_ = 400.\_\_\_\_\_

Believe me in great haste

Yours very sincerely

T.W.Webb

Letter 8

Two weeks later

Hardwick Parsonage,  
Feb.15. 1864

My dear Sir,

I was glad to hear you were making some progress, at least, in collecting information, which is so desirable before we commit ourselves to an expensive undertaking. My object in sending you my last notes – which was a very hurried one I believe – was merely to let you know the opinion of one of our very best observers as to Alvan Clark, who is definitely cheaper than Cooke. As to little alterations & additions, whoever you may employ for the Object Glass & tube, ~~they would~~ those smaller matters (or even the tube itself) would be very cheaply & well supplied by T. Murrell<sup>1</sup>, 13 Albion Place, St. John's Lane, Smithfield – a working optician whose prices are much below those of the regular shops. You have probably seen in the Intellectual Observer a cheap equatorial stand - & a plan of a cheap Observatory (£12 or £15 I should think) by Mr. Bird of Birmingham is soon forthcoming in the same periodical – A wind-up Jack, I fancy, with a little contrivance will supply a good driving power. You are probably aware that a pendulum movement is objectionable, from its jerking motion – especially with high powers, where a driving movement is most wanted. But if you have fall enough for the weight, I think you might very easily get a wind-up Jack to do the work.

Pray excuse these hasty hints and believe me,

My dear Sir,  
Yours very sincerely  
Tho<sup>s</sup> W. Webb.

I shall probably D[eo].V[olente] [God wills]. be in London during April, when I sh<sup>d</sup> have much pleasure in seeing you if I c<sup>d</sup> be of any further use. –

[Pdfs 1031, 1033](#)

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<sup>1</sup> Business flourished from at least 1836-46 under John Murrell (Pigot's 1839 directory.) 13 Albion Place St John's Lane, London

**Letter 9**

**Two months later**

67 Great Russell St. Bloomsbury, WC<sup>1</sup>  
April 15. 1864

My dear Sir,

I fear my long silence may have appeared very strange and uncourteous – but the truth is, that the interval between my receiving your last letter, & my arrival in London on Monday last was one of so much pressure & fatigue from the quantity of work to be done before coming here, that I was glad to postpone any correspondence that I thought could wait – and since I have been here, though much relieved by the change, I have been continuously occupied in one way or another. But I must no longer defer thanking you for your last, & telling you how much real pleasure I shall have in seeing you again – You have been so kind as to express an idea of calling upon me, and I shall be truly glad to see you – but I am sorry to add, I fear it must be just now a pleasure deferred. During the course of our stay in London, which will extend to ~~near~~ Whitsun eve, I shall be absent each Saturday, Sunday, & Monday, - the whole first week in May - & possibly some other days – And next week, till Friday, will be all engaged with friends – So till the week after next, I don't think I could make any appointment. But if you can make it quite convenient to come & see me any morning about 10h. after the Monday of that week, I shall be truly glad to see you.

As to your studies, I have no doubt all is well & prudently decided upon – but I daresay you will find nooks & corners of time in which you can stow away stray bits of astronomical information - & then, when you are the possessor of an Observatory, you will be all the better qualified to use it. I have always found that when an object is kept steadily in view, numbers of little things fit into it with very little expenditure of time & trouble – especially if I may presume so far upon our acquaintance and your kind feelings as to tender you a little bit of counsel – viz – to keep notes & extract books, & put down everything worthy of notice in one's own way – I often regret many things that I lost in youth, from not having adopted this, which is now my regular practice.

Will you present my comp<sup>ts</sup> to M<sup>rs</sup> Ranyard with many thanks for her obliging note – and - begging you never to think that you have given me anything but pleasure instead of trouble as you express it, I remain

My dear Sir,  
Yours very sincerely,

Th<sup>os</sup>. W. Webb

A. Ranyard, Esq

[Pdfs 1034,1035, 1036](#)

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<sup>1</sup> The home of Henrietta Webb's sister, Arabella Wyatt and her husband Thomas Henry Wyatt. It is possible that TWW wrote 67 erroneously in this and the succeeding letter as the Wyatts were living at 77 acc. to 1861 census. See Wyatt family for details.

**Letter 10**

**Probably few days later**

67 Great Russell Street  
Thursday even<sup>g</sup>

My dear Sir,

I have had so many engagements, and have been in such a state of confusion, since my return to Town, that I cannot (I am ashamed to confess) recollect accurately the arrangement I took the liberty of making for our meeting. But I am inclined to think it was for tomorrow (Friday) morning – and lest it should be so, I write a line to say that I am obliged to go home at that time – a day earlier than I intended – and I ~~am~~ should be sorry that you should have the journey in vain. I cannot say exactly when I shall be back – but probably you might find me at home – if not too early for your convenience – at ½ past 9 either on Wednesday, Thursday, or Friday morning of next week. – I hope this involuntary postponement may not risk the pleasure I should have in meeting you – but I find I cannot help myself in the matter - & now I have written in the midst of much interruption – but always remain,

My dear Sir,  
Yours very sincerely

T.W.Webb

*[There are sketches of focal lengths etc. in pencil on back – possibly by Ranyard?]*

Pdfs 1037,1038,1039

## Letter 11

One month later

Hardwick Parsonage,  
May 25. / 64

My dear Sir,

I felt quite concerned after you had parted from me, to think of the probability there was of your getting a severe wetting, and perhaps catching a serious cold – or at any rate aggravating your hay-fever – before you could reach your house. I shall very much regret it if such has been the case, for it was quite my fault in bringing you out of your way.

I wished to have made this enquiry even had I not had a selfish motive for writing – such however happens to be the case just now. You were so very obliging in offering to execute any commission that I am induced to trouble you even this early – and only hope you will not be alarmed under the idea that with such a speedy beginning there is every prospect of much trouble to come !<sup>1</sup> The fact is that we forgot to purchase at Shew's photographic depôt whither you accompanied us, a bottle of Clear Varnish for protecting negatives – about 1s or 1s 6d size. And Mrs Webb purchased a little ornamental brass frame with glass, for holding a Carte de Visite<sup>2</sup>, which pleased her so much that she would be glad to have 2 more – I have given an outline over page – (with a little brass stay at the back to stick it up upon a table -) (The price was 1<sup>s</sup>.3<sup>d</sup>.)



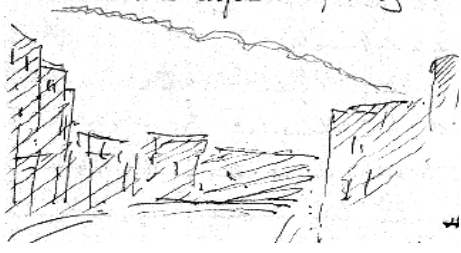
If you will kindly pay for these, we will send you the amount in Stamps. – and please tell the people to pack them in a safe manner, for a long country journey, and write upon them Glass conspicuously, and send them directed to M<sup>rs</sup> Webb, Care of T. J. Brown Esq:<sup>3</sup> Conservative Club, St James's St. Pall Mall. – There would be no hurry about this, so please quite suit your own convenience.

And now for another matter. I found on my return that our storm of Friday night had been anticipated here, by a fearful tempest (though of limited extent) on Thursday afternoon. The rain came down as in “bucketsfull” – pierced our roof, & spoiled some new papering – but that was well considering “neighbour's fare” – while the roads in places were reduced to the ~~condition~~ appearance of a tessellated pavement. Such a tempest on the whole has not occurred here for many years. But what struck me most was the fresh illustration it offered of an electrical difficulty, which has occurred to me very frequently before. Scarcely a severe storm occurs without a proof of the fallacy of the ~~common~~ universal assertion that the electric current always strikes in the nearest & easiest line of transit. I saw the contrary just after parting from you – I had not entered the door, & was looking along the street W. when I saw a long flash – evidently no reflection, but the real stream, descending at an acute [sic] angle with the horizon till it was lost behind roofs – but probably struck something –

<sup>1</sup> Considering the enormous number of requests that Webb subsequently made in these letters perhaps Ranyard regretted his youthful kind offer JHR.

<sup>2</sup> A visiting card sized photograph

<sup>3</sup> Relation of the Penoyres of The Moor estate, Hardwick



In such a case what becomes of the theory? Then here – a little way from the house, a small ash ~~sh~~ tree was struck in the midst of a line of oaks, not in the least higher than the rest of them, & lower than many other objects within 3 or 400 yards – the top & upper half were quite uninjured as far as I can see, tho' the current must there have passed thro' a mass of small branches & foliage - & a long splinter was taken out below - & its fragments scattered in the most capricious way. – There was scar on each side of the stem where it entered the earth, the centre being uninjured. But a stranger case was the killing of a Hen in an open meadow, a hundred yards or two, from a house & barn & trees, all much higher – the spot too [at] the foot of a hill. This I have often noticed & well recollected some 20 years ago the strikings of a school in a valley between 2 high hills on which all probability the prime conductor of cloud was nothing at the time. – ~~I cannot make~~ And I have seen, I think in the Brit. Assoc:[Association]. Reports, accounts of much damage done by lightning striking in a horizontal direction.

I cannot reconcile all this with the ordinary theory. I don't know whether you have attended to electricity – but at any rate some of your friends, possibly, might not be disinclined to attack the difficulty.

I have had many letters to write, & not time as yet to communicate with M<sup>f</sup> Herschel. Your puzzle I think is a puzzle - & not by any means a “mare's nest”, - My Negative Achromatic Lens answers very nicely.

I had good views of ♄ [Saturn] last night & the night before – much inferior to ~~those~~ that at Leyton with M<sup>f</sup> Barclay's glass – but then that has 10½ inches aperture! The cluster 3M Canna Venaticorum is a fine object & you ought to see it pretty well – it lies between Arcturus and Cor. Caroli – about 2/5 of the distance & a little to the right but no visible star to serve as pointer -



With kind regards to M<sup>f</sup> & M<sup>rs</sup> Ranyard, I remain,

My dear Sir,

Yours very sincerely

Tho<sup>s</sup>. W. Webb.

Letter 12

Three weeks later

Hardwick Parsonage, Hay,  
June 11 1864

My dear Sir,

I ought to have written long ago to thank you – but have had my hands very full indeed. We are very much obliged by your kindness, & have no doubt that all will be quite correct. But M<sup>r</sup> Brown<sup>1</sup> who was kind enough to undertake to bring the parcel, has not yet come down – so we have not received the articles. I do not doubt the little photograph will be a great treat to me, and it was especially kind in [sic] you to think of it.

After some delay I have received a very interesting communication from M<sup>r</sup> Herschel, which I enclose [*letter follows*]– please keep it as long as it of any use to you. It puts the matter in a new light to me – & perhaps you will deem it satisfactory. It seems so to me.

I started off yesterday the “copy” for the Intellectual Observer – containing Colours of Stars, Solar Observations, & - a dullish contribution<sup>2</sup>. Next month I hope to return to the Moon.

I have had little opportunity of using my telescope tho’ one or two nice nights. Being at Hereford on Wednesday I had an opportunity of examining his<sup>3</sup> 6 foot reflector with 8 inches silver on glass speculum. It is a magnificent thing to look at. There was such a vibration of heated currents that his watch – face could not be steadily seen – but it was plain that he had very good definition even with about 500 – Saturn would be glorious I am sure. - ~~24~~ this noble instrument he would sell for about £35. – If he were not so engaged in schoolkeeping, under a severe disciplinarian who rather grudges his attention to these things, he might become one of the first opticians of the day.

I forget whether I told you that, just before M<sup>r</sup> Nasmyth’s lecture<sup>4</sup>, Mr Birt & myself had, at Leyton, the most convincing proof of his mistake in maintaining that the eruptive action of the moon has ceased. (By the way, how queer, to assert as he did a position so utterly incapable of proof, as that the Moon had been quiescent for ages! It reminds me somehow of the old classical joke of Hierocles, about a silly fellow who having heard that a raven lives 200 years, kept one on purpose to see if it was true!) We found a beautiful minute crater on the floor of “Marius”, where B&M’s<sup>5</sup> map shews nothing, tho’ their description proves that they examined it with attention.

I forgot to ask, what we are in your debt about the photographic articles? Or was the bill enclosed to M<sup>r</sup> Brown? Please let me know – if it was yourself I am quite ashamed to have neglected it so long – Shall I send a Money Order ? Or Stamps ? –

I find my little negative achromatic – alias Barlow lens – which I explained (or rather did not explain) so miserably to you in the Shoe Shops – acts very nicely – but I have not yet measured the increase of power in using it.

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<sup>1</sup> See Penoyre family

<sup>2</sup> Intellectual Observer vol.5 July 1864 434-443

<sup>3</sup> Webb is referring to G.H.With

<sup>4</sup> James Hall Nasmyth 1808 –1890, Scottish engineer and inventor famous for his development of the steam hammer. Co-founder of Nasmyth, Gaskell and Co. manufacturers of machine tools. He retired at the age of 48 and developed his hobbies of astronomy and photography ODNB.

<sup>5</sup> Beer & Mädler. See biographical notes



I beg to be remembered kindly to M<sup>r</sup> & M<sup>rs</sup> Ranyard – M<sup>rs</sup> Webb sends her kind regards, & many thanks, & hopes she may meet you again some day, & I remain, My Dear Sir,

Yours very sincerely

T. W. Webb

[Pdfs 1044, 1045, 1046, 1047](#)

*Letter from Sir John Herschel*

*June 6 /64  
Collingwood  
Hawkhurst*

*Dear Sir,*

*Your letter has followed me here where I am busy lecturing to the Royal Institution on wandering stars and wandering stones. It possesses .'. a great interest to me because those on shooting stars being concluded I feel at liberty to repeat the statements contained in them without anticipating the claims of my audience by expressing them to others. The objection of your friend is ingenious as far as it is original and for the rest it is a revival of Jhon[sic] Farey's series of questions contained in the Philosophical Magazine for 1821 who supposes that wandering stars are satellites of the earth just grazing the atmosphere and again restored to space.*

*In the first place the atmosphere of [sic] Astronomers is 40 miles high but the average height of disappearance of 210 shooting stars hitherto measured is 54 miles above the earth. The place where they are most abundant is 60 miles high and the average height of first appearance is 70 miles above the earth. I believe this statement includes all the observations of the heights of shooting stars which have yet been made!*

*Your friend should take a ring from 40-to 80 miles above the earth as the Zone in which wandering stars are most common instead of 0 to 40 miles. Wandering stars are more common from 40- to 80 miles above the surface of the earth than in all other elevations put together.*

*In the second place falling stars do not as John Farey (and your friend) supposes move always horizontally but on the contrary they move, without any preference at all possible angles of inclination to the horizon (or to the vertical) The average course of 37 measured by Brandes<sup>1</sup> in 1823 was (if I recollect right) 50° from horizontal downwards.*

*It is .'. certain that shooting-stars do not pass onwards into space in the manner which your friend assumed; but they are consumed upon the spot and neither go onwards into space nor strike the earth.*

*A shooting star cannot penetrate more than a 10 thousandth part by weight of the atmosphere. It is destroyed by heat by the time it reaches the ~~higher parts of the~~ height of 54 miles.*

*Large fireballs are destroyed by heat by the time that they reach the height of 35 miles. There remains 999 parts out of a thousand of atmosphere to penetrate even*

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<sup>1</sup> Brandes, Heinrich Wilhelm (1777 - 1834)

after that, and nothing but a stone of the size and density of that which fell at Agen on the 14<sup>th</sup> of last month can make its way to the ground. I think there is satisfactory evidence that falling stars if they are stone are not more than the tenth of an inch in diameter and fireballs if they are stone, are not more than one inch in diameter. I do not believe what the Germans say that the brightest shooting stars are on the average ~~#~~ lighter than the dull ones but I am positive of this that extremely vivid fireballs sometimes disappear as high as the highest falling stars. These must of course be looser in their texture than aerolites wh. reach the ground because they make just as much light but are consumed at the beginning of their course. I suppose .'. that some luminous meteors are pulverulent, others solid and that any stones larger than a cricket ball is sure to get safe to the ground unless splintery and apt to crackle by heat.

If meteors are moving in every direction through space; Why is it that by far the greater number of them appear to fall through the atmosphere " or nearly" to the plane of the horizon?

For if you take any one moving in any given direction the chance that it shall only pass through the shell of Atmosphere that envelopes the earth without striking the solid mass must be very small for supposing the height of the Atmosphere to be 40 miles and the earth's radius as roughly 4000m then the number of those passing through the atmosphere is to the number of those falling as

$$\frac{40^2}{(4040 - 4000)^2} \text{ to } \frac{40^2}{4000^2}$$

or as the area of a ring 40 miles broad and 8080 [?] in its greatest diam. Is to the area of a circle 8000 miles in diam. or  $(16331600 - 16000000)^2$  is to  $16000000^2$  or as 3216 to 160000

$$\frac{402}{1} \quad \frac{20000}{50 \text{ nearly}}$$

But instead of only 1 in 50 not coming to the ground perhaps there is only 1 in 50 that does fall.

In this we have taken no notice of the effect produced by the earth's attraction.

Then a very faint paragraph – in pencil?- indecipherable.

Letter 13

Nine days later

*Blacked over Parsonage*

June 20. /64

My Dear Sir,

I enclose the order mentioned yesterday – believing you know my hand well enough by this time to render it needless to sign this scrap of a note. I feel so much obliged by all your kindness, I only regret that we should have been troubling you at a time when you were very much occupied. I wish you could come here for a holiday - & perhaps the thing is not impracticable. We could receive you anytime before the 2<sup>nd</sup> of July if that would suit you – but afterwards we have visitors coming one after another for some time. It is a long journey, but I c<sup>d</sup>. certainly show you a good Telescope at the end of it. – I shall not see your pretty little present till the end of the week, as M<sup>r</sup> Brown does not return until Thursday – but I am looking forward to it with much pleasure.

Thank you for much interesting information. Nasmyth<sup>1</sup> seems to have fought his battle well, but still I think he will have hard work to prove he has won it. I received this morn<sup>g</sup> a letter from M<sup>r</sup> Herschel, in which he returns your queries with a pencil annotation, & his card – which I accordingly forward - & no doubt if you have any account of a meteor to send him, he would like to hear from you – I have seen a very respectable one – as bright as 2 or 3 Jupiters – since my return – I sent the account – (which to be of any use must contain some approximate reference to its path to the surrounding stars) to M<sup>r</sup> H – unfortunately there was no corresponding observation.

I have seen a beautiful Silver-on-glass Newtonian at Hereford – the workmanship of M<sup>r</sup> With – having 8 inches aperture to only 6 f<sup>t</sup> focus. It was pointed to a watch face with a power of about 500 – which it carried right well. Still, there was something about it which led me to think it might have done better - & the ingenious maker has since written to tell me he has found a great defect in his “flat” - & has not one that is good – but believes when he has, his mirror will perform much better. In that case, I begin to suspect he will beat me !

And this, an amateur, who never, I believe saw an optician at work, & never took the subject up till 4 or 5 years ago. This shews what spirit & perseverance will do. He w<sup>d</sup> sell such an instrument very plainly, but efficiently mounted, for £30 or £40. Possibly, if his ideas as to the fine figure of his great mirror sh<sup>d</sup> be justified by it’s performance when he gets a really good “flat”, he may ask more – as I think he w<sup>d</sup> be quite warranted in doing.

I see the reason assigned for the non-appearance of Cooke’s 25 inch at the Soirée was the danger of the journey. I don’t, I confess, know how to take this in, & sh<sup>d</sup> rather refer it to the known, & very annoying, dilatoriness of the party. I find I have now, with the Barlow lens, powers ranging up to 733 – more than ever I sh<sup>d</sup> wish to use with that aperture. –

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<sup>1</sup> See Letter 12

Thank you much for your kindness in mentioning my little book. – I find there is a prospect of our being at the next Meeting of the British Association<sup>1</sup> at Bath as we have friends in the neighbourhood. Perhaps we may meet there ?

With all good wishes & many thanks  
believe me, My Dear Sir,

yours very sincerely

*signature blacked over as was place name. Maybe this suggests  
ACR showed the letter to others but tried to keep Webb anonymous, but what was the point ??*

Pdfs 1048, 1049, 1050, 1051

*The sketch pasted on to the top of this letter refers to the dish mentioned in 14 but is in the wrong place*

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<sup>1</sup> British Association for the Advancement of Science Annual Meeting Bath 1864 The B.A.A.S was founded in 1831. The 2<sup>nd</sup> meeting was in Oxford in 1832 when Webb joined as a life member.

Letter 14

Apparently same day

*Three letters together. First from TWW*

Hardwick Parsonage

June 20 / 64

My Dear Sir,

Tho' I have enough to do, I must send a line today. We got the stamps alright - very many thanks – but not without sincere regret at having given you so much trouble, as I perceive how deeply you are engaged, & I fear our requests were truly unreasonable.

We are very sorry you c<sup>d</sup>. not come – but no doubt you have chosen wisely. I hope you will have a delightful journey, as well as a most instructive & improving one. I should rejoice in such a prospect myself.

Thank you about Wheatstone – I could have given him that answer, & told him how little I believe it meets the phenomena.

I am sorry to find you are so limited for time abroad. You must run for it, - and you are pretty active. But 'tis a great disadvantage. I could give you a quasi introduction to Secchi<sup>1</sup>: i.e. I know nothing of him, but as he has been pleasantly mentioned in my little book. I c<sup>d</sup>. send him a copy by you, which, ~~How~~ if you have no better prospect, might be made to serve the turn.

Donati<sup>2</sup> is I think a friend of a Mr Drach<sup>3</sup>, a FRAS with whom I have had a little correspondence some years ago & if you like I c<sup>d</sup>. write to him to get a note for you. Sh<sup>d</sup>. you be going to Somerset House M<sup>r</sup> Williams<sup>4</sup> c<sup>d</sup>. I dare say tell you who of our Fellows, are acquainted with Donati, or Secchi who has been over here - & you m<sup>t</sup>. get introductions in that way. –

The Baron Dembowski<sup>5</sup>, who is a great double – star – measurer, has just set up a very fine 7 inch Merz at Gallarate, a town to which there is a rail of some 25 miles from Milan.

I saw yesterday a very fine silvered speculum Newtonian of 8 inches aperture for £35 – very roughly set up, but very efficient<sup>6</sup>.

Believe me

In gratitude

My Dear Sir,

Yours very sincerely

T. W. Webb

[Pdf 1052-1055](#)

*From Henrietta Montagu Webb*

Hardwick Parsonage

Near Hay, S. Wales

June 20 / 64

My dear Sir,

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<sup>1</sup> Angelo Secchi. See biographical notes

<sup>2</sup> Giovanni Battista Donati, Italian astronomer. Observed the comet named after him in 1858

<sup>3</sup> Solomon Moses Drach 1835-1879 Obit. MNRAS

<sup>4</sup> Secretary RAS

<sup>5</sup> Baron Ercole Dembowski 1812-1881, Italian astronomer. Published his observations of double stars in the

'Astronomische Nachrichten'

<sup>6</sup> At Mr. With's in Hereford

I thank you so much for your kindness in executing so many commissions for me. The china<sup>1</sup> has safely arrived, & yet my friend M<sup>r</sup> Brown is not yet arrived, therefore I cannot tell what I owe you for the other things you so kindly purchased for me.

To-morrow I will send you a Post Office order to the amount of £1 - & I shall feel much obliged to you if you will let me know how much more I may owe you.

The bill of the china was 11<sup>s</sup> but in default of the photographer's bill I cannot tell whether the remaining 9<sup>s</sup> will discharge my debt.

The Order will be from T.W.Webb to you, payable at Bloomsbury, & I hope it will reach you on Wednesday –

With my best thanks for your kindness

Believe me Dear Sir

Yours sincerely

Henrietta Montague Webb

[Pdf 1056-1058](#)

*A PS by Thomas*

P.S. I had finished my note, & was sending M<sup>rs</sup> Webb's messages when she suddenly reminded me that I had forgotten to beg you to be so kind as to do another little commission for her. Will you do her the favour to go (or send) to Oxford St. very near the corner of Tottenham Court Road - & on the same side where, at N<sup>o</sup>.9. is a china shop kept by C.F. Turner.

On May 4. she purchased there a Dessert dish of White French China, for 4s. 6d. of which I send you a sketch [*The sketch is pasted in the book of letters – in wrong place, so shown below*] (open work, as you will perceive) She wants another of the same? [edge of paper covered] also another of what is called a "Centre" in the bill – which is a similar openwork dish fixed upon a stand with a central screw – which cost 6s. – The people must pack the [?? edge of letter covered] roughing it by rail, and send them directed to

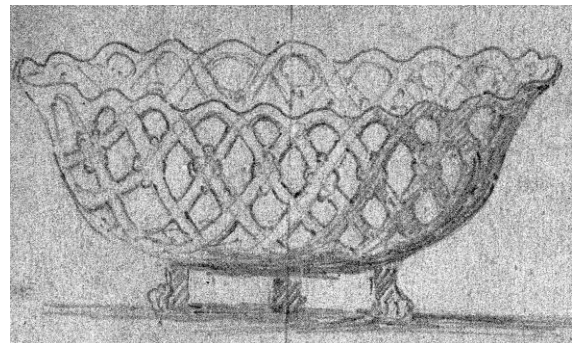
B. Haigh Allen, Esq:<sup>2</sup>, Union Club, Trafalgar Square W.C.  
with (M<sup>rs</sup> Webb) in the corner. – But in case it w<sup>d</sup> not be perfectly convenient to you to see about this in time for M<sup>r</sup> Allen to have it by Wednesday night it must be sent directed to M<sup>rs</sup> Webb

Care of M<sup>rs</sup> Wyatt

77 Great Russell St<sup>3</sup>. Bloomsbury

In either case Glass with Care sh<sup>d</sup> be written on it.

We are very sorry to ask you to take so much trouble. You shall have a money order as soon as possible for the whole.



[Pdf1048](#)

[Pdfs 1058 -1060](#)

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<sup>1</sup> Henrietta Webb painted china. See Webb family

<sup>2</sup> Neighbour at The Priory, Clifford

<sup>3</sup> See Letter 9

Letter 15

Five days later

Hardwick Parsonage, June 25 / 64

My dear Sir,

I did not receive your very pretty little present till last night -& I must take the earliest opportunity of thanking you for the little gem. It is I presume a reduction from one of M<sup>r</sup> DelaRue's negatives - & it is wonderful how much it contains for its size. The China all arrived perfectly safe, & answers its purpose exactly – it was for “Decalcomanie”<sup>1</sup> with which M<sup>rs</sup> Webb is succeeding to the admiration of all her neighbours. I forget whether you saw any of her work. Mr Brown, the conveyor of the parcel, has not yet been here, so I do not know (no bill being enclosed with Shew's things,) whether you paid for the Photographic matters – or he – If you, please ~~add~~ retain for yourself what you have expended in addition to the china (we see 3s. 9d. marked outside the box, which probably is the amount, and if you have no objection to retain the balance in the prospect of future commissions we shall be additionally obliged – only perhaps you may feel, and with reason, that we have given you a great deal of trouble already. I hope however you will kindly excuse it, for you, who live within reach of everything, can hardly imagine the convenience it is to ~~have a friend~~ people dwelling in this remoteness to have a friend to procure little matters for them, that here either could not be got at all, or at a disproportionate cost - & sometimes with vexatious blunders. You would hardly believe how long I have been waiting for a common carpenter to bore me one hole in a bit of wood – too large for my own tool!

I have lately met with a beautiful double star, but too severe I imagine for your instrument. Have you ever examined  $\alpha$  Herculis ? He is a capital coarse test. I suppose  $\epsilon$  Boötis baffles you.

The silver on glass specula are getting on admirably. M<sup>r</sup> With of Hereford has finished 3 of 8 inches, any of which he believes will bear 800 on small stars – (large ones being usually troublesome in reflectors.) He is now anxious to sell – I have persuaded him not to sell to cheaply – as in his generosity he might have been tempted to do. Did you ever notice, that none are so generous in proportion to their means, as those whose means are small? – One reason however – at least a fact that ought to be duly allowed for – is that there are fifty poorish men for one wealthy one - & therefore the advantage, in a numerical statement, is so much in their favour. – did you happen to observe how Sir W. Armstrong,<sup>2</sup> who has I believe realized a great fortune, was exposed for his niggardliness at a public meeting lately ? –

M<sup>rs</sup> Webb desires her kind regards, and with mine to your parents believe me,

My dear Sir,

Yours very sincerely &amp; much obliged,

T. W. Webb

[Pdfs 1061, 1062, 1063, 1064](#)

<sup>1</sup> The art or process of transferring pictures and designs to china, glass, marble, etc. and permanently fixing them thereon.

<sup>2</sup> William George Armstrong (1810-1900) British engineer, inventor, armaments manufacturer and industrialist ODNB



Letter 16

One month later

Hardwick Parsonage,  
July 22. 1864

My dear Sir,

I had been wishing to hear rather than wondering at not hearing from you – for I can well understand all manners of hindrances to correspondence – and I had even fancied you might have started for Rome. Thank you very much for your thoughtful kindness about commissions – nothing of the kind has turned up at present. –

I congratulate you most cordially upon the prospect which a good providence seems to have opened out before you, and sincerely hope that both your parents and yourself may have reason to rejoice in the decision.

If such unworthy prayers as mine may be of any service to you, you may depend upon their being very sincerely offered, with true interest in your welfare both in this & a future world. I quite understand your difficulty as to the advice which you would receive (no doubt in a most friendly & well-intentioned spirit) from the question you have mentioned – being previously aware of the love of heterodoxy & paradoxy (to coin a word for my purpose) so much to be regretted there. It so happens – perhaps it may have been so directed – that a young lady – a very old friend – is staying here, who has been much in Cambridge<sup>1</sup> & knows it well. She thinks very highly of Christ's College – as an excellent place for work – under a very valuable man (Dr. ~~Carr~~ Cartmell) as Master – and with admirable tutors. It stands 3<sup>rd</sup> in rank (Trinity of course coming first, & St John's 2<sup>nd</sup>) & would be less expensive than those colleges. – Caius is the college to be avoided – French Cookery being the predominant element there – in which I presume you do not take any particular interest.

What a blessing it is, that we may cast all our care upon One who careth for us! How far more comforting than any assurance derived from human affection or friendship! No doubt you have already your own work ready ~~pointed~~ marked out for you – and you have no reason to distrust the wisdom which has fixed the end – in seeking assistance as to the choice of the way. –

I have expressed this very badly – but you will be able to interpret it, & forgive it too when I tell you that I am writing in a room full of animated talk. – I hope I may have the pleasure of hearing from you, when any thing is decided. I am an Oxford man myself, and so shall not be able to understand University details.

I have been looking a little at the Moon lately, definition being good during the hot weather. I hope I may meet you at Bath<sup>2</sup> – where I purpose D.V.. being myself, & perhaps reading a little paper on the high illumination in the Moon. – we shall be staying at a friend's in the neighbourhood. Silvered specula go on beautifully – M<sup>r</sup> With of Hereford is attaining as near perfection as I suppose can be obtained with 8 inches - & will soon go on to 9– I beg him not to give his work away. – I think he w<sup>d</sup>. charge £12 to £15 for 8 inches – the silvering stands admirably with a little care – Pray give my kind regards to your good parents – M<sup>rs</sup> Webb begs to be very kindly remembered to you, & I remain,

My dear Sir, Yours very sincerely

Tho<sup>s</sup>. W. Webb

Pdfs 1065, 1066, 1067

<sup>1</sup> Arthur was applying to Cambridge at this time

<sup>2</sup> Meeting of the British Association for the Advancement of Science 1864

Letter 17

More than two months later

Hardwick Parsonage,  
Oct 4 / 64

My dear Sir,

You will perhaps not suppose how glad I was to hear from you – But you may judge how matters have gone with me when I tell you that after returning on Saturday afternoon, M<sup>rs</sup> Webb & myself, in consequence of a pressing invitation, thought it right to start off on Monday morning at 7 h. 15<sup>m</sup> to see a cousin of hers in a most precarious state on the Isle of Wight! And we only returned much fatigued & unsettled, on Thursday night - & I have only got into harness again by this time. And now, of course, I have a whole load upon me at once – and consequently have too much neglected you ! – For indeed I am particularly obliged by what you have so kindly done for M<sup>r</sup> With – and so I am sure he will be – it is a most lucid & satisfactory explanation, & quite within his “portée” – I have not yet forwarded it to him, but hope to do so shortly. – I have been trying to test his specula that M<sup>r</sup> Berthon may have the best – but unfortunately my journey cost me 4 splendid nights, & those since, tho’ in part fine, have been interrupted by clouds. – I was fortunate enough to have time at the British Institution to find what I wanted – it was in Phil. Trans.<sup>1</sup> 1861 – wrongly referred to as 1862 (what ought to be the punishment of a wrong reference-giver or index-maker? Should he not be made to eat his own blunders?) From which it appears that the E.[arl] of Rosse has been diligently at work up to that date – using a power of I think 1013 !! on the 3 ft. speculum, & as much occasionally on the 6f<sup>t</sup>. He reports on the resolution of nebulae. – Nothing I think very new - & no confirmation of his former assertion of the resolution of the Neb. in Orion. As to the Dumbbell he only sees stars in, or upon it – it w<sup>d</sup>. seem not to have been resolved. I see one star there with the Achromatic, 2 certainly, & several more by glimpses, with the trial –speculum. – Your Lunar remarks are very interesting - & as far as I can comprehend such matters you seem quite right – So where is all the water gone? Gruithuisen<sup>2</sup> thought there was once an ocean there of some 30000 feet deep - & no volcanoes at all!- I don’t remember Hutton’s model. And who was Hutton?<sup>3</sup>

I certainly have much more “faith in your sincerity”, my dear young friend, than is necessary for troubling you about my Queen Anne affair<sup>4</sup> – (with ~~xxx~~ which her Majesty aforesaid has nothing whatever to do ) – If the enclosed Receipt is presented at the “ Bounty Office”, the date only being filled up at the time, the amount will be paid without difficulty. And then, you can keep it as long as you please till there may be an opportunity of paying it into the National Provincial Bank, to my account at their Branch Bank at Hay. The said National Provincial Bank lies hid in a corner of the city – Or perhaps it may be a London Bank which undertakes their agency – it has just struck me ~~that~~ I am not sure about this, so perhaps you will kindly keep the money till I can enquire, in Hay, the exact address of the place in London. Or possibly you may find it in some Directory. I have been at the place myself – I think in Leadenhall St. but cannot now recollect whether it is called the Nat. Prov. Bank, or by some other name. – The hours at the Bounty Office are between 10 & 2, every day, holidays excepted. – The money is not payable till 10<sup>th</sup> Oct<sup>r</sup> – you will see a blank in the Receipt left for the insertion of the day at the time of payment. Either the applicant or the clerk in the bounty Office can fill this up at the time. –

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<sup>1</sup> Philosophical Transactions of the Royal Society. Commenced in 1660

<sup>2</sup> Baron Franz von Paula Gruithuisen (1774 – 1852) Bavarian physician and astronomer.

<sup>3</sup> James Hutton (1726–1797) geologist

<sup>4</sup> Queen Anne’s Bounty: A fund estbd. 1704 for the augmentation of the incomes of poorer clergy

I dare say you will kindly allow me to refer to your ingenious ideas ( I know ^you do not wish your "name in question" as we say ) about Lunar Stratification when I touch on that subject as I have to do in Int. Obs<sup>1</sup>. or possibly Fraser. –

I must close now - & with M<sup>rs</sup> Webb's kind regards pray believe me,

My dear Sir,  
( Most certainly ) yours affectionately

Thomas William Webb

Please present my kind remembrances to M<sup>rs</sup> Ranyard and your father.

Pdfs 1068, 1069, 1070, 1071

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<sup>1</sup> Intellectual Observer and Fraser's magazine

Letter 18

Two weeks later

Hardwick Parsonage,  
Oct 20 / 64

My dear Sir,

I am very sorry for all the trouble I have been the means of causing to your good father: but I have sent him the regular Circular, which explains though it does not justify the mistake. – I am very thankful to hear of your new position and earnestly trust that you not only have been, but ever will be, Divinely directed. – “Commit thy works unto the LORD, and thy thoughts shall be established.”

I am short of time today (when am I long of it?) but must add my admiration of your cement plan – to which I can see no objection unless ~~it~~ ^ one ^ may arise from the unequal contraction ~~of the~~ & expansion of the surfaces of glass & metal cemented together. But actual trial would best decide this – I am sure M<sup>r</sup> With will be greatly obliged by the suggestion ^ as he was by your calculation ^ - and I can bespeak his great obligation for the Book you have been so very kind a to send ~~whi~~ for him, which duly arrived this morning. I will take it to him on Saturday, having to go to Hereford that day – when I shall have an opportunity of seeing his new 8¾ inch mirror worked to only 63 inches focus. Its spherical figure was very fine – I do not know whether it has been parabolized ~~its~~ yet (I am writing in a lot of talk!) – He has kindly offered to lend it to me for the opposition of ♀ [Mars]. M<sup>r</sup> Berthon<sup>1</sup> has by this time the speculum I chose for him (with much ado – for two were so nearly alike that had they been changed in my absence I could not I think have told the one for the other.)

M<sup>rs</sup> Webb particularly begs her kind regards - & with our united best wishes

I am always  
My dear Sir  
Yours affectionately  
T. W. Webb

We both wish you could come here soon and pay us a visit. –

*On back of page:*

A C Ranyard, Esq..

[Pdfs 1072, 1073, 1074, 1075](#)

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<sup>1</sup> Berthon, Edward Lyon 1813–1899. Obit MNRAS

**Letter 19**

Hardwick Parsonage,

*Same day To Mr. Ranyard Snr.*

Oct 20 / 64

My dear Sir,

I am very sorry to find that you have had to apply for my Dividend to no purpose – I hope you had some other business in the neighbourhood, so that it might not be altogether a waste [sic] journey.

I have taken the liberty of enclosing the official Notice – (which I shall not want again for 6 months) – to shew how that troublesome and unpleasant mistake arose. I was guided by the date 10<sup>th</sup> October which is so conspicuous in the first page, and did not attach any importance to the other dates, 17<sup>th</sup> October, inserted in the form – thinking it meant any day after the 10<sup>th</sup> – Should you not have already received the Dividend, and should you not dislike the additional trouble, it would be well perhaps to shew them their own Form, and ask whether it would not be advisable, in any future reprint of it, to state expressly that the Dividends cannot be received before the 17<sup>th</sup>. Many of the Country Clergy are like myself, little conversant with the forms of London business, and might not be aware that Due and Payable, do not always mean the same thing! However, pray do not give yourself any trouble about this. –

I am happy to hear that your Son is now a member of the University, where his abilities will find full scope for their exercise. He appears to me to be equally intellectual and amiable, as well as serious-minded, and I assure you I esteem it a privilege to have made his acquaintance – perhaps I may venture to call it something more – I not only hope, but fully expect, that M<sup>rs</sup> Ranyard and yourself will often have occasion to think upon Prov xxiii 25 [Thy father and thy mother shall be glad, and she that bore thee shall rejoice]. –

I have enclosed a little note for him, just to acknowledge his last to me – which if you please can be forwarded to him whenever you happen to be writing, but it contains nothing that will not wait your convenience.

I beg to offer my kind regards to M<sup>rs</sup> Ranyard, and with many apologies for the trouble I have unfortunately caused you, to remain.

My dear Sir,

Yours very faithfully

Tho<sup>s</sup>. W. Webb

*On bottom of page:*

— Ranyard Esq.

Letter 20

One week later

Hardwick Parsonage,  
Oct 28. 1864

My dear Sir,

I do not like to lose an opportunity of a little chat with you, whenever it may occur, as it does now, since I have to rectify a mistake I made in settling my account with your good father.

I hear that M<sup>r</sup> With's 8¾ inch speculum, which he will kindly allow me to test during the time of the opposition of Mars<sup>1</sup>, promises very splendid definition. I thought it very fine when I saw it, but I think he has retouched it since, & M<sup>r</sup> Key<sup>2</sup>, who is very difficult to please in such matters, seems delighted with it. I do not know whether it is yet silvered – that process sometimes brings out unsuspected error – but I sh<sup>d</sup>. not think it likely to do so in this case. It has the very convenient focus of only about 5 f<sup>t</sup>. 8 in. –

I see by the last Monthly Notices that Lascelles' [sic]<sup>3</sup> work must be very wonderful, as his 4f. will divide  $\gamma$  Coronel.

The new Moon Committee will soon hold their first meeting, at which I need not say I shall not be present – indeed I am ~~much less~~ ^not very^ moveable at any time for anything which other people can do as well without me - & just now I am much behind with higher & more important matters: the wedding preparations having interfered a good deal with parochial work (my attendance at Bath, however, & subsequent journey to the Isle of Wight, still more.)

~~Ha~~ you were the first to tell me of Huggins'<sup>4</sup> wonderful nebula discovery. He has since sent me his paper. It certainly is most marvellous. I have seen Mars twice. He is quite big enough for observation & has a band towards the S. pole coinciding I presume with some of ^the ^ best opposition spots, foreshortened however more – no traces of snow – poles. –

Last night he bore 239 very well in openings between fog – often favourable. —



I suppose the Northumberland Telescope<sup>5</sup> is not very accessible. I have heard its performance is not quite first-rate – I think it will not divide  $\gamma^2$  Andron, as it ought – but still it must give magnificent views. Cooke has just taken Dawes's new 8 inch home, forgetting the Driving Clock Cord & weight - & having sent a Driving Clock which seems not to have been tried – it proving too feeble in action. That man may be a first-rate optician, but he is anything but a man of business. —

M<sup>rs</sup> Webb's kindest regards & I am always

Yours affectionately

T. W. Webb

[Pdfs 1080, 1081, 1082, 1083](#)

<sup>1</sup> Dawes' observations of Mars, 1864–65, J. Brit. Astron. Assoc., 98 (6), 294–300 (1988) (with R.A. Marriott) Also Dawes in MNRAS vol xxv with R.A. Marriott). Happened Dec 2 1864

<sup>2</sup> Revd. Henry Cooper Key 1819–79 Obit MNRAS

<sup>3</sup> William Lassell. 1799–1880. Astronomer who was also a wealthy brewer. ODNB . Obit. The Observatory, Nov. 1880

<sup>4</sup> William Huggins. 1824–1910 Obit MNRAS

<sup>5</sup> The Northumberland<sup>1</sup> is now the only remaining large instrument from the early days of the University Observatory at Cambridge, and is preserved because of its great historical interest. It was for some years one of the world's largest refracting telescopes with an accurate clock-driven equatorial mounting to follow a star in its diurnal motion across the sky. The Duke of Northumberland, later Chancellor of the University, indicated his wish to present a large telescope to the recently founded Observatory in 1833, and was enthusiastically encouraged by the Director, G.B. Airy

Letter 21

Two months later

Hardwick Parsonage,  
Dec. 22. 1864

My dear Sir,

I have this long time forborne writing – not so much because my hands have been very full tho' that is quite true – as because I thought yours would be so – and I did not know your College address - & had nothing to say interesting enough to call for a forwarded letter. But now that, as I presume, you have returned and are again enjoying the pleasures of home, I must send a few lines to say how glad I shall be – and M<sup>rs</sup> Webb also, to hear something of your progress – how you like the University, what fresh paths of knowledge have opened out before you; - and in fact anything that you like to tell us, for we shall be sure to be interested in it. I wish you could come & tell us vivâ voce, but of that, I fear there is no prospect just now. We have been going on much as usual – with a great deal to be thankful for as to health & many temporal comforts – and as usual ~~rat~~ also rather more to do than is always convenient. A Confirmation held at my Church, & the marriage of two dear friends<sup>1</sup> from this house, took up much time & attention. In scientific matters there has been some little progress. ~~I had (but forgot whether) I~~ I told you at Bath about M<sup>r</sup> With's 8 inch specula which I had been testing for him. M<sup>r</sup> Berthon took one, which he has carried with him on a lovely stand of his own invention, to Malaga, whither he has taken M<sup>rs</sup> B. for her health during the winter. – He had, I have been often sorry to think – to sail during miserable weather, & against a tremendous head-wind & she must have been very unfit for such a trial. I am anxiously expecting to hear from him shortly. – Another of those specula has been sold to an ardent amateur near Yarmouth. In the mean time M<sup>r</sup> With had polished one of 8.75 inches to only 68 inches (I think) focus, which he found beat all previous results - & which as I saw performed admirably upon his test-dials. And this I was to have had over here to test it & use it during the opposition of ♀, [Mars] when, as I had been asked by M<sup>r</sup> Lockyer to co-operate in a grand attack upon that planet, I hoped to find it eminently useful, & to ^be^ as much before Lockyer & Phillips instrumentally this time, as I was behind them in 1862. But it was unluckily mounted upon the stand of the 8 inch & the purchaser of the latter, a red-hot amateur, would hear of no delay, & it was obliged to be dismantled & lie idle for the present. I still hope, however, to make acquaintance with it some day. – Then I had a visit from an amateur achromatic OG. maker, the Rev<sup>d</sup> R. Crowe of Huddersfield – who came all that long way gladly to see a good sized OG. of high character, & who was quite delighted with what he saw. He had but two or three nights to be here, & the weather was piteously unpromising, but one night it cleared off, as if on purpose, & we had unusually fine definition. He appeared to be a good man & we had much interesting talk, not only on that subject. As an optician, he seems to have attained great proficiency, & as far as I can make out his work is superior to that of second-rate opticians, if not yet up to that of Cooke or Dallmeyer<sup>2</sup>. He has I think some 30 pair of tools. He pointed out to me that the centring of my OG. in the tube, which I never considered as more than an approximation, was much more “out” than I suspected, & I have to ascribe to that, some botheration of vision which I have thought atmospheric or depending on the temperature of the tube. And the next thing to be told is, that tho' this was several weeks ago, I have (must I tell you?) never centred it to this day! – Then did I tell you that M<sup>r</sup> Buckingham<sup>3</sup> very generously made me a present of a beautifully made apparatus, something resembling a tangent screw on a large scale, for steadying

<sup>1</sup> This was the marriage of Thomas Owen Tudor and Marianne Hughes on October 25<sup>th</sup> 1864. The bridegroom was Henrietta's cousin. The bride was the sister-in-law of Dr. Barry See Letter 142

<sup>2</sup> See Letter 5

<sup>3</sup> James Buckingham (dates unknown) had an engineering works at Walworth Common. Buckingham worked with the optician William Wray

my ricketty stand in RA. And this has never been properly fitted on, to this day ?! I trust your arrangements, scientific or otherwise, will never be conducted on a similar plan! – Then I have had a disappointing letter from M<sup>r</sup> Lockyer, whom I regard as the Coryphaeus<sup>1</sup> of our Martial work telling me that through indisposition & over employment he had been able to do hardly anything ! – And this morning I got a more encouraging missive from M<sup>r</sup> DelaRue<sup>2</sup>, who has very obligingly examined M<sup>r</sup> Berthon’s little Transit Invention at Somerset House, where it was left, & thinks well enough of it to ~~recommend~~ mention it to Smith and Beck<sup>3</sup>, tho’ I fear it will not prove a paying affair. –

And one more curious matter has turned up – A young man (who or what I do not know) named Herbert Ingall<sup>4</sup> – whose name may be seen in the Astron: register – has written to ask me about the means of turning a simple refractor of 6 inches aperture & 6 f<sup>t</sup>. focus with which he has been observing, into a Dyalte. I recommended an experiment on a smaller scale, & gave some hints which he has carried out in his own way with very encouraging success, and with fabulously little outlay. It is something worth thinking about . His 3 inch OG. actually divides the little star following Procyon (170P.VII) - & I am sure can be but little behind a good achromatic of that size. And this, but the second attempt & costing him some 5s or 6s. – There is something about him that leads me to think he will turn out a capital astronomer some day. – and then Mr Knott<sup>5</sup> & myself have been chasing H’s “extraordinary phenomenon, 45 H.IV, a nebulous star in Gemini, which I perceived bore differently from an adjacent star from its position as given both by H & Sm<sup>6</sup> – I asked Mr Knott to look after it with his grand OG & micrometer & capital eye, & the result is a change of angle of ~~between 6~~ about 7.5° in some 30 years. There is probably proper motion, rather than rotation - & it ought to be ascertained whether it is in the nebulous or the clear star – if the former it is a very curious & unique case, amounting to demonstration that the star is not projected upon the nebulosity, but is the actual centre of it – a fresh confirmation of Huggins’s discovery from an unexpected quarter.

And now I think I have pretty well emptied my budget - & it is well if I have not tired you – so with my kind regards to your parents, & our united best wishes & compliments of the season I remain, my Dear Sir,

Yours affectionately,

T. W. Webb

My father desires to add his kind regards  
& best wishes, & hopes you are getting on. –

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<sup>1</sup> The leader of the chorus in ancient Greek drama, a leader, as of a sect or movement

<sup>2</sup> Warren delaRue. 1815-89 Obi MNRAS

<sup>3</sup> Smith & Beck 6 Coleman St. London This partnership 1847-1856 before Richard Beck's brother Joseph Beck joined the company in 1851

<sup>4</sup> See Letters 23 and 211

<sup>5</sup> George KNOTT 1835-1894. Keen double star observer. Obituary in The Observatory 1894 and Obi.MNRAS

<sup>6</sup> Herschel and Smyth



## Letter 22

Almost six weeks later

Hardwick Parsonage,  
Feb 6. /65Not posted till 7<sup>th</sup> owing to dreadful state of Roads with snow

My dear Sir,

Right glad was I to hear from you, for I had been thinking of you often, & wondering how you were getting on. And now I am rejoiced to get so pleasant an account, both ~~of~~ of your proceedings & your expectations. What you have said as to the trial of prosperity is I am sure most true – thro' a Heavenly Father's mercy I have known much of it myself. But he that knew how to be abased, knew also how to abound – everywhere & in all things he was instructed – but it was by the same Divine Teacher who is equally willing to impart the same lesson of sufficiency – derived indeed, but only the more real on that account – to all who look for it at his hands. You will not be in real danger, I believe, my dear friend, so long as you fear lest you should be. And under the wholesome impresssion, you will I have no doubt, feel it your duty to cultivate your every talent to its full extent. And He whose providence has given you this opening, & enabled you to see a little way along a pleasant path, will no doubt assign you your place & your work. What it may be, time will shew – but one thing is evident – that there is at present a great want of Christian science – the two lines – instead of converging to their ultimate end in the glory of God, are not even running parallel – the divergence is equally obvious & painful - & he that sets himself to work, however humbly & distrustfully in remedying this, the greatest evil of the day (Popery, bad as it is, will I am sure be in the end found a far inferior mischief) will be a workman that need not be ashamed. If such a poor shortsighted creature as myself might venture to speculate upon futurity, such, I should ~~not~~ suppose, will be your future destination – and a very honourable one it will be.

A good many matters have passed through my hands since we parted: - the results of which I have chiefly been filtered into the Int: Obs.<sup>1</sup> I have had a little correspondence of a nebulous character with M<sup>r</sup> Huggins, whom I find most pleasant & obliging. His Orion results &c. certainly place him at the head of the discoverers of the century. I have asked him to examine that most curious nebulous star 45H.IV ?? which I have been looking at, & have ascertained (or rather M<sup>r</sup> Knott has ascertained what I did but estimate) that either it or its companion star, has moved in angle. – M<sup>r</sup> With's silvered specula go on admirably. He is about to commence one of 12 inches, from his great success on 8.75.-

The latter I have only tried on terrestrial objects – but it was very fine. I was to have had it for the opposition of ♀ [Mars] - but Mr With had but one stand – intended for trial purposes – and that was carried off by a red-hot customer – who bought one of the 8 inch that I tried, & says he would not change it for a 6 inch Clark or Dallmeyer<sup>2</sup>. I could not quite endorse that, but certainly is a noble instrument. If you have any astronomical friends ^at Cambridge^ who are thinking of setting themselves up with an instrument at a very moderate cost, it is worth their consideration. The Dialyte scheme, too, has made more progress than I expected – having been taken up by a young man named Ingall<sup>3</sup> of Camberwell – of whom I know nothing but as an ingenious correspondent. He applied to me for some information, which he has worked out well by means of a very cheap & good optician - & the results, with 3 & 4 inches, of very approximate trials, is highly satisfactory. The latter, tho' the curves differed a god deal from my recommendation, divides ζ Orionis, & my young friend is delighted. – I have sent all my Mars

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<sup>1</sup> Intellectual Observer

<sup>2</sup> See Letter5 p.1

<sup>3</sup> Herbert Ingall. See Letter 211

Observations to M<sup>r</sup> Lockyer. What he will do with them I do not know. – I feel very much obliged to your good Father for his very kind offer of executing any Commission from me. Pray thank him especially for me when you may be writing - & offer my kind remembrances to your excellent Mother. I hope you will let me hear of your progress from time to time, and in the mean time believe me to be

My dear Sir,  
Yours affectionately,  
T. W. Webb

*Written to the left of the valediction:*

M<sup>r</sup> Berthon has found Malaga so miserable he has decided upon proceeding to Malta. I was fortunate enough to get him an introduction to M<sup>r</sup> Lassell from Adm<sup>l</sup>. Smyth.

Letter 23

Two months later

Hardwick Parsonage,  
Hay,  
April 5 /65

My dear Sir,

Just a line to say with what great pleasure we are anticipating a meeting with you in Town. For we hope that your Vacation will coincide with our visit - & though we fear you will be deeply occupied, yet we ~~hope~~ ^trust^ you will be able to bestow some fractions of your leisure upon us (don't let them be a "diverging series") – We intend, D.V. to come up all of us to London on Easter Tuesday, & shall be there 5 or 6 weeks, I running backwards and forwards to my duty. Our first stay will be – for a fortnight – at M<sup>rs</sup>Wyatts' 77 Great Russell St<sup>1</sup>. – then we shall be with our friend in Belgravia as before & then back to our old lodgings opposite M<sup>rs</sup>. Wyatt's. I shall have various things to tell you – both about silvered specula & Dialytes – both of which go on remarkably well – but I will not forestall it, as I hope for some right pleasant opportunities of talk. Do you remember walking so kindly with me all the way beyond the Clock Tower, which we listened to (or rather the bells in it) I think at 11 o'clock P.M. – And our talk was I believe about the Auvergne volcanoes.

Our good friend M<sup>r</sup>.Berthon has just returned from Malta in time that his wife might expire in the midst of her family whom she longed to see again. It seems to have been a very sad trial to him – but she departed in "the multitude of peace."

M<sup>r</sup> Birt seems to be very hard at work on the Moon.

M<sup>rs</sup>.Webb desires me to say that she has a great favour to ask you – if you will allow us to have your Carte de Visite<sup>2</sup> – which we will exchange for ours if you would like to have them- i.e. – A.C.R. = H.M.W. +T.W.W. An equation having an affirmative root. –

With our united very kind regards believe me,

My dear Sir,  
Yours affectionately,  
Tho<sup>s</sup>. W. Webb

I trust your good parents are both well, & beg my kind regards to them.

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<sup>1</sup> Sister of Henrietta Webb

<sup>2</sup> See Letter 11

Letter 24

Eight days later

Hardwick Parsonage,  
Ap<sup>r</sup> 13. /65

My dear Sir,

We were truly glad to hear from you but it is a great disappointment to find that you will be leaving London so very soon after our arrival. We purpose D.V. starting on Monday, sleeping at Glos'ter, & reaching Paddington ^on Tuesday morning^ by the express which gets there at 11.15. – when if you like to meet us & it is quite convenient to you to come, we shall be truly glad to see you – not however a matter of selfish convenience – for we have been so long used to travelling, & that station, that luggage arrangements etc. give us now very little trouble. Still, pray do just what is most agreeable to yourself – only we shall hope to see something of you that day at my brother-in-law M<sup>r</sup> T. Wyatt's in Gr<sup>t</sup>. Russell St (77) where we shall be quartered for the first part of our stay in Town. It is most kind of you to postpone your journey on our account, & I sincerely hope you will not in be [sic] in any shape inconvenienced by it. Thank you for the Card of the Math: Society. As I never see the Athenaeum now (having changed it for the Reader) I have not read the notice you speak of. –

The Dialyte which we talked over so much in a shopping expedition has been very successfullly taken in hand by a young man named Ingall in Camberwell, whom I hope to go & see – his 4 inch seems nearly = an achromatic of that size. – and M<sup>r</sup> With's specula are splendid. He has made but 8 or 10 8. inch but now divides with them A & B of ζ Caneri, which my object glass will only elongate. I saw the black separation myself last Monday evening. This is a great feat. And the horns of ♀ [Venus] were charmingly sharp with a high power. He is now ready to undertake a 12 inch, if anybody w<sup>d</sup>. give him an order.

I think I mentioned to you M<sup>rs</sup>.Berthon's release, which seems to have been a very happy & peaceful one. I don't know whether we shall have any chance of seeing him while in Town. –

I hope your good parents are quite well – please remember me kindly to them, & with M<sup>rs</sup>. Webb's very kind regards believe me,

My dear Sir,  
Yours affectionately,  
T. W . Webb.

M<sup>rs</sup> Webb desires me to add that she has the 2 Carte de Visite<sup>1</sup> ready for you, & hopes to receive yours in return.

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<sup>1</sup> See letter 11

Letter 25

Ten weeks later

Hardwick Parsonage, Hay,  
June 30 1865

My dear Sir,

The pleasure we felt at hearing from you was sadly allayed by the contents of your letter – we had been so anxiously hoping for the gratification of your visit. And I don't know why the Hay fever need have hindered it. Certainly not for want of sympathy, for I had it myself – as I have done any time these 50 years. (There's a prospect of future pleasant summers for you!) – And I think Hardwick would not prove less salutary than Brighton air.

A further sentence in your letter admits of two interpretations – you ~~hope~~ ^trust^ you have not lost the chance of seeing us, because you hope to be at the B.A. meeting at Birmingham<sup>1</sup>. Does this mean you think we shall be there, or do you mean you mean to take us on the road? The latter we hope – for our going there is a very uncertain matter.

You'll forgive a scolding which - as you will easily perceive – arises simply from the great regard we feel for you, and the consequent regret that we should have such very few opportunities of meeting. Life is short, and we, especially, are advancing in it. But our past experience of friendship has been far too pleasant to allow of our willingly foregoing any opportunity of cultivating it - that is with anyone whose principles qualify him to be a friend. –

I am writing in the midst of talk & interruption & have but little time – but I must thank you for kindly sending me the London Review on the Math: Soc<sup>y</sup>. – you speak of a ~~couple~~ couple of “reviews” but one only has reached me. Shall I return it?

Do you know of anyone who takes in the Geological Magazine, and would not be disinclined to learn in the recent No. (for May I think) containing a paper by M<sup>r</sup> Bonney<sup>2</sup> on the Auvergne volcanoes – my pet subject? I mean if possible to dig for silver in the lava, - It has been handled I fear unwisely by Archd<sup>n</sup>. Garbett<sup>3</sup> but have no right to an opinion till I have seen what he has written - which is either in the Guardian or Daily News of last Sept<sup>r</sup>. – I fear I shall see no file of them till I can go to London – & when that may be, I have no idea whatever. I think I have all the ancient materials of any value relating to the Mamerous [? or Mamereus]<sup>4</sup> affair – but sh<sup>d</sup>. much like to know what shape other people have twisted them into.

We had splendid definition during the clear skies - & I got my OG into better centring. With's specula are very fine. He is now attempting 10¼ inches. – I hear a very queer account of your Northumberland<sup>5</sup> telescope from one who ought to know. It is I guess neither homogeneous nor achromatic, tho' a grand work. – Birt's 4¼ Cooke is very nice: his driving Clock more fit for a Windup Jack (if you know what that old fashioned machine was). Slater's 16 inch which we saw at Bath, fair. I think the “Materiam superabat opus”<sup>6</sup>. – it shewed me **h** [Saturn] respectably. But what a sight was the Annula Neb: - in Buckingham's 20 inch. M<sup>r</sup> Huggins kindly shewed me much & w<sup>d</sup>. have shewed me more, but for weather etc. He is a very obliging man - & is on a splendid line of discovery.

<sup>1</sup> British Association for the Advancement of Science 1865 meeting

<sup>2</sup> T.G. Bonney 1833-1923, geologist ODNB Geological magazine June 1865 Vol2 issue 2 *On the evidence of Volcanic Eruption in Central France in the fifth century*. Maybe Webb was interested in the reference in that article to Bishop Colenso. See elsewhere in letter 38

<sup>3</sup> Probably Edward Garbett ODNB

<sup>4</sup> Can find no reference to this – or even be sure of correct spelling

<sup>5</sup> See letter 20

<sup>6</sup> Ovid: 'Metamorphoses', Book II, line 5. 'The work excelled the material' or the workmanship was better than the subject matter [which does not seem to fit in with Webb's opinion of Slater]

M<sup>rs</sup>. Webb sends her very kind regards – & earnestly hoping a great blessing may attend  
you

I remain

My dear Sir,

Yours affectionately,

T. W . Webb.

*Pages which follow in the original are the incomplete drafts of two articles; They are not transcribed here. The complete articles may be found in the Intellectual Observer as follows:  
The colours of Stars: I.O. vol. 7 July 1865 pp. 467-71  
Lunar details: I.O. vol. 8 August 1865 pp. 28-32*

**Letter 26**

*[At top of sheet, written upside down in TWW hand:]*

My dear young friend,

I owe you a letter - & here is a Scrap – but I cannot send more today especially after being my wife’s amanuensis – I must however say how very kind I think your treatment of my drawing – to which I am more reconciled - & it may please you to know this) from its having been very ill represented in the Wood Cut – so that it has some little comparative value [expressed by a fraction 1/1000000000 &c.] While the larger map which you admired when here has been very well engraved on Steel – No more now but very best wishes from your very affectionate friend.

T.W.Webb

*[Marginal note in HMW’s hand:]*

I beg you look at my husband’s

**Letter 27**

Great St Andrews St.. *[Seven Dials / St Giles,*

*London]*

*[In HMW’s hand:]*

My dear M<sup>f</sup> Ranyard

Thank you for your most kind letter which was as pleasant as it was unexpected

*[the letter continues in TWW’s hand]* It was exactly the thing I wanted, to have a letter from you, & it has done me good – I have been very far from well – bad headaches, owing I suppose to having seen a good deal of company lately – Will you tell your dear Mother with my kindest regards, that the Picture for the Mission [Blümlis Alp from Lake of Thun] is under the care of my Cousin Walter Greenfield<sup>1</sup>, who will take it to London in Oct. when he returns to Bedford Place, and can easily leave it at anytime in Hunter St. – I wish it were likely bring more money than I expect it will. – I am very sorry to hear you have trouble with your teeth – but I hope you will be all right after going to Town – and what a pleasure it will be to see your dear Mother again! I wish with all my heart that you were coming to stay with us also – but I know that is out of the question. But will you please think of us at Xmas & come & pay us a visit, if only for a week! I think you are quite bound to do it after that horrid parting in the hall and on the stairs, that eventful evening Tuesday July 18, 1865. I want to see you in the same position again under a very different aspect. I am delighted at the thought of having a Photog. of your rooms, as we shall then be able to imagine you in them, & that will be very pleasant, for you seem quite to belong to us now, in some shape. Do not forget that you promised me a Photo of Swanscombe. The little Fern you sent is planted & looks very flourishing in the greenhouse - it is pleasant to think that I have got some little living thing that you have given us. I wonder whether your book (The Duke of Manchester’s Court &c.) was the same I read last year – which of course interested me, as my Grandmother was a Montagu. – How can you ask me for advice about Cromwell, when I behaved so very shamefully to you on that very subject! Please to remember that I only felt vexed that one I loved so much should think so differently from me & my belongings. I could admire the good parts of Cromwell as well as you, and when I was your age I thought him perfection – but I found out the shield had two sides - & my reverence for the Bible led me to feel that however wrong Charles might have been – and I know he was – the safest side is even that of obedience to Him who has bid us be subject to the higher powers. Do ~~not~~ pray understand that as far as we are concerned we shall love you all the same whatever your views may be on that point. – About Guizot,<sup>2</sup> I hear from my learned companion, the senior of this house, that he has not seen that part

<sup>1</sup> Remote cousin of Henrietta Webb on Wyatt side b.1846

<sup>2</sup> François Pierre Guillaume Guizot 1787 - 1874) French historian, orator, and statesman. Probably his History of Charles I and the English revolution 1625-49. Trans. By A.R.Scobie. 2vols.8vo 1854

of ~~the~~ his history of the English Civil War – but that he considers him a very and truthful writer, and always worthy of attention, though he thinks he has hardly done Richard Cromwell (whose life he has) justice. When you come here at Xmas – which of course you will do! – please to bring Guizot with you, as we have not read it - & then you shall look over Rich<sup>d</sup> Cromwell's papers with my father<sup>1</sup>. –

About the Moon – You have highly honoured the dirty disc (not dish!) by framing it – it is very pleasant to me to think that you appreciate & so fully enter into my husband's tastes and pursuits. – I have not done with you yet about the Vignetting – if you have an opportunity in London will you ask if it is possible to get rid of the background in Louey's portrait – she unfortunately sat at the side instead of the centre, & so the porch is brought in, which I detest,

[*the letter continues in HMW's hand,*] there is such a demand for their Photos amongst our neighbours here that I want to send good ones. When you write next, please after the 1<sup>st</sup> direct to us at “The Lady Emily Harding<sup>2</sup>, Elmhurst, Stratford on Avon, then after the 9<sup>th</sup> to “M<sup>rs</sup>. Stackhouse Acton<sup>3</sup>. Acton Scott, near Church Stretton” where we shall remain a week. We are likely to go from Stratford to the British Ass! meeting for two days, & I daresay we shall be writing to you from there, but always bear in mind that it would make me unhappy if I thought our writing to you prevented you from ~~not~~ ^doing^ your work, & I trust to your friendship to say so. Your excellent mother might well send us a letter of reproof if we interfered with duty, & upon the same principle you must not if you love us worry yourself to write to us, much as we prize your letters we value your welfare in your College life far more. – [*the letter continues in TWW's hand*]. Thank you for your kind offer of doing any thing for us in London – we have nothing at present. If your Father in Oct: would be so kind as to receive our little Dividend we sh<sup>d</sup>. be greatly obliged. Do you ever look at Goulburn<sup>4</sup>? I think he is very fair. I am going to look at (may I understand it!) Baylee's Genesis & Geology<sup>5</sup> [*the letter continues in HMW's hand*] My Father & my dear Husband (who has been helping me to write) unite in kindest love & believe that I am always your very affectionate & faithful friend

H.M.Webb

Hardwicke Aug 24

*On a small piece of paper, HMW has written on one side:*

My husband gave this to me & I shall give it to you because I think you worthy of it! To my mind it is invaluable being the original ^done by his own hand^ of the index Map of the Moon published in the In: Obs:

*And on the other side TWW who folded it into half has written:*

Thank you very much my dear friend for your loving letter just come in. But if you love me don't sit up till 2 to write to anybody. The bookseller is an ass. – Ask Bumpus<sup>6</sup>, 6 Holborn Bars to send for Beer & Mädlers – (turn back or somewhere)

*Reverso* Mappa Selenographica – published at Berlin, in 4 Sections. – But mind he does not get you Lohrmann's<sup>1</sup> Map instead because he has been getting that recently for at least 3 people,

---

<sup>1</sup> Meaning her father-in-law, John Webb

<sup>2</sup> Relation of John Webb's late wife.

<sup>3</sup> Friends of the Webbs. Mrs Frances Stackhouse Acton 1784-1881. Lived at Acton Scott, Shropshire. Was married to Thomas Pendarvis(?) of Cornwall who took the name of Stackhouse. He died in 1835 at the age of 57, so she was a widow for 46 years.

<sup>4</sup> Probably Revd Edward Meyrick Goulburn 1818-1897 Headmaster of Rugby, later Dean of Norwich. Conservative churchman who wrote *Thoughts On Personal Religion. Intended to Carry the Reader Somewhat Further Onward in the Spiritual Life*. 1862

<sup>5</sup> Rev Joseph Baylee: *Genesis and Geology: The Holy Word of God defended from its assailants*. A.Holden 1857

<sup>6</sup> J & E Bumpus. Firm established 1790. In 1858 moved to Oxford Street



& it will run in his head – which in astronomical matters is shallowish. E.G. I was positively told that somebody having gone to him to enquire whether he had so & so's Map of the Moon – he replied No but he ~~has~~ had got the Ordnance Map of the Moon! Nevertheless give him a correct title & he will do well by you.

Now we are now all off to the Black Mountains – this old guide has but a minute or two to tell you we wish you were of the party, 'tis a splendid day.

My wife sends you some better photographs tho' not yet satisfied with her paper for printing – a specimen of Photographed fern among them & she wishes to have your opinion as to whether such things (ie a little book containing 2 or 3 dozen of them) w<sup>d</sup> be likely to sell for charity. She is very much obliged by your very kind letter which has been a great comfort to us. She undertakes things much better now – she only hopes her letters don't interrupt x+y – if so you must stop them.

With our best love & kind regards for your little pupils

Yrs. Very affectionately

Thomas William Webb

We are thankful to have a better account of your dear mother.

[*in faint pencil*] Please tear up the old Photo. of [?...] now you have a better. I wish you were with us today.

T.W.W.

***The numbering of the letters on the original documents got somewhat confused at this point so there appears to be no separate 28 or 29. They are mixed up with the long letter in both the hands of TWW and HMW. Hence the numbers now move to 30***

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<sup>1</sup> Wilhelm Gottself Lohrmann 1796-1840. Completed the drawings for 25 sections of his moon map by 1836, but died before he could secure their publication. In 1851 Schmidt took almost 30 years to edited the remaining. Lohrmann's map was finally published in 1878

**Letter 30**

**Probably about a month later**

*Written sideways at top of first page:*

P.S. My wife desires her kindest regards to you & says she ought to have apologized to you for the pencillings in Goulburn's<sup>1</sup> book which she forgot to rub out. The fact is she had not time to send for a new one – but if you like to return it she will send you her new one, which is an enlarged & better edition (the 7<sup>th</sup>) – She is very busy preparing 2 paintings for Manchester, & is also going to send to the French Artists & Birmingham. She is sure you must be quite sick of her hand writing by this time.

(Finished Aug. 1.)

Hardwick Parsonage

July 31. 1865.

My dear young friend,

I have been thinking, and thinking, of writing – but never doing it – and rather sheltering my omission under the right pleasant correspondence which has been going on between my dear Wife and yourself. But I am conscious that this will not do – and though you will I know make all allowance for a busier man than I may have appeared during your visit – which was holiday-time for me, still you will think, and very justly, that I might squeeze out a little time for you. –

In fact I have been thinking much though writing little – thinking with much sympathy and regret upon your trying position in the University – and earnestly hoping it may please a merciful Providence to direct you to some good, wise, steady friend who may counteract the evil influence which is being brought to bear so extensively against your stability and happiness. I believe you thought to have found that friend in me and I am sure you must to a certain extent have been disappointed – and this, I am sorry to think, must have made your little visit less pleasant and profitable than you had expected. But however I may regret this, I do not feel to blame for it – as I have no idea what might have led you to think of me as I believe you did, before you found out more about me. One does not usually shew one's colours – at least I do not – in ordinary & mixed society?? – but I can acquit myself of sailing under any but my own.

Well - if this should lead you not to trust in the arm of flesh it may be well. It certainly will be well if it should prove the means of your closer recourse to the Great Teacher of Divine Truth. – But you must not suppose that I am not most willing, and more than willing, anxious to help you as far as my little ability and acquaintance with these subjects extends, and as far as you may be willing to accept help from one whose education & habits of thought are so unlike, not merely your own, but the picture of him which you had – I know not how or why – drawn in your own imagination. But, even if you felt disposed, in your great kindness and charity, to overlook some matters of difference, what could be done at such a distance? You want someone to refer to frequently, as fresh puzzles and annoyances arise - someone to whom you can open your mind with all that readiness and freedom which are so hard on paper & so easy in conversation.

Still, there were some things quite evident to me – on which I did not hesitate to say what I thought – and if you please I must by permission to say those things again – because our talks were so discursive & took in such a multitude of subjects scientific, social, historical, political, and ecclesiastical, that it would be no wonder if, according to the old proverb, you “could not see the wood for trees” – for which I was somewhat to blame. But I rather fancied that, especially towards the close of our time together, you became more shy of the most central & vital matters - & I felt unwilling to intrude upon you. It might have been wiser had I held you more closely to

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<sup>1</sup> See Letter 27

certain points - & let the rest take their chance – for a wasted opportunity is a sad reflection, and I have too many upon my conscience already.

First of all, I think it is of the highest consequence that you should exercise self-denial as to the reading of sceptical books. You may be told that this is mere enquiry after truth. I believe it to be tempting God to leave you to yourself. It is not a search after truth unless you had time & opportunity to study both sides fully. Even this is not desirable for a young mind, which is apt to catch at appearances & be more easily unsettled than get straight again. In this matter I certainly think you went out of your way to do yourself harm & it will ever be true, to the end of the world, “He that seeketh mischief, it shall come unto him.” You will tell me perhaps, you must give up which is very congenial to your tastes & feelings if you refuse such study. But this must not be tampered with. You partly see your own danger, & you will therefore be inexcusable if you persist in putting yourself in the way of it. ~~And as for companions though I wish truly~~ And there never can be any pretext for reading more of what you have already found injurious. It is but the intoxication of error instead of alcohol. –

But as to the question of companions – there I must truly sympathise with you. You can more easily exercise due self-denial as to reading, than hearing, scepticism. It seems to me your positive duty to seek support against their evil influence by getting amongst a sounder class of men – These may not be so much to your natural taste – I dare say they would not be so much to mine – for I have found so called “religious” people - & certainly religious-party-people – very disagreeable. But where your first principles are concerned, natural taste must be not too much listened to – and if you ask him, I can well believe that your Heavenly Father would direct you to some friend, or friends, who, without annoying your feelings, would strengthen your good resolutions, & keep you more steady in the narrow path. If you cannot ~~do~~ <sup>^find^</sup> this help, it does seem to me positive duty that you should be reserved on those subjects with your present acquaintances, & let them perceive that such discussions are unwelcome to you. –

2. Do let me beg of you to make a strict practice of diligently, perseveringly, and humbly studying God’s word. I believe that many of those who are now slighting its authority are “speaking evil of those things which they know not.” Nor do I think that, had you endeared it to yourself as David did and as so many thousands have done, you would so willingly easily have listened to attacks upon it. I do not venture to say that you do not know it very well – But I am at any rate sufficiently observant in such matters to entertain suspicions – the truth of which you best know. –

And you will bear in mind that if we acknowledge our Lord, in the first instance, to be a teacher come from God (to say nothing of his being infinitely more and if we believe the Apostles and prophets to have spoken by His Spirit, we must come to Scripture, not to sit in judgement upon it, but to learn from it, and to submit ourselves to that fulness of adorable wisdom which it contains. It may be that a diligent, prayerful, impartial study of it may lead us to question some fallible schemes of doctrine deduced from it, by fallible men – or rather invented by themselves, and attempt to be supported by Divine authority – But we shall only gain, by such – rejection I will not call it – but avoiding of “wood, hay, & stubble.” – The “gold, silver, & precious stones” would only gain in brightness by separation from such admixtures as the Apostle foresaw & foretold. The Church of Rome is the most glaring instance of a superstructure of utter rubbish upon the true foundation, which nevertheless they do hold in its essential truth – but it is not difficult to trace the working of human infirmity in the interpretation of Scripture, in many other questions, comparatively free from glaring error.

All this careful examination, which is the duty of every Christian who has the opportunity for it – (and you ought to make opportunity) will be the most different thing possible from the irreverent “higher criticism” (so called) of the present day, which ~~exam~~ scrutinizes God’s word with a view, not of ~~eliciting~~ discovering truth, but of detecting error.

I hope I need not add, in the next place, the necessity of earnest and humble prayer – I may add – at the risk of being thought prejudiced (for which I care right little) my suspicion that

not all of you those who have been influencing you, have sought for that knowledge which they fancy they possess, as the gift of God. –

You will consider me very one-sided if I add my full persuasion that you have listened to a greater amount of historical untruth – I mean not merely as regards past but present times – than you have any idea of. Blame me as you will, & think of me as you will, facts are facts in spite of the “Liberation Society”<sup>1</sup> and its admirers. I more than suspect that a large proportion of good, pious, estimable & valuable non-conformists known as much of historical fact as the French in Napoleon’s time did of the battle of Trafalgar.

The reluctance which you spoke of, as having met with in many persons to speaking on the subject of the Atonement I cannot say I feel [sic]– What subject can be more worthy of that devout & affectionate study out of which the mouth will speak? What I do feel, perhaps is the great ~~inde~~ inadequacy of some phraseology often used about it by pious people, to express anything like the extent of this glorious provision of Divine Love not ~~so much~~ merely I venture to think for the harmonizing of His own justice & mercy ~~as for~~ but (with which I think many statements stop short) but for the reconciling of the sinful nature of man.

– But I must not go on in this way, or I shall completely exhaust your patience and make you wish never to hear from me again. Will you please accept this, at any rate, as some proof of my real & deep interest in you & anxiety for your best interests, & believe me (whatever you may think of my notions,)

Yours very affectionately,  
Tho<sup>s</sup>. W. Webb

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<sup>1</sup> Founded by Edward Miall, prominent Congregationalist minister and journalist in 1844. From 1853 known as the Liberation Society. Main aim to free church from state control. Supporters by such non-conformists as John Bright

**Letter 31****Four days later**

Hardwick Pars. Aug. 5/65

My dear young friend,

I write with Red Ink, most certainly not in token of Controversy! but just because it is in the room, & the black ink is out of it – to thank you most sincerely & affectionately for your truly kind letter. It gives me quiet comfort to know that you have at any rate not thought unworthy of consideration some things I mentioned – not I hope chiefly for the pleasure of knowing that my dear young friend agrees with me – a poor motive in comparison, truly – as ^but^ from the hope that he may thus ultimately find himself in accordance with the principles of truth & goodness – which change not, amid the variations of this strangely mutable world. Nothing can be more gratifying to me than the thought that you are more decided as to keeping out of temptation – Things which I have since heard respecting the case of one but little older than yourself of Oxford, not Cambridge, & personally unknown to both of us, - make me still more thankful that you have resolved to watch against the miserable sceptical spirit of the day. I don't know how the poor young man in question began – but he has ended by giving up prayer as useless! or rather I sh<sup>d</sup>. not have said ended – for who can say where such a course may end ! – Thro' his case however I have become acquainted with the alleged fact which is well worth bearing in mind – that two at any rate of the highly-praised writers on the sceptical side - & men who are thought to be “such good men” - are really of immoral principles. (I believe however this does not apply to Jowett<sup>1</sup>.) “By their fruits ye shall know them.” The wish that there sh<sup>d</sup>. be no judgement is often the strongest argument against the Being of the Judge? As to what you have been pleased to say about myself (←to M<sup>rs</sup>Webb) I hardly know what to say – but that I cannot possibly love you the less for the mistaken opinion you have formed – I can only feel greatly ashamed of myself - & pray that your kind & loving feeling may never be the means of your being misled in anything.

However, don't suppose I can't understand you. For I have myself before now admired people greatly for no very sufficient reason - & when I found out things which shook my opinion of them, still did not ~~fo~~? succeed in disentangling my feelings – or perhaps attempt to do it. – I have but one fault to find with your most kind & greatly prized letters, you have told us nothing about your dear Mother. But I think your silence is a sufficient proof that your anxiety about her is at an end - & we are truly thankful for it. – I recollect (it has just come into my head) your saying something to me about the eternity of punishment of which I took no notice, from forgetfulness, while you were here – let me then take this opportunity – lest I sh<sup>d</sup>. forget again – of saying that it appears to me, that as to positive & arbitrary infliction, we have no data excepting such as we find in God's world – but there is another view of the subject which ought to be considered & which has great weight with me. Holiness, we are agreed, is essentially & necessarily (not arbitrarily or depending on positive enactment,) happiness. And therefore sin must be essentially & necessarily (not arbitrarily or depending on positive enactment)miserable. And therefore the sinner must continue miserable, as long as he continues such. But the Scripture contains not the least intimation of any change of moral disposition in the sufferer ^hereafter^: & therefore there is no revealed hope of any end of his torments. I can easily understand, in the abstract, a mitigation, or termination, of an arbitrary & positive punishment – but that would avail little as long as the nature continued wicked & estranged from God. It w<sup>d</sup>. be merely like releasing from prison a poor wretch tortured by an incurable disease, who w<sup>d</sup>. be equally in pain everywhere. – Tho' my wife has written, she has a message for you, thanking you very much for the Crests. Coloured ones are what she wants, & she will be very thankful for any that you may happen to have at any time, as she is also collecting for little Helen. She is very much obliged for

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<sup>1</sup>Jowett, Benjamin (1817–1893), master of Balliol College, classicist and liberal theologian ODNB

your opinion about the Ferns - & when she does them she will adopt your advice, & you will be the first to have a presentation copy. She has just finished painting you a little picture w<sup>ch</sup> she begs you will accept with her affectionate love – she will send it off on Wednesday morn<sup>g</sup>. on her way to Brecon if the frame is ready in time – & sh<sup>d</sup> there be a difficulty in paying Carriage all the way (likely enough since they refuse to pay to Cheltenham!) she will enclose Postage stamps to the amount of 2s with the Picture, & sh<sup>d</sup> its amount be more she will depend upon your letting her know. When you have rec<sup>d</sup> it pray let her know how you like it, as she particularly wishes to contribute another larger one for the benefit of the Bible Women, if it sh<sup>d</sup> turn out good enough to sell – You are not on any account to give away (excepting to your Wife) what she has painted expressly for you. Between you & me I think you will be pleased with it. – We have been looking at Knott's crimson star, a very interesting object, not very unlike the colour of this ink. Can you not get access to the Northumberland Telescope? I sh<sup>d</sup> think it w<sup>d</sup> not be difficult. The O.G. is not first rate, but such a big fellow cannot fail to shew wonders in his own way.

Believe me,

My dear young friend,  
Yours very affectionately

T.W.Webb

Letter 32

Three days later

Hardwick Parsonage,  
Aug. 8. 1865

My dear young friend,

My wife is very desirous that this little picture may give you as much pleasure in the receiving as it has done her in the painting for your sake – and she will be glad if you will kindly acknowledge the receipt of it – she encloses 2s worth of stamps believing that they will be sufficient for the carriage – but if not, you are to be sure to let her know. – She has been more successful with Photographs since, & begs ~~sh~~ ^you^ will send back your two bad ones, and she will replace them with better, and also add my Father (with Cockatoo!)<sup>1</sup> –

Will you kindly tell me, whether you know the name of the enclosed plant – locally dignified as Robin-run-in-the hole!<sup>2</sup> – it is a wall plant of some size. And very useful for fermentations &c. I suspect its medical properties are very superior (like those of many other herbs) to our common idea of them – it is thus that “the old woman” beats the doctor. It pushes out long straggly runners, of which you will find a little withered fragment.

Your little picture would have been improved by a coat of Varnish – but if applied now might probably crack it – it should be left as it is for at least 6 months, & if you like to bring it here, we can operate upon it.

I have no astronomical news – unless it is that I see from Dr. Draper’s<sup>3</sup> ~~pamphlet~~ ^essay^ that his Clepsydra<sup>4</sup> would form an admirable driving clock for an Equatorial. I have been looking & wondering at M<sup>r</sup> Knott’s crimson star, but it is of no use talking to you about that, unless you had access to the Observatory.

We are going again to Brecon tomorrow with M<sup>r</sup> Woodhouse<sup>5</sup> & a friend of his – determined to make a sketching excursion of it this time. The weather to-night is most promising.

We all join in love & kind regards & remain,  
My dear young friend  
Yours very affectionately  
T.W.Webb

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<sup>1</sup> The Webbs kept a cockatoo at Hardwick. Note mention of it in Kilvert’s diary for July 1870 “A white cockatoo sulphur crested was bowing and chuckling in his cage...” Also mentions in several later letters and drawings as signatures. Webb mentions the death of one and the purchase of another in Letter 239

<sup>2</sup> Any ideas?

<sup>3</sup> Henry Draper (1837 – 1892) American academic. Produced silvered glass mirrors 1861. Wrote monograph published by Smithsonian Institute 1864. Took solar photographs from 1862. Used sand clock and later a clepsydra.

<sup>4</sup> Greek word for water clock

<sup>5</sup> Thomas Woodhouse b. 1830. S. John’s College, Oxford. Curate at Cusop 1865-67. Rector of Otterhampton, Somerset 1867-1871, Vicar of Ropley, Hants 1871 (Alumni Oxoniensis)

Letter 33

Three months later

Hardwick Parsonage,  
Nov. 20. 1865

My dear young friend,

I have long – very long – owed you a letter – so long that you would have been more than justified in throwing me overboard, but for the apologies which I know my dear wife has repeatedly made for me. Indeed I have been much over-pressed – especially in connection with this unexpected Cheltenham<sup>1</sup> engagement.

I thought such a thing might possibly be looked for towards spring – in fact at this time it came upon me as a surprise – I did not like to decline it but it has proved a greater entanglement. So that I have had no time to look, as yet, at the book you so kindly sent me – tho' I am nonetheless obliged by the sender's very kind remembrance. In addition to all this, we have of late had a great & most depressing anxiety, which M<sup>rs</sup>. Webb mentioned to you. You will I know be grieved to learn that it had a fatal termination on Friday last, when it pleased our Heavenly Father to take to Himself – one whom we mourn, & long shall mourn, with a depth that would not be misunderstood by any who did not know what she was, & what she was to us. I cannot tell you how we have been cut up. I feel quite blighted. We might have lost many members of our families with much less reluctance. I fear I have been very unwilling to submit – very disobedient to the Supreme Will – very backward to believe in that everlasting Goodness which changes not. I feel now how vain must have been my attempts, at consoling other people. –

But I must not make your affectionate heart uneasy by these details – I must thank you very much indeed for your kindness in referring to Prof: Challis<sup>2</sup> about the libration question – I had hardly had leisure or heart to look into it – but my impression is that it is very satisfactory solution – that part of your letter, I cannot at this moment lay my hand upon, but it is quite safe, & will furnish me with matters of thought some day. – I am very much pleased at your standing with the Professor & your introduction to the Observatory. The telescope is sufficiently known as not of first-rate definition – but still its great light-grasping power must make it a magnificent thing in its way. With respect to Prof: Challis's enquiry about diffraction-rings, they are very conspicuous in reflectors – I think I may say, as far as my experience goes (for I do not know much of very large achromatics) they are both more numerous, & brighter than in the achromatic, while the central disc is smaller & sharper: so that one might fancy that in the achromatic some part of the light which forms rings in the reflector was ~~was~~ detained, as it were, in the edges of the spurious disc, so as to give it magnitude & neatness of definition.

I have never seen a front view reflector, so I cannot form an idea how far the rings are increased by the presence of the small mirror, but I think there is reason to believe that such must be the case, Prof. Airy<sup>3</sup> (I believe) says that in achromatics the rings are rendered more light & luminous, & the discs smaller, by stopping out the centre of the object-glass.

- M<sup>r</sup> With is going on admirably with his specula – Those of 6½ inches & 5½ f<sup>t</sup>. focus have I hear most marvellous definition. He has just sold a splendid thing of 10⅛ inches, the performance of which greatly delighted me, when I was fortunate enough to have a fine hour one evening in Hereford. With a power of 370, I saw  $\mu^2$  Bootis [sic] clearly divided, with a black interval of about half either disc. Will the Northumberland Telescope<sup>4</sup> do this? If so, it has been greatly belied. With could do the same with 9¼ inches. – One of the 10⅛ (or 10¼) has been just ordered for an Englishman living near Nice. Think of old Hereford being preferred to Paris or

<sup>1</sup> Probably referring to his lectures at Cheltenham Ladies' College or to the Working men's club there.

<sup>2</sup> Challis, James (1803–1882), astronomer and physicist. Professor at Cambridge ODNB

<sup>3</sup> George Biddell Airy. 1801-1892 Obit MNRAS

<sup>4</sup> See Letter 20



Munich! – M<sup>r</sup> With lent me one of the Herschel-Browning spectroscopes – quite a new thing to me – which delighted me extremely. But this sad occurrence has brought a heavy cloud over all these things. And what are they after all! Behold – the Judge standeth before the door! And how unready am I, to give in my account of my stewardship! It is a very awful thought. What if I were summoned away in the middle of all my scientific trifling! –

My thoughts have often been with you on subjects as to which ~~you~~ ^we^ had much interesting talk, but you have since said nothing. I hope I may infer that my dear young friend is more “stablished, strengthened, settled.” The time is short - & instead of listening to specious but empty objections to the Gospel, we had all need to imbibe more of its spirit. “If any man will do His will, he shall know of the doctrine, whether it be of God.”

We have been so very glad to hear of your dear Mother’s restoration to health. I trust she may yet be spared for many, many years of increasing usefulness & happiness. My father sends his kind regards, & my wife will speak for herself, so with all possible good wishes & many thanks I remain,

My dear young friend  
Yours very affectionately  
T.W.Webb

Letter 34

Five days later

19 Rodney Terrace  
Cheltenham  
Nov. 25. 1865

Postscript [*to the letter dated 20 Nov??*] – our letter not having been sent from Hardwick, notwithstanding its date - & M<sup>rs</sup>. Webb having come here for Turkish Baths.-

Do you think you could without much inconvenience do me a little favour? – It is stated (I think by Lardner<sup>1</sup>) that Sir J. Herschel says in *Phil. Trans.* 1840, that he made dark rays of heat visible by concentration & found them of a lavender colour. I have not seen this curious fact elsewhere, & Tyndall<sup>2</sup> in his *Lectures on Heat* considers these rays invisible. For several reasons it is a very curious fact & I sh<sup>d</sup>. be particularly obliged if you c<sup>d</sup>. get a sight of that Vol. Perhaps you might do so, thro' Prof. Challis<sup>3</sup> – or it may probably be in some library where you might see it. And would you do me the favour just to run your eye over the article & let me know – first whether there is such a statement at all – for if so it is very strange that it sh<sup>d</sup>. have been ignored when so much is said & thought about the Spectrum - & next, if so, what means he used for making these rays visible - & whether they were “lavender.” Not only does Tyndall call them invisible but Miller expressly states I believe that rays can only be rendered visible by making their undulations slower e.g. fluorescence (such a marvel to me. -) But the reverse – i.e. a quickening of the undulation – he does not consider possible. This is what w<sup>d</sup>. happen if the Heat Rays were rendered visible by falling on any substance altering their vibrations. If however they were “brought to light by simple concentration, there w<sup>d</sup>. be nothing in this against Miller’s dictum.”

Please answer here when you write, as I shall be backwards & forwards –

Yours very affectionately

T.W.W.

*There appears to be the start of a PS from HMW:*

My

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<sup>1</sup> Dionysius Lardner (1793-1859), Irish scientific writer who popularised science and technology

<sup>2</sup> Tyndall, John (1820–1893), physicist ODNB

<sup>3</sup> See letter 33

Letter 35

One month later

Hardwick Parsonage

Dec. 26./ 65

My dear young friend,

Thank you for y<sup>f</sup> kind letter – to which I cannot now reply – on the contrary I fear I am going to give you a little trouble – but am so much hurried I must bolt into the matter at once. A scamp calling himself “Parallax”<sup>1</sup> who denies the rotundity of the Earth, &c. &c. & lives by lecturing to that effect, has been victimizing the people of Chelt.<sup>m</sup> of late, & I have been begged to confront him – I did so – foolishly enough – you may guess to what purpose when he maintained his ground of these assertions – in the hearing of an audience who did not contradict him –

That the Earth is less than ½ enlightened at the Equator!

That the circle described by the Southern stars diminish beyond the equator!

That the Sun never rises at 90° from the Zenith, but at 70° or 80°! –

A schoolmaster who had defeated him at Gloucester was so disgusted that tho’ he meant to have had a discussion against him at Chelt<sup>m</sup> he w<sup>d</sup> have given up & refused to meet him – but he found he was pledged – all I can do is to help him in anyway I can.

His book “The Earth not a Globe”<sup>2</sup>, by “Parallax” was put into my hands only the evening of the Lecture (owing to my having to run backwards & forwards here, & not choosing to pay 3s 6d. for it.) I have had time to examine it since, & a more wonderful piece of sophistry I never saw. It is full of lies in plain English. But to “give the lie” to these before an incompetent audience does little good. I think however I can rout some of his misquotations. And if you only would help me a little bit!

I know it is a great, very great favour. But if you w<sup>d</sup> only run down to Somerset House & verify a thing for me. – I w<sup>d</sup> write to Williams<sup>3</sup> & perhaps may do so, but fear he may be out for Xmas - & then I am beat. I will quote the passage, in connection with Lunar Eclipses, ~~in~~ which he says are caused not by the shadow of the Earth but by some intervening body! – He says “that such a body exists is admitted by several distinguished astronomers. In the report of the Council of the R. Astronom. Society for June 1850, it is stated, “We may well doubt whether that body which we call the Moon is the only satellite of the earth.” In the report of the Academy of Sciences for Oct. 12 1846. & again for August, 1847, the Director of one of the French Observatories gives a number of observations & calculations which have led him to conclude that there is at least one non luminous body of considerable magnitude which is attached as a satellite to this Earth.”

\* Referred to in Lardner’s “Museum of Science”<sup>4</sup> p.159

Now you see the man an astronomical Simonides!<sup>5</sup> Unfortunately, my Reports of the RAS in Monthly Notices begin a year or two too late! What a pity! It w<sup>d</sup> be in Vol. XI. or so. I want to express a contradiction that it c<sup>d</sup> be read at a public discussion without a chance of evasion - & it sh<sup>d</sup> be stated that if it is certain if it is no error of the press, ~~but if~~ (as to date of year) but no such statement ~~is to be~~ could ever have been made by the council. The other statement (the French

<sup>1</sup> Nom de Plume of Samuel Birley Rowbotham (1816-1881) who lectured and wrote extensively to promote idea that the earth was flat. See Cheltenham Examiner reports Dec. 1865 and Jan. 1866 and letter in English Mechanic for further details of this momentous affair!

<sup>2</sup> *Zetetic Astronomy: Earth not a Globe* (2nd edition London 1873)

<sup>3</sup> Secretary RAS

<sup>4</sup> See letter 34 for Lardner. Editor and contributor: *The Museum of Science and Art* 12 vols. 1854-1856

<sup>5</sup> Simonides of Ceos (c.556-469 B.C.) Greek lyric poet

one) has dates clear enough. In this case I presume it is a falsified version of Petit's "Bolide<sup>1</sup>." – He has quoted "Somerville's Physical Sciences"<sup>2</sup> ! So much for honesty.- I never saw anything more curious ~~that~~ than the perverted ingenuity of the book – it w<sup>d</sup> deserve praise were it not what one might call almost diabolical. –

If too busy to go down to Som<sup>t</sup> House c<sup>d</sup> you oblige me by sending a note to M<sup>r</sup> Williams<sup>3</sup> to ascertain this – I only found this morning to my great vexation that my Monthly Notices begin with Vol.XII ! – ~~My~~ Many things – I can't stop to tell you how many, have played strangely into the hand of this rogue.

With my kind & loving wish, but in furious haste

Y<sup>rs</sup> most affectionately

T.W.Webb

NB I go to Chelt<sup>m</sup> D.V. tomorrow to remain till Saturday. Then I am here. If you can possibly help me at all I s<sup>hd.</sup> be so glad to hear very soon, as if you can't I will ask someone else.  
(Address, 19 Rodney Terrace Cheltenham)

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<sup>1</sup> Bolide is an extremely bright meteor. Who Petit was, I know not

<sup>2</sup> Mary Somerville 1780-1872 ODNB. Science writer and mathematics expositor. *On the Connection of the Physical Sciences* (Murray 1834)

<sup>3</sup> See Letter 14

## Letter 36

Four days later

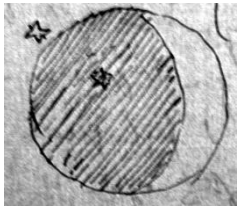
Hardwick Parsonage,

Hay

Dec.30.1865

My dear young friend,

Thanks, very many & very cordial, for what you have so kindly done for me in the Parallax<sup>1</sup> affair. It would seem rather presumptuous to hope for success where Prof. Potter “took so little by his motion” – but M<sup>r</sup>. Moden, the Glo’ster schoolmaster – who is going to hold a public discussion with him at Cheltenham next Wednesday <sup>^evening^</sup> - and myself, are preparing a heavy battery between us, which I suspect will damage the pirate very seriously. I am very sorry that ~~my~~ <sup>^his ^</sup>reference to the RAS Council report, which I fully expected to have found a forgery, is correct - & I am very sorry I sh<sup>d</sup> have troubled you & good-natured M<sup>r</sup> Williams about it – and I feel great compunction at asking you to do anything again in such a matter. But I think ~~I have heard you~~ it just possible that you might without much inconvenience make out a little more ~~th~~ yet for me – with the distinct understanding that if it does cause you inconvenience you are Not to think of it Whatever! – The chap says that on a certain occasion Sir Ja<sup>s</sup> South went to Ireland to observe some Eclipses &c. &c. &c. & there he found an occultation of a big star coming on – that instead of disappearing at the limb it continued to pass apparently before the Moon, & became more & more feeble – that he went down to his ~~his~~ brother observers, who laughed at him as having taken too much whiskey, but nevertheless went to satisfy themselves, & found it all true. In testimony whereof he exhibits this kind of Diagram:



(The star in the second position having lost much of its light) After what I found out at his Lecture I w<sup>d</sup> not go near him again, but got a person on whom I c<sup>d</sup> depend to ask for the source of his information. He referred to “Constable’s Miscellany, published in 1850<sup>2</sup>”. I want if possible to convict the fellow of some palpable falsehood. If the Brit. Mus: had been open, I w<sup>d</sup>. have asked if you could with perfect convenience have made search there for me – but alas! – the Reading Room is closed next week (several such contretemps have happened with him.) But possibly it might be in your Univ. Coll. Library, or you may know who has it without giving yourself more trouble than just a little run for exercise. If so it w<sup>d</sup> be curious to know what that volume really contains. I daresay a reasonable & fair account of a “projection of Aldebaran” on the Moon’s disc, twisted by this fellow into evidence of ---- **Partial Transparency**, I presume, of the Moon! – (I say “I presume” for he has wisely kept it out of his book.-)

He quotes triumphantly the following passage from “Somerville’s Physical Sciences” – “No particular theory is required to calculate Eclipses; & the calculations may be made with equal accuracy independent of every theory.” I wrote to Bumpus to ascertain whether any such book as the above existed (as well as several similar queries) he returned a most obliging reply, & shewed that one or two of the books referred to were creations of imagination – But in answer to this particular query, he only sent me a list of [“M<sup>ts</sup>”] Somerville’s works – including of course her [Connexion of the] Physical Sciences. So I have not got the noose quite as tight as I wish yet. If you happen to be seeing anybody who can tell you whether such a book as “Somerville’s Physical Sciences” exists, it w<sup>d</sup> be worth the enquiry. I fully believe it to be a “myth”.-

<sup>1</sup> See Letter 35

<sup>2</sup> A serial publication dealing with many subjects

The fellow w<sup>d</sup> not be worth notice but for his victimizing the people of Cheltenham, some of whom are helping to maintain him there, I am told, till the “discussion” of Wednesday comes off. –Should you happen to come across anything of use, would you kindly write to me – (with every circumstance so much in detail as to satisfy a public meeting) at 19 Rodney Terrace, Cheltenham, when D.V. I rejoin my dear wife on Tuesday, preparatory to the tug of war on Wednesday even<sup>g</sup>. - It w<sup>d</sup> not be worth one quarter of your while, but it w<sup>d</sup> be good fun if you w<sup>d</sup> come to hear it yourself! & my wife w<sup>d</sup> rejoice to see you again - & so I’m sure sh<sup>d</sup> I. With every kind wish of the season including your good Parents, who I hope are well, believe me,  
My dear young friend Yours very greatly obliged But in a hurry –

T.W.Webb

Letter 37

Three weeks later  
Hardwick Parsonage,  
Jan.22/66

My dear young friend,

Tho' the screw is forced pretty tight today, I will slacken it a quarter of a turn for your sake. -

The point you have mentioned has several times ~~occur~~ come across my mind during the last few years. It never occurred to me, however, as to the lunar ellipse – but as to the position of the whole Solar System - which, it is obvious must be different, at any given moment, as seen, from its real condition. The <sup>^</sup>apparent<sup>^</sup> place, for instance, of Saturn at the moment of an occultation will be sensibly different from its real position, &c. I have never once seen this mentioned – although a few times I have seen some element or other of a planetary orbit with the addition of “corrected for equation of light” or something of the kind. It appears to me, not on theoretical grounds – I am not 1/20 deep enough but on those of common sense – that this, like a secular inequality, will all right itself – and I suppose the “annus magnus” of the equation w<sup>d</sup> be the rotation of Neptune (not, however, if by that term that all the included periods are then to be complete – if so the <sup>^</sup>grand<sup>^</sup> periods would be incalculably long. I sh<sup>d</sup> think – but sensibly all would come round.) But how about a Comet – part of whose orbit lies much nearer to the eye than the rest? Its dimensions will be very sensibly affected, in the case of a very long ellipse - & the major axis & periods perceptibly changed from what they w<sup>d</sup> be found by computation exclusion of velocity of light. It w<sup>d</sup> be quite worth while to ask any computer if this has been ever done in long orbits – embracing obs. at great distances – e.g. 1811, when the verification 12 months afterwards must have been affected by light-passage.

So Donati<sup>1</sup> as observed at its 1<sup>st</sup> & last epoch <sup>^</sup>visibility<sup>^</sup> an orbit determined from [blot] these 2 places, combined with one in perige[sic] <sup>^</sup>uncorrected = tion of light<sup>^</sup>, ought to give a different ellipse from one deduced from 3 places near perige. I should, I own, like to know about this - & whether this may not be in part the cause of some discrepancies as to Comets – The Moon I sh<sup>d</sup> fancy w<sup>d</sup> soon right itself.

I hope you have passed a right pleasant vacation, & enjoyed much the Soirée, which I hear a grand account of. – I fear I never thanked you for your kind present of a Math<sup>1</sup> Soc. paper.

And now – ut mens est mis – I am going to give a little trouble- Id est [that is] – to ask one or two questions with The Distinct Understanding that you are not to attend to them till you have convenient leisure. One is this.-

All the Books <sup>^</sup>or nearly all <sup>^</sup>I have seen speak of the Electric current between the charcoal (or other) poles of a Great Voltaic battery, as a dazzling arc of flame. I never had an opportunity of seeing it but once – but then, tho' the two coke [?] points were ignited to whiteness, there was a mere trace of flame between them - & Slater, whose battery it was, told me it was always so. And so did an intelligent man with whom I once travelled – And Tyndall<sup>2</sup> in his Rede lecture<sup>3</sup> infers the same – speaking of the image of the two ~~points~~ points on a screen, but no visible arc of flame.

Where is the truth? As usual in a well too deep for me. If I knew Tyndall or Gassiot<sup>4</sup> I could soon find out. I have a mind to write to Browning to ascertain it from Gassiot.

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<sup>1</sup> See Letter 2

<sup>2</sup> See Letter 35

<sup>3</sup> Originally a series of endowed lectures. By 1858 became a single lecture per annum. Tyndall's in 1865 was On Radiation

<sup>4</sup> John Peter Gassiot FRS (1797 –1877) was an English businessman and amateur scientist particularly associated with public demonstrations of electrical phenomena and the development of the Royal Society. ODNB

Now for N<sup>o</sup> 2. I want to know whether the name of the Thermometric Scale inventor, Reaumur<sup>1</sup> – should have an accent or not upon the E – in short, whether it should be pronounced Ro-mure or Ray-o-mure. I have now & then seen the accent, & think it more likely to have been omitted than inserted wrongfully. – These 2 matters touch my Chelt. lectures<sup>2</sup> in the spring (D.V.) a course of 12. And another Edit. to be prepared for the Cel: Objects – [*the first part of the letter is double sided, folded quarto, rest of the letter is written on two sides of a scrap of paper*] so you see I shall have more than enough to do. I must add this scrap to tell you what good kind M<sup>r</sup> Huggins writes me this morn<sup>g</sup>.-

Last week I got a spectrum observation of Tempel's Comet<sup>3</sup>. The result is interesting, & a short communication on it was read at the R.S. on Thursday last. The nucleus is self luminous & probably of similar composition to the matter of the gaseous nebulae. The coma shines by light from another source, & there is reason to suppose that it reflects the sun's light. The paper is from the "Proceedings" – Is not this glorious? So old Schröter was right about the self luminosity of the Nach [?] at any rate - & I believe Herschel agreed with him there.

M<sup>rs</sup> Webb's very kind love & I as always

M<sup>rs</sup> Webb thinks the  
Dog's head more beautiful  
but wants to know whether it is  
your dog's head or anybody else's  
dog's head!

My dear young friend  
Yours exceedingly  
T.W.Webb

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<sup>1</sup>René Antoine Ferchault de Réaumur (1683 - 1757) French scientist of wide-ranging interests who made contributions in many fields including the invention of a temperature scale.

<sup>2</sup> Webb gave regular lectures at Cheltenham Ladies' College

<sup>3</sup> Comet 11P/Tempel-Swift-LINEAR, a periodic comet discovered in 1869 but unobservable after 1908 because of perturbations by Jupiter. It was not found again until accidentally rediscovered in 2001.



## Letter 38

One week later

Wyesham n<sup>r</sup>. Monmouth,<sup>1</sup>  
Jan. 29. 1866.

My dear young Friend,

I feel rather ashamed that I never write to you, excepting to give you trouble or make some tiresome enquiry – I am sorry to say the present is no exception to this rule.

A non-mathematical though very intelligent neighbour asked me a question the other day involving a statement that Radius and Cot: might be expressed in DEGREES min: & sec:

To my ignorance & inexperience this seemed mighty queer - & I so resented this tampering with accustomed modes of expression, that he sent me the book; where I found it – a book apparently of authority & acceptance. I found he was perfectly right in his statement – so I could only write to say it was the first time in my life that I had seen the sides of a triangle, as well as its angles, expressed in Degrees – but I w<sup>d</sup>. ask - & this is the result: I have sent you a copy of the passage, & sh<sup>d</sup> really like to know (any time when you may be writing) whether this really is a modern innovation in terminology (which I could not admire, tho' possibly it may have the merit! of being compendious!) – or whether it is – what my ignorance & impudence w<sup>d</sup>. call it – a very discreditable specimen of blundering in high places! -

My wife sends her love & desires me to enclose for you one of several little portraits of John Hampden<sup>2</sup> which D<sup>r</sup>. Lee has kindly sent her – she is also going to send you a copy of “The Earth a Globe!”<sup>3</sup> You will miss the common argument from circumnavigation – but you will easily see that it is inconclusive – being on the common section of a plane and sphere. The argument too from a S. celestial pole is unnoticed, as introducing what I wished to avow in the effort to attain simplicity – the idea of rotation.-

I wrote the above amidst a lot of talk last night. – I must add a little this morning – if only to say I much wish you could have been at a Clerical meeting at my house the other day, where the defects of the Authorized Version were descanted upon, and one of the party gave us a masterly exposure of one or two of Colenso's<sup>4</sup> absurd mystifications – which though spun out into several pages loaded with Hebrew, are solely based upon errors in the English translation!

My little book is coming to a second Edition. I wish it had not been just now when I am fully burdened with the preparation of 12 lectures for the Ladies' Coll: at Chelt<sup>m</sup> – But it must be got thro', somehow, - and I should feel especially obliged if you can suggest any desirable additions or corrections. I have only just looked at it - & see a good deal of trouble overhanging my future time. I hope my poor brains won't get worn to a threadpaper, amongst it all. And worse than all, these things are taking up, I fear, more than they ought, of time which should be all consecrated to God. I sometimes doubt whether I am justified in undertaking so much – but then something or other comes, to lead me to think that I am ~~so~~ providentially so called & ought not to refuse what is put into my hands.

My lectures will be on Heat, Electricity & magnetism. I have sent for the articles in Watt's Dict. of Chemistry on these subjects – which I hear are very good. If anything very new & very curious on these matters sh<sup>d</sup>. happen to come in your way, will you please not to forget me?-

I have incidentally heard most gratifying as to your mathematical progress & prospects – which I think will be fulfilled to the utmost, thro' that great blessing which alone can prosper either intellectual or spiritual efforts: but which is ever ready for the asking.

<sup>1</sup> The home of the Tudors. Mrs Tudor an aunt of Henrietta Webb

<sup>2</sup> Presumably the 17<sup>th</sup> century parliamentarian

<sup>3</sup> See Letters 35 and 36

<sup>4</sup> Colenso, John William (1814–1883), Bishop of Natal ODNB

We shall be going home on Friday. I am sure my father would add his kind regards if here.

Believe me, my dear young friend  
Yours very affectionately

T.W.Webb

I think old Cockatoo is funnier than ever

Letter 39

Ten days later

Feb.8 1866

My dear young friend,

I have reopened the letter & made a mess of the Envelope to take the opportunity of a scrawl to thank you much for all your kindness. I find from high authority there is no Electric Arc with big batteries, so we must refer to Cowper's<sup>1</sup>

-Well,

what monstrous lies some (travellers) do tell!

Thank you too about Reaumur<sup>2</sup> ( not Römer the Dane, another man whose name is always spelt that way - ) I find it is Ré-au-mur, in 3 syllables. – I think the action of gravity is supposed instantaneous: but qu. Why? – your speculation about it is very interesting. But you must have a very marvellous idea of my mathematics. Do you know, seriously & soberly, I have no conception of even the meaning of log log log – log log ∞ [=infinity symbol] ! – I once knew Euclid & Robertson's C. Sections, & could work a simple equation or so – but that was all! & I regret it very often.

Shall we know anything about these things hereafter? or what is the destination of uncultivated capacity ^and taste^ which often exists, where there is little or no education? “The lowest functional form of infinity” What's that? Could it be expressed thus?

T.W.W. = 0

1

Now seriously I want to ask you something.

I see pretty clearly there is a train of research open, on the subject of Radiant Heat, which he who follows, may advance himself in the scientific world – ~~Shall~~ It w<sup>d</sup> require some leisure, & expense ^money^ & a taste for the subject. I have the latter, but neither of the former - & w<sup>d</sup> gladly hand over my ideas to a friend, & especially to yourself, if you w<sup>d</sup> like to take it up. ~~But~~ I have no notion of writing about such things to Tyndall or Stokes<sup>3</sup> or men who have plenty of name already. If they have not started this game for themselves I don't ~~sh~~ see why I sh<sup>d</sup> do it for them.

But I own I should dearly like to see some of these matters in the hand of a friend whom (if the research were successful as I fully expect) they w<sup>d</sup>, temporally speaking, benefit – I have thought that opportunities have been repeatedly put into my hands, not for my own sake, but that of others – It may be so here. Do you think you can take this up, within any reasonable time? Turn it over in y<sup>f</sup>. mind. If not I sh<sup>d</sup> like to mention it elsewhere – but you must have the first refusal. € The expense w<sup>d</sup> be a rock-salt lens, a ^some^ silvered mirrors, & galvanometer a thermo-electric pile?? – nothing very dreadful. But much delicacy w<sup>d</sup> be requisite for good results

Wishing you all blessings I remain

My dear young friend

Yours very affectionately, T.W.Webb

<sup>1</sup> William Cowper (1731-1800) English poet ODNB

<sup>2</sup> See Letter 37

<sup>3</sup> Stokes, Sir George Gabriel, first baronet (1819–1903), physicist ODNB

Letter 40

One month later

Hardwick Parsonage,  
March 10. 1866

My dear young friend,

I have certainly behaved very shabbily to you – but I can only assure you it has been mere want of time – not want of love - & sometimes perhaps a little heartlessness – at looking at the load of work around & before me, with my feeble power of getting thro' it. But “he giveth power unto the faint & unto them that have none might he increaseth strength”. – I have to thank you for several most kind letters -& must just advert to one or two points in then.-

As to the measurement upon a sphere in mapmaking, your suggestion is undoubtedly right. But I am not sure that I sufficiently explained to you that the individual spoke of expressing rad. in degrees &c!!! (unless I am much mistaken.)

As to the name I mentioned – Römer ~~and~~ ^the Dane^, Rew (the discoverer of the propagation of light-) and Reaumur the Gaul, the author of the Spirit Thermometer, were quite distinct persons - & I find the é in the latter's name ought to be accented, as it is a Trisyllable (this has been very generally neglected in books.)

~~You will be glad I think~~

As to the action of gravity in time you have touched on a most curious question, (which I think however I ^have^ seen mentioned before) but one quite out of my depth. Do you keep memoranda of these ideas as they occur to you? If not please be persuaded by a sincere friend to do so. They may prove of more value than you are aware of at the time. I now jot down any difficulty of a theoretical nature that occurs to me, for an explanation which sometimes makes me ready to “write me down an ass” – but which at other times I don't get at all! – When shall we meet? If you will come here in the summer, I will promise you a dose of scientific nuts much too hard for my teeth - & if you don't find some of them too hard for anybody, I shall be much surprised –

We hope D.V. to be in London – if my dear Father is able to manage it – after Whitsuntide - & I think we may meet then – but I don't mean that to be a substitute for your visit here.-

What an awful thing, Whewell's<sup>1</sup> death! I hope it may produce a good impression. Truly the time is short: ~~though~~ that is not indeed the true interpretation of the Apostle's words – but how impressive is the fact - & how important that we should walk before Him to be found ready at His coming!-

You will be glad I think to hear that my dear father has just made me a present of a 9 ¼ inch silvered speculum – of very fine quality. It divides (I have seen it do so last Wednesday evening, in very indifferent air.) AB ζ Caneri. ~~will~~ with 370. Will your Northumberland Telescope<sup>2</sup> do that? It may, but ??? -

If you happen to come across any great guns loaded with fluorescence, & ready to discharge their contents, please ask them whether Prof. Stokes's ideas upon that subject are fully accepted? To me there is a peculiar fascination about these “invisible” rays. ~~And~~ and indeed the whole subject of the Spectrum. If I have not – as I suppose I must ~~a~~ have – misinterpreted what he said in the R.Soc. Notices for 1853 – he must be in a muddle. – At any rate, with my present ideas about it there must be a pair of long ears between us. When I have seen in London, Phil.Trans. I shall better be able to arrange their appropriation.

<sup>1</sup> William Whewell, (1794–1866), college head and writer on the history and philosophy of science ODNB

<sup>2</sup> See Letter 20

We are often thinking about you here, & hoping you are not over-tasking yourself. At my age it signifies less – but at your time of life it is very important not to overdo that wonderful machinery through which mind acts. We unite in kindest regards & best wishes & believe me always,

My dear young friend,

Yours very affectionately  
T.W.Webb

**Letter 41**

**Six days later**

*Included with this letter is one from HMW*

My dear M<sup>f</sup> Ranyard

I have not been writing to you of late because I felt sure you were too busy but I am sure you will believe I do not forget you. I write a line now to say how very happy your letter has made us, in the promise that you will come & see us. I have only one alternative to make about your visit & that is that instead of days you will spend weeks with us – you shall have a study to yourself & it will make me really happy if you will feel at home with us & come when you like for I may truly say you will be always welcome where ever we may be. I must close for post with much love from the trio.

I am always

Y<sup>rs</sup> affecte. & faithful old friend

H M Webb

*On separate folded page is a letter from TWW*

Hardwick Parsonage,

March 16. 1866

My dear young friend

Come by all means in the world, according your own most welcome proposal – only mind it must be upon my Wife's terms enclosed – But I am ~~too~~ so ignorant not to know when “the Long” begins - & hope you will kindly send one line to let us know this. We shall have such charming talks together - & you will do me a mile of good if that may be an additional inducement. Pray bring your books - & be as quiet as ever you please.-

I am afraid you won't see the silvered speculum, as it will hardly be mounted. I hope it may bring you another time, if nothing else will.-

I rejoice in the idea of your good mother's relaxation. I am sure she must greatly need it - & ~~is~~ as far as the word suits human beings, deserve it too – far more than most of us. – I trust she will return quite refreshed for her work –

Please fix your earliest day for coming – as the sooner you come, the less ^more ^ certain your visit will be, to be quite uninterrupted.

What you say of human knowledge is so true – excepting as far as it may be used to the glory of God or the benefit of our fellow creatures. I think the more I look into some kinds of it the more scientifically heterodox I am getting – But more of this when we meet –

Always, believe me,

My dear young friend

Yours very affectionately

T.W.Webb

Letter 42

Fortnight later

Hardwick Parsonage,  
April 3. 1866

My dear young friend,

I am at the old game again “Neighbour, neighbour, I’m come to torment you” – Or at least, if you were my neighbour (I would you were) I am afraid you would find me a very tiresome one. I seldom write – (do I ever?) without asking some plaguing question - & this is to be no exception. I am, you must know, writing a certain heavy article for the *Intell: Obs:*<sup>1</sup>, in the Dull-and-Dry style – containing certain assertions touching on mathematical ground. Now, what I want to know is, whether my notions are sound, & will bear knocking about - & hoping you will kindly & friendly tell me, I have sent a copy of my rough notions - & if you can knock a hole in them I hope you will. I am loth to name a time – but if I could have it within a week it would be a favour.-

I have not much to tell you – excepting how much disappointed we felt to find that ~~∞~~ the proposed days of your visit are to be taken in a literal sense. I hope, however, we may have the pleasure of meeting while in Town. – I do not know why or how it has been that you have bestowed upon me so much more affection & confidence than I could possibly have put in any kind of claim for, but I do assure you, & hope you believe – that it is most entirely appreciated. I have now been long enough in the world to outlive many loved friends – and to see the circle of affection narrowed – To use the words of a very, very ancient Welsh Bard “Merdyn Wylt” – Merlin the Wild -<sup>2</sup>

God hath provided unpleasant things for me –

Dead is Morgeneu, dead is Mordar,

Dead is Morien – dead are those I love.-

And it is not without much, and I trust allowable pleasure, that I look to a younger mind to supply – if it may be so permitted – some of that void which Time has made –

- As I said, I know not how or why it is that we have been drawn together – differing to a very great extent in theological, ecclesiastical, and political training, we have not disagreed - & I feel as though we could not disagree: - and it is very pleasant for me, at least, to think upon. Things go on here pretty much a l’ordinaire – a good deal of sickness, pain, misery, wickedness, folly & nonsense – but some little I hope of better things. I do not think – though sometimes I might be tempted to think – that our Lord has forgotten us. My dear father grows somewhat more feeble. My wife is very rheumatic & wants a change much. I don’t know whether I told you that my father has presented me with a 9 ¼ inch speculum, which however I do not propose getting here before my return from London. I think of adopting our good friend Berthon’s very ingenious & cheap equatorial mounting –

Wishing we might meet again very soon, & with M<sup>rs</sup> Webb’s most affectionate regards, I am always,

My dear young friend,  
Most sincerely & affectionately yours,  
Thomas William Webb

*Included with this letter is the rough draft mentioned above:*

Certain doubts, difficulties, perplexities and botherations touching the Rings of  $\text{♄}$  [Saturn]  
Proposed by T.W.W. for the annoyance of A.C.R.

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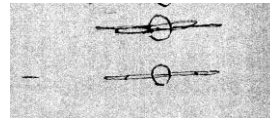
<sup>1</sup> Intellectual Observer

<sup>2</sup> Myrddin Wylt (Mad/Wild Merlin, Merlinus Silvestris, Merlinus Caledonis, Lailoken, Laleocen, Llallawg, Llallogan) was a Welsh prophet, bard and seer. May date from 6<sup>th</sup> century AD

It is often said, Rings are not in the same plane. But is the expression free from ambiguity? - Their planes may differ by varying inclinations as referred to any one assumed as standard - line of nodes all passing thro' common centre of gravity of planet & rings. - Thus, perfectly intelligible - & combined with variation of inclination, or a motion of the nodes, might explain some differences in apparent thickness of rings, ^ or ^ of some parts of them, ~~& some irregularities in the breadth of their divisions~~ as compared at different periods - but it does not appear how, on the principles of perspective, it could account for the want of symmetry in the 2 halves of ring as compared at same epoch. To account for this it seems necessary to assume, not merely that the separate rings possess varying inclinations & possibly motions of nodes, but also that the lines of their nodes shall not all pass thro' one common centre. This seems to involve a dynamical difficulty not easily overcome, except by the supposition of a very unequal distribution of material in the various rings, & this again seems not easily reconciled with their general uniformity of breadth & extreme thinness - Some considerations are probably to be taken into consideration here, the return & extent of which we are unable, from distance to detect &c. This is the substance of what is meant for Int; Obs:

I hope it is ----- 1<sup>st</sup> Intelligible  
 2<sup>nd</sup> Defensible mathematically

In perspective it is obvious that no possible tilting of planes could make the two halves unsymmetrical as long as the lines of nodes all pass thro' the common centre of figure - the varying nodes might vary somewhat the thickness of rings e.g.:



would be a different proposition from but both **symmetrical**

This would not follow if the rings were separately elliptical with motion of apsides. But then, the divisions between them would be more unequal at different times than has ever been seen (the observed inequalities being insufficient)

Per Contra- if the rings were loaded in a direction normal to their breath - e.g. if one was made of lead beneath & water above, another of alcohol beneath & iron above, then, tho' their centres of gravity would lie in the centre of the globe, their centres of figures would not - & with an inclination & motion of nodes, unsymmetrical effects w<sup>d</sup> occur, such as are seen. But how to reconcile this with an almost evanescent thinness?

I think no one has gone into this point. They talk of "not in the same plane." If homogeneous & not loaded I don't see how they can be out of it. If loaded, how can they disappear edgewise? Q.E. (non) D. &c. &c.&c.



Letter 43

Three weeks later

Hardwick Parsonage,  
April 28. 1866

My dear young friend,

Your quite unexpected letter, & very kind present to my Wife reminded me of what however I had not forgotten by any means – that I had never thanked you for all your kindness about Saturn. I think I see my way through it better - & while I cannot acquit writers in general (all I know) of ambiguity or incompleteness to the point, I can make out what puzzled me so much about symmetry. -

It is evident that the expression “not in the same plane” as applied to a whole set of rings, is ambiguous. They may either be so situated that all their possible diam<sup>s</sup> cut the axis of the globe in one point – in which case, however varied their inclinations to each other might be, their perspective on each side of the globe would be symmetrical – and this therefore does not meet the case in question – Or else-

They may be so situated that their diam<sup>s</sup> w<sup>d</sup> cut the axis in different points., ~~Or~~ or which is the same thing. if all their inclinations were reduced to 0, they would not as in the first case be all in one plane but in parallel planes. This meets the unsymmetrical appearances observed – But how to reconcile it with dynamical requirements I was stupid enough not to see when I “came to torment you” but I now do see - For tho’ it would be incomprehensible that the centre of gravity of  $\wedge$  single ring should not coincide with the C. of G. of the planet – yet the Cs of Gs. of a system of rings might be easily so arranged that the combined C.of G. of them all considered as one system, would coincide with that of the Globe – And this, I venture to think, is the real solution of the mystery. But it is queer that it has never been, I think, pointed out in any book I happen to have seen. – And it is just as queer, how little the best books on any subject deserve the title of exhaustive. I have long noticed this in Astronomy - ~~And now that I have~~ but then the immense extent of the subject renders such an idea impracticable. But I have now – against the grain – had to “read up” Heat & Electricity for my class at Cheltenham - & each author I look into gives something not to be found in the other. E.g. for Electricity, I have examined Lardner’s Handbook<sup>1</sup>, ~~the~~ Snow Harris’s<sup>2</sup> treatise, Rees’s Cyclop.<sup>3</sup> – the modern treatise in Watts’s Dict. of Chemistry – Pepper’s Playbook of Science<sup>4</sup> – not one of them does not contain useful matters omitted by the others – truly my Lectures Ought to be something Wonderful! –

I am glad you are under Stokes<sup>5</sup> – His great subject (ill-names) “fluorescence” – is a special pet of mine, & hes [sic] charmed & puzzled me above measure – kept me awake at night, & pleased & plagued me by day. When in town I purpose reading his grand memoirs in Phil. Trans. and if I find any wordument [sic] about which he might not dislike to be asked, I am not without some faint hope that you might favour me by being the medium of communication. - [Gone on with Monday morning. All the gullies & ravines in the Black Mountain were yesterday filled with snow! And I dare say some will be found there on May Day.]

I hope you will get Challis<sup>6</sup> to shew you <sup>h</sup>[Saturn] Though much too low, & consequently fuzzed by vapour he is a noble object – tho’ a very unintelligible one. Did I tell you my dear father had given me a 9 ¼ inch speculum of With’s, which I suspect between ourselves

<sup>1</sup> Dionysius Lardner D. C. L. Handbook of Natural Philosophy - Mechanics(London, Walton and Maberly. 1856)

<sup>2</sup> Sir William Snow Harris, (1791–1867), natural philosopher with strong scientific interest in electricity and magnetism. ODNB

<sup>3</sup> Abraham Rees, The Cyclopaedia; Universal Dictionary of Arts, Sciences and Literature 1800 - 1849

<sup>4</sup> John Henry Pepper, 1821-1900 ODNB. The boy's book of. London: George Routledge and sons 1860

<sup>5</sup> See Letter 39

<sup>6</sup> See Letter 34

will in point of figure beat your great Cambridge equatorial - & that I am thinking of mounting it as an equatorial on Berthon's very cheap & effective plan: but it won't be worthwhile to do anything to it until after my return - tho' thus I fear I shall lose <sup>h</sup> which I shall be sorry for - More evidence the other night of fresh volcanic action in <sup>D</sup> assuming what we cannot assume, the dependableness of Beer & Mädler - Only if they really saw, & did not draw or describe, which anybody may see now (& I was not I believe the first to see) they must have been even more unworthy of confidence than could have been supposed. My own impression is, that another ¼ century will shew proof of continuous eruption there which will be too clear for contradiction. That is, if Birt is spared - or the work is carried on by others with equal care.

I heard the other day in Chelt<sup>m</sup> that y<sup>r</sup> excellent mother had gone in the same ship as Peabody<sup>1</sup> - I cannot hope he may be led to take a substantial interest in her work.

My Chelt<sup>m</sup> class please me much, doing their work on the whole remarkably well. I dare say D<sup>r</sup> Wright the principal Lecturer there, is right in supposing that girls shew a remarkable aptitude for natural science. It is an interesting experiment, to see how far a turn in this direction may answer as supplying the vacuum caused by the modern abandonment of many departments of housekeeping. I shall be very glad, however when this course of Lectures is over - they have taken up too much time in preparation - obliging me to get up subjects with which I had but an imperfect acquaintance - And the result has been an impression that we are very far still from the truth of these things and that the great creator sees the emptiness of our boasted "Theories" - mere attempts at explaining what it is not His Will ever to allow us to explain. The more I see, the less I understand - We go to London D.V. on 14<sup>th</sup> prox. besides seeing Birt & Buckingham, & looking up one or two books &c. - I have not much to do there. I should like however to see the Kew Spectroscope, now that I have got so much interested in these wonders - & I hope I may have a chance of seeing Huggins - believe me

My dear young friend,  
Yours very affectionately

T.W.Webb

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<sup>1</sup> Suspect this was George Peabody 1795-1869, the American merchant banker and philanthropist who settled in England and was instrumental in setting up houses for the poor in London

Letter 44

Three months later

Hardwick Parsonage

July 20. /66

My dear young friend,

I have at last got through a nasty heavy Int. Obs<sup>1</sup>; article which has been lying like a lead weight upon me ever since I came home – and now with much pleasure I take up my pen to you. I had a great wish to submit a part of it to you before it went to press - & was only hindered by two reasons – the one – that I believed I had been so cautious that nothing I said, theoretically, could be laid hold of by you mathematicians – the other, & the stronger reason, was, that I was much behind time, & pressed to get through anyway, & the copying out a lot would have been the last ounce on the camel's (qu. ass's) back.

So it went without – And after all is too late to be all put in. I did not touch upon your wave of compression because I feel sure, however, probable, or even certain, its existence may be, I do not think it could possibly be rendered visible by any optical means that we possess, & my article is clearly so overloaded with matter of observation that I had no room for speculation of that kind. Nevertheless it is a very interesting point - & I have a suspicion that the differing visibility of the division of the ring, on opposite sides of the ball (which has been too often seen to be mere illusion) may be dependent on the position of the Sat<sup>s</sup> for the time – maybe the effect is short of the resultant of their attraction. Careful comparison & observation would shew this, & I wish you had time & opportunity to take it in hand.

I have scarcely anything further to tell you. With is going on capitally. Our President M<sup>r</sup> Pritchard<sup>2</sup> has ordered one of his large ones – so has somebody else who is going to make a great fuss about it (I forget who) & what is no small triumph, M<sup>r</sup> Berthon has at last become more than satisfied, charmed with the working of his – which is really a very perfect mirror, but had been put into the cell the wrong way for axis of flexure. I hear the stand is nearly ready, & M<sup>r</sup> Pritchard has seen it & been delighted with its firmness. Browning has by this time I hope sent him my flat. M<sup>r</sup> Coventry who had ordered a 10 ¼ in: to be mounted in the completest manner, has refused to have it, merely from some delay on B's front - & probably it might be got cheap now – M<sup>r</sup> With & his nephew have both separately observed – with the great 12 ¼ inch an unstellar, granulated look about 13M harmonizing strangely with M<sup>r</sup> Huggins's marvellous intimation to us – I must tell him about it. I don't suppose the E. of R<sup>3</sup>. has definition enough to touch this most curious point.

I have been unable to find anything about the perspective questions where I expected – in Rees's Cyclopaedia – but though I cannot demonstrate the hyperbolic form of the image upon the retina - which I think is the point, I see plainly it is not a great circle. Has any other curve asymptotes (properly so called) besides the hyperbola [I have just gone & looked in Rees - & might have saved myself the trouble of writing that ignorant question. Whence, I will not say that the curve on the retina is a hyperbola – but only that it is not a great circle, & that it has asymptotes.-] I do not now recollect whether x is absciss or ordinate – but if we put it for absciss, I believe we should have  $y = \sqrt{d^2 - x^2}$  where d is = distance of the eye from the point in the curve – But what this makes I have as little idea as may a child has of the **Great Herring Problem**.

-Our happy journey ended as pleasantly as it had been carried through – for though I managed to leave a package behind at Paddington, containing a portfolio of Swiss sketches, it was (though insufficiently directed) recovered a few days afterwards – we are constantly looking back to those days, the happiness of which was so very much enhanced by your company – and

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<sup>1</sup> Intellectual Observer

<sup>2</sup> Pritchard, Charles (1808–1893), headmaster and astronomer ODNB

<sup>3</sup> Earl of Rosse

thinking how graciously we were prospered in them from beginning to end – Among other pleasant matters nearly all our dear little Swiss roots are alive & many of them, especially the beautiful little Soldanellas<sup>1</sup>, actually thriving, though so delicate & gathered in flower. –

Do you see the next step Colenso<sup>2</sup> has taken towards the precipice?- he now avows his doubt whether prayer ought to be addressed to Christ! Sorry as one must be for him, it is well that, by an eminent example, the eyes of many well-meaning people should be opened to the real meaning of the line of sophistry which he has pursued.

I have no doubt that such attempts will ultimately all terminate in the utter discomfiture of their author – but who can say how much mischief may be done in the interim?- Such is the result of unguided & unlimited self-direction – so flattering to the pride of human intellect & so entirely unsatisfactory in its fruits! Some – many I trust - will take the warning thus graciously given.

Henrietta continues, you will be glad to hear, to feel the great benefit of her little trip – people say here she is wonderfully altered for the better. My dear Father has not been very well of late, but there is nothing to cause immediate apprehension. I have not written to Birt yet but have heard from him – he says he wishes I c<sup>d</sup> see some drawings of his which had not been approved – but will continue to work on in what he considers the best way.

My wife sends her love & my father his kind regards & I remain

My dear young friend

Yours very affectionately

T.W.Webb

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<sup>3</sup>. *Soldanella*, commonly known in English as snowbell, native to European mountains,. They grow in woods, damp pastures and rocky landscapes from 500-3,000 m above sea level, usually in hollows which hold snow long into the summer.

<sup>2</sup> See Letter 38

Letter 45

One week later

Hardwick Parsonage

July 27, 1866

Carissime,

En tibi chartulam [A little note to you] –very nastily scribbled if you will do me the favour to decipher it - & give me your opinion upon it. It is part of my Saturn Article<sup>1</sup> - & I want to know whether it is all right – especially whether I have given Maxwell's<sup>2</sup> essay the right name, and whether his opinion is, as I have stated. Corrections, objections, additions, anything you please, will be welcome, if they reach me in about a week's time. I have also enclosed (what I don't want again) my sketch for woodcuts – which will give you some little idea how anomalous & utterly unintelligible has been at times the outlines of the shadows. I see no solution at all that meets the case – among the wonders is the unequal darkness of the different parts of the shadow. Either we must say “my eye” to the American observers – 4 of them – with one of the best of instruments – or else we must acknowledge a most marvellous & incomprehensible state of affairs out yonder.

I wrote to Birt communicating your very kind & sensible views of the matter. He has taken to it at once and embodied it in the form of a subscription for the Map & Catalogue, of which a portion will be published annually for subscribers only. But he says this may be kept strictly private, and nothing said or done till he sees how matters stand at the Nottingham Meeting which will probably decide the fate of the undertaking. And I see that anything premature might have a very uncomfortable if not prejudicial effect. We must be “off with the old love before we are on with the new”. – But if there should be an end of the old Committee, then a certain A.C.R. will have the credit of originating the new one, that's all.-

I am glad to state that my dear wife continues to feel the good effects of our happy tour & is, for her, very well. Very few indeed of our roots – I believe there were nearly 170 – have not grown – they are most promising. My dear father is rather in an uncertain state - & is afflicted with a sore leg, which might be the beginning of a break-up. There has been much illness in the parish - & is so still. My good cousin (Mrs. Eyre) is here still – and another cousin – a Mrs W<sup>m</sup> Webb & her sickly daughter & our dear little Bella (not of Luzern but) of Troy – a fine noble-hearted creature. We went yesterday evening to an outdoor-tea in a meadow by Clifford Castle – How I wish you had been there – 28 in number; mostly girls – we wanted some boys very much but the Trumpers are from home. I think you may remember our excellent kind friend Fanny Dew, and her good niece Emily, & the Haigh-Allens, & Woodhouse – cum mults aliis. The Alpenhorn gave much pleasure - & the little ones (there were some very little ones) were greatly “taken-up” with it. I wish you could have seen a delicate little child (Armyr Dew – a girl with a boy's name?) puffing at it - & pitching out of it a good tone, too. A very lively party it was - & truly pleasant – and a great contrast to the sickness & suffering I had to minister amongst this morning. – Mr With astonished me by telling me that he & his nephew have both independently observed with a 12 inch mirror the stars of 13M not exactly like stars more like “granules” – a marvellous confirmation of Huggins. We may as well keep this to ourselves just now – something very curious may yet turn up out of it. Our President Pritchard, intends to have one of With's large specula and Mr Berthon tells me he (Mr P.) has seen my fine stand – now nearly completed – and is greatly pleased with its steadiness. – I have not forgotten your idea of waves raised by satellites - which I should think is probably the fact – have you ever heard anything of Caroline? We often & often think of those happy days. Why is so large a part of the world so unhappy? Are your good parents returned?

<sup>1</sup> IO – probably Vol 10 p 142–9 September 1866, the fifth of 6 articles in IO in 1866

<sup>2</sup> James Clerk Maxwell, (1831–1879), physicist ODNB

My wife sends her love, and I am always

My dear young friend,

Yours very affectionately  
T.W.Webb

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You will recollect the Old Envelope

*Separate piece of paper possibly bound above Letter 45b.*

The holy Scripture being admitted to be the Word of God, and to be its own interpreter in all things necessary to salvation, must be interpreted in difficult questions according to some rule.

Three Rules for Interpretation alone are conceivable.

1. The authority of the Bishop of Rome.
2. The private judgement of every individual.
3. The consent of the best and wisest men in all ages of the Church.

**Letter 46****Eleven days later**

Hardwick Parsonage

Aug.7.1866

My dear young Friend,

Many thanks for your kind note. I am glad mine served to amuse you for a little. I presume, as you returned my MS with so little note or comment, that it did not contain anything noticeably wrong. I had, before your answer reached me, found the very thing I wanted – viz – an abstract of Maxwell's<sup>1</sup> Essay, in my own Drawer here! – Which if I had known, I certainly should not have troubled you: this led to some modification of my paper. I sent off the horrid thing this day - & have not been more glad for a good while – it has long been a regular Bête noire to me. – We often think of our happy days together out yonder, & I recall the many pleasant conversations we had – especially in those venerable Cloisters at Luzern, and under the open heavens at the Rigi Scheideck. – I wonder whether the remembrance is equally strong with you? I have not yet entirely given up the hope that you may be led to reconsider – seriously & patiently – some of the things which have appeared like difficulties & obstacles – and that in the end you may find the truth about them something very different from what you may have thought – But on some points you used to “fight shy” with me. It need not have been from any fear that I should treat any scruples of yours with contempt, as far as you held them – however little I might regard them in themselves. –

- You may, very naturally have thought me unable, or unlikely – to understand your feelings – Possibly I did more than you were aware of – and so perhaps we lost some time & trouble – though I must ever wish you had one a hundred times more capable of discussing these things with you, than myself. – One thing is certain – it is an ill wind that blows nobody good – and now you can see for yourself the end of Colenso's<sup>2</sup> speculations. –

I have just got about the materials for my second Edition which I promised long ago to prepare as soon as I had opportunity. It will give me a good deal of trouble – for a great part will have to be re-written. Astronomy has made considerable progress since it was published – M<sup>r</sup> Dawes has most kindly pointed out many corrigenda - & the altered aspect of the Reflector question introduces some difference. The worst of all this is, the quantity of time it takes up, & the degree in which it abstracts me from matters so much more important to myself and others. And, besides this, I expect to be engaged this autumn in a long course of Chelt<sup>m</sup> lectures – so I shall as usual have my hands cram full, & be therefore in danger of letting something drop. I hope it may be only some trifle.

I attended last week at a delightful ceremonial – of a much more really interesting character than all scientific exhibitions & speculations – a Confirmation in a country church. We had about 110 candidates – the little church of Whitney was full - & the whole impression most gratifying.

Fearful accounts of the Cholera<sup>3</sup> reach us from various quarters none as yet near us, I am thankful to say. Herefordshire was nearly exempt the previous times, but we know not how it may be – the type of the disease too seems somewhat altered and progress is much more rapid – the sufferer has little time for repentance. And what is all our medical knowledge and microscopic research in its presence? One would almost think – but that it has fallen chiefly upon the lower class, - that it was a pointed rebuke to the spirit of the age – the deification of Intellect – Undoubtedly that is one of the ends of it. God grant that it may be answered.

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<sup>1</sup> James Clerk Maxwell (1831-1879), physicist ODNB

<sup>2</sup> See letter 38

<sup>3</sup> There was a succession of cholera epidemics in the 19<sup>th</sup> century, but that of 1866-7 was the last major epidemic.

I hope, before you get this (which I shall direct to Hunter's St. – as the most probably place) that you will have met your parents returning in health and spirits to face the great work again. Pray remember me most kindly to them – I had almost forgotten one of the chief purposes of writing - to ask you whether you can answer the enclosed – which I cannot having so very few Cambridge acquaintances. Should you not know of anyone will you kindly return the paper when you may happen to be writing – there is no hurry – Believe me always, my dear young friend,

Yours very affectionately,

T.W.Webb



Letter 47

Three weeks later

Hardwick Parsonage, Aug.29.  
1866

My dear young friend,

You will be glad, I know, to hear that I have finished those vile Saturn articles at last - & am now going on with the 2<sup>nd</sup> Edition [of Celestial Objects] – having also a course of lectures impending over my head, to begin next Wed<sup>y</sup>. week [at Cheltenham].

Beyond this I have not much to tell you. I hope M<sup>r</sup> Berthon will come here before long & bring & help to put up the stand, but he is sadly overworked at Romsey, & I cannot press him. We have been enjoying a second summer, & it is continually bringing to mind the pleasures of the first & those happy days to the enjoyment of which your company contributed so much. Here, too, there is great loveliness & garden flowers surpassing all of the same kinds that we saw abroad – but in the midst of scenes of pain, grief, & ignorance – equally[?] existing, of course, round us abroad, but not equally forced upon our attention. I rejoice to hear of the safe arrival of your good Parents – I trust for renewed usefulness – You won't think me a mischief maker if I say that I was very sorry to hear, from a real friend to the Mission work, & to the evangelization of the poor, that the conduct of a Bible-woman at Cheltenham<sup>1</sup>, in disregarding the feelings of the Clergyman, has caused considerable offence. I have one objection to my name being mentioned – but that is a very strong one – that it would lead to the disclosure – (not through my information most certainly but from a reasonable guess) of the name of my informant, whose permission I have not asked to mention it. If it came from a hostile quarter I should have hesitated to tell you of it, as little worth notice. This was not all that was said, but I don't like to put it on paper.

I am enclosing something just to shew how faithfully Spurgeon<sup>2</sup> is carrying out Binney's<sup>3</sup> advice as to the desirableness of "~~keen ha~~ a little keen hatred & round abuse of the Church", as important to maintain the cause of schism & disunion. A happy undertaking, to be sure! These men may be very glad (ira si bona norint) [count their blessings?] that they have the Church, as a common enemy (in their estimation) to keep them from falling foul of one another. Give them rope enough you see what they are. I guess if the old Church was out of the way – England would soon be a Wonderful place! – and nobody would gain but the Pope!.

I was informed by the way (certainly not a propos) the other day, on authority which appeared to me perfectly reliable that Lord John Russell<sup>4</sup> actually promised the help of England to the Danish Ambassador!!

And now about logarithms &c. I want you to come to teach me something about them, & then you would not find me so intensely disagreeable a listener as I know I was – and am indeed sorry for it – when we were together. I hope Birt has been well supported at Nottingham. All was going on well when he wrote. With every kind wish, and prayer for your Divine guidance, believe me

My dear young friend

Yours very affectionately  
T.W.Webb

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<sup>1</sup> The best known innovation of Ranyard's mother, Ellen Ranyard, was the idea of the 'Bible woman'. These were missionary cum social workers, a working class woman drawn from the neighbourhood to be canvassed, was to provide the "missing link" between the poorest families and their social superiors... Their patch was really in London but perhaps one went to Cheltenham or Webb may have been referring to a evangelical woman preacher.

<sup>2</sup> Charles Haddon Spurgeon, (1834–1892), Baptist preacher and religious writer. ODNB

<sup>3</sup> Thomas Binney [Benny], (1798–1874), Congregational minister. ODNB

<sup>4</sup> Lord John Russell, first Earl Russell (1792–1878), prime minister and author. ODNB

P.T.O.

P.S. Wednesday. I wrote the above on Monday, but it waited for a note from M<sup>rs</sup> Webb who was too busy to write. Meanwhile ~~at~~ your very kind little note came yesterday & the book this morning. Very many thanks for the loan – but I fear I shall understand not a lot of it. Come here & I will try to help you in Classics & I will get what mathematics I can out of you.

Your loving, T.W.W.

Letter 48

Six weeks later

Hardwick Parsonage, Oct.8./66

My dear young friend,

I have used you very ill in more ways than one – I have, first of all, never returned a book you lent me so kindly till Oct. (if I recollect right) & probably you have been wanting it for this exam, which is a scandalous shame! However here it goes by the post. – Next I never thanked you for the other equally kind loan of Grove<sup>1</sup> – pray tell me when this shall be returned & I will promise to behave better next time - & thirdly I have never written to you about these or any other matter I know not how long! – Well – pray believe I don't love you the less one bit. You know how I have been lately occupied in a hard single handed fight – but what chance have you when your adversary is armed with a Scythe?

I am very sorry you could not come & assist at the inauguration of this little Observatory: which I think promises admirably tho' at present in a very rudimentary state. M<sup>r</sup> Berthon had intended going on Tuesday, but I hope he will stay till Wednesday – or I shall be even in a worse plight than I expect at his departure. What a marvellous man he is! I had no idea of his eminency in so many things – his painting admirable - & he is the real inventor of the screw propeller for the Navy - & the gunboats which had peace not been made, had a fair chance of taking Cronstadt!<sup>2</sup> –

Better even, though less unique, than all this – he preaches admirable sermons – full of the Redeemer, without the least of that cant & froth which so justly displeases you. I do wish you could have come. He talks of asking you – if he does, pray don't refuse: strain half a dozen points to do it – his friendship is of more real value to you than many supposed Cambridge advantages.-

The more I see or hear of [rest of line blank]

I have been so interrupted with observatory work & the arrival of a spectator that I have not a single idea how that sentence was to have gone on! So I had better conclude, & with my wife's very best love remain

Yours very affectionately

T.W.Webb

I am very glad your good Father is better.

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<sup>1</sup> William R. Grove 1811-1896, electro chemist and physicist Wrote *On the Correlation of Physical Forces 1846*. The Grove cell was an improved form of voltaic cell used by Faraday at the Royal Institution

<sup>2</sup> Maritime fortress of Russia founded by Peter the Great

**Letter 49**

**Five days later**

*To Mr Ranyard*

Hardwick Parsonage  
Oct. 13.1866

My dear Sir,

As I have no present prospect of being in Town, and you have so kindly offered me the favour of receiving my little Dividend at Queen Anne's Bounty<sup>1</sup> Office, I will avail myself of your very obliging ^ consent to my wife's ^ proposition, & have enclosed my Receipt accordingly – which only requires the completion of the Date according to the time when it may be presented.

If you will then kindly deduct the expense of obtaining it, & the Post Office Commission, & postage, and forward it to me by money order payable at Hay, the affair will be completed, which will I hope involve but little trouble to you, and to me will be a great convenience.

I think when next I write to your good Son (which I am sorry to say is not as frequently as I would wish) I must address him as

“My dear Herodotus” –

From your account, I almost wonder that he did not write so to me! I trust however that the name may be associated in future with pleasant recollections of victory over difficulties. Nothing certainly is so agreeable as what we have fought for stoutly, & fairly won. I received yesterday a very obliging letter from Mr Alex. Herschel, telling me he is going to spend the winter at Glasgow, and expressing a wish that if I were going that way I should call upon him to which he adds “I hope Mr Ranyard might pay me a visit at the same time as I have not heard from him this year. I hope his college duties keep him very fully occupied”. I will send him this message when I write, but I think his parents will not dislike the favourable impression he has evidently made upon Mr A.H. But on whom does he not make a favourable impression?

If he would only come & see me I would try to “coach” him a little in classics – Herodotus & several of his relations being very old acquaintances of mine.

With my kind regards to Mrs Ranyard believe me,

My dear Sir,

Yours very faithfully and

Much obliged

Thos. W. Webb

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<sup>1</sup> See Letter 17

**Letter 50**

**One week later**

*Letters to Mr Ranyard.*

Hardwick Parsonage  
Oct.20.1866

My dear Sir,

I write a hurried line to acknowledge your great kindness, & the safe receipt of the two half-notes & stamps. But I must add my great pleasure at hearing of my dear young friend's success. His Orthography, I must own, has often rather surprised me – I can only hope he will take especial pains as to this point as it may among strangers convey so wrong an impression as to his education – I cannot but congratulate you & M<sup>rs</sup> Ranyard on your future prospects regarding him.

Believe me  
My dear Sir  
Yours greatly obliged  
T.W.Webb

*There follows a note from HMW*

My dear Sir,

I must add a line to express my joy at dear Arthur's success which must be a great comfort to his dear Mother & to you. – Will you tell M<sup>rs</sup> Ranyard with my kind regards that there is a chance of our going to London some time next month to stay with an old friend of mine who is most anxious to be introduced to your wife. She is the widow of a clergyman, & a daughter of the late Lord William Somerset, & is a most excellent woman.

With kindest regards & our love to dear Arthur when you write

I remain dear Sir  
Yours sincerely & obliged  
H.M.Webb

Letter 51

Two months later

Hardwick Parsonage

Dec 12/66

My dear young friend,

Come here for a few days – it will do you good & you will be all the sharper for a change. Continuous work may sometimes be necessary – but it is often a blunder. I want you very much to see the little Observatory, & what a silvered speculum can do. (You must bring better weather though) And on passing through Hereford I want you to see With – not only a thoroughly nice fellow in himself but one of the best speculum workers in existence. What do you think has happened lately? You know DelaRue wishing to see if silvered glass w<sup>d</sup> produce better photographs than his admirable metal, commissioned Steinheil to make him one of the same size = 13 inches. Great & magnificent was the delay – when it came it cost £100 - & was pronounced by M<sup>r</sup> D<sup>1</sup>. – as was understood – a very fine thing, tho' not equal ~~&~~ to his own. Hearing however something of With's prowess, he made him an offer of retouching it. With refused. Then he would order one of his - & previously sent down the Steinheil to With to examine. He finds it so inferior to his own figuring that he wonders how St. c<sup>d</sup> have allowed such a thing to go out. – & now I hope With's name will be known as he fully deserves. He has never made a 13 inch – but I have seen his own 12inch on a watch face with 500. Beautifully sharp. You know that mine is not one of his best. But with about 600 (the aperture being 9 ¼ inches) it perfectly splits  $\gamma^2$  Andromeda. If you were to ask any of your Astronomy folk if they can do that even with their larger apertures with any power –

I sh<sup>d</sup> not have hesitated to put 500 on With's 12 inch for double stars – You will see in <sup>next</sup> Int.Obs<sup>2</sup>: that Schmidt<sup>3</sup> thinks he has seen the lunar Linné<sup>4</sup> in eruption.

My course at Chelt<sup>m</sup> ended on Monday – a very nice lot of girls – I could have picked you out a charming wife – not perhaps the prettiest ever seen. –

Your affectionate friend

T.W.Webb

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<sup>1</sup> Dawes

<sup>2</sup> Intellectual Observer

<sup>3</sup> Johann Friedrich Julius Schmidt 1825-1884, German astronomer and geophysicist. 1858 became director of the new Athens Observatory, where the clear skies were very suited to astronomical observation, and where he spent the rest of his career. Avid moon observer and recorder. 1866 he made the astonishing claim that Linné crater had considerably changed its appearance, which began a controversy that continued for many decades. The claim is generally considered unproven.

<sup>4</sup> Linné is a small lunar impact **crater** located in the western Mare Serenitatis. See above

Letter 52

One week later

Hardwick Parsonage

Dec.19 1866

My dear young friend,

Thank you for your kind letter, which I was very pleased to get. And first of all as to the business of it. I cannot very well answer your enquiry directly, because it involves many things which I can't get at. The value of such a thing depends solely upon its accuracy ~~which can be~~ (I mean its being originally well-made) It may be as Baker<sup>1</sup> says, "in very excellent" (by which I presume he means "condition") but this has nothing to do with its original correctness. Baker was well spoken of by DelaRue to me & I fancy he is an honest tho' not cheap tradesman. But I conceive he would, & could, only look to the ^present^ condition of such an article & if it has no maker's name upon it (if there had been he w<sup>d</sup> have told you) you have no real guarantee. Nevertheless it cannot be dear. I have one (I forget whether you saw it) which my dear Father gave me with my old achromatic. I had at one time a mind to sell it, so I took it to Simms, who as an F.R.A.S. was always very obliging in advising. He said it was an inferior instrument, the cross wires not being accurately at right angles – but it might be worth £3 or £4. So Baker's cannot be dear whether good or not.

Mine however had 3 eyepieces with solar cap. – A good deal depends on what you want to do with it, & to what kind of instrument you wish to apply it. I hope some day you will have a silvered reflector. They are going ahead magnificently. Mine is admirable - & M<sup>rs</sup> Webb who had always dislike the idea of the construction, is fairly delighted with it. DelaRue has sent his Steinheil to With for examination - & the latter without a spark of jealousy or envy in his composition, pronounces it a very inferior affair. He can beat it hollow, with ease –

Now, the next thing. Why don't you come here? – you that talked of the ease of our coming to Cambridge. Come here, I tell you - & you will have an opportunity not only of seeing the Observatory, but of testing the chemical properties of some particularly tenacious mud, & teaching my nieces Marsh Botany!

I rejoice to hear of your good Mother's recovery. You must have been very anxious about her. Pray give her my very kind regards – as this I presume will reach you at home. I am sorry for your lodger-troubles – there is a very nasty sting about not being in perfect love with everybody. But what could be done with anybody so strangely unreasonable? You had more reason for your trouble than Argan (if that is the name) had for his – I am glad you like the idea

“occidendi

Impune per totam terram”<sup>2</sup>

It is wonderful fun – (the plot I have nearly forgotten) I am glad, too, very glad, that you have so pleasant a recollection of our Rigi Scheideck walk - & of that delightful service at S.Paul's.-

M<sup>r</sup> Slack (Editor of Int.Obs:) where by the way is some curious Lunar News for Jan<sup>y</sup>) has been puzzling me by some curious & I think original speculation as to the radiation of light. He thinks comparatively small surfaces at an enormous distance would receive, not the divergent, but the parallel rays of light only – i.e. supposing the radiant to be not a point but a surface (such as the Sun's disc) ~~the~~ which the divergent rays would pass by each side of them, they would only get such rays as issuing from different points, & belonging to different pencils, would be parallel among themselves. This I see is a fallacy, because, even if they did not receive the divergent rays from any one point, they would catch these from the surrounding points (of a disc of similar magnitude) But it does seem to me to invoke a curious question, which if I am not mistaken, is

<sup>1</sup> See Letter 1

<sup>2</sup> Quote from Moliere's La Malade Imaginaire who in turn is quoting Pliny

just such an one as? you like to grapple with. The undulation of light being admitted to have some transverse magnitude (I think you called it u in your explanation of my last difficulty) supposing them to be emitted from a radiant point & propagated through space, would there be limits either way? I.E. in their first origin might not the radiant surface be suppressed so small that the vibrations would be packed too close all round it - & for a given distance from it - to exist without interference & ~~to show~~ mutual destruction? E.G. what w<sup>d</sup> be the result if the value of u equalled or exceeded the dimension of the radiant point? And secondly, the other way - in the progress of the radiation thro' space, all these u s being propagated in diverging lines - since they have after all a material & not a metaphysical existence, & possess a positive magnitude, however small, will a degree of divergence ever be reached at which they will have interspaces - travelling on in separate lines with vacancy between them? or at least only such transverse ^lateral^ undulations as they might cause in the ether, which not being emanations from the radiant, would not affect the distant body as light? - I fancy on the corpuscular theory of light, this difficulty might find a place - for however small the particles might be, yet you could conceive them either packed too close towards the centre, or opened out too wide towards the circumference, of an unlimited sphere, to admit of the production of light. Whether it may be any clearer (I mean the question not the light!) on the undulatory theory I do not very well see - but I think there is something in it - i.e. I fancy some effect must follow somewhere from the not infinite relation of light to space (I don't know whether I have expressed this properly - I mean, the fact that u is not infinitely small; however minute it may be it has yet an assignable magnitude, & [symbol = therefore] ~~may~~ is theoretically capable of too great compression, or too wide expansion. - And it just strikes me - would it be conceivable that some such cause might affect the twinkling of the stars? I suppose not, however, for that seems to be related to climate & atmosphere (tho' still involving I fancy a relation of u to the magnitude of the particles of vapour &c. in the atmosphere. Or is it not conceivable that the ~~ap~~ want of perfect transparency ascribed to space, may be due to some such cause?

Please think over this - & I will communicate your answer to M<sup>r</sup> Slack. -

Believe me, with all possible kind wishes for the coming season,

My dear young friend,  
Yours most affectionately  
T.W.Webb

My wife sends her love - she will write when less busy - she understands now the mystery of the Photo. - it is inside instead of outside life - she had fancied it was some mountainous recollection, which puzzled her. She is grievously disappointed that you do not come, as she will have such a nice party on New Year's day to meet you, of folks about your own age. You must not always say no to our invitations - "naughty boy".



Letter 53

Seven weeks later

Hardwick Parsonage, Feb.7/67

My dear ill-used young friend

You have been ill-used, there can be no doubt of it – but not so much by your friends here as by their circumstances – I have been – since your kind letter of I don't know when, much over-bothered. An elephant in the shape of a 2<sup>d</sup> Edition [of Celestial Objects] – has been lying atop of me, & crushing out all my spirit – not to mention divers vexations, matters which have made this a very troublesome new year to us. And to mend the matter my dear Wife's teeth have been such a failure & a plague, & she has been suffering such severe pain, that I must take her to the Dentist as soon as possible – which will be D.V. on Monday next for the week.

I suppose it would be about as likely to suspect the arrival of a great Comet, as of yourself, in London during that time. But we do long to see you again - & talk over things past (very happy things), present & to come. – Please write to us at any rate. I feel time goes very fast: & we must make the most & the best of it.

Weather & bother have conspired to reduce my Observatory experience within very narrow limits. But after all I find it such a comfort I little expected ever to possess. Instead of hawling [sic] out & in, a long iron carronade weighing 50 or 60lbs – a process which in the utter uncertainty of English definition, often made me rather glad of an excuse for avoiding it, I can run over to the Observatory in any weather when there is a bit of blue, get the ~~???~~ <sup>roof</sup> ^ porthole^ opened & the great gun in position in 3m – see what I want - & have everything bowsed away tight in 1m more: & into the house again. This is charming. And you will be glad to hear that the speculum turns out beautifully. Tho' there is a little remaining spherical error, which With has kindly volunteered to remove, if he can do so without disturbing the symmetry of the curve, I see I have a splendid instrument, & one which I have no doubt beats all Cambridge (now don't you go for to be angry about that there speech! for I don't say it as an Oxford man, believing that I beat Oxford also!)

My 2<sup>nd</sup> edition will contain one very curious & unique thing – a diagram of the passage of the Comet of 1819 over the Sun's disc, where it appeared, utterly unlike anything else – a nebulous spot with a Transparent centre. The obs. is by Pastorff<sup>1</sup>, whose curious MS. Vol. has been obligingly lent me by Sir J. Herschel for the purpose.

You see Huggins's curious verification & extension of Secchi's discovery of lines of burning Hydrogen ( not the dark but the bright bands in a star in Cassiopeia. – I shall be so glad when a big Comet comes from that worthy man. I have heard such good of his private life, & Dissenter as he is, honour him therefore. – We hope to call on your dear Parents in Town - & to cram all we can into the week. It will be an especial pleasure to see that good M<sup>rs</sup> Newcourt again How very few have I ever met like her. How curious it seems, & how interesting, to look back on our pleasant times when you made their acquaintance, & carried me about town in Cabs - & we went to the Museum - & Birts & especially S. Paul's. Which I don't believe you have forgotten.

I communicated your remarks on Light to Slack, who was still unsatisfied, because [he is a quick fellow] water, whose particles are continuous, affords no good analogy for the case of light. – My wife send her very kind love, & means to write when she has a little more time & can send you a little oil painting in a letter. But she has been much occupied by her nieces<sup>2</sup>, who are going away tomorrow I am sorry to say. They have been very much fêted in the neighbourhood, & are very nice amiable unaffected girls. Their mamma has just had a 14<sup>th</sup> child. “And so the world goes round!”

<sup>1</sup> J.W. Pastorff 1767-1838, German Astronomer. Made numerous observations of sunspots between 1819 and 1833.

<sup>2</sup> Helen and Louisa Wyatt

And what have you been at, in the hurried circuit? Up? Or down? Or both by turns?  
(Hardly both at once, seeing your travels have not extended to Ireland, I believe)  
I am afraid you are horribly bothered by this (or some such) equation  $(A+C+R) + (A-C+R) -$   
 $(A+C - R) \&c. \&c. = O$ . But I am not sure that a 2<sup>d</sup> Edition is not worse – please keep out of that!  
And believe me always with every kind wish  
Yours very affectionately

T.W.Webb

We shall be in the old quarters – Mrs Payne, 67 Great Russell St.

Letter 54

One week later

Mrs Payne's 67 Great Russell St.  
 Bloomsbury W.C.  
 Feb.15/67

My dear young friend,

I beg you will never again make such a mistake in your notation as to think that silence can ever be explained in any other way than this

Botheration = - writing.-

1

I am sure if I could be guilty of "misunderstanding" you without the slightest cause or reason – or rather with every cause & reason to the contrary – the sooner you dispose of me by auction the better! (The which proceeding I fear would not much enrich you!)

We are here I am sorry to say another week – owing to dentistic botheration - & I am sure you will feel with M<sup>rs</sup> Webb in her troubles. I am down to duty tomorrow<sup>1</sup> – back Monday. You know how delighted I w<sup>d</sup> be to see you – but I must say no more about that. We have as yet seen nothing of your Mother or M<sup>rs</sup> Newcourt & scarcely anyone else - & M<sup>rs</sup> Wyatt has not been at home – she will be back however I hope on Monday. All the news I hear is that Hodgson<sup>2</sup> has given some offence in opposing the Double Gold Medal of the year, & has been (an unprecedented thing) turned out of Secretaryship & Council both – Huggins succeeding in the former place. - I know Dawes considered Hodgson an unfair man, but D. had nothing to do with this. I went on Tuesday evening to Birt who seems to be getting on capitally & going in for a great deal of matter not to be found in any of the Moon-books – he desired me to tell you how greatly indebted he felt to you (or something to that effect) about the Libration business – which it seems to me will now be set quite in a new light. (And You ought to have some of the credit of it.)

I see Chambers<sup>3</sup> has just sent news of a Comet – not very bright & going away from ☉ [Sun] & ⊕ [Earth] so not very much for Huggins. I do so want him to have a good, thorough handling of one of those marvels. Had he been at work in 58 or 61 we sh<sup>d</sup> have had some marvellous results – (or even in 62) You see how he agrees with Secchi about that queer star in Cassiopea. What wonders are round us on every side!

With goes on bravely. I saw on Monday 2 13inch discs being figured for DelaRue. To beat Steinheil all to smash.-

I am glad you did not see the horrible bonnet rouge (the type of human butchery) carried through the streets of London on Monday. It was my sorrow to witness it - & to hear the Marseillaise - & to see stars & stripes & hear Yankee Doodle. – The shame of Old England<sup>4</sup>. You won't agree with me now, but you will I think some day: - perhaps when I am out of it all.-

How I wish you had time to read Clarendon!<sup>5</sup> – But I must be at the Mensurae Micrometrica & other things & my dear wife will want room to write so I remain my dear young friend

Always your very affectionate, T.W.Webb

<sup>1</sup> To Hardwick

<sup>2</sup> Richard Hodgson FRAS 1818-1872 Obit.MNRAS

<sup>3</sup> G.F.Chambers FRAS 1841-1915 Obit.MNRAS

<sup>4</sup> This "demonstration"? would have been on Monday 11<sup>th</sup> February. Possibly agitation for the 1867 Reform Act.

<sup>5</sup> Clarendon, Edward Hyde, Earl of, 1609-1674: The History of the Rebellion and Civil Wars in England.

*From HMW*

My dear Arthur,

I do wish you were coming to London next week – What a treat it would be to see you again! We stay here till the end of next week. I mean to call on your dear Mother.

I must only add best love Ever y<sup>f</sup>

Very affecte [sic] H.M.Webb

[Numbering on original document is 57 but according to date order should be 55]

**Letter 55**

**Seven weeks later**

Clifford School Room<sup>1</sup>,  
April 6. 1867

My dear young friend,

Here I am – superintending a School exam – where I am as quiet as a lamb – sitting up like a great sham – (after having attempted a cram!) to overlook Annie and Pollie and Sam – which by the way is rather a “flam” – only to save my rhyme from a “jam” –

No Sam ^” at all ^, at all” being here – as by the list doth plainly appear – But Tom, and one-eyed ~~Dxxxx~~ George so queer – And little Jan with her hair in a net – That wishes she did not know how to forget – And ~~Jane~~ dark-eyed Jane so steady and nice, And Mary Anne and Anne Mary Price – Twins as like as a pair of dice – And Lizzie the tipsy keeper’s daughter – That’s taken a pledge and drinks cold water – Nine in all, all striving for fame – Do you know anyone doing the same? – Anyone whom I need not name?

But here my doggrel [sic] came to a stick, And I was forced to shut it up quick, for time & place I could not pick, But like an old lamp without a wick, I just “went out,” when my work was done, And they went off at a walk or a run, convinced an exam was very bad fun, Tommy and George that eye has one, Pollie and Annie with each of them two, And ~~Jane~~ fourteen-year Jane, with her jacket blue – (It was red, by the way, but the rhyme wouldn’t do!) Nine that had all been striving for fame, with a puzzled head, and a hearty good-will, - Do you know anyone doing the same? Anyone that ‘tis needless to name? I asked you before, and I ask you still!-

I’ve “tried it with x s and tried it with y s” –

And the more I’ve tried it the worse it grows – And it boils in my brain, and burns in my eyes – They talk about being merry and wise, But I shall be neither – this task defies All heart and hope – ‘tis under my nose from morning till night, - and the sweet wind blows, The sweet spring wind with its fragrant sighs, And soft clouds float in the smiling skies, And flowers from their wintry beds arise, But all, alas! ~~in-vain~~ for me in vain! Better would suit the drenching rain, Better the hail on my window-pane, Better the blast of the Eastern main, Better each weary troublesome thing, Than the mocking call of the lovely Spring!

I’ve “tried it with y s, and tried it with x s” – The more I try it the more it perplexes – Does anyone want a thing that vexes? Here then it is – you may take it all – All, and welcome, whatever befall – Look out ahead for the coming squall – my mind’s made up and off I shall go – Off to Hardwick “as sure as a gun!” To see the last wreathes of the fading snow, And catch by the hand old friends that I know will joy to see me whenever I go, And cry from their hearts, Well done!

There now. –

Did you ever read so much nonsense in 2 ½ pages of note paper? -

Did you ever expect that from me?

Can you excuse it as simple reaction? The overflow of a brain squeezed up & cooped in so long among the trammels of o’ h m ”s + - RA prec: NPD &c. &c. &c. that it must break out somewhere? –

If you will forgive all that I have – I dare say most unjustly ~~ascribed to you~~ – at any rate most impertinently, ascribed to you – and believe what I have ascribed to ourselves in the matter, it will be all right. – I used you must know to be a bit of a rhymester in old, old days – and especially when I was in love! But I have not broken out in this way, I am sure, for years and

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<sup>1</sup> The local school for Hardwick and Clifford visited frequently by Webb.

years – and probably should not now, but that, as I said I have been so over- bothered and utterly wearied with this 2<sup>nd</sup> Edition – that the reaction led to this outbreak.

I wonder whether your friend was ever obliged to prepare a 2<sup>nd</sup> Edition! If that was ever the case, it would be a fair punishment for him.

And now – it is really hardly fair, but may I by permission to enclose something which I am afraid you will not like very well. You will forgive me, my dear young friend – but you know my old fashioned notion that on some points you have had things put before you – and very naturally, accepted ^them^ in default of any evidence to the contrary – to the truth of which I strongly demur. You will I dare say remember some discussion we had on such matters. The enclosed will state what I believe to be fair and true. I shall be glad to have it again at your leisure but better bring it with you.

And now for another matter – in which I am going, I am sorry to say to give you a little trouble. If you don't remember, I am sure I do, the long consultation we held together – and the very pleasant walk we had at the time – among other places, to that delightful service at S<sup>l</sup> Paul's – when we discussed the legal difficulties of some friends of mine, and your benevolent plan of getting M<sup>f</sup> Bompas's<sup>1</sup> opinion upon the case. The occasion has now passed away – the sol<sup>f</sup> employed by my Co. Trustee having behaved so handsomely & liberally in the matter that no difficulty arose. But a matter has just come before me in my parish, which is beyond my legal ability altogether – and which is so utterly within the province of charity, that if I am not taking too great a liberty with you and him, I venture to hope that your good friend might be induced to favour me with an opinion – Or possibly you may know of someone in Cambridge who could answer the question – for I apprehend the resolution of it requires but a very small knowledge of law, though more than I possess. To save you trouble I have written the case on a separate piece of paper – and if you could without inconvenience to yourself or interruption to your studies, get me an answer (Or answer it yourself – which by this time perhaps you can do!) before long, I shall feel especially obliged to you. The poor old people are getting very fidgetty & anxious about it – and tho' I see but little cause – for the old man is in no present danger – yet that won't satisfy them. You know how it is when people get “set on edge.”

There is not much news here – my little Observatory almost unused, I need not say – a perpetual veil of cloud. I dare say you recollect my truly excellent friend M<sup>r</sup> Woodhouse<sup>2</sup> – whose frequent visits used to be so reviving & instructive – I regret to say they are much less frequent now – he scarcely ever sees us – because he has seen somebody else – at Brecon – to the great advantage of his health & spirits tho' some who have seen the lady (we have not) are not in raptures with his choice. I should be very sorry if it should happen to him according to the old proverb preserved by Latimer

“Well have I fished – and caught a frog!”

But time for me to have done – my wife send her kindest love, & believe me,

My dear young friend

Very affectionately

Thomas William Webb

*Note scrawled at bottom by HMW*

Dear Arthur when will you come to us?

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<sup>1</sup> Presumably a barrister – cannot nail him down

<sup>2</sup> See Letter 32 (Likely that he did marry the lady from Brecon: Elizabeth Ann acc. to 1871 census)

**Letter 56**

**Three weeks later**

*From HMW*

Hardwick Parsonage  
April 30 -1867

My dear Arthur,

Though we wrote to you yesterday, I cannot help writing a few lines to you to-day to say how very sorry we were to hear that you have suffered so much with your teeth & still more sorry to hear that your happy visit to London, ~~but it~~ seemed to have been marred by a trouble which makes me sad to think of, but I trust it is not any thing serious dear Arthur, & that you will be more cheerful in your next letter. It seemed to me that all the world is in sorrow just now for the many letters I have lately received from friends, are full of something sad.

Well! All things are in the Hands of Him Who doeth all things well & is it not our unspeakable comfort to feel this, such a truth as it is. Come here in the summer, my dear young friend if you love us, & if you do not love us, I shall quite understand your keeping away from us!

There is a nice little riddle to be solved.

I really do believe if you knew how fond we are of you, you would come & see us, but I seem unable to instill [sic] this fact ~~in~~ ^into^ you. I am as ever

Yrs very affecte old friend  
HM Webb

P.T.O

*Continued by T.W.Webb*

My dear young friend,

I wish with all my heart I could say anything that could comfort you in your trouble – but as I have no idea respecting its nature I could but – in general – remind you of the source of comfort – but to you it is quite needless to say this: - and I am happy that it is.-

I am very much obliged to you indeed for your kindness about my poor parishioners - & must by you, when you have an opportunity, to express to M<sup>r</sup> Bompas my very grateful acknowledgements on their part & my own. There, you have at any rate been doing good.

I sincerely hope that my nonsensical badinage which must have seemed sadly unreasonable to you, ~~did~~ ^had^ nothing in it especially unpleasant in connection with your own discomfort. – Do you know you never answer a letter, I have a great mind to say I won't write to you unless you mend! This time I hope you really will mind what's said to you – If you have not time or mind to write this week, we shall be all next week at M<sup>rs</sup> Tudor's<sup>1</sup> Kelston Knoll near Bath.-

Has it occurred to you to compare the tempers of the times with Romans XIII. 1-7?<sup>2</sup> – I fear the demonstrable consequence is not always drawn at Cambridge – tho' it is binding at any rate upon one who is – at least as much as you know

Your very specially affectionate,

T.W.Webb

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<sup>1</sup> Relation of Henrietta Webb

<sup>2</sup> Begins "Let every soul be subject unto the higher powers...a plea for obedience to rulers"

[Original labelled 57 was part of 55]

**Letter 58**

**Ten days later**

Kelston Knoll,

May 10.1867

My dear young friend,

Thank you for your very kind dispatch forwarded to me here (I am copying out a Military memoir for my father, so the term dispatch is pat, tho' I can't say yours is of a warlike tenour). You may be perfectly out of trouble - & I am sorry you were ever in it - about the bits of newspaper - I never meant them to be returned. My riddle certainly was not worth answering - it meant that if  $ACR + x$  was = infinity &  $ACR - x$  was = nothing at all at all, then  $x$  was = a partner for life! So you see it was answerable tho' neither answered nor worth it. But my dear fellow, about answering letters - when I want an answer to a letter, it is not (or only occasionally, & not often of late) a reply to diverse astronomical, optical, electrical, algebraical, or any other ical difficulties - but something to tell me how you are - what are your prospects of honours - what employment you have for your time - how far you succeed in overcoming what you complained of - the encroachment, I mean, of idle companions - what progress you make in political opinion and above all in religious stability & consistency - These are the kind of things your friends, ~~who~~ want to hear about - & therefore are the answers to their letters - One thing you have at last answered - but not till my wife dragged it out - that you will come to us if you can - Wherefore, more thanks than this paper will carry: & I do earnestly think we shall not be disappointed. - I want very much to shew you the rubbishing untidy half- finished little cupboard upon posts which is dignified with the title of an Observatory, & the telescope with which, as to definition tho' of course not light, I am prepared to challenge my Lady Northumberland<sup>1</sup> (I have Dawes's authority for thinking the feminine gender the more suitable for so elegant a contrivance) And perhaps old Cockatoo would recollect you - and there has been a discovery of Ophinghssum<sup>2</sup> [?] near the Priory - and &c &c &c.

I am glad you like Stokes's<sup>3</sup> lectures- it is so good a thing to be interested in your work - & the blue bells are a charming variety (not to intimate that blue eyes would be more charming still) - I was at the Flower Shew at Bath on Wed<sup>y</sup>. - I wish you had been there - tho' how you would have escaped I cannot tell - & perhaps you could not yourself.

My young Prussian acquaintance certainly is not to be overlooked - but she was eclipsed there

You will be sorry to hear that M<sup>rs</sup> Newcourt is in Bath for the waters - very ill with rheumatism gout & neuralgia in her arm: & I fear her recovery may be tedious. Yet even so it was a great pleasure to see her again - & she is bent on doing good in the boarding house - I wish I had half her zeal - but I am sorely behind

Oh! Do you know I have seen the real figurehead of the Chesapeake!

Your loving old friend

T.W.Webb

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<sup>1</sup> Reference to the Northumberland telescope [which Webb seems to have a "down" on]. See Letter 20

<sup>2</sup> Does he mean the plant *Ophioglossum* (adder's-tongue) or is he just being funny?

<sup>3</sup> Probably Sir George Stokes See Letter 39



Letter 59

Over four weeks later

Troy<sup>1</sup>, June 18.1867  
Waterloo Day

My dear young friend,

All manner of thanks for the trouble you have so very kindly taken for us – all of a piece with your kindness in following us, about this very day 12 months to Lucerne – to that pleasant pension & all the fun there, which we at any rate think & talk about so often – I wonder if you have forgotten it all – and you own spirited defence of our Prayerbook that window-opened evening ! -

I am very sorry to hear you have had a visit from your plaguing old acquaintance again – the nose & eyes & mouth tormentor – But I think I am more sorry to to [sic] hear of your temptation to – what am I to write? – I was going to put – but I won't

“Well, what does the man mean?”

Why what I do mean is this, Sir, that we have it under your own hand, Sir, that if your Honour (I think that is the right way to speak of a Vice-Chancellor) – well as I was a going for to say – that if your Honour were anywhere this summer it should be to Old Hardwick – and I never heard the Old Hardwick went by the name of Edinboro' – and what's more, it never shall in my time if I can help it.

“The old fellow must be an ass – he forgets all about the Sea Voyage that is to do such wonders for me.” –

To be sure. The old fellow is an ass – and he knows it a great deal better than you do – and he knows something more, too, that there other sea voyages besides to Edinboro' –

“As if I could find Hardwick on the Sea-side!”

Very well; the old donkey has heard of a place called Bristol, & another place called Milford Haven, & another place called Cardiff and he has heard that they are on the Sea-side - & that from anyone of them you may get to Old Hardwick easily enough.

Do come.

Who have you got at Edinboro' that loves you as well as we do?

But Halloo! Stop! Perhaps I am going on wrong ground - & getting into a preserve – and it's best not to allude to the colour of Eyes or Hair!

I could tell you of a Scotch voyage, too, but I won't – “Don't be M<sup>r</sup> Naughtyboy” as at Kauffmann's<sup>2</sup> but Come & see

Your truly affectionate friend  
T.W.Webb

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<sup>1</sup> Troy House, the home of Mrs Webb's brother

<sup>2</sup> Boarding house in Switzerland stayed at by the Webbs and Ranyard

Letter 60

One month later

Hardwick Parsonage,  
Hay,  
July 16./67

My dear young friend,

Here we are – ( and I wish I could make it into Here you are) – the old party - & 3 young ones viz. an Indian Adjutant & his 2 sisters – the said juniors, with the old guide, meditating an excursion on Thursday to the Old Black Mountain - & the battlefield of 1000 years - & that old guide thinking how much – how very much, he wishes his young friend was of the party – not that he supposes the girls would be any great attraction to him, or to anybody, poor young plain orphans – but that he remembers the old day when they visited together the scene of that unknown fight, & mounted to the top - & the junior said, “Well, this is very big” - & they both came away in the rain!

That – and how many other things have passed away

“Into the dim and unreturning past” - yet it cannot be said that their memorial is perished with them. – One thing had very nearly escaped me, however altogether. There is a meeting next month of the Cambrian Archaeolog: Soc<sup>y</sup> at Hereford, ~~next mo~~ & I was looking up some articles to send to the Temporary Museum, when I suddenly missed one of the flints from the battle-field. I could not for a time conceive where it could be – till at length – like the drawing away of a cloud from a mountain peak, a notion slowly emerged upon my consciousness that someone had especially requested to borrow it, to get the opinion of some Don upon it – and I cannot help fancying that someone was yourself. ~~Well~~ If such should be the case will you tell me something of its subsequent history – especially as I have only one more of those relics, which I was so fortunate as to pick up myself on a later occasion, when M<sup>rs</sup> Webb & her nieces went up with me.

Did any of us tell you how that my dear father has actually been persuaded, at his age, to edit a curious MS. Relating to the Civil War time? (on the Parliament side, by the way)<sup>1</sup>. Of course I have had, & have, heaps to do as amanuensis, & have been dipping into a great mass of authors – some of the results curious enough. – Mathematics & I have long cut one another. He has voted me an ass, & I have pronounced him a boar – so I keep my ears for the present out of the way of his tusks, till you come & make up a peace. I do know there are & must be different orders of infinites nevertheless - & have some notion how they ~~are~~ are spun out of finites - & I connect their threads somehow with the deck of an Alpine steamer & a hot climb in a thunderstorm (which would have been much hotter but for the kind determination of a young Englishman that I met with to carry a bag for me) And this amount of knowledge – or recollection may serve as a “sufficient ground for a Treaty” – some future day – the sooner the better.

We have been quiet enough here of late – going nowhere, & having no one, till the Greenfield<sup>2</sup> party came – They go next Saturday – nice girls in some respects – tho’ I have been abusing them – but they are not so good to look at as I wish, for their own sakes - & they have two poor little sisters plainer still. My former pupil was a brother – who I think you have met – Walter - & you have seen the father, who ~~was~~ I am sorry to say died this spring, & left them to a step-mother’s care – on their own – but they do not want for money. He was just such a man as you have often met with – converted I believe – or rather feel sure – from a very worldly state, but not receiving prudence with grace, & making many mistakes uncomfortable to himself &

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<sup>1</sup> Military memoir of Colonel John Birch (1615-91)., sometime governor of Hereford in the civil war between Charles I and the parliament, and later a Royalist business man and MP written by Roe, his secretary, ed. T.W. Webb, Camden Society (1873) with more than 200 pages of notes added by John Webb.

<sup>2</sup> See Letter 26. The father James Greenfield 1810-67 was a JP and sometime High Sheriff of Angelsey

others – When they are gone (i.e. the party, not the mistakes) the Troy girls<sup>1</sup> are coming, & they will go with us to play croquet & hunt ferns at Acton Scott<sup>2</sup>, our dear old friend M<sup>rs</sup> Stackhouse Acton – the headquarters of genteel & intellectual life in a wide neighbourhood – a great advantage for them. I may perhaps get upon the Longmynd again, & wish I had your geology to interpret the curious things there. I forget whether it is Murchison<sup>3</sup> or Lyell<sup>4</sup> that is so fond of that neighbourhood – I sh<sup>d</sup> like to see where the igneous came roaring up, & roasted the neighbouring limestones, & turned their fossils into dust – the strange metamorphic action I have seen, but not it's source. I was not less interested in the grand old camp atop of them where Caradoc (alias Caractacus) once had the power of Rome at bay.

Now don't you be "Mr Naughtyboy" of Lucerne but tell us all about yourself – and Paris - & the salt water, "the Loves of the Triangles". My wife sends her best love to her dear "Boulogne-son" Arthur. And I shall always be as I am

Your very affectionate friend

T.W.Webb

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<sup>1</sup> Helen and Louisa Wyatt

<sup>2</sup> See Letter 26

<sup>3</sup> Murchison, Sir Roderick Impey, baronet (1792–1871), geologist and geographer. ODNB

<sup>4</sup> Lyell, Sir Charles, first baronet (1797–1875), geologist. ODNB

Letter 61

Three days later

Hardwick Parsonage,  
July 19/67

My dear young friend,

Bravo!-

One thing only is amiss – you must not begin to be – what you never were – shabby - & a very shabby trick it would be to put off your loving old friends with a week – Bah! – Are we expected to adopt the phrase

“The smallest contribution will be gratefully received?”-

Now write as soon as you can – say you mean to behave properly & not run away as if you were ashamed of us - & tell us when our pleasure is to be – that we may have all clear –

The very term “the long” condemns you – out of all that length you might give us a little more time.-

I am sorry you had not my flint, for it puzzles me beyond measure to think who can have it – I only fixed on you – not from any distinct recollection but from the ~~combined~~ impression that I had lent it to somebody, combined with the certainty that no one has been here so likely to be interested in such a curiosity as yourself – or to wish to shew it to some learned friend.-

I have just looked at my Pocketbook & see term begins Oct.1. but that I fancy is nominal & you are not wanted immediately. But please let us know as soon as you can, when you will come, & whether there is any necessity for your taking us last? We shall be delighted to see you any time, but if it were all the same to you, sh<sup>d</sup> rather prefer the beginning of Sept. to the end.- My wife says if you c<sup>d</sup> come the 1<sup>st</sup> week we would make an expedition to Llanthony – She dreamt most felicitously the other night of your being here & our all being very happy together. I went to the Mountain yesterday, & am glad in some respects you were not there.

My wife sends her best love, & is so delighted about your coming. It’s a refreshment to us which we want.

Your loving old friend  
T.W.Webb

Saturn – Proctor & I have struck up an acquaintance: a nice candid fellow.

Letter 62

Over two weeks later

The Old Quarters,  
Aug.6/67

My dear young friend,

I am going to give you a little Trouble – Wanting your Judicious Opinion Upon A Matter of Business.-

I have had, from time to time, some little correspondence with a certain Rev. **W.O.Williams of Pwllheli, N.Wales** – he wrote about testing an Object Glass – and afterwards about having seen a bright spot on the Moon’s Back (a very curious & good obs: by the way,) which led me to put him in communication with Birt – and finally he wrote the other day to ask me how he c<sup>d</sup> become F.R.A.S. – I gave him all particulars, & said I ~~was of a~~ would sign his recommendation, but I was afraid the Soc<sup>y</sup> w<sup>d</sup> not consider such communications as amounting to personal knowledge – but as I did not know their practice in such cases, he might ask M<sup>r</sup> Williams about it. He <sup>^</sup>i.e. W.O.Williams <sup>^</sup> wrote to ask J.Williams <sup>^</sup>i.e. our Secretary!!<sup>^</sup> whether he thought in such a case as mine, being driven as it were to the remotest corner of the country – the Society w<sup>d</sup> admit of correspondence as constituting “personal knowledge”, and if he <sup>^</sup>i.e. J.Williams <sup>^</sup> thought that this construction upon the words in question was admissible, that I <sup>^</sup>(i.e. W.O Williams) <sup>^</sup> had no doubt but that you (i.e.T.W.W.) would be happy to favour me with the first signature &c. – And this enquiry brought J. Williams’s reply, on which I am writing now. – Now, what do you think about this? I certainly think the man very fitting to be a member, & think it’s a pity he sh<sup>d</sup>. ~~not have the advantage,~~ if be cut off from the advantage, from his retired situation, but that is not to lead me to do a wrong thing – so will you please consider the matter? – and very probably you can ask someone at Cambridge, if you feel a doubt about it, who may know what is thought right on such occasions. I had hoped Williams <sup>^</sup> (our Secretary) <sup>^</sup> w<sup>d</sup>. have referred to some precedent, pro or con, but he does not. Query Does personal knowledge mean knowledge of a man’s person? If so I ought not to sign. But if it means knowledge of what he is, I can do so, very satisfactorily.

It is rather a case of conscience which puzzles me - & if you can settle it for me yourself – or get me a good opinion from a good man, I shall feel particularly obliged. I hate – it is not too strong a word – a conscientious embarrassment - such as I have got into and not for the first time in my life. - I do not think there is any great hurry, if a little delay would make the point more clear. – If it is decided that I may honourably sign as first, I dare say you w<sup>d</sup> not object to add your name as second – and perhaps you c<sup>d</sup> get a friend to give a 3<sup>rd</sup> signature – ~~there~~ the 2 latter signatures being only pro-forma & implying no knowledge at all. Possibly your experience in the Mathematical Society, or your own Union at Cambridge, might help you out.

We are thinking with so much pleasure of your coming & shall soon begin to count the days. I hope the weather will not have broken by that time. Shall you come from Hunter St? excuse my asking but I have a reason for that impertinent question.

On second thoughts I will enclose the form of recommendation – not, you may believe, as wishing to induce you to sign, if you have the slightest hesitation as to the propriety of my doing it first – which would be a <sup>^</sup>sneaking<sup>^</sup> dirty artifice – but simply to save a little time, & suspense to the party concerned, either one way or the other. The question is evidently not in what sense I may understand “personal knowledge” – but in what sense it is meant to bear in the Rules of that & similar Societies?

Ever my dear young friend  
Yours very affectionately  
T.W.Webb

*Attached is the letter to the Rev. Williams from the Secretary of the R.A.S. on headed paper. Is he a lawyer? In that he does not use punctuation.*

Royal Astronomical Society  
Somerset House  
August 3 1867

Dear Sir,

If Mr Webb feels he has a sufficient acquaintance with you to propose you the Society will not presume to enquire whether his knowledge of you is strictly personal in short the matter rests entirely between him and yourself as his signature will be sufficient for all purposes

I am  
dear sir  
yours obed<sup>tly</sup>

John Williams

Rev W.O.Williams

Letter 63


Three weeks later

Hardwick Parsonage

Sept. 14. 1867

My very dear Arthur,

We were truly glad to hear from you, & to get no worse an account than you have been able to send us. You don't say when you shall return to Cambridge – so we shall send this to Hunter St<sup>1</sup>. – I was never so sorry to part with you – though you might not have thought so – for the coming up of a certain Maria in a little black hat disturbed me – the said Maria's troubles having of late interested me very considerably, and I having failed to find her & have a talk which I much wanted – so when the said Maria came upon me most unexpectedly it threw me somewhat off my balance & I had two to look after instead of one. – How much I wished you could have stayed longer with us – I could have shewn you many things which have occurred to me since, & talked over many more – & I might have had more opportunity of proving how truly & deeply I am concerned for your happiness in every way. It is but little that I may be able ~~to~~ ever to do to promote it – but that little will I am sure be most willingly & earnestly done - & the more opportunity you will give me of doing it, the better pleased I shall be. – You may think this hardly consistent with some things I said – but indeed I had no idea ~~at~~ at the time (though I ought to have had) that I was causing you so much pain by some remarks of mine. I thought about it long and sadly, & am much concerned, not only on your account – but from the annoying but salutary – mortification of knowing that I was not, even at my years, a wiser man. It is very easy to be, in theory, a “wise reprover” – (Prov.xxv 12) – but theory & practice are far apart - & the more interested I am in any matter, the less likely I am, I fear, to express myself about it so as to leave no ground for subsequent regret. I was deeply concerned therefore to find how much more I had said than there was any occasion for – how much that simply gave pain (where I should above all things have desired not to give it ) and done no good after all! - Well – one comfort is, there is nothing more profitable for us than to think over our own failings (or excesses) & trace them well to their roots, that, however far from wise in the abstract, we may at least be wiser next time.

You will like to hear that we have been able to arrange for going to Cheltenham next week, & to London the first fortnight in Oct. when if all be well, we are looking forward with especial pleasure to seeing you again. The more the merrier. – I wish you had been here last night – air very fair & a fine sight of the Transit of  [Jupiter] I, followed by his shadow, & then by II. I thought too I caught that terrible comes of  $\delta$  Cygni – In regard to your proposed work on Light, I don't know that any line – as far as my very limited information goes – would do more to stamp you as a master of your subject, than a thorough discussion – analytical & experimental, of the unsolved difficulty, whether light, heat, & actinism are 3 <sup>^partially^</sup> superposed spectra having specifically different properties – or one long series of undulations differing not specifically, but only in ~~velocity~~ <sup>^rapidity^</sup>, & possibly as you explained to me in that same peculiarity which is thought to give quality to sound.

Is it ~~very~~ distinctly understood why some substances are more on the extremes, others on the centre, of the colour spectrum? – When invisible undulations are so weighted as even to have transposed to the red end of the spectrum (which I not only believe I have seen, but I think you will find Stokes<sup>2</sup> ~~admits~~-asserts) Would they thereby acquire the property of exciting Heat? or would you have Cold Red Light? (There's something bran –new for you  $\rightarrow$  forged this moment on the breakfast anvil & tempered in a Cup of Coffee.) –

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<sup>1</sup> Ranyard's home

<sup>2</sup> See letter 39

And mind – you are to give me what notice you comfortably can – of your arrangements to meet us in Town, that I may ~~give an~~ bespeak Buckingham. We ought to do justice to all parties – telescopes included – to say, the first fine night after such a date, when ever that may suit you. – I sh<sup>d</sup> like to take you to Browning's also, as I hope you will have a grand Spectroscope some day. Mind also to let me know (to do me to wit) whether you want your Lloyd before we meet?-

I hope we shall have a right jolly time of it yet. The Old Welsh toast was “Toasted Cheese and Hang the Saxon!” ours shall be, a happy meeting and a fig for the Cosine of Infinity! –

Your especially loving friend,

T.W.Webb

*With this letter is one from HMW. Part of which is crossed*

My dear Arthur

I was very pleased to see your handwriting to hear that you were safe. I should have been very unhappy when I parted with you, but for the hope of our seeing you again in February, & hope helps me on in many ways. We go D.V. to Cheltenham on Monday but we shall be home again on Friday or Saturday. Then we shall meet you in London where we hope to go on the 30<sup>th</sup> & I hear to-day we shall also meet my brother & sister from Troy, so Louie will be the mistress (if Helen will let her) during their absence. I have heard again [*now crossed*] from my niece but not since the ball. I will be sure to deliver your message to Miss Draper<sup>1</sup> – With much love from us all I am always dear Arthur your very affectionate old friend

H M Webb

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<sup>1</sup> Governess at The Priory, Hardwick, the home of the Haigh-Allens



**Letter 64**

**Two weeks later**

*On deckle-edged paper*

Hardwick Parsonage,  
Sept. 27/67.

My very dear Arthur,

A great many thanks for your dear affectionate letter. I could almost find in my heart to direct to you, if I were sure you would be in Hunter St. when it arrived -

Cos. Infin, Esq:

Where Cos: might stand for Cosmo – and Infin might as well pass for Jenkin, for all I see.-

However my present object is to say that (D.V.) we shall be at the old quarters (67, Big Russell St.) on Monday even<sup>g</sup> – or should my dear Father feel the whole journey too long, & break it at Gloucester, - Tuesday afternoon. I shall not say how pleased we shall be to see you again.

My wife sends, with her kind love, two little sprigs from her rock-work – the one genuine Swiss, the other imitation English – The latter is deeper purple – but by the time you get them, very probably no difference may remain.

What a bore – here is that postman – I c<sup>d</sup> flog his coat

Ever your loving friend

T.W.Webb

Letter 65

One month later

Hardwick Parsonage, Oct.29. /67

My very dear Arthur,

We shall duly comprehend any amount of silence on your part during this somewhat anxious time – but indeed I think you have been very good, to write so much as you have done - & we are always glad to hear, be the same more or less, as you will have to say. – I earnestly hope you do not suffer your studies to ~~infringe~~ interfere with regular active exercise (which is I need not say a very different thing from wasting time among idlers, and is as praiseworthy as the other would be blameable. I hope too you are very careful about proper rest for your brain. As an old quack I should strongly advise you never to shorten sleep below 7 hours; (perhaps though you don't require this bit of advice!) The brain must be nourished & cared for, if it is to be “good at need” (you recollect who was so styled) as much as the arms require similar care for a rowing match. A little ~~ear~~ neglect, or obstinacy, in points of this kind has often inflicted serious – sometimes irreparable injury, on fine & promising young men. ~~The~~ Your country has a right to expect a good deal from you in future years, dear Arthur – don't disappoint her expectations. College honours are not so important as the mens sane in corpore sano [sound mind in a sound body] through many years, I trust, of future usefulness. –

The matter on which we talked here has not slipped out of my recollection (tho' some important things I am sorry to say have) & I would beg you to look – and carefully weigh, the analogy in St Matthew xxiii. – 1-3 – the inevitable & eternal decision in a multitude of cases, among which – ~~for it is~~ the one in question would be included. Unfashionable doctrine, I know, with many in all ages & especially the present day – but I am well satisfied to stand by it, and its consequences too, sh<sup>d</sup> they come in my time (if God will give me the grace of faithfulness) – I might have added a reference to Philipp. II 3,- I St Peter II.13 –v.5 – However engaged you may be, I am sure your time will be well spent in looking out those passages – still more in carefully weighing them - & most of all in prayer, that they may be received into an honest & good heart

I enclose something which I am pretty sure will interest you - & which I do not want returned. With, who understands ~~fluorescence~~ ^these points^ will, consider it a clear case of fluorescence – we might call it mechanical fluorescence – so here Stokes is wrong.

I am lecturing at Cheltenham again – beginning my course last Monday week – ~~h~~ Optics – but of course very superficially handled – a nice intelligent class of some 15 or so – I have not counted them. Layard's<sup>1</sup> niece is there again, but not Layard in petticoats.

Believe me always, my dear young friend,

Yours very affectionately,  
T.W.Webb

<sup>1</sup> Very likely the niece of Sir Austen Henry Layard (1817–1894)-, archaeologist and politician, bearing in mind the Letter 66

Letter 66

Six weeks later

Hardwick Parsonage  
St. Thomas's Day 1867

Vous savez – ce que le très haut et très puissant Roi Arthur<sup>1</sup>, after whom you are named, did with the 3 pecks of Barley Meal? We have a right to claim them but you shall bring 3 books from Som<sup>t</sup> House in exchange.

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My dear Arthur,

I am hoping to hear something from you and about you. Do let us have a line. Whatever its import may be as to your own success, we shall be still delighted to hear from you. Should it not be all that we have wished and prayed for, we are well aware of the impediments that you have had – as well as the uncertainty that always does & must attend trials of this nature. – We were not aware when it took place, but conclude it must certainly be over now, & shall therefore direct straight to Hunter St. And now you are not to forget your promise of coming here –you remember how often you spoke of coming after Christmas – so we have a right to be looking after you - & you will cheer us up a bit, for we (at least I) have been a good deal saddened by work - & shall be greatly revived by the pleasure of seeing you once more. We have just had a fresh proof of the uncertainty as well as shortness of life – our good kind neighbour Ja<sup>s</sup> Williams of the Hardwick (I don't think you are likely to recollect him) expired within this hour. We must make the most, in every possible sense, of our time.

I will not write more this morning, tho' I am always glad to write to you – but I like talking to (or rather with) you much better. My very kind regards, with all good & happy wishes of the season, to your good parents as well as yourself, and believe me,

My dear Arthur,

Yours very affectionately

T.W.Webb

Will you let us know, when ~~convenient~~ you can conveniently make your arrangements, when you will be coming – for we sh<sup>d</sup> be glad to Cat's Paw you in the shape of begging you to bring down some books from Somerset Ho. (Library Antiquaries) for my dear father's undertaking.

*Continued by HMW and crossed*

My dear Arthur,

I am longing to hear when you will come to us, & when you do I must beg you to give us a nice long visit – I hope it may be somewhere towards the 24<sup>th</sup> of January, as I should like you to be with us when we have our usual little ~~Chris~~ New Year's party, as you will meet some of your new acquaintances, the Dewes<sup>2</sup> etc. It will be such a pleasure to us all dear Arthur to see you here again & I flatter myself you will like old Hardwick in the winter as well as the summer. I have been very busy of late & Miss Draper the governess at the Allens<sup>3</sup> has kept me constantly at work by coming here every week to have some hints given her in drawing. I forgot to tell you that my nieces delivered their best thanks & kind regards for the nice book & picture you sent them. Helen & Arthur<sup>4</sup> are paying a visit at my old friend near Bath & by & bye I trust the 2 girls will be allowed to come for a visit for I look forward to it as one of my greatest pleasures. Do write soon & tell us how you get on

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<sup>1</sup> You know what the most high and most mighty King Arthur...

<sup>2</sup> Henry Dew was rector of Whitney on Wye from 1843-1901. His brother Tomkyns Dew lived with his sister, Fanny, at Whitney Court.

<sup>3</sup> Neighbours at The Priory

<sup>4</sup> Wyatts

*Letter continues crossed over the page of writing*

We all send our kind love & best regards to your dear Parents with every kind & good wish for the coming Holy season.

I am always dear Arthur

Your very affecte [sic] old friend,      H MW

Letter 67

One month later

Hardwick Parsonage

Jan.13.1868

My dear Arthur,

Your loving friends here are very anxious not to disturb you nor to intrude upon you unreasonably – but they are not less anxious to know what you are doing, & what is going on. You will recollect that we have no Cambridge friend near us – not a soul to speak to who knows anything about it – so we have no distinct idea when the Exam: commences, or how long it lasts  $\frac{2}{3}$  and consequently, should this reach you at some very inconvenient moment, you will please forgive your ignorant well-wishers. We think about you very often – and certainly with no diminished interest or affection. I have a lot of things to talk about – but when will that be?

(Say the bells of Stepney.)

Now mind you are on no account to make the answer of the Big Bell at Bow. –

Some of the young folks of the neighbourhood are making holiday here, & we want you to help them very much – hoping that the idea might not be unpleasant to yourself – but if you don't make haste all the fun will be over - & Hardwick will in my dull and fogified (I don't mean foggi-fried – tho' that meaning might very well be put upon the word. Could you not manage to take the smallest possible bit of paper, & write upon it

Coming I am

A.C.R

Surely you can squeeze a time for that! And then will “sink, burn & destroy” the **Cos of**

Cockatoo wants to get up your sleeve –

Tiny wants to get into your lap

And who else wants - & what they want, & how much they want it I leave to you to guess – My wife is drowned in ink – so I remain

My dear Arthur

Yours full of affection

T.W.Webb

**Letter 68**

**One week later**

*[From HMW]*

Hardwick Parsonage  
Jan.22. 1868

My dear Arthur,

Cheer up! Matters may terminate much better than you anticipate & I think they will, for you are of a desponding nature, & make yourself out worse than you really are. At any rate dear Arthur, we will “Hope on, Hope ever” & we do not forget you each night in our prayers. I am so glad your dear belongings have been to see you, but now I must put in a word. You promised to come to us when your exam was over, & I want to know the first possible day we may look for you, as I shall not have my second party till you come for I wish you to meet some of our nice pleasant neighbours & we all long to have you here, so please write one line soon & mention the earliest day – Ever your affecte [sic] old friend

H.M.Webb

My nieces beg their kind regards to you & send many thanks for the books you have lent them. I fear I forgot to thank you long ago - Turn over [*in handwriting of T.W.W. who continues:*]

All which I cordially endorse. It is sure to be all right one way or another.

Please do come. The change will do you a world of good - & I want your help in adjusting the Ob<sup>s</sup> &c. &c.

The last sheet but one of the 2<sup>nd</sup> Edition goes up today.

O I am so thankful

Ever your truly loving

Cos.  $\infty$ , [infinity symbol] in (No – not that – because it takes more than one meaning. The which I protest against & I’m sure there is but one meaning in this letter – let me be

O

**Letter 69**

**Nine days later**

Hardwick Parsonage. Feb1./68

My dear Arthur,

Tho' I cannot but acquiesce in the wisdom of all that your dear Mother has so kindly said, I am very sorry indeed that you cannot come. – However, 'tis but a pleasure deferred, I trust.-

Meanwhile there is a thing that just now assumes considerable importance & in which I think you might possibly have some power ( as I will know you have the will) to aid me. When my dear father was in London he made some Extracts from the Journals of the House of Commons (about 1642-1646) which were of great importance for the work he is attempting and which he has most unfortunately mislaid. And this not only hinders him continually, but makes him even despond as to his ever finishing what he has begun. I have written to Bumpus (not your friend Bompass) to try to get them but without reply. - The ~~Arch~~ Antiquarian Soc<sup>s</sup> have sold theirs! Do you know of any possibility of our being able to borrow a few Vols. (if Lords as well as commons, tant mieux) for a short time? If not, I don't know but I must come to Town myself to make the extracts again: - an expense of time & money I w<sup>d</sup> most gladly avoid.

Please tell your good Mother that having very lately emerged from under a superincumbant mass of matter & intellectually heavy enough to be compared with the storms & sand of Layard's<sup>1</sup> work, I have been reading her "stones crying out" with great interest. I had a particular fancy long ago for the Sinaitic question, & had heard hardly anything about it since a friend gave me Forster's book<sup>2</sup> some 10 years ago.

With my kind regards to her & your good Father I remain in very great haste  
Yours very affect. friend T.W.Webb

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<sup>1</sup> See Letter 61

<sup>2</sup> Probably Charles Forster: *Sinai photographed: Contemporary records of Israel in the Wilderness* London Richard Bentley 1862

**Letter 70**

**One week later**

Hardwick Parsonage

Feb. 8.1868

My very dear Arthur,

You have been most kind & friendly in this matter - & if it can be managed without giving much trouble, my father, who sends his kind regards & best thanks, would be very much obliged by the loan of the Lords and Commons Journals – which, you are doubtless aware, are two separate sets – from March 15, 1642 to Aug. or Sept 1646.

They had best be directed to my father or myself, care of Mr. With, Blue Coat School, Hereford – the result of which will be, that if I do not bring them myself from Hereford in some Cheltenham journey, M<sup>r</sup> With will forward them at once, & save the detention oft to be caused by change of Rail. But you will kindly write when you see your way more clearly. Perhaps it may be against rule to allow more than one Vol. at a time – if so, please let it be the first Commons Journal after March 15.1642.

I am very, very sorry that you, or your good father, sh<sup>d</sup> feel so much disappointed. I asked M<sup>r</sup> Woodhouse's<sup>1</sup> successor M<sup>r</sup> Pope<sup>2</sup> – (knowing nothing myself of such matters) what was the value of your position – he said it was decidedly a good degree. And it w<sup>d</sup> be the more so this year, as the standard he said was an unusually high one. Depend upon it, it is all right.

I am copying out a few Observ<sup>ns</sup> on Linné<sup>3</sup> for the R.A.S. & think to send them time enough for Friday's meeting – when I daresay you will be there – but I don't expect they will be read – as, being the grand Annual Meeting with Reports &c. I don't imagine any private communications will come forward.-

But perhaps they may have a chance at the following meeting –unless they consider (which they ought not) that Linné is worn out.

We shall have a most elegant mannered & courteous President.

I must only add now how very much I am

(My dear Arthur)

Your affectionate friend T.W.Webb

Ten days later

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<sup>1</sup> See Letter 32

<sup>2</sup> Andrew Pope, Curate at Cusop. Mentioned in Kilvert's diary. William Plomer, ed. *Selections from the diary of Francis Kilvert* (Jonathan Cape, London 1<sup>st</sup> published 1938 Reprinted 1980)

<sup>3</sup> See Letter 51



**Letter 71**

**Ten days later**

Hardwick Parsonage, Feb.18/68

My very dear Arthur,

As many thanks to you, every whit, as if you had been entirely successful. You have taken a world of pains - & we are truly obliged to you – and your friends who have kindly interested themselves in the matter.-

As for the alternative of references you mention, it w<sup>d</sup> be impracticable – for we sh<sup>d</sup> have to make search first to know where the points are - & then to turn them out to see if they are the right ones – And as to the 3<sup>rd</sup> idea – so very kindly entertained & so very pleasantly urged – of my coming to hunt these matters up, I am obliged to say there is no hope of it. It is possible that my dear Father may be strong enough - & inclined -& come to town after Easter - & in that case I c<sup>d</sup> make searches or he might – if M<sup>rs</sup> Eyre<sup>1</sup> came here – release us for a short time. But I will not look forward – not only as a general rule, but in this special case, I can see how desirable it is, to take no thought for the morrow.

There was another saying – implying hard & tough jobs – about “having one’s nose to the grindstone”. But I suppose you are by this time having your nose to the Blackstone - & hardish grinding I sh<sup>d</sup> think it was. Well – it must be a great comfort to you to have advanced one more step in the journey, & left entirely behind a period of considerable toil, drudgery & anxiety.

My last sheet of the 2<sup>d</sup> Edit. is or ought to be in the press, & when it is really done I could find it in my heart (if in my strength!) to shy up my Hat to the Moon – where it might stay till Astolfo<sup>2</sup> went to fetch it down – full maybe, of the ashes of Linné!. – I have been concocting a Magazine article on lunar affairs – but where it will go to, I can’t at present tell – or whether it will go anywhere. –

You know I daresay that the Intellectual Observer is at an end – Its successor The Student seems to me below its mark at present. I have been asked to write in it – but at present have done nothing.

My father is very much obliged to you & sends his kind regards & best thanks. My wife always likes to write to you, so I shall let her speak for herself, & remain,

My very dear Arthur,

Your truly affectionate friend

T.W.Webb

*In HMW’s hand*

I will write another day dear Arthur about  
the watchmakers

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<sup>1</sup> Anne Eyre, great- niece to John Webb

<sup>2</sup> Astolfo a fictional and magical character of the Matter of France (14<sup>th</sup> century) One of his magical exploits was to fly in Elijah’s flaming chariot to the moon, where all things lost upon the earth turn up.

**Letter 72** [*Circled 1*]

**One month later**

Hardwick Parsonage,  
March 21. 1868

My very dear Arthur,

Just a few lines – at dinner – to thank you for your kind note – and to say how very much I admire your capital handywork, & how much I hope you will one day teach me – if you have no objection - the acquirement, which might prove very useful to me. I had no idea you had so neat a hand: & should think you might employ it in other mechanical ways as an amusement for your busy brain, very advantageously.

I am teaching a little Perspective to the Cheltenham girls<sup>1</sup> & this has brought before me a matter I have never quite lost sight of. Do you recollect the discussion we had in our delightful ascent from Gersau<sup>2</sup> – would we could have such another this ~~xxx~~ summer! – as to the curve formed by a long line vanishing both ways in Horizon? I was confident it was not a circle, but a curve of some kind having asymptotes – I thought a hyperbola – but could not prove it. You maintained that the section of a Cone by a Plane must be a circle. Good – so far – but if you won't think me very tenacious, I don't give up yet. The Cone is not cut by one, but by an infinite No. of planes behind one another, receding in the direction of the axis & this I think must be a hyperbola.

You very loving friend,

T.W.Webb

*Pds f 5,6*

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<sup>1</sup> Cheltenham girls: Webb gave occasional series of lectures to the pupils of Cheltenham Ladies' College.

<sup>2</sup> Gersau: Town on the southern slopes of the Rigi by Lake Lucerne, Switzerland.

**Letter 73** [*Circled 2*]

**One month later**

Hardwick Vicarage,  
December 11. 1868

My dearest Arthur,

Just a line to say that if you will kindly cause the Ast. Soc. Vol. (Baily's Lalande)<sup>1</sup> to be left at M<sup>r</sup> Wyatt's 77, Great Russell St. – it can be sent down to me very conveniently by one of my Nephews. I hope it may not give you extra trouble to arrange this in the course of a few days, as I am uncertain when they may ~~come~~ leave Town – Please direct it for me fully.

You asked me about the 'Tail' concerning my Grandfather<sup>2</sup>. It was this. He was walking once by moonlight ~~over~~ between Hampstead ~~Heath~~ & Islington, in which were then fields, on his return from dining with his brother at the former place, wrapped up in a large greatcoat & with a hare in his hand which his brother had given him - when he was stared at & almost stopped by a man who met him - Whom he astonished by saying, in Hebrew, "Anochi Ben Jareach" - I am a son of the Moon - so I placed the words as my signature to that article! – I have received the Revise of my next, on Spectrum Analysis, which I suppose is meant for the Jan. N<sup>o</sup>. –

With every kind wish for the coming and all seasons, believe me,

My dearest Arthur

T.W.Webb

(What a joke – I never said, as I meant Your most affect.! – But I was thinking of signing myself at that moment Chaplain to the Earl of Cleveland (i.e. of him who fought under Chas. I) only, thereby w<sup>d</sup>. have hung another "tail" which I have no time to tell –

Upset my pen –  
That's the way

[Several blots of ink]

Pdfs 7,8

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<sup>1</sup> Joseph Jérôme Lefrançois de Lalande 1732 –1807 French astronome . His star catalogue was first rendered practically available, at the insistence of Francis Baily 1774 –1844, British astronomer, by the British Association in 1837-8. In 1842, Baily had accomplished the arduous task of deducing the mean average from the apparent places of 47,390 stars in the 'Histoire Celeste.' The publication was, after many delays, completed in 1847.

<sup>2</sup> Grandfather: William Webb 1736-1791 Mathematician, political writer and linguist.

Letter 74 [Circled 3]

Seven months later

Felsenegg above Zug<sup>1</sup>,  
July 21, 1869

My dearest Arthur,

Our plans are now I think so far arranged that I may write & tell you something about them. We intend, D.V. to spend our ensuing Sunday at Schaffhausen – Monday night Freiburg (im Briesgau) Tuesday night, Mannheim. Wednesday night Coblenz – and Thursday night we hope to reach Bonn where we propose fixing our quarters at the Golden Stern Hôtel – to have the pleasure of stating part of a day, at least, with you & a little more if we can – And a great pleasure I assure you it will be. But NB there are one or two hitches on the way. I have got luggage to fetch from Mad. Kauffmann's<sup>2</sup>, as we started off light for an excursion, & now find we cannot go back there - & that may hinder me - & there is an uncertainty as to day or days, between Schaffhausen & Mannheim – which possibly we may not be able to see our way through, till we get further on the road. So I would beg you to look on the above as the earliest arrival that can be expected – but with the possibility of one, or even two days' delay. I am sorry to say, & I know you will be sorry to hear, that my dear wife's health is by no means restored – she was never equal to so little, but has by our circumstances been obliged to do a great deal too much – I cannot help however hoping that the good effects may appear hereafter, as is often seen in cases of change. I don't know whether, when I wrote to you she had had a feverish attack from fatigue ensuing on a generally enfeebled state – it took some time for her to rally from this, & I doubt whether she has yet got over it. The air of Luzern became stifling in itself & much more so in Mad. Kauffman's crowd, so we left for Sonnenberg – you never can tell what a place is, from report, or books – we found it vulgar & gambling – with a glorious view badly arranged even to ugliness as a whole – (the forest walks alone seemed charming). Mr. E. only got in an troisième which would never do – so after a night we marched off down to the lake - & left our umbrellas behind – got a rowboat to fetch them where your humble servant wet himself through in catching crabs – had a fine drive through the awful looking remains of the fall of the Rossberg<sup>3</sup>, where hundreds of unclaimed corpses are lying till the day of judgement – got to Arth where a crowd of pedestrians with sticks and bags were preparing to assault the Rigi – steamed to Zug, wishing for a little quiet – when behold! the little place was in an uproar like an opened ant-hill – it was the Tir National – the place was full of flags & festoons (pretty enough, by the way) – a hundred persons or so crowded into the little steamer the moment we left it – rifles, bands & volumes of tobacco smoke in a boiling sun sent us up here (whereas we had meant to have slept below) & here we are; with all the lake of Zug (I had like to have spelt it Jug!) beneath us - & all the plain country beyond without end. The Rigi cuts out most of the high snows – still the place is charming, & I wish you were here: only perhaps you would rather be where you are!

By this time I hope you have mastered Der die das – Two geese & one Jackass - &c. &c. &c. (pray don't betray me to the Herr professor Doctor – if still living – who figures in the Anti-Jacobin). I really have a great respect for genteel Germans. But vulgarity – the same in its essence everywhere, is especially unattractive when rolling about in a cloud of smoke. We thought of you so often at Mad. K's – you seemed like a part & parcel of our idea of the place – but the house is changed, & the management more pretentious & I am sorry to add less comfortable. I think

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<sup>1</sup> The Webbs were on holiday in Switzerland and Germany

<sup>2</sup> Webb's usual guesthouse

<sup>3</sup> Fall of Rossberg: also known as Goldauer Bergsturz. On 2 September 1806, a massive 40 million cubic metres of rock mass loosened itself after heavy rainfalls and thundered down into the valley. The landslide destroyed Goldau and its surroundings, 457 people lost their lives. A tsunami of c.15m. in Lake Lauerz resulted in a flood causing loss of life and the destruction of villages on the southern shores of the lake.

Switzerland is overdoing the thing, & being overdone - & they will be done up in the end. Which I shall be very sorry for, for I love them, tho' not all their meanness - After all John Bull is a noble animal, though often very clumsy, & needlessly rough - What do you think of our finding a dear friend of M<sup>rs</sup>. Eyre's<sup>1</sup> at Thun, & an F.R.A.S. - a very pleasant fellow, with a new wife & family, at Mad. K's - I would rather you would not ask his name - so I will tell you - Hopkirk! - He can't help that, poor fellow! We met too a very nice young girl who has an aunt at Brecon, & knew some of our friends. And there were 2 pleasing American ladies there - but the rest of their compatriots such, both in appearance & behaviour, that I am glad you did not prefer going to America. Their assumption is most offensive. My wife sends her best love & says you don't know how glad she will be to see you again, & hopes for 1 ½ day at Bonn.

Your very affectionate old friend T.W.Webb

[With a tiny drawing of a person and a comment: "no room for the feet!" at the bottom of the page]



*Pdfs 9,10*

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<sup>1</sup> Mrs Eyre: cousin to TWW

**Letter 75**

**Five months later**

*black edged*

Hardwick Vicarage,  
Dec.10/69

My dearest Arthur,

I am only able to write a very hurried line today – going to School on business.

I am very much obliged by your kind sale of which w<sup>d</sup>. have been mere rubbish to me -& by the remission of the Stamps – but why did you put 2d on your letter – it was very naughty – I can't believe it was required. -

And now, here is more plague for you (you don't deserve a bit of pity, though, as you won't come here! –

Will you do Mrs. Webb the kindness to call when convenient on the Secretary of the Ladies' Work Society<sup>1</sup> at the Victoria Press, Princes St. Hanover Square and say that Mrs. Webb sent a small package of work to her from Hereford by G.W.R. last Saturday – but has received no acknowledgement of its safe arrival, tho' she wrote to her & enclosed a stamp for a reply. (The said Secretary we believe is a Miss Emily Faithfull<sup>2</sup>, the proposer of the Ladies' Work Soc<sup>y</sup>)

And will you kindly sometime get ~~me~~ a copy of the Astronom. Register No. 83 - & forward it to Professor Mayer<sup>3</sup>

The Lehigh University  
South Bethlehem  
Pennsylvania  
U.S.

Paying both the copy (1s) & the freightage out of what you have of mine.

Also will you please ask Williams<sup>4</sup> (Som.Ho.) to send to same address a copy of last Monthly Notices (this the Society ought to pay)

And I sh<sup>d</sup>. like another copy of same notices sent to W.S. Gilman jun<sup>15</sup> Esq. Banking House of Gilman & Sons, 47 Exchange Place, N. York – the expense of this please pay for me.

Also, will you kindly pay for us, at your leisure, the enclosed bill?

Your right loving but scrambled friend

T.W.Webb

*Pdfs 11,12*

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<sup>1</sup> Ladies' Work Society: Founded in 1871. An institution established for the sale of needlework, embroidery, and other articles, the production of ladies in necessitous circumstances. Mrs Webb's work would probably have been sold for funds.

<sup>2</sup> Emily Faithfull, (1835–1895), publisher and women's activist ODNB

<sup>3</sup> Prof Alfred M.Mayer a physicist. Major work was in acoustics. Photographed the solar eclipse of 1869. The results were considered remarkable for those early days of photography. Taught at Lehigh, founded 1866 as a technical university In 1868 a \$5000 Observatory was built for Mayer. He later went on to Stevens Institute of Technology. His papers may be at Princeton. His paper on Jupiter in the Astro. Reg. Aug.1870 refers to "my valued friend Revd. Thos. W.Webb of Hay and the latter described Mayer in the same paper as "One of the foremost astronomers in the New World." (Mayer also wrote widely on fishing and in 1884 obtained 1<sup>st</sup> prize in the Amateur Minnow-casting tournament of the national; reel and Rod association!)

<sup>4</sup> Secretary RAS

<sup>5</sup> W.S.Gilman jnr.Son of banking family. Keen observer in Iowa. Involved in the search for the pseudo-planet Vulcan (Astronomical register, vol. 7, pp.227-228)

**Letter 76**

**Six days later**

*heavy black edge*

Hardwick Vicarage,

Dec.16. 1869

My dearest Arthur,

My wife sends her kind love & having had another account from the same man whom you have so kindly paid once already, has hoped to save you trouble by desiring him to send for the amount at your house next Monday evening. As however you may possibly be out, will you have the kindness to leave the money with the servant, and ask her to get the account receipted. Some time when you are writing – but not on purpose, as there is no kind of hurry, will you tell me whether the following impression is correct.

That Airy's computation of the diameter of the disc & rings produced by lenses on specula proceeds entirely upon the assumption of interference - & that such interference arises from the circumstance that there is a limit to the aperture of the Obj on speculum – in fact there is an uncompensated undulation at the edge, wherever that edge may be giving rise to interference - & that the disc & rings are solely interference – phenomena – I conceive the above to be right. But an idea has occurred to me. If the aperture could be conceived infinite, would not the focal image of a point be a point, without disc or rings? I have never seen this referred to.

On Wednesday next in despatch a Turkey by Midland Rail (carr: paid) for your good mother, & hope it will prove acceptable

With best love

My dearest Arthur  
Your truly affectionate friend  
T.W.Webb

*Pdfs 13,14*

**Letter 77 [Circled6]**

**Two days later**

*black edged*

Hardwick Vicarage,  
Hay, Dec.18.1869

My dearest Arthur,

Many thanks for your very careful & satisfactory financial statement. Please keep the balance at present. I fear your very troublesome Herefordshire friends may have occasion to plague you again

The weather here is superfoul - and I have a delightful deal of parish walking in the same.

Since I began this I see a book in Bull's Library which I am about to write for.

Wills's Eagle's Nest<sup>1</sup> - 5s 6d -

And I shall take the liberty of saying that they may send the account to you, and that you will pay it. And as I dare say they will not send the book till it is paid for, will you kindly leave the amount with your servant to pay the messenger when he calls. They will no doubt add the postage (probably 6d) to the price. They state in their Catalogue that they execute Bookbinding in all varieties & styles &c.&c but surely Bull ought not to bind except in Calf - or rather he ought to refuse Calf, for love of his kindred.

And now I must put on waterproofs &c. &c. &c. and with every good Christmas wish for you and yours, remain

My dearest Arthur,

Your loving friend

Thomas William Webb

*Pdfs 15,16*

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<sup>1</sup> Alfred Wills, *The Eagle's nest in the Valley of the Sixt: a summer home among the Alps* (Longman, Green, London, 1860)



**Letter 78** [*Circled 7*]

**Six days later**

*black edge*

Hardwick Vicarage Dec. 23 1869

My dearest Arthur,

The res ipsissima [the very thing] that we had been longing for – come by all possible means on Wednesday – to stay as long as ever you possibly can. Jolly!

I have a lot to write today & must be brief but I want to tell you – to anticipate any disaster or rather disturkey - at this season so fatal to the ~~fixx~~ reputation of dead heroes of the poultry yard, that I started off a Hamper from Hereford yesterday in a heavy fall of snow – which was to have been at Paddington (or rather in London – I don't know which is the Midland terminus) last night – but where it may be at the present moment is another question – I hope at No. 13.

The time will be so short - & holidays at Somt.Ho. so probable – that I can only ask you to bring one or two matters on the supposition of the most perfect convenience. But I have there as you will recollect, some paper photos sent for myself from America (the glass ones being the property of the Soc<sup>y</sup>). and a Vol. of the memoirs granted on application – I hardly can ask you to borrow for me from the Library the Vol. of Phil. Trans.<sup>1</sup> (a recent one within 4 or 5 years) containing E.[arl] of Rosse on Orion Nebula – at least, I can readily ask you to borrow it – but I am ashamed to think of you being burdened with such a big heavy thing. –

I must go out, and my wife wants to go on so I am my dearest Arthur

Your very loving

T.W.Webb

*Pdfs17,18*

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<sup>1</sup> Phil.Trans.: Philosophical Transactions of the Royal Society.

**Letter 79** [*Circled 8*]

**Three weeks later**

*black edged*

Hardwick Vicarage. Jan.15/70

My dearest Arthur,

We were truly glad to hear of your safe journey – and were greatly pleased to find that you still retain so pleasant an impression of your short stay here.

I must be brief today, having got afresh heaps of business but enclose the Bill, and shall feel very much obliged by your kindly paying it when convenient – if it has not been already settled.

The poor woman is not only still living, but somewhat better, and I think likely to recover but I have another threatening case in hand.

This morning I heard from the Camden Society<sup>1</sup> – No explanation whatever of the contre-terms – which I suspect was no blunder of mine after all - overpressed as I was at the time – but of my correspondent – But an acceptance of my Editorship of the Old Colonel<sup>2</sup> – so that must go forward speedily – “worse luck”, as the country people say, though I ought not to say so, of a tribute to my dear Father’s memory –

I will put on the opposite page for the especial information of yourself and your legal friends, as to how law is done in the country – one of the most successful of attempts at nonsense.

You will be very sorry to find that my dear Wife has suffered very much from severe pain in consequence of going to the lecture. Mrs. Wyatt says she has received the parcel & my wife is very much obliged to you for taking it. Many thanks for your very kind care of Bella,<sup>3</sup> she found friends of ours at Ross Station who took her to Monmouth in their Fly. Our united best love

Your most affectionate  
T.W.Webb

[On opposite page of letter]

Signed, sealed, and delivered by the Testator J.P. in his presence who at his request and in his presence and we as Witnesses in his presence and in the presence of each other subscribe ourselves as Witnesses.

(I hereby certify the above to be a True Copy!

T.W.Webb!)

*Pdfs 19,20*

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<sup>1</sup> The Camden Society, named after the early English historian William Camden, was founded in 1838 in London to publish early historical and literary materials, both unpublished manuscripts and new editions of rare printed books. Members received the Society's publications, roughly two volumes per year. In 1896, the Society merged with the Royal Historical Society. John Webb was a member and produced several volumes for the Society

<sup>2</sup> See Letter 56

<sup>3</sup> Arabella Wyatt – (1807 -75) Sister to Henrietta Webb. She was married to Thomas Henry Wyatt, architect.

**Letter 80** [*Circled 9*]

**Two days later**

*black edged*

Hardwick Vicarage, Jan 17/70 [1870]

My dearest Arthur,

Very many thanks for your kind letter & all you have so obligingly done. I am quite surprised at what you have heard as to the Letters of Orders<sup>1</sup> – but it must be recollected that they are incomplete – i.e. they are only Deacon's, or Priests' – and I am afraid the former, which would be less valuable – as some men – Rowland Hill for instance – never took Priests' Orders afterwards (somebody compared him to a man in such a hurry to go on a journey that he only waited to put on one boot!) – On the other hand, Priests' Orders would of course infer the pre-existence of Deacons.

My wife sends her kind love. She wishes me to ask to kindly send her Parkins & Gotto's<sup>2</sup> receipted bill when convenient. Also, she has ordered 2 books from Bull, & taken the liberty of referring them to you for payment – about 5s or 6s – with 1s 1d postage. They relate to Switzerland, & came in this morning very opportunely to amuse her, for she had an especially severe attack of pain last night – in fact she has never been right I am very sorry to say since that lecture night. M<sup>r</sup>. Greenfield, being a doctor gave her chlorodyne - & did more harm than good. I must take her to D<sup>r</sup>. Evans as soon as I can (Friday or Monday) for his opinion - & on Feb.7 we go, D.V. to Bath for warmth & regular treatment. I must add no more now but united best love & that I am, dearest Arthur,

Your most affectionate friend

T.W.Webb

*Pdfs 21, 22*

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<sup>1</sup> Letters of Orders: The documents ( institution and induction, etc.) which a beneficed or licensed clergyman may be required to produce at the first visitation after his admission

<sup>2</sup> Parkins & Gotto: Stationers in Oxford Street

Letter 81 [Circled 10]

Eleven days later

*Black edged*Hardwick Vicarage, Jan.28, 1870- After post

My dearest Arthur,

I have been a long time in answering your kind letter – but not because it was not appreciated – for indeed I was interested & pleased with the speculation as to the possibility of a varying law of Gravity – especially as applied, as you suggest, to Globular Clusters. – What however has led me to write to you just now is a legal question laid before me with much concern & annoyance by Thomas Wood, the gardener<sup>1</sup>. The which, if you can favour us with a little advice upon, both he, & I, shall feel especially obliged to you – Tom’s father, Abraham left a small property to his wife for life - & then to his son Tom, chargeable with two sums of £50, one payable to his (Abraham’s) daughter Sarah. – After decease of Testator, his widow finds herself very poor, & borrows £100 on this property – on mortgage Tom said, but I fancy it was only on Bond with deposit of Title Deeds and Will of Testator – Subsequently the daughter Sarah intermarries, as I think you gentlemen call it, with a certain very rascally individual called Bill Hill – which Bill Hill has saved money. And now it is supposed that his object is to become Tenant of the property – and that he will then pay off the so-called mortgage, get possession of the writings, and set Tom at defiance. And the said Tom does not like the prospect of this – and wishes to know – if it may please your Lordship – whether the said Bill Hill can do the said rascally thing to him – and, if he can, whether any steps can be taken to prevent it. Of course, the obvious way would be, not to allow Bill to become tenant. I did not ask Tom about this being called away at the time - & indeed not thinking of it at the moment – but I suppose his widow (his mother) favours her daughter, Bill’s wife more than Tom, and may be capable of conniving at this pretty little arrangement.

You recollect your remarks to me about picking up Red Stars. I have been at it again - & this time I really hope to some little purpose – for on Christmas Day I was so fortunate as to light upon a great beauty, though very small, about 10mag: in Orion. On looking for it again two nights ago, what was my surprise to find it apparently increased. I think there is little doubt of this, but of course it requires watching – but should it ultimately prove so, we shall have a new deep Red Variable. Last night I spent a good deal of time in differentiating its place with 42 Orionis - & think I have it near enough for identification. I have however written to Mr. Knott about it – especially as he is as good a magnitude judge as I am a bad one - & if it turns out well, I will send a little notice of it to the next Somerset House Meeting – Schjellerup<sup>2</sup> (Oh dear what a name)’s Catalogue of Red Stars contains nothing within what the good old Admiral [Smyth] used to call “blundering distance” of its place – unless I have done my work most egregiously wrong. – I believe I saw another very minute ruby last night, but in some place where identification is hopeless – And to mend - or rather not to mend, matters, I have never to this day finished mending the Whipcord so kindly mended once, and ultimately left unmended after all, by you. I have only as With desired, & as he says, like DelaRue, ought to be done with every speculum, stopped off the extreme margin, which always inevitably suffers a little on the tool (and is usually concealed by the cell in mounting) Whether due to this, or to the quality of the airs I cannot at present tell, but I have had some hours of very splendid definition lately: it was cold work however – the thermometer having I think been once down to 11.5<sup>0</sup> F. – it would have been hardly possible to get on without an Observatory. – I shall have to beg the favour of your calling

<sup>1</sup> Wood was gardener to the Webbs. He married their house maid Emma Price in 1863. She died two years’ later probably in childbirth. He married again and worked for the Webbs – and possibly some other household - until he moved to Somerset (1901 census) when Arthur Jones, the vicar who succeeded Webb, moved there.

<sup>2</sup> Hans Carl Frederik Christian Schjellerup (1827- 1887) Danish astronomer.

for me some day, if you will, at the Illustrated Almanac Office, about Jupiter. He was marvellous last night, though getting away to a great distance.

Your young friend Walwyn<sup>1</sup> was here this morning with his companion Mr. Dawson – they return to Oxford tomorrow (having been yesterday on the Black Mountains in the snow!) I shall miss Walwyn sadly at the next Lecture, which is to be on Monday. – The Allens however will play –

I know you will rejoice to hear how much better my dear wife is, since her return from seeing Dr. Evans – and I humbly trust we have not that ground of apprehension about her which we were partly beginning to entertain.

She sends her best love with mine, and I remain

My dearest Arthur  
Your truly affectionate old friend  
T.W.Webb

She has painted a Charming Landscape in Oil (P.T.O.)

Jan.29 Your kind note since arrived – It is answered by anticipation

*Pdfs23, 24*

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<sup>1</sup> Walwyn Trumper – son of the Vicar of Clifford

Letter 82 [Circled 11]

Two weeks later

*Black edged*

9 South Parade, Bath, Feb.10.1870. –

My dearest Arthur,

What an indefatigable friend you are, in doing kindnesses – or how can we thank you sufficiently for them all! I am sorry you should have had so much trouble to so little purpose about the Whitfield<sup>1</sup> documents – but I quite agree with you, that you have hit upon a capital plan as far as America is concerned. However – about the price – my dear Wife thinks it rather extravagant – I have not quite that impression so strongly – having no idea what Jonathan might think reasonable or otherwise. But I am rather desirous not to make a blunder in the matter, or get my name up as a “Jew”, because it so happens that my little book has had a considerable circulation there & I am not in the position of a stranger. So I have been thinking that the best plan will be for me to write to a kind friend [sic] there, and try to get his opinion on the subject. – In that way, I should at any rate avoid any egregious blunder - & the delay is not likely to be of much consequence as they are hardly likely to get up a centenary specification at this time of year. And you shall hear the result.

And now to proceed – We are very sorry to hear that your good Mother has not been so well - & hope this sudden severity of weather may not be adverse to her. – About the Illust. London Almanac I was stupid not to put down my wish on paper when I mentioned it to you - I will see about it when I return to Hardwick – as I have not the date here.-

If we did not tell you of our projected flight to this place, you will be surprised at the date, but it is a little scheme which we have had in our heads for some time - partly to break the cold at Hardwick – partly to give my wife an opportunity of passing a little time with one of her sisters, whom she otherwise has seldom an opportunity of seeing – and partly for medical advice. She has I thank God recovered from the agonizing pains to which she was subject for some time after that unfortunate exposure to cold on the lecture night - & is much more comfortable but still far from well. We propose returning, D.V. on the 25<sup>th</sup>. I running backwards & forwards for duty.

I do not think I have ever written to thank you, so I do most sincerely for him & myself, for your kindness to Tom<sup>2</sup> I found afterwards (once I well knew well enough but had forgotten when I wrote to you) that there was some absurd complication in the Will – made by a friendly public-house keeper – constituting a Life Interest in the Widow with power to mortgage or sell!!! Or some equally lovely puzzle, which has led us to desire a copy to be made which will soon come into my hands – There is another Will connected with another part of the same family, & which fortunately has nothing to do with Tom or his mother – a will which I made for his older brother when dying, who was illegitimate. I was not then aware that such an one could make no will – though I knew that he could not inherit. He has left his property (which I suspect came to him by will ) between his two legitimate sisters, with a gift to Tom’s little daughter. Is it right to take any legal steps to put this ~~right~~ straight? The title of the sisters to their little cottage ought not to be doubtful.

Now for another little bit of trouble for my dear friend with the concurrence of the Vicar of Clifford. I have asked our Bishop about our respective rights to fees as affected by Lord

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<sup>1</sup> Possibly, since Webb mentions America, papers of George Whitfield 1714 - 1770, Anglican itinerant minister who helped spread the Great Awakening in Great Britain and, especially, in the British North American colonies.

<sup>2</sup> Thomas Wood See previous letter

Blandford's act for the division of Parishes<sup>1</sup> – but he referred us to Counsel's Opinion, as the case presents some difficulty. Will you kindly tell me, what the expense of such an opinion would be?

There is botheration enough, I am sure, for once! And I must get about something else i.e. Jupiter for Pop. Sci. Rev. I had one or two marvellously sharp nights before leaving home but the object is getting very far away. Before I send the paper off, I expect I shall have to plague you as to certain points involved. Have you seen the No.1 of the New Series of The Student? They have made it quarterly - & this first No.(Jan<sup>y</sup>) contains a tinted plate of Jupiter by Browning. He is a very clever fellow – but I do not quite take to his tinted plates or indeed to his description – though he has told me something I had no notion of, and intend to make use of. – The figures hitherto published by the Observing Astron. Soc<sup>y2</sup>are, fortunately for him, considerably worse! You will think me getting very self-sufficient so I had better close, with our united kindest love & best thanks, & remain

My dearest Arthur

Your truly affectionate friend,

T.W.Webb

P.T.O

I have now reopened the envelope to erase, on second thoughts, the name and address of my American friend, that in writing to him today, I may be able to tell him that I shall keep his name strictly private. – To think of my doing such a thing with You! But I have an idea that it would be right towards him as a matter of business – or at least he might think it so – and at any rate he would probably be more willing to give an opinion.

Pdfs 25, 26

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<sup>1</sup> In 1856 the Act of 19 & 20 Vict. c. 104. (commonly known as Lord Blandford's Act) was passed, for the creation from time to time of new parishes for all ecclesiastical purposes, with the same status as those created under Sir R. Peel's Act of 1843

<sup>2</sup> Announced in the Astronomical register 1869 as A new Observing Society. In 1871 the decision by members to systematically observe Venus was heartily endorsed by Webb. Letters on the subject were published in the Astro Reg. up to 1873 but there are no references to the society after Vol.11 Astro.Reg.Dec.1873. Indebted for this information to Richard Baum.

**Letter 83** [*Circled 12*]

**Five days later**

*black edged*

South Parade, Bath, Feb.15/70

[*There is a PS here written sideways and in small writing over the salutation. It reads:*]

I had nearly forgotten to tell you how very much pleased I was with the enclosed letter – I am certain I could never have done the thing half so well.

My dearest Arthur,

You really are quite unwearied in doing good – and your most kind letter ought to have had an earlier reply – but it reached this place after I had left it for my duty at Hardwick whence I returned yesterday evening.

I do not see how we can possibly do better than act at once upon the most kind and valuable advice of Good Dr. Boardman – of whose name I certainly seem to have heard – and to whom I beg you will express my very grateful and sincere acknowledgements – though I am perfectly sensible that the favour conferred upon me has been solely for your sake. I see no occasion, under the circumstances, for waiting for any further information from my correspondent in America, as he certainly could not give a better opinion, and in all probability not so good an one. And I will write to him very speedily, to prevent his taking any trouble in the matter. – Please recollect, in the process of the negotiation, that as I never should have had the idea of turning those articles into money, but for yourself, I shall feel perfectly satisfied with anything you think well to accept, even should it be much less than what you have mentioned – as for my wife she would have been satisfied with £5 – in fact the articles, though not valueless in themselves, are so utterly so to me, that every shilling they bring, is so much clear gain.

-Re. Wood<sup>1</sup> I have got a copy of the will – which I will forward if you like – but all that is of importance is as follows

To all whom it may concern, I, Abraham Wood, Gardener, residing in the parish of Clifford in the Co<sup>y</sup>. of Heref<sup>d</sup>. Do will and bequeath unto my wife, Sarah Wood after my death (!) all my real and personal estate, she to have and to hold the same unto her especial use & benefit during the term of her natural life. And it (sic) also my desire that after the death of my wife Sarah Wood, that my son, Thomas Wood his heirs administrators or assigns shall take possession of the remainder of the estate that my deceased wife may leave &c.&c.

Which last funny clause I rather fancy was meant by the learned inditer to signify “without impeachment of waste” but it is what Tom is afraid of – I trust without reason, as I hope the previous portion creates a life - interest sufficiently to protect his right. Whatever may be the theory of the Right Hon. The High Court of Chancery (I hope I am giving the gentleman his proper title) I feel very sure, if any of it were sold, Tom would never hear of the money again. There is a Mt<sup>g</sup>. [Mortgage] on it – which was raised by old Abr. himself – but since his death the Widow (who was made Administratrix with Will annexed) paid it off, and raised the same sum (£100) elsewhere, on a bond with deposit of Will & other documents (if there are any) – which Bond Tom was asked to sign, & did so. The estate, on coming into Tom’s hands, is heavily burdened with charges amounting to £110, (£50 of which go to the wife of the man whom he dreads).

πελατινη κηρε εσικώς) [*Not sure about the characters here. The first “ρ” could be “μ”*] and his idea is that the same precious individual, having got possession as tenant, & having a considerable stock of tin – by some means or other – intends to pay off the Bond – and to get possession of the Will & Deeds, & sing out to the aforesaid Tom, like an Ancient Briton

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<sup>1</sup> Thomas Wood the gardener. See Letter 77



“Come if you dare”  
in answer to which the aforesaid Tom  
“Cantabit vacuus”<sup>1</sup>

There now – I hope you will be duly satisfied (may I venture to hope, gratified?) with the above instructive & entertaining mélange of Homer, Purcell, Horace and the High Court of Chancery – I must not forget to tell you in conclusion that the said Tom or his representatives having been made answerable for all “Funeral & other debts or expenses that may then be due or owing” – “all the remainder of the estate that may then be left or remaining, The said Thomas Wood his heirs or assigns shall hold unto himself or themselves for ever.” And so the document is wound up in right royal style. “Given under my hand this 23<sup>rd</sup> day of Sept.” &c.&c.

Please, Sir, is it worthwhile to obtain Counsel’s opinion, as to whether the said Thomas Wood would not be actionable for obtaining money under false pretences, if he persuaded anybody to give him £10 for his chance?-

Apropos of Counsel’s opinion – Thank you very much for your kind information. I will in due time talk to my friend M<sup>r</sup>. Trumper<sup>2</sup> on the subject.

I have at last done what I ought to have done long ago –(& should have done, but that owing to my style of mounting, it caused me some trouble) adopted Mr. With’s<sup>3</sup> kind advice, & stopped off a trifle of the margin of my speculum, which he (as well as DelaRue) says is never so well figured as the rest. I can hardly at present say for myself whether the change may have been in the atmosphere or in the speculum – but With – who knows perfectly well – has not the slightest doubt about it – but anyhow certain it is, that my reflector has “persaltum” [in one step] reached a marvellous pitch of excellence - & I am alike surprised & charmed with the definition – very good indeed before – but now – “something rich & strange”. Jupiter’s satellites, par-exemple, perfectly cleaned up from all false light & flare. I have had scarcely any opportunity of overhauling the critical stellar tests.

You will be glad to hear that Good Dr Berthon is coming to see us tomorrow, & to stay I hope & presume till Saturday. I have brought here that unlucky string about which I gave you so much trouble & all for nothing thro’ my stupidity - & with it the pulley round which it ought to have been spliced.

My wife unites with me in kindest love, & best thanks, & the sincere hope that your good Mother is quite restored, and believe me, my dearest Arthur,  
your truly affectionate & obliged Friend,  
See P.S. at the beginning

T.W.Webb

Pdfs 27, 28

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<sup>1</sup> Cantabit vacuus coram latrone viator. (Juvenal) The poor wayfarer will sing in the presence of travellers .

<sup>2</sup> Vicar of Clifford

<sup>3</sup> George Henry With

Letter 84 [Circled 13]

One month later

*black edged*

Hardwick Vicarage, March 17 1870

My dearest Arthur,

It is indeed a long while since we have had any communication but I thought the debt was mine, though you have kindly taken it upon yourself. Anyhow, I was very glad to see your writing again. But why will you run and race against an adversary who as somebody says is not troubled with human information? He carries indeed a scythe and an hour-glass – but they do not impede his nimble running. –

Your plans are both of them most ingenious – but practically I fear they would not “pay”. For it is not red lights alone, but that of a definite refrangibility which render the prominences visible; & I do not see that your method offer any advantage above the employment of a red screen at the eye-end – if only any medium, solid or fluid, could be found to transmit just the quality of light required. This Mr. Huggins has all but accomplished – and it would be probably both easier & cheaper to succeed on this plan, than to attempt to insulate from the red light in general, the exact section required, by such methods as you propose.

The prism-plan (as far as your time enabled you to explain it) seems to me to accomplish nothing more than is already done by the eye piece prisms in the spectroscope, with much less trouble. Nevertheless, as I said before, there is great ingenuity in the ideas. Pray go on with all such things – and twist them into all manner of possible & impossible shapes. Something may come out of them that may well repay your troubles.

I have sent up a long botheration to the Editor of the Pop.Sci.Rev. which I hope his readers may like better than I did, by the time I had ended it. It leaves matter pretty much like the last chapter in Rasselas<sup>1</sup>- “The Conclusion in which Nothing is concluded” – However it may have some possible use as matter of comparison some future season.

With had often asked me to try the effect of stopping off the extreme rays of the speculum - it being impossible as DelaRue had told him, to carry perfection to the very edge. (this by the way is always done by opticians in the mere process of enclosing it in a cell.) I was loth to give myself so much trouble, as a stop at the mouth of the tube could hardly be managed accurately enough with a paper trial - & the speculum would have to be taken out – however – at last I tried it, & with admirable effect. The “flare” which used to annoy me with large stars, has disappeared, & the image gained greatly in sharpness & beauty. But Jupiter, and the weather, - Have gone off together. [sic] I caught however the little black point in Linne<sup>2</sup> one night last week.

We saw a good deal of dear kind Mr. Berthon in Bath, & went together to explore an observatory on Lansdown, where was a big, silvered reflector, home-made, of more than 14in. diam. Very expensively & badly mounted, & not promising much. A 9in. metal combined in the same mounting was charming for colour, & apparently polish. The owner an intelligent man – but no match for Berthon (and that, no discredit to him either).

My dear Wife was getting the better for her stay in the delightful warmth of Bath – and still I am thankful to say preserves much of the good effect; but we have had a good deal of worry since our return with servants: the Cook (one you had not seen) turning out incompetent - & Ellen, the parlour-maid, whom you may recollect, becoming impertinent that she was obliged to be dismissed after being here 5 years. Such things are disappointing and vexatious; and I do not think the world improves – certainly not in proportion to the pains taken to mend it. In some respects – especially an insubordinate temper – it certainly grows worse - & this prognosticates a future I do not like to dwell upon. You young folks have a great deal to answer for, in helping to

<sup>1</sup>History of Rasselas Prince of Abyssinia by Samuel Johnson. First published 1759

<sup>2</sup> See Letter 51

guide the course of your country. I am sure there are “breakers ahead” but I fear there are those - & very many of them – reckless enough to steer right on, till it may be impossible to change the course!

You will be interested to hear that our good old Swiss Guide Christian Bohren – supposing that we were coming to his country this year – has written to propose our bringing back his daughter to be received into our house, & make herself useful, while she learns the English language. We liked the notion, & wrote to accept it, if he knew of anybody with whom she could travel this spring, and then D.V. we might be able another season to take her back with us. But I fear that will prove a serious hitch, & the scheme may come to nothing.

We are beginning to smell out a little project of coming to Town for a short time about the 2<sup>nd</sup> week in May - & do so hope you may not be out of the way at that time. Wouldn't it be jolly?

My wife sends her very kind love & I am always

My dearest Arthur

Yours most affectionately

T.W.Webb

Letter 85 [Circled 14]

Five days later

*black edged*

Hardwick Vicarage, March 23, 1870

My dearest Arthur,

I want to know what you would recommend me to do about anonymous letters. Till of late, I have been very free indeed from such missives – I can only recollect one, at this moment – to put me on my guard against a person in whom I was supposed to be placing too much confidence but in the course of the last 10 days or so I have received I believe three – all evidently from the same hand – and all I am certain written with the kindest and most affectionate intentions. What do you advise me to do?

As to the Red flame idea. I have no doubt a skilful optician would manage to get you a Red image of the Sun, ~~But you~~ by either of your very ingenious plans. But you want much more, or rather much less, than that. You want to be able to stop out all the red light except the extremely minute breadth of the line C – at least, to get anything like the full effect – and this I fear would be a very difficult matter. The only hope would be by something of a circular form, corresponding with the rectilinear slit of the spectroscope – possibly an opaque disc, & a circular aperture concentric with it, and both moveable longitudinally and independently in the cone of rays, might effect it. If any man could continue it, it would be Berthon – would it not be well to see him about it? – You are aware that Huggins very nearly accomplished it by two screens – each shutting off ~~light~~ red light, but on opposite sides of line C. – the one a solution of Carmine in Ammonia – the other, Chlorophyll. But I believe the latter encroached a little too much on C.

I much regret that slip in Nature<sup>1</sup>. But I greatly fear, my dear friend, it never came out of Donkeydom, & is more likely to increase than diminish the circulation of his paper.

When we consider the general tone, alas! of popular (and learned) scientific writers, it seems all very well that the readers of “Nature” should hitherto have found so little to annoy them. I fear further outbreaks in that direction.

My wife’s kindest love. She says, & so do I, that you are to come here on Easter Monday, & take care of the old fogies to London. Hereof fail not. – She owes Bumpus<sup>2</sup> for Mrs. Beeton’s Cookery book – also some Magazines received today, with postage on all - & if you should happen to be passing that way, she would feel much obliged by your kindly paying him.

Believe me always,

My dearest Arthur,

Your most affectionate friend

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Pdfs 31, 32

<sup>1</sup> The journal *Nature*

<sup>2</sup> Bumpus: J and E Bumpus, booksellers, Oxford Street

**Letter 86** [*Circled 15*]

**Two months later**

Hardwick Vicarage, Hay, May 24.1870

My dearest Arthur,

I am very glad to find that you are enjoying yourself so much, and getting on so nicely. I have only time today for a few lines to “report progress”, and, as usual, give you trouble.

I write to thank Mr Martin. I did not call upon Sir T. Duffus Hardy<sup>1</sup>, because I had not time. I called at Somerset House but Mr Watson was not there: ditto at the War Office, where Lockyer was out. I called at the Queen Office<sup>2</sup> where they told me there must be a mistake, as they were not in existence in 1851 (the date you gave me) – it must, they thought, have been in 1861, when they recollected a very large plate – but did not seem to take to my description of it: however you sh<sup>d</sup> see the whole file, whenever you may like to call.

Now for the trouble which I am about to impose upon your inexhaustible good nature. By some great blunder – which I can only explain by the confusion of books & papers here, a MS. copy in my dear Father’s hand, of Symond’s Diary of the Army under Charles I got among some old & waste Music which I took to London to sell, and which I left for that purpose at Messr<sup>s</sup> Puttick & Simpson’s,<sup>3</sup> 47 Leicester Square. I had not the least suspicion of the mistake, when this morning “pro forma” they send me a cutting from their printed catalogue, to know if they are to sell without reserve - & there – to my utter surprise, stands

A MS Copy of Symond’s Diary! –

As the sale is tomorrow, there was not a post to lose – I wrote to stop the sale - & in my full dependence upon your good nature as usual, ventured to tell them that my friend M<sup>f</sup> Ranyard would call for it before long. -

The Lot is numbered 396 in the sale of May 25, & is catalogued as “Manuscript Diary of Richard Symonds, transcribed from the Harleian MS &c. giving an account of the progress of Cromwell’s Army” —————

(Which it does not do, by the way, Symonds having been a gentleman in attendance upon Cha<sup>s</sup>.I.) The MS would not be worth much trouble in reclaiming, as having been already printed by the Camden Soc<sup>y</sup>. excepting for certain illustrative sketches, which my dear Father copied, but which strangely enough have been omitted in the Camden reprint

Believe me, my dear Arthur,

Your very affectionate old friend

T.W.Webb.

Pdfs 33, 34

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<sup>1</sup> Sir Thomas Duffus Hardy 1804 -1878 English antiquary: ODNB

<sup>2</sup> This could be the Queen Anne’s Bounty Office but its establishment was in 1704. Perhaps the office moved in the 19<sup>th</sup> C. See Letter 17

<sup>3</sup> Literary and Fine Art Auctioneers. Estbd 1750

**Letter 87** [*Circled 16*]**Five weeks later**

Hardwick Vicarage, Hay, June 29, 1870

My dearest Arthur,

This comes to tell you various things – First, what I hope you do not need to be told, that you are anything but forgotten in the land of your voluntary exile – next, that we hope your flight from your old summer enemy has answered your expectations – then, that we wish you had been here instead of there, for we feel that your being there is “neither here nor there” – and then various other matters to be duly developed as far as luncheon, & post –hours, et alia talia, will allow.

You will be glad I know to hear that your good friend, my better half, is something improved in health of late, though still suffering in a strange way from rheumatic pain about the neck & shoulders. Possibly it may depend upon the extraordinary dryness of climate exceeding what has been known for many years. I hope the very mention will not disagree with you, when I tell you we are, in the middle of Haymaking – The Fever I thank God has long left us, and the neighbourhood is comparatively healthy. The Moor<sup>1</sup> people have returned – but, as usual, the house is so saddened by illness & frequent dejection, that the neighbourhood does not greatly feel their presence. Still I am very glad to see at Church those that can come. – We spent last week at Stratford (Shakespeare’s Stratford, not the other of flea-celebrity – do you know about that?) – at good Lady Emily’s<sup>2</sup> – and saw a good deal of their Church work – under a very active Vicar. It was perhaps a little higher than you might have chosen – but you could not have overlooked the life & heart & spirit that pervaded their services. I gave them 2 Swiss lectures for their new School - & blazed up an illumination, &c. &c.

-You are to please to come here the first week in August, to help us (we greatly want it) in a splendid Tea Gathering for the Home Missions of our Church<sup>3</sup> – which is far to exceed all former Hardwick doings (and to be utterly spoilt, interpolates the Dissenting Preacher, by a thoroughly rainy day). Well – you will do us an immensity of good, and I won’t say you won’t hear a lecture from Sir Bartle Frere,<sup>4</sup> the ci-devant Governor of Bombay – and you are to bring Prof. Argelander<sup>5</sup> (snuff-box and all) that I may thank him personally for many obligations he knows nothing about - give him a taste of some capital Herefordshire Cider which he never heard of – and shew him such an Observatory as |I will venture to say he never saw in all his life!

There is another very serious matter, too, about which I want a very earnest talk with Mein Heir A.C.R. Do you know that the Popular Science Balloon has burst in mid-air – the publisher being insolvent (whence the author of the Jupiter article cantabit vacuus, or something like it) and now’s the time to start the publication discussed round Russell Square. You are to be Editor, and old Cockatoo will do what he can – first for love, & by & by for money - & we’ll all get rich, and build Churches & Schools, & snap our fingers at Huxley & Co.

Well – I have not written in this strain for a long time – but if this thought of you, my dear kind friend, makes me thus hilarious, what is not to be expected from your presence? You don’t

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<sup>1</sup> The Penoyres

<sup>2</sup> Lady Emily Harding was a relation of Thomas’s mother. She lived at Stratford on Avon. The families visited each other

<sup>3</sup> This event is fully described by Francis Kilvert in his diary. See Letter 66

<sup>4</sup> Frere, Sir (Henry) Bartle Edward, first baronet (1815–1884), colonial governor ODNB. Was Webb joking or did he or a neighbour know Frere? He did not attend

<sup>5</sup> Friedrich Wilhelm August Argelander 1799 –1875 Prussian astronomer. He is known for his determinations of stellar brightnesses, positions, and distances.

know the good you would do us both. And we want you to see how marvellously the Swiss collection flourishes & blooms here - & to explain to us why all manner of grubs & earwigs & creeping things “affect” them, as our old writers would have said, in so strange a way. And you must quite forget the German Baroness – and call on good Huggins on your road (now D.C.L. I am glad to think, of Cambridge) – and bring me some spectroscopic news & don't tell him – what I fully believe – that he has made a mistake in going to Grubb<sup>1</sup>, instead of With & Browning & Wray.

I have been doing something at old Col. Birch<sup>2</sup>, and as soon as Parliament has done all the mischief they can think of in one session, hope to be ready for press – at any rate to make a beginning in type. I wish that, & the History of Herefordshire, were done - & then I would kick up my heels.

Can't you get a peep at the Dresden Observatory? I forget the observer's name – but perhaps that same Saxon Baroness (or Countess is it?) would get you the entrée - & please take notice whether the objective is much over-corrected for colour. Also I want the names of the Stops in the Great Organ in the Hofkirche, for Hollingshead<sup>3</sup>.

Seriously if you have a chance to look through any of Steinheil's<sup>4</sup> achromatics, I should like to know what you think of them.

It is quite time for me to have done with all this nonsense, only fit to amuse you on a rainy day (if you can get such a thing – it is unknown here) In very good sober earnest we both join you in kindest love, and every prayer for your spiritual and temporal – fare, and I am, as always,  
My dearest Arthur

Your very affectionate friend

(sketched from life in  
(In the library)



My no-complimentary as Lord Clarendon would say, to the Baroness -

[Pdfs 35,36](#)

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<sup>1</sup> See Letter 5

<sup>2</sup> See Letter 60

<sup>3</sup> The blind organist at The Moor who also served the church at Hardwicke

<sup>4</sup> See Letter 5

**Letter 88** [*Circled 17*]

**One month later**

Hardwick Vicarage, July 27 1870

My dearest Arthur,

We are extremely glad to hear of your safe return – and think it very kind of you to write about it so speedily. My wife had written to your good mother yesterday to enquire about you, for she had been feeling very anxious and we are truly thankful that all is well. –

This being a busy day – in preparation for a Croquet party this afternoon – I must be duly brief in telling you that now you have no excuse for not coming to see your loving friends who will be delighted if you will visit them – and we have a selfish motive too in wanting you at our intended Tea Gathering for the Church Home Missions on August 29. – The day is rather unfortunate as just preceding Hay Flower Show – so that those people will not come - & in the middle of harvest – but it was fixed by the Bishop, so there is no help for it but in getting good & interesting speakers.

About this I am sadly anxious – but there would be no dearth if you would only come. You could say so much about the spiritual state of London, & make your sayings so interesting in so many ways. **Do please come.** –

My wife's best love & I am always  
My dearest Arthur,

Yours most affectionate friend

T.W.Webb

Please bring the other volume of Nehemiah Wallington<sup>1</sup> – (the 1<sup>st</sup> is safe here) & perhaps I shall beg you to convey another little parcel or so. –

Best thanks for the Photograph – all is scuttle here (not coal-scuttle though! – sun-scuttle-)

Pdfs 37,38

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<sup>1</sup> Nehemiah Wallington (1598 – 1658) was an English Puritan artisan (a wood turner) and chronicler. from Eastcheap. He left over 2500 pages and 50 volumes on himself, religion and politics.



**Letter 89** [*Circled 18*]

**Two days later**

Hardwick Vicarage, July 29. 1870

My dearest Arthur,

Nous sommes extrêmement fâchés [We are extremely sorry] that you cannot come – but with such a reason to the contrary, what can we say? – but that we hope you will pass a much pleasanter holiday with your dear Mother than you could possibly have done where “ the blood-red blossom of war has opened its heart of fire!”<sup>1</sup>

(I am by no means sure of the literal accuracy of my quotation) –

It does seem very tiresome & vexatious to be pestering you as soon as ever you come home – but there are one or two kindnesses that you might do us if and when quite convenient, and we earnestly hope they may not incommode you in any way. –

One is the payment of the enclosed amount at 346, Strand.

Another is – I see by the last No. of Notes & Queries that Bohn, 18 Henrietta St. Cov<sup>t</sup> Garden, wants Thomson’s History of the Royal Society – He says, Edit. 1800 – Now I have it (in very good condition) of 1812 – no notice of its being other than the 1<sup>st</sup> Edit<sup>n</sup> – so I suppose Bohn’s date is wrong – and I don’t care about keeping it, but I don’t know what to ask. It was marked 10s 6d. towards 40 years ago, but may be much more valuable now. Could you possibly find out for me what I should ask at a fair rate now? –

- Ditto Waterland’s Critical History of the Athanasian Creed, a nicely bound copy, marked in ancient times 20.6d and wanted by a gentleman near Dublin. I have no doubt your bookseller would tell you the proper sum to ask for each of these – Thomson’s History is only in boards.

I enclose a Cheque for £3 as I fear we shall be troubling you to pay another bill before long. –

I must close, because of a lot of commissions to prepare for Hay – and remain

My dearest Arthur

Your most loving friend

T.W.Webb

My wife sends best love to you & Mrs. Ranyard, to whom she will write soon. –

Envelope torn in re-opening to put in the Bill, which I had forgotten.

Pdfs 39, 40

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<sup>1</sup> From Tennyson’s Maud

**Letter 90** [*Circled 19*]

**Six days later**

Hardwick Vicarage, Aug.4 1870

My dearest Arthur,

I do think you a very “strangely and unaccountably” good boy – for being willing to come down to all our dullness here, and help us in our time of pressure. At any time we should be delighted to have you – but now it is not merely pleasure – but help – that we shall receive from your most opportune visit. You have not said exactly when, but there will be plenty of time for you to suit your dear Mother’s and your own convenience – to us it will be all the same, excepting that the more we see of you, most unquestionably the better.

I am to tell you that the Bill is quite correct – with many thanks for your kind trouble. Perhaps before you leave Town – and as late as convenient - you will do us the favour of calling at M<sup>rs</sup>. Wyatt’s, where there may be something to bring for us.

I have enough to write in other ways to make me brief to you – as you may guess – so with united kindest love and thanks from both, I am

My dearest Arthur  
Your most affectionate old friend  
T.W.Webb

On looking at your letter again I see I have not quite caught your meaning – you speak of your mother’s visit as occupying “a fortnight at the end of this month.”

I don’t quite know whether this means the last fortnight of the month – or a fortnight beginning towards the end of it. My wife says therefore I had better be more explicit, and remind you that the day is the 29<sup>th</sup> (Monday) and she begs you will come here not later if possible than the 24<sup>th</sup> as your help will be of the greatest importance. – We have a sale of Work & my wife’s pictures. Can you suggest anything that would be likely to sell well and cost but little. If there is time after you come, she will be glad if you will teach us how to make frills for hams &c. as you once did, but she has forgotten it. We have no machine for the purpose here.

My wife says it has quite cheered her to find you will be with us at that time.

**Letter 91**

**Five weeks later**

Hardwick Vicarage, Hay, Sept. 10 1870

My Dearest Arthur.

Many thanks for your kind letter, on behalf of my Cheltenham friend and myself. I have communicated its substance to her, and she is very much obliged, and will thankfully accept your kind offer of Pereira's<sup>1</sup> Lectures when you have returned. Her address is

Miss Wood, 4 Wellington St. Cheltenham.

In the risk of seeming very ignorant - or perverse - or both, I cannot quite see her idea of the advance of lights in zigzag lines should result from a mixing up of the emission & undulatory theories. I can understand, though I cannot explain, her difficulty. For if I am not mistaken, the undulations of light have a definite magnitude, and occupy a definite time-and therefore are actual motion. So is the progression of light. And these two motions being perpendicular - to each other, the resultant, it seems to me, cannot be otherwise represented than by an oblique line, alternating in direction, & therefore equivalent to her zigzag. I am afraid I am very stupid in such matters - but you have found that out long ago.

And now I am going to plague you "a little" about legal matters - I hope you will find it but "a little" for the question seems a very simple one. A parishioner of mine had the Christian names of Sally Potter given to her in Baptism. She was in due time married, in the name of Sarah (or Sarah Potter) to one William Boucher - being herself quite unaware, even till lately, that her name was actually Sally. Subsequently a little property was left to her as Sally Potter wife of William Boucher - Will she be liable to any trouble on expense as to the legacy in consequence of this mistake as to the name?

You will be glad to hear that our Gathering<sup>2</sup> was most successful. I have not time to give you the details, but the result was beyond all possible anticipation-about £60! The expenses are not yet all ascertained-but I do not think they can exceed £15.

When you have returned will you kindly-at your perfect convenience - send me the 2<sup>nd</sup> vol. of Nehemiah Wallington? I suspect it may contain a little more to my purpose than the 1<sup>st</sup> which excepting as to one or two curious points was barren enough.- I have been so much employed in other matters that for a length of time I have had to leave Col. Birch<sup>3</sup> on the shelf - but I must soon rout him up again. This horrible and barbarous bombardment of Strasburg - poor doomed heroic Strasburg -was anticipated, it is said, by him to a certain extent at Bridgewater - the surrender of which was enforced by his design of shooting fiery arrows into the town. These nevertheless, were destructive rather than murderous. Von Werder<sup>4</sup> ought to be gibbeted-in effigy-in the sight of all Europe.

You will be sorry to hear that my wife is suffering from a rather severe attack of inflammation in one eye - which has caused most acute pain and much loss of rest.

If able to go - as I trust - I shall take her to D<sup>r</sup> Evans on Monday, & go on on Tuesday to M<sup>rs</sup>. Tudor's<sup>5</sup>, at Kelston Knoll near Bath, where we shall remain till Saturday. She sends you her best love, and wishes me to say to your good mother that she had intended writing to her today, but her sight is unequal to it. She was delighted with her letter

Believe me, my dearest Arthur.

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<sup>1</sup> " Pereira: BAA Solar Section Memoirs the 3rd Rpt of the Section, 1893, there is the name J. De Moraves Pereira (Prof.), St Michael's, Azores. It was the A C Ranyard connection that set alarm bells ringing. I always associate him with solar work and it would seem that Prof. Pereira was an active observer of the Sun.It seems too great a coincidence not to be this gentleman". Thanks to Richard Baum for this information.

<sup>2</sup> See Letter 88

<sup>3</sup> See Letter 60

<sup>4</sup> Von Werder: The name is given as Werder in accounts of the Siege of Strasbourg during the Franco-Prussian War.

<sup>5</sup> Mrs Tudor: relation by marriage of Mrs Webb.

Yours truly affectionate old friend, T.W. Webb

Pdfs 43, 44

Letter 92

Ten days later

D<sup>r</sup> Evans's Gloucester, Sept 20/70

My Dearest Arthur,

Your very kind letter has followed me here - & I must reply to it, however briefly.

Our intended visit to Kelston Knoll was laid aside as impracticable with my poor Wife's eye, & we came here, where the good Doctor has in the kindest and most generous way made us his guests since Wednesday, & called in an oculist to aid the treatment. The complaint proved to be Iritis (= inflammation of the Iris) & mismanaged or neglected might have had most serious consequences. I thank God these seem to be averted, & there is every prospect of uninjured vision. But I regret to add that from the situation of the complaint, so near the brain, and possibly, too, from the active Allopathic treatment adopted, a degree of "tic" has supervened, the paroxysm of which occasionally touch the very verge of human endurance. I have never seen anything like it in her - I think I have never seen anything worse, in anyone.- The good Doctor is doing all he can think of - but her present condition is so miserable as to call for not only the sympathy but the prayers of her friends. What is next to be done I know not. D<sup>r</sup> E. says we cannot move at present - M<sup>rs</sup>. Tudor wants us to come on - possibly we may - but I must return to Hardwick first, & she must be much better before I can leave her at night, (when pain is worst & even distracting.) I was much fortunate last Sunday in succeeding in changing duties with a Curate here - after Hereford had been searched for help in vain. But next Sunday I must if possible be at my post: & trust an ever gracious & ever wise Providence from day to day. -

Very many thanks about S. Boucher & the wave theory - the latter so clear when explained that I wonder how I had misconceived it. - I have such a daily press of correspondence that I am sure you will forgive my closing - & I will not disturb her to ask for the loving message which I know would be sent with mine to your good kind Mother and yourself -

Always my dearest Arthur

Your affectionate friend

T.W. Webb

**Letter 93** [*Circled 22*]

**Eleven days later**

M<sup>rs</sup>.Tudor's, Kelston Knoll, Bath

1 Oct. 1870

My Dearest Arthur,

I must write just a line before starting to take my duty & return on Monday, to thank you for yours, & to tell you that your poor friend, who has passed through distracting agony (the words are not too strong) is at least in less pain - so that I can manage to leave her at night - but the state of the eye is not quite satisfactory, & it is uncertain whether the sight may be perfectly restored. It has been a very sharp and heavy cross -but she has borne it with great patience & submission to her Heavenly Father's will.

I must only add that we return to Hardwick D.V. on Thursday or Friday.

Your phosphorescence idea is capital.

We unite in kindest love, Always

Your most affectionate friend

T.W.Webb

**Letter 94**

**Three weeks later**

Hardwick Vicarage, 21 Oct. 1870

My Dearest Arthur,

I have written, with great pleasure, to Lockyer at his address  
24 Victoria Road  
Finchley Road N.W.

thinking it would reach him sooner than if it got impounded at his office. But it is a very old address - & if he should have moved, a very undesirable delay must still ensue. - I have asked him to write straight to you, instead of me.

I am delighted at the idea of our meeting so soon, but can add no more now - (but that I hope soon to have the Equatorial stand bravely adjusted, & in finding order. I saw I believe Neptune last night).

I had almost forgot to say that we greatly admired your very sensible letter to The Standard.

Ever your truly affectionate T.W. Webb

P.S. We had yesterday a most kind invitation from Mrs Stackhouse Acton<sup>1</sup> to stay with her, while the eye can be put under a celebrated Shrewsbury oculist - but we prefer Dr Evans's recommendation in London. -

Pdfs 49/50

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<sup>1</sup> See Letter 27

**Letter 95****Five days later***from Henrietta Webb to Mrs Ranyard*

Hardwick Vicarage 26 Oct. 1870

My dear Mrs. Ranyard

My husband is writing this for me to let you know that I have this morning heard from Dr. Webb's wife; who tells me that she knows of excellent lodgings at 13 Woburn Place at 2.2.0 per week – and she mentions two others besides – expressing however a strong fear that if we do not close very soon, we shall lose the chance from the overcrowding of London by French refugees<sup>1</sup> – My husband has also been rather disquieted by symptoms of inflammation (though slight, and we hope checked for the present) in my other eye – and we have been urged by Dr. Evans (though he knew nothing of the latter circumstance) to go to the Oculist as soon as may be. (This letter we received the day after your kind invitation). Under these circumstances I hope you will not think us very troublesome or changeable if we ask your kind permission to alter the arrangements we lately made – and go straight – on the Monday evening – to the lodgings; lest delay should prove of material consequence. We feel your kindness equally, and shall never forget the true friendship that dictated the offer – but we cannot help feeling that we should have been very troublesome visitors with such an errand as hunting for lodgings – and I hope that you will kindly allow us to spend some evening with you instead. – We should have written sooner to Mrs. Webb about lodgings, instead of troubling dear Arthur, but for having heard that ~~they~~ ~~were~~ she was not at home – and I wrote to her husband with very little hope that she would have returned – which has now proved to be the case. With our united affectionate regards and grateful thanks to you all, I remain

My dear Mrs. Ranyard

Yours affectionately

H W. Webb

I have some very small Swiss Pictures which perhaps you may like to copy – Shall I bring them? – I see I may still be detained here till Tuesday – as it will be difficult now to be ready – but I must leave it uncertain today. My husband's very kind love to Arthur & thanks for his note.

Pdfs 51/52

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<sup>1</sup> From Franco-Prussian war 1870-71



**Letter 96**

**Over three weeks later**

Hardwick Vicarage, 16 Nov. 1870

My dearest Arthur,

Many congratulations, and cordial ones, on your very well merited success<sup>1</sup>. The other affair is, as you truly say, mere matter for a smile – but I fear it may be our poor friend's special infirmity. –

Did you happen to notice what was said about Jupiter & the Sun in that same N<sup>o</sup> (the Nov. one) of the Astron. Register? If not, please turn to it when next at Som<sup>t</sup>. House. –

I have just had my mirror splendidly resilvered, & had a fair view of ☐ [Jupiter] last night. There were a lot of eggs – but I don't think the colouring of that region is so decidedly yellow as this time last year. I mean to keep a look out.

Do you happen to know any member of the Bible Revision Committee<sup>2</sup>? – Or could you readily tell me, who they are?-

Yours most affectionately

T.W.Webb

Pdfs 53/54

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<sup>1</sup> Probably referring to Ranyard's appointment as assistant secretary to the Eclipse Committee

<sup>2</sup> B.F. Westcott and F.J.A. Hort set out to replace the Textus Receptus with a New Greek Text based on corrupt Alexandrian manuscripts in 1853. Published work 1881

**Letter 97**

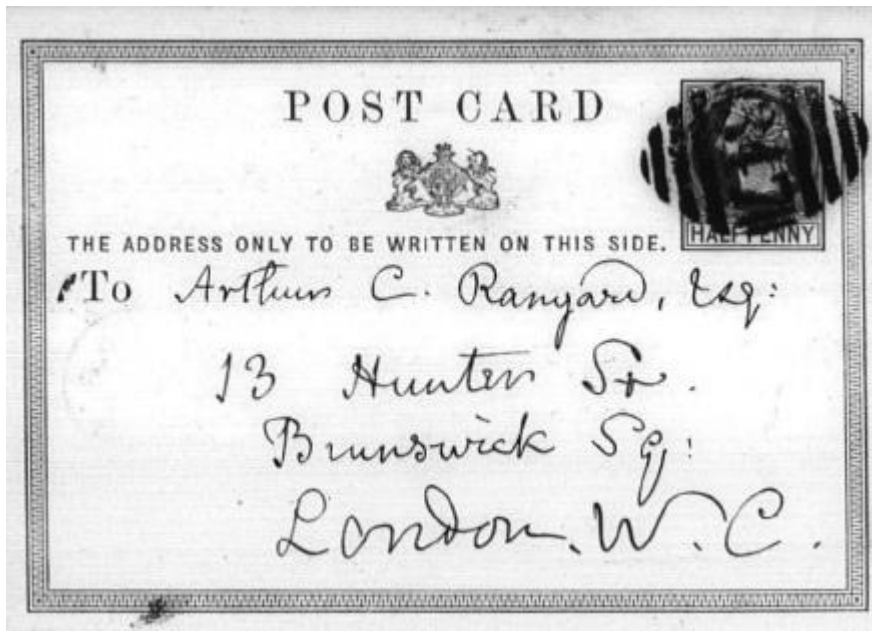
**Two days later**

*postcard*

Hardwick Vicarage 18 Nov. 1870.                      Speculum resilvered –  
Jupiter very much as last winter – whence this epoch cannot be called one of special disturbance  
or activity. Great and sudden changes, 1839 (South.) Eggshaped forms,  
1863 (T.W.W.)

Aurora – A.D. 859.    very splendid during 3 months.  
993.  
1717. very fine  
1737.    d°  
1750.  
1792. very grand (Oct.13).  
1820.  
1828.

Another of great brilliancy is noted by me in 18<sup>th</sup> cents but I do not know the year.  
Many more no doubt to be found in Mem:de l'Academie<sup>1</sup>. –  
T.W.W.  
Address on other side]



Pdfs 55/56

<sup>1</sup> Memoires d'l Academie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique

**Letter 98**

**Three days later**

*Postcard*

21 Nov. 1870

My dearest Arthur

A great sun-spot has been visible to the naked eye for several days. –

Yours very affectionately

T.W. Webb.

[On other side] A.C. Ranyard, Esq.,

[Pdfs 57/58](#)

Letter 99

Nine weeks later

Hardwick Vicarage 26 Jan. 1871

My dearest Arthur

You may conceive with what sad & grievous concern your loving friends have received (thro' Miss Webb, to whom I applied for Vol. II of N. Wallington<sup>1</sup>) the news of your illness – an illness too, so painful to bear, and so uncertain in its continuance. We wrote directly to your good Father about it, and received your address from your Mother yesterday – and not another post must go without the expression of our loving sympathy in your trouble, and our anxious desire for your speedy recovery, and return.

I hope you will be able to send us very soon a comfortable message though your parents, and we trust it may not be long before we see the assurance of your recovery in your own handwriting. Meanwhile, we feel assured that all is right – and much more right than we could make it if we had the power – and we humbly trust that this affliction may prove to you a great means of growth in grace, and in all spiritual blessings. It is a joy to us to know that you have not now for the first time to seek that help & comfort, so needful in time of trouble. God has long been your Father & your Friend, & it is natural and pleasant for you to turn to Him now: in the certainty of free access to His gracious ear. Nor do I doubt that you will come out of this trial with a more serious desire to make yourself intimately acquainted with this Holy Word, and to glorify Him by steadfast and consistent obedience.

It is curious that you should have a Wyatt to attend you in your illness, who will prove to you we trust everything that you, or we, can desire. We hear too with pleasure of your Scotch nurse. Italians I believe are very kind – but they are less likely to be acquainted with our country ways. I have not much news to report. We are much as usual in every sense, including my dear Wife's eye, which has made no progress, but I am thankful is not worse. We heard incidentally yesterday that Dr Evans has said that one day's more delay would have caused its loss. We little knew that at the time – and often little know how near we are to some unexpected danger, or how often we are delivered unawares.

I have discontinued "Nature" – not from any "ill-natured" feeling about it, but because I could not succeed in my plan of making it pay me for the outlay, which to me was worth more, generally speaking, than the information. Mr Lockyer asked me to help, though my name did not appear on the staff – I sent an article on the state of astronomy, soon after he began the publication. It was not put in – but this I may say did not surprise me, for I did not like it myself, it was poorly written, & worth little. I sent another paper – since Mr L's departure – on Jupiter, containing a good deal of thought & care – this also was "bunked", so as I have no means of doing better to replace my outlay, I have resolved up[sic] (on) retrenching it, without any other personal – only a purse-on-all – feeling in the matter! I have done a little in the Observatory – notwithstanding the severe cold – which on Dec. 23 & 24 was, at night, below zero. Jupiter is as last season, with some variations & if I am not mistaken, a decided enfeebling of his features, arising, I fancy, not from their being intrinsically fainter, so much as from some change in the transparency of a region which overlies the ordinary belts. But this "with all reserves". I have met with a few crimson stars & one in Orion has I am pleased to find turned out an unquestionable Variable. I sent an account of it to the last RAS meeting, where I dare say there would be little chance of its being read, owing to Eclipse matters – but it may probably appear in the "Notices"<sup>2</sup>. – I ought to have told you long before how very pleased we were to find how much you had succeeded in seeing of the Eclipse – we hope by & by to hear it all from your own lips. – It was pretty well seen here, in great starvation. I amuse myself now & then with a little

<sup>1</sup> The Webbs had a niece who did copying etc. at the British Museum

<sup>2</sup> Monthly Notices of the RAS

spectroscope, & see some queer things. I am further than ever from believing that colour, & wave-length, are connected. I do not venture to say that Bernstein was right – but his idea is not buried, nor even dead as yet. As to some of the supposed colour invariabilities I am inclined to say with the old doggerel,

You shall see – you shall see

A horse's head where his tail should be!

But I am not in a humour for much fun. The miseries of poor, poor France<sup>1</sup> have deeply overshadowed us - & for many Sundays I have prayed publicly for The City of Paris – little knowing who else may have done the like. My wife's kindest love & best wishes with mine.  
Your heartily loving old friend

T.W.Webb

Pdfs 59/60

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<sup>1</sup> Reference to the effects of the Franco-Prussian war

**Letter 100****Over three weeks later**

Hardwick Vicarage, 20 Feb. 1871

My dearest Arthur,

I wish your last could have conveyed a more cheering impression both as to your dear Mother and yourself. But I hope, under God's blessing, every day will see you both making good progress. The weather though <sup>more</sup> favourable than it has been, is still rather rough for you both – and you I hope (i.e. A.C.R.) will take great care how you venture out too soon.

I have not seen Proctor's ☉, [Sun] nor did I know he was so great an ally of Browning's. It is a pity that the spirit of clique should so creep into the domain of Science. I did not know (or had forgotten) that Secchi was writing upon ☉ and I do not quite know what may be bearing of your intimation of his wanting an English Translator. Why do you not undertake it yourself? I wish you would – and if you wanted any little help as to some points I should be very glad to be of use. – But, supposing that you have no idea whatever of the kind, had you any intention of putting out a feeler as to my ideas!! I fancy somehow there is a smell of that about the words. If it were so – and if the Padre would think me competent, I am not prepared to say I could do it, but I should wish, before saying good-bye to the thought, to make some enquiry about it. It might, or might not, be within my portée [range]– might or might not, suit my convenience. I am very much pleased with what you tell me about the Zodiacal light. Pray send it to the Notices. You will see in the last a paper of mine – to which I have to add that at last I am certain that my beauty is on the increase (What a sentence I have written!) being now unquestionably more brilliant than her SP neighbour, whom I only thought she equalled as recently as Jan.25. I hope some people more accustomed to star magnitude – valuation than myself will take her in hand.-

Can you guess how I am led to the conclusion that a Variable star should be addressed as a lady? It is a discovery of this morning's date. You know Virgil's statement

Varium et mutabile semper Femina.

Now this will construe just as grammatically (at least in poetical grammar).

-A varying and changeable thing must be always of the feminine gender! But pray take notice, that not I, but Virgil, must bear the blame of the sentiments! whichever end of the sentence goes first!

My wife writes in kind love, & very best wishes for both the invalids, and I remain

My dearest Arthur,

Your very affectionate old friend

T.W. Webb

**Letter 101**

**Five weeks later**

Hardwick Vicge. April 1. 1871

My dearest Arthur,

I have time for only a few hurried lines today - & those on business – I want to enlist your kind feelings on behalf of a poor parishioner who I fear is in a dying condition, though he may probably live several days. I have prevailed on him to settle his worldly affairs & have drawn up a will which was duly executed this morning – but I shall be so very much obliged if you will tell me whether it is all right – and if there should be any material error, if you would kindly correct it by return it would be a great favour, as it might reach me in time to have a valid one executed - The reason of the expression ‘any right which I may have’ &c. is that such a provision was made for his wife & children by a will directing that the principal should be divided on the majority of the youngest child. But as this will was made before her marriage, & there were Trustees, I presume the poor man has nothing to do with it, but as the Trustees are both dead, it would give trouble just now to ascertain the precise nature of the will, which he tells me a Lawyer told him was one of the strangest he had ever met with – I thought the better way would be to express the matter as I have done. Should the will be valid, please not to trouble yourself to write till you would otherwise have been doing so. Very much obliged by your mentioning 21 [Jupiter] to Mr. L.<sup>1</sup> Entre nous, if published at all, it would have been far better months ago, & every week has detracted from its value & meaning – but that is no affair of mine.

I was truly glad to read your very nice notice of the Prof. & to see your name in print. Shall you receive anything for that article? I ask, not out of curiosity, but only to know if there is any prospect of my being paid for mine – a point which I should be glad to ascertain.

My wife I am thankful to say is better tho’ far from right. We are sorry to hear your good Mother still feels rheumatic – I must close now with our united best love –

Always your very affectionate friend  
T.W. Webb

Pdfs 63/64

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<sup>1</sup> Lockyer

Letter 102 [Circled 31]

Eleven days later

Hardwick Vicge 12 Apr. 1871

My dearest Arthur,

You have probably been expecting to hear before but I have been much engaged, & have delayed many thanks for many kindnesses. I was much obliged about the Will – and regret that I gave you so much trouble – as the poor man died before your kind corrections came: under the circumstances of the case, no doubt mine will answer all the purposes required. Thanks too about Mr Lockyer – it was very kind of you – and saves him at any rate, a subscriber – for I had once actually discontinued “Nature”, but resumed it when I found I should be admitted. You, I presume, are still very busy with Eclipse results – the expedition seems after all to have “paid” - & I am right glad of it.

My wife & I have just returned from an expedition to Gloucester & Cheltenham to see Dr Evans (who I am thankful to say gives a favourable report) and to find lodgings (no easy matter) for her & my niece Helen – I think a little change will do my wife much good - & Helen I am sorry to say is Dr Evans’s patient, being a good deal out of health. After a good deal of time & trouble wasted, we found very nice quarters in Cheltenham, where they will probably go, D.V. next Saturday for a fortnight – and “whereas the said” Cheltenham is much nearer to London than Hardwick is, we want to know what just reason you can have for not favouring us with a little of your company while we are there? Do come. We want to see you so much and you can bring some books - & if they are such as I can possibly help you with, I will.

Meanwhile – as usual - I have a favour to ask. I cannot recollect the title of the new work on Spectroscopy, which some young lady or ladies (or perhaps old ones for all I know!) have been translating from the German, with some assistance from Dr Huggins – which guarantees it as the best work afloat – I want to make a present of it, but cannot find the title (or possibly it may not yet be out?). Will you kindly assist me?

Another matter too has occurred to me. I have been beginning a little article on <sup>2</sup> for Pop. Sci. Rev<sup>1</sup>. and want to ventilate the equatorial direction of the belts. There can be no doubt that this is the result in some way of rotation – but how? Friction against the new plus – quam – hydrogen-light gas of the corona & aurora is more possible than probable - & I do not see any other alternative except some kind of polarity – i.e. magnetic or electric forces. Now is it not the case that such forces may be developed simply by swift rotation? Is there not an experiment in which a copper disc made to revolve very rapidly exercises magnetic action?

Again – another matter entre nous. If Dr H. is right in ascribing the displacement of Hydr F in Sirius to the rapid motion of that star in a direct line from us – ought not the orbital movement of the earth (doubled, by going & returning) to shift the lines of the spectra of any stars lying near the plane of the ecliptic? I cannot stop now to compute this velocity or compare it with Dr H’s for Sirius, but my impression is that our speed would be fully sufficient. Is it so very certain that the line in Sirius is Hydr. & Hydr. only.

I am in another puzzle, too, about wave-length & refraction – but would rather get you to explain this when we meet in Cheltenham, as I hope.

Birch<sup>2</sup> goes slowly on - & to my surprise – another Edit. of Cel. Obj: will soon be wanted – “more sacks to the mill” – which was already grumbling at its weight of work. Well – I suppose it is right “Dieu tout amende” and help and bless us all!

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<sup>1</sup> Popular Science Review

<sup>2</sup> See Letter 60



I have had an astonishing upset of telescope stand, & all (but the pillar) in the Observatory. How you would have stared! as I believe I did! – yet there is not five shillings worth of harm done – and some actual good! I won't tell you about it by letter. My wife desires me to say with her best love, that we have not only 2 sitting rooms in our Chelt<sup>m</sup>. Quarters, but there will be an extra bed-room at your service, & we shall have our own servant with us – So Pray Come – She says she shall feel very hurt if you do not come this time. We hope your Mother is better –

Ever your affectionate old friend

T.W. Webb.

**Letter 103**

**Next day**

Hardwick Vicarage, 13 April 1871

My Dearest Arthur,

I will do my best to meet your wish. But you will not expect too much, for, excepting always the N.T. I hardly ever open a Greek book now. And to begin with – the only Lexicon I can find - that of Scapula, does not contain ἐνσπινδύζω. The general sense however, I think is as follows:-

“But about the time when he was busily employed in Greece, a portrait of the following kind ^{or such as this}^ (τσιαυτγ ) occupied the heavens – a crown, similar to a rainbow, encompassing the orb of the Sun, darkened the sunbeams -----But when he earnestly entreated (ἐλιπαρει) Apollonius to say {where, or whither, he thought, I suspect you may have omitted a word here, implying to fly, or to escape – some such word is required to correspond with & explain οποι} for he feared lest all things should flow back into night – Be of courage, said he – for there shall be some light out of this night.”

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I congratulate you most cordially on your post – may it be one alike of pleasure and profit. You will have got some queries of mine – Please not trouble yourself about the book on Spectroscopy – I can get every information about it next week, and the book itself, from a Cheltenham bookseller.

We expect you there “sans faute” [without fail] & bring all your work along –  
Our united best love –

Your truly affectionate  
T.W.Webb

Letter 104

One week later

8 Oriel Place, Cheltenham, 20 Apr. 1871

My dearest Arthur,

Your directing to me at Hardwick proved how little hope we could ever have had of seeing you here. You are a very naughty boy. – For the same reason I cannot send you the book, as I shall do with pleasure, till Saturday on my return - & even then I may find myself too much hurried for post, & may be obliged to delay till Monday's post. But by that I hope you may depend upon it.

Thanks about 24.[Jupiter] I had been thinking over the matter again & come to the conclusion that there is no occasion for my polarized notions. Rotation alone however seems inadequate, without admitting friction, which of course must tend to a future stand-still. But rotation combined with a considerable degree of heat will suffice – And that question of heat is rather a curious one. At such a distance from the Sun it seems to point the same way as Proctor's speculation (not that I can take in, at all, his notion as to 24 being self-luminous). I am surprised to find that another Edition of my Cel: Obj: is wanted - & that I must soon take it in hand. It is an annoyance just now, with that Birch<sup>1</sup>rod over my shoulders. – Did I give you (I ought to have done it & hope I did) a copy of the 2<sup>nd</sup> Edit? – and if so, as you are I fear too much engaged to be able to make use of it at present, would you do me the favour & let me have it to tear up for the printer's use – to be replaced I need not say by the new Edition when out? --And would you also kindly let me know of any corrections or suggestions that may have occurred to you?

- I have no copy left of the 2<sup>nd</sup> edition that I like to use for the printer – my own is useless, being only the revises with their corrections in the margin - another copy found on “dear Dawes” study table after his death, & sent to me by his Ex<sup>cc</sup>. I should not like to sacrifice in this way. But I thought you would kindly not object to what I hope will be a good exchange. I might have made the new Edit<sup>n</sup> much better than it will be, had I since the date of the 2<sup>nd</sup> used my telescope with that view, but not supposing it would be called for so soon, I have been amusing myself in hunting for red stars &c. instead of searching for improvements for my book.

You will be glad to learn that my Wife is decidedly better, though she has got a cold just now. My niece also has been improving so much under Dr. Evans's care, that if it may only please God that it may be progressive, we shall soon cease to feel anxiety, as we have done, about her. - I shall be returning here, D.V.^ early ^on Monday, to stay till Saturday week.

Ever my dearest Arthur,  
Your very affectionate  
T.W. Webb

Pdfs 70/71

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<sup>1</sup> Reference to Col. Birch See Letter 60

**Letter 105**

**Five days later**

*From Henrietta Webb*

8 Oriel Place, Bath Road, Cheltenham, 25 April 1871

My dear Arthur,

I am so very glad that you will come & see us at Boulogne where we hope to go about the 5<sup>th</sup> of June, but would it not be cheaper and more comfortable if you took a bedroom where we are going (Mons. Blanchard Rue Napoleon) as you can have board & lodging there for £2 per week, & if you did not mind eating your dinner at the same time with us in our sitting room it would I believe be only £1.10. or £1.15. per week including every thing but wine, lights & fires. The agreement is by the week, & no notice is necessary before leaving; payment of the day of leaving only is required to be included in the bill. The dinner consists of Soup or Fish, joint & Poultry, or joint & made Dish, with vegetables Tart, or Pudding, Meat at breakfast & Tea.

I tell you all this as I have been in communication with Mons. Blanchard through M<sup>rs</sup> Sadler the nice Consul's wife, who is a cousin of one of my cousins. My dear husband is very busy with his book "Col Birch" & is going to give 2 more lectures at The Ladies College. I daresay he will add something to this letter. Will you kindly tell us if you do not think it would be well to put the Kenilworth Manuscript<sup>1</sup> that is now under your care in the hands of an Auctioneer as we are told it <sup>^</sup>would<sup>^</sup> fetch a good sum in that way, & Puttick & Simpson might buy it for £45. Please let us know about this room, as the good season is coming on – My niece desires her kind regards to you & with my love I am always dear Arthur

Yr. affectionate friend

H. M. Webb

Pdfs 72/73

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<sup>1</sup> Most probably the Chronicle containing details of Kenilworth Priory by John Strecche (fl.1407-25) given to John Webb by Charles Hansford of Woollas Hall, Pershore – a RC family. See John Webb Anecdotes. BL. Puttick & Simpson. Shelfmark: S.C.Puttick & Simpson. Catalogues for 1846 to 1967. There is a typescript index (1928) of sales 1846-70 at shelfmark: C.131.k.15.

Letter 106

Two days later

Cheltenham

27 April 1871

My Dearest Arthur,

The books are just come in - & before going to bed I must thank you at once for your great kindness to ~~you~~<sup>our</sup> my<sup>^</sup> friend and myself. We shall both be much benefited by it. - As to Lord Lyndsay's<sup>1</sup> [Lindsay] critique - I shall feel especially obliged by anything of the kind you can gather, & particularly by any remarks of your own - but in the instance you have specified I do not see how I can make any change, as my colours, as well as positions & distances, are all professed reproductions of the data in the Bedford Catalogue - & the Admiral<sup>2</sup> is alone responsible for anything vague or obscure. I think however I know very well what his 'topaz-yellow' means - a yellow with a slight tinge of brown, or smokiness, as compared with that of sodium, which may I suppose be taken as the standard. But were a new nomenclature attempted, I do not see how a direct comparison with the spectrum-lines could be accomplished with any ordinary means - & to common observers it would convey no intelligible idea.

I am so sorry to think that when I went back to my duty last Saturday, I entirely forgot to look out the book for you - however I had so very much to crowd into so short a time (getting up on Monday morning at 3.20 & none too early) that it was not surprising. However - as we return D.V. finally on Saturday, I will - unless anything very unforeseen intervenes - send it off by Monday's post. I shall like very much indeed to know your mind about  $\omega$  [Jupiter] I can see no evidence whatever of native light - per contra, as the shadows are absolutely black - complete ink spots - it seems impossible that his reflected should receive any addition from his native light. ~~He would~~ Such addition w<sup>d</sup>. require to be very considerable, to have the effect which has been imputed to it - & w<sup>d</sup> certainly shew itself, not only in the shadows of the Sat<sup>s</sup> but on the Sat<sup>s</sup> themselves when in the shadow of the planet. - I should like you, who have studied the polariscope, to make out (& you could include the point in your notice for R.A.S.) what is the character of the reflection. It is proved by the gradual fading of the Sat<sup>s</sup> into the disc (or conversely their brightening as they approach the limb-) that ~~much~~ more light is reflected from the centre than the margin of the disc. & the occasional darkening, & even blackening of the Sat<sup>s</sup> [satellites] towards the centre proves the difference to be very great, though I do not know that any eye has even detected it in any direct way. I should fancy that from this something of the character of the reflecting surface might be made out. If dense terrestrial cumuli behave in the same way, we shall get hold of a promising analogy. I do not suppose the full Moon does this. It w<sup>d</sup> be possible - though difficult enough - to make a little artificially illuminated disc traverse the focal image of the full Moon, as the Satellites do that of  $\omega$  & the result would be interesting. Or it would be easier, & perhaps more manageable, to make a white bar traverse the whole field of a low power, illuminated with an uniform light (I mean uniform throughout its length) but capable of being increased or diminished at pleasure - this made to lie across the disc of the full Moon would decide the question. - If the dimming of the limb of  $\omega$  is not due to reflection it must I suppose arise from absorption, & that again w<sup>d</sup> infer a considerable thickness of atmosphere above the clouds - which if dense enough to darken the limb, ought to do the same by the sat<sup>s</sup>. near the limb in the further part of their orbits. Qu. Would observations of their comparative lights in the 2 halves of the orbit - very near the limb - which had better be barred out - shew any

<sup>1</sup> Lindsay, James Ludovic, Earl of Crawford and Balcarres (1847-1913), astronomer and book collector, In 1874, with Gill and Ralph Copeland, he went to Mauritius to observe the transit of Venus. He was elected president of the Royal Astronomical Society in 1878 and 1879, fellow of the Royal Society in 1878, and honorary associate of the Royal Prussian Academy of Sciences in 1883.

<sup>2</sup> Smyth

such difference? A big telescope & clockwork w<sup>d</sup> be required - & considerable patience – but something might come out of it. However, if the Moon, tested as I have described, shewed a similar degradation of light towards the limb, it w<sup>d</sup> be hardly necessary to look further for a “vera causa” – Your trade wind speculations interest me much. I fancy considerable heat, & thickness of atmosphere (I mean of the cloudy region) must concur with rapid rotation to produce the effects we see. By the way please don’t lay much stress on the often repeated assertion of the fading of the dark belts towards the limb. With my 9inch that effect is so questionable that I don’t think I sh<sup>d</sup> trace it if I did not know it was said to exist - & which is more important, it is not shewn in the grand drawing of De La Rue. – The fading of the dark markings which lie in on towards Jupiter’s meridians is unquestionable; but that is a result of perspective foreshortening, not atmospheric obscuration. The more perfect telescopes become, the more these alleged atmospheric effects hide their heads. You sh<sup>d</sup> compare even such drawings as mine (to say nothing of De La Rue’s) with those of B. & M<sup>1</sup>. I may fairly say I am as much ahead of them as they are in advance of Cassini & Maraldi<sup>2</sup>. –

I have just received intelligence of Comet I 1871 from my good kind R.C. friend Mr. Birmingham – with an Ephemeris – but I fear it will be too low in the N. for my telescope. It has the Gaseous Spectrum! –

About the Kenilworth MSS<sup>3</sup>. I am truly obliged by all your trouble. My wife’s memory, so much better than mine- tells me there is probably a description of the Chronicle in my dear Father’s hand, inserted in I & if not it has been printed by Sir T. Duffus Hardy<sup>4</sup> in his Catalogue. I do not know however, where, or how, that is to be got at.

I have just returned from delivering a Lecture on <sup>h</sup>[Saturn] Comets &c. at the Ladies Coll: & find somebody has been throwing water over my letter. (did they think there was too much of it?) & now I must be off to make some calls. My wife has gone out - & been Vaccinated - & I wish I knew where to find a hermetically sealed Tube of Hay Fever, with which you could be inoculated just at the right time – meanwhile always

My dearest Arthur

Your very affect: old friend

T.W.Webb

Pdfs 74/75

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<sup>1</sup> Beer and Mädler

<sup>2</sup> Giovanni Cassini was a 17<sup>th</sup> C Italian mathematician and astronomer. Giacomo Filippo Maraldi 1665 –1729) was an French-Italian astronomer and mathematician and the nephew of Cassini

<sup>3</sup> See previous Letter

<sup>4</sup> See Letter 86

**Letter 107****One week later**

Hardwick Vicarage

4 May, 1871

My dearest Arthur,

I do not know whether we were most astonished or pleased by your most unexpected intelligence – nor do we know how to thank you sufficiently or suitably for all the pains and trouble you have taken – and so perseveringly among disappointments, for our advantage. We acknowledge the hand of a Heavenly Father in this mercy – and yourself as His instrument of blessing. But we cannot be satisfied with mere verbal thanks – and must beg you – unless you would hurt and grieve our feelings much more than we are sure you would like to do – to accept some more substantial proof of our gratitude. I therefore enclose a cheque of which we most earnestly entreat your acceptance – and we hope you will not fail to come over and be our guest at Boulogne, for as long as ever you like and can. –

My wife would write to you herself – but she has a very painful right arm, much inflamed by 4 cowpox pustules, now nearly at their height. She will be so pleased we have you as our guest at Boulogne as soon after our arrival there as you can come: and she thinks that you like some of the people to whom we have introductions – She hears Blanchard's establishment very highly spoken of - equally cheap and comfortable: and she hopes you mean to bring some sketching materials. I on the other hand want you to bring the Polariscope, & teach me how to use it. What means would there be of comparing the mode of reflection from the centre & edges respectively, of an uniformly enlightened cumulus cloud with that from the centre & margin of Jupiter? If we could hit off something of this kind it might be of some use at the next opposition as the old gentleman has got pretty fairly out of reach for the present. – Mars too I am sorry to say is getting gibbous & sulky & declines giving much further information about himself. Did I tell you I had what Proctor calls Dawes's Ice Island well in sight one night, before I knew what it was? My mirror certainly behaves admirably, though not one of With's best: it was not I am thankful to say in the least damaged by the "grand et horrible bouleversement" in the Observatory. I do hope we shall be permitted to do a little together at Boulogne in various ways. – I must close now, with our united kindest love & most grateful thanks, & remain

My dearest Arthur, your very affectionate old friend.

T.W. Webb

Letter 108

Three weeks later

Hardwick Vicarage

27 May 1871

My dearest Arthur,

I have long been a letter in your debt – but very busy indeed – chiefly with 3 matters pressing all at once – the completion up to a certain point of the naughty old Col.<sup>1</sup> – to bring with me when permitted to come to Town (but at present I have failed to find a locum tenens - & cannot of course move without him-) 2. The opening of the curious ancient tumulus at the foot of the Black Mountain – which we went to see together – which I knew nothing about till it was far advanced – but then they (i.e. the Woolhope Naturalist's Club<sup>2</sup>) called me in as “amicus curia:”<sup>3</sup> - & this has taken a lot of time – and 3. a very stupid law-affair, which has already obliged me to wait a week longer than intended. ‘Tis a long & profoundly dull story. Nevertheless, will you let me retain you for a little advice? I think you can help me materially – and mind – you are not to do so gratuitously. That’s a bargain. If for a charity, or poor oppressed person, I should not hesitate to accept your kind advice. But in this case you must hold me your regular debtor. – I must be brief for post.

I made an agreement for lease with my Tenant – or rather my father did, & there has never been a fresh one, reserving to myself all the Game & Rabbits on the farm<sup>4</sup>, which the Tenant ~~had~~ <sup>was</sup> also required to preserve. He complained to me often of Rabbits doing much mischief - & I spoke to Mr. Brown<sup>5</sup>, to whom I gave the right of shooting, & also to The Moor Gamekeeper to have them kept down – which was not done properly I believe, but the keeper says the Tenant ordered him off the land.

Last July or Aug. all the country was excited by the decision of a case in the neighbourhood in which a Tenant recovered from a gentleman to whom the landlord had given leave to shoot, very heavy damages – It was not known that this was under special agreement for compensation – so we non-lawyer folk all imagined we could recover for injury by law. In this state of affairs my tenant came to me, just before beginning to harvest a field of barley, to tell me it had been grievously damaged, & to ask what he was to do. I, knowing the man, & wishing to protect the Moor interest from his misrepresentations, though I thought he ought to have some compensation, advised him to get it valued, undertaking myself to see that it should also be done on The Moor behalf. Mr. Brown was as usual in London – the crop would be cleared off in some 3 days. I sent to the bailiff – he objected to go because my tenant had insulted him – I begged him to send up someone else, which he did, but the man, afraid of a bad neighbour, would not appear, & the adverse valuation, £45 odd (an enormous exaggeration) was sent to me & by me to Mr. Brown. Mr. B. said he would make the man a present of £5 which the said man refused - & now I am sued in County Court (9<sup>th</sup> June) by the Tenant (who left at Candlemas) for the full amount - & his lawyer tells me he intends to set the matter, on which many similar cases will depend, in a new light. He volunteered the opinion that it was exceptionally hard upon myself, not being my business at all, but he had no one else to proceed against & he wanted it tried out in a “scientific” point of view. Which is this. That whatever may be the terms of an agreement made in former years, on the mutual understanding that the quantity of Game & amount of damage would be moderate, it would not prevent damages being recovered if the mischief was excessive. And we believe my opponent intends to have a jury of farmers, who invariably, if possible, give an anti-landlord verdict. Whether the judge may consider the agreement perfectly

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<sup>1</sup> Col. Birch See Letter 60

<sup>2</sup> The Woolhope Club was founded in 1851 as the Woolhope Naturalists' Field Club. Its interests cover the local history, archaeology and architecture of Herefordshire as well as natural history and geology

<sup>3</sup> Legal term: friend of the court

<sup>4</sup> Farm is Llanerchycoed on Little Mountain in Hardwicke

<sup>5</sup> Owner of The Moor estate, Hardwick



conclusive - as my Attorney thinks – or whether he will allow the question of which seems to me more like Equity than Law to be raised, is uncertain – if it goes to a Jury I shall probably be flung [?]- but I don't care for that for several reasons - I think the Tenant ought to have some compensation – I shall be really glad to see a decision which will tend to the destruction of such verminous creatures as are doing us all – including poor cottagers – immense damage – and (but this entre nous) I don't think The Moor will allow me to suffer. – But of course I must do what I can, for success – so much for the state of the case. Now, the questions I want to ask you are two. –

1. I saw in a book of law (modern) which was merely shewn me, & therefore I can't refer to it – a statement that

If Rabbits become extremely mischievous, Tenant may destroy them, any agreement whatsoever notwithstanding. If this is so, I should think it alone would defeat my antagonist, but my attorney tells me those “handy books” are not to be trusted.

2. I have been forced to proceed against the said Tenant (who left at Candlemas) for six months' rent due at that time. He in return produces to my Attorney – at least leaves for him in his absence – a bill of upwards of £22 for work done & various allowances. Some of these are just. E.g. such matters as cartage for posts etc. for an enclosure which did not benefit him - & for which I get an increased rent from his successor – the value of some fencing, a wall etc. – In all some £6 or £7. The rest are charges for walling materials &c. for repairs done during his own tenancy – for the benefit no doubt of the property – but in great measure for his advantage also – e.g. the repairs to a Cow House which had become dangerous; the erection of a Granary at his special request – and even materials for Goose-Cots which his wife begged for – all this 2 or 3 years ago. Can he claim these items? and if not, how ought I to resist him?

I must not add more today, tho' I have something to tell & ask you about “Nature”. But, with my wife's kindest love remain

Your truly affectionate old friend and bore

T.W. Webb

Perhaps you don't mind replying soon.

Letter 109

Three months later

Hardwick Vicarage, Hay,

19 Aug. 1871.

My Dearest Arthur,

I am much obliged by your kind letter, and the opportunity of reading the communication from Secchi - some parts of which are a real linguistic curiosity - especially the opening - a marvel in its way. But I truly regret the "sort" which he fears for himself and the observatory. It would be a barbarity to displace him - & though I have about as little sympathy with the Jesuit system as may be, I have heard that at any rate they were as irreproachable as any - if not more so than any - of the ecclesiastics at Rome.-

I hope you will have a charming excursion, & will come back all the lighter hearted & more fit for the work of life. I do not understand whether you will have completed your sub-editorial task before you start, or not - I sincerely hope you may, for I well know from experience how unpleasant it is to be plunged on one's return into a mass of intermitted engagements. - No doubt I, & my wife too - should have enjoyed some things at Edinburgh very much - but I question whether they would have repaid so long a journey - and anyhow we have done very well for this season. As to Brighton - I should think the position a good one - but I should question our going there - or anywhere almost, if Switzerland were attainable. I find from Birt, much to my gratification, that the grant to the Moon-work is continued for this year. He says, truly enough, if the geologists get £100, they need not grudge so much a little to the Moon. We are in the thick of preparation - though thicker and thickest lie ahead - for a little Choral Festival to be held in our church 12 Sept. in aid of the Home Missions of the Church: and our Organ is now undergoing preparatory improvement.

I think, if only we can have fair weather, we shall succeed. The Bishop will preach, and one of the Hereford Choirs will come over. (**Not** - I have since heard. We must postpone.)

Not much news. Your old friend Walwyn Trumper<sup>1</sup> shews more & more of his decided taste for art in various forms - & I regret that he cannot cultivate it more. Few appreciate him here. - I am very sorry to say Helen Wyatt seems to be rather going back from the very improved health in which you last saw her. I fear Troy does not agree with her. - My little Observatory is again at work - chiefly Double & Red Star hunting, for the improvement of that same 3<sup>rd</sup> Edition.

I must stop now. Our united kindest love & best wishes for a safe & happy journey under the gracious care of your Father in Heaven.

Your very loving old friend

T.W.Webb

Pdfs 80-81

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<sup>1</sup> Son of Vicar of Clifford

Letter 110

Over two months later

2, Belmont, Tenby, 2 Nov. 1871.

My Dearest Arthur,

We are truly happy to hear of you, and from you, in Old England again. Nothing has transpired of your movements, & so, knowing no better, I had to make an enquiry through your good Father, which no doubt has reached you before this time – please not to trouble about it – if you had seen the Moon-relief yourself when at Bonn it would have interested me – as I have mentioned it in my Cel: Obj: - but it is of no consequence I dare say

If 'tis not gone, it lives there still.

I have mentioned in Cel: Obj: a number of instances in which big spots have been seen as notches in the ☉'s [Sun] limb. Do you think Lord Lindsay<sup>1</sup> would allow me to add his, as another instance? I should very much wish to do so.

Let me congratulate you on your reduplicated sub-editorials combination-arrangements (you don't object to long words) Many thanks for the intended insertion of my letter. Perhaps I may have something else before very long. If you have an untroublesome opportunity, will you do me the favour to ascertain how matters stand between me and the Publishers, pecuniarily. - I received from them £2.2.0 last May for an article on Jupiter - & I think nothing since 'till last week, when I had £1.10.0 for contributions during the quarter ending Sept. – Now during that time I think they published 2 articles – one on Astronomical Observation, the other – prepared at their request – on Engelmann's<sup>2</sup> treatise of the brightness of the Sat<sup>s</sup>. of 24. [Jupiter]– I am not sure whether the latter was ~~included in~~ printed during the quarter ending Sept. 20 - & cannot just now ascertain. I think it is most probable that they intended the payment to be for the Astr.Obs. paper only, & that the others will run over to the next account, because the sum is obviously very small for both – or possibly, as the Astr. Obs. article was anonymous, they might not know it is to be mine, though Lockyer did, and so intend the remittance to be for the Engelmann article only. If quite convenient, I should feel very much obliged if you could kindly make this out for me. -- Small contributions included amongst “ Correspondence” are I presume not paid for. I have sent 2 on Berthon's Dynamometer.

Were I in Town I think I could get up an article which might be worth putting in, on Star. Magnitudes – a subject not much gone into. But I have not sufficient materials I fear, though some noteworthy facts .- Proctor's Smaller Star Atlas – prepared with some view to my 3<sup>rd</sup> Edition, promises to be very nice indeed.

You will be glad I know to hear that our stay here has been very beneficial to my wife and niece: Neither to be called ill when they came, but both decidedly the better for coming. We go tomorrow – I to Hardwick duty – they to Mrs Eyre's<sup>3</sup> near Haverford West, where I hope to join them on Monday. By Thursday we shall be back, probably for a fortnight, at 5, St. Julian's Terrace, Tenby.

I & my neighbour Mr. Powell of Dorstone are just going to bury ourselves - & I suppose his wife also – in the depths of darkness – in a certain Cavern called Hoyle's Mouth, where we shall be for some 40 yards out of sight of day. I have been to the end already & they want to go - & I wish you were of that party. My wife sends her kind love – and I remain

My Dearest Arthur

Your very affectionate old friend, T.W. Webb

Pdfs 82, 83

<sup>1</sup> See Letter 106

<sup>2</sup> Dr Rudolph Engelmann 1841-88 Observer at Leipzig. Webb wrote about his work on Double Stars in I.O. VIII. Webb commented that though Engelmann's mean values were regularly cited on the whole they were drawn from very few observations.

<sup>3</sup> Relation of John Webb

**Letter 111**

**Eleven weeks later**

24 January 1872

My Dearest Arthur,

I had to start to Eardisley to deliver a Swiss Lecture (a room full. & the coloured fires encored - not much wonder, my wife's pictures looked so charming) - just after the receipt of yours, which otherwise I should have answered by return.

I am very sorry that I have so mis-expressed myself (there's a new word ! I rather like it) as to give your dear Mother and yourself a very different impression from anything that I intended with regard to the Convalescent Home. I had never for a moment contemplated the idea of poor Eliza Smith's becoming a "pensioner" or being treated in any way differently from any other inmate - I only thought it possible that as she is an interesting & engaging person, some of those connected with the management might so far "take her up" as to think of her if they know of any situation or opening for her future employment or benefit - when she left the Home. More than this never entered my head. This, even, would be a mere chance - but I was willing to put one so friendless into the way of such a chance ( knowing by the way as I do that there is no such thing as chance ! ) And that was all .

The terms you mentioned are I believe the same with the ordinary terms at Bournemouth. But there is a possibility that there - though Mrs Penoyre has dropped her own subscription, which I had been depending upon - I may make interest so far as to procure a 6 weeks instead of a month's order. And I think I must try this. But should I fail - (which I should know about before long ) do you think it would be troubling your good Mother too much if I were still to look to her kindness for an admission ? -

Many thanks for your kind replies about other matters - and pray thank your dear Father especially for the trouble he took about Rowney's parcel. -

As to the debated questions of the arc &c. ( not the " arc-en-ciel " , by the way. I saw a fine one this afternoon - but before I could get your little analyser it - was gone ! ) - I think we are on opposite tacks. You, unless I am perfectly mistaken, mean the Spark of the Leyden Jar <sup>1</sup> - I, the continuous discharge, which entirely alters the case - & as to Frankland's<sup>2</sup> pressure, it is I suppose only another name for affinity. But this is not to be confounded with mechanical pressure, of which we were talking - In great haste but with best love Your very affectionate Old Friend

T.W. Webb

Pdfs 84, 85

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<sup>1</sup> A device that "stores" static electricity between two electrodes on the inside and outside of a jar. Invented 1744. Was used to conduct many early experiments in electricity

<sup>2</sup> See Letter 5

**Letter 112**

**Four weeks later**

Hardwick Vic<sup>ge</sup>.

21 Feb. 1872.

My dearest Arthur,

I have been and am very busy, preparing for a confirmation here, & many other matters – but I must just send you a line on several accounts. –

1. to thank you for the loan of a German book, which I have not yet looked into. I hope you did not wish it returned speedily.

2. to thank you also for a most kind line of sympathy about poor E. Smith<sup>1</sup>. I believe the matter was after all accidental & not at all habitual - & the mention of it was the result of a terrible Civil War in the Infirmary – headed by the House Surgeon, & the Matron – but for which, it would probably have been thought – as it seems to have been, a misfortune rather than a fault. However you will be glad I know to hear that I have succeeded in getting a free recommendation for her to the Bournemouth Convalescent Home.

3. I want to tell you that I have at last found a Rainbow – and turned it quite out! Twice – but the best success this morning – but if you please I will keep the little prism till I can try a still brighter one. –

I must stop. –

Our united much love

Your ever affectionate

T. W. Webb

Pdfs 86, 87

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<sup>1</sup> See previous letter

Letter 113

Six weeks later

Hardwick Vicarage,

8 April 1872.

My Dearest Arthur,

Many thanks for your kind letter. I should have been sorry to have troubled you so much, but for the evident elasticity of tone that shows you have not felt your kind aid-giving a burden. Only, when you say you are "as happy as a king", I feel that you have a right to be a great deal happier - and I trust you are. Your personal comfort is I have no doubt a merciful compensation for much hard work - and much & many kind exertions for others. - You will let me know in due time the success of your electrotype. -

Thanks about Stokes<sup>1</sup>. I knew the facts - but not the measure, of his nine spectrum lengths! I wonder what must be the angle of deviation! - But it was not exactly that, I was enquiring about - but the fact, which I think may not have been noticed, - that the violet end of the spectrum passes more readily & fully ~~that~~ through water, than glass. -

As to Transverse vibrations. I am very intensely stupid as to any new way of looking at a subject - & I could not quite catch your reasoning - but believing that you must be right, I tried to think it out in my own way, & perfectly succeeded. As thus. Suppose a Pendulum vibrating at right angles to the line of sight. An eye removed from it with a velocity = that of light would see it perfectly stationary - with a greater velocity, even retrograde - & the converse - a funny kind of illustration, you will perhaps think - but one that has quite satisfied me.

But, do you know, my dear fellow, you have not answered a question or two of mine - no wonder for you have been full of work - & I am a great bore. - But can you manage just to send me a card with the date (from Breen's Planetary Worlds<sup>2</sup>) of [symbol for Herschel's] observation of a red equator of 2? [Jupiter] - I want it to go into my next proofsheets of Cel: Obj: as soon as I can.

My wife sends kindest love, & will be especially glad if you will tell her whether an application for School building for S. John Evangelist, Holborn, is genuine? She will subscribe if so. -

Ditto an application from Rev. G. Hervey, St Augustine's Vicarage Hackney Road.

Obliged to close full gallop

your right loving T. W. Webb

Brewster's Optics is on sale (2s) at Foote's - a man that sends out Catalogues - I dare say you can easily find him out

*on blank side is a note in a different hand (Ranyard's) which appear to be train times, viz*

down 16.15 c 9. ?? [not imaged] [16 probably meaning 6]

back 7.30 c 9.32

5.0 c 7.18

**6.0** 6.10 c 9.9

Pdfs 88,89

<sup>1</sup> Probably Sir George Stokes See Letter 39

<sup>2</sup> James Breen pubd. 1854

**Letter 114**

**c. Two weeks later**

*postcard*

Hardwick Vic,

Ascension Day - 1872

Very many thanks to you & yours. I will come with pleasure unless the hoped for arrangements (at 77 Great R.S<sup>1</sup>.) for the rest of the party sh<sup>d</sup> fail. In that case, we must all 3 get lodgings together - you shall hear again. -

If I can catch a rainbow I will try the Prism But I previously fully extinguished every part, through I sh<sup>d</sup> think an arc of 120° - down to horizon.

T. W. W.

*Post Card addressed to*

Arthur C. Ranyard. Esq;  
25 Old Square  
Lincoln's Inn ~~Fields~~  
London W.C.

Pdfs 90, 91

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<sup>1</sup> Great Russell Street

**Letter 115**

**One week later**

Hardwick Vicarage, 16 April / 72

My Dearest Arthur,

I hope you got the P.card sent in great haste yesterday to prevent you taking further trouble about Breen<sup>1</sup>. We are very sincerely sorry for all the annoyance we have caused you – but there the unfortunate entry stood in my pocket book – how it got there is past my telling – and we both supposed we recollected having lent it you.

- Can this furnish a hint as to the uncertainty of evidence? - And if such things happen even with people of rather careful habits, and who wish at any rate to do right and not give needless trouble - which must sometimes happen in other quarters ?

Yesterday, the Llanthomas<sup>2</sup> people came to call – and my wife getting on the topic of Astronomy, Miss Thomas mentioned she was reading that very book, which she had borrowed here –

O how very queer!  
All this must appear!  
And I almost fear  
I shall never steer  
So as to keep clear &c &c &c ! –

1 St Margaret's Terrace, Cheltenham

A fresh date – for since I began this morning I have been transported to this kind house – and tomorrow morning have to begin my 3 Lectures<sup>3</sup> – the last being next Tuesday. I suppose I may state, as the finality of our Eclipse Expeditions, that the Corona is now fully acknowledged as Solar –& that it shows in parts a, spectrum of reflection – in part of gaseous matter – Hydrogen & an unknown element in chief – Should this be wrong – or should there be anything more of interest to state, will you kindly favour me with a line here? If I don't hear - & please don't trouble yourself to write unless you see cause – I shall presume it will pass muster – And when you do write pray provide yourself with a better pen than the one that now annoys me – and believe me with every expression of regret for such a troublesome mistake

Your most affectionate  
T.W.Webb

Pdfs.92/93

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<sup>1</sup> See previous letter

<sup>2</sup> Revd William Jones Thomas and his wife Annie Elizabeth, Vicar of Llanigon. Mentioned in Kilvert's diary.

<sup>3</sup> At the Ladies' College, Cheltenham



## Letter 116

Five weeks later

Hardwick Vicarage, 21 May 1872

My dearest Arthur,

Many thanks for your kind help – I have got through the Reviews somehow - I dare say you will be seeing “ the Edition of Nature” before long – would you kindly give a hint as to my leaving home – for they have lately taken to a trick (I dare say it is due to your kindness) of sending me books to review – and it would be very stupid to have one lying dead here in my absence. I don’t much like the trouble of it – but for 2 reasons it pleases me very much – it pays - & it gives me a chance now and then of a quick hit at the adversary.

What will you – or your dear Parents - say, when I tell you what I think of doing? And yet I fancy, by anticipation, that in such a case I shall find forgiveness. It turns out after all that my sister-in-law can very well take me in at No. 77 as well as my wife & Helen – so under these circumstances I hope you will kindly excuse my breach of promise in taking up my quarters there for the night – or rather 2 nights – of my stay. Dessen ungeachtet [nevertheless]– as our neighbours say - I must positively see as much of yourself as I possibly can – we shall want a nice talk & must not be cheated out of it. How this can best be managed we shall see as time goes on.

No Rainbows have I seen, notwithstanding all these showers and very probably may not now, as the time is so short. If anything depends upon the examination I think you might arrange a pretty experiment for yourself, by filling a little glass bubble with water, & setting it in various directions in the sunshine.

I get letters occasionally through your kindness from Lieut. Burton<sup>1</sup>, & a very nice fellow he seems to be – at any rate an excellent observer. I have asked him to send his figures of Mars to Dr. Terby<sup>2</sup> at Louvain, who is making collections about that Planet.

I wrote to Dr. Mayer<sup>3</sup>, about the photographs, & unluckily it crossed a letter from him on the road telling me he had moved to a suburb of N. York. I should think my ~~first~~ letter would reach him in due time, but I have not yet heard.

Meibauer<sup>4</sup>, who maintains the eternity of matter (eternity of nonsense, I beg pardon) & whom I have just been reviewing as hardly as I thought our friend would let me – for I did not wish to defeat my own end – nevertheless has pleased me much by some very clever & sharp thrusts at the Ether people. I am not going to parry them, you know.

My wife’s kind love – ever my dearest Arthur

Your most affectionate T.W. Webb

Pdfs. 94/95

<sup>1</sup> Charles Edward Burton. 1846-82 Obit MNRAS

<sup>2</sup> Francois J. Terby. 1846–1911 Belgian astronomer.

<sup>3</sup> See Letter 75

<sup>4</sup> Rudolf Ottomar Meibauer 1836-78? Die physische Beschaffenheit des Sonnensystems [The physical condition of the solar system] Berlin 1872

**Letter 117**

**Four days later**

H.V 25 May -72

My Dearest Arthur,

I have but a minute or two to thank you & your's most cordially for your most kind note & thoughts about me - I don't think as matters stand that I can well do otherwise than sleep in Gt. R S<sup>1</sup>. where we shall arrive about 7 on Monday D.V. But sh<sup>d</sup> I not hear to the contrary I don't see why I sh<sup>d</sup> not come to breakfast in Hunter St., next morning as early as you like you know I am an early bird tho' I catch no worms ! - And then we can talk over matters. So sorry about your disappointment in the Patent office - I hope you may trounce that rogue - our united kind love to all My wife thanks M<sup>rs</sup> Ranyard very much for her kind letter.

Your very loving  
T.W.Webb

Pdfs 96/97

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<sup>1</sup> Great Russell St.

**Letter 118**

**One week later**

Hardwick Vicarage, 31 May 1972.

My Dearest Arthur,

I am very sincerely obliged both to your dear Parents and yourself for the contents of your Card –  
But - sehen sie da [let's see?]- how my matters stand on that there Tuesday.

Imprimis – Exhibitions –

Then - a journey into the City to my bankers, & to hunt up an Agent far East

To Somerset House –

To my very aged Uncle – away at Barnsbury – whence I cannot hurry away. –

All this I know – besides the probability and more of some other excursion or so, on business -  
With all this I think you will see it would be a piece of un wisdom (or no-wisdom as Clarendon  
would have said) to tie myself to any appointment, however pleasurable (and most pleasurable it  
would be at 13 Hunter St) as early as 6.30. I think all I can do (with very many thanks) after the  
experience of many defeats with great slaughter in London heretofore, is to say I will certainly  
come as early as I can for a cup of tea that evening. My wife sends her best love to M<sup>rs</sup> Ranyard  
& is greatly obliged by her kind invitation to herself and Helen – but after the fatigue of the  
previous day – and in town – and with the prospect of an early start on Wednesday for Brussels,  
[sic] she fears she could not manage it. Will it be quite convenient to you to call at 77 Gt. R. S.  
anytime after 8 Monday? We shall be delighted to see you

Your very loving

Old Owl

Letter 119

Eleven days later

Albrück<sup>1</sup>, 11 June 1872

My dearest Arthur,

I am starting this letter at a Gasthaus near a small Station on the Basel & Schaffhausen line, where our Kutscher [coachman] has just deposited us, & where the filthy smoking engine of the Grand Duke of Baden is to pick us up in two hours' time, to deposit us this evening within sound of the giant Fall. No sketching to be done here - & most of my bills added up - the ladies eating eggs & drinking tea - why should I not begin some nonsense to you - quite uncertain where it may be posted - certainly not here.

I am thankful to say we have had a very prosperous journey hitherto - and beautiful weather - rain only at night "quanking" the dust, as old Herefordshire talk is. A very smooth passage - a comfortable house at Brussels [sic] - a dull journey to Trêves (but there, most interesting Roman remains) a nasty filthy rail not far from the scenes of bloodshed at Metz & Forbach, [following Franco-Prussian war] to Mannheim - then a pleasant Sunday at Freiburg-in-Brisgau - & since, a charming carriage journey through part of the Black Forest, by the great Byzantine Church in the strange seclusion of S<sup>l</sup> Blasien (where we slept last night) to this place where we join the rail again. Whether you will get this before Sunday I can hardly say - but if you do, please think of us at old Kaufmann's quarters at pleasant Lucerne. -

And now for a bit of business. You know how that day when I had the pleasure of seeing you I was obliged to come to your house without going to my own quarters first - & consequently I got puzzled about some of my business with you - & quite forgot that a parishioner of mine, after my collection for the Persian famine<sup>2</sup> had been sent to Mr. Kinnaird, gave me a shilling for it, & I promised him it should be sure to go. So - (very unwilling to give you the trouble) may I ask you to do me the favour to give the same shilling to Mr. Kinnaird if you happen to see him - or anyone else that will take charge of it - I saw but the other day that though things are mended on the whole, the distress in Teheran (or Ispahan?) [sic] is still appalling. - Deus miseratur!

And next - business ended - a bit of science - (Such as may be expected from the little Inn Zum Albthal.) You are too well acquainted with my scientific (or, as Lord Clarendon might call it, no-scientific) scepticism, to be surprised at my doubting the received idea, that the heat-undulations are only slower light-undulations gradually passing into visibility. If Seebeck's<sup>3</sup> observations are worth anything, that with some fluid prism (I fancy it was reines Wasser) [pure water] the greatest heat is in the yellow ray, the idea must be wrong, & heat & light must be 2 distinct & partially superimposed spectra. The whole idea of simple, continuous, progressive undulation, however simple & beautiful, depends, I fancy on some very slender foundation, & ought to be strengthened & tested. You could do it yourself perfectly well, & you I presume would now have easy access to the means of doing it. No doubt many effectual means might be devised. I would only mention some that have occurred to me - You would want a delicate galvanometer - hollow & solid prisms - a rock-salt lens - (you said something about this - & that made me think you could manage the thing) & a Tyndall screen of iodine in sulphuret of carbon, to filter out light. - Now take a well-developed spectrum of any light - throw it on a screen in which is a hole, through which you can admit any separate colour - receive that colour on the Tyndall screen, & ~~can~~ so place the rock-salt lens as to bring whatever [page curled over] through

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<sup>1</sup> In the Black Forest

<sup>2</sup> 1871-2 Persian famine is supposed to have killed 2 million people

<sup>3</sup> Thomas Johann Seebeck 1770 -1831 a physicist b.Estonia of Baltic German family who in 1821 discovered the thermoelectric effect.

that screen to focus on the Galvanometer. If the theory is all right, it seems to me that the maximum of heat, whatever prism is employed, ought to ^be^ found beyond the visible red. € In fact, on that theory I do not comprehend how there should be heat in the red itself, or in any coloured space – the undulations changing from heat into light, & ceasing to glow when they begin to shine. But let that pass – at any rate, if with any material, solid or fluid, the maximum of heat should be found removed down among the colours – e.g. anywhere beyond the red into the yellow, as Seebeck found – then it seems to me the theory will have at any rate to be considerably modified. It could be a worthy enquiry – I hope you will take it up - & I wish you all manner of luck with it. But should anything hinder the experiments, do please let me know “some day” what is the meaning of so-called dark heat being found in the red space – when the quickening of the undulations ought to have turned it into light – which as such would not affect the galvanometer. Qu? Is there any but dark heat?

Pension Kaufmann, à Lucerne – Thursday nachmittags –  
 The Chûte du Rhin<sup>1</sup> was splendid – we had never seen it so well, the weather here has been sehr schlecht [very bad], but I hope we have brought amendment with us – it is very glorious here today with heavily capped dark purple mountains – still mantled with vieles Schnee.[much snow]  
 On our arrival here yesterday evening I found a letter sent on to me from Hardwick by Prof. Mayer<sup>2</sup> – dated Stevens Institute of technology (what in the world is that?) Hoboken, New ~~J~~ Jersey – saying – Immediately on the receipt of your letter requesting that I should procure for you the photographs of the corona [? paper folded] taken by Mr. Whipple, I wrote to procure them; but failed in obtaining an answer from Mr. Winlock of Cambridge Obs<sup>y</sup>. U.S.A. I have concluded that he is at present absent from his home. I have just written to Mr. Whipple the photographer of the expedition, and hope to obtain the photographs by next week. Whenever I obtain them, I will forward them at once to your address.” –

I cannot exactly recollect what you said to me about them in London – whether you had got them, or not – but it seems they will be sure to be sent to Hardwick, for Prof. Mayer’s letter bears date 24 May. – If therefore you wish still to have them, will you please write to Mary Anne Bromage, Rev. T.W.W’s H.Vic. Hay RSO, asking her to forward to you (giving her your exact address) by book post any parcel that may have come with American postage-stamps upon it – and if she feels any doubt as to the kind of stamps, to “aks” [sic] the Post-Mistress at Hay, who will know whether they are American or not. I will also tell her to forward them, when I write, if she hears from you.

I hoped to have seen an Iris in the Rheinfall yesterday, & to have tried to “turn it out” – but was disappointed. My old acquaintance the Optikus here recognised me this morning – I found he had never seen a Spectroscope so I have an opportunity of making him stare tomorrow. Our old guide has written to say he cannot do exactly what we wish, so our plan is a little bouleversé [upset] – but I think also verbessert [improved] –and the post is coming – and we are writing in a hurry – and it is charmingly quiet – and we enjoy it greatly – and we unite in kind love to you and yours – and I remain

My dearest Arthur

The man you rowed out upon the Vierwaldstätten See  
 in the Moonlight – in your 22<sup>nd</sup> year.

Pdfs 100/101

<sup>1</sup> The Rhine Falls in Neuhausen in Switzerland near Schaffhausen are the largest waterfalls of Europe

<sup>2</sup> See Letter 75

**Letter 120**

**Over six weeks later**

27 July 1872

My dearest Arthur,

A hasty line today. –

I sent the Photographs & pamphlets by bookpost, & enclose Prof. Mayer's<sup>1</sup> letter to myself, which you may like to see – please return this as soon as convenient, as I must reply to it soon.-

My Spottiswoode speculations came to an untimely end. G.A.S was out of town – W, [?] I did not see how I could very well attack, as he was not my printer & I had no kind of business with him – however I determined - though rather against my judgement to make the attempt, & called at his office (near the others) but he was not in – and as matters stood I could hardly regret it – for with him as almost a stranger to myself – there would have been more appearance of officious meddling - & I had no handle whatever to pull the business in with. –

I found at Som: Ho: that Liais<sup>2</sup> was in – a heavy clumsy fellow something after the fashion of Lockyer's Guillemin<sup>3</sup> – with painful French type & nice illustrations.

This being Saturday, I feel rather “Mondayish” & oppressed with heaps of letters & papers – but the silence & the climate & the garden of this place are delicious. Thank God for such a home – A double amount of best wishes from your very affectionate old friend.

T.W.Webb

[Pdfs. 102/103](#)

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<sup>1</sup> See Letter 4

<sup>2</sup> Emmanuel Liais (1826–1900) was a French astronomer, botanist and explorer who obviously produced a heavy book!

<sup>3</sup> Amédée Guillemin. Ed. By J. Norman Lockyer. The Heavens: An Illustrated Handbook Of Popular Astronomy.

Letter 121

One month later

Hardwick Vicarage, 26 Aug.1872

My dearest Arthur,

I have heard nothing from you for a long time – and I, or more properly we, want to know very much how matters have been going on – whether you went to the British Ass[ociation], whether anything further has turned up - &c.&c.

I found afterwards that I had taken the trouble of carrying that curious book of Zöllner's<sup>1</sup> all the way to London to deliver it to you – and brought it all the way back again without knowing anything about it! If you don't tell me to send it by post, I shall now keep it till you fetch it – you will not forget your promise. –

We have been pretty full of business – as you might expect – since our return – but no great progress made. Somehow the days are never long enough. I am still fagging at that plaguey 3<sup>rd</sup> Edit:[of Celestial Objects] - but I hope it is gradually getting into train. I am also doing a little bit by bit towards remounting the Telescope, which I had entirely dismantled. The stand wanted - & has had- considerable repair - & With, in whose care I left the speculum, pronounces that it requires a different mode of suspension – I am glad he has found this out, for I have been latterly not so well pleased with it, & thought the fault might be decay in my own eye. It will now be supported on flannel instead of a zinc ring.

I dare say you will give me leave to ask you two legal questions – provided always the answer may not be inconvenient. – The one is this. I have been threatened by the turnpike keeper at Hay with a summons for going through M<sup>rs</sup> Penoyre's ground [The Moor Estate] to the Station – that is, along her private drive – she having given her consent, & I having been, a good while ago, informed by 3 magistrates that I had a perfect right to do so – as it was my direct way to the Station – nay, that if my principle business was at the Station I might even go on to Hay without evasion of toll, tho' I could not legally do so if my principal business was in Hay. The gate-keeper is very confident that the J.Ps are wrong. I have since asked another magistrate of much experience; & he thinks the matter doubtful. What say you? -

The other point is this. You know I hold the meadow opposite the house from M<sup>rs</sup> Penoyre at a nominal rent of 1<sup>s</sup>. Her gamekeeper comes & nets fish there & brings any acquaintance he likes, “breaking my close” – damaging my hedge, &c. – (The brook is in ~~my~~ ^the^ meadow I rent, on both sides) I am told this is wrong – that supposing the fish are hers, as I presume they are, no person, not even the keeper, may come to fish without my permission. In fact that, if so disposed, I could maintain action of trespass against anybody. Is such the case? –

Pray forgive my bothering you with these enquiries.

I hope very soon to rake Col. Birch<sup>2</sup> & his regiment out of the box where they have lain so long. Most happy shall I be to rout them all. We hope your dear parents are quite well, and with our united very kind regards to them & best love to yourself I remain



Dearest Arthur, Your very affectionate old friend

Pdfs 104, 105

<sup>1</sup> Johann Karl Friedrich Zöllner (1834 – 1882) German astrophysicist who studied optical illusions. He invented the Zöllner illusion where lines that are parallel appear diagonal.

<sup>2</sup> See Letter 60

Letter 122

Seven weeks later

Hardwick Vicarage, Hay 14 Oct.1872

My dearest Arthur,

This comes in the first place to welcome you home – where we trust you have by this time arrived in safety & comfort, and are getting into harness again, which I daresay will go rather stiffly at first – At least I know mine usually does so on similar occasions. And next I am to tell you that we propose, D.V. reaching London on the evening of Monday 21<sup>st</sup> instant; M<sup>rs</sup> Wyatt having very kindly given us accommodation at 77 G.R.S<sup>t</sup>. [Great Russell St.] We shall be so glad to see you if you will come to spend the evening with us – and there will be no one there but ourselves (not even M<sup>rs</sup> Wyatt, who I am sorry to say is out of town) and we can have a nice long uninterrupted chat about all manner of things, German & English and arrange for your coming here – and all the rest of it, “be the same more or less” – And I will not fail to bring your Zöllner’s book, which I made such an especially stupid mistake about. And won’t we have a nice cosy evening? We shall be perfectly at liberty to receive you any time from 6 of the clock, and the sooner the better. Things go on pretty much more antiquo [as of old?] here. – my wife much the better, I am thankful to say for the Swiss excursion – my little “telescope-house” in nicer order. – 3<sup>rd</sup> Edit: Cel: Obj: advancing &c. &c.&c.

I shall bring up the old Puritan officer<sup>1</sup> with me. My wife sends her kind love to your good Mother, with best thanks for her letter – she feels highly complimented by her asking for drawings to copy from, but she is very sorry to say she has no oil painting - & her water-colour drawings are all mounted in large books.

With best love to you from both, dearest Arthur, I ~~give~~ send with my new Motto, that of the Bardic Chair at Raglan Castle,

Deffro! Mae Dydd<sup>2</sup>

I had written the above before post-time, when a letter came in inducing me to ask if you can possibly manage to do me a great favour. In consequence of somebody well known to the readers of the English mechanic as “F.R.A.S.” having given a guarantee of Solomon’s £5 telescopes, an optician named Robert Thomas, 7a, Duke St, Grosvenor Sq. wrote back to me if I would test his object glasses: offering to send them down with proper tubes &c for the purpose. To this I agreed – I suppose about 2 months ago - & my name was consequently gazetted in his adv<sup>ts</sup> in Engl. Mechanic (& elsewhere for ought I know) But no object glasses appeared: & it was obvious that either he was preparing a stock to send ~~at once~~ ^ in one lot^, or selling under false colours. So I wrote to him last week, & got his answer today, telling me his last batch consisted of so many of different sizes, (39 in all) & that he had ordered tubes for them to send me “but my customers were so impatient that they would not give me the time, they have said, never mind I will test it myself” – he then adds he has only two left, such is the demand, & has only 6 doz. in hand which will not be ready for some time. Now all this looks suspicious, tho’ it may possibly be right – and I must not, as you will know, attack a man’s business proceedings so long as he could bring a colourable explanation – so, if it would not give you a great deal of trouble, I want to ask the especial favour of you to go to his address, & ascertain what he has been doing – please not to let him see that you know me, but merely say you come to enquire about his telescopes, & that you understand he has ~~had a good many tested by T.W.W.~~ advertised them as tested by T.W.W. & has had a good sale. Then you will see. If he is an honest man, he will tell you what he has told me, ^Or^ if he has any still in stock, perhaps the most direct way w<sup>d</sup> be to ask to see them, & whether they in particular have been tested by me. If he has none remaining you could ask what

<sup>1</sup> See Letter 60

<sup>2</sup> Awake! It is day



character I had given of those he has already sold – I merely suggest these enquiries ~~as a means~~ to save you trouble in thinking of some way of getting at the truth without any species of subterfuge – which you would scorn to employ quite as much as I should to suggest it. But if anything preferable suggests itself please think nothing of my idea. Then, if you can grant me this favour, I shall know how to deal with him when I come to town. And I have the comfort of knowing that the matter could not be in better hands than your own. – I am writing to him to stop the advertisements.

Pdfs 106 & 107

## Letter 123

Two weeks later

Kelston Knoll<sup>1</sup>, All Saints Day, 1872

My dearest Arthur,

We have come to this happy place to spend a few days with our dear old friends - & shall be very sorry to go tomorrow – though never sorry to find ourselves at home. And I have been thinking repeatedly of sending a few lines to you – for various reasons. The one – because I want to know how you are. I did not like to see you below par - & I sincerely hope you have devised something to bring yourself up to your place again.

And then – the next thing is, as usual, a selfish one. – Our stupid Hay bookseller ordered Lowe's British ferns for us - & we had an imperfect copy ending with p.348 instead of 472! And then he or his London agents who may be denser than himself, pretended no more was to be had. This I found out was all wrong: but stupidly again – adding forgetfulness to blundering, I omitted to see about it till the other day, when I went to Groombridge's about it. I did not see the principals – but this young shopman was not sure that it might not be out of print by this time. However, he's made a memorandum & promised to enquire about it and I said I would call again if possible. I could not however manage it. And now my petition is – that some time when you may be passing that way – there not being the slightest cause for a hasty on purpose journey – you would kindly look in at 5 (or 6) P N Row<sup>2</sup>, and ask, whether the said termination of Lowe's British ferns (including Index) is yet to be had.

The wonders we saw together at Tulse Hill<sup>3</sup> have continued to run in my head more or less ever since - & I took the first of the very scarce opportunities of open sky to look for the 3 neb<sup>ac</sup> & I found them quite as well shewn as  $\frac{1}{3}$  the light would shew them. That is certainly a glorious glass of Huggins's – but I should like to have seen a big star through it in default of actual trial. I have a suspicion that there is a slight degree of flexure in the O.G. from some inadequacy of support. 'Twas a presumptuous thing even to think – but you know I am now an "old salt", and not remarkable for diffidence in my own opinions – I certainly felt it matter of thankfulness to be experimentally convinced of the unchanged state at present of my own eye – but the change will come – in God's good time.

This letter was broken off here by the relation of a marvellous well attested ghost story – not to be told again – but of the most strangely convincing character. What have Mess<sup>rs</sup> Tyndall, Huxley, et hoc genus omne, to say to these things?

If you happen to come across a book by a man called Sanford – ~~work~~ ^Studies^ & Illustrations of the Great Rebellion<sup>4</sup> – or some similar title, will you kindly give me some notion about it as to size, price &c. I have ~~a notion~~ an idea of ordering it for our Book Club, if it should be the right kind of thing.

I have a strong impression that I wanted to tell you or hear from you something else, but it seems to have gone from me. – I have a little scheme of trying to adapt my miniature spectroscope to the reflector, and I cannot but think I could make the great Neb. in Orion give me a reply. I suppose our Annular friend would hardly be bright enough.

Will you let me know whether you have got Brewster's Optics? My wife says yes – I think no. Cel.Obj. crawls on – but I must not crawl- there is not much time ahead. I have crawled too much this many a year.

<sup>1</sup> Near Bath – home of Tudors, relatives of HMW's uncle by marriage

<sup>2</sup> Paternoster Row

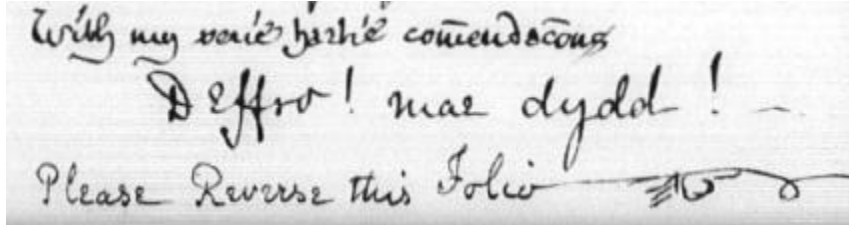
<sup>3</sup> The home – and observatory – of William Huggins. Huggins enlarged his observatory in November 1870 to accommodate a pair of fine telescopes by Howard Grubb of Dublin—one a 15 inch refractor and the other an 18 inch reflector—which could be mounted interchangeably on the equatorial base.

<sup>4</sup> Sanford, John Langton, Studies and illustrations of the Great Rebellion, London, J.W. Parker and Son, 1858

With my verie hashé comendacons [medieval?]

Deffro! Mae dydd!

Please Reverse this Folio [shows hand pointing]



I thought I had forgotten something – it is this. You will be, I daresay, in the Somerset Ho: direction before very long - & perhaps passing Macmillan's. In the top of Bedford St. – I think No. 32, is a place for second hand microscopes, Electric coils &c. called the Science Mart – and in the window a few books for sale, parmi lesquels [amongst which] Mitchell's Orbs of heaven<sup>1</sup>. I called one evening to get it but the door was locked. I think if you were passing by & would offer 1s 6d for it, it would be taken, tho' the man talked of about 2s – And if not I would give 2s and you could kindly put it in your portmanteau when you come to see old Cockatoo.

[Pdfs 108/109](#)

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<sup>1</sup> Ormsby MacKnight Mitchell: The Orbs of Heaven: or, The planetary and stellar worlds London 1851. This was a considered a book for "juveniles" and went into several editions. It was quoted by Samuel Birley in his Earth not a globe (See Letter 35b)

Letter 124

One week later

9 Nov. 1872

My dearest Arthur,

I am very sorry you should have had so much trouble for nothing – pray think no further about it. My wife has found a nice copy ^of Orbs of heaven^ for 1s.6d at Footes (91 Edgeware Road) and will write to him today to send it with a bill to 13 Hunter Street – by someone who can be paid – and she will feel very much obliged if you will accept the enclosed stamps for that purpose, and bring it with you when you come. –

My set of Astron.Nachrichten<sup>1</sup> ends with No.1634 – and I have seen none – that is regularly since. As you will probably be at our Library before we have the great pleasure of seeing you, would it be giving you too much trouble to ask you to see whether I could borrow any or all of the subsequent Vols & bring them with you. They seldom contain anything I care about (but when they do it may be very valuable) and I can run through them very rapidly, so that probably I could return them by you.

If any Vols. are out visiting, as usual, Mr Williams<sup>2</sup> was so good-natured, when I was last in Town, as to offer to let me borrow from his own private copy - & I daresay he would let me make up the deficiency in that way as I could return them so soon. –

I think I have seen traces of a great uproar in the family group, of which my friend  $\zeta$  Orionis is the most remarkable member. But they were all very low (in position) and muddles (with haze) when I paid them the first call of the season, so my judgement is suspended for the present.

But seriously, if there should be 2 Variables of different colours within  $1'$ , would it not be a curious – perhaps an unexampled phenomenon?(if we except  $\Sigma$ 's alternately variable pairs;  $\rightarrow$  & even some of these may be otherwise explained. I hope your Plate gets on swimmingly

Your very loving friend

Deffro! Mae Dydd. -

Pdfs 110,111

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<sup>1</sup> Astronomische Nachrichten (Astronomical Notes), one of the first international **journals** in the field of astronomy, was founded in 1821 by the German astronomer Heinrich Christian Schumacher...

<sup>2</sup> RAS secretary

**Letter 125****Five weeks later**

Hardwick Vic. 16 Dec. 1872 (at night)

My dearest Arthur,

What you may be thinking of we do not know – how should we, till you are pleased yourself to tell us? But we have been looking out eagerly for a letter to announce your intention of coming, & stopping as long as ever you can. We expect to see you ground down by work, & sorely wanting the rest that we hope you will have here – bring anything with you that you like – only let it not be so much work as play. It will be Christmas time, when all good folks think it right to unbend the bow, & everybody makes holiday – but poor parsons! – However, tho' their work is unremitting, or often increased at that season, they find good company more help than hindrance – and you don't know how much good you may do me by coming, if that is any inducement.

I have not much news to tell, but expect the opening of a grand budget of astronomical information – i.e. of astronomical literature, for I & my telescope suppose that observation is in abeyance everywhere. She sends her respects to you, & begs me to say she is quite tired with standing in one posture, & would feel fortuitously obliged if you would bring her down 2 or 3 fine nights – she can't recollect when she has seen one. You will be too late I fear to see a lovely table-screen of my wife's painting, as it will be going off to its destination, but you are sure to find her active in some good & beautiful work or other. The 3<sup>rd</sup> Edit.<sup>1</sup> & Col. Birch<sup>2</sup> are stuck side by side in the mud – par nobile fratrum [a noble pair of brothers] - I cordially wish either or both were out of my way.

Your friend Lieut. Burton proves a very pleasant correspondent. I was sorry to hear this morning that he is out of health. If you see the Astron. Register you may have noticed how some of his silver-on-glass has been rivalling & in some respects outstripping one of A. Clark's<sup>3</sup> great object glasses.- Berthon (not Burton) is coming “to the fore” with an improved equatorial stand - & I think Browning may ultimately regret the pertinacity with which he has stuck to his own line. I remonstrated with him about his expensiveness once, a good while ago, in vain. He has been very kind & generous to me, and I should not wish any diminution of his prosperity, but I cannot think he has taken due care to avoid it.

My particular friend  $\zeta$  Orionis is gone into retirement. Mr. Knott says she hails now from No. 13½ and her movements rather puzzle me. I hoped at one time that I had met with something remarkable among her neighbours – but I believe I was, like suspicious persons in general, in the wrong - I have had a fine view of the great Gasometer in Orion, through my little spectroscope rigged up as an eye piece. It was a lovely sight to see the stationary spectrum of Nitrogen or whatever ...gen it might be, transpierced by 2 brilliant streaks at right angles, of vivid colour – traversing it rapidly – over the spectrum of the Trapezium, the other of the 2 or 3 bright stars S. of the body of the nebula. This is about the most of my “seeings”! – I got Neptune once, but felt much the inferior light as compared with what my amusing good -humoured friend Birmingham calls “the Great Grubb”<sup>4</sup> – Some kind person of the F.R.S. – I can't think who, unless it may be Huggins or Hind, has sent me the correspondence about the Melbourne Reflector<sup>5</sup>. The which is very queer. And - as usual – all the story is not told. However, I am sure they made a mistake in not trying glass instead of metal. – I have never had single O.G. sent from Mr. Thomas yet. I hope he knows his own business better than I do, or it will soon come to an end.

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<sup>1</sup> Celestial Objects

<sup>2</sup> See Letter 60

<sup>3</sup> Alvan Clark

<sup>4</sup> The Grubb telescope belonging to Huggins. See Letter 123

<sup>5</sup> Thomas Grubb – father of Howard Grubb - built the Great Melbourne Reflector in 1862 (destroyed in the Mt Stromlo fire).

I am going this evening – when for a great wonder there seems a possibility of its holding up – to lecture at Hay on Spectrum Analysis! to an audience more likely to be agape with sleepiness than curiosity. – However I must go at it “happy go lucky”, as Gen. Morgan told the English soldiers to do at the battle of Dunkirk. –

I hope I have not taken up too much of your time in “bestowing all ~~this to~~ my tediousness upon you – I was not likely to be very lively at the end of it – having gone over twice, almost word by word, 2 sheets of Birch today. They are going off by post now, to trouble me no more – but

“uno avulso, non deficit alter”<sup>1</sup> – I can’t go on with Vigil and add “aureus”. –

Our united much love, & very kind regards to your good parents, and so, my dearest Arthur  
Deffro! Mae Dydd

Pdfs 112, 113

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<sup>1</sup> “Another replaces the one ripped off” Virgil , Aeniad Bk. VI v.143.

**Letter 126**

**Ten days later**

Hardwick Vicarage, 26 Dec 1872.

My Dearest Arthur,

I won't pretend to say that I do not feel much disappointed – for I have been looking forward to your visit with so much pleasure for months and you never seemed to consider it an uncertainty! – Is it an impossibility for you to reconsider the point? Life is speeding away, & I know not when we may meet again – we have no intention of coming to London in the spring. –

About the books; it is so kind of you to have done as you have about them, & taken so much trouble. You can, as you say, forward the others by post, or if the collective postage would amount to more than 1s. 6d. they would probably come for that per Midland Rail. But as to the Nachrichten<sup>1</sup> I really don't think they would be worth, to me, the carriage money – it would have been another matter if you had brought them – or could yet bring them – but as it is – if it must after all be a disappointment, I don't much care to have them, and am only ashamed that you should have had so much trouble about them already.

Every kind wish and blessing of the season attend you, my dearest Arthur,  
from

Your very loving old friend

T.W.Webb

I ought to have explained that I thought the A. Nachr. might have contained some addenda for Cel.Obj: – but that affair is now so nearly at an end that they would be too late for it. I hope to send off the last MSS. on Monday or Tuesday at latest.

[Pdfs 114, 115](#)

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<sup>1</sup> Astronomische Nachrichten See Letter 120

Letter 127

One month later

28<sup>th</sup> Jan 1873

My Dearest Arthur,

I feel much obliged to Mr Martin, and will enclose him a note, which I dare say you will kindly let him have some time. It will keep cold. If it is not in your way, I shall feel much obliged by your giving the book house room just at the present. I am very glad to find that the commission is going on so actively.

I have viewed Horrox<sup>1</sup> with great interest and fully agree in your appreciation of a very wonderful man, to whom as you say very inadequate justice has been done. But I wish the Translator had had the sense to shew his poetry to some candid friend. I wonder to see a scholarlike man so committing himself.

You will be glad to learn that all "copy" of "Celestial Objects" has left this house for weeks – so that only a sheet or two remain to be printed and revised. The old covetous courting Colonel<sup>2</sup> has made considerable progress also – more than 100 pp printed – But I have found the corrections of both at once a heavy "grind" from eye to brain - & shall be ready to jump for joy when these two tasks are completed. –

I want particularly to tell you and your Dear Parents of a most valuable remedy. We went to our dear friends the Hardings at Stratford the week before last. There we met Lord Denbigh<sup>3</sup> – a pervert I regret to say, but one of the most amiable & pleasant of men - & from him we learn about a vegetable preparation for the relief of pain which seems to act in the most marvellous way. It is the discovery of an Italian nobleman, Count Mattei, who keeps the secret – and calls his tincture Vegetable electricity, a name one regrets as savouring of charlatanery, though the action is a fact, & a marvellous one. Leath & Ross, Homeop. Chemists, 9 Vere St. Cavendish Square are his agents in England, & it is sold in 3 strengths – the white (or colourless) is weakest – this is for cuts or bruises where the skin is broken – when it removes pain instantaneously & induces rapid healing – the Red – or medium strength – generally useful for pain where the skin is not broken & the yellow or strongest, about which I know less – but I believe it is used for paralysis –

The mode of application is to paint the seat of pain with a drop or two in a camel's hair pencil- and then you may apply a bit of thin rag (just to keep the tincture in contact with the skin) - & wet the back of the rag with the brush in the same way, a fraction of a drop of the Red introduced into an aching tooth cures it on the spot.

It is by no means dear – the most convenient form - a little bottle with stopper and glass cap, into which you can pour a few drops for use, & return the surplus, costing only 2s – Please get up a bad ~~pain~~ face-ache as soon as you can for the pleasure of curing it - & recommend it to all your friends. Lord Denbigh has seen marvellous cures effected by it - & tho' we have as yet no occasion to try it here, it has given marvellous relief in face-ache to the nurse at The Moor<sup>4</sup>.

Your friend Lieut. Burton is a right pleasant correspondent, & evidently a marvellous speculum worker. –

My wife's kind love.

Ever dearest Arthur, your most affectionate

Pdfs 116/117

T.W.Webb



<sup>1</sup> Jeremiah Horrox or Horrocks (1617 - 1641) This English astronomer observed the transit of venus across the sun using the camera obscura, 24th November 1639. DNB

<sup>2</sup> Col. Birch: See Letter 60

<sup>3</sup> Rudolph William Basil Feilding, 8th Earl of Denbigh, and 9th Earl of Desmond, (1823 - 1892)

<sup>4</sup> See notes on Neighbours and friends



**Letter 128**

**Three weeks later**

Hardwick Vicarage 20 Feb. 1873

My Dearest Arthur,

If you don't think me one of the greatest plagues of your existence, I fear I am going rapidly the way to bring you to that persuasion. I have already asked you some bothering questions and without so much as waiting for your answer, now send you another. But the fact is, there is literally no one to whom I can look for help but your self. And I know your kindness too well to question the result – so now “have at you” at once – Please NB imprimis I am in no hurry for the answer, as the back of the book referred to will not be in print I hope for a week or two. – It is a Twig out of the Birch Rod.-

And the whole case is this. –

(According to the journals of the Commons, Perfect Diurnall, &c -)

Col. Birch<sup>1</sup> captured Hereford by surprise, Dec. 18. 1645.-

He then petitioned to have his Regiment made up to 1200 men, & garrisoned the Castle. - These troops however were not wanted much longer here – but were required with many others for the war in Ireland. –

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March 25 & 26, 1646-7 (just at the end of the one & beginning of the other civil year then in use, Birch engaged to send 1000 foot & 200 horse to Ireland – (for 2 months arrears & 1 month in advance = £6740.). –

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July 19. 1647. those same troops were in Hereford in a state of mutiny - ~~no mention of Ireland, but refusing to disband except in their own way.~~ Fairfax was directed by the Houses on Birch's complaints to give order for sending them to Ireland speedily.

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But so far were they from obeying, that on Jan. 19 1647-8, they were still at Hereford, with no mention of Ireland, but resisting an attempt to disband them unless it might be on their own terms. Some arrangement was I presume come to about this time – and it appears by an order of Oct. 18. 1648 that they had not gone to Ireland at all – and had in consequence received only the 2 months arrears bargained for March 25, 1646-7.

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From all this it appears as clear as possible that this force never quitted Hereford & its neighbourhood, though some of them were for a time carrying on exaction & rapine in Radnorshire – (as to Macaulay's finely-coloured picture of the Army, it may have been true at headquarters – but at a distance – credal qui vult)[believe it who will?]

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But then I find ~~the following~~ a memorandum of my dear Father's – to the effect that May 10 1647, they were ready at Chester for embarkation, giving as his authority, Rushworth's Historical collections,<sup>2</sup> Part IV. c. 1. p.482. It is evident that either he or his authority must be mistaken. I have not access to Rushworth, but believe and hope it would not give you much trouble to get at him. He is pretty sure to be in your Library, if not, in the Reading Room of Brit. Mus. – Could you do me the favour just to turn to the place, & copy what may be found there – (or, for curiosity's sake, anything he may have to say about Birch's men under the other dates I have mentioned.)? –

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<sup>1</sup> See Letter 60

<sup>2</sup> Historical Collections of Private Passages of State, also known as the Rushworth Papers, covering the English Civil Wars throughout the 1600s by John Rushworth c. 1612- 1690

It would be a very great favour. –

These petty details are very troublesome & time consuming – but anyone who aims at accuracy must face them & get through them how he may. -

My wife's kindest love.

Your very affectionate

Deffro! Mae Dydd!

Letter 129

Four days later

Hardwick Vic<sup>ge</sup> 24 Feb. 1873

My dearest Arthur,

I am especially obliged by all that you have so very kindly & promptly done for me - & only hope it was not the means of taking up too much of your valuable time. The Rushworth [see previous letter] matter was exactly what I wanted – and shows very satisfactorily that Birch’s regiment was only expected at Chester – instead of having been actually there. That same Col. Web [sic] I am afraid was one of the family<sup>1</sup> – but we have – as I believe – a full counterpoise in that gallant Col. Web [sic] who was amongst the last cavalry officers that held out for the Crown even to Lord Hopton’s surrender to Fairfax in Cornwall. Like his superior he accepted no terms and went abroad<sup>2</sup>.

As to the Amateur Authors – many thanks for your kind advice – there can be at any rate no necessity for hurrying into such a thing -& I can very well wait and see. When my present pressure is over (I thank God I begin to see a little light) I shall be glad to get a little ~~light~~ easy – not over – engrossing work that will pay fairly! I get something out of occasional reviewing in “Nature” but they are not so very liberal as I have heard you say. J N L<sup>3</sup> professes – 10s 6d per column of small type is nothing very wonderful.

I am very sorry about that Horrox<sup>4</sup> business – I have not seen the Punch (a thoroughly discreditable thing to them) – but do you know my dear Arthur, I am scarcely prepared to agree with you as to retiring. If a thing is right and good, we ought not to fear ridicule – especially the ridicule of ridiculous people. There are those whose abuse is a compliment - & whose sneers are encouragement. I cannot possibly blame you for anything you may see fit to do with your far greater knowledge of the whole affair, & of the London world – but speaking simply for myself I should say, that mean childish piece of effrontery is beneath notice. It is a derogation from the real greatness & honour of science to allow its course to be turned aside by such rubbish. But if not beneath notice, then it would be a shame to let it have the victory. What a pity to allow ridicule to become the test of right – a ~~fine~~-way of proceeding, the ultimate end of which one can only regard with horror. Such an impertinence, if not despised, ought to be out-faced & put down & I daresay you could get some of the influential newspapers to take a very different view of the matter. Had I time, influence, & the peculiar kind of talent required – in all [of] which I am sadly deficient - & were I into the bargain, upon the spot, which is essential, I would take it up & go through with it, conte qui conte – if only to establish the principle, that the honour of science & the just claims of one of the greatest of Englishmen are not to bow to the sneers of penny-a-liners. For myself, I should feel myself much more contemptible for submitting to the dictation of such an unworthy lot – who live by getting up poor jokes – than they could possibly mock me by any representation or misrepresentation of theirs.-

Forgive me, dearest Arthur. I ought not to inflict all this upon you – but I really do feel strongly about it – and feel always stimulated to perseverance & fresh energy, by any attempt to laugh me down. I could never give way to that, in a good cause.

I have not heard a word about Proctor – but I should think it no harm if the Mag. gave him something better to do than to run tilts with every jack-an-apes that takes up a lance against him in the English Mechanic. He is a gallant fellow, & I wish him all success – but his pugnacity is

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<sup>1</sup> Two officers in the Webb family in the English Civil war supported different sides.

<sup>2</sup> See notes on Webb family

<sup>3</sup> Lockyer

<sup>4</sup> See Letter 127

quite Irish. He is much too good for this kind of thing. How capital his paper on ♂[Mars] in M. Notices.

I did not till this minute see or understand – but looking at your letter again I now fully comprehend the authorship of the obnoxious article, and see quite your difficulty. This makes what I have written over page inapplicable. & you will have to forgive it twice over – but I know you will not wish me to rewrite my letter on account of that oversight of mine. If you will kindly send me either Alex. H.<sup>1</sup> or Capt. Tupman's<sup>2</sup> address, it would be a favour, & there is no hurry, as Dr. T.<sup>3</sup> can wait. – I have had such a kind letter from Mr or Dr? Copeland<sup>4</sup>, the observer at Parsons town. – Reflectors are going a-head. It may be worth your knowing that good achromatics of any size are more difficult to get now than some years back – the secret of glass annealing seems partly lost: the trade of course don't wish it known – but I have it thro' an unexceptional source – not any optician or quasi optician. Yours most affectionately

Deffro!        Mae    Dydd.  
Awake!        It is    day.

Pdfs 120 /121

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<sup>1</sup> Possibly Alex Higgins since he is mentioned with Tupman in the next letter?

<sup>2</sup> George Lyon Tupman 1838- 1922. best known for his work on the Transit of Venus 1874 MNRAS

<sup>3</sup> Probably Dr. Terby

<sup>4</sup> Ralph Copeland, (1837–1905), astronomer. ODNB

**Letter 130**

**Over two weeks later**

Hardwick Vicarage, 14 March 1873.

My dearest Arthur

I am so sorry you should have had the trouble of sending for what I ought to have returned long ago. I always intended to do so – and have been thinking of writing from day to day. But in fact have been very busy – a Confirmation having added to my usual pressure. The letter was very interesting – but I own I am less satisfied or credulous – or which you may call it – than I used to be, since such manifestation as these have come up – they bear so evidently the marks of infamous deception. But, though I should distrust all the lot of mediums who proposed to do such things, I am just as superstitious as ever in other matters – just as a believer in medicine would remain unshaken by the pretensions of Quackery. -

Another reason for my silence is that I have really had very little to say – nothing worth telling you – though I might have sent you information that, after long suspense as to a substitute in my duty, we hope that we may be permitted to start for the Continent on 5 May for some 7 weeks. But right little (or rather wrong little) I fear we shall be able to see of you, for as our motions stand at present we should reach town on the Monday afternoon, to start for Amiens on Wednesday morning – thence to Strasburg through Rheims, leaving Paris on one side, en route for ~~the~~ Munich & the Bremmer to Venice – then we hope to get as far S. as Florence, & take Zermatt on our way home.

I am sorry good Dr Higgins is not well. Capt. Tupman<sup>1</sup> has been extremely kind & I get very nice letters from Lieut. Burton. These 2 I owe to your kindness. – Some day or other I want you to tell me all about the wonderful uproar at Somerset House - I am much vexed to hear of such things – life is not long enough to quarrel in. We shall all soon be in perfect love, if not -----

And that is a text never to be forgotten – “See that ye shall not fall not out by the way”.

The world is as you say revolving with marvellous speed – but it will never break loose! I have only heard the result of the debate, but not as yet seen the Times which we shall have I believe today. You must have been extremely interested in that debate.

My wife’s kindest love with mine

Ever your very affectionate friend

Deffro! Mae Dydd!

Pdfs 122,123

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<sup>1</sup> See previous letter

Letter 131

Two weeks later

Hardwicke Vicarage, April Fool's Day 1873

My dearest Arthur,

Have you not been thinking me a very queer fish – perhaps a “poisson d’Avril” as our neighbours say? – I have certainly been using you very “Cavalierly” – but that you know is my prepossession (and by the way what wonderful specimens of Cromwellian and Iretonian falsehood & hypocrisy I have lately met with – on the evidence of our Royalist, but one who commanded against the King!) Well – at last – the true story of my silence has been that I have been squeezed even harder than usual for some days past – and, the grip being – little relaxed this morning. I gladly take the first chance of thanking you very particularly for all your kindness about Denning<sup>1</sup> – whose offence as mentioned by you I was entirely ignorant of – and all the trouble you have taken about the presentation copies – and for signing M<sup>r</sup> Lambert’s<sup>2</sup> proposal – ( I should like you to see his truly amusing as well as earnest letter) – you are the same dear old friend as ever.

And now I am going to increase your trouble again, I am sorry to say – you see what your ready kindness brings upon you. – I am going to post a card to Longman’s today, to ask them to send you 4 copies – and will you do me the favour to dispose of them as follows. – One posted to

G. Hunt, Esq. 16 Chad Road, Edgbaston  
Birmingham

Another to F. Bird, Esq. General Cemetery  
Company, Birmingham.

A 3<sup>rd</sup> to Monsieur F. Terby  
Docteur en Sciences,  
124, Rue des Bogards,  
Louvain  
Belgium.

And the 4<sup>th</sup> please bring to me when we have the pleasure of meeting – as I wish to take it abroad to give to Professor Neseio[s?]quis at the observatory of Somewhere – it may do for a kind of introduction. – I suppose you don’t know Donati or I would beg the favour of a recommendation to him – though I don’t much like his spirit.

I have just thought of a destination by Post of a 5<sup>th</sup> copy – Rev. E. L. Berthon,  
Vicarage, Romsey

And that I think completes my presentations.

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I shall be so very much pleased to see you again, dear Arthur – it is a long time now, and life with us is rapidly passing away ! God give us grace to use the remainder well! –

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<sup>1</sup>William Frederick Denning 1848 –1931, British astronomer

<sup>2</sup> Probably Professor Samuel John Lambert, New Zealand (elected to RAS in June 1873)

We hope to be (with His permission) at 77 Great Russell Street. By the afternoon of May 5<sup>th</sup>. – remain in Town on Tuesday:- and start for Amiens on Weds. Morning: and we much, as the time draws on, arrange a happy meeting with you. But I expect I shall have to dine out on the Monday. Bring me lots of news – but especially of peace among the telescopes – My wife's best love & I am ever your most affectionate & obliged old friend

Deffro! Mae Dydd.

**Letter 132**

**Two days later**

*Postcard*

Hardwicke Vic. 3 April 1873

I must have made some stupid mistake – the first 6 copies stand in my list which I meant to copy for your information. – 1. A.C.R - 2 G.H.With. -3. J Birmingham Esq. Millbrook, Tuam, Ireland. – 4. Miss Wood. – 5. Knott. – 6. Birt. – I can only imagine that I put down Berthon's name in place of Birmingham's. If so please send the spare copy to Birmingham ( the man not the place) according to the above address. Many thanks for detaining it, & writing. – The South London Working Men's Institute have begged (throu' their secretary Mr Wilson) a copy - & I have referred them to you – please let them have the spare one I meant for myself abroad – I can get another from Longman when in town. Sorry to give you so much trouble. Lovely occultation of Double Star 118 Taurus last night. One snuffed out after the other. & both instantaneous. I have not been very fortunate in catching occultations - this was a charming as well as interesting sight.

T.W.W

*On reverse of postcard:*

To A. C. Ranyard, Esq.  
25 Old Square  
Lincoln's Inn  
London. W.C

Pdfs126/127



**Letter 133**

**One day later**

*Postcard*

Hardwick Vicarage, Hay 4 Apr. 1873

If you happen to have Thurloe's<sup>1</sup> State Papers in your library, and if it has an index (else don't trouble yourself with a search) you will find in Vol.III or IV. a letter from Col. Wroth Rogers to the Protector, dated Mar. 17. 1654, which contains a passage I suspect wrongly copied. It stands thus –

Whither I shall continue a guard there as make it untenable.

I suspect it ought to be

Whether I shall be. - or make it. &c.

(The copy in fact is not very legible. – Please don't mind at all about it if troublesome – but if easy & convenient, a card, please, by return.

T.W.W.

*On reverse*

To A.C Ranyard, Esq  
25 Old Square  
Lincoln's Inn  
London W.C.

Pdfs 128/129

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<sup>1</sup> John Thurloe ( 1616- 1668) was a secretary to the council of state in Protectorate England and spymaster for Oliver Cromwell

**Letter 134**

**Four days later**

Hardwick Vic. 8 April 1873

My Dearest Arthur,

We shall be delighted to see you, & think it most kind & friendly on your part to have proposed it. –

But could you manage to come down on the Friday (after service) so as to reach us by the last train that night – (leaving Hereford at 8)? – This would suit us best – and then NB NB NB you are positively & without any manner or possibility of excuse or being excused, stay over the Monday – at least – and as much longer as possible. The longer the better. In haste ever your loving

Deffro? Mae Dydd!

We shall send the carriage to meet you at Whitney station on Friday evening. It is nearer Hereford than Hay is, & a turnpike been taken off we generally go there

*Then follows a folded note from HMW on what appears to be a piece stuck on to the original*

I am so pleased to  
think you are coming  
to see us my dear Arthur  
& I think it especially  
Kind of you to  
Think of us, only  
Do try to stay till  
Wednesday. Any  
time on Good Friday  
evening the carriage  
shall meet you  
at Whitney Station  
remember not  
Hay Road. We  
always drive  
to Whitney Station  
now. In great  
haste hoping  
to see you soon  
Ever your  
Affecti. old  
friend  
H.M. Webb

A.C.Ranyard – *written on back of fold*

Letter 135 [Circled 64]

Nine days later

Hardwick Vicarage, Hay, 17 Apr<sup>1</sup>. 1873

My dearest Arthur

I am so glad you had so pleasant a journey - & am much obliged by your care of my poor people. I will follow your instructions as well as I can. -

This morning brought me the enclosed card - I have taken the liberty of asking in reply that the copies shall be sent to your care, as they will cost needlessly if sent ~~to our~~ here previously. About Lord Lindsay - thank you for withholding:- on further consideration I am led to doubt the entire desirability of the move - You know the old adage "flee love and it will follow thee" - it has good application in other matters as a sound rule of etiquette.

When you get the copies of Burnham's Catalogue, perhaps it would save trouble if you would post them at once (I mean as soon as quite convenient) to

S.W Burnham, Esq:  
2, Vincennes Avenue  
Chicago  
U.S.A.

Only please be sure to get payments from me for them. I will write tomorrow to tell him to look out for them. Col. Birch sticks I suppose because the printers have been keeping holiday.

I had so many more things to talk over with you! and the time was so short ! I don't know when we shall ever get a quiet long talk as in old days - the world spins round faster now - But I do want to tell you how sorry I was to find that you had been imposed upon by some very false and misleading assertions regarding the extreme needs & the grand exertions of the Church of England. Forgive me dearest Arthur, you know little or nothing about either and it would open your eyes a little. But n'importe - God's servants are content with His inspection - and there are parties whose sentiments & proceedings they perfectly well understand & whose calumnies & misrepresentations they can bear - the day will come - and they can wait for it. With them, it is of very little account that they should be judged of man's judgement. But it concerns me much to see so dear a friend so grossly imposed upon. I do not however mean to advert to this painful matter again. -

We are trying every day to make some preparation in earnest - but many hindrances. You will not wonder to hear that the poor old man died yesterday. She I believe is lingering still. We had rather a smart thunderstorm yesterday evening on the Radnor side, & last night here, - today rain & much discouragement for our little Choir feast. I got a letter from **Denning** this morning enclosing some curious Jupiter observations from Ormesher<sup>1</sup> but saying he is himself so ill he has given up observation, & for the present at least dismounted his telescope. - I should have liked you much to have seen ♀ with mine today. -

A lot of letters are coming for me so I must remain.

Dearest Arthur

Your very affectionate old friend  
Deffro! Mae Dydd!

Pdfs 134 135

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<sup>1</sup> H. Ormesher of Manchester was quoted in a report on meteors in the Observing Astronomical Society in 1869 when he observed 14 meteors on the 9<sup>th</sup> August. Further than that...?

**Letter 136**

**Two days later**

1873. 19 April

Anne wife of Henry Saunders says - Her husband and his sister Hannah Prosser say that Col. Powell<sup>1</sup> (the Witness & Excr) took the Will to London to have it proved and charged £10 for so doing which was put down in one charge with the Funeral Expenses. – That 12 months after death the family were assembled & the will read to them by ~~the~~ Colonel Powell, the Rev. Tho<sup>s</sup>. Powell<sup>2</sup> being present and the surplus of the money ~~left for~~ not left in the Will but intended for proving the Will, funeral expenses &c was divided among them. Perhaps 15s a piece. There were cottages in Clyro which were sold, Anne Saunders believes to make up the money - and it was placed in Hereford Old Bank, which failed. And the money has been put on land at Llanfair, Clifford and was 'rose' from that security to put on the Bage Farm.

Pdf 136

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<sup>1</sup> Colonel Powell, a near neighbour

<sup>2</sup> Rector of Dorstone – related to Col.Powell

**Letter 137**

**Three days later**

Hereford 22 Apr. 1873

Just after the Bishop's Charge<sup>1</sup> in great haste

My dearest Arthur,

We have unleashed the fox I think –

I enclose information obtained on Saturday – Contradicted by the fact since communicated - That search has been made in Hereford and the Will is there. Proved 12 Sep. 1845. – Hannah Prosser whom you so kindly spoke to in her cottage, being ^since asked by me about the proving in London told me her mother used to say that Col. Powell told her he went to London to prove it & paid £10. I have no dependence on anything he may have said, I very sorry. –

Written on a watchmaker's counter.

Your very affectionate

T.W.Webb

I had nearly forgotten to tell you, a man named Simms in London married a sister of Henry Saunders (she is dead) - & we have advised Anne Henry's wife to write to him & desire him to write to Rev<sup>d</sup> T.P. & tell him the money is saved for the purpose of earning better interest. This may draw him out of his hole.

[NB notes from census researched by Julie Jones

PROSSER

1871 Hannah Prosser at Windle Park widow aged 57 an assistant born Clifford 1814

Living with her sister Mary Saunders aged 48 a pauper born Clifford 1823

SAUNDERS

1871, Henry 51, living at Hardwicke Green as a farm labourer and Ann, 50 along with their son George 17 a farm servant and Harriett aged 13 a scholar]

Pdfs 137, 138

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<sup>1</sup> Formal homily to the Churchwardens of the diocese

Letter 138

Two days later

Hardwick Vic<sup>ge</sup>. 24<sup>th</sup> April alias January 1873

My dearest Arthur,

I wrote it is true in a very great hurry in Hereford, between the Charge & the Luncheon, to catch post – but still I regret I should have given you so much trouble about “ Ann, Henry’s wife”. I thought you would have recollected that she – Ann, wife of Henry Saunders, the only son claiming under the Will, is the person who gave evidence to you in our Library - & whose name I should think you would find among your pencil memoranda. No one therefore has a greater right to move than her husband. – As to the letter we proposed, to have written by the widower Simms in London, who can claim his deceased wife’s share, the object was to make the offender shew his colours. Don’t you see – if he answers he has committed himself in writing! – If not, then comes a lawyer’s letter with much more propriety in consequence of his refusal to answer. We think therefore that we have advised rightly as well as according to the wish of Ann herself. – I doubt whether any answer will come before we start – but there’s no hurry. We are in the state you may guess – but there is one very beautiful ray of light - in the rapid advancement of Birch<sup>1</sup>. – By the way would it give you much trouble just to look at Rushworth in your Library & send me a card to put one little point straight? I find in a proof sheet just looked over, under the head of the comradeship (if there is such a word) of Lieut. Col. (afterwards Sir Ralph, & ultimately Lord) Hopton – and Sir William Waller, that they were both in 1624, when Mansfield raised an Army ~~for foreign service~~ in England for foreign service, in Col. Sir C. Rich’s 4<sup>th</sup> Reg<sup>t</sup>. of foot. – So far well. But the reference, “ Rushworth, Hist. Coll. p.153,” is not nice, because the part, & the volume are omitted. I think & hope, as the year 1624, the page 153, and the subject matter of ~~Hopton~~ Col. Rich’s regiment are so clearly given, it would give you but very little trouble to supply the Part and the Volume – Will you kindly oblige me with these on a post card? I shall get it time enough for the 2<sup>nd</sup> Revise - the first proof I return today. –

O how cold it is! It has been snowing just now - & the Black Mountain was all besprinkled yesterday morning. Thanks for Birt’s note – it was a pleasant acknowledgement that he had got my hastily written article.

Ever my dearest Arthur

Your very affectionate old friend

T.W.Webb

Pdfs 139/140

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<sup>1</sup> See Letter 60

Letter 139

One week later

Hardwick Vic. 28 Apr. 1873

My dearest Arthur

I am very much obliged by the reference to Rushworth<sup>1</sup>, which was exactly the thing I wanted: & I am happy to say it will be the very last trouble I shall give you about the old Col. who will now be all finished (except Index) this week – and I am truly thankful for it.

I found on Sat. a letter of Capt. Noble's<sup>2</sup> to you here, which perhaps you left by mistake – but nowhere can I see it today! However it is sure to turn up - & I will bring it with me – but I hope you have not been inconvenienced by the want of it.

With regard to other matters which you have touched upon in spirit, the kindness & gentleness of which makes the subject but the more painful to me – it is grievous to me to revert to them – but I think if you can recollect all that passed here you may see why I should naturally feel anything reflecting on that body to which it is my greatest earthly honour to belong. I do not mean for a moment to insinuate that you are not open to conviction – but, dearest Arthur, you must bear with me when I tell you in all faithful friendship that the course you have adopted of reading what Christians in general consider dangerous books, - without ever studying the answers to them – can never lead to a good result. You are too well acquainted with my engagements to suppose that I could have leisure to put before you, as you express it, what is to be said on the other side - this would not only require much leisure, but ability to which I lay no claim – it is not for want of inclination. But I cannot think with you (I should be delighted if I could) that “our differences of thought are only to be expected, & are only the natural result of the difference of our lives & time of life”. I fear there is much more in them than that – more than I like to think of –

I have no hesitation in saying that the habit of reading dangerous books without their antidotes is no better than keeping bad company. – One question weighs upon my mind Dearest Arthur, Do you regularly read God's word? Do you read it with prayer for true understanding & knowledge? Do you really know, what you venture to criticise? I think not. In several respects I feel persuaded that you have made up your mind partly on false, partly on misapprehended data – but as long as you will let me be, I must ever be, my dearest Arthur,

Your most affectionate old friend.

T.W.Webb

Pdfs 141/142

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<sup>1</sup> See previous letter

<sup>2</sup> Capt. William Noble 1828-1904 ODNB

## Letter 140

Two months later

Fribourg en Suisse, 27 June 1873

My dearest Arthur

Will you forgive me writing in this scandalous actionable form on the back of an old Voiturier's agreement? The fact is, all our ~~paper~~ letter paper is exhausted tho' not our envelopes – and our unexpected detention of a few hours giving me convenient time to write – but not to go out after paper, I am tempted to take the liberty of such a filthy scribble!

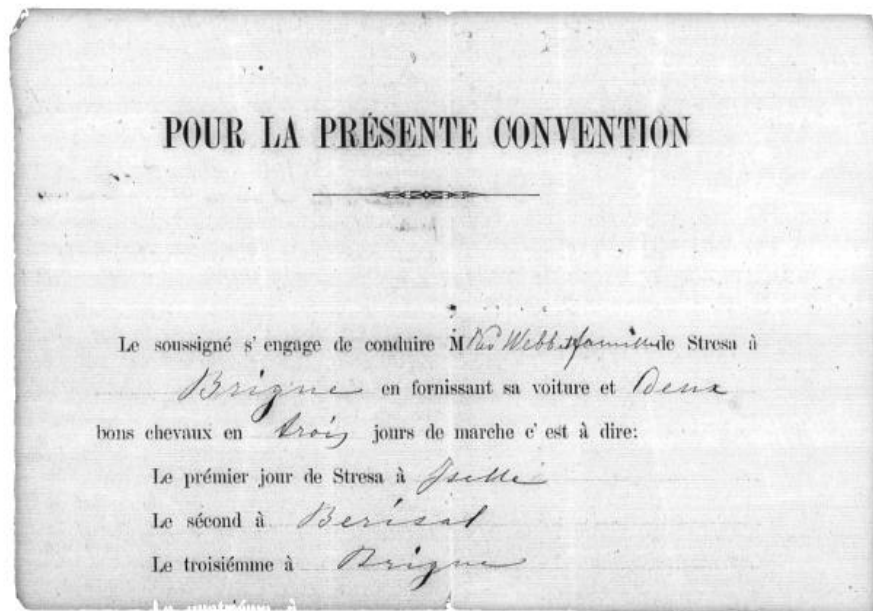
Especially as I want to tell you without further delay that we hope to be in London D.V. next Wednesday even<sup>ing</sup> – to remain Thursday & Friday – when, tho' our time will be crammed very full, I do hope & trust to see something of you – & the more so for a selfish reason – a young man's letter has been forwarded to me about requesting information as to the study of astronomy mathematically – which books to read &c.- as to which I am as ignorant as a young bear, but you know everything – & I shall be especially obliged by your advice as to my reply.

We have done I am thankful to say a great deal & done it well & I think my dear wife all the better - & I have been greatly relieved by the absence of Birch bother. I have seen & heard nothing that would interest you – except what you have probably seen for yourself at Florence – the old tubes & O.G. of Galileo at Florence, his observatory at the Torre di Gallo [in Tuscany] – and his forefingers in a glass case. We have at last seen Bel Alp, Zermatt then Rissel &c. & had for the most part splendid weather. We trust you & your good parents have been quite well. My wife sends her kind love & please believe me notwithstanding the Italian Voituriers.

Your affectionate old friend

T W Webb

*On the back is indeed the old Voituriers' agreement for a three day tour.*





Letter 141

Twelve days later

Hardwick Vic. Hay 8 July 1873

My dearest Arthur

I do not know how it came to pass that we should have met so unexpectedly at ~~the station~~ ^ Mr Wyatt's door^ (I was thinking when I wrote, of sending to Hay "Station") & then have missed one another – but I felt very sorry about it – for I much wished to see you – & it seems so strange to come away after such a shabby pretence of an interview in the Street! – You no doubt were hindered from coming that evening as you said – and as you mentioned the probability of your leaving town next day if I understood aright. I did not go to hunt you up in Hunter St<sup>1</sup> – nor indeed had I well time – being, as usual, pretty well hunted myself. But now I have come back – as expected – to a precious heap of ~~business~~ ^work ^ - & instead of a pleasant chat about a pleasant tour (including Galileo's forefingers!) I must go straight into business - as usual being about to give my dear old friend a lot of trouble!

1. About Lord Lindsay. I find here a printed notice sent by Dr Terby – I cannot lay my hand upon it at this moment ~~amongst~~ ^ "amidst^ the outrageous multitude of leaves" (of paper!) – but the meaning was – that he was about to report on the contents of the Areogr. Fragm<sup>2</sup>. which had been entrusted to his hands – to the Belgian Academie des Sciences – nothing is said as to purchase, on their part, but it seems to look that way – I shall be visiting Dr T. and shall no doubt hear from him as to the progress of the affair – and should it come to nothing, I can let Lord Lindsay know.

2. As to the enclosed letter. Will you do me the favour to look at it to tell me what to say? The writer has made a great mistake and "gone to the wrong shop" for his information – would be much the worse, in these terms, for any that I could give him – and your reply will do me & him a real favour. Please return the letter with your reply.

3. I was a great ass (but a weary overladen one, so it is no great wonder) not to fulfil my intention of bringing to Town the only book I have belonging to the R.A.S. Library. I fear I forgot all about it - & possibly therefore can hardly be said with truth to have intended it. But anyhow my neglect has caused a notice from M<sup>r</sup> Williams<sup>3</sup> – to which I shall reply – to send it to Hay as soon as I have a safe messenger. But to ensure careful delivery I think I had better not prepay carriage. So if you will do me the favour to "recoup" Williams on that account, I will settle it with you.

The Index to Birch awaits me with open jaws – not that alone – so here ends this.

My wife sends her kind love to you & your good Mother – she had intended calling, but a visit to my very aged uncle (89) at Barnsbury Square took up too much of her time. I have not yet had time to "read up" Nature or anything else – so am in a state of, perhaps, happy ignorance. My Observatory I found in capital good case – but the moon was sour last night.

Ever dearest Arthur

Your very affectionate old friend

Deffro! Mae Dydd!

Pdfs 145/146

<sup>1</sup> Ranyard's home

<sup>2</sup> Aréographie Fragmente: Studies of Mars originally made by J.H Schröter, re-discovered by Francois Terby in 1873 (or offered to him for sale by Schröter's grandson) Published eventually in 1881. See Letters 71 and 72

<sup>3</sup> Secretary RAS

Letter 142

One month later

Hardwick Vicarage 11 Aug. 1873

My dearest Arthur

It is a long time since we had any communication – but no doubt we have been alike busy – I can answer for one – I am glad however of an occasion to write - & here it is.

On Saturday I received a letter from D<sup>r</sup> Terby. I had written to him since my return to say that Lord Lindsay would have been glad to purchase the Areogr. Fragmente but that I considered they were in his (Dr T's) hands. He also tells me that M. Schröter – the grandson of my valued & respected old master, is willing to sell - & if Lord Lindsay is inclined to make an offer, he would communicate it. He also expresses his regret at not knowing Lord L.'s address, to whom he would send his own past & future "brochures" (one will I suppose be a Memoir on the Areograph. Fragmente) should Lord L. feel inclined to write to him, his address is  
Monsieur Terby,  
Docteur in Sciences,  
Rue des Bogardo, 124,  
Louvain,  
Belgium

When I was negotiating on behalf of the R.A.S. I had a private intimation from D<sup>r</sup> Peters that the family, who are not in good circumstances, would have been very glad of an offer of £100 – of this however I took no notice. Lord Lindsay probably knows that an offer of £30 produced no reply – so consequently the advance of £50 which the Council authorised if necessary, was never acted upon.

From a delicate to distant intimation I gather that D<sup>r</sup> T. would be very glad to be connected with the R.A.S. Would there be any difficulty in getting him elected an Associate? I do not know the requisite conditions or formalities. Will you kindly find out for me? His forthcoming Memoir on ☿ [Mars] will be complementary, he says, to a larger Memoir which Kaiser has left (in M. I conclude). I believe I should have said "supplementary" is the better rendering of his expression "le complement".

I have finished all but proof of Index now on the table. Col. Birch – most thankful to be delivered from him - & must soon proceed to the examination of my dear Father's "History".<sup>1</sup> Proctor has I see (from cursory openings, for I have not yet read the book) been very kind to me in his "Moon". But he has talked in his preface about my "intention of writing one day a book upon the same subject". I don't recollect ever saying so to him – nor does he say he heard it from me. But anyhow if I could write the book in "one day" it should be done – or one week either – otherwise the intention - if it ever existed – would have to be adjourned sine die. – But the older I grow, the less inclined I feel to go far into these matters. Science has furnished me with many delightful hours of relaxation - & for that I am thankful - & it has paid me into the bargain - & for that I am thankful – but it could never make me, or anyone else, substantially happy – even in this world. & I am at a loss to know how it can prepare me to appear before the presence of GOD. Not so, could ever I expect to hear the words "Well done, good & faithful servant!". Not that I dare reckon upon any such a welcome – but I do not wish to set myself further off from it than I am!

My wife sends her kind love & I am always

My dearest Arthur

Your most affectionate old friend,

T. W. Webb

Pdfs 147/148

<sup>1</sup> John Webb, *Memorials of the Civil War in Herefordshire*, ed. T.W.Webb. 2 vols. (London, Longman, Green & Co. 1879

Letter 143

Ten weeks later

Hardwick Vic. 21 Oct. 1873

My dearest Arthur,

I had no idea you had returned, & was very glad to get the Card this morning. The only reason ~~wh~~ you got no answer to your last was that, having a great deal to attend to, I put off my reply for some time - & then on looking again at yours & found that the fortnight's stay in Bonn which you had mentioned would have expired before you would get my letter - and you had given me no further address - so I have been waiting to hear again, and am very glad to find that the reply comes from the old quarters, & that your visit has been a pleasant one.

That observation of Pastorff's<sup>1</sup> which you mention is a very interesting one. I should like much to know (I think you told me, but I cannot distinctly remember, what those "Pastorff Sun-spot M.S." are. - Not, I believe, the vol (or 2 vols. but one I think) given by Sir J Herschel to the Astr. Soc. Library - but a sequel, which you have somehow had entrusted to you - I do not know that there was ever any suspicion of a Comet's having crossed the ☉ [Sun] in May 1828.- Do you imagine a small one might do so & escape notice before & afterwards? Possible, I should suppose, rather than probable.

If I can lay hold of a spare copy of a little periodical I will send it you, as it will give you some account of our doings - and I shall beg the favour of you not merely to look at the past concerning ourselves, but to read through the whole.

As to Mädler. I feel sure - but can give you no authority for it - that he is Baron von Mädler.

I suppose you will now be deep in the discussions of which I hear so little. Proctor will very soon be gone. I regret the scrimmage between him and Birt, without knowing enough about it to have any opinion which may be in the wrong, both, perhaps.

We have had very unpleasant weather here & the Black Mountain was white yesterday evening. I hope it may be better next week, which we & 2 nieces intend to pass at Aberystwyth. If, like today, I had rather be here than there.

There has not been much observing weather this autumn, but I have been looking after a few of Schjellerup's<sup>2</sup> Rubies - in conjunction with my most pleasant and good humoured ally Birmingham. We generally agree capitally - an index expurgatorius [sic] of said Catalogue is much wanted, but it is next to impossible to compile a better, from the difficulty of knowing where orange ends and true red begins. I have had this year another right pleasant correspondent in Dr Copeland, the E. of Rosse's observer, who, as well as the Earl, has been very obliging in verifying a little object about which a Mr Gotch had asked me a question. The 6 ft as well as 3 ft mirror was brought into play upon this occasion.

I have never heard anything since as to Lord Lindsay & Dr Terby & the Areogr. Fragmente<sup>3</sup>. I hope you found your g<sup>d</sup> parents both quite well and your dear Mother's work prospering in her hands.

With our united best love believe me, My dearest Arthur,  
Your affectionate old friend, Thomas William Webb

Pdfs 149 & 150

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<sup>1</sup> See Letter 120

<sup>2</sup> See Letter 81

<sup>3</sup> See previous three letters

**Letter 144****Three weeks later**

Hardwick Vicarage, Hay R.S.O 12 Nov. 1873

My dearest Arthur,

I have several matters to discourse to you about – but whether I shall be able to tell you all today is doubtful – at any rate I'll begin.

Imprimis - I received the enclosed letter from D<sup>r</sup> Terby some days ago – which I guess must relate to your own self. Will you kindly return it when you may be writing.

Next. I have 2 lectures to deliver sometime in Dec<sup>r</sup> at Cheltenham – on the Transit of ♀, [Venus] & on Spectrum Analysis as applied to Astronomy. You recollect I have no doubt making me a kind present a good while ago of Huggins's Lecture ^on the latter subject^ & subsequently borrowing it. If you have quite done with it, & it would be every way convenient to you to return it, I might perhaps find it helpful.

But about ~~my~~ ^the^other Lecture. I want to consult you and I know you both can & will kindly aid me. I have seen - & shall see again I hope – but have not got it here – a very interesting article on the Transit of ♀ in the Edinburgh Review for last July. It contained of course a good deal about Halley's & Delisle's<sup>1</sup> methods - but the account of the latter (I am sorry I have not got it here to refer to) appeared to me confused & unintelligible. It was (that is the mode of observing was) made to depend in some way on either the rotation or revolution of the Earth during the Transit. Of course both of these come into the consideration, & must be allowed for – simply because the appearances to the eye in motion cannot be the same as to an eye at rest. But will you kindly look at the idea I have formed of the 2 methods & tell me where I am wrong – in either or both.

Halley's datum is the apparent displacement of the planet in transit N. or S. as it is viewed from a more S.. or N. station - the amount of displacement being converted for greater accuracy, from linear measure, into time, the duration of transit giving the exact position of the chord on the Sun's disc. This I believe is quite correct.

Delisle's method, on the contrary, gives a value of parallax at right angles to the former; being the apparent displacement of the planet E. or W. as viewed from a more W. or E. station – the amount of displacement being deduced from the acceleration or retardation of the ingress (or egress) of the planet. – Obviously a correction must here be introduced for the movement of the Earth both in rotation & orbital progression in the interval between the observations – which correction, as far as I see, is not required in Halley's method. But to make the method depend (as I believe the Edin: Reviewer does) on this correction as its basis seems to use a complete misconception of the principle. But possibly I may have misconceived him.

I am just obliged to go out - & must wind all up at once, hoping I am right!

Your very affectionate old friend –

T. W. Webb

Pdfs151/152

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<sup>1</sup> Joseph-Nicolas Delisle, 1688-1768, French astronomer

Letter 145

Twelve days later

Troy House, Monmouth<sup>1</sup> 24 Nov. 1873

My dearest Arthur

I have been away – for the “best part” of the week – to see my dear friends here – where we have not been for a good while – & having escaped a pretty strong pressure at Hardwick, I will set to work (though work it cannot be called!) to reply to your last kind letter. You have I hope received Dr Terby’s Memoirs on the Areogr. Fragmente<sup>2</sup> which he sent me, & I forwarded to you a few days ago. It is, as you will have observed, a present to the R.A.S. As far as I can judge from a hasty perusal it is very nicely done – on p.11 you will observe slight error such as a foreigner would be very likely to fall into – of supposing the term “hour-glass-sea[?]” to refer to its special suitability for marking the rotation.

My lectures stand over, I am thankful to say, to the early part of Feb<sup>y</sup>. so I am in no hurry for what you have kindly promised me. Thank you for pointing out materials about the “black drop” -but I shall have no occasion to go far into that, & besides, I have Dunn’s<sup>3</sup> original paper & drawings in Phil. Trans. – I did not see any correspondence about the Edinburgh Article – the historical part of which seemed to me very nicely done. – Nor have I seen Proctor’s papers on Denison’s<sup>4</sup> article which you refer to – but I think I have all the materials that I will need for this kind of lecture.

The most interesting thing I have noted lately is Huggins’ candid avowal of the shaky foundation of the Nitrogen Nebula theory. If you’ll believe an old sceptic (but you won’t!) you will in all probability live to see curious undeterminations.

I was heartily glad to see today in Nature that you have been bringing forward that very curious observation of Pastorff<sup>5</sup> – just the thing to do. Strange! that we cannot get a larger comet – but when we do, shall we find that we understand it? Je ne sais pas – mais – mais – [I do not know – but – but] &c – &c – &c I don’t quite believe that we understand some things nearer home.

Not much work with the Telescope for some time. I look after a Ruby now & then, with Birmingham, who has taken much & worthy pains - & we sometimes turn up curious things – the most remarkable concerns Schjellerup’s<sup>6</sup> Nos 251 & 252. Only about 9m. diff. Of R.A. & 9’ of Dec – 251 is simply called “roth” by Bessel<sup>7</sup> – 252 is one of the Cape Obs. Stars of a “most beautiful & extremely intense ruby colour” & this by 2 observations. Only one red star exists thereabout now - & I find from Greenwich (as well as M<sup>t</sup>. Birmingham) that 252 cannot be found - & Schj: also notes that it does not appear in the Bonn Cat: – Are we to suppose that H<sup>8</sup> was twice in error to so considerable extent? If not, both stars must be variable, & to a great extent, for it is most improbable that H should have missed 251, if it had been then as conspicuous as now, or in Bessel’s day. This too is not a very probable, though possible, alternative.

My S Orionis is very small - & the period is as yet a puzzle, though I have not gone into the continuation of the light-curve. I should, I own, like to see it brighten up once more if I may.

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<sup>1</sup> Home of Henrietta’s brother

<sup>2</sup> See Letter 141 and subseq.

<sup>3</sup> Samuel Dunn was a London mathematical teacher, author and publisher whose paper in the Phil. Trans. attempted to portray and analyse the black drop phenomena in the Transit of Venus 1769.

<sup>4</sup> Probably William Thomas Denison 1804-1871 FRAS MN ODNB

<sup>5</sup> See Letter 53

<sup>6</sup> See Letter 81

<sup>7</sup> Presumably Friedrich Wilhelm Bessel 1784 –1846) German mathematician & astronomer

<sup>8</sup> Herschel

I see your friend M<sup>r</sup>. Morley is backing up his friend M<sup>r</sup>. Lucraft<sup>1</sup>. If the subject were not too serious there would be some fun in it.

I shall be returning (D.V.) on Friday. Believe me, my dearest Arthur,

Your very affectionate old friend

T. W. Webb

Pdfs153/154

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<sup>1</sup> Probably Samuel Morley and Benjamin Lucraft, radical reformers

Letter 146

Two weeks later

Hardwick Vic 11 Dec. 1873

My dearest Arthur

I am very sorry indeed that I should have been the means of causing you – busy as I am sure you are – such a quantity of trouble about that covetous old Puritan<sup>1</sup>. But I see no escape from the supposition that either you are in love, or have mislaid my directions – for I well remember the latter, which were very explicit. You were to have found 5 copies at 5x5=25 Parl<sup>t</sup> St. because I am allowed 25, & one has been sent for from the Office already, & 19 were sent as a parcel to me. Those 5 I accounted for thus

1 – A.C.R.

2 – Rev T. Woodhouse<sup>2</sup> (not Waterhouse as you have written it in your last) Robley Hants – to be so directed & sent by Rail at his own desire.

3 – C. Baker Esq, 11 Sackville St.

4 – D<sup>r</sup> Barry, King's Coll<sup>3</sup>.5 – D<sup>r</sup> Webb, 22 Woburn Place

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One of these 5 I thought could be left at Nicholas's & save you trouble – either No. 2 if they could readily send it to a receiving house for the rail, or No. 3. But how it has been arranged so as lead you to think of giving up your own copy (which I cannot possibly hear of) passes my comprehension. Meanwhile M<sup>r</sup>. Baker (No. 3) writes to say he has sent to Par<sup>t</sup> St. & there is no copy for him there – I think & earnestly hope this little éclaircissement will get over the difficulty.

I have been at Cheltenham for 3 days (i.e. one day there & most of 2 on the road.) On my return too late for the post I find a letter from M<sup>r</sup>. Birmingham, & a paper which I had hoped he would write about two of the Red Stars in Schjellerup's Catalogue. The meeting is I believe tomorrow. Whether you will have time, or room to get this paper in, I don't know – but if you cannot this time I dare say you will give it its turn another day. I presume you, as Secretary, can lay it before the Society without the formality of a note from a Fellow – but if more in etiquette I presume you might say you had requested by myself to ask permission to have it communicated to the Society. I have made one or two trifling additions to it - he says in his very amusing style "I wrote it in an immense hurry in a neck and neck race with the post, which I just beat by half an head or so". His Irish humour, and much kindness, make him a charming correspondent. - He fancied I was in the habit of attending the meetings – but says, if I do not, he thinks M<sup>r</sup>. Lynn<sup>4</sup> would read the paper & would be the one most likely to do justice to it. And I should accordingly have sent it to Lynn had I returned time enough for post, but as he may perhaps not be at the meeting, I thought it better to send it to you, who I suppose are sure to be there - you can, if you please, hand it over to him.

We have got a tremendous pinch<sup>5</sup> – the more felt as so unexpected. About 21° here on Tuesday night - 19° last night - & the country all white with hoar frost. I worked a long time in the Obs<sup>y</sup>. last night from 28° to 26° - cold fingers with handling metal. My S Orionis keeps very minute.

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<sup>1</sup> Col. Birch

<sup>2</sup> A friend See Letter 32

<sup>3</sup> Alfred Barry (1826–1910), principal of King's College, London.1868. Appointed bishop of Sydney and primate of the Church of England in Australia and Tasmania, and metropolitan of New South Wales 1884 ODNB See Letter 311.

<sup>4</sup> William Thynne Lynn 1835-1912 MN

<sup>5</sup> Similar to "to feel the pinch" -

My wife sends her love – she is pretty well – we are very sorry indeed to hear that your good mother is so rheumatic.

Terby is a jolly fellow ; & right good correspondent.

Your very affectionate,

T.W. Webb

Since writing this, a P.Card comes from M<sup>r</sup> Woodhouse to say “The Colonel has just arrived from London by Train. He has not yet taken off his overcoat, but seems safe & sound. I hope to introduce him to my wife presently.” How this would bamboozle any P.O. official who spent his time in reading it!



**Letter 147**

**Nearly three weeks later**

*Black edged paper*

Hardwick Vicarage, 27 Dec. 1873

My dearest Arthur,

You will be sorry I know to find the cause of this mourning – tho' I believe the deceased was not previously known to you. He was the D<sup>r</sup> Webb<sup>1</sup> of 22 Woburn Place, to whom you sent the Birch<sup>2</sup>. His loss – most unexpected to us – threw a painful gloom over Xmas Day. He had expired soon after going to bed on the previous morning – from heart diseases, his daughter tells me in the few hurried lines she sent. He did not know he was so affected, but had long thought him grievously overworking himself for 10 children. He had a little before attained some high medical honour, I am not quite sure what - & was Editor of one of the principal Medical Journals. Many will feel his loss: and it has been a great blow to us, for we loved him & respected him greatly - & much before nearly all my other numerous relatives. But sudden as it was, I am certain he was well prepared for it. He lived in the faith & fear of God, and departed, his daughter says, in entire peace. To me it is an unspeakable comfort – and O that I could feel the same about every dear friend – that he was a believer in the whole word of God – and treated the philosophy falsely so called, of the day, as it deserves. His last letter to me referred among other things to points of this nature.

I am not going to the funeral – which takes place on the last day of this year, ending so sadly - & followed by a midnight service at this Church (arranged previously) – But we think it better, for family reasons, to come up on the Monday following, & remain till Friday – when I hope to have the pleasure of seeing something of you. We shall probably be at the Bedford Hotel, certainly not at Mrs Wyatt's, who is full. I hope you have had no further trouble with the Birch – but we can put it all straight when we meet. My wife sends her love, and with very best wishes for the New Year I remain

My dearest Arthur

Your truly affectionate friend

T.W.Webb

Pdfs.157/158

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<sup>1</sup> Cousin of TWW

<sup>2</sup> See previous letter when TWW has asked Ranyard to distribute the Military Memoir of Col. Birch

Letter 148

Four days later

Hardwick Vicarage, 31 Dec 1873

My dearest Arthur,

I am so very much obliged by your kind letter – and should have answered by return, but I thought I might as well <sup>^wait^</sup> to tell you our final arrangements – which we decided upon this morning. We shall be at the Bedford Hotel to sleep & breakfast during our stay – the rest of the time at M<sup>rs</sup> Wyatt's (77) among our relations. We hope to reach the Bedford about ½ past 3 or 4 <sup>^on Monday^</sup> according to the punctuality of the train – and shall be either there, or at M<sup>rs</sup> Wyatt's, all the evening, excepting between ½ past 6 & ½ past 8, when we shall be engaged. We shall have of course a good deal to do in Town, but hope to see something of you. We are very sorry indeed to hear of your good kind Mother's illness – and hope she may soon be quite restored. The New Year begins under a cloud to us, & in a lesser degree to you – but cloudy mornings are often followed by brighter light - & if it may be but the fore-runner of the Day-Star rising in our hearts, welcome the cloud. As I am not official on the present occasion – there being unfortunately no will – I shall try to get all the business I can into the journey to save myself if possible future trouble. Unfortunately my dear Father's Memoirs of the Civil War in Herefordshire have not as yet (& could not be) looked at minutely enough to enable me to verify anything in the Reading Room – which I regret as I must soon proceed with the work in great earnest. I hope this Spring to have the Commissioners<sup>1</sup> here to inspect the R. Cromwell & other MSS<sup>2</sup> – There is so much to do & in so many ways I hardly know where to begin but I have received a fresh admonition: "Whatever thy hand findeth to do, do it with thy might." We both unite in every kind wish of the season & I remain

My dearest Arthur,

Your very affectionate old friend,

T.W. Webb

Pdfs.159/60

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<sup>1</sup> The Royal Commission on Historical Manuscripts was appointed under Royal Warrant in 1869 to make enquiries as to where manuscripts and private papers of historical interest were located and to report on their contents.

<sup>2</sup> John Webb had amassed a large number of historical MSS [ borrowed, begged, but surely not stolen, from most of the country houses in Herefordshire JHR]

## Appendix I

### Arthur Cowper Ranyard

Ranyard was born in Kent in 1845. His father Benjamin was a barge owner of means, originating from Kingston-upon-Thames. The family home was 13 Hunter Street, Bloomsbury, London. He attended University College School then went on to University College. Taught by Professor Augustus De Morgan, he concentrated his attention on mathematics and astronomy, and he became very friendly with the professor's son George. Together in 1864 the two young men formed the plan for a society for the study of mathematics, The first meeting was held on 16 January 1865, when, after Professor De Morgan's presidential address, Ranyard read the first paper, 'On determinants'. The association received the support of eminent mathematicians, and eventually developed into the London Mathematical Society.

Arthur had an older brother Herbert b.1840 who died in Australia in 1901. and two sisters: the older, Edith Ellen, died aged seventeen from synovitis and "caries of the femur" (perhaps a form of cancer) The illness was extremely painful and prolonged. Alice Margaret who was two years younger than Arthur, died aged 18 from a massive fever.

Ellen Ranyard, his mother was the daughter of a non-conformist cement maker and might be described as a "career woman" – a dynamic organiser of great vision. In 1857 she established the Bible and Domestic Female Mission which became known for developing work in some of the most deprived areas of London. She had a particular concern for the well-being of women in poor areas.

One of her innovations was the idea of the 'Bible woman'. This was typically a working class woman drawn from the neighbourhood to be canvassed who was given three months training in hygiene, the poor law and the Bible and so was a missionary cum social worker. By 1867 there were 234 Bible women working in London. They were the first group of paid social workers in Britain. This very brief account of her work is really to give the flavour of the Ranyard household which must have been both serious, religious and driven. For more information see ODNB.

Ranyard went to Pembroke College, Cambridge, in October 1865 and graduated MA in 1868. He was called to the bar at Lincoln's Inn in 1871, but his real interests lay in the direction of science, and his means allowed him to devote much time to astronomy. He became a fellow of the Royal Astronomical Society in 1863, and served on its council (1872–88 and 1892–4) and as secretary (1874–80). He was assistant secretary of the expedition for observing the total solar eclipse of 1870, and made a successful series of polariscopic observations at Villasmunda in Sicily. In 1878 he went to Colorado to view the solar eclipse of that year, which he observed and photographed at a station near Denver. In 1882 he observed and photographed the total solar eclipse at Sohag in Upper Egypt. His most extensive work in astronomy was the eclipse volume of the Royal Astronomical Society (begun in 1871 and completed in 1879). It was originally begun in conjunction with Sir George Airy, but soon devolved on Ranyard alone.

In 1888 Ranyard's friend Richard Anthony Proctor died, leaving his great work, *Old and New Astronomy*, incomplete. Ranyard undertook to finish it for the benefit of the author's family, and wrote chapters on the universe of stars, the construction of the Milky Way, and the distribution of nebulae, which he discussed with much ability and thoroughness. He also succeeded Proctor as editor of *Knowledge*, a popular journal dealing with astronomy and natural sciences, and contributed a long series of articles on astronomy, giving his mature views on many intricate

problems. His most important investigations were those on nebulae, the density of which he concluded to be extremely low, even as compared with the earth's atmosphere, and on star clusters, which he regarded as showing evidence of the ejection of matter from a centre, and not gradual condensation, as supposed by Laplace.

In 1872, in conjunction with Lord Lindsay (twenty-sixth earl of Crawford), Ranyard undertook experiments on photographic irradiation, and in 1886 he investigated the relation between brightness of object, time of exposure, and intensity of photographic action.

Although mainly engaged in scientific pursuits, Ranyard took much interest in public affairs, and in 1892 was elected a member of the London county council, where he sat on the committee dealing with the new (London) Building Act, which passed into law in the summer of 1894. Ranyard resigned that year due to ill health.

Ranyard was unmarried, extremely conscientious and lived an industrious life. He died of stomach cancer at his home, 13 Hunter Street, Brunswick Square, London, on 14 December 1894. He was not buried in the family tomb in West Norwood cemetery but in a Ranyard tomb at Kingston upon Thames.

## Appendix II

### Biographical Notes

Details marked \* denote that the subject has a full entry in the ODNB. Obit.MNRAS refers to the Obituaries of fellows in the Monthly notices of the Royal Astronomical Society which can be accessed from the internet.

I acknowledge the assistance of Wikipedia

**Beer & Mädler: Johann Heinrich von Mädler 1794–1874** German astronomer. **Wilhelm Wolff Beer 1797-1850** Banker and astronomer from Berlin, Prussia. They produced the first exact map of the Moon, *Mappa Selenographica*, published in four volumes in 1834–1836. In 1837 a description of the Moon (*Der Mond*) was published. Both were the best descriptions of the Moon for many decades, not superseded until the map of Johann Friedrich Julius Schmidt in the 1870s. Beer and Mädler drew the firm conclusion that the features on the Moon do not change, and there is no atmosphere or water.

\***Berthon, Edward Lyon 1813–1899** Inventor of nautical aids and Church of England clergyman. Vicar of Romsey, Hants. Keen and versatile inventor. Deep interest in astronomy. Invented the Romsey observatory. His collapsible boat made a significant contribution to life-saving and riverine exploration. Obit.MNRAS

**John Turnbull Bird 1862- 1930** Chief interest was on the variable star section of the BAA. Obit.MNRAS

\***John Birmingham 1829-1884** Owned an estate and was lord of the manor at Millsbrook, near Tuam, in Ireland. In 1872, at the suggestion of the Revd. T. W. Webb, he undertook a revision and extension of Schjellerup's Catalogue of Red Stars.

\* **William Radcliff Birt 1804–1881.** Assistant to John Herschel. He used to observe together with Dr.Lee in Hartwell and erected his own private observatory in 1866. Chiefly known for his observations on the moon. First president of the Selenographical Society. Obit.MNRAS

\***John Browning 1835-1925.** Joined his father's scientific instrument making firm. Practical optics was the chief interest of his life. His spectroscopes were the best available. Did pioneering work in the development of reflecting telescopes. George With (q.v.) had an agreement with him whereby Browning made telescopes using mirrors figured by With. Browning went bankrupt in 1881 owing With a large sum. MNRAS

**James Buckingham** (dates unknown) had an engineering works at Walworth Common. Buckingham worked with the optician William Wray. (q.v.)

**Sherburne Wesley Burnham 1838-1921** American astronomer. After serving as observer at Dearborn Observatory, Chicago and as astronomer at Lick Observatory (1888-92), He was from 1893 astronomer at Yerkes Observatory and professor of astronomy at the Univ. of Chicago. Although his interest in astronomy had begun with amateur observations, he became outstanding in the field, especially through his discoveries of double stars. He wrote **General Catalogue of Double Stars** (1906) and **Measures of Proper Motion Stars** (1913)

**\*Charles Edward Burton, 1846–1882** The family moved to Ireland while he was young. 1868 entered Lord Rosse's observatory at Parsonstown as assistant, where he specialized in the grinding of specula. Observed the total solar eclipse of 22 December 1870 and on 13 February 1871 read a paper on its results before the Royal Irish Academy. From 1876 worked at the observatory of Dunsink, near Dublin. He retired in August 1878, through ill health. Skilled instrumentalist as well as a good observer. Obit.MNRAS

**Alvan Clark 1804-1887** American optician and astronomer First person in USA to make achromatic lenses. Worked with his two sons, George Bassett and Alvan Graham. Their 40" lens for the Yerkes Observatory at the U. of Chicago has never been surpassed. He was the first significant American contributor to astronomical instrument making. Dict. of Scientific Biography [www.famousamericans.net/alvanclark/](http://www.famousamericans.net/alvanclark/)

**\*Revd. Dr. William R. Dawes 1799-1868.** Studied theology and medicine and worked from 1826 on as a physicist in Haddenham and later in Liverpool. Between 1839 and 1844 he was Astronomer at Bishop's new observatory in London. From then on he lived in Cranbrooke, Kent, until 1850 and then until 1857 in Wateringbury near Maidstone. Then he moved to Hopefield near Haddenham. Wherever he stayed he continued to observe the sky with his private observatory. He made numerous double star and solar spot observations and discovered the innermost ring of planet Saturn. Obit.MNRAS

**\*Warren De La Rue 1815-1889.** Apprentice, then partner and later senior partner in the paper mill of Thomas de la Rue & Co. in London. De la Rue owned a private observatory at Cranford, Middlesex, which he sold in 1873 because he suffered from fading eyesight. De la Rue invented some new instruments: a method to make parabolic mirrors, a micrometer to measure photographic plates and a photoheliograph. He took the first photographs of a solar eclipse in Spain in 1860. Obit.MNRAS

**William Sadler Franks 1851 –1935.** Astronomical work almost entirely with colour of stars. Published catalogue of the colours of 3890 stars. In 1878 this was communicated to the RAS on his behalf by Webb. He directed the Colour star section of the Liverpool Astronomical Society and later that of the BAA. Obituary MNRAS

**\*Sir John Frederick William Herschel 1792–1871** English mathematician, astronomer, chemist, and experimental photographer /inventor, who in some years also did valuable botanical work. Son of astronomer Sir Friedrich Wilhelm Herschel. Originated the use of the Julian day system in astronomy. Named seven moons of Saturn and four moons of Uranus. Made many contributions to the science of photography, and investigated colour blindness and the chemical power of ultraviolet rays. Obit. MNRAS

**\*John Russell Hind 1823-1895** Worked at Bishop's Observatory in London and made many important astronomical discoveries. Obit.MNRAS

**\*Sir William Huggins 1824–1910** Astronomer best known for his pioneering work in astronomical spectroscopy. His wife Margaret Lindsay was a capable astronomer in her own right. Huggins built a private observatory at 90 Upper Tulse Hill, South London from where he and his wife carried out extensive observations of the spectral emission lines and absorption lines of various celestial objects. 1864 was the first to take the spectrum of a planetary nebula. First to distinguish between nebulae and galaxies President of the Royal Society between 1900 and 1905. Obit.MNRAS

**Revd. Henry Cooper Key 1819-1879** Vicar of Stretton Sugwas, Herefordshire. 1859 began to attempt the grinding of glass mirrors for Newtonian reflector telescopes. Key was the first to import the new ideas of Leon Foucault (1819-1868) making a 7½-inch and two 12-inch specula by 1864. Co-operated with George With (qv.) and they succeeded in inventing a method with resulted in great accuracy. When Key had made a speculum of 18" diameter he discontinued mirror making and used his instrument in observing. Also much interested in other areas of science. Obit.MNRAS

**George KNOTT 1835-1894.** Keen double star observer. Obituary in The Observatory 1894 and Obit.MNRAS

**Lassell, William 1799-1880.** Astronomer who was also a wealthy brewer. ODNB. Obit. The Observatory, Nov.1880

**\*John Lee 1783-1866.** Antiquarian, astronomer and landowner. Member of many learned societies. Established the Hartwell Observatory which he provided with first class instruments/ many observations made there by Admiral Smyth. Lee was a patron of astronomy. Smyth's Cycle of Celestial Objects was paid for at Lee's expense.

**\*Sir Joseph Norman Lockyer 1836-1920** Known simply as Norman Lockyer, English scientist and astronomer. Along with the French scientist Pierre Janssen he is credited with discovering the gas helium. Lockyer also is remembered for being the founder and first editor of the influential journal *Nature*. MNRAS

**\*Albert Marth 1828–1897** German astronomer. He was something of an outsider, getting poor treatment from Airy and became embittered criticising Airey and the RAS Council. However William Lassell engaged him as his assistant in Malta. 1865 engaged by Robert S. Newall who promised him a new transit instrument for his satellite observations. Marth suffered an eight-year hiatus, the transit failed to arrive, and the refractor was still incomplete in 1873, so that he was dismissed. MNRAS

**\*Richard Anthony Proctor 1837–1888,** astronomer and science writer His writing was renowned for clarity, lecturing style, and scientific exactness on many subjects. Also an original investigator. Obit MNRAS

**Herbert Sadler 1856-1898** His knowledge of double stars and double-star catalogues was extremely comprehensive and Webb encouraged the young man, reckoning he would be a first class observer. 1879 His first paper to RAS strongly criticised Smyth's Bedford Catalogue. It was regarded as deeply "contentious", caused a furore and much heated correspondence. Though Webb deplored Sadler's vehemence in the paper on Smyth, he nonetheless acknowledged the partial justice of it. Sadler was also interested in the lunar surface and helped to found the Selenographical Society and was a frequent contributor to its journal. Obit.MNRAS

**Father Pietro Angelo Secchi SJ1818–1878** Italian astronomer. Director of the Observatory at the Pontifical Gregorian University (then called the Roman College) for 28 years. He was a pioneer in astronomical spectroscopy, and was one of the first scientists to state authoritatively that the Sun is a star.

**\* William Henry Smyth 1788 –1865.** English sailor and astronomer. Served in the Mediterranean, during the Napoleonic wars and achieved the rank of Admiral.1825 retired from

the Navy to establish a private observatory in Bedford, equipped with a 5.9-inch refractor telescope. Used this instrument to observe a variety of deep sky objects over the course of the 1830s, including double stars, star clusters and nebulae. He published his observations in 1844 in the *Cycle of Celestial Objects*, second volume became known as the *Bedford Catalogue*.  
Obit.MNRAS

**François J. Terby 1846–1911** Belgian astronomer. Had private observatory at Leuven, Belgium and was an early ardent advocate of the existence of Martian canals. Collected drawings of Mars and wrote the work *Aréographie* in 1875. Tracked down the Mars drawings of Johann Hieronymus Schröter and deposited them at the University of Leiden, where they were published in 1881.

**George Henry With 1827-1904.** Teacher, agricultural chemist and maker of silvered glass mirrors for reflector telescopes. From humble origins he qualified as a certificated teacher. In 1851 he was elected Headmaster of the boys Bluecoat charity school in Hereford where he remained for 25 years. He introduced elementary science to the curriculum. After his retirement he was employed by the Hereford Society for Aiding the Industrious as their agricultural chemist. In the 1860s and 1870s he produced over two hundred mirrors ranging from 3½ to 18 inch diameter. Obit MNRAS

**William Wray 1829-1886** Optician whose experiments with reducing chromatic aberration in object glasses proved very successful. Webb used Buckingham's 30-foot, 21-inch Wray objective on the globular cluster in Hercules