

Appendices to Peter de Clercq, 'William Storer, an inventive and enterprising optician in late 18th-century London', *Bulletin of the Scientific Instrument Society* 98, pages 28-40

Appendix 1 is a list of extant Storer instruments, and is printed in the *Bulletin* itself alongside the article. The following additional appendices are available here:

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Appendix 2: William Storer's patents for the Delineator (1778), for a portable telescope (1780) and for syllepsis glasses (1783)

The following descriptions and specifications of Storer's three optical patents are reproduced (complete with spelling and grammatical errors) from the 1850's reprints by Eyre and Spottiswoode. Brief versions of the descriptions were given in in Bennett Woodcroft's *Alphabetical Index of Patentees of Inventions, 1617-1852* (London, 1854) and used by Mario Biagioli for his *Early Modern Instruments Patents Database, 1500-1800*, <http://www.fas.harvard.edu/~hsdept/bios/biagioli-db.html>.

#1183, 4th March 1778

'An optical instrument called an accurate delineator, which amongst its many perfections, intirely obviates the defects of the camera obscura, as it may not only be used without the assistance of the sun in the day time, but also by candle-light, for drawing the human face, inside of rooms, buildings, perspectives, landscapes, foliage and fibres of trees and flowers, it exactly representing the same, large or small, with the true outlines, lights, shades, and colours'.

The specification is dated 29 June 1778:

'The accurate delineator may be made of various forms, and the effects above mentioned arise from a new-invented application of lenses, mirrors, speculums, prisms, or mediums of lenses of glass, or any composition containing reflecting or refracting powers. The rays from the object are at first received on or conveyed by a mirror or speculum placed at a proper angle in the inside of a tube or box by one or more convex lenses or medium of lenses before the mirror or speculum. In cases where the object is conveyed thro' a lens or medium of lenses on the mirror or speculum, one or more convex lenses or medium of lenses must be applied to correct and illuminate the rays, and to receive from the mirror or speculum the rays from the objects conveyed thereon through the first-mentioned lens or medium of lenses; but in cases where the rays from the objects are received in the first place on the mirror or speculum, a convex lens or medium of

lenses must be placed fixed or moveable next after the mirror or speculum, to collect the rays from the mirror or speculum ; and at a proper distance from the first lens or medium of lenses must be applied one or more convex lens or medium of lenses to correct and illuminate the rays from the first lens or medium of lenses, by which means all rays that are spherically refracted through the first medium will be made parallel, and consequently all objects are accurately represented and all parts thereof equally illuminated on the lens or medium of lenses so receiving and correcting the rays of the objects received from the mirror or speculum, or first lens or medium of lenses, and gives the most lively and exact representation of the objects, either by the light of the sun, moon, or any other light. In all cases the size of the aperture or medium through which the rays first pass must govern the size and powers of the correcting lens or medium, both contrary to the principals of the camera obscura. A prism, mirror, or speculum placed at a proper angle to reflect the image on the first lens or medium of lenses, mirror, or speculum, the objects will be represented in their true shape, figure, and form; and a collecting or correcting lens or lenses, or medium of lenses, to collect or correct the rays from the images presented by a reflecting microscope, magick lanthorn, camera obscura, or other instrument of the like nature, instantly forms the accurate delineator, the principals of the accurate delineator being not so much in the form or figure of the instrument, as to collect and correct and illuminate the faint and imperfect rays from the objects received thro' these instruments'.

This specification was reprinted in *Repertory of Arts and Manufactures*, Vol. 4 (1796), pp. 239-242, and in Ann Wisher, 'Horace Walpole, William Storer and the Accurate Delineator', *History of Photography*, 4, no. 3 (1980), 247-249 (who, incidentally, was not aware that any Delineators survive).

#1252, 10th April 1780

'Certain properties in light and in optical glasses, and by means of a new and peculiar application, invented certain telescopes, microscopes, opera glasses, and other optical instruments, which are hereby rendered more accurate, more distinct, and more luminous, and in particular whereby a refracting telescope of fifteen inches long has all the powers of a two-foot reflector, with the additional advantages of a larger field, more light and distinctness of vision, and may be easier adapted to the size of the object and state of the atmosphere, and by which said invention one and the same portable refracting telescope may be made to answer the purpose, and have all the powers of telescopes of various lengths and sizes now in use, and which new invented telescopes are admirably adapted to the purposes of navigation, and of terrestrial and astronomical observations'.

The specification is dated 10 August 1780:

'First, distinct vision, or the accurate image of an object, is only to be produced by points formed by rays of light having suffered refraction. Rays of light reflected from and by glass of unequal forms untill they form a true optical paralelism of themselves (and not till then) produce distinct vision. Secondly, I find the human eye is so wonderfully and wisely constructed, that by means of the different humours, and its speculum or rettinæ, they conjunctively and alternately adapt themselves agreeable to the state of the atmosphere, the distance of the object, and the quantity or quality of the light reflected therefrom, from which construction I founded my principle, as having discovered that the eye, when form'd proper for distinct vision, is in every respect in effect the same as a plain mirrour, and that the negrum pigmentum behind the rettinæ serves as an amalgam on a looking-glass to reflect each ray of light proceeding from an object to the eye. Now, the eye being in effect as a plain mirrour, it has not the power in itself of enlarging or diminishing the image of an object at different distances nearer to itself, any more than a plain mirrour looking-glass, therefore the eye is properly a dilating catadioptrick refractor. But the eye is to be greatly assisted by means of spherical, or glasses with unequal forms, any two or more such glasses retaining the properties of the humours of the eye, and formed and so adapted in different and separate cells as shall be proper; the same to be observed and provided for as well in compound object glasses as in the eye glasses, as also for spectacles and other optical instruments, to be reciprocally acceded to or reced from each other when and where required, in order to form the image in a true dilating or pantagraphycal paralelism, to be enlarged or diminished at pleasure, being in a state to be readily dilated or contracted, similar to the expansion or contraction, and in conjunction with the dilation of the optic nerve, without distortion or losing the light by such changes with the same glasses and by which glasses rays of light shall be reflected

and varied so often and untill the dilating paralelism formed by them be agreeable to the paralelism form'd by the eye that are to receive them; for in the same manner as the eye forms and act as a plain mirrou, so rays of light under every change, by the means of the aforesaid Invention, shall likewise form an image from an object in a perfect true paralelism, and which said image meeting the paralelism of the eye, the image then becomes in a centric, dilating, or pantagraphical paralelism, to be diminished or enlarged ad infinitum, even to an angle of one third of the hemisphere, which human eye is capable of receiving, and in such an angle no light ought to be lost. But magnifying powers, field of [view, PdC], and distinctness is preserved far superior to the most powerfull telescope, or the best optical instruments of the various kinds ever yet known, or that can be made by any other principle, by which means microscopes (as well as telescopes, opera glasses, &c.,) are made to have superior powers with more light and greater distinctness, as instead of the object glass of microscopes (viz.), the glass that first receives the rays from the object, being so small as scarce to admit any light, or not sufficient light for a great magnifying power or opaque objects.

Now, by my Invention, as aforesaid, the object glasses of microscopes will admit being as large, and the same as for telescopes as microscopes, composed as aforesaid, performs properly as telescopes, and visa versa, as no refractions whatever can disturb or distort an image once formed by my Invention of a true centric dilating pantagraphical paralelism. Optical glasses of every kind, according to their various properties, the state of the atmosphere, and the different powers required of them, must be adapted and treated as aforesaid to form the image in a true paralelism to be received by the eye, as the object itself, with no other alteration than that of being nearer, consequently appears to the eye larger. For want of such knowledge of the properties and applications before mentioned (in light, and as is required in glass), all optical instruments have hitherto been very deficient, as opticians all well know they have never yet been able properly to account for, much less to remove, the errors proceeding from refracted and reflected light, or the various property's in glass or their alternate changes necessary for distinct vision. For when a magnifying power was carried beyond a certain degree, as allowed by all opticians, notwithstanding the latest improvement of acromatic object glasses, they wanted light, field of view, and distinctness, which mathematicians know is contrary to their own demonstrations of the laws of optics, and which no one has ever before been able to account for.

Now every difficulty is remov'd by the aforesaid new discovered properties in light, and in optical glasses, by means of the new and aforesaid peculiar applications thereof, in causing rays of light, by the laws of reflection, to produce distinct vision, which S^r Isaac Newton endeavoured to accomplish, and which no doubt was the reason that great optician had recourse to reflected in preference to refracted light, and he often wished for metal of a similar quality to glass to reflect light. Now he had not discovered, nor was it ever before known, that convex, or glasses with unequal forms, might be applied so as to produce a true paralelism of the image of any object by the laws of reflection by refracting mediums, and which I declare to be my discovery, and that distinct vision at various distances, with great magnifying powers and sufficient light, is to be produced by no other means than as aforesaid. Now, be it remembred, that refracted rays of light are subservient to reflected rays of light, yet reflected rays must be refracted to produce distinct vision, which at last is produced by points by the laws of reflection, and which entirely governs the laws of refraction.

Note, paralelism is probably a new technical term in optics, yet necessary to be applied in this case, as it is an effect (produced by the laws of catoptrics) newly discovered by me, and don't appear to be understood by mathematicians and opticians. By an optical paralelism, I mean an invisible image, formed by points of rays of light, from two or more reflections, and which points shall meet, unite, but not pass other, but take a new direction in angles equal to each other, as the ray of incidents with the ray of reflection. By a dilating or pantagraphical paralelism is meant two paralelisms so meeting as the points from each unite. By a centric dilating pantagraphical paralelism I mean three paralelisms so united and formed as to reciprocally assist each other under every change required of them, in which state the minutest points of the rays producing the image may be caused to accede to or recede from each other in a dilating form, ad infinitum, without distorting the image or wanting light, a phœnomenon in optics never before known, though upon which the distinctness of vision, great magnifying powers, a large field of view, and sufficiency of light entirely depends.

‘A new and peculiar method of preparing and making of optick glasses which I called by the name Syllepsis glasses, and also the application thereof to optick instruments in general, particularly telescopes, microscopes, reading glasses, opera glasses, and spectacles, whereby distinct vision is more readily procured and the sight greatly relieved, and by which said preparation optick glasses are rendered more perfect, and may be applied with greater certainty.’

Note: for this last patent, Storer gave the address Great Marlborough Street.

The specification is dated 10 April 1784:

‘The refrangibility of rays of light is their disposition to be refracted from the incident rays on their emmerging from any surface of any pelucid medium which they shall have met in oblique directions. Besides these oblique rays there are also rays of light propogated in direct lines from any object to any optick glass, which is or ought to be so placed so as all rays for distinct vision may be transmitted through such optick glasses in a direct line with the incident ray, for all vision-making rays are transmitted through a syllepsis glass or optick glass in a straight line with the incident ray; and as there are a sufficient supply of these rays proceeding from any object in any direction agreeing with the laws of perspective that are transmitted through from any point of an object in a direct line with the incident ray, which direct rays alone are proper for distinct vision, and proves that all rays of light that are refracted are not only become distorted, prismatick, and are enemies to but likewise useless for distinct vision, being repugnant to that truth.

To obviate the defects of optical instruments which refracted light occasions, I have the extream edges of the two surfaces of my syllepsis glasses truly paralel to each other, which when truly centered I cut off the prism from the glass, leaving only such part of the centre of the glass as may be proper for a sufficient quantity of those rays of light to be transmitted through as will be on direct lines with the incident rays, according to the distance of the object or the image of the object and the magnifying power required, preserving the laws of perspective, (videlicet,) a straight line with the incident ray, and this strictly to be observed by light transmitted through every or any optick glass according to the instrument used to or the effect desired of it; I shut out all refracted light that I possibly can, considering it imperfect and improper for distinct vision. When and then the transmitted light from such syllepsis glasses with the prism so cut off or obscured, together with radia of the surfaces of such prepared sylepsis glasses, such glasses being first duly and properly proportioned agreeable to the use or magnifying power required, telescopes, microscopes, opera glasses, spectacles, reading glasses, reading, travelling desks and optical instruments in general, are or may be rendered the most perfect by the simple application of such syllepsis glasses being placed in frames, cells, or sockets, to be moveable or fixed as may be necessary, according to the use, effect, or magnifying power to be produced by them. A syllepsis glass is one optick glass, and which fully answers the end and effect of but is far superior to the late improved accromatic object glass, exhibiting by its external shape or form such as when one convex and one concave or two convex’s and one concave are placed close together, which is in effect and form but one syllepsis glass with the prism cut off; and by the aforesaid manner of preparing and applying such syllepsis glass or glasses, they answer to each other, so that all transmitted rays of light are or may be preserved in direct lines with the incident ray and produce distinct vision. And by this preparation of syllepsis glasses, and a due and proper application thereof, optick instruments in general are or may be rendered perfect, as the image transmitted through such syllepsis glass or glasses properly applied as aforesaid will remain still distinct and undisturbed, although the aid syllepsis glasses which the said image is transmitted through shall be in continual motion, and which no other optick glass will answer to or perform with accuracy and distinctness.

Appendix 3: Horace Walpole’s letter on Storer and his Delineator, to Henry Seymour Conway, dated 16th September 1777, published in the *Yale Edition of Horace Walpole’s Correspondence* (ed. Lewis), vol. 39, pp. 293-4

I have got a delightful plaything, if I had time for play. It is a new sort of camera-obscura for drawing the portraits of persons, or prospects, or insides of rooms, and does not depend on the sun or any thing. The misfortune is, that there is a vast deal of machinery and putting together, and I am the worst person living for managing it. You know I am impenetrably dull in every thing that requires a grain of common sense.

The inventor is to come to me on Friday, and try if he can make me remember my right hand from my left. I could as soon have invented my machine as manage it; yet it has cost me ten guineas, and may cost me as much more as I please for improving it. You will conclude it was the dearness tempted me. I believe I must keep an astronomer, like Mr. Beauclerk, to help me play with my rattle. The inventor, who seems very modest and simple, but I conclude an able flatterer, was in love with my house, and vowed nothing ever suited his camera so well. To be sure, the painted windows and the prospects, and the Gothic chimneys, etc. etc. were the delights of one's eyes, when no bigger than a silver penny. You would know how to manage it, as if you had never done any thing else. Had not you better come and see it? You will learn how to conduct it, with the pleasure of correcting my awkwardness and unlearnability. Sir Joshua Reynolds and West have each got one; and the Duke of Northumberland is so charmed with the invention, that I dare say he can talk upon and explain it till I should understand ten times less of the matter than I do.

Appendix 4: Newspaper advertisements by or concerning William Storer in the London newspapers, 1778-1790

Note: Many of these advertisement were repeated, often in various newspapers, sometimes over a period of several weeks. This has not been recorded here.

I : Morning Post and Daily Advertiser, Wednesday December 9, 1778

To the ROYAL FAMILY, NOBILITY, ARTISTS, and ADMIRERS of the ARTS

THE ACCURATE DELINEATOR, BY Letters Patent, patronized by the Royal Family, many of the Nobility, and first Artists in Europe.

The Accurate Delineator is an optical instrument, that obviates the defects of the camera-obscura, the greatest use of which is to facilitate the arts of drawing, painting, modelling, &c. &c. and particularly to furnish the mind with accurate ideas. Some singular properties of it are worthy the observation of the curious, as objects represented by the instrument, will astonish the most learned scientific persons; even those that have seen parts of its effects would be satisfied in not crediting what it claims, viz. it proves that paintings ought to lose the appearance of art, and if right will absolutely become represented by the instrument, so close a resemblance of nature as to be difficult to determine, at eighteen inches distant, if the image is from nature or not. That false paintings will not be advantaged by it, but that every defect will appear more conspicuous. It has the effect of an indetermined focus, objects at various distances being at the same time equally, clearly and accurately represented at the extreme edges, as at the centre, and that without the sun. A small object may be represented of any size larger in one moment, and an object of any size will be represented in miniature, or any intermediate size, in as short a time, with the real effects it ought to have in such state. It proves that rays of light are so far manageable, as to produce a true image from an object in any direction at pleasure, without losing their force in the reflected image, notwithstanding it be the full size of the object. The instrument likewise proves the impropriety of examining paintings through a concave glass, which most miniature painters use. The various uses to which it may be applied, and the manner of its performing, must alone confirm its value to every judge of the arts. It may be used at any time, by day, candle-light, or moon-light, abroad, or in a room. As many might desire to see the singular powers of the accurate delineator, without purchasing an instrument, the patentee submits to the nobility, gentry, and public in general, a proposal to regulate shewing the above by tickets: as much time must be given up to the curious that are not purchasers, hopes the following method will meet their approbation, viz. [blank spot] the effects of the accurate Delineator appear not to be understood by many in the present age, and of such nature as requires some general rules in shewing, to prevent giving offence.

First, Mr. Storer cannot engage to shew to more than twelve persons at once. Secondly, The room will be opened at eleven o'clock, and the effects begin to be shewn at half past eleven, and until one, and begin again the same day for a second company, at half past one and until three, every Tuesday, Wednesday, and Thursday, (being public days) or any other day for one guinea a company, not exceeding twelve persons, if timely notice is given.

Thirdly, Tickets must be procured for the certain hours of eleven or one o'clock for the public days, which will not admit but on the days and hours specified therein.

Fourthly, Every purchaser of the accurate Delineator will be complimented with a ticket to admit them, any of the public hours of shewing, during one hour; if twelve persons are not entered for the same hours before them.

For the public days tickets may be had at twelve shillings per dozen, or six shillings for half a dozen, but less than that number will be two shillings each, at No. 14, Lisle-street, Leicester-fields, where the effects will be shewn.

Not ambitious of personal fame, but desirous to see the arts flourish in my country, I offer this opportunity that a valuable instrument may be known, and to convince artists and admirers of the arts, that colours properly applied, are capable of producing that real effect we see in nature, which if not proved to the satisfaction of any company of twelve, the money will be returned. It is allowed this advertisement has a strange appearance, but Mr. Storer hopes the public will not be determined against him, till they see the effects he can produce with the instrument; in the interim, begs leave to recommend to their consideration, what that truly great philosopher Sir Isaac Newton has exemplified, in his Optics, Query 31, page 380, says he, 'But if at any time afterwards any exception shall occur from experiments, it may then begin to be pronounced with such exceptions as occur.'

The royal Accurate Delineator has led me to many discoveries on light, optics, painting, &c. &c. and confess I see light at present as a grand mystery, optics, its conductors managable, and that the true meaning of paintings is to closely represent nature, acquired by viewing, and attentively observing nature as a picture, as in both every tint demands its place, and to partake of each other (according to the direction and obstruction of the rays) to preserve harmony, and keeping which, if properly applied by a painter, the rays from his picture, passed through the accurate Delineator will have different focal distances, and every tint will keep in true perspective the same as in nature, and proves the artist's skill, for whose assistance the accurate Delineator is with submission offered, wherein nature may be at once viewed as a picture, and a true picture will have every effect of nature, whose works are too simple to be easily comprehended, through our too general complex ideas of them.

I consider the eye consists of one lens, and one speculum, the lens keeps its form, and varies only in its direction, but the speculum expands or contracts, by which means it is capable of receiving rays at a proper angle in any direction, from the lens, and otherwise assist the lens for different distances and magnitudes; for want of such speculum in optics as can be altered in shape at pleasure, that deficiency may be supplied, and the eye further assisted by an additional application of lens's and speculums of different forms, which beyond a doubt, are capable of producing every effect desirable in optics, by conducting the rays of light suitable to, and by varying the focus of the lens of the eye, which prove the necessity of adjusting every optical instrument to the focus of the lens of the eye using it, for various distances or various magnitudes, as if rays are diverged [*sic*] or converged, for the enlarging or diminishing an image, they cannot be received by the eye with ease, nor the tints produced from them appear so distinct but at the focal distance of its own lens, without the assistance of glasses, which are capable of lengthening or shortening its focus at pleasure; glasses assist the speculum of the eye by acting upon its lens, making it more conformable to the state of its speculum, which otherwise is liable to be strained; weakness of sight proceeding mostly from the speculum of the eye being relaxed, which prevents its forming itself to receive the rays at a proper angle from the lens, so readily as the lens catches them, and occasions weak-sighted people sometimes to change the positions of their head, or close their eyes, till their lens and speculums are able to act in conjunction, from the principle of the eye, I invented my accurate Delineator, to assist that valuable member.

To their Majesties, the noble Earls of Bute, Bathurst, and Harcourt, the Right Hon. Sir Thomas Sewell, Master of the Rolls, the Hon. Horace and Thomas Walpole, Sir Joshua Reynolds, and Benjamin West, Esq. (my first patronizers) all humility and thanks are due, by permitting my first works to their possession, as also to Mr. Parker, in Fleet-street, for his singular spirit and valuable improvement, by manufacturing matchless fine glass for me, for the knowledge of whom I thank Mr. Adams, his Majesty's mathematical instrument maker; my thanks are likewise due to Benjamin Thompson, Esq., for many useful hints relative to more new experiments to be made by the Accurate Delineator, and to all admirers of the instrument.

Mr. Storer don't pretend to a varnished address, therefore will advertise the particulars but once in every principal paper, hoping ocular [*sic*] demonstration will prove satisfactory.

The accurate Delineator is from Six Guineas to any price upwards, to be had of the patentee, No. 14, Lisle-street, Leicester-fields, and by his appointment Accurate Delineators made by the patentee only, may be had of Mr. Parker, No. 69, Fleet-street, and no one else.

The manner of using the instrument will be found easy, and the closer our ideas are to simple nature the more useful and entertaining it will prove.

II : General Advertiser and Morning Intelligencer, Tuesday April 6, 1779

ROYAL PATENT DELINEATOR. / TO the NOBILITY, GENTRY, &c.

The Singular and beautiful effects of the accurate Delineator (impossible to describe in an advertisement) will be shewn every Monday, Wednesday, Friday, and Saturday, from ten to four of the clock each day, at 2s. each person, at No. 14, Lisle-street, Leicester-fields, where subscriptions are taken in for the Grand Exhibition of Experiments on Light, Colours, and Optics, instituted the 29th March, 1779.

NB. The Nobility, Gentry, Artists, &c. are desired to take Notice, that the Delineator, of six guineas price, will represent accurately the human head, the size of life; fruit, flowers, plants, &c. in their natural colours and true gradations, may be at once represented on paper, canvas, &c.

III : Morning Chronicle and London Advertiser, Saturday 1 May 1779

The Royal Exhibition of Experiments on Light, Colours, and Optics, instituted the 29th March, 1779.

THE KING PATRON

On TUESDAY next the 4th instant, Mr. STORER begins to exhibit his Experiments on LIGHT, COLOURS and OPTICS, to Subscribers, (and no other Persons whatever) during their Subscription.

The days of exhibiting will be Tuesdays and Thursdays, from Ten to Four of the clock, at No. 14, Lisle-Street, Leicester Fields, where bills of the particulars may be had.

Quarterly Subscription Tickets at One Guinea each

Annual Subscription ditto at Four Guinea each

General Subscription ditto at Ten Guinea each

N.B. Annual Subscribers will be complimented with an explanation of the heads of the effects subscribed to by an instrument in drawing and writing by Mr. Storer, which will be annually delivered.

Mr. STORER will begin his Experiments with the Phænomenon of a single mirror, wherein the spectator shall view his own image, not transversed as in other mirrors, but precisely in the same manner as he is seen by any other person, that is to say, he shall see the right side of his image opposite to his left, and vice versa.

Mr. STORER considers the important business in which he has engaged, is to simplify, (as natural phænomena are truly simple); he neither require oratory, or a gilded roof, to divert the mind from the truth of his experiments and discoveries, but most earnestly request the favour of his subscribers, to give such attention at the time they see each experiment made, that the impression may not be defaced, but by the loss of their memory.

IV: Morning Chronicle and London Advertiser, Tuesday October 12, 1779

To the Nobility, Gentry. &c. particularly Gentlemen of the Navy, this Advertisement is addressed, as the most expeditious intelligence of Mr. WILLIAM STORER's new invented POCKET TELESCOPE being ready, the effects of which, and its size, may be seen at his Royal Experiment Room, No. 9, Lisle-street, Leicester Fields, (from Eleven to Three o'Clock, every Tuesday, Wednesday, Thursday and Friday) where further particulars may be had.

THE TELESCOPE invented by Mr. STORER, is only Fifteen Inches long, its magnifying power equal to that of a good Newtonian six-foot Reflector, and its field of view much larger, on which the image will be represented as distinct at the edges as the center, and without prismatick colours; it would be needless to

expatiate on the manifold advantages of this small yet powerful Telescope, as they must be clear to every person retaining the least knowledge of the use of Telescopes.

N.B. Mr. Storer has fixed up (at his experiment rooms) several Royal accurate Patent Delineators in various directions, to produce different effects, for the better facilitating the use of that instrument to those that have purchased it; and that persons to whom it is at present unknown, may (by applying as above) be made fully acquainted with its value in the arts of drawing, painting, modelling, &c., which some persons will endeavour to secret, rather than lose the sale of a common Camera Obscura, which they know would never pass to such as have judgement, as they would immediately distinguish the superior beautiful and singular effects of the Royal Delineator.

V : St. James's Chronicle or the British Evening Post, October 12, 1779

The first two paragraphs are identical to those of III, but instead of the paragraph starting 'N.B. Mr. Storer', the advertisement continues:

An Experiment made on this new Telescope at Half past Eight o'Clock in the Morning, October 4, 1779, when the Fog was so great as not to be able to see a Person in the Street at 200 Yards Distance; the Spots on the Sun appeared perfectly distinct when magnified at least 200 Times. Hence follows the Value of Mr. Storer's (at present unknown) Principles in Optics, that if an Object is to be seen, be its Distance whatever, that the same Object shall be magnified one thousand Times; when instead of confusing the Rays or loosing Light [an Error in Experiment] as many thousand Parts of the Object as the Field of the Telescope may contain shall be seen as distinct as the whole Object in its primitive State.

The magnifying Power (at the same Time to preserve the distinct Vision) is by no Means limited in Telescopes, neither is it required of a Telescope that shall magnify an Object distinctly one thousand Times to be more than 1* [*second digit illegible*] in. long. However preposterous these Hypotheses may appear to that Part of Mankind who are prejudiced in Favour of the Errors of others (for want of knowing how to correct them) any Opposition the Facts Mr. Storer is daily exhibiting will best confirm the Opponents Inabilities, and further illustrate the Value of Mr. Storer's Experiments, which he flatters himself may in Time tend to give new Light to Astronomy, Navigation, Botany, Surgery, &c. Lest the Emulation of some should be offended at seeing the Avenue to which themselves were pushing occupied by another, it may be proper for every Person to see some Experiments on Light, Colours, and Optics, at the Royal Experiment Room in Lisle Street, before they determine; the Business of some being to keep others ignorant, as their only Remedy to pass what is spurious and false for genuine without being detected. The most able Mathematicians will rejoice on seeing these Effects brought to Light in their Time, and, like Men of true Genius, rather fear as for the Cause than deny their Existence because they may not immediately comprehend them.

VI : Morning Chronicle and London Advertiser, Wednesday December 1, 1779

To the NOBILITY, GENTRY, &c. &c.

Experiments on LIGHT COLOURS and OPTICS.

THE ROYAL EXPERIMENT ROOM, At No. 9, LISLE-STREET, LEICESTER-FIELDS, will be opened to subscribers (and no other person whatever) on Tuesday, December 7, and continue every Tuesday and Thursday for the winter season, when, from Eleven to Three o'Clock each day, Mr. STORER will endeavour to demonstrate the reality of such effects as he has promised in his proposals, by a display of their simplicity; there are certain other properties in light and in glass, which necessarily exist to perfect distinct vision, and which are manageable at pleasure; now altho' some persons have denied these facts, may it not easily be attributed to their own perplexed ideas; because whenever such mistakes happen, as they are for the most part owing more to inadvertency than want of knowledge, so that instead of being chagrined at the disputes of others, we ought to consider them as the frailty of human nature. Mr. STORER is convinced some part of what he has already offered to produce may seem absurd till properly attended to, as differing from certain received opinions, (exactly in that proportion) as such certain received opinions differ from those truths which are found in effect by experiment. The many advantages which may arise from the simplicity of natural Phenomena, soars so much above the best philosophical imagination, until reduced to experiment, that Mr. Storer rests satisfied no one who has a regard for truth, or the least love for science, would ever oppose or reject the most trifling discovery; therefore, as far as he shall be able to

acquit himself to the satisfaction of the publick, he is well assured of their generous support, from the several honours already conferred upon him by the patronage of many of the first Nobility and Gentry in the kingdom becoming subscribers to his Experiments, Telescope, and other works.

N.B. Proper attendance will be given at the Royal Experiment Room, in Lisle-street, every day from Eleven to Three o'Clock, and on the usual days many beautiful effects will be exhibited by the Delineator, at Half a Crown each person who are not purchasers, and where bills of proposals and other particulars of Mr. Storer's Works may be had, viz. his improvements on Telescopes, Microscopes, Opera Glasses, Spectacles, &c. &c.

Mr. STORER flatters himself his Experiments on Light, Colours and Optics, will be found as entertaining as simple, and will be rendered attainable to every moderate capacity, as being from principles agreeing with our most easy conceptions.

VII: London Courant and Westminster Chronicle, Saturday April 15, 1780

The KING, the Royal Family, many of the Nobility and first characters in Europe, having been graciously pleased to patronize WILLIAM STORER for his new discoveries in Optics, and powerful improvements on optical instruments, and have done him great honour and credit for the invention of his ROYAL ACCURATE DELINEATOR: they now lay him under the strictest injunction to bring forth his new-invented TELESCOPE under the above patronage, his Majesty having been graciously pleased to honour him with his royal letters of patent for the same. Mr. Storer, therefore, as in duty bound to the high authority above mentioned, offers to the public a REFRACTING TELESCOPE with extraordinary powers, and though of but fifteen inches long, is equal to the best two-feet reflector, with the additional advantages of an infinite degree of light and distinctness of vision, with a field surprisingly more extensive than a ten-feet refractor on the old construction, by which the undulation of the rays appears twenty times less, and consequently the image twenty times more steady. With the above telescope will be given additional powers, which when applied will make this instrument a complete microscope that will as far surpass the common instruments of that sort, as it does telescopes when used as such, with many other advantages as set forth in his printed particulars. Mr. Storer is making 500 of the above by subscription; the first 250 will be ready to be delivered within one month, and the second 250 within three months after 500 are subscribed for. They will be delivered by rotation as the names stand in his books, and it is hoped no gentleman will take it ill that none can be considered as subscribers till their subscription is paid. The price to subscribers will be twelve guineas each, six guineas to be paid on subscribing, and six guineas on delivery of the Telescope. All subscriptions are taken in, and tickets delivered for seeing Mr. Storer's Optical Works, at Messrs. Riccard and Co's, cutlery manufactory, joining the Kings's Mews, in Castle-street.

VIII : London Courant and Westminster Chronicle, Saturday June 3, 1780

Between the hours of eleven and three o'clock on Monday, June 5, 1780, being the Anniversary of his Majesty's birth-day, Mr. Storer (experimental Professor of Opticks) proposes to exhibit to his Subscribers (who have actually paid their subscription) a model of his new invented Telescope, with its extraordinary powers as Microscope, in which capacity it is superior to the best Microscope he has ever seen; as Mr. Storer has accomplished his great design by totally removing the spherical figurations of lenses, and thereby rendering objects at one view as distinct at the extreme edges, as at the centre of an extensive microscopick field. Mr. Storer will (on penalty of returning the subscription he has received) engage to deliver 250 to the first subscribers, on or before the 25th of December, and 250 by Lady-day next, in exact order as their names shall stand in the subscription book, after which period the subscription will close, and the Telescopes will then be advanced to eighteen guineas each, as they cannot be made under that price, but from the circumstance of a subscription for a large quantity at once. – The Rev. Doctor Shepherd, Professor of Optics, is requested by Mr. Storer, to point out to the world, by theory or practice, whether or not he is able to remove the spherical figuration of lenses, in optical instruments, with great microscopic powers, or if he can produce one instance of its ever being done. – Mr. Storer likewise hereby invites the Doctor to his house, in Lisle-street, on any Saturday when he may please to see the experiment publicly made; he will also request the favour of his Subscribers to sign a paper, declaring their sentiments of the various properties of his Telescope, in order to convince the world of the unjust and mean designs of his calumniating opponents, who are striving, by every disingenuous art, to stifle in its birth, a discovery of such infinite national importance.

IX: London Courant and Westminster Chronicle, Friday November 23, 1780

The principal walls of Mr. STORER's house in Lisle-street, Leicester-fields, London, being so decayed as to occasion great part of them to be taken down, it has and will a little while stop his intended works from the public; but he is compleating them as far as possible, and will attend every Saturday at No. 19, Great Russel-street, Covent-garden, two doors from Tom's Coffee-house, from twelve till three, for the satisfaction of those who have done him the honour to subscribe or patronize his undertakings.

To convince the public he is equal to the task of improving all Optical Instruments far beyond what he has promised, he is pursuing his plan to the utmost of his abilities; and not shagrined at the disputes of a few designing men, (or more compassionately speaking) a few ignorant professors of optics whose ill treatment has roused Mr. Storer to do himself justice, and who now thinks it his duty to point out to the public, that they have imposed on them daily the most paltry trash for valuable optical instruments, with the stale tale, and a shake of the head, *Ne plus ultra*; but Mr. Storer will soon shew them they are not yet half way, and that he only begins where they leave off; therefore indolence or ignorance in optics must be cautiously preserved lest exposed.

N.B. Mr. Storer will attend at Russel-street aforesaid every Saturday from five to seven in the evening, which time he begs all tradesmen and workmen, having any business with him, will be punctual to, as he can give up but one day in the week to the public without neglecting his engagements.

X: Morning Chronicle and Daily Advertiser, Saturday November 24, 1780

Mr. STORER [page very dark, some illegible words] made new and certain discoveries in the properties of Light and of Optics [again some illegible words] Optical Instruments more perfect, and having applied some of his discoveries to his accurate delineator with success, induced many persons of the first rank to honour him with a visit in Lisle-street, when he had the happiness to find that instrument met an unparalled approbation.

Encouraged by royal patronage, and the generous support of the public, which he had amply experienced (for his delineator) when the Count Bruhl first intimated his Excellency found it no difficult matter to prevail on Mr. Storer to attempt to improve Telescopes, which he soon accomplished in a very great degree.

This discovery on the Telescope however has hitherto proved very injurious to him. That through the misunderstanding of a few, the public may be deprived of his improvements, for unless they think proper to exert themselves on the occasion, his principal discoveries on Optics must lay dormant, being his only real security for the vast expence he has been at in making his experiments.

Mr. Storer publickly offered his services; they were espoused and nourished by some, not comprehended by others, various circumstances have made this a public cause; and so numerous are the opinions and advices on the occasion, that Mr. Storer is entirely divided and undetermined how to proceed.

A subscription was opened by Mr. Storer for the Telescope, soon after a Parliamentary reward was proposed to him to close the subscription, and purchase his discoveries for the use of Optical Instrument-makers, and benefit of the public; a copy of the Bill was given into his hand by John Pitt, Esq. of Arlington-street, the indefatigable friend and patronizer of the arts first having taken the trouble for two years to inspect, enquire into, and inform himself by ocular demonstration the truth and value of Mr. Storer's discoveries; and assured him every success he could wish in Parliament, the nature of which Mr. Storer being entirely unacquainted with; he answered he was happy and satisfied with the noble support from the public, and could only hold himself ready, if called upon by the Hon. House, or by those who so generously subscribed to his Telescope, and other works, he therefore humbly hopes, and prays the Hon. House, and his subscribers, will not suffer themselves to be farther imposed on by a few designing men endeavouring to frustrate the good intention of Mr. Pitt, but to take his case into their consideration, to hear him and direct him, as he is ready to comply with what in their wisdom shall seem proper to be done either to return the subscriptions received, or to complete and deliver the Telescopes as first proposed.

N.B. The principal walls of Mr. STORER's house in Lisle-street, Leicester-fields, London, being so decayed as to occasion great part of them to be taken down, has and will a little while stop his intended works from the public; but in the meantime he will attend every Saturday at No. 19, Great Russel-street, Covent-garden (two doors from Tom's Coffee-house), from Twelve to Three, and the company of the

subscribers or patronizers of Mr. Storer's undertakings, will be highly and humbly esteemed the greatest favour they can confer on him.

XI: Morning Chronicle and London Advertiser, Saturday August 23, 1783

SYLLEPSIS OPTICA

THIS DAY, the 23rd instant, will be ready for Sale at the SYLLEPSIS OPTICA, No. 43 Great Marlborough- street,
THAT Effect of the ROYAL PATENT DELINEATOR, called The PRINCIPIA OPTICA, in its improved state, as exhibited at Richmond before His Grace the Duke of Portland, John Pitt, Esq., William Codrington, Esq., William Lock, Esq., Charles Gore, Esq.
Shewing on paper or canvas any Print or Drawing to any size required, and enable any person to make [*? last word hardly legible*] a Drawing from it; which gave such satisfaction to the above gentlemen as to have done Mr. STORER the high honour of acknowledging it, by each of them subscribing for the Instrument. Which may be seen by tickets, to be had at the Syllepsis Optica for 2s. 6d. each; or by an order from the patrons, viz. The KING, John Pitt, Esq., William Codrington, Esq., The Duke of Portland, Count de Bruhl, William Lock, Esq., The Duke of Manchester, Charles Gore, Esq., Henry Penton, Esq., Sir William Codrington, Bart.
N.B. That long-wished for Desiderata of Exhibiting, or Reflecting on Paper or Canvas at once, external Objects from Nature as Portraits, Landscapes, Figures, Buildings, Plants, Flowers, &c. &c. to any size required, with the greatest accuracy, and sufficient light when the Sun does not shine.

XII: Morning Herald and Daily Advertiser, Saturday November 8, 1783

To the PUBLIC.

EVERY AGE affords us some new Truths, and in all ages of the world, Truth has met with opposition, whenever it has been contrary to any received opinion, or when men are interested by concealing it from us, a greater proof of which we cannot have than that of Optic Writers, or Practitioners on that Science. Mr. Storer, Professor of Optics to his Majesty, some time past, declared to the Public, that the present known principles of Optics, as laid down and demonstrated by Optic Writers, and practiced by Optical Instrument-makers, were contrary to the true principles on which distinct vision depended, and on which account we have hitherto had no certainty for constructing good Telescopes, or other optical instruments, but have always been left to chance, notwithstanding the opposition our more accurate observer met with from men of science and learning being misled – The most convincing proofs have been given, and the Public will soon be convinced by ocular demonstration, that his discoveries are not only new truths, but of such importance, as will rank him in that degree of eminence, which his indefatigable application to the improvement of Science so justly merits.

For my authority of this assertion, I beg leave to add, that I this day saw an Experiment made by Mr. Storer, on his Telescope, constructed on his new-discovered principles, when the field of view, which was two feet four inches diameter, at four feet six inches from the eye, was filled with an equal perfect image, and without the least distortion, prismatic colour, or difference from the center of the field of view, to the extreme edges, which appeared as if clipped round with a pair of scissors, I saw through it objects at different distances with equal precision; and to my great satisfaction, Mr. Storer desired me to take out the object glass and look at it, which I did and found it to be agreeable to Mr. Storer's assertion, but very contrary, and much superior to any auromatic [*sic throughout*] combined object-glass, as practiced by Mr. Dollond and others; its magnifying power was equal, and field of view one-fourth larger than Auromatic Telescopes of the same length which were proved against it: what added to my surprise, Mr. Storer desired me to take notice there was no eye-stop to cut off confused rays, as in all other Telescopes.

These things are so contrary to what Opticians admit of, either in theory or practice, that I am the more desirour to make this known: as Mr. Dollond himself told me, Mr. Storer was obliged to make use of his, viz. Mr. Dollond's Auromatic Object-glass, in preference to any new discovery of his own, which assertion of Mr. Dollond is not true, as I am thoroughly satisfied Mr. Storer's principal use for Mr. Dollond's Auromatic Glass was to prove its absurdity, although I have heard Mr. Storer speak of it as very ingenious.

Therefore I think it incumbent on me not to conceal it from the Public, who are so much interested to support Mr. Storer's discoveries, which they may rely upon will become of the greatest importance to the improvement of Science, and this kingdom in particular, where happily these discoveries were made, will have reason to glory in his birth.

I am happy for the honor of the opportunity of this communication to the candid Public, and am,
Their respectful and most obedient Humble Servant,
Great Marlborough-street, ROBERT BRADBERRY.

XIII: Morning Chronicle and London Advertiser, Monday November 17, 1783

SYLLEPSIS OPTICA

On Saturday next the 22nd of November, Mr. STORER proposes to give his first Lecture on Optics, when he will explain the difference between refracted Light, and distinct Vision, as understood by him.

And on Saturday the 6th of December, will be ready for sale, One Hundred Reading Glasses; likewise on Saturday the 5th of January, 1784, will be ready for sale, Two Hundred and Fifty Opera Glasses, and One Hundred Pair of Spectacles, all constructed on Mr. Storer's new-discovered principles. The publick may rely that all Optical Instruments offered for sale at the Syllepsis Optica, will be prepared under the immediate directions of Mr. Storer, all of which will be signed by him.

The Nobility and Gentry who wish to be early supplied with any of the above articles, are requested to send their real names and place of abode as soon as possible, to Mr. Bradberry, between the hours of Twelve and Three, at the Syllepsis Optica, No. 43, Great Marlborough-street, where all other particulars respecting Mr. Storer's valuable discoveries and improvements on Optics may be had.

XIV: Morning Herald and Daily Advertiser, December 30, 1783

SYLLEPSIS OPTICA

The Proprietors respectfully acquaint the Nobility, Gentry, and Public at Large, that on Thursday next, the 1st of January 1784, the Syllepsis Optica will be opened at No. 43, Great Marlborough-street, where may be had, STORER's Syllabus to his new-discovered Principles of Optics, and proper attendance will be given to receive orders for Optical Instruments in general, constructed on the said new and valuable principles.

The price of the Syllabus, in Boards, Half a Guinea. Admittance to the Optical effects at the Syllepsis, 2s 6d. each person, between the hours of 11 and 3, any day, Sundays excepted.

ROBERT BRADBERRY, Secretary

XV: Morning Herald and Daily Advertiser, March 5, 1784

SYLLEPSIS OPTICA

To the Nobility and Candid Public.

Ladies and Gentlemen,

It is with the utmost respect, retaining a proper sense of the high honors already conferred upon me, I humbly desire leave to acquaint you, that my Optical Works will now be laid before you, neither rashly nor fearfully.

It would be very improper, at this time, to dilate upon what has pass, or what is to come; for that my works have been delayed is certainly well known, and the numerous causes too ridiculous for me to take notice of in this place. I will now suppose myself new-born, and that my Discoveries on Optics are new-born with me. Therefore, for this moment, I bless myself with the idea that I have no opponent, no enemy; for who will be an enemy to, or oppose what they are yet unacquainted with? Brevity will shake the shaken, and secure the sound: what I offer shall be the criterion for your candour to determine, trusting that your support will be given to ocular demonstration, in preference to any received opinion.

I now present you with the patent Eye Microscope, to be seen at the SYLLEPSIS OPTICA, No. 43, Great Marlborough-street, from twelve to three o'clock, any day, Sundays excepted.

The Price of the PATENT EYE MICROSCOPE is One Guinea.

By this it will evidently appear, that Storer has made, and are now to be sold, better Microscopes, for one Guinea each, than any hitherto offered to the Public; and in this manner, I will ever expose my gratitude to my noble patrons and friends, for the great indulgence and support they have given me, and am their much honored, and obliged thankful humble servant, W. STORER, Professor of Optics to his Majesty.

Dieu defend le droit;

Tandem fit surculus arbor.

N.B. Storer's Spectacles, and Reading Glasses, will be exhibited as above, with many other new Optical Instruments next week.

XVI: Morning Chronicle and London Advertiser, April 27, 1784

(on April 29 also in Gazetteer and New Daily Advertiser)

LECTURE on OPTICS

On SATURDAY next, Mr. STORER, Professor of Optics to his Majesty, proposes to give a LECTURE on OPTICS, when he will explain the difference between Refracted Light and Distinct Vision, as understood by him. None can be admitted without a Ticket, which may be had by applying at the Syllepsis Optica, No. 43, Great Marlborough-street.

XVII: Morning Chronicle and London Advertiser, Saturday 7 May, 1784

MR. STORER, Professor of Optics to his Majesty, with the utmost respect and gratitude, acquaints the Nobility and Gentry, and public in general, particularly the Subscribers to his Pocket Telescope, &c. that Mr. Thomas Mackintosh, Great Queen-street, Lincoln's Inn Fields, his working Optician, has positively engaged to dispose of his stock of optical Instruments, and quit shopkeeping, on purpose to work the new discovered Syllepsis Optic Glasses for Mr. Storer, and otherwise engages to give every assistance, to the best of his knowledge, in order the more readily to supply the public with Mr. Storer's patent Syllepsis Glasses, optical Instruments. From this union of Mr. Mackintosh, the Optician, the public will readily judge the vast importance and value of Mr. Storer's optical discoveries, together with the principles being new and desirable, as simple. In consequence of this union of Mr. Mackintosh, who Mr. Storer firmly believes can and will work his Syllepsis Glasses true to his direction; and being so highly honored and secured by his Majesty's most gracious pleasure, Mr. Storer therefore solemnly pledges his honor to the subscribers to his Pocket Telescope, and the Public at large, that he will, with all possible expedition, furnish them with his Syllepsis Glass Telescopes, Microscopes, Opera Glasses, Spectacles and other Optical Instruments, to facilitate drawing and the polite arts; and has the further satisfaction to assure his Friends, and the Public, that with the union of Mr. Mackintosh, he shall be able to furnish them, not only with better Instruments upon his new Syllepsis Glass principles, but also much more reasonable, as Mr. Mackintosh is a real good working Optician, and has a good optical and mechanical head, with great dispatch, and is as good a judge when an Optical Instrument is right as any man in the kingdom. Therefore the Public, by this time, find it did not rest with Mr. Storer, but that he only wanted a good working Optician in union, to faithfully execute his directions, and a capital to support so great an undertaking, both of which being now provided, Mr. Storer hereby publicly gives notice, that he shall invite every Optician in Europe, to bring their Telescopes of any length and powers, Microscopes, Book, and other Cameras, and Optical Instruments in general, on particular days, which shall be advertised, in order to compare them with (his) Mr. Storer's Syllepsis Glass Optical Instruments, wrought by Mr. Mackintosh, under Mr. Storer's direction.

The public may now expect something worth their attention, by this union, as Mr. Storer and Mr. Macintosh are pledged to exert themselves, in improving Optics, and optical Instruments, for the benefit of mankind.

N.B. A proper allowance will be made to the trade to sell again.

XVIII: Morning Herald and Daily Advertiser, Tuesday 11 May, 1784 (from the news section):

Of all the coalitions that have taken place, none are more singular than that which is now the wonder of the scientific gentlemen, on the science of optics, by Mr. Storer, professor of optics to his Majesty, Mr.

Mackintosh, optician, of Queen-street, Lincoln's inn fields, and Mr. Bradberry, of Great Marlborough-street, to the last of whom the world is indebted for Mr. Storer's valuable discoveries: with the true greatness of mind he possesses, he generously undertook to make them known to all mankind, tho' the principles had been denied by the opticians; and that every person should have an opportunity to see and determine for themselves, he offered tickets of admission, gratis, to all who applied to see their effects, and likewise to the lectures; and if information be true, he still continues the same offer for Thursday next, to the studious philosopher, the curious artist, and the admirer of nature. There cannot be a doubt but he will be amply rewarded for so laudable an undertaking. The writer of this paragraph was happy to be a witness to the great demand for various instruments last Thursday, when he was present; and is sensible, that should the whole body of opticians make an attempt any longer to deny facts, Mr. Bradberry's open spirit will have the desired effect, both for his advantage, and the rest of the gentlemen concerned, and will certainly receive the thanks of many.

XIX: Morning Chronicle and London Advertiser, 27 May, 1784

OPTICS

THOMAS M'INTOSH, Optician, Great Queen-street, Lincoln's-Inn-Fields, returns his most grateful and humble thanks to the nobility, gentry, and public in general, for their great support, by their continued favours to him for many years; these are to acquaint them, that as soon he can let his shop, he is going to retire to No. 1, on the Mall, Hammersmith: and he begs leave farther to acquaint the nobility, gentry, and public in general, that he has not joined in any degree of partnership, or share or shares of partnership, with Mr. Storer, or his partners, in any degree whatever; he only receives orders to work glass to his directions, as other opticians have done, and is paid cash or drafts for the same; but the applying them to instruments must be Mr. Storer's business, as I never made an instrument on his principal.

Witness my hand,

THOMAS M'INTOSH.

N.B. Near two thousand pounds worth of prime Optical Instruments to be sold cheap, warranted good to the buyers.

Captains of ships and merchants may have a good opportunity of sending some real good, abroad.

XX: Morning Herald and Daily Advertiser, Wednesday August 25, 1784

WHO IS AFRAID? – Not STORER

THIS DAY, the 25th of August, 1784, at Nine o'clock in the morning, will be opened the SYLLEPSIS OPTICA, No. 43, Great Marlborough-street, until four in the evening, and continue every day (Sundays excepted) for the use of the public, where and when Storer's Syllepsis Glass, Optical Principles and Instruments will be exposed without reserve for sale and approbation, viz. Spectacles, Principia Opticas, for the use of Drawing, and Pocket Cameras for ditto; likewise Opera Glasses; and for the further satisfaction of the public, the long looked for desiderata of Storer's Syllepsis Glass Perspectives and Telescopes, viz. Pocket Telescopes of 1* [*second digit illegible*] inches, will be held to public view, as a criterion of the principles which he set forth as superior to the achromatic [*literally: aecroamatic!*] combination of Glasses, and are humbly submitted. Now in order to convince every liberal minded man, that Mr. Storer does not wish to avoid conviction, he most respectfully invites Lord Mahon, the Rev. Doctor Maskeline, the Astronomer Royal, Sir Joseph Banks, President of the Royal Society, with Sir George Schuckborough, and the Hon. Stewart Mackenzie, as Judges and Gentlemen of integrity professing the science, to determine whether Mr. Storer has imposed a falsity on the Public, or deserves their support.

XXI: Morning Herald and Daily Advertiser, Friday September 3, 1784

Thomas Macintosh, Optician in Great Queen Street, Lincoln Inn Fields, announces 'To OPTICIANS, LOVERS of OPTICS and the PUBLIC in general', that 'he purposes to meet the challenge to him, and the other Opticians, by Mr. Storer, this day, at the Syllepsis Optica [...]. Mr. Mackintosh's Telescope is only a small one of One Guinea and a Half price. He wishes for any judge or number of judges to determine,

whether his or Mr. Storer's is the best. The Telescope is sent to the Syllepsis, in order to determine the matter, by all who will do Mr. Mackintosh the favor to attend.
N.B. Mr. Mackintosh's is a Compound Object Glass, and Mr. Storer proposes a single Object Glass.'

XXII: Morning Herald and Daily Advertiser, Thursday September 9, 1784

Mackintosh announces that 'the challenge given by MR. STORER to him, and all the Opticians, with his long-promised Telescope, did not commence on Friday last [...] as Mr. Storer said he was not ready and asked for a week's more indulgence, which Mr. Mackintosh agreed to. The time appointed is Friday next, at one o'clock, at Sir Isaac Newton's Head, Great Marlborough Street. Mr. Mackintosh solicits the favor of the Opticians and Lovers of that branch, to attend and see that there be no partiality on their side'.

A comment in the same paper, repeated in Public Advertiser the next day, reads: 'The contest between Mr. Storer and Mr. M'Intosh, on the subject of *optics*, is easily to be determined; as the umpires, it seems, are only required to *believe their own eyes*'.

XXIII: Morning Chronicle and London Advertiser on 16 October 1784

'HAVING seen Mr. Storer's Telescope for the Pocket and Sea Service, am fully satisfied they are very much preferable to any I have seen of the same sizes, as such, I have undertaken to work Optick Glasses, and fit up Telescopes to Mr. Storer's directions only; and do engage to have ready by Christmas next, Glasses for One Hundred Telescopes, as good as the samples which are approved of.
GEORGE LINEL, Optician, No. 1, Goldsmith-street, Gough-square, Fleet-Street. Oct. 14, 1784'

XXIV: Morning Chronicle and London Advertiser, November 4, 1786

In the Year 1783, Mr. Storer received the following Letter directed to him in Marlborough-street, franked T. Egerton, dated November 22, but did not reach Mr. Storer till the latter end of December, at which time Mr. Storer could not conveniently answer it, notwithstanding he had then performed what was inquired for.
MR. STORER,

In using the common Reading-glass, there is sometimes an inconvenience in finding and preserving the proper distance between the eye and the book, and the sight of one eye only is admitted. In consequence of your advertisement, I therefore take the liberty of enquiring, whether it might not be so managed, that the sight might be equally assisted, and the glass held close or near to the book, so that both eyes might be included.

Such an improvement would be very useful to those who preach or speak in public, and want only (on a gloomy day, or in a small character) an occasional assistance, and wish to defer the use of spectacles. The favor of your answer under the inclosed cover, will much oblige, Your humble Servant, RICHARD ASSLETON.

Mr. Storer, with the utmost respect, desires publicly to return his thanks for the Rev. Mr. Assleton's very useful and polite Letter, and such desiderata may be now had amidst Storer's Optical Works, of the Proprietors, at No. 69, Great St. Martin's-lane, Long-Acre, London, between Twelve and Three, Sunday excepted.

STORER'S OPTICAL MAGAZINE, in 12 Vols.

Just published

Vol. I

Which is a perspective for viewing prints and distant objects; it also acts as a reading-glass, properly relieving both eyes at the same time, and may be adapted to different sights, adjusted by himself, Professor of Optics to his Majesty,

'Sero sed Serio'

Particular attention will be given to the Public at large (who are purchasers) to make them acquainted with the uses of the instruments.

** Enquire for the Subscription Telescope at the above place.

Storer's Optical Magazine will also be sold for the Proprietors, at Mr. Clarke's, Stationer, in Portugal-street, Lincoln's-inn-fields.

XXV: Morning Chronicle and London Advertiser, November 11, 1786

STORER's OPTICAL MAGAZINE; or, Syllepsis Optica: in twelve vols., octavo.

This new work is with great deference humbly recommended to the inspection of the publick, to simplify Optical Desiderata; being instruments proper for real experiments on Optics in general; and also as entertaining and useful to those acquainted with the science.

Publick days for shewing the uses of the Magazine, &c. are Wednesdays and Fridays, from twelve to three o'clock, at Mrs. Smither's, the last house in Pancras-street, (opposite Howland-street) Tottenham Court Road.

N.B. Enquire at the Proprietors Warehouse, No. 69, Great St. Martin's Lane, London, from twelve to three o'clock, any day, (Sundays excepted) and at Mr. Clarke's, stationer, Portugal-street, Lincoln-Inn-Fields. Particulars of the Subscriptions Telescope may be had at the above place.

XXVI: World (1787), Saturday March 27, 1790

To the CURIOUS in OPTICS / MR STORER, Professor of Optics to the King, will exhibit his improvements in Optical Instruments, every Thursday, from Twelve to Three o'clock, in Union Buildings, Leather-lane, Holborn. Tickets for admission may be had at C. Lincoln's, No. 62, Leadenhall Street.

Appendix 5: Comment on the Delineator by Cornelis Varley, 1845

C. Varley, *A treatise on optical drawing instruments* (London 1845), note on p. 25:

The merit of having first applied a lens in the place of t [*a correcting lens shown by Varley in fig. 32, PdC*], to render the picture equally luminous, is due to a Mr. Storer. Many years before achromatic lenses were much in use, he seems to have discovered this effect, which made him apply earnestly to improve the Transparent Camera. [...] Success thus far increased his ardour to get such instruments manufactured, but the obstacles in his way were more than enough for ordinary means. One of the instruments I examined, and found the glass was exceedingly bad, the lenses were so veiny as to damage the image. The looking glass, in addition to the evil of double surfaces, was the worst I ever saw; it was polished with a motion all one way, which gave it a surface like a wire-marked paper; then the lens which rendered the whole picture luminous was very veiny, and the plate of ground glass over it, altogether produced such a mass of confusion as greatly to disappoint me in seeing so bright an image so ill defined, and thus from defects in the materials and in the workmanship, Storer appears to have been baffled; and when he sought aid from others to overcome the difficulties, instead of some gratitude for what he had done, he was looked upon as a schemer seeking to profit by others money.

Appendix 6: Advertisements of local artists using the Delineator, 1778-79

Morning Chronicle and London Advertiser, May 5, 1778

MR. SAUNDERS begs leave to return Thanks to the Nobility, and his Friends in General, for the encouragement he has met with, and in hopes of their future favours takes this opportunity to acquaint them that he is enabled (by the assistance of that curious Machine, the Royal Patent Delineator) to take LIKENESSES to a certainty, in any view, at one guinea, properly coloured and neatly framed. No. 20, Henrietta-Street, Covent Garden

Morning Post and Daily Advertiser, December 22, 1778

LIKENESSES

MRS. ADAMS, paintress in crayons, begs leave to acquaint the Nobility, and her Friends in general, that she has purchased that curious machine, the Royal Delineator, by the assistance of which she hopes to give satisfaction to such Friends as shall please to favour her with their commands, being enabled by the help of this instrument to finish them much better, and the likeness much stronger in any view for 15s. each upon vellum, and elegantly framed. Likewise Miniature Pictures neatly finished for 10s. 6d. each; and shades reduced small enough to put in a watch for 2s. and 6d. each. Specimens may be seen at No. 27, Wardour-

street, Soho. N.B. As the Delineator is very little incumbrance, Mrs. Adams will have no objection to wait on families at their own houses.

General Advertiser and Morning Inteligencer, February 22, 1779

LIKENESES

STRONG LIKENESSES of grown People and Children [...] Specimens to be seen at No. 27, Wardour Street, Soho. Note: Drawing, painting, &c. taught upon reasonable terms, with the advantage of the use of the royal delineator.

Appendix 7: William Storer's petition to Parliament for funding of experiments to improve his newly invented portable telescope, 1780

The Journal of the House of Commons vol. XXXVIII. From November 26th 1778 to August 24th 1780, page 579, session 8th February 1780:

A petition of William Storer being offered to be presented to the House; The Lord North, by his Majesty's Command, acquainted the House, That His Majesty, having been informed of the Contents of the said Petition, recommends it to the Consideration of the House. Then the said Petition was brought up, and read; Setting forth, That the Petitioner hath, by particular Study and Attention, and after a great Number of Experiments, and at much Expence, made great Improvements in Optical Instruments in general; and that he hath lately invented a Portable Telescope, which, on account of the Smallness of the Size, its great magnifying Powers, the Largeness of the Field of View, and Distinctness of Vision, and the facility of adjusting the magnifying Power to the Size of the Object and State of the Atmosphere, and other Qualities, will be of great Utility to the Public in general, and particularly with respect to Navigation, as it may be used at the Mast-head of a Ship, whereby an elevation is gained to descry [=detect, PdC] Objects at a Distance, far beyond the Power of any Telescope now in Use, and remarkably excels all others in exhibiting Objects more clearly in a hazy Atmosphere, and will likewise be of great Advantage to the Officers of the Army both in the Field and in Garison; and that the said Telescope may also be applied to the most minute Microscopic Discoveries, with the particular Advantage of exhibiting to the Eye opaque as well as pellucid Objects, and by Candle Light as well as by Day Light; and that it is also peculiarly adapted for making Astronomical Observations, which last-mentioned Quality the Petitioner doubts not may be so improved as that thereby, together with the Means now in Use for ascertaining the Longitude at Sea, that valuable Discovery may be completely obtained; and that, for the bringing the said Telescope to a Degree of Perfection adequate to the last-mentioned Purposes, some further Experiments will be required, which he is desirous and ready to make in case some Provision be made towards enabling him to defray the necessary Expences that may attend the Prosecution thereof; And therefore praying the House, to take the Premises into Consideration, and to grant him such Reward, and so to enable him to prosecute his Experiments, as to them may appear reasonable and proper. / *Ordered*: That the said Petition be referred to the Consideration of a Committee: And that they do examine the Matter thereof; and report the same, as it shall appear to them, to the House: And it is referred to *Mr. Penton, Sir Gilbert Elliott, &c.* : And they are to meet To-morrow Morning, at Nine of the Clock, in the Speaker's Chamber; and all who come to the Committee are to have Voices.

Appendix 8: List of Storer's patrons, as printed in his *Syllabus* (1783), pp. 121- 126

[p. 121]
TO THE
Earl of Aylesford
[Earl of] Angerstein
Mr. Arswidson
Earl Bathurst
Earl of Bute

Lady Caroline
Sir Patrick Blake
His Excellency Count Bruhl
Colonel Burton
Right Honourable Lady Bateman
Lady D. Beauclerk
Wilson Braddyl, Esq.
Mr. John Bateman
Godfrey John Boccius, Esq.
P.W. Baker, Esq.
[blank] Bathoe, Esq.
E. Boehm, Esq.
John Beard, Esq.
Benjamin Barnet, Esq.
Earl of Clanbrassill
Right Honourable General Conway
George Cumberland, Esq.

[p. 122]
John Chichester, Esq.
William Constable, Esq.
Thomas Cornwall, Esq.
William Codrington, Esq.
James Christie, Esq.
Samuel Cutler, Esq.
Charles Catton, Esq., R.A.
Lord Dudley
Peter Dalmea, Esq.
Sir John Eden, Bart.
George Engleheart, Esq.
The Honourable [blank] Fitzmaurice
William Frankland, Esq.
Richard French, Esq.
L.D. Fytche, Esq.
John Fuller, Esq.
Lord George Germaine
His Excellency Prince Gallitzin
Charles Gore, Esq.
Henri Goodwin, Esq.
Leslie Grove, Esq.
Captain John Graves
Earl of Harcourt
Right Honourable Lord Howe

[p. 123]
Right Honourable Sir William Howe
The Honourable [blank] Hawke
Countess of Harrington
Henry Hoare, Esq.
[blank] Hearn, Esq.
[blank] Hope, Esq., Amsterdam
Richard Harford, Esq.
Joseph Harford, Esq.
Christopher Hodges, Esq.
John Harford, Esq.
John Harman, Esq.

Mark Harford, junior, Esq.
John Hurlock, Esq.
John Hale, Esq.
John Hood, Esq.
Robert Holford, Esq.
Captain Johnson of the Granby
[blank] Ingleby, Esq.
[blank] Jordan, Esq.
William Jones, Esq.
Lord Bishop of Killaloe
Richard Knight, Esq.
[blank] Kynch, Esq.
Captain Knox

[p. 124]
Francis Kinloch, Esq.
Lady Littleton
William Locke, Esq.
F. Le Mesurier, Esq.
John Le Mesurier, Esq.
Peter Le Mesurier, Esq.
Henry Le Mesurier, Esq.
Thomas Le Mesurier, Esq.
[blank] Lambert, Esq.
James Lawrell, Esq.
Miss Lane
Miss Leighton
Duke of Manchester
Earl of Macclesfield
Lord Viscount Mahon
Lieutenant General Mackenzie
James Meyrick, Esq.
Mr. James Monro
Duke of Northumberland
Captain Joseph Nunn
William O'Hara, Esq.
Reverend Mr. Oglander
Mrs. Otway
Duke of Portland

[p. 125]
Henry Penton, Esq.
Lieutenant General Pitt
John Pitt, Esq.
[blank] Phipps, Esq.
Lady Juliana Penn
William Pierie, Esq.
Mrs. Peacock
Lord Rivers
Sir Joshua Reynolds
Captain Robinson
A.H. Rohan, Esq.
Lady Frances Radcliffe
Miss Ruth Raper
Earl of S.
Right Honourable Sir Thomas Sewell, Master of the Rolls

Honourable Mr. St. John
[blank] Schroeter, Esq.
Charles Selwyn Esq.
[blank] De Schudorf, Esq.
Andrew Scherbinen, Esq.
[blank] Sitwell, Esq.
Lady Frances Scott
Lieutenant Colonel Trigge

[p. 126]
John Trigge, Esq.
Richard Troward, Esq.
Captain Todd
[blank] Urry, Esq.
Mr. Verwyck
Right Hon. Agmondisham Vesey
Mrs. Vandewall
Sir Watkin William Wynn, Bart.
Honourable Horace Walpole
Honourable Thomas Walpole
William Weddell, Esq.
Miss Wood
Benjamin West, Esq.
Reverend Mr. Williams
Miss Watkinson,

and to the Nobility, Gentry and the Public in general, who have either purchased the Royal Delineator, subscribed to my exhibition of experiments, or to the Pocket Telescope, &c &c

Appendix 9: Announcement of William Storer's bankruptcy, 1784

London Gazette, November 9, 1784

Whereas the Commission of Bankruptcy awarded and issued forth against William Storer, of Great Marlborough Street in the County of Middlesex, Optician, Dealer and Chapman*, and he being declared Bankrupt, is hereby required to surrender himself to the Commissioners in the said Commission named, or the major part of them, on the 20th Day of November instant, at Five of the Clock in the Afternoon, and on the 1st and 25th Days of December next, at Ten of the Clock in the Forenoon, at Guildhall, London, and make a full Discovery and Disclosure of his Estate and Effects: when and where the Creditors are to come prepared to prove their debts, and at the Second Sitting to appoint Assignees, and at the last Sitting, the said Bankrupt is required to finish his Examination, and the Creditors are to assent to or dissent from the Allowances of his Certificate. All Persons indebted to the said Bankrupt, or that have any of his Effects, are not to pay or deliver the same but to whom the Commissioners shall appoint, but give notice to Mr. Morton, No. 17, Furnival's Inn.

* Note: the double characterization Dealer and Chapman was a standard phrase in bankruptcy announcements and not specific for Storer.

This compact version of the announcement appeared in the *London Chronicle*, 13-16 November 1784 and in several other newspapers: 'William Storer, of Great Marlborough-street, Optician, to surrender Nov. 20, Dec. 1, 25 at Guildhall. Attorney Mr. Morton, No. 17, Furnival's Inn'.

Appendix 10: Announcement of the auction sale of William Storer's possessions and patents, 1785

Morning Post and Daily Advertiser Saturday June 1, 1785 (also 3 June, and the first part only on 4 June):

SALE BY AUCTION

By Mr Ansell,

At the CASINO ROOM in Great Marlborough Street on the 4th June and following days, by order of the Assignees, The STOCK in TRADE of OPTICAL and MATHEMATICAL INSTRUMENTS, some Articles of HOUSEHOLD FURNITURE, PICTURES (amongst which is one very capital PORTRAIT of an OLD LADY in fine PRESERVATION, by C. JANSSEN), a fine set of Hogarth's Marriage a la Mode, first Impressions, a few Books, a fine toned (?) single-keyed Harpsichord, by Shudi, an high finished marble Bust of his Majesty; and other Effects, of Mr. WILLIAM STORER, late of Great Marlborough Street, OPTICIAN, a Bankrupt.

The Stock comprises a Variety of curious DELINEATORS, Book and Pocket Cameras, LENS of different Focus's and Dimensions, Telescopes, Spectacles, &c &c.

To be viewed till the sale. Catalogues may be had as above, and of Mr. Ansell, No. 52, St. James's-Street.

By Mr Ansell

At the CASINO ROOM in Great Marlborough Street on Friday 3rd of June, at two o'clock, by order of the Assignees of Mr. WM. STORER, Optician, a Bankrupt,

HIS MAJESTY's several ROYAL LETTERS PATENT, granted for the term of fourteen years, for the sole making and vending, sundry curious Optical Instruments, invented by the said Wm. Storer, called Syllipsis [*sic*] Glasses [...] The Accurate Delineator [...]. also the valuable Invention or Discovery of certain properties in Light and Optical Glasses [...] Printed particulars may be had at the Room, at Garraway's, and of Mr. Ansell, No. 52, St. James's Street.

Appendix 11: William Storer's petitions to the Board of Longitude and related documents, 1788-89

Part paraphrase, part transcription of 'Storer'-related documents in the papers of the Board of Longitude, part of the Royal Greenwich Observatory Archives deposited in the Cambridge University Library. For an inventory, see <http://janus.lib.cam.ac.uk>, search 'RGO'.

Note: no attempt was made to extend this research by looking at the Minutes of the Board meetings or other potentially relevant documents.

RGO 14/12 nr. 51 (= fol. 432-446): Petitions &c. of William Storer praying that a Committee may be appointed to enquire into the merits of his invention, 2 February 1788 – 10 July 1789.

1. William Storer, 2 February 1788:

"[Y]our Petitioner hath discovered several methods for better and more accurately determining and ascertaining the Longitude at sea". Asks to be given a chance to prove this, and meanwhile requests "pecuniary assistance [...] without any prejudice" to any rewards to which he may be entitled "in pursuance of an application to Parliament heretofore made by your Petitioner for several Improvements and Discoveries in Optics which he has made his study for nineteen years and upwards." Names "an assistant in London, to receive, and convey, without loss of time, to me, all letters and messages, that I may adhere the closer to my studies and future experiments, viz. Mr. James Warner, No. 2 Bishops Court, Chancery Lane."

2. William Storer, 2 April 1788:

While his methods are "referred to the Astronomer Royal for his Report", and there will be no Board meeting for a while, he asks whether he can meanwhile "publish to the world (without prejudice) his eight different methods now before the Board", so that he can "support himself and family" until hopefully his reward will be granted.

3. Certificate by four undersigned men, dated 8 (?) August 1788:

The Board in its meeting of 12 July 1788 has asked Storer to “procure certificate under the hands of proper persons” that they would “undertake not to disclose the principles or construction” of what Storer was about to exhibit to them “except to the Board”. They certify “that the said William Storer has, on the [8th August 1788] exhibited to us an Instrument by the Principle of which an Observation notwithstanding the irregularity of a ship’s motion may as we conceive be taken at sea nearly and perhaps as correctly as at land [...]”. They recommend that experiments be made.

The document is signed by Thomas Wall, John White, William White and Pinson Bonham. On the back it is also signed by Sir Herbert Mackrooth, Charles Lincoln, Robert Parker, John Hamilton Moore and Kenneth McCulloch, - on which see next document.

4. William Storer, 15 August 1789:

Has found four more persons prepared to sign the certificate: “Mr Lincoln, Optician, Robert Parker Esquire (now or late in the East India Service), Mr John Hamilton Moore, Hydrographer to his Royal Highness the Duke of Clarence, and Mr Kenneth McCulloch, Sea Compass Maker to his Royal Highness the Duke of Clarence”. In another hand on the document: “Read at the Board the same Day”

5. William Storer, 10 July 1789, with in top left corner, in same hand as on previous document, “Read at the Board the 15th of August 1789”.

This long-winded petition, covering eight pages, essentially sums up what happened since February 1788. We learn that Mr Maskelyne had told him “that he had to reduce his Eight Methods to Three” and that he had not been allowed to show his instrument that he had brought along. He had applied to Admiral Campbell, Mr. Wailer of Christ’s Hospital and Master of Mathematics, and [*left blank*] Smeaton Esq., but all “declined to attend at an Exhibition of your Petitioner’s said Instrument”, - Smeaton was particularly categorical that he had no time for this. On 22nd July, following instruction from Admiral Campbell, he had applied to Philip Stephen Esq. as one of the Board’s Commissioners present at the meeting of 12th July, but that also led to nothing. He had then applied to Thomas Wall Esq., John White Esq., William White Esq. Captain in the East India Service, and Pinson Bonham of the Sea Clerks (?) Office, and Sir Herbert Mackrooth Baronet, who had signed an undertaking of secrecy and had then attended an exhibition of the instrument, certified having seen it, and had requested “in their own names and of the public at large” that the Board would direct that experiments be made. Storer begs to be given a date for a future Board meeting when they would “inquire into your petitioner’s discovery” and order experiments.

RGO 14/32 nr. 4: ‘List of the several Methods proposed by William Storer (Professor of Optics to his Majesty) for the better ascertaining the Longitude at sea’, copied 29 February 1788

Preceded by a letter to the Commissioners from Storer dated 12 July 1788, “that he attends fully prepared, as he conceives, to establish to their satisfaction the truth of his discovery touching the Longitude at sea [...]”.

‘A List of the several Methods proposed by William Storer (Professor of Optics to his Majesty) for the better ascertaining the Longitude at sea’, 6 pages.

“First Method is to Correct and improve the solar and lunar Tables [...]

Second Method is By true Altitudes &c. taken by means of an artificial horizon with a Quadrant or Instrument of my Construction, by which the Longitude at sea, notwithstanding the Irregularity of the Ship’s Motion, may be accurately ascertained [...]

Third Method is the Zenith or angular distances between the sun’s centre and Jupiter’s, or the Moon’s centre and Jupiter’s, or Jupiter’s Distance or Zenith Angle East or West, from a Fixed Star. This may also be done by my method accurate enough at sea [...] We have only errors of Instruments (occasioned by their improper construction) to guard against, and correct, and which will be no great Task, when once explained and properly understood.

Fourth Method is, of ascertaining the Difference of Longitude between any two points of Land, East or West of Greenwich. and this method is still more exact than even Astronomers could even expect, from the improper Construction of their instruments [...]

Fifth Method is By the means o the first or second satellite of Jupiter, and Jupiter and a fixed star east of west of them [...] This method will be better explained by proper Drawings and the Fact will be ascertained by acual Experiments.

Sixth Method Is by the Difference of the Altitudes (referred to and compared with true Charts of Parallaxes) of the Sun and Moon, and the Moon and Jupiter, and the Moon and a fixed star [...] Those who are ell acquainted with trigonometrical mensuration may by my Methods, have (nearly correct) siderial and mean time at Land, and the Longitude at Sea, in their own hands [...]

Seventh Method is, by Artificial Points, Altitudes, Amplitudes, Azimuths, Parallaxes &c. of the Sun, Moon, Jupiter, fixed stars &c. (by Instruments on my construction) [...]

Eighth Method is By the Belts, or Shadows before Jupiter's Disk, and the Parallaxes of his Satellites [...] Mr Storer flatters himself that he is able to effect the purpose in question, principally, by means of his various Improvements in the construction of astronomical instruments (and with a correction of the Tables &c. now in use) or ascertaining the Longitude at sea, notwithstanding the Ireugularity of the Motion of the Ship, Impediments from cloudy and hazey weather excepted."

29 February 1788

"This is a true copy of the original examined by, and the original thereof left with me, James Warner, assistant to Mr. Storer".

In the margin: "Examined and the contents are true, as such. Therewith fix my hand and seal this first day of March One Thousand Seven Hundred and Eighty-eight. William Storer, Professor of Optics of his Majesty. White Hart Row, Kennington Lane, Lambeth."

Behind this document is the envelope (with broken seal) in which this list was presented to the Board, with written on it: "The said William Storer now personally attends and waits the Pleasure of the Commissioners of the said Board. Saturday 1st March 1788"

RGO 14/55, fol. 147-148: Letter from Storer to the Commissioners of the Board, dated 5 December 1789

Mr Storer regrets that he is ill and cannot attend the Board this day, "agreable to Sir Harry Parker's notice of [16th November]" [...] "Mr Storer having been confined to his House these five weeks", requests a future appointment. Should he not be well by that time, would the Commissioners please "attend him at the Union Observatory, Leather Lane, Holborn (his present abode)" on previous notice being given to him or to Mr James Warner, No. 2 Bishops Court, Chancery Lane.

Appendix 12: Auction sale catalogue of 1793, possibly of Storer's stock in trade

A catalogue of a valuable collection of camera obscura and telescopic instruments and machines, a large assortment of optical glasses for experiments, variety of working optical tools, lathes, vices, models, figures; neat and genteel household furniture, plate, linen, China, pictures, prints, a drawing-room suit, and other valuable effects, of a Gentleman; which will be sold by auction, by Mr. Graham, on the premises, No. 52, Dean-Street, Soho, on Monday, October 28, 1793, and following day, at eleven o'clock. To be viewed on Saturday the 26th instant. When catalogues may be had on the premises and of Mr. Graham, Southampton-Row, Bloomsbury-Square. / At twelve o'clock in the first day's sale will be sold, the lease of the dwelling house and premises behind, with communication to the mews – Held for an unexpired term of fourteen years, at eighty-four pounds per annum, out of which the land tax is allowed.

For a transcription of this document (and other late 18th-century sale catalogues of instrument collections), visit www.mhs.ox.ac.uk/library/auctions.htm or www.sis.org.uk, under 'resources'

The following are the lots explicitly mentioning his name:

- # 4: A quantity of Storer's optical delineators and magazines, unfinished
- # 6: Seven slates, a large atlas, 4 other books and a quantity of Storer's *opticia principia*
- # 8: Part of a Storer's camera, in a chest, and 7 other parts of optical machines
- # 103: Twenty Storer's patent subscription telescopes, unfinished (# 104 to 108 are in total another eighty ditto)
- # 110: A Storer's patent delineator, on a mahogany claw foot stand, unglassed (# 111 and 112 ditto).

Another telling lot is #3: 'Eighteen brass figures of the king's arms, about 18 sets of window fastenings and 12 dozen brass rings with screws'. The brass figures were attached to the lids of the Delineators, and what was listed here as window fastenings were probably handles to carry the Delineators when closed.