THE OPTICAL
MAGIC LANTERN
JOURNAL
AND
PHOTOGRAPHIC ENLARGER.

A Magazine of Popular Science for the Lecture-room and the Domestic Circle.
Edited by J. Hay Taylor.
Vol. 2.—No. 15. AUGUST 1, 1890. Price One Penny.

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NOTES.

Binding Cases for this Journal are now ready, price 1s., post free 1s. 1½d.

Society reports, which should be short, must reach us as early as possible before the 24th of each month to insure insertion in the forthcoming issue.

H.R.H. The Princess of Wales has recently taken to "Kodaking," and is to have lantern slides made from her negatives.

One of the chief attractions at a recent conversazione held at South Kensington Museum was the electrophonoscope, an instrument which is said to be capable of reproducing not only the voices of the operators, but also their faces. It is not improbable that in the future, with certain lantern appliances, the electroscopic face may be projected on a large screen. This, in connection with a microphonic attachment, might enable a large audience both to see and hear a lecturer although he may be a considerable distance away at the time of the delivery of the discourse.

An advertising firm in London are contemplating supplying small and compact lanterns to shopkeepers, together with a coloured slide setting forth the qualities of the wares sold. The lantern can be affixed above the shop front and the image reflected upon the pavement. Some time ago we saw some very fine "trade" slides painted by Messrs. Wilkinson and Co., of Sunderland, who, we understand, are making them one of their specialities.

A lantern suitable for this purpose should be sold for a moderate sum (and yet leave a reasonable margin of profit), which will intimate upon the pavement to passers-by such announcements as may be desired.

Another new lantern light may shortly be expected. Mr. A. W. Scott, in a letter on another
page, states that he has an improved oxy-calcium jet of 300 c.p., which dispenses with coal gas, is simple to use, and can be employed for dissolving lanterns.

It appears that stereoscopic photography is reviving in Sheffield, as the Photographic Society of that town have purchased several stereoscopes for use at their meetings. Stereoscopic negatives are well adapted for contact printing for lantern transparencies.

It is with regret that we have to announce the death of the Rev. T. F. Hardwich, which took place on June 24 at Shotton Vicarage, co. Durham. Mr. Hardwich, who was an authority on optical lantern matters, was a contributor to our columns.

---07---

**Toning Transparencies.**

Although in many cases a wet collodion transparency is of a tone sufficiently good to need no toning, yet it is the lightness of the colour of the deposited silver of which the image is composed not pleasant to the eye, a dark if not black deposit being invariably preferred.

The blackest colour is obtained by immersing the transparency in a weak solution of chloride of platinum, in connection with which two things must be observed—first, that it is rendered acid by nitric acid; and secondly, that the toning bath be exceedingly weak.

Having dissolved the contents of a 15-grain tube of chloride in 20zs. of water, add thereto a drop by drop a solution of bicarbonate of soda of which the strength is not material, until after stirring well with a glass rod the solution of platina no longer reddens litmus paper, which it will certainly do previous to the addition of the bicarbonate of soda. The hydrochloric acid being thus neutralised, one or more drops of nitric acid must be added, until the blue litmus paper turns red, and shows that the solution is once more acid.

Bearing in mind how many grains of platinum the solution contains, viz., fifteen (or more or less), add one-fifteenth of the solution to 150zs. of water, which will give a toning bath containing one grain of platinum chloride in 150zs. of water. The transparency is immersed in this, and allowed to remain until the yellowish colour of the silver image is changed to a black tone. When looked through, the tone will be found to have become a neutral black. The transparency is then rinsed in water and allowed to dry.

A black tone of a rather cold nature, although it answers well for portraits, may also be given by immersing the slide in a very weak solution of bichloride of mercury. The first action of this toning solution is to blacken the picture, which after arriving at this stage begins gradually to bleach. But the mercury solution, like that of the platina just described, must be so weak as to enable the operator to leisurely remove it from the toning bath when once it is seen to have become blackened through and through, and place it in water so as to entirely wash out every trace of mercury. If this is done all further action is arrested, and the transparency when dried may be looked upon as permanent. Some prefer to keep the plate in the toning bath until the bleaching action has set in, when it is removed, washed very thoroughly, and placed in water containing two or three drops of sulphide of ammonium, by which a rich brown colour is produced. It is unnecessary to say that washing must follow this treatment.

A plain solution of chloride of gold also acts as a good toning agent. While some use this by itself, others prefer to mix it with a solution of bichloride of mercury, in the belief that it may conduct to greater permanency.

 Sulphide of potassium or liver of sulphur is much employed in the toning of transparencies on account of the fine purple-brown colour it gives. Its offensive smell is its most objectionable feature; but as the solution ought to be very weak, and the toning process can be conducted near to a chimney, or even out of doors, no inconvenience need really be experienced from this cause. The toning action commences as soon as the plate is placed in the solution, and proceeds with a degree of rapidity in proportion to the strength of the bath. It should be borne in mind that this solution not only tones, but also intensifies the image, and hence it is necessary that the transparencies that are thus toned should be rather thin. Some, as in cases previously cited, add chloride of gold solution to the sulphide toning bath; others recommend in addition albumen that has been liquefied by being shaken up to a froth, with a few drops of ammonia, and then allowed to stand until liquefaction takes place; gelatine, gum, and substances of like nature. It is the potassium sulphide, however, that is the active toning agent. Singular though it may seem, collodion transparencies toned by this agent not only possess a high degree of beauty, but also a greater degree of permanence than those by many other systems, for it is generally known that silver sulphide is one of the most stable silver compounds.

It may sometimes happen that a transparency of a pronounced reddish brown colour is wanted, as when one has got some enlarged or micro-
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"THE ALL QUADRANT" SURPASSES PRODUCED.

THE SIMPLEST AND MOST COMPLETE IN THE WORLD.

SIZE— Takes 12 Plates, 4½ x 3; Vertical or Horizontal. Measure, 10 x 7 x 5½.

TO CHANGE PLATES—Simply pull back the Lever at bottom and the plate swings into register; an index is fixed at the bottom to indicate the number of plates exposed.

LENS—Specially manufactured, working at F6, and made to focus for short and long distances.

SHUTTER—Works behind the lens, and can be fitted with Newman's Pneumatic Regulator. With this Shutter more exposure is given to foreground than the sky.

FINDERS—One to show horizontal and other vertical.

THE CAMERA is one of the most simple that has yet been introduced; nothing complicated to get out of order; can be fitted to Tripod with focusing arrangement. The whole is made of seasoned Mahogany and covered with Morocco leather, and we guarantee that there is nothing so Easy to manipulate and yet so Perfect.

Price for 12 Plates, £6 6s.; Price for 18 Plates, £7 7s.; Price for 24 Plates, £9 9s.

Magic Lantern, Dissolving View, and Photographic Apparatus Makers.

W. H. HUMPHRIES & Co., SOLE MAKERS 268, UPPER ST., ISLINGTON, LONDON, N.
scopic view of a brown insect, which he wishes to show life colour.

In this case the plate in a half-saturated solution of bichromate of potash, to which a few drops of hydrochloric acid have been added. The image will rapidly bleach, till it is a pure white, when it must be washed. A weak solution of Schlippe's salt is poured over it, by which it immediately takes a red colour. But here again precaution must be taken to have all the solutions weak, else may the image become so dense as to stop the light in too great a degree.

In all these processes of toning, it is necessary that the transparency be not allowed to get dry after removing from the water following the fixing and its immersion in the toning solution.

Hand Cameras for Obtaining Slides for the Lantern.

Since the Eureka was first introduced by W. W. Rouch and Co., 180, Strand, in 1887, it has undergone several minor adaptations until it is now a very perfect instrument. This camera is made in three sizes, of which the lantern plate size measures 9in. by 4in. In the ordinary form (Fig. 1) the receptacle for containing the plates is part of the camera proper.

The plates, which are placed in sheaths, are contained in a reservoir, and are arranged close together, that in the front being kept in focal register by springs.

When it is desired to change a plate, a lever, situated at the back, lifts the rear plate into a flexible chamber or bag. It is then grasped by the finger and thumb, by which it is conveyed to the front ready for exposure. Each plate is in this manner moved in turn to the front, until the dozen which the chamber contains have all been exposed.

To suit the convenience of those who wish to expose a greater number of plates on an outing, the changing receptacle is also made detachable, so that all one has to do to attach another charged one is to slide it in an ebonite shutter in the front of the box, press a spring knob, when the plate receptacle will become detached, and a new one may be substituted.

The changing bag, when not in use, folds into a small compass, and is covered by a lid (Fig. 2), on the inside of which is an ivory slab, upon which can be written in pencil such particulars respecting each plate as may be desired.

This camera is so adjusted that all objects beyond 20ft. are in focus, but for portrait groups or near objects the focus can be readily adjusted by a scale provided for the purpose. When it is desirable to use this instrument for time exposures, it may be secured to a stand. The entire front can, by a touch on a spring, be removed, thus affording opportunity for employing a stop in the lens (Fig. 3) and for using the cap.

The lenses of these cameras are of the rectilinear type, and are of high class. The shutter, which is of the roller-blind class, is actuated by a small knob in front of the camera. A finder is also provided, and the whole packs into a neat leather satchel.

Comparison of Illuminants.

There seems to be a diversity of opinion respecting the relative qualities and intensities of the oxy-ether and hydrogen. In comparing the light given by these two methods, it is not sufficient to use any jets at random.

It is not a difficult matter to make two burners, which can be made to show either one or the other method of the two lights is to procure burners, each capable of showing these respective methods to the very best advantage.

At present there seems to be a slight "hanging back" about the employment of saturators, but by degrees, as lanternists come to appreciate this method of lantern illumination, there is no doubt that their use will become more general. But in order to make a comparison between two different methods of lighting, each burner must be of that form which is calculated to give the illumination under its best conditions, suited to the conditions of the light.

"Made Up" Statuary Slides.

I have lately been experimenting upon methods whereby a statuette may, by a little manipulating, be presented upon the lantern screen, as though the photograph had been taken of a statue of large proportions.

In photographing an ordinary small figure, I observed that all the small marks, grain, or inequalities of the surface were reproduced on such a large scale that it had anything but the appearance that it was intended to represent, but by preparing it in the manner to be described, I have made some very good statuary pictures, to all appearances "true to Nature" (if I may use such a phrase).

Of course there must be such surroundings as will give an idea of size; but first, the surface of the figure must be prepared. This I do by cleaning the plaster statuette as much as possible, taking special care that all dirt is removed from the crevices, then, after gradually warming the figure, I immerse it for a short time into a vessel containing white wax, after which it is carefully withdrawn. When cold it is ready for the operation of mounting.

A pretty effect can be made by mounting the statuette upon a rough block to represent a huge stone,
or, if necessary, a pile of stones, or anything of a kindred nature. To obtain this effect was another source of trouble owing to the magnification of the grain or atoms of various stones, but when I finally hit upon the idea of using coal for the purpose, the effect was good. A lump of coal when photographed gives no idea as to the original dimensions, and when it is reproduced in a photograph there is no telling whether it is of a few inches across or as many feet. The coal, if it is to form the base of the figure, must be prepared so as to be in keeping with it.

After the figure is rigged up, some small foliage should be placed at the sides, and immediately in front. Then, as a background, a large photograph may be introduced. In lighting such a composition care must be exercised that the figure has as little "shine" as possible, and above all things do not let a shadow fall upon the background. When all the arrangements are well carried out, a pretty lantern transparency can be thus obtained.

I mentioned that care should be taken to remove all dirt in the crevices. This reminds me that if sitters were to wash their faces immediately previous to having a large (head) photograph taken, there would be less work for retouchers, and a better photograph would result. An interesting comparison is that of a large head photographed immediately after sponging the face, and another taken an hour or two afterwards. The marks in the face in the latter case will appear hard compared with those in the first, for it is surprising how a lens can detect foreign matter in crevices; but for a photographer to ask his clients to wash their faces is, indeed, a difficult matter, and great delicacy would have to be displayed, but perhaps, two labelled prints showing the difference would answer best, if they were hung in a prominent position in a studio dressing-room.

**Mat Trimmers for Lantern Transparencies.**

Various methods have from time to time been advocated for cutting out masks, and with many in general use, a separate guide or die is required for each respective size and form.

When it is the intention to produce mats in quantity it would seem reasonable enough that there be a die for each size, but for the amateur who makes a few slides now and then, and wishes to mount them with a mat the size and shape which in his opinion is best suited to display the pictures to advantage, he usually possesses himself of an assortment of mats, or else procures a die for each size and form according to his requirements.

With a view to the wants of those desiring to make their own mats, Messrs. Bain and Co., of 515, Pine-street, St. Louis, U.S.A., have introduced an ingenious form of trimmer, with which masks of various sized openings may be made.

The trimmer, which is sold for 25 cents, may be made from a sheet of brass and seven-eighths inches square. Across this plate two heavy lines are ruled at right angles, thus dividing it into four equal parts. One corner (in the case of the one received by us, the lower left hand one) is left entire. The right hand corner of the square opposite is rounded in the form required for a cushion shape, that of the above division in a quarter circle, and the upper left hand corner in the form of a cycloid, as in the annexed cut.

Parallel with the two lines mentioned, light lines are ruled one-eighth of an inch apart. To make a full-sized dome-shaped mat, the paper must be folded in two, and placed under the shape until it just touches the upright heavy line; then a wheel cutter or knife is run around the shape. By placing the paper upon any of the fine lines the opening will be reduced by a quarter of an inch for each division, counting from the coarse line. Circles, ovals, and squares are made by folding the mat paper twice, or into a quarter its shape and size. Place it under the trimmer, two edges opposite the heavy lines which quarter the trimmer, and cut around the shape. The thick lines described will give an opening two and seven-eighths inches in diameter.

To make oblongs, place one edge of the folded paper opposite the heavy line, and the other opposite one of the small lines at right angles, keeping in mind that each fine line removed from the thick line will reduce the opening by a quarter of an inch.

To obtain a clean cut, it is best to place the paper upon a sheet of glass. A little experience with this trimmer will suggest various methods of using it.

**Large Lenses v. Small Lenses.**

There are two advantages claimed for a large lens—first, that it will give more light; and second, that it will give a flatter field. I may explain by this term "flatter field" to those who are not acquainted with it,
that it means that the picture will be sharper, or better defined, over the entire surface.

The reason for the first advantage is that the cone of light which the objective lens will be larger in diameter at the place where it first meets the lens; and the reason for the second advantage is that the curvature of the lens being less, the picture would be naturally sharper. The ordinary \( \frac{1}{2} \) size tube, that has been in use for years upon lanterns, has a diameter of about one and five-eighths of an inch: I mean the back lens has that diameter; the focus of this lens is varied from 3\( \text{in.} \) to 4\( \text{in.} \), consequently it has been placed at either of these distances, which we call its focal length from the picture.

Now the cone of light that is received from the condensing lens upon this back lens has been in length about six inches, depending a great deal in its length upon the focus of the condensing lenses, although not varying more than about 2\( \text{in.} \); consequently it follows that when a cone of such length is received from a condensing lens of from 3\( \text{in.} \) to 4\( \text{in.} \) in diameter, on an objective lens having a focal length of from 3\( \text{in.} \) to 4\( \text{in.} \), it will receive upon its back lens that cone at a point in its length where it will be larger in diameter than the diameter of the back lens; consequently all that portion of the cone which is greater in diameter than the lens itself will fall outside of the lens and be lost on the brass work of the mountings. Now if it is necessary for certain kind of work to have a lens of just this focal length of from 3\( \text{in.} \) to 4\( \text{in.} \), that means if you want a picture of a certain size at a certain distance that only this power lens will make, we should have, in order to get all the light that the lamp and condensing lenses will give, a lens larger in diameter—as much larger as the cone of light is larger than the \( \frac{1}{2} \) size lens just spoken of. In fact it should be somewhat larger still. This explains why, with a larger diameter lens, we get more light. Now those lenses that have a long focus are usually made larger in diameter. Recently makers of magic lanterns have been having their short focus lenses made larger in diameter to gain the advantages just spoken of. Increasing the diameter of the lens and maintaining the same curvature will not alter the quality of the lens at all in reference to its flatness of field. This can be only accomplished by reducing the curvature and consequently increasing the length of its focus, and the result of this is reducing its power. We have found that the half size objective will make a better defined picture than the quarter, because the curvature is less, and we have found that the 4-4 tubes will make a still better one for the reason that its curvature is much smaller than the diameter of either of the glasses through which it passes. Now why cannot the lenses be cut down in diameter nearly to that of the cone of light? This would reduce the bulk considerably and consequently the weight.

While upon this subject of reduction of weight and bulk we think also that the mountings are unusually heavy. The front tube, which carries the cap, is much larger in diameter than is at all necessary for lantern work. It could not only be reduced in diameter, but also in depth; in fact, the whole shape and construction of the tube could be altered to great advantage. It seems to have been merely copied from the camera tube without regard to its utility as a lantern lens.

Returning to the position of the objective lens in the cone of light, we would call attention to the fact that the medium-long and long focus lenses necessarily occupy a place in the cone of light, which is further away from the condenser than that occupied by the \( \frac{1}{2} \) size tube, and consequently if the objective lens is not of an extremely long focus it will be nearer the apex of the cone, thus combining the two advantages of a less curvature of glass and a glass whose diameter is much greater than the cone received, and this is why the larger lens gives a much brighter and much flatter field.

Those who have used the two extremes, the 1-4 and the 4-4 tubes, will have noticed a peculiarity in focusing their pictures on the screen. With the 1-4 size tube they can quickly focus, because the movement of the rack will be comparatively long; while when they have been using the 4-4 tube the movement of the rack is very short, the result on the screen not being so decided. I do not know whether I can make myself exactly plain to those who have not appreciated this, but the moment you touch the rack movement of the 1-4 size tube there is an immediate change upon the screen of the focus of the picture, while with the 4-4 tube the change is not nearly so apparent. — The Exhibitor.

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To Prevent Softening of Negative Films in Hot Weather.

MR. BACHRACH, in a communication to Wilson's Photographic Magazine, says: — "At this season of the year, on extremely hot, sultry days, gelatine films are sometimes difficult to handle in the absence of ice or cold water, and they often become very soft in the developing solution. A perfect cure for this will be found in the addition of about half-an-ounce of a solution of sulphate of magnesium (of a strength of one ounce to eight ounces of water) to each pint of developer. It is especially useful with eikonogen, and is perfectly inert, having no deleterious effect whatever. It acts almost as energetically as alum, and has none of the objectionable qualities of the latter. With pyro developer I have found the same quantity of a saturated solution of bichloride of mercury to answer the same purpose, but with eikonogen I prefer the sulphate of magnesium. It leaves the film as firm as in cold weather, and ice or cold water can be entirely dispensed with. I still adhere to eikonogen for portraiture."
Editorial Table.

Mr. W. J. Chadwick, of St. Mary's-street, Manchester, has sent us one of his Eclipse carriers. This carrier, when used with a single lantern, gives a very pleasant effect upon the screen, an opaque shutter sliding over the disc at the time of changing the picture. The motion of changing the slide and also closing the shutter is conveyed by pushing the end of a wooden strip, and so simple is the arrangement that it is next to impossible for it to get out of order.

The carrier consists of a frame, through which the slides are placed, and in front of the groove carrying the slides is another groove, in which travels a thin strip of wood, which acts as a shutter. When the slide is to be changed it is merely set into its groove, and the end of the shutter pushed forward. This shutter—as soon as it has covered the slide which has just been presented upon the screen—by means of an arm attached, conveys the new picture to its exact place, and the withdrawal of the shutter exhibits the next slide. The change can, when desired, be made with great rapidity.

Bolas's Photographic Annual, published by Hampton, Judd and Co., 14, Duke-street, Adelphi, W.C., is to hand. It contains upwards of twenty interesting and original articles, and also numerous photographic hints, which will prove useful. This Annual, which sells at sixpence, contains in all eighty-six pages of matter.

Light for the Lecturer's Desk.

As a lanternist of some considerable time I have often bethought myself of the most convenient method of obtaining the necessary illumination for the lecturer to read his notes during a lantern entertainment, and as the gas arrangements at our weekly lecture hall are such that the source of supply of house gas has to be conveyed near where the desk is situated, I have lately used this instead of an oil lamp, which seems to be the orthodox illuminant. The means of making a connection for this purpose are so simple that a few words will suffice.

The rubber piping conveying the supply is cut and again connected by slipping the ends over a metal T-piece, which permits of another piece of piping being sprung on to connect with the desk, which, of course, has a necessary shade so as to prevent illumination when it is not required.

Various means of shading may be adopted, but as these are so simply carried out, I merely throw out the suggestion of employing gas for the purpose mentioned, leaving the general details to those using it.

In halls where the screen, lantern, and desk are fixed points, and are used periodically under the same conditions, gas illumination would in the long run be found most convenient.

Illustrations are becoming sine qua non if a book is to sell now-a-days. The knowledge of that fact cannot fail to have influence with the public—G. Lindsay Johnson.

Correspondence.

British Photographic Union.

[To the Editor.]

SIR,—I take this opportunity of explaining the position of the above proposed organisation to those who are awaiting practical results from the organising meeting of the 16th inst. At that meeting it was agreed that union is absolutely necessary, but that it is impossible until we can secure the assistance of men who have nothing to fear from employers, and who have enough time and money to do the active work of organisation in London. Thus the proposal is effectively blocked, for all our adherents in town are workmen who dare not risk their employment for the sake of this work; and I live so far from London that I could do nothing outside correspondence and an occasional visit to some previously organised meeting. Our friends who have been waiting for a fully-fledged union to hatch itself without heat, will have to wait a little longer; but the main recommendation of the meeting can be put in force almost at once. It is that we should start, as a preliminary step, on the registration of workmen of genuine merit, and their supply to only "fair" employers; coupled with a crusade against "rabbit-hutch" cut-throats and sweaters, purloiners and detainers of specimens, and fraudulent apprentice-hunters; this movement to be effected by a practical boycott regulated by the establishment of a "black list" of both employers and workmen who are proved to be a disgrace to this trade.

The initiatory difficulties of a purely unionistic organisation are insuperable at present, as the usual complicated central offices and bodies all depend on the individual pluck, ability, and steadfastness of the officials in charge. It would be useless for us to start the union with less than a hundred members and four or five organising officials; but a scheme was proposed and adopted by a majority of the meeting, which can commence existence profitably with one adherent, and will not need elaborate organisation; and its expansion to a membership of a hundred or a thousand before amalgamation in an ordinary trade union will be a matter of a year or two. After a short correspondence with the proposer of the scheme, it will be announced in all the journals for discussion, and submitted for support to the Photographic Club, or some such institution, by which means we are likely to secure the assistance of a few well-to-do and disinterested men favourable to the idea of the protection of the workman.

The formation of the entire trade union is deferred to such time as our London sympathisers can produce some workman or friend of the operative photographer with sufficient pluck and ability in him to stir photographic London up to organisation, and the maintenance by money and attendance of the branches and offices. The stop-gap scheme of which I speak hinges itself on the first point of our programme: the registration and supply of workmen; and will soon attract to itself a useful working body of competent men who will form the nucleus of the union in London. Even now, if any names are obtained of men willing to do the work of organising in London, I shall be very pleased to start them on the good work in the proper way.—Yours, &c.,

Arthur G. Field.

Another New Light.

[To the Editor.]

Dear Sir,—I intend to introduce this coming season an improved oxy-sulphuretum jet, giving double the light of the old form. Its special feature will be its simplicity of working, as it dispenses with coal-gas, and will run for an hour without the slightest attention, not even to turn the lime. It will be
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suitable for dissolving lanterns. The power of the light is about 300 candles, hence it cannot compete in brilliancy with the warm-air saturator, which is capable of producing 1,000 candle-power; but it is likely to be preferred by some lecturers who work their own lanterns, and do not require exceptional light-power.—Yours faithfully, A. W. Scott.

Ashcombe-road, Weston-super-Mare.

SCREENS.

[To the Editor.]

Dear Sir,—I am looking forward to your description of Chadwick's "Eclipse" Carrier in next month's. Would it be trespassing too much on your kindness to give me some instructions respecting the making of an opaque lantern sheet (paper faced), such as is described on page 20, vol. I.?

What is the best material to use? What sort of white paper should I ask for? I deal with a paper manufacturer. Should the back be covered with ordinary brown paper? What is the best thing to use for sticking the paper to the calico? Should plain paste be used, or should size be mixed with it? If the front surface got dirty, what would be the means for cleaning it? I should want a sheet about 8 ft. square, for parlour use, to roll up map fashion.

I hope you will not think me troublesome in asking so many questions, but if you can find time to do so, I should feel grateful if you would answer them in the pages of your exceedingly interesting journal. Thanking you in anticipation,—Yours very truly,

HERBERT WORTH.

Totnes, July 16, 1890.

[Calico will answer the purpose if covered with a stout surfaced paper on the front only; this may be secured with paperhangers' paste. If you are inexperienced in this kind of work, perhaps the best way would be to get a paperhanger to put the paper on the fabric, as great care must be taken to avoid creases. Dirty marks on the face may be removed by rubbing with a piece of stale bread.—Ed.]

HEADQUARTERS OF THE LANTERN SOCIETY.

[To the Editor.]

Sir,—I am glad to be able to give you some definite news about our rooms for the Lantern Society. We have obtained the use of the rooms belonging to the Royal Medical and Chirurgical Society, at 20, Hanover-square, and, through the courtesy of their committee, at a very moderate rental.

The rooms are centrally situated, and are occupied at various times for meetings by several societies, amongst them being the Royal Microscopical, and the Quenett Club.

Our evenings for meeting will be the second and fourth Mondays in each month, at 8.30 p.m., commencing in October.

Will you also say that ladies are eligible for membership? We have had two or three applications from them. There may be more who would like to join if they knew that they could.—Yours very truly,

CHARLES E. GLADSTONE
6, Bolton-street, W.
Hon. Sec. Lantern Soc.

AMERICAN CONVENTION.—The Photographic Association of America will hold its annual convention from August 12 to 15, at Washington, D.C. The monument recently erected in memory of Daguerre will be unveiled.

Society Meetings.

EAST DULWICH AND PECKHAM PHOTOGRAPHIC SOCIETY.—At the ordinary meeting of the society on 18th ult., the president (Mr. F. W. Edwards) in the chair, after disposal of the routine business, Mr. H. Banks exhibited a Scott's warm bath saturator (lent by the Editor of The Optical Magic Lantern Journal and Photographic Enlarger), by means of which the use of hydrogen gas for limelight purposes is entirely dispensed with. Some brilliant pictures were thrown on the screen by the aid of a powerful optical lantern, and the result was deemed to be highly satisfactory and a great improvement on the ordinary oxy-hydrogen light.

WALTON PHOTOGRAPHIC SOCIETY.—An open night was held, on the 17th ult., at the Liverpool Exhibition. Mr. H. E. Burn described some interesting slides, illustrative of a trip through the Highlands, and Mr. Tyerman presided at the lantern. Several miscellaneous slides, the work of members, were also projected upon the screen.

SHEFFIELD LANTERN SOCIETY.—At a general meeting on the 16th ult., arrangements were made for excursions during the remainder of the season. Next winter the competition for the president's prize will take place.

HOLBORN CAMERA CLUB.—The last meeting was held on the 18th ult., Mr. Knights in the chair. Mr. Cobb read a paper on the difficulties of mounting. He thought it was a rather important matter, which was to a certain extent overlooked in the various photographic papers. Now and then he found it would turn up, but in a very haphazard sort of way. With regard to the mountant, he did not recommend the use of those advertised by various firms, as no preparation would keep good for all time, but to use starch, and make it fresh each time it was required. After removing the prints from the water he laid them face downwards on a piece of glass, and with an ordinary brush laid on the mountant. Care should be taken not to put too much on the back of the print, as the excess will ooze out at the side, and disfigure the mount, especially if it is an enamelled one. With regard to getting the picture in position on the mount, he recommended, before wetting the print to lay it on the mount, and mark the corners with a pencil. Mr. Cobb mounted several prints on various descriptions of mounts, and in answer to a question said that he did not use a squeegee, but always had two or three thicknesses of blotting paper, and rubbed firmly with the open hand. A vote of thanks to Mr. Cobb terminated the meeting.

DENSIBURY.—The monthly meeting was held on July 10th, Mr. T. G. Beaumont in the chair. Mr. E. Scargill brought one of the postal photographic albums for inspection. Several members brought negatives, prints, and transparencies, which were inspected. A discussion anent the development of lantern slides was raised, when it was ultimately decided to have a demonstration at the next meeting. A negative will be selected, and those members wishing to compete are to expose a plate each, and use any developer they wish, the results to be compared at the next meeting.

HACKNEY PHOTOGRAPHIC SOCIETY.—The subjects for August are as follows:—August 14—Demonstration, "Intensifying, Reduction, and Varnishing."—Mr. R. Beckett.
August 16—Excursion to Carshalton. (Train from London Bridge at 2.18.) August 28—"Portraiture and Re-touching."—Mr. J. Hubert.
Selections.

The diameter of a lantern condenser should be not less than the diagonal of a clear space within the slides. A 3½in. condenser is large enough for a slide of standard size with circular opening, but for an oblong opening, a condenser of four inches in diameter is necessary.—Andrew Pringle.

My advice to amateurs respecting plates is, not to hop from one make to another, but to select a make of plates with a thick evenly coated film, rich in silver, and of medium quickness, and when such a make has been found—to use an Americanism—"freeze to it."—T. Stevenson.

If, when developing a lantern plate with hydroquinone, a little yellowness result, it can be easily removed by a treatment with a solution of cyanide of potassium of the following strength:—Cyanide, two drams; water, one pint.—W. A. Kibbler.

An album affords amusement for one or two only, a public exhibition to the many; but a good deal of the interest derived from the latter is lost from the fatigue of walking round the room with the back of your head at an acute angle to your spine, and the frequently exceedingly bad lighting of the exhibits. All this is got rid of by using the optical lantern.—D. Wardrop.

The things that have helped to make the lantern so much more popular during the last few years are, to my mind—1st, the simplification of photographic work by the introduction of dry plates; 2nd, the improvements in apparatus, by means of which perfect manipulation and registration can be secured; 3rd, the compressed gas system being all that can be desired since Beard's small automatic regulators have been invented.—G. R. Baker.

In my experience of a number of years in the manufacture of oxygen for the limelight and other scientific purposes, I have become convinced that the majority of explosions are the result of a sudden plugging of the neck of the retort and outlet pipe with the binoxide and decomposed chlorate. There are many cameras now to be had which take small negatives suitable for lantern work; these are so compact and self-contained that they require no stand, focussing cloth, or other adjunct.—T. C. Hepworth.

All hand cameras should be practically tested before being issued to the public.—Charles Winter.

The quality of the glass for lantern pictures is a matter of considerable importance, as a slight scratch or air bell would, when magnified on the screen, be very objectionable.—Albert W. Scott.

The eye knows not how to see until it is taught; it will look upon objects without seeing them—senseless and vague. It must be taught what and how to appreciate.—C. L. Imax.

When lantern slides are varnished with collodion, a great brilliancy is given to the picture.—Geo. A. Nelson.

There is a peculiarity about certain plates manufactured for the purpose of making lantern slides. The image, which before fixing appears very thin, acquires great density after fixing. When one is prepared for it, this is very liable to mislead.—G. W. Atkins.

Notes and Queries.

M. J.—You evidently had ether in the saturator than it was capable of taking up. The saturator should be drained so as to allow any excess to escape.

Ch. Hutchinson.—Instead of cutting the wicks so much as you mention, try rubbing the charred surface with a piece of paper; this should enable you to obtain a flame that is not "forked."

D. T.—The intensity of the light would in both cases be equal.

H. Evans.—We may have something to say upon the subject in our September issue.

Hand Camera.—Judging by the print you enclosed, the picture is slightly out of focus. If you call the maker's attention to it they will rectify it. The camera mentioned being a "fixed focus" one, you cannot alter it in the manner you explain.

C. G.—A is nearly twice the price of B; E would perhaps answer your purpose best.

Cyanide.—Replied by letter. Perhaps the new form of oxy-calcium jet mentioned in this number would suit your requirements at the altitude you speak of.

J. M. Hick.—We have communicated with the makers, and are informed that the fault was remedied some months ago. Perhaps the lot you obtained were made previous to the rectification. We have found them greatly improved of late.

Inquirer (Ryde) writes:—"Will you or any of your readers kindly inform me if it is a safe thing to use an oxygen cylinder to supply gas to an ether saturator, using a regulator to the cylinder?" Reply.—Yes.

G. A.—In using Hydroquinone for the development of the Maswood lantern plate, yellow stain may be caused by: (1) Using too strong a formula; (2) if the plate be removed from the fixer and exposed to the atmosphere before being quite fixed; (3) by using the same developing solution repeatedly for a number of plates; (4) if Hydroquinone be kept in solution with sulphite of soda for a long time it will stain badly.

R.—We have not heard that the camera has yet been placed upon the market.

Louis Whitney.—Communicate with Taylor, Taylor, and Hobson, of Leicester; they have a machine for engraving which would doubtless answer your purpose. We do not know the price.

Henry Hunter writes: Enclosed please find a half plate negative. Kindly mark out the best piece from which can be obtained for contact slides. We shall be pleased to see you when you come to town.

H. J. asks:—What is a photo-crayon enlargement? Is it an enlargement worked up in crayon? Your reply in "Notes and Queries" will be esteemed. Reply.—Photo-creas are enlargements made from a negative upon a collodionized plate, the deepest parts of the shadows of which must be very thin. This picture is backed by paper, which has previously been touched so as to catch a slight diologic. The effects thus produced are very beautiful and stand well.

John S. Benham.—We have not heard that the gentleman has returned from America, but as we understand he has several engagements in this country for the autumn and winter, we may expect him shortly.

Samuel Hedges writes: A foreign formula contains the following—1 c.c. Will you kindly help me by saying in your next what it means in English? Reply.—1 c.c. means one cubic centimetre, and is equal to 17 minims, or drops.
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Dear Sirs,—My satisfaction with your Lantern Plates is unbounded. Their quality is so consummately excellent that with the quinol developer, a tyro need not fail in getting good slides. Add two gross lanterns to my order in your hands for other plates.

To R. W. Thomas & Co.

Yours faithfully,

WILLIAM ADOCK.

Rayapuram, Madras. 27th July, 1889.

Dear Sirs.—Mr. F. York was kind enough to send me a sample dozen of your Lantern Plates for trial, and I have much pleasure in stating that in my opinion they are the most perfect Plates of their kind.

I do not think you exaggerate in the least in saying that Collodio-Bromide is superseded, for when one can get such perfect Plates for 1s. a dozen, no one would think of going to the trouble of making Collodion Emulsion with its uncertainty and worry.

I spoil the first of the dozen purposely by giving different exposures on the two halves of the Plate to ascertain their rapidity, but after that I got eleven very beautiful transparencies with the remainder of the dozen, and since that I have used many dozens of your plates with the most gratifying success. I have had some thirty dozen out, and find they keep exceedingly well in this climate, for I used some that had been in a cardboard box some four months and they were perfect as at first.


Yours faithfully,

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