**CINEMATOGRAPH FILMS OF CHINA AND THE EAST:**

Being part of Series recently taken by a Skilled Operator with E. F. G. HATCH, Esq., M.P., during his Tour in China, Japan, Corea, Malay, Aden, Canada, British Columbia, etc.

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**THE C.I.V. RECEPTION.**

Taken by permission from the steps of St. Paul's Cathedral

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**HARRISON & CO., Sole Publishers,**

13, BERNERS STREET, LONDON, W.

---

**IMPORTANT TO LIMELIGHT USERS!**

**BORLAND’S PATENT SCISSORS ARC LAMPS FOR...**

Direct and Alternating Currents.

Made in Three Types

Hand Feeding.

Self-Striking & Hand Feeding.

The "Dot." The only automatic Arc Lamp in the market which fits all ordinary Optical Lanterns on the limelight tray without any alterations.


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**THE WELL-KNOWN PICTURES OF**

Dürer, Van Dyck, Hals, Holbein, Mich. Angelo Millet, Murillo, Raphael, Rembrandt, Rubens, Teniers, Velasquez, Da Vinci, Watteau, and MANY OTHERS.

**Sole Agent:**

F. J. BORLAND,

Sheepscar Grove, LEEDS.

Please mention this Journal when corresponding with Advertisers.
Vol. 11.—No. 138. NOVEMBER, 1900. Price 2d., Post-free 3d.

CONTENTS.

NOTES.

The Optical Magic Lantern Journal and Photographic Enlarger is issued on the 1st of every month, price Two Pence, and may be obtained from all Newsvendors, Railway News Stalls, Photographic Dealers, or from the Publishers, at the following rates, post free:—

12 months, 3/-.
United States, 75 cents.

EXCHANGE Column, General Wants, &c. (not Trade)—First 20 words, 6d.; and for every 5 additional words, 1d.

SMALL ADVERTISEMENTS must reach the office not later than the first post on the 24th of each month. All cheques and postal orders to be made payable to the Magic Lantern Journal Company, Limited.

EDITORIAL communications must be addressed, J. HAY TAYLOR, Advertisements and business communications to THE MAGIC LANTERN JOURNAL COMPANY, Limited, 9, Garthusian Street, London, E.C.

American Agents:—The International News Co., 83 and 85, Duane Street, New York City.

NOTICES.

The Traill Taylor Memorial Lecture.—The annual lecture in memory of the late Mr. J. Traill Taylor will be given by Mr. F. E. Ives on the 16th inst., at the headquarters of the Royal Photographic Society, 66, Russell Square, W.C. The subject will be "The Optics of Trichromatic Photography." Many illustrations and demonstrations of an interesting kind will accompany the lecture. This lecture is open to the public free.

Secco Films.—The firm controlling this film (39, Lombard Street, E.C.) is arranging with its demonstrators to give a series of lectures before the principal photographic societies. Secretaries should place themselves in communication with this firm without delay.

The Cinematograph at Newcastle-on-Tyne.—A sub-committee of the Newcastle Town Improvement Committee are drawing up regulations for the control of public cinematographic exhibitions. This step has been brought about by the fire which occurred at the Town Hall at a cinematograph exhibition some months ago.
Acetylene Explosion.—An explosion of acetylene gas occurred at Lyons on the 11th ult. The building was shattered, and several occupants had to be taken out through the windows. As we have often stated, acetylene explosions are invariably the result of carelessness.

Waterproof Lantern Screen Bag.—A correspondent writes:—"I use an opaque screen wound on a roller, and for the purpose of keeping it clean and dry when going about the country, I had been in the habit of putting it in a long narrow box. Finding this meant considerable extra weight, I now use a cloth bag open at the end; this, of course, I have waterproofed. For the benefit of those who wish to do likewise, they may be interested to know that the cloth can be rendered waterproof as follows:—Take say half an ounce each of powdered alum and sugar of lead and dissolve them in a gallon of rain water. When dissolved pour off the clear liquid on top and soak the cloth for about 30 hours, then hang up to dry."

Limelight Slander.—A curious case is to be heard shortly on the Continent, a heavy claim being laid for damages. A lady and gentleman were out walking, and taking a seat in a rustic part embraced each other. From a neighbouring house, where many friends were assembled, a beam of limelight was suddenly turned upon the couple aforementioned. The following day, owing to the scandal created, the gentleman was discharged from his situation. Hence the cause of the wielder of the limelight being sued for damages for scandal.

Tinted Glasses.—The effect of many projected photographs can be considerably heightened by using a judicious selection of tinted glasses when exhibiting the lantern. Thus a slight pink for sunlight effects, and a bluish tint for snow views or other photographs to give an evening effect. The glasses can be used either as cover glasses, bound up with the slide, or inserted near the slide or the lens.

Lights from Venus's Rays.—A New York astronomer has succeeded in taking a photograph by means of the rays of Venus. He selected the darkest hour of the night after the planet had risen, and carefully excluded all light except that which came from this single star through the open shutter of the observatory dome. He found the light much stronger than he had anticipated, and will continue his experiments with other planets of less brilliancy.

Biographo - Religioso.—The following occurs in the advertisement of an Australian biograph showman:—"It is the expressed wish of His Holiness that those who see His Benediction in the moving pictures of the biograph and receive it in proper spirit should participate in the happiness, in the glory, and in the advantages of it as if it was bestowed upon them personally."

Fake Cinematograph Pictures.—This winter fake cinematograph pictures will probably become very popular. Almost any impossible feats can be seen by the use of fake films, but in arranging, cutting up, and rejoining the negatives a tremendous amount of labour and skill is involved. A particularly good subject is one in which a man enters with a cornet in one hand and a chair in the other. He stands behind the chair, and by the act of waving his right hand causes several chairs to range themselves towards that side; whilst a similar movement of the left arm causes others to appear on the left hand. The man with the cornet then sits down on the end chair, but immediately rises up and sits on the next chair, and so on throughout the line of chairs. Strange to say, he leaves "his double" on each chair. Here we have some eight or ten musicians, who stand up together and play on their cornets. After a time they sit down, and commencing at the end chairs the performer gets up and sits on the knee of his next neighbour, with whom he immediately becomes merged. This is continued until the centre chair contains the consolidated man with a row of empty chairs at either side. Finally, he stands up and waves the odd chairs away, and walks off the stage with his own.

Sanitary Institute Slides.—The Sanitary Institute has collected a large number of sets of lantern slides relating to sanitary arrangements and appliances, which can be lent to members and associates for lecture purposes. A list containing over 500 subjects is available.

War Photographs.—Earl De La Warr, who went to South Africa as special war correspondent of the *Globe*, and afterwards received a commission as Captain in Bethune's Mounted Infantry, is publishing in book form about 250 photographs taken by himself, and which include many exciting incidents and pathetic scenes of the war. The work is now in the hands of the Bexhill Publishing and Printing Company, and will be ready shortly.
NEW LANTERN SLIDES AND APPARATUS

SEASON 1900-1901.

NEW SLIDES.

CHINA AND THE WAR.
DINARD, FRANCE.
TRANSVAAL WAR.
GERMANY.
SOUTH AFRICA.
SWITZERLAND.
PARIS EXHIBITION.
SICILY.
'The Louvre Statuary.' SCRIPTURE SCENES.
BRITISH BIRDS. From Drawings by A. THORNBURG.
CRUISE TO THE BALTIC, DENMARK, SWEDEN, AND NORWAY.
ENGLISH SCENES.
DENTAL.—PHOTOMICROGRAPHS. Morphology and Pathology of the Enamel Embryology of the Teeth, and Bacteriology of the Mouth, &c. By Dr. J. LEON WILLIAMS.
SOUND WAVES. By Prof. R. W. WOODS.
MAGNETIC FORCE.
MAPS. From Longmans' New Atlas.
THE HEART AND ITS INMATES.
HISTORY AND WORK OF THE CHURCH OF ENGLAND TEMPERANCE SOCIETY.
THE BICENTENARY OF THE SOCIETY FOR THE PROPAGATION OF THE GOSPEL.

NEW ETHER SATURATOR, £3.

NEW SUPPLEMENTARY LIST OF SLIDES AND APPARATUS POST FREE ON APPLICATION.

ILLUSTRATED CATALOGUE SIX STAMPS.

NEWTON & CO.,
8, FLEET STREET, LONDON.
The Optical Magic Lantern Journal and Photographic Enlarger.

GENERAL ADVERTISEMENTS.—Continued.

GRAND new effect sets in the finest miniature painting.—Fire in Jewin Street, houses gradually burned down and walls are seen to fall in; The Earthquake at Arica, with startling and realistic effects; The Kremlin, Moscow, with grand effects of illuminations and searchlights; send for lists.—Edmund H. Wilkie, as below.

PARIS Exhibition.—New and original series of novel effect sets; scenes in this wonderful world's show; The Luminous Palace; The Palace of Electricity and Chateau d'Eau, with its marvelous fountains; The Street of Nations and its aspect at night, millions of glow lamps; The Alexander Bridge, with charming effects, etc., all worked up on special photographs from Nature; each picture a gem of artistic skill; send for list.—Edmund H. Wilkie, as below.

A MAGNIFICENT series of 55 photos of the Paris Exhibition, each picture a gem of art, both with regard to technical quality and composition; the series extant; superb definition; these are not trade photos, but special productions, printed on the premises by E. H. Wilkie's skilful assistants; price 1s. each or 10s. per dozen; send for list.—Edmund H. Wilkie, as below.

PARIS Exhibition.—Special series of cheap effect sets to accompany above set; Opera House, Paris, day, night; glow lamps outlining buildings and windows illuminated; Lake in Bois de Boulogne, effect of swans by day, moonrise, and ripple by night; Courtyard Petit Palais, illumination at night by electric lamps; The Grand Palais, day, night, and illumination by electric light; Old Paris and the Seine by day, night, and illumination, moonlight, rippling on water; The Albatross section by day, night, and effect of moon's rays on buildings; Esplanade des Invalides by day, night, and illuminated by moonlight; Rue des Nations, day, night, and effect of lamps, moonlight, and ripple; others will be added; these effects are powerful, striking, and entirely new, and it is proposed to issue them for a short time at an average of 2s. 6d. per slide, 2s. extra where convenient.—Edmund H. Wilkie, as below.

BARR War effect; sets as before; sorties from Lady-smith; naval gun at Ladysmith; Baden-Powell at Mafeking; Buller crossing the Tugela at Potgieter's Drift; signalling with Ladysmith by searchlight.—Edmund H. Wilkie, as below.

EDMUND H. WILKIE desires it to be distinctly understood that these effects are produced by the identical artists who formerly painted the grand dioramic and mechanical effects for which the late Royal Polytechnic was so celebrated; no trouble or expense is spared in their preparation, and at the present time their value to public exhibitors cannot be exaggerated; send for list of effects.—Edmund H. Wilkie, as below.

PHOTOGRAPHS worked up in oil colour, water colour, pure varnish colours, or by the beautiful American process at most reasonable prices; the best work only; slides prepared by photography or painting from negatives, drawings, prints from nature, or from written or verbal description; every class of mechanical movement supplied or invented for special purposes; see testimonials.—Edmund H. Wilkie, as below.

SPECIAL effects for single lanterns.—Edmund H. Wilkie, as below.

CHINA.—A large selection of views showing the China of to-day, together with scenes from the recent battlefields, principally from direct negatives from Nature; send for list.—Edmund H. Wilkie, as below.

BARGAINS in second-hand apparatus and slides; send for list, a quantity of useful slides, some finest quality hand paintings for disposal at less than half cost.—Edmund H. Wilkie, as below.

WONDERFUL genre studies; many prize medals; the finest series of flower studies in existence; beautifully worked up in colours; snow scenes, cloud studies, all in the finest work, at ordinary prices; lists free.—Edmund H. Wilkie, as below.

SOLAR mixed gas high-power jet, the ideal lantern jet, the most powerful and perfect jet yet produced for use in single, bi-unial or triple lanterns; send for illustrated descriptive circular.—Edmund H. Wilkie, as below.

WILKIE'S improved triple and other lanterns, the results of a quarter of a century's practical experience; send for illustrated descriptive pamphlet.—Edmund H. Wilkie, as below.

NOVELTY.—A new box for carrying unframed slides, same size as those usually carrying 45; entirely new principle; carries 75; slides cannot fall or get out of order; no grooves to tear bindings; small, light, compact, nicely finished, stained and varnished, with strap handle for carrying; 5s. 6d. post free; a great convenience.—Edmund H. Wilkie, as below.

WILKIE'S "Solar" flint limes are made with the greatest care, are accurately turned and drilled, and composed of selected magnesian limestone; the finest extant; ordinary size 2s. 9d. per dozen, post free; large size, 1½ inches in diameter, a noble limb, per half dozen, 2s. 3d. post free, packed in air-tight tins; lanternists once using these magnificent limes will use no other.—Edmund H. Wilkie, 114, Maygrove-road, West Hampstead, London.

ARGAIN.—Lawson's latest 1,000 c.p. saturator, new last season, guaranteed perfect, with burner and filler for £2 10s.—G. Hare, Strode Crescent, Sheerness.

FOR sale, Wrench's cinematograph and lantern combined (still the best on the market) and 12 films; all in good condition; best offers.—Rex, 40, Westgate, Burnley.

WANTED, offer for 24 beautiful Scripture slides, good orders can be placed.—Lists, etc., to Slides, c/o Optical Lantern Journal.

BIOKAM outfits for sale cheap, never used, including camera, printer, projector, double film receptacle, four film boxes with winders, printing box, film support, adaptor for lantern, folding tripod, leather case, three large developing trays, revolving developing frame, measure, chemicals, Biokam hand-book, three excellent film subjects, three unexposed films; see description Magic Lantern Journal, April, 1899; worth over £11; what offers?—Littleboy, Penygarr, Wrexham.
New Optical and Lantern Firm.—
Extensive premises are being fitted up at 71, Shaftesbury Avenue, London, as the headquarters of a new firm to be known as Sanders & Crowhurst. Both are energetic gentlemen, well-known in optical circles, and deserve the success which capital, experience, and industry will bring them. We have known both gentlemen for some years, and we feel assured that their patrons will find them particularly painstaking. Mr. H. Armytage Sanders has just severed his connection with Messrs. Watson & Sons, in whose employ he has been for nineteen years. He is very enthusiastic in all matters pertaining to the lantern and its adjuncts, and will preside over that department chiefly, whilst Mr. H. A. Crowhurst, who has also been in the employ of the same firm for a number of years, and who holds the diploma of the Spectacle Makers’ Company, will take in hand the optical department. A very fine sight-testing apparatus is being fitted in a special room on the premises. This new firm has acquired the special West-End agency for Watson’s celebrated cameras and other instruments, also agencies for Messrs. Graystone Bird, C. Reid, York, and other well-known slide makers.

The International Oxygen Generator Syndicate.—A new firm of the above name, with headquarters at 17, Southampton Row, Holborn, W.C., has purchased the British and foreign patents of the Stedman-Brown oxygen generator, and will in future manufacture that apparatus themselves.

Ashton-under-Lyne Photo Exhibition.—The triennial exhibition of this society will be opened on Monday, the 12th inst., and will continue open during the rest of the week. Illustrated lectures are to be given each evening after the opening night, and a musical programme rendered by an efficient band. Full particulars may be obtained from the Hon. Secretary, Mr. Robert T. Marslans, 24, Park Avenue, Ashton-under-Lyne.

The Southsea Amateur Photographic Society.—The Southsea Amateur Photographic Society hold their 13th Annual Exhibition on the 29th, 30th, and 31st January, 1901, at their headquarters, 5, Pembroke Road, Portsmouth. There are to be six open classes with silver and bronze medals, also certificates in each class. Full particulars may be obtained from the Hon. Secretary, Gilbert Wood, 10, Pelham Road, Southsea.

Preaching with a Lantern in Japan.

WITHIN the past seven years I have travelled nearly all over Japan from Sapporo in the North, to Kagoshima in the South, preaching with a lantern. On one tour alone I passed through thirteen towns and reached 22,360 people out of a total population of 188,000. In my early tours it was difficult to collect an audience of adults. The common school lanterns are mostly toys, which afford an evening’s amusement for the children, and the people did not realise that my lanterns were anything different. But one night only was sufficient to show them their mistake, for the men and women always came in large numbers the second night.

There is a lack of large and suitable assembly halls in this country. The largest and most conspicuous buildings are theatres and temples. A few eating houses provide large rooms for dinner parties, but the ceilings are low, and otherwise the places are unsuitable for lecture purposes, although I have spoken in many of them. If one wishes to reach the largest number of people he is shut up to the theatre. But these places are not the magnificent buildings which one sees in Western lands, whose acoustic proportions are perfect, and whose galleries curve so artistically and slope so evenly that the back seat is as good as the front, furnished also with folding plush chairs. The only thing which the foreign and Japanese theatre has in common is the spacious stage. Outside of a few of the largest cities, the buildings are unfit to rank even with a well constructed American barn. The roof timbers are undressed, the paper windows are lacking or broken; instead of seats or even mats, woven straw is spread over the rough board or upon the solid earth. A photograph may give the shape, but it cannot reveal the wretched construction of these buildings. But they are spacious, holding from 500 to 5,000 people, and therefore for my purposes more suitable than any other.

The better class of people in Japan, especially the women, do not attend theatrical performances; but they come in large numbers

[* The Rev. George Allchin, of Osaka, who wrote the following for the Missionary Herald, U.S.A., expresses the hope that it will be of interest to the readers of the Optical Magic Lantern Journal, of which Journal he is a constant reader.—Ed.]
to the theatre to see the "shadow pictures." These meetings are not solely preaching services. The subject of my sermon is always announced and the fact impressed upon all that the chief purpose of these gatherings is to tell about Christ. But in order to allure as many as possible, and especially to draw a class, who under no other circumstances would listen to a word about Christianity, I entertain them for about half-an-hour with moving ships, dissolving views, chromatropes and scenery. This also helps to forestall any disturbance which men of the baser sort might plan for. In the educational centres the student class is much in evidence, and their exuberance of feelings is allowed full utterance while these preliminary pictures are being shown. Any disposition to rowdism is always transformed during this half hour into a feeling sympathetic with the object of the meeting. When sympathy has been awakened, I quietly pass on to the pictures which illustrate the

**topic of the evening.**

On one occasion only has any attempt been made, under the cover of the darkness, to break up the meeting. It is a marvel to everyone that such crowds of people remain so quiet and attentive in theatres where there is ordinarily so much noise and confusion.

The object being to attract and instruct the masses whose religious ideas are perverted by heredity, education and environment, the subjects of the sermons are selected with great care. The Japanese are steeped either in superstition or atheism. To tell such a people about the miracles of Christ and to give them their first ideas of Christianity through such a medium is not the most favourable way to approach them. Since it is true that about one-third of Christ's sayings which have been preserved to us consists of parables, we have a hint as to the best form in which to present the truths of God to those who are strangers to it. The parables of the Prodigal Son and the Good Samaritan have formed my best topics, because they convey lessons unlimited by nationality, and their teaching is as broad as the earth and universal as humanity. The former is especially instructive, because the pictures are drawn from Japanese life and the lesson adapted to their circumstances. Two suitable tracts on these topics are sold at the door for one cent each, and the reading of these helps to deepen the impressions made by the pictures and the sermon.

Next to the parables, religious biography furnishes fruitful subject matter. The lives of Paul, Joseph, and Bunyan show the power of Christianity to elevate men. A special feature which I am fortunately able to introduce is the singing of a hymn or two at a fitting time in the sermon. The people listen with breathless attention to the singing, while following the words thrown upon the screen. One stolid looking coolie once said that the song alone was "worth the whole trouble of going to the meeting and getting in." His closing words have a special meaning, for it often occurs that the doors are closed after the place is comfortably filled and scores refused admission. The "Prodigal Son lecture" ran three nights in one city, and closed up the other theatres for lack of an audience. Such crowds may not indicate any widespread yearning to hear the Gospel, but they are the missionary's opportunity. It would be a most serious blunder to fritter away this opportunity by merely showing pictures. The better classes, especially officials, are habitually late and often arrive after the mechanical views have been shown and the sermon already commenced. Often am I requested, under these circumstances, to repeat the preliminary pictures at the close. But this request is always declined. The chief object of my visit is to stir the conscience and to open the mind to Christian truth, and therefore the people must be dismissed with the sound of the Gospel ringing in their ears. Everything is planned to produce and fix

**serious impressions.**

The people, most of them, have come for the pictures and not the sermon; but they must leave with the "still small voice" speaking to their hearts.

No efforts on my part, nor time, nor expense are spared to procure the best pictures and to make the sermon as complete as possible; and the missionaries and Christians into whose fields I go exert themselves to the utmost to secure a full house, whether the meeting be held in a church, school-house, private dwelling, clubroom or theatre. Only on one occasion did I consent, much against my judgment, to the sale of tickets. In no other way could the large fee for the use of the theatre in that city be met. Strange were my feelings that night as I faced an audience of 800 non-Christian people who had paid to hear the Gospel. The usual method is to distribute free tickets plentifully among the people whom it is desirable to reach.

Physically, touring with a lantern is the hardest work I ever performed. There are the ordinary discomforts of a touring missionary who lives in Japanese hotels, upon native food,
M. R. W. C. HUGHES, the great specialist in optical projection; over 30 years' experience, and over 20 patents for improvements connected with lantern work; the inventor of the most perfect optical lantern effects extant, which have been supplied to the most eminent amateur and professional exhibitors. Professor Malden, Canon Scott, Dr. H. Gratian-Guinness, Madame Patti, Colin Docwra, Esq., Capt. Charles Reade, R.N., Chevalier, Stuart Cumberland. Hundreds of the Clergy all over the world; also the late Polytechnic, etc., etc.

R. HUGHES' Docwra Malden and Grand Triples and Bi-unials are superb instruments, and the effects unequalled. The marvellous Pamphengos still holds its own against the commercial productions. Gives beautiful 12 feet pictures. The £6 6s. reduced to £4 4s.; the £4 4s. to £3 10s. If you want a really high-class technical instrument, consult Mr. Hughes; if you want a good cheap lantern or cinematograph, see Mr. Hughes' grand show of instruments, etc., at the show rooms and art gallery, Brewer House, 82, Mortimer-road, Kingsland, N. London.

R. HUGHES has produced the grandest mechanical effects ever shown upon a screen. Over 600 to be actually seen in stock, at all prices; the best value in quality and result. Among the most recent are:

- **Boer war effects.** Sorties from Ladysmith; Bulter crossing the Tugela; Ladysmith signalling by searchlight; Naval gun at Ladysmith; Mafeking, Baden Powell, Battle of Dundee, etc.
- **XN. RAND effects.** —Great fire in Jewin-street, Earthquake at Arica, Life-boat rescue, Fairy glen and lake, The ship on fire, special; and over 400 others. Executed by the only artists who painted a number of the mechanical effects shown years ago. Mr. Hughes has hundreds of pounds of this class of work, which may never be obtained again; and best of all, they are on view. Hundreds of testimonials. Grandly illustrated catalogues, 180 choice engravings, 6d.; smaller illustrated catalogues, 100 engravings, 4d.

**Paris Exhibition.**—The finest of any yet published, 1s. plain; coloured, 1s. 6d.; very artistic effects of ditto, 3s. 6d. each.

**China.**—A fine new series from direct negatives.

**Boer War.**—Over 200 subjects; coloured, 1s. 6d.; artistically coloured, 3s. 6d.; litho series of same, 2s. 6d. per box of 12; five lectures in all.

**To Exhibitions.**—Hughes' telescopic brass fronted bi-unial, three sets of lenses, £13 13s.; the Universal 4-wick lantern, £18 6d. Have no hesitation. If you want value, and want to see a fine collection, visit Brewer House. All kinds of effects made and invented by W. C. Hughes, Specialist, Brewer House, 82, Mortimer-road, Kingsland, N.

**Cinematograph** for sale, only used one season, £6 only; complete; one film given.—Baker, 86, Fisherton-street, Salisbury.

**Mr. Ernest C. Garbutt,** Lanternist and cinematographer (lanternist to the Gilchrist Educational Trust), has a few vacant dates in November and December; particulars and terms (new address).—2, Sidlaw-terrace, Roundhay-road, Leeds.


**Cheap as Plates Simple as a Photographic Plate to use Flat Films and Dayrolls GLASSOLINE Price List Free From all Dealers or from The Thornton Film Co., Ltd. Altrincham, Cheshire**

**Improved Limelight Jets.**

J. OTTWAY & SON, (Established 1820)

Makers of all kinds of Optical Lanterns and Fittings.

Our **Animatoscope** is equal to anything on the market, giving a Clear and Steady Picture.

**Our No. 2 similar to above without Cut-off. 35s.—** The very best Jet on the market. Invaluable to Lecturers, as it enables the operator to turn down Gases after adjusted, and turn up Light to full volume, without altering either of the gases.

J. OTTWAY & SON, 178, St. John Street Road, Clerkenwell, E.C.
Each Magic Lantern is efficient for Exhibitions. The Lens gives crisp definition, being a superior Achromatic Photographic Combination with rack and pinion. It is fitted to a telescopic lengthening tube, so gaining increased focal accommodation. The condenser is composed of two plano-convex lenses of 4 inches diameter. The refulgent lamp has three wicks, yielding a brilliantly illuminated picture. Each is in box.

We supply Lanterns of Every Variety and Every Accessory for Lanternists.

PERKEN, SON & CO.: LIMITED, 99, HATTON GARDEN, LONDON.

Lantern Photographs of Various Countries and Peoples. Plain, 1/-; Coloured, 1/6.
for a month or more on a stretch. In addition there is the labour of moving my apparatus to a new town nearly every day and hanging the curtain in a strange theatre, hall, or church. Only those who have done much of such work know how this feat taxes one's ingenuity to the utmost. It is seldom that I return to my hotel after an evening service before 11 p.m. Such is the routine nearly every day and for weeks at a time, and the wear and tear of the apparatus is small compared with the fatigue and physical strain on myself and all associated with me in the work.

From the time I began this special work, nearly seven years ago, it has been my privilege to hold 357 lantern meetings and to speak to 157,100 people. If I had the time and space I could tell many touching stories of prodigal sons confessing their sins, backsliders reclaimed, decisions for Christ brought to a point after months of procrastination, and awakened desires— to read the Bible and to live a better life.

The slide for this month is that of a swinging boat—an inseparable appendage to all festive gatherings usually honoured by the presence of 'Enrietta and 'Arry—and two of these gentry are apparently enjoying themselves in it, and meanwhile earning their ride by their individual exertions.

As the boat swings to and fro, the occupants in turn each do their share of pulling the rope; the motive power is thus, to all appearances, supplied by the riders themselves, and not (as it is in reality) by a hidden mechanism.

The construction of this slide is very simple, and the effect, as seen upon the screen, is excellent. The ordinary framework and two glasses are employed; one being fixed and the other movable. Upon the fixed glass x, Fig. IV., is glued the oblong block or beam f. A front view of this block is shown in Fig. III. The boat and rods v connecting it with the beam are cut out of one piece of tin, as shown in Fig. I. Three holes, b, c, and d, are drilled in it, and at the extreme end a small slot a is cut.

The riders, g and j (Fig. III.)—g, of course representing 'Enrietta and 'Arry—are cut out of tin or thin metal and pivoted at the points c and p to the boat. It will be noticed that small, irregular projections of tin, h and k, are left near the hands of the riders, which serve to represent the ends of the ropes which the occupants of the boat are pulling. The two long wire rods, y and z, Fig. III., are soldered to the arms, and are bent round at the other ends into small loops. The swinging boat should be pivoted at b to the centre of the beam f, and the wire rods just alluded to (which represent the ropes by which the riders effect the motion of the boat) are pivoted through the loops at r and s to the ends of this beam.
Upon the interior of the fixed glass are painted in black the trestles of the swing (the positions of which are indicated by the dotted line, Fig. III.). On the interior surface of the sliding glass, Fig. II., is glued a small block w, bearing a pin P. This pin fits in the slot a at the extreme top end of the swinging boat, as seen in the sectional diagram, Fig. IV. The slide being now ready for exhibition, we will follow its action.

When the sliding glass is pushed in, the swinging boat being pivoted at B (Fig. III.) is caused, by means of the pin P working in the slot a, to swing up from left to right. At the same instant the distance between the pivot L and the end of the boat occupied by the man becomes greater, whilst the length of the rod z is, of course, constant. The result of this is that the man is pulled up into a sitting posture. Meanwhile, the distance between the pivot M and the end of the boat occupied by the woman becomes less, and consequently the woman is pushed down into a leaning attitude.

The total effect obtained, therefore, is that of two persons in a swinging boat in motion—the woman in her turn pulling the rope, whilst the man is just resting after his “pull,” and waiting for the next. When the sliding glass is pulled out the actions are reversed. The boat swings up from right to left, and the man, leaning out of the boat, tugs strenuously at the rope, whilst the woman receives her well-earned rest. The reader observes that the man is made to lean out of the boat—apparently pulling hard at the rope—by reason of the fact that the distance between l and the end of the boat as it swings up becomes less, the length of the rod z remaining constant. A similar reasoning will explain the action of the woman.

When the sliding glass is pushed in and out, therefore, the effect as seen upon the screen will be that of a man and woman in a swinging boat in motion; and, to all appearances, they, by their own efforts in pulling, keep on swinging the boat. To give a realistic effect, the operator would, of course, see that the sliding glass was so manipulated that, starting from rest, the boat would gradually swing higher and higher, and after a time, would gradually slow down, until it was once more stationary.

Hints to Would-be Village Lanternists.

By Thomas Byford.

Never build up in order to get the lantern on a level with the screen. This entails a lot of useless labour when a canting board would serve the purpose admirably. If not possessed of this useful article, a few books placed underneath the front of lantern would do the necessary tilting. It would be well to bear in mind that it means money to transport big lumber from one village to another. Limit your luggage and your ex’s will be limited.

The lectures sold with lantern sets are in most cases too long. Village folk do not like long lectures; let them be short, but always to the point. The more humorous the lecture, the better it will be appreciated. Don’t attempt to learn the lecture and give it as extempore if your retaining powers are not good—it only spoils the show; far better read it, which after all is no doubt the best plan. Don’t talk as if you have a plum in your mouth; speak slowly and deliberately in a natural tone of voice, which will penetrate to every corner of the room. It is quite an easy matter after a little practice to manipulate the lantern and read the lecture at the same time. A small reading lamp (those with a candle are best) should be
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placed at the back of the lantern; arrange the slides in close proximity to the lantern. With everything at hand and in the right order, plain sailing is a foregone conclusion.

Always make friends with schoolmasters, who are invariably splendid fellows. Treat them with courtesy and you will get the same in return. They are valuable people to lanternists in many ways; their recommendations to other schoolmasters as to your capabilities and virtues means the utmost respect being shown you all along the line. The duty of local reporter to the county newspaper is usually discharged by the schoolmaster, and one or two good puffs in the local will help one—financially speaking—through any district.

Never gas or strut about a village as if you were somebody in particular. Nothing lowers a person more speedily in the rustic mind than vulgar airs. Strange as it may appear, the dwellers in our villages are excellent judges of human nature, and will weigh a person up much quicker than can a townsman.

Some village inns are excellent places at which to stay, others are not; and it is much the better plan for any quiet unassuming fellow to get private lodgings. By communicating with the schoolmaster or mistress a few days previous to the proposed visit, they will in all probability arrange this necessary business for you.

Obtain if possible testimonials from the clergy when they honour the entertainment with their presence. These will stand you in good stead wherever you may go. Have three or four of such printed at the foot of bills or circulars.

Some schoolrooms are very inconveniently built, and it takes a little thinking to know where to place the lantern to best advantage. This difficulty can usually be overcome by placing the lantern at the side of the room. Of course, the pictures appear somewhat distorted when shown thus, but this is but little noticed by the uninitiated.

Prices of admission should not be high. Front seats, 6d.; back seats, 3d.; school children, 2d. is sufficient. It means a big item for a labouring man, whose wages may be about 11s. weekly, with four or five children to keep, to find say about 1s. 6d. for a night's enjoyment.

Always commence at 7.30—not earlier or later—and conclude by 9.15; beyond that time it gets monotonous to village folk.

It is always essential to have one or two strong schoolboys to assist in moving the desks and performing several small services. Always reimburse them with a few coppers for their trouble, and admit them to the entertainment free of any charge.

A small sum, about 1s. or 1s. 6d., should always be given to the school cleaner for the extra trouble involved the following morning in ridding the schoolroom of the previous night's dirt.

It sometimes happens that a small charge is made for the use of the schoolroom, in which case the parson or managers of the school pay the cleaner.

Rough and Ready Enlarging.

BY THE NOMAD.

AM not the fortunate possessor of an enlarging lantern with a big condenser and every convenience; in fact, I only possess an ordinary projection lantern with 4 inch condenser (not a very good one either), yet I have managed to make some very nice enlargements from bits of 1-plate negatives, pocket Kodak films, etc.

My first attempt was with a small portion of a ½-plate negative. The size of the enlargement, as an experiment, was ½-plate.

My difficulties began at once. I had nothing in the way of light but my three-wick lamp, as I had just emptied my oxygen cylinder.

The lantern was anything but light-tight, but by using a curtain on the back, and tucking it round well, I stopped most of the light. Then I got a big piece of card, cut a hole in it to allow the lens to go through, and put it resting against the lantern front. This shielded the paper from any stray rays of light, and the resulting pictures were quite free from anything like fog.

To hold the negative in its place I used one of the new kind of printing frames, closed all round. The springs were taken off, and velvet glued on the edges, back and front. No light escaped when the frame was put in the lantern in the place of the carrier, and the velvet is no hindrance to the ordinary use of the frame. The negatives are held in by a couple of pins.

The negative should be put close up to the condenser, and a mask of opaque paper cut out and put against it to stop out all the picture but the portion required. If this is not done fogged paper will result.

The next thing to find was an easel to hold the paper. A box laid on its side, bottom
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towards the lantern, did very well. It was unsteady at first, but a couple of heavy weights inside, cured that effectually. Plain white paper pasted on the bottom and marked with various sizes completed the affair, to which the bromide paper was attached with ordinary pins. Drawing pins in this connection are a delusion and a snare, causing much annoyance and breaking of nails.

A trial strip was used, of course, and the exposures for the ¼-plate size ranged from ½ to 1 minute on rapid paper.

A word should be said about the lenses used. At first I cut a piece of thick cardboard to fit the front of the lantern (which has bellows extension), and cut a hole in the centre to hold a ¼-plate lens. Afterwards, however, I used the lens sold with the lantern, which is of the portrait type, 5 inch focus. The brass flasher was used to make the exposure. The definition was good enough for anything. The paper was pinned up by the light of the dark-room lamp, the lantern being turned down before development.

To hold the films I got two clean ¼-plate glasses, put the negative and mask between them, and then put a rubber band round the ends. When pushed into the frame the bands held the glasses in place, and strained the film quite flat.

The experiments were so successful that I am about to try some larger sizes.

**Title Slides.**

**By WILHELM LEIFELD.**

PRELIMINARY slide is a necessity to a lantern lecture. It makes the occasion for the few words of introduction, which must always be before the audience has settled down to listening or the lecturer has warmed to his subject. An interesting and novel title slide arouses interest and creates a favourable impression at the start, and for that reason, the usual blue curtain and red tassels must be eschewed by the lanternist who wishes to be up-to-date.

Now, title slides can take many forms; they can be dramatic, humorous, or decorative. They may be a brief prediction of the lecture, or they may do no more than name the subject. In the few notes that follow some hints and suggestions are offered on this generally unheeded item in lantern technique.

Some of the most ingenious title slides I can recollect seeing were made by Mr. Alfred Watkins, of exposure meter fame, who, as is well known, unites to his business of a miller the two recreations (?) of photographic actinometers and bee keeping. The title slides in question were part of a set on bee culture, the operations in the foregrounds of the slides being titled in the upper part of the picture. The letters of the title were composed of the bodies of dead bees. The idea is very readily applied to all kinds of title slides. Thus, a preliminary picture for a lecture on our Army will have the letters composed of tin soldiers or war buttons (bearing a portrait of Lord Roberts). A lecture on China would similarly have its title slide built up out of miniature flags of the Yellow Dragon.

Now, these slides are made as follows:—A good sized print is first obtained, say 12 by 10 or 15 by 12, printed and toned to a bluish black. The print should be distinctly pale, so as to throw the title forward. So long as the main outlines of the subject are visible there is no need to make them prominent. Its subject must, of course, typify or bear on the lecture. Thus, our Army will be a print of a huge Aldershot review, or any military subject fairly open in extent. To photograph this as a title slide it must be placed horizontally and the lettering arranged upon it. The camera must then be placed vertically above it, and a negative about 2½ inches square made of the whole.

A difficulty will perhaps be anticipated in placing the camera vertically, i.e., with the plate horizontal; but there is really none. It can be done by screwing two boards together at right angles, and strengthening them in the angle by a triangular block or a wrought iron bracket. The device thus made is screwed to the tripod head, and the camera screwed to the vertical portion.

An even simpler though more cumbrous arrangement is to screw a couple of stout wood blocks to each side of each end of a ¼ inch board (see Fig.) about 5 feet in length and 4 inches in width. The board can be laid across two chairs, and the camera screwed to the centre. The sketch shows the appearance of this really primitive piece of apparatus when looking on it from above.

At any rate, some kind of arrangement, let it be what it may, is necessary whereby the ground glass of the camera and the print may be arranged parallel and horizontal. It is hopeless work with the print vertical and using an adhesive for the lettering. The lighting
should be mostly from above, so as to avoid shadows on the print. An ordinary room provides excellent lighting if the print be placed fairly close to the window, the lower portion of which is shaded.

A second arrangement of title slide is to include a small picture, and the necessary wording by the side in black and white. This calls for the exercise of a little skill in draughtsmanship in the lettering, as well as in any decorative work which may be done. But an artist friend can generally be prevailed upon to supply the latter, which should be separate from the picture. The black and white work should be copied and printed on a lantern plate, space being left for the picture. This is printed (from a masked negative) on to a separate slide, and the two bound together. In this way a very pleasing effect can be given by staining the black and white slide faintly with aniline dyes.

A still further variety can be produced by placing several small views of different colours on the same slide. Unfortunately, the only really practical method of doing this is to make the little pictures by reduction on separate lantern plates; to then tone them, to cut them up with a diamond, and to afterwards affix them to one piece of 3½ by 3½ inch glass. But this means that a black mask must be used to hide the sides of the glasses, and the title must therefore occupy a rather subsidiary position in a space provided for it in the mask. Transparencies on slow celluloid films might be tried instead of glass, and ought to allow of a white background being obtained.

The subject of the picture may bear humorously or punningly on the title of the lecture. For example, a title slide on “Matches” may have for its accompanying illustrations Maud and Algernon in Mayfair, or Edwin and Angelina “Margate way.” The advisability of this depends on the audience. Hence the usefulness of a selection of title slides.

An easy method which may be commended to those whose skill in drawing is of the slightest, is to obtain a placard or poster in some way bearing on the subject, and by working in photographic views of their own to make a suitable mosaic. Thus, for a set of slides of a certain district, one can generally find a title slide in the bill issued by the railway company which serves the district, or by the local authorities interested in popularising it.

Reducing the Density of Lantern Slides.

By T. Perkins.

The introduction of persulphate of ammonia as a reducing agent is likely to be a great boon to the makers of lantern slides, and many slides that would otherwise have been only fit for conversion into cover glasses, may be saved for their intended use. With this new reducer and Howard Farmer’s, almost any over dense slide can be reduced so as to fit it for projection on the screen. Let me detail some of my late experiences. I had a box of “Gaslyt” lantern plates given me for trial. I exposed these in a printing frame under various negatives, and found that I got them sufficiently exposed by holding them out-of-doors on the shady side of the house in the forenoon of a sunny October day, for periods of 3 to 10 seconds, according to the density of the negative. I had not by me the chemicals to make up the rather complicated developer, recommended by the makers, so used the following which I had by me already made up.

\[
\begin{align*}
A & : \\
\text{Hydroquinone} & \ldots \ldots \ldots \ldots \ldots \frac{1}{2} \text{ounce} \\
\text{Meta-bisulphite of potash} & \ldots \ldots \ldots \frac{1}{3} \text{ounce} \\
\text{Bromide of potassium} & \ldots \ldots \ldots 60 \text{grains} \\
\text{Water} & \ldots \ldots \ldots 20 \text{ounces}
\end{align*}
\]

\[
\begin{align*}
B & : \\
\text{Caustic soda} & \ldots \ldots \ldots \frac{1}{2} \text{ounce} \\
\text{Water} & \ldots \ldots \ldots 20 \text{ounces}
\end{align*}
\]

I took one drachm of each, and made up the solution to an ounce with water.

With this developer I obtained warm browns, and the addition of a few drops of a 10 per cent. solution of bromide of potassium gave a redder colour, somewhat resembling burnt sienna; when using this, I gave the longer exposures of about 10 seconds.

In some cases I found that before I got out the delicate detail in the high lights, the shadows were far too dense, so that all detail in them was lost. The slides in that condition were absolutely worthless, but as an experiment, I fixed and then washed them for several hours in four or five changes of water, and left them in water all night until I had time to see what the new reducer would do for them. I took with a knife from the bottle of persulphate of ammonia some crystals without weighing them, but about as much as would lie on a threepenny piece, and dissolved these in an ounce of water, and then put the over dense slides in the solution one by one. At first no reduction
The Optical Magic Lantern Journal and Photographic Enlarger.

seemed to take place, but after about five minutes’ immersion the process of reduction showed signs of commencing, and then proceeded somewhat rapidly; the finer deposit was not affected, but the clogged up shadows were gradually cleared, details hitherto buried appeared, and in about 10 minutes even the most unpromising transparencies were converted into nice soft slides; all these manipulations were carried on in daylight. When I considered the slides sufficiently reduced, I took them out, swilled them under a tap, and then put them into a bath containing a saturated solution of sulphite of soda, where they remained for a quarter of an hour, then they had a good washing in several changes of water, and then were dried and finished in the usual way. I found that the reducer in those cases, where considerable reduction was required, rather cooled the tone of the slides, but left no deposit or veiling. The reducer after use must be thrown away, the sulphite of soda may be used over and over again. I used this to stop the reduction, as I had been told by someone who had tried the persulphate reducer on some negatives, that, though he had succeeded in reducing the negatives to the desired density, yet he found that the action still went on in the washing water, and his negatives after a few hours had become veritable ghosts of their former selves.

The action of persulphate of ammonia differs much from that of Howard Farmer’s reducer, made by putting a few drops of a saturated solution of ferricyanide of potassium into a ounce of the ordinary

\[ \text{hyposulphite of soda} \]

fixing bath; for this tends to reduce the thinner parts of the negative or transparency first; by this the contrasts in a slide may be increased, while the persulphate reducer renders a slide in which the contrasts are too great softer. If a quick action is required, and some portion only of a slide needs reducing, the ferricyanide solution is very useful, as it can be applied with a tuft of cotton wool, rolled up if necessary, into the form of a stump. Great care, however, is needed to prevent this solution running over other parts of the plate; the reduction should always be done in close vicinity to a running tap of water, so that the plate can be instantly and constantly swilled. This reducer is the best one to use when the high lights of a slide are veiled, as they often are when carbonate of ammonium is added to the developer to get warm tones. The Howard Farmer reducer may be used as soon as the plate is fixed, and preferably before it is dried, the persulphate reducer only after the plate has been well washed.

When binding slides, I used formerly to use the binding slips without cutting them, turning the plate round as one side was done after another. I now find it easier to cut from the strip four pieces, each \( 3\frac{1}{2} \) inches long, and bind each side separately. If this method is adopted, there is no need to snip off the superfluous folds at the corners, and there is no danger of tearing the paper, a thing which happens if the long strips are used, if they happen to be of that make which requires them to be plunged into hot water, such as those I am now using, supplied by Messrs. Percy Lund & Humphries. These hot water binding strips adhere better than any other kind I have used. I have recently had a box of masks supplied by the same makers, containing a most useful assortment, with apertures varying from \( 2\frac{7}{8} \) square to \( 2\frac{7}{8} \) by \( 1\frac{3}{8} \), all with rectangular corners; thus providing shapes suitable for all subjects, whether made by contact or reduction.

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**Slotted Catch for Lantern Body.**

By Richard Peckett.

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It is an unfortunate fact, but fact it is, that the lantern operator is still open to mishap, still open to accident, still open to be made the laughing stock of an audience, sometimes through his own carelessness, sometimes through his shortsightedness in not making proper arrangements and making perfect his apparatus before commencing the show.

Sometimes, however, what happens is not entirely his fault, but the lecturer’s, who not infrequently turns up late, leaving too little time for setting up the lantern by his assistant, whom—as is often the case—he has never seen before.

Perhaps one of the most outrageous of these errors is the tilting up of the lantern. This is a thing that never ought to occur, and never would occur if purchasers insisted upon some mechanical contrivance, by which the body of the lantern can be tilted from its plinth or baseboard to the required angle. The absence of such an attachment has disturbed the mind of many an entertainer in the past, and it may be safe to prophecy will do so again.
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Films.—Three first quality Photographic, English-made Films of up-to-date subjects, 4 feet long, joined for continuous action. Ordinary full length Cinematograph Films can be exhibited on this Machine.

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Write for our Winter List of New Goods.
Only a few months ago some friends were much enjoying a science lecture, but when about half-way through, the interest was upset by the upsetting of the lantern, or at any rate, by the disc disappearing completely from the screen. The operator, who was working with a fly-carrier, was unaware that a slide had not fallen into position, and using, I presume, extra force to send the holder through, dislodged the books and other props that were supporting the lantern, which humpty-dumpty-like "had a great fall." The lecture was finished, but without the lantern, and its interest waned when the lantern disappeared.

Scores of such incidents could be cited but the one above mentioned is sufficient.

Now, there is no earthly reason why such risks should still be. In the pages of THE OPTICAL MAGIC LANTERN JOURNAL, years ago, this very thing was obviated, was demonstrated, was adopted. "By whom?" says the present day reader. Well, wait a bit, dear Sirs, and I will tell you.

Also add that there is no earthly reason why such an attachment should not be added to every lantern sold—toy lanterns here are not recognised—when it is stated that the extra cost is practically nil. The highest class lantern could be fitted for, say, an additional five shillings, the humble iron lantern for sixpence.

Some articles that were published in Vols. 4, 5, and 6, entitled "The Lanternist's Den," by Mr. C. E. Rendle, contain in particular detailed lessons in lantern construction, or lantern building, and on page 221, Vol. V., the subject of this article is for the first time mentioned and treated. In those most interesting instructions Mr. Rendle strongly recommends that all lantern bodies should be detached from the baseboard, but hinged thereto at the back, so that when the baseboard is thumb-screwed to travelling case or lantern stand, as the case may be, the lantern proper can be raised to any angle with impunity, and then he shows how it can safely be held in position. The suggestion at the time was adopted by some few makers, but only, I think, in the highest-class apparatus, whereas it should be supplied, as stated above, at a nominal cost, and to every grade of lantern manufactured.

The sketch annexed shows a piece of stout flat brass A, and a couple of rounded brass headed screws, B, C. The brass plate is slotted to the size of the smooth pillar of screws. With screw B the plate is screwed to base-board of lantern on the left side; the plate may be thus fixed that it works stiffly; screw C is placed at bottom left-hand corner of lantern body, sufficient space being left that the plate will work any of the slots over it. It will thus be seen, that as the lantern is raised on its plinth it can be held at the required height. This is a crude, simple, but efficient means of overcoming the difficulty, and such can be made and attached by anyone.

On the Mounting of Slides.*

By WILLIAM S. VAUX, Jun.

At each of the business meetings of the Society of Friends they have a good old custom, which has been handed down from time immemorial, of three times a year asking and answering certain questions or queries on the condition of the society, the behaviour of the members and the progress or retrogression of the past four months. The object of these queries is to keep before the minds of the members certain great truths which regulate the whole government of the body, and without which the organisation would sink to a mere formal existence.

I have sometimes thought that the Photographic Society of Philadelphia could not do better than to adopt a somewhat similar custom and formulate a set of queries which the members might consider from time to time, and that the first one might be framed something like this:

"Are all our members careful to mount their slides in a uniform manner, with name labels and thumb labels in order for the help of the lantern operator, and where they find slides lacking these to use due expedition in supplying the deficiency?"

If such a query was put to the members tonight there are many who would have to admit they had been very lax in this respect, and, in fact, during the last few years hardly a lantern night has passed without some slides perfectly innocent of labels being submitted for exhibition.

Our English cousins, who generally do things the hardest possible way, and generally have a good reason for doing it, have adopted the

*Lecture Photo. Socy. of Phila., U.S.A.
square $3\frac{1}{2}$ by $3\frac{1}{2}$ inches size for slides. The saving in weight of 100 of these, as compared with 100 American standard slides, is considerable, but after admitting this there is little to be said in their favour. As some of us have learned to our sorrow, there is but one right way to place a slide in the lantern so that the image may appear in its proper position on the screen. Now with an English slide, which is square, it is possible to place it upside down, or on either of its sides, or right side up, and then turning it about so that the left side of the picture appears on the right to repeat the four operations again, making eight possible ways of inserting the slide in the carrier, and but one right way. With the $3\frac{1}{2}$ by 4 inches, or American slide, there are but four possible ways of inserting in the carrier, three of which are wrong and one right. There are thus seven possible wrong ways of placing an English slide in the carrier; there are but three in the American slide. It will be seen from this example how easy it is to run American slides through the lantern with a fair probability of getting them right as compared with English slides; but in addition to this the greater margin on the larger slides and more ample labels makes it easier to mark them in some certain way which may be easily distinguished by the operator in a dimly lighted room.

At first sight it would seem a very simple matter to label a slide for easy identification and insertion in the lantern; but from the number of different schemes which make their appearance in going over a miscellaneous lot of pictures, one is almost led to believe it is a most difficult problem.

The American Lantern Slide Interchange soon after its inauguration formulated a set of rules governing the mounting and labelling of slides submitted by its members, which I regret to say have been violated time and time again — written on the white mat.

The American Lantern Slide Interchange, soon after its inauguration, formulated a set of rules governing the mounting and labelling of slides submitted by its members, which I regret to say have been observed principally by their non-observance.

Supposing that the slides for an exhibition have been arranged in order, about the only mishap which may occur is that the pictures appear on the screen upside down. The little thumb label, which some considerate persons place on the lower left-hand corner of each slide when it is viewed in its proper position, is of great value, and no one who has not had experience with these little white circles has any idea of the comfort and relief they are when placed on the right—that is, the lower left-hand—corner of the slide. But if blindly followed the thumb label is pretty sure to lead into trouble, because there are several schemes of applying it to the slides. The English are the most fertile in these, and not being satisfied with one label, often insist upon placing two, three, or even four on the cover glass. These are worse than nothing at all, as they are most misleading.

One of the neatest methods of applying the thumb label is on the mat placed between the slide and cover glass. The side of the mat which comes next to the condenser is left white, and on it may be written the title of the slide, the author's name, or any other data, while a black dot on the paper cover shows very distinctly even in a dark room the proper position of the slide in the lantern. This method, if universally adopted, would furnish a satisfactory solution of the problem of slide-marking.

Respecting the title label, which is usually pasted on one end, but little need be said; so long as it is firmly attached to the slide and legibly written upon its duty is fulfilled. Some people paste this label on the back, when the slide is viewed in its proper position, and some on the back; doubtless many paste it on the first side they pick up. This label is mostly pasted on the left-hand end of the back, opposite where you would endorse your name if the slide were a check. The English slides, which usually are made on much thicker glass than is common in this country, often have the names written in very small letters on the edge. The advantage of this is that the title may be read while the slide rests on end in the box, but the space is so small that at best but a few words can be written. The title label on quite a number of slides is placed on the front, opposite the thumb label. This is rational, as the name can then be read without turning the slide over, and the position corresponds with the title when written on the white mat.

But, after all, the one great thing in marking slides is to have them uniform. Brother Jennings may be all right when he sings:

"To be great
Originate."

Only don't let us try to originate new schemes for marking slides, nor yet go so far as did a lecturer in this room not many weeks ago, who had conscientious scruples against marking his slides. In this particular case conservatism is much to be desired, and uniformity, even if the methods used are not perfection, the goal to be striven for.
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Rev. J. G. BIRCH, Limerick, writes Nov. 23rd, 1899:—"I have just completed a lecturing tour with the Præsentia outfit you supplied me with. It proved most satisfactory. I am much pleased with the unrivalled light that can be had with your 'Rilford' Generator and Lawson Saturator."

W. H. C. BARK, Esq., Wooton, writes March 24th, 1900:—"Let me again tell you of my numerous successes of the season with your 'Rilford' Generator. Ever since the first few times, when I was unfamiliar with its working, it has never failed me, and the light has been brilliantly maintained throughout my numerous entertainments. It is a gem, and beats cylinders and their increased cost and trouble out and out."

Rev. C. H. FYNES-CLINTON, of Blandford, writes March 31st, 1900:—"I am much pleased with the 'Rilford' apparatus; it works perfectly."

Rev. J. DUNSFORD LYLE, of Leicester, writes Dec. 3rd, 1899:—"I am delighted with it. It is the very thing necessary for one like myself, who is constantly visiting villages and out of the way places. The automatic movement of the lamp is most ingenious, and the light produced far better than what I have been able to get with a fixed jet."

G. H. N. STEPHENS, Esq., of Worcester, writes Oct. 20th, 1899:—"I cannot too highly praise the invention."

G. H. RILLIOTT, Esq., of West End, writes Nov. 13th, 1899:—"With regard to the 'Rilford,' all I can say is, it is simply splendid, and I cannot speak too highly of it. It thoroughly deserves everything that has been said in its favour, and more too. Not only is the light most brilliant and steady, but the regular and unfailling supply of gas, the automatic action, and absolute safety of the apparatus give one the confidence which one doesn't often feel when working other appliances."

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A Lantern Screen for the Lecture Room.

By E. D. B.

The readers of the Lantern Journal may be interested in a brief description of a lantern screen which I saw in use in a London institution. The screen is particularly constructed with a view to showing experiments from the lecture table, such as experiments on light, and at the same time it is readily and accurately shifted so that a lantern placed at the opposite end of the room facing the lecture table will throw an image upon the screen. The screen is easily removed and can be replaced in a few seconds.

Fig. 1. shows a general view of the movable screen and fixed parts on to which the screen is hung. The screen was a simple one of linen or it may have been four sheets of white drawing paper neatly joined to two central cross bars which formed part of the framework of the screen. Attached to the two top corners of the screen were two wheels arranged to freely revolve upon horizontal steel arbors and vertical pins as seen clearly in the enlarged view Fig. II., in which b b are the wheels turning upon the arbor c. The wheels run upon a rail d, which is screwed to a piece of moulding permanently secured to the wall. The bent brass L pieces carrying the wheels n n are allowed to freely turn upon a pivot e, riveted to an angle piece of brass attached to the framework of the screen. By means of the said pivot e, the frame when being drawn along the rails will readily adapt itself to any angle which it is desired to place it in. The most convenient position in which to place the rails d, depend entirely upon the room in which the screen is going to be placed.

Two points must be borne in mind, namely, the centre line of the wheel b must pass through the centre of the rail and also the vertical pivot e. The centre line above mentioned must be brought as near the ends of the screen as possible to allow the screen to turn freely without damaging or scraping the wall.

By means of the above description and the two sketches, any readers of this Journal will have little difficulty in constructing the screen and parts, should he intend making one for himself.
THE B.P. COMBINATION KEY.

Lanternists know too well that there is a difference in the fittings of cylinders, etc., used by the various gas compressing firms, and often it is no easy matter to get the right tool or spanner whereby to obtain a supply of gas after having got the cylinder. To simplify matters on this score, the Scotch and Irish Oxygen Company, of Rosehill Works, Polmadie, Glasgow, have introduced a universal key which they have named the B.P. combination key. The tool, which is supplied either blackened or nickel-plated, weighs about 18 ounces. This key is made of stamped steel, case hardened throughout, and the reversible union or coupling is made of gun-metal. With the aid of the illustrations and letters on the same the uses of the various parts will be readily understood. It will be noticed that six different size spindles are provided for:

A. To suit Manchester Oxygen Company’s and other gland nuts.
B. To suit Brin’s, Birmingham, and Scotch and Irish Oxygen Companies’, and other gland nuts; also to take reversible union H.
C. To suit Manchester, Birmingham, and Scotch and Irish Oxygen Companies’, etc., spindles ½ inch square.
D. To suit ½ inch bare spindles employed by some gas compressing companies for oxygen and nitrous oxide for dentists, etc.
E. To suit odd or bastard size spindles.
F. Screw-driver.
G. Hammer-head.
H. Gun-metal reversible union to suit gauge, regulator, slow valve. The end H is screwed to fit Scotch and Irish Oxygen Company’s cylinders or other externally screwed oxygen valves, and H fits the bull-nose or internally screwed oxygen valves of Brin’s, Birmingham, and Manchester Oxygen Companies, and others.
I. It will be noticed is screwed (½ inch gas thread, same as tails of gauges, regulators, slow valves, etc.) to carry the reversible union H.
J. Lime tongs.
K. Lime cleaner. The pin is stiffly hinged and brought to right angles with the lever of key when used to clean out the hole in lime.
L. Wing nut, etc., lever.

BUTCHER’S LITHOGRAPHIC SLIDES.

Messrs. Butcher & Son, of Blackheath, are at present making a special feature of lithographic slides pertaining to the Boer war. Of course slides made by this process cannot for a moment compare with photographic slides, but all things considered they are good of their kind, and with, say, an oil light, will look very well when projected on a screen. These sets of slides are known as the Junior Lecturers’ series, and are sold at a low price.

NEWTONIAN ETHER SATURATOR.

The annexed drawing shows the general shape of a new ether saturator just brought out by Messrs. Newton & Co., of 3, Fleet Street, E.C. It practically consists of two chambers, one placed within the other, both stuffed with material to retain the ether, each being provided with means for reinforcing their ether supply from a reservoir at the bottom of the saturator, into which a number of feeding wicks extend from the two chambers spoken of to the extra supply of ether. We lately submitted this saturator to some exhaustive and severe trials with jets of very large bore, and were very pleased with the results obtained. Into the saturator we poured a quart of ether, and after allowing sufficient time for soaking up by the stuffing, poured out about one half,
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What an experienced Lanternist says:—

"I yesterday sold my old Pendant Saturator so should like a new one in its place. . . . The new Jet works very well indeed. I used it on Wednesday at a private trial in the Borough Hall here. It illuminated a picture at 40 feet distance with 12 inch lens. It worked quite easily and gave nearly as much light as the 10 ampere direct current arc lamp, and the arc lamp was not in the same street for evenness of light throughout."

J. S. WILLWAY & SONS, ST. AUGUSTINE’S PARADE, BRISTOL.
1 pint. It was then connected up to two jets of large bore, viz., the F.B. jet, the supply of oxygen being obtained from a 20 feet oxygen cylinder. Although the two jets were connected only one was kept burning at a time, the other being kept at a bye-pass flame. Instantly we obtained an excellent light, which only went down after three hours by reason of the contents of the 20 feet cylinder being used. Being anxious to see how long the charge of ether would last under the circumstances, we attached another cylinder of oxygen, and found that under the same conditions a good light was obtained for a little over four hours, at the end of which time the lime showed no signs of incandescence when the direct oxygen side was turned off, the saturated (or hydrogen side) producing an ordinary flame like house gas. On continuing the light further for about half an hour, we found that in order to put the light out quietly it was necessary to first turn off the hydrogen side of jet. With the large bore mentioned we obtained an excellent light for the four hours, and used altogether about 30 feet of oxygen. Had we used jets with a smaller bore of nipple, the duration of light would of course have been greatly prolonged. We were greatly pleased with the behaviour of this saturator, which will be found to work with absolute safety with one charge under the conditions mentioned. With it one who had never before used a saturator could not fail in getting a good light with practically no trouble.

PARIS EXHIBITION SLIDES.

Mr. E. H. Wilkie, of 114, Maygrove Road, West Hampstead, has become the fortunate possessor (by purchase) of 55 negatives of Paris views. These negatives are exceedingly fine, and lantern slides are being printed from them. We have seen a few of these slides, and they are excellent.

SOLAR ECLIPSE SLIDE.

Last May, Mr. Henry G. Frost, of High Street, Deal, succeeded in obtaining a negative of the eclipse. Since that time, paper prints from this particular negative have been in good demand. Lanternists will be glad to learn that it is the intention shortly to place upon the market lantern slides from the negative mentioned.

AURORA LANTERN SLIDE CLUB.

To Mr. J. Hay Taylor, Editor.

Dear Sir,—I have recently undertaken the duties of Hon. Secretary of the Aurora Lantern Slide Club, and as there are several vacancies in the number of members, I shall be glad to hear from any lanternoists, male or female, which would be willing to join the club. The subscription is 3s. 6d. per annum; first and second prizes are awarded to the best and second best sets sent in by members to each quarterly circulation.

T. PERKINS.

ENTERTAINMENTS FOR WINTER EVENINGS.

To Mr. J. Hay Taylor, Editor.

Sir,—Last winter you kindly noticed our effort to provide entertaining and instructive lantern lectures for institutions and societies throughout the country. May we be allowed to point out that we have improved upon our idea of last year by obtaining the services of several popular writers to prepare lantern lectures, copies of which are sent (with slides) for a small fee to societies, institutions, schools, etc., who are unable to afford the expense of paying large sums to lecturers for their personal services. For the coming season we have arranged with Sir Herbert Maxwell, Bart., M.P., to write on "A Century of Empire," the Earl of Rosslyn on "With Roberts to Pretoria," Mr. Clement K. Shorter on "Illustrated Journalism, Yesterday and To-day," and Mr. Arthur Croxton on "An Evening with Punch." Particulars of the above scheme will be sent to any of your readers on receipt of a stamped addressed envelope.

We are, yours truly, *

EYRE & SPOTTISWOODE.

PATENT INTELLIGENCE.


No. 16302. 13th September, 1900. George William Brown and George Robson Beaumont. The historyoscope—an apparatus for showing or exhibiting motion photographs, framed and bordered with a stereoscopic frame.
1637. 15th September, 1900. Eugéne Théophile Lacroix. Improvements in apparatus for viewing living pictures. (Date applied for under Patents, etc., Act, 1883, Sec. 109: 17th March, 1900, being date of application in France.)

16759. 30th September, 1900. James Fleck. Improvements in and relating to carrying and exposing in the camera of photographic sensitive films.

16791. 20th September, 1900. Andrew Ainslie Common. Telescopes for sighting ordnance.

16803. 20th September, 1900. Paul Charles and Stephen Faujat. Machine for production of gelatine images. (Complete.)

16996. 24th September, 1900. Ross, Limited. Improved means for adjusting and fixing the prisms in prismatic field and opera glasses and telescopes. Warner and Swasey, United States. (Complete.)

17075. 25th September, 1900. Andrew Ainslie Common. Improvements in binocular telescopes.

17076. 25th September, 1900. Enoch Kector. Apparatus for exhibiting pictures of moving objects. (Complete.)


17369. 25th September, 1900, 17th March, 1900. Eugéne Théophile Lacroix. Improvements in apparatus for viewing living pictures. (Date applied for under Patents, etc., Act, 1883, Sec. 109: 17th March, 1900, being date of application in France.)


17632. 4th October, 1900. Albert Kaufmann. Improvements in or relating to photographic cameras.

17854. 20th September, 1900. Andrew Ainslie Common. Improvements in and in the construction of supports for cameras, telescopes, theodolites, and other like apparatus for exhibiting pictures. (Complete.)

18007. 10th October, 1900. Kodak, Limited (Frank A. Brownall, United States.) Improvements in or relating to photographic apparatus.

18029. 1st October, 1900. Andrew Ainslie Common. Improvements in binocular telescopes.

18076. 10th October, 1900. Arthur Augustus Brooks and George Andrew Watson. Improvements in and connected with photographic apparatus.

18298. 10th October, 1900. Walter Gibbons. Improvements in cinematographic apparatus.

Copies of the following specifications may be obtained by remitting 1/- for each specification to W. P. Thompson & Co., Patent Agents, 329, High Holborn, London, W.C.

SPECIFICATIONS PUBLISHED.

1520 of 1900. Stübgen. Lanterns.

W. Bates writes:—When perusing the daily papers I have often been struck by the way in which lantern entertainments are reported. In nine cases out of ten we are told that a fine collection of pictorial views "were thrown on the sheet." How much smoother such notices would read if we were told that the pictures "were projected upon the screen.

F. writes:—In last issue you described a triple set of burners formed like a star for acetylene use. I presume they are not all three intended to be alight at the same time, for from an optical point of view the flames should not be thus spread about. Ans.—If you will again read our comments, you will see that we stated that only the top burner for the time being had a clear gas way.

Doubtful.—It is simply rubbish; pay no attention to it.

Spirits.—Methylated spirit is used with the style of jet you mention. Practically it is like a blowpipe emitting oxygen, which is blown through the flame of a spirit lamp on to a piece of soft lime placed at a little distance from the nipple of the blowpipe. We do not understand your second query about reflected light from several flames; please repeat in other language.

H. J. Gladwin writes:—Kindly inform me whether methylated ether gives satisfactory results with a saturator? I have worked the oxy-ether light abroad with pure ether, and now that I have returned to England, after many years' absence, it is an important matter to refit as cheaply as possible. Ether was cheap where I was living, and if the methylated article will serve I shall continue to use a saturator; if not, I shall have to go in for the mixed gases. Ans.—Methylated ether is usually employed now.

A. H. Dunning.—If you will refer to the column of New Apparatus in this issue, you will find a full account of our experiments with the Newtonian ether saturator.

F. Simons.—Thanks for your interesting letter. We heard that there was some little difficulty with the carbons of the electric lamp during the first few days of the exhibition, but understand that the defect has been remedied. We are unable to give particulars.

E. Hill.—The negative duty to hand. It is very much over-exposed, and the markings you speak of are caused by the developer not flowing over the plate at once, probably because the solution was insufficient in quantity. If you want the negative back, please send stamps to cover postage.

J. E. (Australia) writes:—Perhaps you will give certain dealers in England a hint as to the more careful selection of lantern outfits, for it is a serious matter for those who have paid a large amount of freight to find that the various parts will not ensemble. My own experience in connection with a recent order would lead one to infer the orders by the shopman were something like the following:—"Put into that, case a bi-unial lantern, two condensers, two lenses, two trays, and two jets.

When I got my outfit, I found that the lenses were not a pair, and the upright on one tray was too thick to permit of the jet going on. This, to say the least, is not conducive to business. A few minutes would have been sufficient to have seen that the various parts fitted.
WE MAKE LENSES on the INTERCHANGEABLE SYSTEM of manufacture,
each part of every lens being made to standards with a degree of accuracy and beauty of finish which is believed to be unrivalled. The testing and adjusting of the complete lenses is done by experts with great care, each instrument being subject to special study with the object of rendering it as perfect as human skill can make it.

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Five seasons' experience has fully established the superiority of this Jet over all others. It will yield THE FULL 1,800 TO 2,000 CANDLE-POWER (so-called) of the ordinary mixed jet when taking its supply of coal gas direct from the town's pipe, or even from a bag without any pressure at all. If a town's supply is not available, it will work just as well with coal gas from a cylinder. We cannot see why ordinary mixed jets should be purchased which cannot offer these alternatives. As for blow-through jets, ejector or otherwise, we do not know why they should be used at all, when with the same economy and convenience of working, the Injector Jet will give two or three times the light. By removing the Injector nipple the jet becomes an ordinary mixed jet. This can be done whenever it is desired to work with oxygen at low pressure, and coal gas from a cylinder.

The working of the Jet is simpler than that of an ordinary jet. When the H tap is once adjusted, it does not need to be touched again when using town's gas. The turning off or on of the oxygen supply regulates automatically the supply of coal gas. This is a great convenience in actual use.

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