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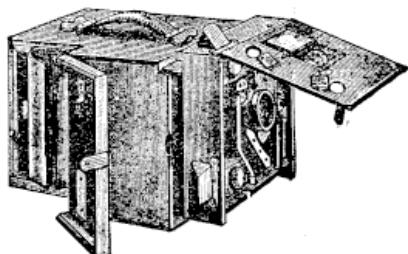
CONTENTS:

	PAGE		PAGE
Our Prize Competition	153	Phototopography	165
Universal Transparency	153	Process Work—	
Our Illustrations	154	A Turmeric Printing Process	167
Bristol International Photographic Exhibition ..	154	Local Development	168
Optical Lantern Work—		Science and Art..	168
Improved Method of Judging Lantern Slides ..	155	News and Notes: New South Wales	169
Carrying a Camera	157	The Photographic Union of N.S.W.	169
Röntgen Ray Photography in Sydney ..	157	Society Reports	170
Plates for X-Ray Photography	157	Photographic Competition at Poultry Show ..	171
X-Rays and Gold Mining	157	Victoria—Notes	171
Intercolonial Industrial Exhibition at Albury ..	158	Society Reports	172
Visible and Invisible Light Rays	158	Queensland—	
Flashlight Photography. <i>Illustrated.</i>	159	Society Report	174
Contrast in Exposure and Development	160	Tasmania—Notes	174
Design for a Photographic Transit Circle	161	Society Report	174
Intercolonial Photographic Exhibition— <i>Illustration</i> ..	162	New Zealand—Society Report	174
Papers Read at the Intercolonial Photographic		Formulae	175
Congress	163	Correspondence	176
Photography in the Lecture Room	163	Editor's Table	176

SUPPLEMENT ILLUSTRATIONS—PHOTO-CHROME BLOCK—“THE PENITENT'S RETURN” ..	OPP. PAGE 154
“THE MUSIC LESSON”	OPP. PAGE 160
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## INDEX TO ADVERTISEMENTS.

|                                                     |     |      |         |       |             |     |
|-----------------------------------------------------|-----|------|---------|-------|-------------|-----|
| "AUSTRALIAN PHOTOGRAPHIC JOURNAL" PRIZE COMPETITION | ... | ...  | ...     | ...   | ...         | xv. |
| AEROGRAPH, The                                      | ... | ...  | ...     | ...   | iii.        |     |
| ANTHONY'S International Annual                      | ... | ...  | ...     | ...   | i.          |     |
| AUSTRALIAN EVERLASTING PICTURE HOLDER               | ... | ...  | ...     | ...   | xv.         |     |
| BADIER, P. C.                                       | ... | ...  | ...     | ...   | i.          |     |
| BRITANNIA WORKS CO., P.O.P.                         | ... | ...  | ...     | ...   | viii.       |     |
| BUSINESSES, &c.                                     | ... | ...  | ...     | ...   | xxiv.       |     |
| BUTCHER AND SON, W., Photo. Goods                   | ... | ...  | ...     | ...   | xiv.        |     |
| CADETT AND NEALL, Dry Plates                        | ... | ...  | ...     | P 3   | COVER       |     |
| CLEMENT AND GILMER LENSES &c.                       | ... | ...  | ...     | ...   | xviii.      |     |
| COLEMANE AND SON, Eucalypte Extract                 | ... | ...  | ...     | ...   | vi.         |     |
| DARK ROOMS                                          | ... | ...  | ...     | ...   | ii.         |     |
| DARLOT, A., Lenses                                  | ... | ...  | ...     | ...   | xxi.        |     |
| EASTMAN CO., LTD., Cameras, Papers, &c.             | ... | ...  | P. 4    | COVER |             |     |
| EDWARDS & CO., B. J., Plates and Films              | ... | ...  | ...     | ...   | xvii.       |     |
| ELLIOTT AND SON, Dry Plates                         | ... | ...  | ...     | ...   | xii.        |     |
| EXCHANGE AND MART                                   | ... | ...  | ...     | ...   | xxiv.       |     |
| EDWARDS, ASTIN, Films                               | ... | ...  | ...     | ...   | xx.         |     |
| FUERST BROS., Developers, Plates, etc.              | ... | ...  | ...     | ...   | vi.         |     |
| GEM DRY PLATE CO.                                   | ... | ...  | ...     | ...   | iv.         |     |
| GUEQUIER AND CO., V., Dry Plates                    | ... | ...  | ...     | ...   | xiii.       |     |
| HARRINGTON AND CO., Photographic Goods              | ... | ...  | ...     | ...   | iii., xxii. |     |
| INTERCOLONIAL AGENTS                                | ... | ...  | ...     | ...   | ii.         |     |
| IMPERIAL DRY PLATE CO., LTD., Plates                | ... | ...  | P. 2    | COVER |             |     |
| LANCASTER AND SON, JAS. Cameras, &c.                | ... | ...  | ...     | ...   | xi.         |     |
| LEVI & CO., JOSEPH, Lenses, &c.                     | ... | ...  | ...     | ...   | iii.        |     |
| LUMIERE, Plates, and Papers                         | ... | ...  | ...     | ...   | vi.         |     |
| MAGIC LANTERNS                                      | ... | ...  | ...     | ...   | xxvi.       |     |
| MILLER, W. S., Enlargements                         | ... | ...  | ...     | ...   | iii.        |     |
| NEWMAN AND GUARDIA, Cameras, &c.                    | ... | ...  | ...     | ...   | i.          |     |
| "OPTIMUS," LENSES, CAMERAS,...                      | ... | ...  | OUTSIDE | COVER |             |     |
| PAGET PRIZE PLATE CO., P.O.P.                       | ... | ...  | ...     | ...   | xxvii.      |     |
| PENROSE AND CO., Process Work Specialities          | ... | ...  | ...     | ...   | vi.         |     |
| PERKEN, SON AND RAYMENT, Cameras, &c.               | ... | P. 1 | COVER   |       |             |     |
| PHILLIPS, A. J.                                     | ... | ...  | ...     | ...   | xvii.       |     |
| Photo-Engraving Made Easy                           | ... | ...  | ...     | ...   | iii.        |     |
| PHOTOGRAPHIC SOCIETIES                              | ... | ...  | ...     | ...   | xv.         |     |
| POCKET KODAKS                                       | ... | ...  | ...     | ...   | xxvi.       |     |
| PRINT EXCHANGE                                      | ... | ...  | ...     | ...   | xxiv.       |     |
| PROCESS SCREENS                                     | ... | ...  | ...     | ...   | vii.        |     |
| ROCHESTER OPTICAL CO.                               | ... | ...  | ...     | ...   | v.          |     |
| ROSS & CO., The Photoscope                          | ... | ...  | ...     | ...   | xvii.       |     |
| SCOVILL AND ADAMS CO., Cameras                      | ... | ...  | ...     | ...   | xiii.       |     |
| SITUATIONS                                          | ... | ...  | ...     | ...   | xxiv.       |     |
| STEINHEIL FILS, C. A., LENSES                       | ... | ...  | ...     | ...   | xiii.       |     |
| STEREOSCOPIC TRANSMITTERS                           | ... | ...  | ...     | ...   | vii.        |     |
| SQUIRES & CO., J. H.                                | ... | ...  | ...     | ...   | xxi.        |     |
| The Photographic Blue Book                          | ... | ...  | ...     | ...   | xv.         |     |
| THEODORE BROWN                                      | ... | ...  | ...     | ...   | vii.        |     |
| THOMAS AND CO., R. W., LTD., Plates                 | ... | ...  | ...     | ...   | xvi.        |     |
| THORNTON PICKARD, Manf. Co., Shutters               | ... | ...  | ...     | ...   | xxi.        |     |
| VEREL AND CO., F. W., Dry Plates                    | ... | ...  | ...     | ...   | xvii.       |     |
| WRATTEN AND WAINWRIGHT, Plates                      | ... | ...  | ...     | ...   | xxi.        |     |
| ZEISS, CARL, Lenses                                 | ... | ...  | ...     | ...   | vi.         |     |

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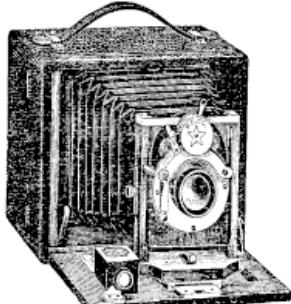
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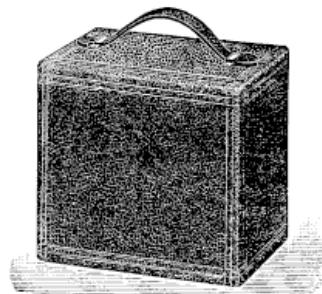
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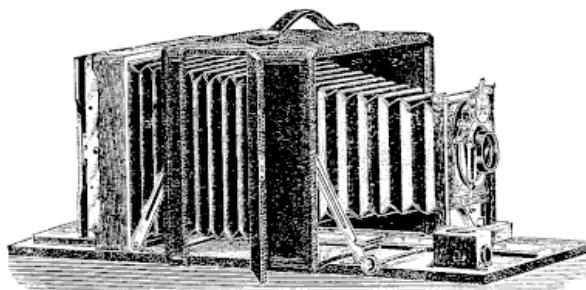
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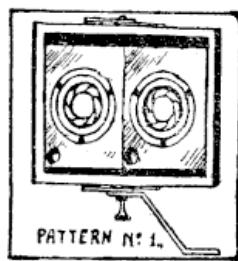
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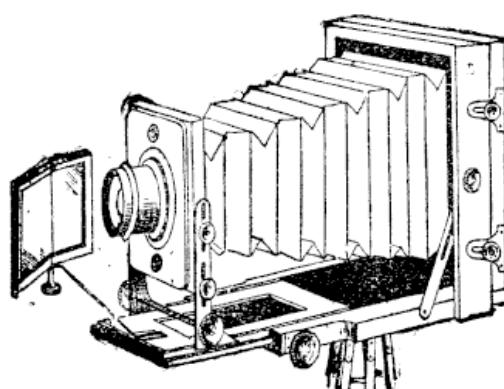
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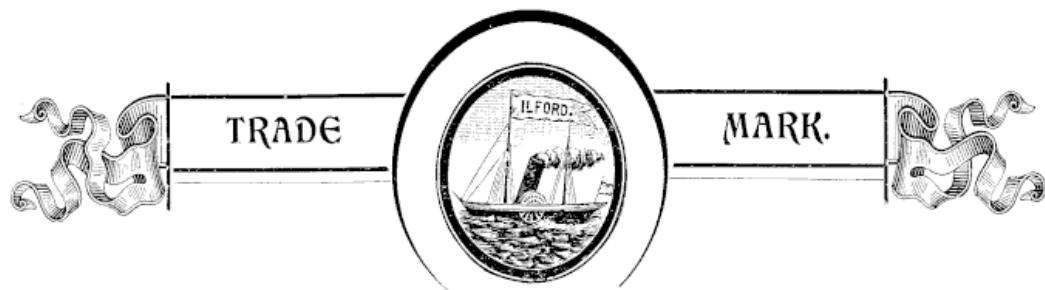
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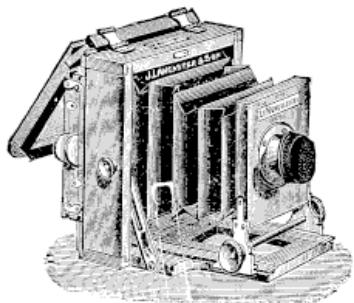
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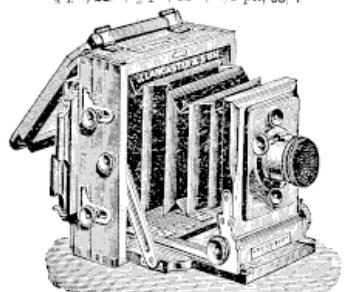
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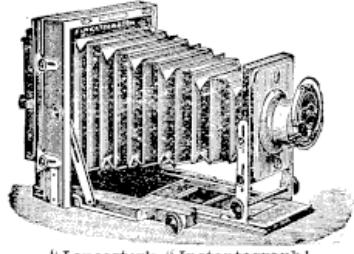




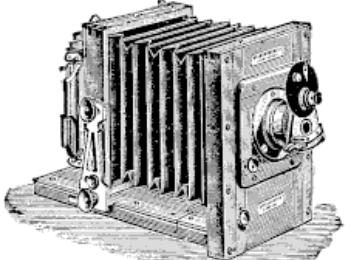
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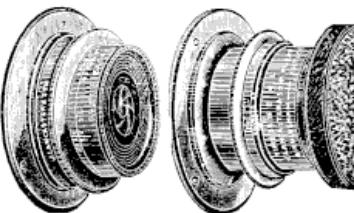
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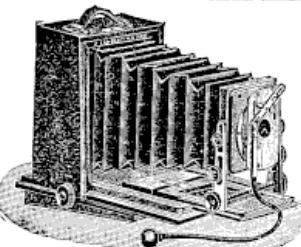
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| Narrow Angle.....           | 12 6  | 21    | 30    | 42    | 50    | 52 6  | 63    | 70    |        |         |
| Instantaneous.....          | 21    | 30    | 42    | 52 6  | 63    |       |       |       |        |         |
| Wide-angle Rectigraph.....  | 30    | 42    | 50    | 63    | 70    |       |       |       |        |         |
| Combination Rectigraph..... | 30    | 42    | 50    | 70    | 90    |       |       |       |        |         |
| Rapid Rectigraph.....       | 40    | 60    | 80    | 100   | 120   |       |       |       |        |         |

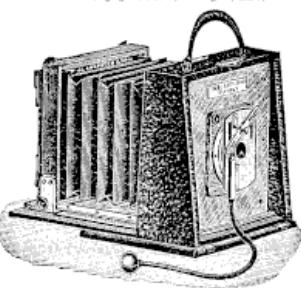
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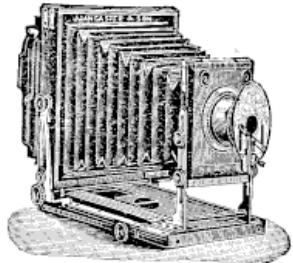
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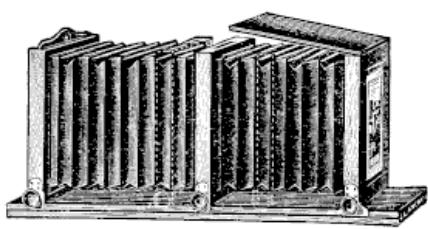
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graph" (Patent).  
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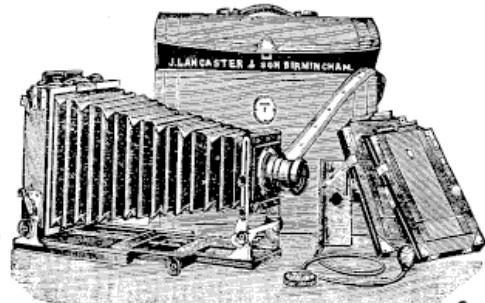
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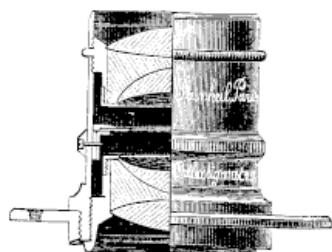
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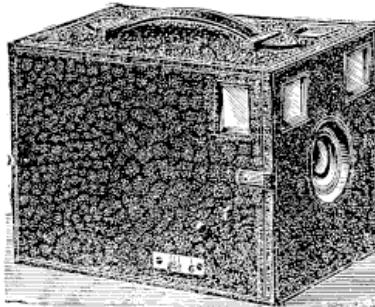
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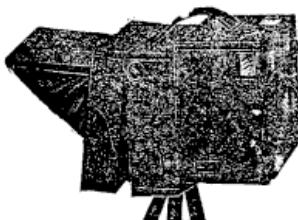
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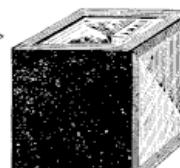


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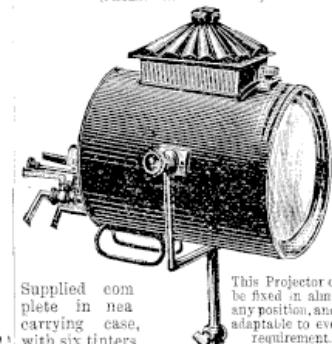


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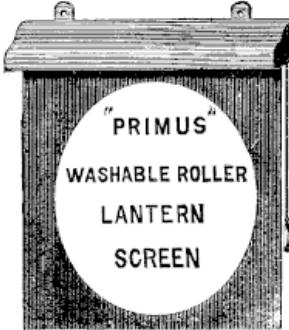
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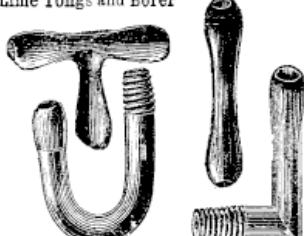


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We have to notify to our Subscribers and the Australian Photographic public generally that it has been decided to offer a **Prize Competition** in connection with this Journal, with the special object of advancing and improving the manipulation of **Photographic Work** suitable for **Half-tone reproduction**. With this object the following Prizes are offered for general competition, those intending to compete being requested to send in their application forms and prints **at as early a date as possible**.

All Pictures are to be forwarded, addressed to the **Editor of this Journal**, in **Sets of Three**, and must be whole-plate size or over. They must be representative of distinctive Australian Scenery, as provided in the Conditions herewith attached.

### THE FOLLOWING IS THE LIST OF PRIZES OFFERED:—

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## CONDITIONS.

1. No entrance fee, but competitors must send, addressed to the **Editor of this Journal**, a separate **Entry Form** filled up for each Class or Entry in which they intend to compete before the 15th August next. Competitors may make as many entries as they think advisable.

4. The subjects must be of Australian character, and be representative, embracing Street Scenes from the principal Cities and Towns, Landscapes, Seascapes, Aboriginal Groups, Characteristic Views of City and Station life, Mining, Agricultural, Pastoral, or other Industries, Bullock Teams, Camel Teams or other methods of Locomotion, or any other subject illustrative of life in the Australian colonies.

8. No competitor shall receive more than **one award**, but unsuccessful competitors in Class I. can compete in Classes II. and IV. or III. and V. with the same sets of prints; or those unsuccessful in Classes II. and III. may compete in Classes IV. or V. if they send in Entry Forms as provided.

10. The Competition will close on the **30th day of August** next, by which date all N.S.W. Exhibits will be expected to reach the Office of this Journal; and competitors from other colonies will be expected to forward their prints before that date.

**Full Conditions**, with **Entry Forms**, will be found in the **June Number of The Journal**, copies of which may be procured on application to the Publishing Office, 66 King Street, Sydney.

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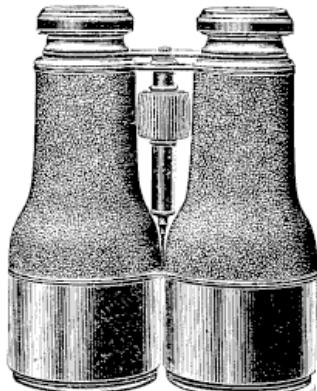
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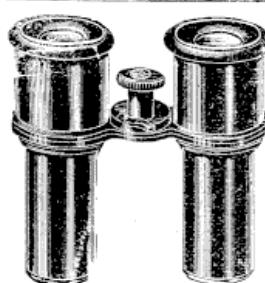
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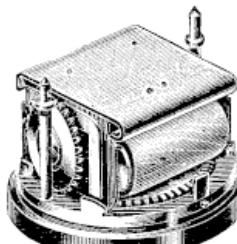
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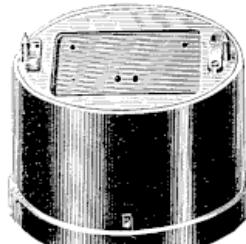


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- Auckland Photographic Club, N.Z.**—General Meetings, the second and fourth Thursday of each month. Annual Meeting in October. Club Rooms, Australian Mutual Provident Society's Buildings, Queen Street, Auckland. Hon. Secretary, G. R. Boulton.
- Ballarat Amateur Photographic Association, Ballarat, Vic.**—President, Mr. W. H. Wooster; Secretary, Mr. F. Foster, 146 Lydiard Street. Meetings are held on the 4th Tuesday in each month in the School of Mines.
- Barossa Camera Club, Nuriootpa, South Australia.**—Walter J. Ponder, Hon. Secretary.
- Canterbury Philosophical Institute (Photographic Section) Christchurch, N.Z.**—Meetings second Tuesday in month. Hon. Secretaries, Mr. S. Page and R. C. Bishop.
- Central Queensland Amateur Photographic Club, Rockhampton, Q.**—Hon. Secretary, H. V. Sankey.
- Dunedin Photographic Society, Dunedin, N.Z.**—Meetings once a month in Union Chambers. Hon. Secretary, Mr. R. A. Ewing, care of N. Z. Drug Company.
- Gordon College Amateur Photographic Association, Geelong, Victoria.**—Meetings held on each Friday in the month. Hon. Sec., Mr. J. Hammerton.
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- Ipswich and West Moreton Amateur Photographic Society Ipswich, Q.** holds its Meetings on the second Wednesday of each month. Hon. Secretary, Mr. E. Bostock, Brisbane Street, Ipswich.
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- Northern Tasmanian Camera Club, Launceston, Tas.**—Meetings on the third Wednesday of each month. Secretary, Mr. F. Stant Brown.
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- The Wanganui Camera Club, Wanganui, New Zealand.**—President, Mr. A. Elliott. Hon. Secretary, Mr. D. Meldrum.
- Wellington Camera Club, Wellington, New Zealand.**—Meetings are held on the second Thursday in each month. Mr. F. J. Denton, Hon. Secretary.
- West Australian Photographic Society, Perth, W.A.**—Meetings third Wednesday in each month. Annual meeting in September. Hon. Secretary, A. R. L. Wright, Public Works Department, Perth.
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- FOR SALE.— $\frac{1}{2}$ -p. Dallmeyer Rapid Rectilinear Lens, Waterhouse Stops complete. £4 17s. 6d. No. 876A.
- FOR SALE.— $10 \times 8$  Optimus Wide Angle Camera, double extension, revolving turn-table, reversing frame swing, &c., 3 double slides, each in protecting cases, carriers to  $\frac{1}{2}$ -plate, 3-fold stand,  $10 \times 8$  Optimus Rapid Rectilinear Lens with Iris Diaphragm, £16.\*  $10 \times 8$  printing frame, 2s.;  $10 \times 8$  printing frame, 3s. No. 877.
- \*To be sold in one lot, other items may be had separately.
- FOR SALE.—16-in. Roller Burnisher complete, with atmospheric burner, £4 10s. No. 886.
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- FOR SALE.—Large Square Ruby Lamp, oil. The Climax 12s. 6d. No. 899A.
- FOR SALE.— $8\frac{1}{2} \times 6\frac{1}{2}$  "Swift" Rapid Paragon Lens, with Iris Diaphragm; splendid instrument. £6. No. 900.
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- FOR SALE.— $8\frac{1}{2} \times 6\frac{1}{2}$  Portrait Lens, with Waterhouse diaphragm. P.A.C.S.A., London. £5 5s. No. 928.
- FOR SALE.— $10 \times 8$  "Optimus" Parallel Bellows Camera, double extension, every improvement, built of Spanish mahogany, with 3 double dark slides. Has only been used a few times. £12. No. 930.
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|                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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| FOR SALE.—1 Folding Stereoscopic Outfit, 2 lenses (1 short and 1 long focus), 4 double dark slides, to take 6½ x 3½ plates, in perfect order, very compact. 35s. No. 950.                                                                                                                                                 | FOR SALE.—½-Plate Outfit, comprising Camera Par'l. Sq. Bellows, Double Extension, Rack and Pinion, Reversing Frame, Rising and Cross Front, 3 Double Dark Slides (in baize covers), Rapid View Lens, Shutter, Focussing Cloth, 3 ½-P. Printing Frames, 1 ½-P. Ditto, Waterproof Canvas Bag and Tripod; in first-class order. £5 10s. No. 986.                                                                                                                                             |
| FOR SALE.—1 Guerry Double-flap Shutter, time and inst. with 6 feet I. R. tube and ball with tap; will take lens up to 2 in. diameter. 20s. No. 951A.                                                                                                                                                                      | FOR SALE.—Anthony Camera, swing back (10 x 8), 6 Double Dark Slides, R.R. Lens, Extra Front Folding Tripod, wooden case; nearly new. Price, £7. No. 987.                                                                                                                                                                                                                                                                                                                                  |
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| FOR SALE.—Camera (15 x 12) by Marion, double extension, brass bound, Russian leather bellows, reversing frame, 3 double dark slides, in solid leather case, first-class order; cost £27. Price, £18. No. 966.                                                                                                             | FOR SALE.—Biunial Lantern, 2 jets, leaden oxygen generator and purifier, a bargain. Must be sold. No. 807.                                                                                                                                                                                                                                                                                                                                                                                |
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| FOR SALE.—½ Plate Camera, parallel square bellows, reversing frame, swing back, rising and cross front, double extension, 3 d.d. slides, tripod, 8 x 5 Ross Rapid Symtl. Lens, Waterproof Canvas Bag and Focussing Cloth. Price, £10. No. 971.                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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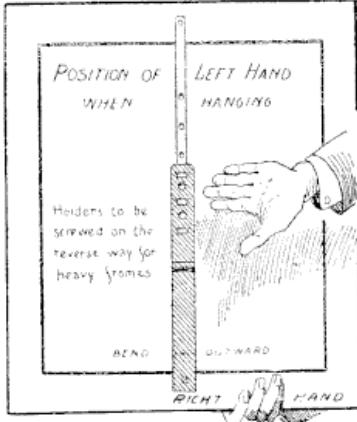
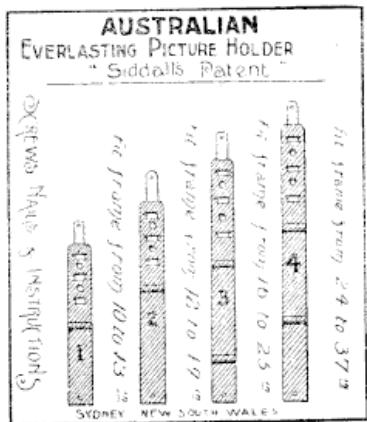
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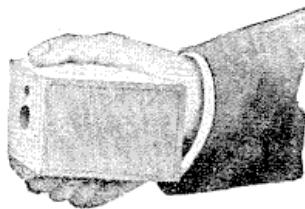
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THE  
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VOL. V.

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No. 7.

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THE  
**Australian Photographic Journal,**  
EXCHANGE AND MART.

SYDNEY, JULY 20, 1896.



**OUR PRIZE COMPETITION.**

As a result of many communications received, we have decided to extend the date for receiving Entries and Exhibits for the Fifty Pounds Prize Competition, particulars of which we gave in our last issue. Entries will now be received up to the 15th August, and Exhibits are to be sent in before the 30th of the same month. Entry Forms for this Competition appeared in our June issue, and those who may wish to make further entries in the various classes should send for copies at once to the Office of the Journal, when they will be immediately forwarded.

For general information, we would state that it will be necessary to make an entry for each set competing; thus, a competitor entering in Class I., and sending 12 pictures, will require one entry for this class. If he wishes the same pictures to compete in Class II. he will require an entry for each 6 pictures competing, and if he wishes the same pictures to compete in Class

IV. he will require an entry for each set of 3 pictures competing, which will, of course, entitle the competitor to any of the six prizes in this class. The same applies to Classes III. and V.

It is not necessary to send *nom de plume* with Entry Form; it can come with Exhibits on envelope in which name is enclosed.



**UNIVERSAL TRANSPARENCY.**

**OPACITY OVERCOME.**

PROFESSOR DAVIS, of Parkersburg, it is said, has informed the American Chemical Society that he has found that by a combination of four chemicals any opaque object can be rendered transparent. He also claims to have made a second and later discovery: that the powers of the chemicals can be transmitted by means of small wires to a metal plate which, if enclosed in a dark box, makes a fluorescent screen, and by looking through it all opaque objects become transparent. This discovery, if it should be confirmed, we are further told, will rival in importance that of Professor Röntgen, and we quite agree.

Like many of these revelations of Nature's secrets, Professor Davis's discovery was the result of an accident. He was engaged in soldering, seated at his table with three bottles of chemicals before him. In one hand he held a fourth bottle, and in the other a file. By accident he held the file between the bottle in his hand and the three bottles on the table, and to his astonishment only the ends of the file extending beyond the bottles were visible. Struck with this remarkable phenomenon, he made tests with numerous other objects, including the hand, and all appeared transparent. He has constructed an apparatus which admits of his discovery being practically availed of.—*Photographic News*.



## OUR ILLUSTRATIONS.

First Half-Tone  
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Picture  
Printed in Australia.

WITH this issue of *The Journal* we make an effort to give our readers an idea of the results obtained by three colour Half-tone Process Work.

This is the first attempt to execute this class of work in these colonies, and, naturally, has entailed considerable trouble and expense; but the result obtained promises well for future efforts. The Blocks from which the picture is produced were made by the Enameline Photo. Engraving Co., with the assistance of Mr. C. H. Hunt, the artist who painted the original picture, and our printers, Messrs. McCarron, Stewart and Co., have taken great trouble to produce the best results obtainable. The special Chromotype Ink necessary to produce the various tones were supplied by the Imperial Ink Co.

Our second Illustration gives the results of quite a different class of work. It is generally supposed that it is most difficult to obtain good photographic results by artificial light; the picture, "The Music Lesson," which is a reproduction of a flashlight photograph taken by Mr. C. Gruncell, of Hobart, with five one-penny tobacco pipes, will completely dispel this illusion. For particulars regarding "how it is done" see the article on "Flashlight Photography," in this issue. The Block was produced by the *Daily Telegraph* Engraving Coy.,

the principal operator, Mr. F. Irwin, having been most successful in bringing out the minutest detail.

The view of the Intercolonial Photographic Exhibition, recently held in Melbourne, will give those who were unable to attend an idea of its extent and completeness. The Block is a half-tone on copper, made with the Fish Glue Process, by Messrs. Collis and Wait, who have recently started this class of work in Sydney.

It will be admitted that our Supplement Illustrations this month prove that, both in Photographic excellence and Process reproduction, our Australian workers are not far behind their *confrères* in the older parts of the world.

## BRISTOL INTERNATIONAL PHOTOGRAPHIC EXHIBITION.

THE Council of the Bristol and West of England Amateur Photographic Association announce that the Triennial International Exhibition of Photographs, Apparatus, Appliances, and Processes, will be held in the Galleries of the Academy of Arts, Queen's Road, Clifton, Bristol, on Monday, 14th December, 1896, continuing open till Saturday, 23rd January, 1897.

Apart from Photographs for competition the Council will esteem it a favour if those who have any interesting examples of the history and progress of Photography will kindly lend them for Exhibition.

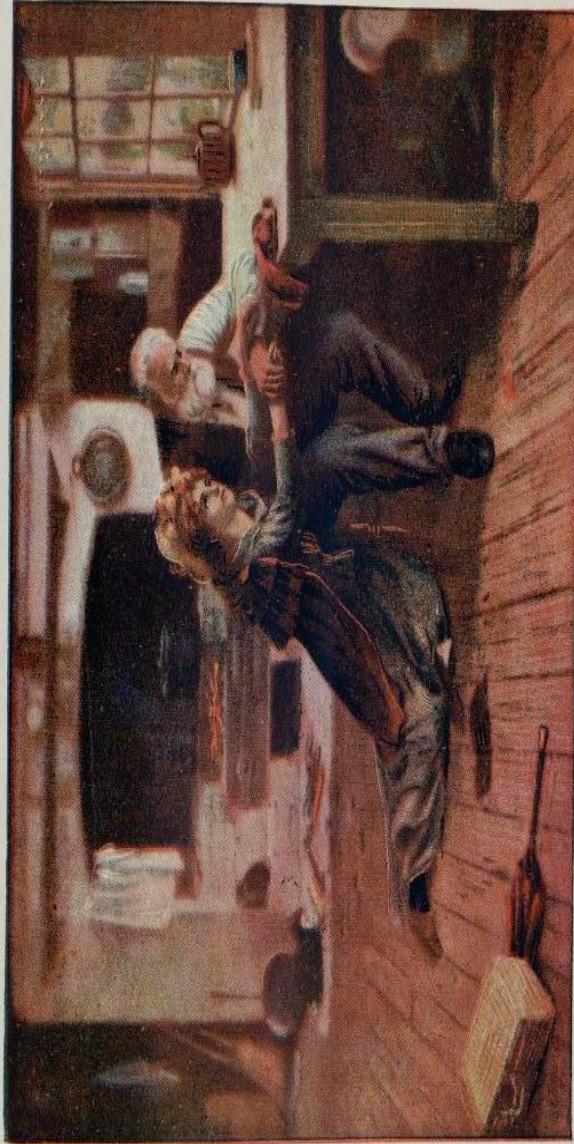
All Pictures, Apparatus, and contributions of any kind will be insured at the expense of the Association.

Especial care will be bestowed on the hanging, so that all pictures shall, as far as possible, be done justice to, to facilitate which *the whole of the extensive galleries above referred to have been retained*.

Full particulars, with Entry Form, may be obtained on application to Mr. Lavington, Hon. Sec. Bristol International Photographic Exhibition, Literary and Philosophic Club, 20 Berkeley Square, Bristol, or the Editor of this Journal.

### A Photographic Pose.

A pleasant smile devoid of guile,  
A careful arrangement of hair,  
A calm regard (which isn't hard),  
A table and carpet and chair;  
A becoming dress, all fluffiness,  
And the prettiest girl that grows—  
Oh, these are the paraphernalia  
Of a photographic pose!



Block by the Emaneline Photo-Engraving Co., Sydney

From Photographs of C. H. Hunt's Picture.

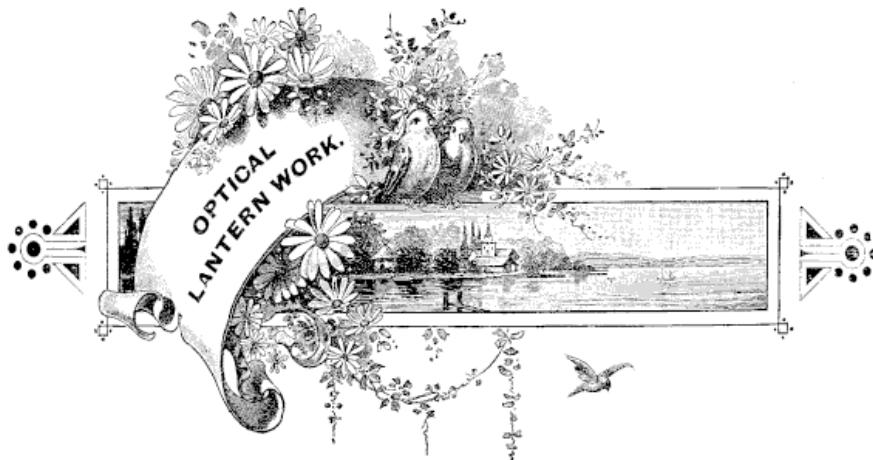
PHOTO-CRHOE.      Printed in three primary colours.

THE PENITENT'S RETURN.

Imperial Ink Coy.'s Chromotype Inks.







## INTERESTING LANTERN SLIDE COMPETITION.

### IMPROVED METHOD OF JUDGING SLIDES.

A most interesting competition of lantern slides was held at the last general meeting of the Amateur Photographic Association of Victoria. This society is strong in good lantern slide makers, and the competition was looked forward to with great interest on this account, as until the slides were handed in no one knew positively who were the competing members.

Messrs. J. W. Small and Co., in order to encourage the making of slides of a high quality, presented an optical lantern as a prize to be awarded to the maker of the best slide from a given negative. The donors supplied the negative and laid down the rules which were to govern the competition; these, briefly stated, were to the effect that each competitor should have the use of the negative for 48 hours, only one slide was to be submitted by each, any plate or process might be used, slides were to be sent in under mottoes, and accompanying each slide was to be a sealed envelope bearing the same motto and enclosing the name of the maker, together with all particulars as to how the slides were produced, judging was to be done by all members of the Association who might be in attendance on the evening of the competition.

The system adopted by the Society for testing was a new one, as far as this part of the world is concerned; the slides were exhibited two at a time, the two lanterns being placed side by side, and five feet apart, and five feet discs were projected by them.

After a pair of slides had been exposed for the time agreed upon, they were removed from the lanterns and re-inserted, with the difference that the slide which was at first in the right hand lantern was now shewn in the left, and that which had been viewed by the light from the left was changed into the right. A few seconds longer and the scrutineers ordered the vote to be taken, one slide being first voted for and then the other. The slide for which the greatest number of votes was cast remained in the lantern, and the other was removed being thrown out of the competition; a third slide was then introduced, and so on, until the whole of those submitted had been shewn; the operators varied things at intervals, for sometimes they changed the slide which remained in the lantern after a vote was taken, and transferred it to the other instrument before the next slide was inserted (the lenses were kept capped between each two changes,) and this increased the interest. The object of changing the slides is said to have been the prevention of one slide having an accidental advantage over another by reason of any slight difference between the lights in the two lanterns.

The lime light was used, and the competition appears from what we can learn to have passed off in a very satisfactory manner.

The points to be learned from this competition, which we believe is the first that has been conducted upon these lines in Australia, are worth considering.

In the first instance, (and this is a novelty here), the whole of the competitors work from the same negative, thus the holder of extra

good negatives or negatives of attractive or interesting subjects has no advantage over the man who has not the good fortune to possess such, and any accidental preference which some of the voters might exhibit for certain subjects is not allowed to interfere with the result.

Leaving the choice of plate to the maker of the slide is also another good point, as the experienced slide maker will naturally select that plate which he understands best, or if he is conversant with several makes he will choose the one which his judgment tells him will best suit that particular negative.

The second novelty is the showing of two slides on the same screen at the same moment; by thus exhibiting them, the judges are enabled to obtain a clear grasp of things, and are in the best position to weigh the merits and defects of the respective slides one against the other, the discs being absolutely the same size and the illumination as nearly equal in the two lanterns as it was possible for those in charge to keep it. (We were informed some time ago that the projection lenses in the lanterns of the association are Dallmeyer's Lantern Lenses, which were specially paired to the order of the society.)

The device of changing the slides in the lanterns previous to the taking of the vote has also much to recommend it, as both slides are then seen under practically identical conditions.

If, instead of allowing the judging to be performed by the whole of the members of the society, a small jury of recognised experts in the making and criticising of transparencies had been appointed, we think that there would have been no question as to the value of the slide which came off victorious, but when the votes of the general body of members are taken, this result is by no means guaranteed—as it is extremely unlikely that every member present would be qualified to adjudicate upon a matter of this sort, and as the members are sure to vote one way or the other there is every opening left for an improper decision with regard to some of the slides—especially when deciding upon the respective merits of two which happen to very nearly equal. We do not—indeed cannot—assume that this was the

case in this particular competition, but that the chance of such errors of judgment occurring does exist can not for a moment be denied.

Another thing deserving of notice is the small size of the discs employed; though these are quite large enough for the testing of slides in this manner, the light can be made very intense when concentrated in such a small area, and this would give a slide which would be far too dense to look well under ordinary conditions, an unfair advantage over one which had been prepared with the usual conditions in view,—the discs were only five feet diameter, now in accordance with the well-known rule, that if a given consumption of gas per hour and a given pressure afforded a light which would give desirable results when a ten feet disc was used, the same amount of light would illuminate a five feet disc with exactly four times the intensity, thus it will be easily comprehended that a very heavy slide would possibly look just correct, whereas one which had been prepared for normal illumination would be swamped.

No doubt this detail was not lost sight of by those in charge of the lanterns, but still the temptation to obtain as fine a light as possible is always very great, and it would possibly be found surprisingly difficult to resist.

These two matters appear to us to be the only elements of weakness in the scheme, though the manner of judging favored on this occasion obviously possesses one great advantage in that it leaves no room for fault finding on the part of the vanquished, as every man has a voice in the placing of his own work.

Considering the competition, as a whole, we think that it is a step in the right direction, and that the imitation of this system in Australia is a further illustration of the energy of the leaders of this Association, and, taken in conjunction with the valuable papers contributed by some of them to the recent Congress, a proof of the work which they are doing for scientific photography. We anticipate that this method of deciding competitions will be introduced into more of our photographic societies.



## CARRYING A CAMERA.

AFTER discussing the various methods by which it is possible to carry a camera during an outing, and showing the objectionable features of some of them, Captain Abney says: "How, then, should the camera be carried? The first desideratum is that the camera shall be easily accessible, that is a *sine qua non*, and for that reason we think that it is a mistake to put the case inside another case. If the camera be (say) the tourist size ( $7\frac{1}{2}$  by 5), the case may be made so that it takes the camera and slides butting on one another, and thus have a rectangular shape and not deep. It is then very easy to sew straps knapsack fashion on to it, and if properly done the case will then be just on a line with the bottom of the neck and the other end rest on the loins. A couple of small straps at the upper end of the case will allow the legs to be carried so as to project but little beyond the leather case. It may be remarked that in Alpine photography it is one of the first essentials that the legs, however carried, should not project too much. A fatal accident on the Matterhorn within the last three years was attributed by some to the camera legs projecting and catching in a rock during the descent. For reasons such as this the legs should be capable of folding into three, and be not more than two feet at the most in length. This length almost obviates any dangers arising from them, except in very narrow chimney-like gullies in rocks, where anything carried increases the difficulties and correspondingly the dangers.

"The utmost that should be carried for any distance is about fourteen pounds weight, but this may be carried for hours together in the manner indicated above. The great point is to have as much weight as possible thrown just above the hips. The back should merely be a support, and it is on this principle that various kinds of military knapsacks have been strongly recommended for adoption."

## RÖNTGEN RAY PHOTOGRAPHY IN SYDNEY.

### DISCOVERY OF A NEEDLE IN A WOMAN'S HAND.

THE surgical value of Röntgen's recent discovery was most conclusively proved in Sydney last week, when a Shadowgraph of the hand of a woman was taken, who had had a needle in her hand for over a year. She had undergone operations at Prince Alfred Hospital and privately, with the object of having the needle removed, without success; but the negative on

development distinctly showed the position in which the needle was located, and enabled an operation to be performed, successfully removing the needle from the woman's hand.

The Shadowgraphs were taken with a complete apparatus recently imported by Mr. F. Schmidlin, electro-medical instrument maker, 44 Elizabeth Street, Sydney, and some excellent negatives have been secured by Mr. Schmidlin in conjunction with the Editor of this Journal.

## PLATES FOR X-RAY PHOTOGRAPHY.

ONE of three papers read at a recent meeting of the R.P.S. was by Mr. H. Snowden Ward, who gave some notes upon plates for X ray work, which, although not exhaustive, established the fact that there was no definite relation between sensitiveness to ordinary light and to the X rays, and that many of the wonderful formulae for increasing the sensitiveness of plates to the X rays were utterly useless. Although the results obtained by Mr. Snowden Ward were the means of at least six experiments in every case, the difficulty of determining a question such as this must be very great, for there are three variables—the coil, the battery power, and the tube, all of which may, too, vary enormously.

PROBABLY it is well known that the spiritualists and Western occultists have claimed that in the discovery of the X rays the uninitiated have merely discovered the "odic" force known to them for so many years; and, as some proof of their statement, a medium has drawn, or caused to be drawn, on canvas, a portrait through an inch of solid wood, in the shape of a box. So that in the future we shall want neither X rays nor plates, but merely a medium and a canvas. Further developments are promised, and the next subject is to be the skeleton of a man. How much truth there is in this we cannot say; but, after having seen this wonderful portrait, we can only say that there is not the slightest doubt that a brush and paint were used, yet an affidavit by three observers states that there was no brush and no paint in the box.

## X-RAYS AND GOLD-MINING.

SOME very interesting and successful experiments have recently been made in Oregon City by a well-known physician and the superintendent of an electric company. So says an American contemporary. Experiments were made with gold-bearing rock, in which the rays defined free gold as plainly as if it lay on the surface of the quartz. So far as is known this is the first successful experiment of this kind with quartz, and the results obtained justify the assertion that the new ray may prove of immense value in mining operations.

## INTERCOLONIAL INDUSTRIAL AND JUVENILE EXHIBITION IN ALBURY.

THE committee of the Albury Industrial and Juvenile Exhibition, to be held in the border capital in September next, are now inviting applications for space in connection with the event. Every effort is being made to render the project a success, and from the cordiality with which it has been received throughout New South Wales and Victoria there can be little doubt that a great success will be attained. The Exhibition will be held in buildings covering in all 70,000 square feet of space, and arrangements are being made by which it is expected the Railway Commissioners will carry exhibits free of charge, and excursions will be organized at specially low rates. The classes in which exhibits will be received are varied and comprehensive, and there will be a special Juvenile Court for exhibitors under 14 years of age, and between 14 and 18. There will also be a section for non-competitive exhibits.

In the Art Section, photographic work is to receive special attention, a liberal Prize Schedule having been issued, a copy of which we here give for the information of our readers, many of whom will doubtless forward exhibits.

### PHOTOGRAPHY.—PRIZE SCHEDULE.

#### (FOR AMATEURS.)

Entrance fee, 2s. 6d.; 10s. 6d. will cover any number of entries  
Each exhibit must be the *bona fide* work of exhibitors.

#### CLASS A PORTRAITS.

Section 1.—Half plate or under, 2 pictures. Medal, certificate and trophy, presented by the Rev. D. Smith.

#### B GROUPS.

Section 1.—Half plate and under, 2 pictures. Medal, certificate and trophy, presented by Albury Brewing Co.

#### C LANDSCAPES.

Section 1.—Full or over, 2 pictures.

“ 2.—Half, 2 pictures.

“ 3.—5 x 4 or under, 2 pictures.

Medal and certificate in each section.

#### D RIVER OR CREEK SCENES, OR WATERFALLS.

Section 1.—Full or over, 2 pictures.

“ 2.—Half, 2 pictures.

“ 3.—5 x 4 or under, 2 pictures.

Medal and certificate in each section.

#### E SHIPPING OR YACHTING.

Section 1.—Half, 2 pictures.

“ 2.—5 x 4 or under, 2 pictures.

Medal and certificate in each section.

#### F SEASCAPE.

Section 1.—Half or under, 1 picture. Medal, certificate and trophy, presented by Mr. Davidson, saddler, Dean-street, Albury.

#### G ARCHITECTURE EXTERIORS.

Section 1.—Full or over, 1 picture.

“ 2.—Half or under, 1 picture.

Medal, certificate and trophy, presented by Mr. Thorne, architect, Albury, and T. H. Mate and Co., Albury.

#### H ARCHITECTURE INTERIORS.

Section 1.—Full or over, 1 picture.

“ 2.—Half or under, 1 picture.

Medal and certificate in each section.

#### I CYCLING PHOTOGRAPHS.

Section 1.—Medal, certificate, and trophy, 7s 1s, presented by the American "Ideal" Cycle Co., Melbourne, for the best collection of cycling photos.

#### J COLLECTION ANY SUBJECTS.

Section 1.—Medal, certificate, and trophy, valued at 7s 1s, presented by Dr. Cleaver Woods, Albury, for the best collection of photographs.

#### K ART PICTURE.

Section 1.—Any size, any picture. Prize valued at £1 1s. presented by Mrs. Darley, Albury Hotel.

Medals, certificates, and special prizes will be awarded for exhibits in the following sections, according to merit.

#### L ANIMAL OR BIRD STUDY.

Section 1.—Any size, 1 picture.

#### M SEASIDE RESORT.

Section 1.—Any size, 1 picture.

#### N HAND CAMERA (Street Scenes or Moving Objects, (Marine Views excepted.)

Section 1.—5 x 4 or under, 1 picture.

#### O HAND CAMERA (Pictorial).

Section 1.—5 x 4 or under, 1 picture.

#### P ENLARGEMENTS.

Section 1.—1 picture.

#### JUVENILES.

##### (UNDER 21 YEARS OF AGE.)

Section 1.—Two pictures, any size, any subject. Medal, certificate, and prize, valued at £1 5s., presented by Messrs. Roxburgh and Accountants, Albury.

Entry Forms and all particulars will be supplied on application to the Director, Mr. A. S. Manders, J.P., Albury, N.S.W.



**Visible and Invisible Light Rays.**—M. Gustave Le Bon claims, in notes presented to the Paris Academy of Sciences, that he has proved that ordinary lamplight and gaslight are transmitted through opaque bodies, such as a sheet of copper, one-thirteenth of an inch in thickness; not in a form of visible light, but in the rays which produce photographic effect on a sensitized film. M. Nieuwenglowski has questioned these experiments, and states that he has obtained the same effect in complete darkness, attributing his results to luminous energy stored up in the plates. We do not quite follow his dicta, but presume that M. Nieuwenglowski understands what he means by his statement.

## FLASHLIGHT PHOTOGRAPHY.

By CHAS. GRUNCELL, Hobart  
(Ilford Gold Medallist for Flashlight Photography).



branch of the art seems to be almost entirely neglected throughout the Australian Colonies.

There is no reason whatever why this should be so, unless it be that amateurs and others have "tried their 'prentice hands" at it and failed, or have been deterred from taking it up from an erroneous impression that it is a most difficult and expensive pastime, with far greater chances of failure than of success.

My object in these articles is to dispel any such idea, and to give such detailed and *practical* information on the subject as will enable any one with a very limited experience in photography to command success in ninety cases in every hundred.

But, first, a word as to the utility of flashlight work. I have been asked this question on several occasions, and have wondered that any intelligent person should fail to see its usefulness. One is enabled by its means to obtain photographs of places and scenes utterly impossible in any other way. Daylight is dispensed with, and is substituted by one more actinic in its character, and far more thoroughly under the control of the operator. Portraits may be taken at night: pretty and effective family groups and gatherings secured amid all those everyday surroundings which make the word "home" so dear. What more delightful and welcome present could be received by absent members than a photograph of "those at home" by the old fireside, in the "dear old room" where the happy days of youth and childhood were spent in the long long years ago?

If, for no other reason, flashlight photography should take a leading place, and be valued

highly by all interested in the art; but when, added to this, one can also secure permanent records of visits to the caves and caverns of the earth, work in the mines, and last but not least, of the various acts and scenes in amateur and other theatrical performances—to say nothing of fancy dress balls and the like—I think little need be said further in its favour. That it is possible (and comparatively easy) to do such things, I hope to show by means of the photographs which the Editor has kindly undertaken to reproduce in illustration of these articles.

Without further remarks, I will go into the matter, beginning with the

### "APPARATUS."

This, as already mentioned, need not be of an expensive character, or deter any amateur with even very limited means. Of course, should he be a millionaire, he may be as extravagant as he pleases; but although he may thus make the work somewhat easier, I will not guarantee his pictures will be improved thereby. The illustration, "The Music Lesson,"—one of the Ilford Gold Medal pictures, and the negative of which that Company made a request to purchase—was taken by means of a battery of "five penny clay tobacco pipes." The secret of success was the arrangement of the lamps and figures in the picture, and which the reader may easily repeat by following the directions given:—

For an ordinary room up to 24 by 14 feet (the size of room in above picture), procure four round sticks—straight broomsticks will do well—about forty inches long, and seven-eights of an inch thick. Get the smith to fit a brass or stout tin ferrule seven inches long at the end of stick No. 1, in which to place No. 2. Cut two pieces of dry and *heavy* timber, each  $20 \times 2\frac{1}{2} \times 2$  inches. Mortise these so that they will be across each other even with the floor, in such a manner that the centre of the crossing portion is about 14 inches from the long ends. Make these to fit tightly into each other, but so that they may be knocked apart for packing purposes. A thumb-screw going *nearly* through will secure them when in use. Bore a hole just large enough to fit end of stick No. 1, almost—but not quite—through the centre of the cross, and put a screw-eye into each end of both

pieces. Erect Nos. 1 and 2 into the hole, and to thoroughly steady them put a small screw-eye through ferrule into No. 1, and secure all together with stays of strong cord. Get the smith to make two *strong* "T" shaped ferrules, so that the top portions fit on No. 2 so tightly that while they may be moved up and down with an effort they will not move of themselves. *This is important.* The other part of each ferrule must fit one end of sticks Nos. 3 and 4, which may with advantage be somewhat thinner than the other two. Place ferrules on No. 2 so that upper cross arm will be six inches from top, and the other one about a foot below this; insert ends of the other two sticks, twist them at right angles—or more—to each other, and the support for the lamps is complete.

Should any reader have a difficulty in making this apparatus for himself, no doubt it can be supplied by photographic stock dealers, with packing box complete, at moderate cost.

I will suppose five lamps are to be fitted, although, should a less number be sufficient for the purpose, the others may be cut off by drawing the rubber tubing from them and fitting the ends with small corks to prevent the escape of air when discharging the lamps. Whether "tobacco pipes" or the more highly finished and ornamental "Flashlamps" are used, the arrangement will be the same. First mark position of *three* lamps on *upper* arm, in the middle and near each end, but clear of the ferrule. On the lower arm the best places are near the outer end and about fifteen inches from upright. If pipes are used, they must be secured to the arms by means of rubber bands or fine binding wire, not too rigidly, but so that the tubing may be easily slipped on and off, yet firmly enough to prevent them "turning turtle." Should lamps be used, perhaps the easiest way to secure them is to have two stout wire spikes, soldered on each about  $1\frac{1}{4}$  inches long, and on either side. Holes to match bored through the arms will receive and hold them securely. These lamps must all be connected by small rubber tubing, similar to that used for discharging pneumatic shutters. In this manner make or obtain the following brass connecting tubes, of such thickness as to allow rubber to be tightly stretched thereon. Their

several arms need not be more than an inch in length. One "T" piece, two "Y" shape, one "F." Secure these also loosely to the frame as follows: "T" to side of ferrule, holding the lower arm; one "Y" on this arm between ferrule and first lamp; "F" to side of upper ferrule, and the other "Y" between first and second lamps on upper arm. Connect all these and lamps together with the rubber tubing, leaving some 15 feet hanging from the lower ferrule with which to discharge the lamps. The air supply may be produced by a *large* pneumatic ball, the lungs, or a pair of bellows. In the latter case a spiral spring must be fastened between the two handles to keep the bellows inflated and prevent them collapsing, and so firing off the charges before their time. They are easily acted upon by the foot when all is ready. Personally, I prefer "my own bellows" (lungs), and accordingly have the fifteen feet length of the larger gas tubing, the lower limit of its ferrule being made of stouter brass to fit it tightly. In order to prevent any chance of this being dragged off the ferrule, it is well to tie a piece of string tightly round rubber, a few inches below ferrule, on stick No. 1, and loop it over the screw-eye in the same.

*(To be Continued).*



#### Contrast. Exposure and Development.

—*Short exposure* tends to emphasize contrast of light and shade, resulting in a hard negative.

*Over exposure* tends to reduce contrast, and yields a soft or flat negative.

*Quick development* tends to reduce contrast.

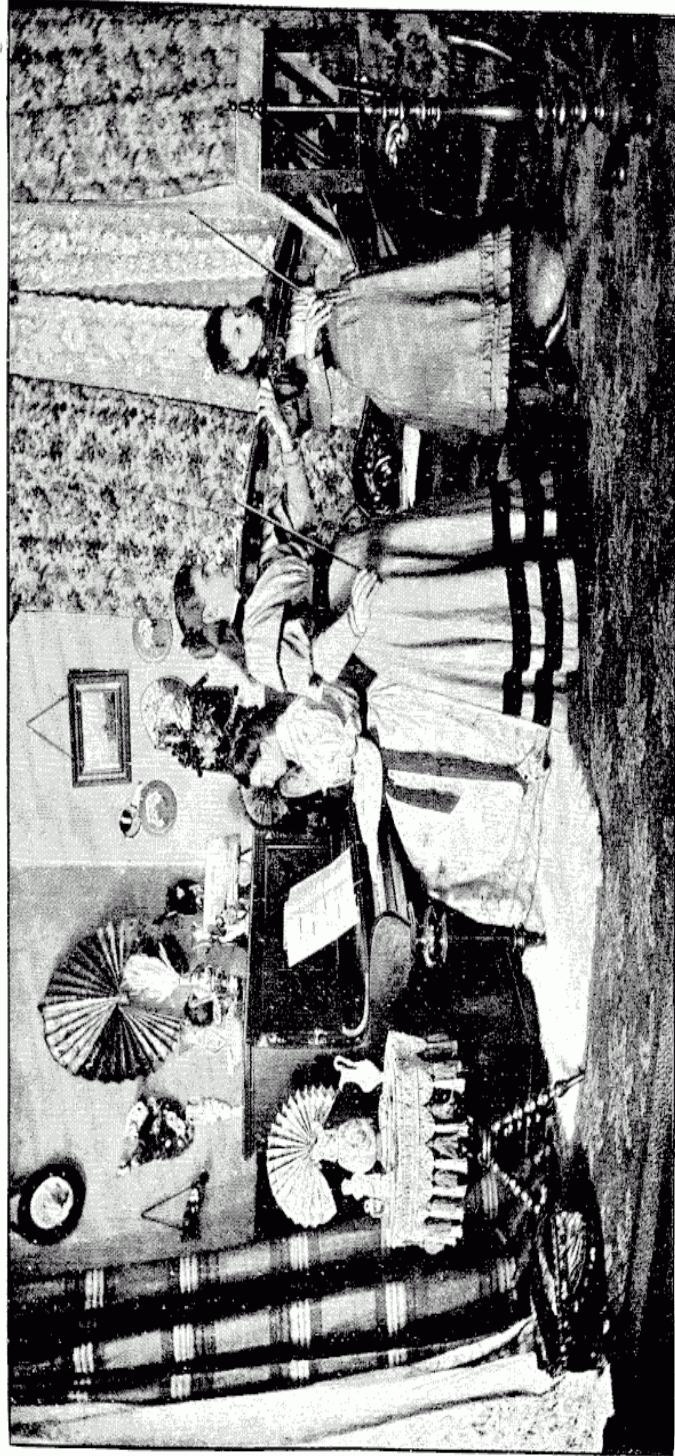
*Slow development* tends to delicacy and detail, with longer scale of gradation.

*Quick Development* may be brought about by warming developer, concentration, or excess of alkali.

*Slow development* may be the result of a slow temperature, dilution, or very little alkali and excess of bromide.

#### The Eastman Photographic Materials Co.

As a result of the operations of this enterprising and popular firm for the past year, the directors are in a position to issue a balance-sheet showing a net profit of £10,914 15s. 10d. This has been considerably contributed to by the great popularity of their "Pocket Kodaks," and other new cameras introduced. This satisfactory result proves that the enterprise of this firm is fully appreciated by the photographic world.



Block by the "Daily Telegraph" Engraving Company.

THE MUSIC LESSON.  
FLASHLIGHT PHOTOGRAPH BY C. GRUNSELL, HOBART.  
Awarded "Hord" Gold Medal



## DESIGN FOR A PHOTOGRAPHIC TRANSIT CIRCLE.

By H. C. RUSSELL B.A. C.M.G., F.R.S.,  
Government Astronomer, New South Wales.

(*Paper read before the Australasian Association for the Advancement of Science.*)

### ADJUSTMENT OF CAMERA.



THE provision for holding the photographic plate is similar to that used in the star camera, which holds the plate firmly against carefully made stops, so that it cannot move from the position in which it is held. Means of adjustment of this plate-holder would be provided, and also the means for fixing it rigidly when it is adjusted.

We now proceed to test the collimation of the camera, and we assume that the photographic lens has been set as truly as possible at right angles to its tube, and therefore, since it turns on the same axes as the telescope which has been adjusted in collimation, it will in the two positions of the instrument record the star on exactly the same point of the plate, except there be any unknown errors of collimation or flexure due to the position of the telescope in declination, and differing from those found to exist in the horizontal and vertical positions in which it was tested. During the time the plate was exposed to the star the observer has constantly observed the star on the wire, and if the bisection has not been perfect he has instantly corrected it. So that the mean position is one of accurate bisection of the star, and experience shows that this is possible, because perfectly round photographic star images are easily obtained, and it is obvious that such a bisection of the star is immeasurably better than that of the flying shot method unavoidable in the ordinary transit circle.

If the two images are not superposed then the centre of the spot made by the two images may be safely assumed to be the mean of the unknown errors, and if it does not wholly eliminate them it must at least be a more accurate position for the star than that obtained in an ordinary transit circle, which does not permit of the determination of these errors by any direct method, except in so far as the reversible transit circle of modern dimensions provides for it. But the star camera form of reverser works much more smoothly than the other form, and has the great advantage of reversing not only the telescope but also the stand itself, and at the same time avoids jars to the instrument, and provides for a far more accurate bisection of the star as we have seen.

In taking observations or rather photographs by this instrument two observers are necessary, and the work would be better and much more rapidly done by three—one to observe the star bisected by the wires, another to read the microscopes on each declination circle in each position of the polar axis, and the third to read and

record on a chronograph the time of transit. It has already been mentioned that the graduations for 15 minutes of time on each side of the zero, *i.e.*, the point indicating that the telescope was in the plane of the meridian, and the determination of that point by observation of a mercury reflector, have also been stated. It remains now to mention that RA graduations or marks should be at 10 seconds intervals; this is quite possible since the RA wheel is 3 feet in diameter. Hence seven of these marks would pass under the microscope each minute; the microscope is powerful enough to enable the observer to see easily  $\frac{1}{100}$  of a second of time, and the parallel wires in the microscope should be exactly suited to the division lines. A point on the graduations would be chosen so that the observation begun there would be soon enough to admit of reversal and picking up the corresponding divisions on the other side of the meridian. Since there would only be a few of these division lines in use, it would be possible to determine with great accuracy their relation to the meridian line.

In making the observation the telescope would be set on the desired star before the meridian; the RA observer would give the signal when the plate should be uncovered and then record on the chronograph the time that each division of the circle passed the microscope. When done he would give the signal for covering the plate and its reversal, and then repeat the observation in that position as before. Now, since the graduated circle would move steadily on without the slightest vibration even under the high power microscope, he would be able to determine the RA with much greater accuracy than is possible in the ordinary transit circle, and that motion being always at the same rate, even for stars close to the pole, the observer would be able to record the RA with extreme accuracy for stars in all declinations.

I have, I think, said sufficient to place before you a fair outline of the instrument and the method of using it; to make this complete in every detail would require a small volume, and is not necessary. If I have demonstrated the principles involved, and I think I have done to, my present purpose will be served, and if my estimate of the quality of the work which would be done with this instrument is correct, the design for it will be all the better for discussion.

I would only add that the photographic field might be two degrees, and that there would be two images of any stars, save the guide star, that might be in the photographic field, and their positions relative to the guide star would be determined with the needful accuracy by measurement. With the 13.1 inches objectives used for the star chart, we can easily get a hard round image of an eleventh magnitude star in one minute with increased experience in manufacture; and with Jena glass it is fair to assume that star images would be smaller and better defined, and measurement more accurate than it is now, and even now they can be made good enough to justify the making of the photographic transit circle here described.



## THE INTERCOLONIAL EXHIBITION AND CONGRESS OF PHOTOGRAPHY, 1896.

### EXHIBITION PICTURES.—(Continued from page 131.)

OLLOWING the descriptions given in our issues for May and June, we now deal with some of the LOAN EXHIBITS.

Taking these as they appear in the catalogue, a copy of which has been recently received, the first to claim notice is the exhibit of the SANDELL WORKS CO., LONDON.

This firm sends a number of frames illustrating work done on the special styles of plates which are manufactured by them; many of these are of exceptionally difficult interiors, and others have been chosen for the purpose of showing that, even when the lens is pointed in the very teeth of the light, these plates will rise to the occasion. A typical subject is one which was reproduced in some of the photographic journals two or three years ago, and shows a portrait taken by magnesium flash-light, the blaze of light representing the burning magnesium being shown on the same plate.

The result is perfect—no trace of halation, and the figure harmoniously lighted, and this one print is sufficient to show conclusively that the advantages of the triple-coated plates have not been overrated.

As examples of special work, many of the photographs comprising this exhibit are deserving of close study.

MAWSON AND SWAN, the well-known plate makers, exhibit material; and a striking exhibit is a series of negatives from black and white subjects which have been made on their photo-mechanical plates, and which, so far as can be judged without closer scrutiny than we have had an opportunity of indulging in, rival the results which are said to be inseparable from the collodion process when photo-litho. and other photo-mechanical work in which great density, coupled with extreme clearness, are requisite. They appear to present perfect opacity in the high lights, and clear glass where the lines exist.

LUMIERE AND SONS, of Lyons, France, show plates and papers; and Robertson and Moffat, of Melbourne, have sent a number of magnificent autotypes, the work of THE AUTOTYPE COMPANY, London.

Among the pictures lent by Mr. W. H. Gill, we notice two or three old friends in the form of pictures by the veteran H. P. Robinson, whose recent additions to pictorial photography with equally picturesque and harmonious writing, even when under the banner of literary warfare, prove that, though advancing in years, he is "worth more than several dead ones yet."

PATTERSON AND CO., of Melbourne, exhibit high-class process work, and the Working Men's College shows a general exhibit consisting of carbon prints, talbotypes, collotypes, etc., as well as bromide enlargements of portions of the college buildings taken during erection.

An extensive exhibit of large silver prints is on view near these bromide enlargements, and we were unable to ascertain definitely who had lent them or whose work they were. They consist of locomotives, railway-station buildings, bridges, and other railway works in Victoria; and close inspection reveals the fact that they are copies—possibly enlargements from silver prints—but so well executed are they that, though hung without frames or glass, and bearing the evidence of having been rather roughly used, a casual observer would be liable to mistake many of them for prints from direct negatives.\*

FALK AND CO., Melbourne, exhibit work on Barnet paper, the bulk of which is quite up to the high standard with which we are accustomed to associate the work of this studio. A very interesting exhibit shown by Mr. H. W. Barnett, is a collection of photo-chromes, from the Photo-Chromo Co., of Zurich. These are, speaking generally, well executed. The colouring may in a few instances be a little high, but, apart from this, the exhibit is a very interesting one and is also attractive, the colour affording relief to the eye in the midst of so large a quantity of black and white work.

MENDELSSOHN AND CO., of Melbourne, have a show of portrait work which sustains the firm's reputation, some of the portraits printed in platinum being worthy of special praise.

THE AMATEUR PHOTOGRAPHIC ASSOCIATION OF VICTORIA sends an exhibit which is non-competitive. This contains probably as much work as is shown by any other society, and much of it is of high class. It consists for the most part of landscapes, buildings, marine views and enlargements; but the same variety in printing processes which characterises some of the other society exhibits is absent, and as a whole the exhibit does not reflect the greatest credit upon this Society, for, on comparing our notes on its work shown in this building in 1895, there is neither the same variety nor the same extent of work exhibited. Some fine enlargements have been sent in unframed, and, as there seems to have been insufficient wall-room, they have been "hung up on the floor." Other work, small in detail, has been skied; and, as a whole, the work does not do credit to this Association.

HARRINGTON & CO., LTD., Sydney, show some very fine Enlargements upon Fuller's Bromide Papers, smooth and rough, and on Bromyta Paper by the same maker. These specimens are untouched, and exemplify well the fine detail, depths of shadows, and general brilliancy of the work that can be produced with these papers. Most

\* We have since been informed that these prints are from negatives taken some years ago by Mr. T. F. McGaurin, Govt. Photo-lithographer of the Crown Lands, Department, Melbourne, and that they are, as we surmised, enlarged copies of silver prints. We do not yet know who exhibited them.

of these Enlargements were made at "Falk's" Studios, from negatives by this firm, the artistic character of which greatly adds to the charm of the exhibits as pictures. The Opal Enlargements shown by this firm, illustrative of the quality of Fuller's Opal Plates, are also good samples of work.

The most attractive exhibit in this collection is, however, a large frame containing 27 whole plate Portraits on "Invicta" Sensitized Albumenized Paper. The prints, which are from "Falk's" Studios in Sydney, are of a highly artistic character, the superior finish of the pictures attracted general attention, and conclusively proved the superiority of this popular brand of paper.

BAKER AND ROUSE have a very extensive exhibit of material and apparatus, and occupy a large amount of wall space, the latter being filled principally by enlargements on the various papers prepared by the firm.

W. WATSON AND SONS show a collection of apparatus and material, and

J. W. SMALL AND CO. are also to the fore with an exhibit of similar character, in addition to which they occupy a good amount of the walls, on which a large collection of enlargements and direct prints on the Eastman Company's papers are hung.

MR. B. COWDEROY sends early talbotypes, and Mr. L. L. Smith exhibits Daguerreotypes and collodion positives of considerable age. These two exhibits are interesting as illustrating a phase of photography long since past.

MESSRS. FREEMAN AND CO., Sydney, have a collection of high-class portrait work, including portraits of several N.S.W. celebrities; and some of Mr. J. W. Lindt's immense enlargements of New Guinea subjects are again noticed.

A modest display of coloured photographs, very well executed, is made by MADAME PATINIE, of Melbourne, and these complete the principal items in the loan collections.

With the work hung in the extreme west gallery we have no right to interfere, that portion of the building being sacred to the productions of the members of the Melbourne Art Club and the Victorian Sketching Club, but the study of much of it will not be unattended with advantage by earnest students of photography, as those who aim at producing photographic pictures will find that a close inspection of some of the works of contemporary painters will afford them many valuable hints in the treatment of pictorial subjects.

## PAPERS READ AT THE INTERCOLONIAL CONGRESS OF PHOTOGRAPHY, 1896.

### PHOTOGRAPHY IN THE LECTURE ROOM.

(Paper by PROFESSOR D. McALPINE).

AMONG the varied applications of Photography to the numerous necessities and requirements of our modern life, not only to perpetuate ourselves and our works, but to charm us with nature in her varying moods and to bring us into contact with the beautiful and the true, I know of no application more worthy of attention or more likely to benefit the rising generation than its utilization as a handmaiden of education. It is capable of rousing the interest of the young and fixing it, because its productions are pleasant to the eye, and may be made to convey a world of meaning by well chosen and apt illustrations. And it is in these pictorial representations, which appeal both to the eye of sense and to the mind's eye, that the power of photography as an educator is made manifest. Indeed, photography had hardly seen the light before it became evident that here was the means of illustration of almost boundless applicability. In every department of knowledge, in the sciences, arts and manufactures, it was seen to be capable of being turned to useful account. And from the illustration of a book or a magazine, of a traveller or explorer's discoveries, or a war correspondent's adventures, it was but a step for it to become a recognised means of lecture illustration and lantern demonstration. And this brings me to the special subject of this short paper—"Photography in the lecture room." When I say the lecture room, I mean not only its use to the popular

educator, who wishes to give an agreeable and pleasant account of his subject, but to the scientific man who wishes to convey to earnest students methodical information on his special department of knowledge. I do not mean to dwell on the advantages of photography for this particular purpose, as I take it for granted that every lecturer on certain subjects, who has considered the matter at all, acknowledges its utility; and the only question at issue is how best to use it and how to make the most of it in our educational work. The pictorial idea in photography constitutes, to my mind, its great value in the teaching of the natural sciences. To get clear ideas on the subjects taught there must be pictorial representations framed in the mind, and according to their definiteness so will the knowledge be definite. And on this formation of clear images greatly depends the success or want of success on the part of the student, and to impart these ought to be the main object of a lecturer. Now, if photography does, as I believe it does, greatly help a student in seeing clearly and forming a definite idea of the subject-matter of the lecture, then it is a powerful educator, and will tend to lessen the great disparity which at present exists among the students, by enabling those who are deficient in the faculty of scientific imagination (and there are many such) to have this deficiency minimised by the aid which photography offers. I will, therefore, now direct my attention mainly to the uses which might be made of photography in the lecture room. I have used it both in Edinburgh and Melbourne to illustrate my scientific lectures, and will speak from a certain amount of practical experience. Of course, the subjects in which it might be profitably used are numerous.

In Geography and History it might be used to bring nearer to us the distant and the past; in Geology it could find for us sermons on stones; in Agricultural science it could be largely used for showing processes and results; but in subjects dealing with life, such as Biography and Botany, and minute and beautiful structures composing tissues, which photomicrography faithfully reproduces, there it specially lends itself to lighten the labor of teacher and student. In the Agricultural Department of this colony it is used by experts to convey useful information-bearing on their industries, to country audiences; to appeal to the seeing eye as well as to the hearing ear, and thus endeavour to make a double impression. In this way the growth and treatment of special products—dairying, scent farming, tobacco curing, the insect and fungus diseases of which plants are liable—are faithfully and forcibly illustrated. Everyone knows the value of a good illustration, and in a casual lecture, where attention has to be aroused, as well as information conveyed, it gives a lecturer great facility in explaining any difficulties he has occasion to deal with. But it is in a regular course of lectures that photography might be made to yield its best results, and that is the phase of the question now to be considered. I have incidentally spoken of lecture illustrations and lantern demonstrations, and these have to be carefully distinguished. Lectures on natural science subjects must, according to modern methods, be illustrated, and these illustrations may either consist of well executed diagrams, of models, or blackboard sketches; or, best of all, actual specimens. Now, these are all useful and even necessary in their place, but the student wants some permanent record and faithful illustration of difficult points, at least, which he can carry away with him. In the course of a lecture he cannot possibly take down all the necessary details of drawings in anything like their natural completeness, and here comes in the great advantage of distributing to students accurate representation of the special structures treated of. Diagrammatic representations on the blackboard are very useful but often misleading, as they give students false conceptions of the size of objects and the relative proportion of their parts, therefore they require to be supplemented by drawings or photographs from nature. In some of the home universities, photo-lithographs are thus distributed with advantage. And what a gain to science and to education it would be, certainly to the student, if the family album were not the sole representative but likewise the student's album, wherein were treasured up valuable specimens relating to botany, or biography, surgery or anatomy, *materia medica* or physiology, bacteriology or geology, as the case may be. Such an album would represent the truth of nature as far as then known. Our modern educational methods, especially at our universities, I consider to be far too conservative and not ready enough to take advantage of time-saving and labor-saving appliances for the student. I know that to talk of saving a student's time and labor will be regarded by some as an educational heresy, for the economy of brain power in a student is not regarded as a virtue; but

my experience as a student and a teacher is, that if unnecessary time and labor are saved the student is thereby enabled to devote his best energies to the more complete and thorough grasp of his subject. Shortly, then, I would say that every lecturer should rejoice in the advancement of photo-mechanical processes, and take advantage of them in giving his students materials for their album, and thus save them much unnecessary and distracting labor in the lecture room. The lecture illustrations I have used to assist students while taking notes, but lantern demonstrations more for revising the subject and taking a rapid run over a given portion of the field, after it had been dealt with in detail and before passing on to some new division of the subject, what might be called a summary of lectures. There are various drawbacks, however, to the employment of lantern demonstrations for the regular lectures, and perhaps members of this congress might help to remove some of the difficulties and thus advance the cause of education. The necessary darkness is a necessary evil, and students are not only thereby debarred from taking notes, but sometimes encouraged to take advantage of the darkness. To obviate this difficulty in evening lectures at the College of Pharmacy, I have used a screen of French tracing paper, facing the audience, and, although faint, the image was distinct while the lights were up. Still, some particular kind of transparency, or screen, or lantern, or perhaps all combined, is necessary yet to make the use of it, under these conditions, a perfect success. One use of photography ought to be specially mentioned and that is in connection with the microscope. The microscope in modern research is indispensable, and its results are only capable of accurate delineation by means of photography. The most accurate measurement which the microscope is capable of yielding is also made by photography. Hence, in the study of bacteriology, or the minute structure of animal or vegetable tissue, or even of the texture of rocks, the lecturer can only convey to students, in the mass, accurate representations of these structures by means of photomicrography. The photomicrographs adorning the walls of the Exhibition are an education in the infinitely little. And in the limited time at my disposal, I have endeavoured to show that photography, as an adjunct to the lecture room, has not been as generally taken advantage of as its merits demand, and that by means of lecture illustrations and lantern demonstrations science might become not only better understood but more generally studied, from the interest which photography lends to whatever it touches, the general truthfulness of its delineations, and its invaluable aid as a time and labor-saving appliance. It is believed that Congresses such as this, by focussing public attention upon the subject, will, among other benefits, show its educational value, and that a quiet revolution might be effected in existing educational methods by the judicious use and aid of photography and its results.





Copper block by Collins & Watt, Sydney.

From Photo by H. P. Bennett, Melbourne.

THE INTERCOLONIAL PHOTOGRAPHIC EXHIBITION, MELBOURNE, 1896.  
VIEW THROUGH THE MAIN COURTS.



## PHOTOTOPOGRAPHY.

*Paper by PIETRO BARICCHI,*

*Government Astronomer, Victoria.*

*Member of the Amateur Photographic Society of Victoria.*



PHOTOTOPOGRAPHY is not a new art. It was thought of even in the days when Daguerre's discoveries had just been made known.

Its purpose, briefly stated, consists in obtaining from photographic views the necessary data for the construction of a complete and accurate topographic map of a given region, showing all the detail both in plan and elevation which it is possible to plot, compatibly with the scale adopted in accordance with the requirements of the case. The pictures, when certain adjustments of the camera are carefully attended to, being formed on a vertical plane which intersects all the rectilinear rays emanating from every point in the landscape, are true perspectives; the main object, therefore, is to evolve from a set of such perspective views, taken from judiciously selected stations within the area to be mapped, a geometrical projection, on a horizontal plane, of the region concerned; and the principles by which this object is attained are those taught by Descriptive Geometry.

This method of mapping was known long before the invention of Photography, and we are told (appendix No. 3 report of the Superintendent of the U.S. Coast and Geodetic Survey, by J. A. Flemer), that the celebrated Hydrographer Beaumamps-Beaupré succeeded in constructing Topographic maps of a part of Van Diemen's Land and other places from perspective sketches of coast regions made during a scientific expedition in 1791-93. The method, however, owing most likely to the great skill required in making accurate drawings, could not be expected to take a conspicuous place in topographic surveying, and it does not appear to have been employed by others to any great extent until, some 60 years later, the camera, in the hands of Colonel Landessat, of the French Army, took the place of the sketcher, and Phototopography then seriously commenced its career.

The experimental stage did not last long, for in 1861 this officer executed an accurate map of a part of Paris by the aid of photographic views, and in 1864 published in the "Memorial de l'Officier du Genie" a complete exposition of the methods employed in Photo-Surveying, which Lieut. Henry A. Reed, in his work on "Photography applied to Surveying," describes as "so exhaustive that at the present date no treatise upon this subject can be complete without making use of the results of his (Landessat's) researches, and no practice perfect without applying the principles that he established." By this time the new art had commenced to draw the attention of prominent men outside of France, and its progress thenceforth was rapid.

A considerable amount of literature dealing with the subject accumulated year by year in almost every language, thus largely increasing the number of workers, and soon the introduction of dry plates, instrumental improvements, and experience acquired in actual practice smoothed down the difficulties of photo.-surveying, facilitated its operations, and conquered one by one all objections raised against its capabilities.

Phototopographic surveys of vast and difficult regions were undertaken and accomplished with astonishing results, and if any doubts still remained as to the adaptability of the methods in question, the unreasonableness of such doubts could be clearly made manifest by the achievements of Italy and Canada in this class of work.

Besides France and the two last-mentioned countries Austria, Germany, Belgium, America, and other nations have fully recognised the merits of Phototopography, and its employment is rapidly becoming general. This Art or Science, or combination of both, offers a most advantageous application in mountainous districts, in reconnaissance surveys for the study of new routes, roads or railroads, in hydrographic and military operations, settlement schemes, exploration, geological surveys, river ameliorations, mining and irrigation projects, and any other purposes where an accurate and complete representation of a given locality is a first requisite.

It is well known that the making of extended topographic charts in Europe by the ordinary methods has invariably necessitated an amount of labour, time, and expense as to render similar undertakings almost beyond the strength of younger countries as Australia and even America; and that, in fact, notwithstanding the recognised desirability for such topographic maps, none yet exist here—at least none approaching to any degree of completion. But, with the camera as an adjunct, the conditions are greatly changed, for it has justly been said that by its aid, and with regard to topography, the patient and arduous toil of a generation may be accomplished in a few years.

It is not intended to give here an exposition of the theories, nor a full account of the instrumental means and methods employed either in the field or in office work, for the execution of phototopographic surveys. Such an undertaking would be superfluous, in view of the complete treatises on the subject published by Landessat in France, Cap. E. Deville in Canada, Paganini in Italy, Lieut. Reed in America, besides other contributions to Societies' transactions, periodicals, &c.; but it seems opportune, especially in order to bear out what has been said above, to mention briefly some points in connection with what has been done lately in Italy and Canada, the two countries which at present are probably the most conspicuous exponents of activity in the application of photography to surveying. In Italy this work has been carried out since 1878 by the Royal Geographical Military Institute, at the instigation of General Ferrero. The successful completion of Topographic maps to a scale of  $\frac{1}{2000}$ , with hypsometric contour lines at every ten metres, constructed from photo. surveys of broken and difficult

parts of the Alps, which were executed by Pio Paganini in 1879-85, so clearly proved the efficiency and economy of the method, that the new survey of the whole country is now being made with the aid of photography.

The apparatus used is a combination of the camera and the theodolite, with horizontal and vertical circles read by Verniers to  $30''$ ; the telescope is eccentrically mounted on a side standard; the camera consists of a square pyramid made with pasteboards incased in a metallic frame. It is levelled by three screws resting on the Vernier plate; two fine platinum wires are stretched at right angles just in front of the plate, and determine by their intersection the collimation axis. The camera accurately rotates round the vertical axis of the instrument, and the proper accessories are provided for adjusting the parallelism of its axis of collimation with that of the telescope. The lens is a Steinheil Aplanatic of 240<sup>mm</sup> focal length, aperture of diaphragm 5<sup>mm</sup> plates 18 x 24<sup>cm</sup>. This Phototheodolite has been improved later by Paganini. The telescope is done away with in the new form, the camera itself is made to act as the observing telescope, centrally mounted, and rotating in all respects like the telescope of a transit theodolite, having the photographing lens as the objective, and the eyepiece mounted on a metallic plate, which replaces the ground glass when visual observations are to be made.

The work done in Italy is universally admitted to be of the highest degree of perfection attainable, and the honour is in a great measure due to the efforts of Paganini.

The difficult photo. survey of portions of the country including elevations of over 15,000 feet, such as Mount Rosa, have been accomplished by this officer, in conjunction with Rimbotti.

At the Vienna Exhibition of charts and maps, held in 1891, under the auspices of the Ninth Congress of German Geographers, an Italian topographic map of scale  $\frac{1}{50000}$  constructed in 1889 from photo. surveys, gained the first place.

These are sound proofs of the value of Phototopography.

In Canada the results are still more remarkable. Photo. surveying has been conducted over vast areas by the Topographer of the Dominion, under the direction of the Surveyor-General, Captain E. Deville. The regions include the Rocky Mountains along the Canadian-Pacific Railways, and extend many hundreds of miles, comprising altitudes exceeding 10,000 feet. From these surveys a topographic chart was constructed by Messrs. McArthur and Drewry to a scale of  $\frac{1}{40000}$ , with contour lines at vertical intervals of 100 feet.

The chart is in 15 sections, and represents a zone 20 miles on each side of the railway, and 1,500 miles in length. The surveys were accomplished in three years by the Engineer, Mr. McArthur, with the assistance of a topographer and two labourers; and Captain Deville states that the cost of the field work and preparing the map is 2.84 dollars per square mile.

This party can actually complete photo. survey work at the rate of 500 square miles per annum.

The chart just mentioned was exhibited at the Columbian World's Fair.

The instrument used for this work is not a Phototheodolite as adopted in Italy, but simply a camera. A transit theodolite is used in conjunction with it for the purpose of making all the necessary angular measurements; but the two instruments are used separately and independently, although one and the same tripod is employed for both camera box and theodolite. The camera is made of mahogany, with brass frames, and is of rectangular shape, for use with its longer side placed either horizontally or vertically, so as to suit the requirements of the landscape. It is mounted on an independent metallic triangular support, provided with levelling screws and means for accurate rotation in azimuth, and the whole when required for action is carefully placed on the theodolite stand, after removing the theodolite subsequently to the completion of the necessary angular measurements.

The plates used are isochromatic, 4 $\frac{3}{4}$  by 6 $\frac{1}{2}$  inches. The lens is a Dallmeyer, wide angle, No. 1a. of 5 $\frac{3}{4}$  inch focal length, thus including an angle of 45° for the short, and 60° for the long side of the camera. The pictures are taken with the intervention of a yellow screen placed at the back of the lens. The plates are not developed on the spot, but are shipped to Ottawa undeveloped in batches of 2 dozen, packed in double tin boxes.

It is stated by Captain Deville that the degree of accuracy attained in mapping from data derived from these photographic perspectives is equivalent to that of the ordinary plotting by protractor and scale, or of a map executed with the plane table. With regard to the rapidity with which these photo. surveys are accomplished, Lieut. Reed mentions in the *International Annual of Anthony's Photographic Bulletin*, 1888, that Capt. Javary in 1874 made in one day a reconnaissance survey extending 14 miles in length and one mile on each side of the route.

And Lieut. Reed himself was able to complete in 10 hours all the field work for the accurate mapping of an area of 27 square miles, with the necessary levels for hypsometric contouring, taking four or five views at each of three principal and two auxiliary stations. It seems, therefore, that there are magnificent records, which go far to show the virtues of Phototopography, and it is to be hoped that their influence may be widely felt in the proper quarters in Australia.

For the information in connection with the Italian and Canadian work I have drawn freely from Mr. J. A. Flemer's accounts in the Appendix 3 of the report of the U.S. coast and Geodetic survey, already cited, from Col. Landessat's paper in the *International Annual*, 1894, and from private correspondence. Here, in Victoria, the subject of Phototopography was taken up some years ago, and a movement was started with great promise of success.

Mr. James Stirling, of the Geological Department, in a paper read before the Victorian Institute of Surveyors, pointed out the necessity of undertaking topographic surveys, and enumerated, I believe, the advantages that were offered by the application of Photography to that purpose.

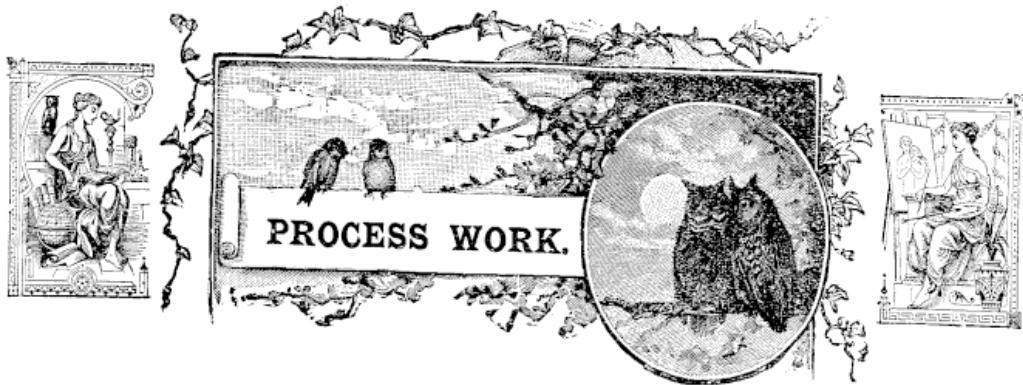
Mr. A. C. McDonald, in his Presidential address, Section E of the Australasian Association for the Advancement of Science, at the Adelaide meeting in 1893, recommended the execution of topographic charts in Australia so urgently demanded by geographical science.

Mr. J. H. Harvey, Mr. E. P. Bishop, Mr. C. H. Harris, and others published valuable and practical papers on the application of Photography to surveying in the reports of the A.A.A.S.

A research committee for promoting this class of work

was appointed at the Hobart meeting of the A.A.A.S. in 1892, consisting of Sir James Hector, Prof. Tate, Mr. F. Belstead, and Mr. E. P. Bishop, with Mr. J. H. Harvey as Secretary, and was re-elected at the Adelaide meeting in 1893, but ceased to be the following year, and since then we have heard nothing more about Phototopography. In consequence of these circumstances, and with the opportunity afforded by the Photographic Congress, it seemed to me that the time had arrived for re-opening the subject, in order to remind the engineering and surveying professions, the influential scientific bodies, and the Governments in Australia that Phototopography has grown in importance, with increased resources, and a wider sphere of usefulness, and, therefore, deserves their earnest consideration.

This is the principal motive that induced me to compile these notes.



#### A TURMERIC PRINTING PROCESS.

A WRITER in the *Photographische Chronik* describes this as follows:—Turmeric is derived from the rhizome of two varieties of plants, *Curcuma longa* and *Curcuma rotunda*; the best kind is the Chinese, the next the Japanese, the worst the Barbadoes. Turmeric may be obtained in the form of powder, and gives up to alcohol its peculiar orange colouring matter, a solution of which on paper or metal gives a negative from a negative as the colour is discharged by light, and only by development with spirit or water, or, with long exposure, by the former alone gives positives.

It can be used for zincography, photo-lithography, and three-colour printing. For zincography it is used as follows:—10 parts of Chinese turmeric should be dissolved in 100 parts of alcohol. If chloroform is used instead of alcohol, more soluble matter is extracted, and with the addition of 5 parts of oil of lavender it withstands acid better, and the solution is more sensitive. In order to judge better of development, 2 parts of a saturated alcoholic solution of methyl-violet should be added. The image thus obtained is quite as resistant as asphalt, if not developed. The development is effected with alcohol. Although this process can be used for zinc etching, it presents no advantages over the albumen or fish-glue processes.

For photogravure it possesses the following advantages:—It does away with the costly carbon paper and its concomitant disadvantages of slow drying after sensitising and slow development, the formation of blisters, and the difficulty of seeing the image in the etching bath.

It must not be assumed that there is any difficulty in coating the turmeric solution, or that the asphalt will dissolve. The asphalt grain is rendered insoluble by the heating and by exposure to light.

For photo-lithography, ordinary litho paper is coated with the above-mentioned turmeric and lavender solution, dried and exposed. Then the paper is squeegeed to a zinc plate moistened with spirit, or to a stone moistened with water; these are then warmed from below till the resin has melted, and then the paper removed by damping, and the zinc or stone moderately etched. For zinc, the etching solution is composed of

|                    |    |    |     |             |
|--------------------|----|----|-----|-------------|
| Water              | .. | .. | ..  | 1000 parts. |
| Gum solution (1:5) | .. | .. | 100 | "           |
| Nitric acid        | .. | .. | 15  | "           |
| for a stone, of    |    |    |     |             |
| Water              | .. | .. | ..  | 100 parts.  |
| Gum solution       | .. | .. | 40  | "           |
| Acetic acid        | .. | .. | 10  | "           |

The stone, when long runs are required, is inked up, and again etched. The advantages of this process are that

it does away with the inking up of the print, the wearisome washing of the print, the delicate development of the print, and the difficult transfer.

For three-colour printing the following may be used as a filter for the blue negative:—

|                |    |    |    |            |
|----------------|----|----|----|------------|
| Chloroform     | .. | .. | .. | 100 parts. |
| Turmeric       | .. | .. | .. | 15 "       |
| Dragon's blood | .. | .. | .. | 1 part.    |

The solution is allowed to stand for twenty-four hours, and then filtered.

This process may also be used for printing from negatives in the ordinary way, and by substituting other light-sensitive resins, such as asphalt, guiacum, dragon's blood, and so on, various shades may be obtained.

**Local Development.**—Sometimes, in an otherwise bright picture, we may have one part of non-actinic colour or a very poorly lighted, e.g., interior of cottage seen through open door. It is desired to accentuate the development of this part without affecting the rest of the plate. This may be done: (1) By tilting the dish so that the developer acts more on one part than another, but no part must be allowed to dry during development. The part to be kept back may be moistened with soft brush and clean water. (2) By the application, by means of a soft brush, of concentrated and slightly warmed developer. (3) By rubbing the part with the tip of a warm finger. (4) Roll up a small tube of paper and gently breathe through it warm breath upon the part to be stimulated.



## SCIENCE AND ART.

(A Ballad of Contentional Camerists.)

Two friends—I'll call them A. and B. for purposes of reference—

Resided at a spot some fifteen miles from town or thereabouts;

Their tastes were somewhat different, as A. displayed a preference

For studies scientific—things that B. did not much care about.

The latter's fond pursuit was art, and though his friend detested it,

He kept his own opinions and maintained a perfect right to them.

But still they lived in peace until—I don't know what suggested it—

Photography became a source of mutual delight to them.

When first they took the subject up they worked with zeal untiring,

As students do when striving for some honour academical;

A. took the chance to satisfy his intellect inquiring,

Whilst B. suppressed his horror for investigations chemical.

For many months they lived in a preoccupied and pensive way;

Until of matters technical each one a perfect master was;

But when they started practice in a rather more extensive way,

Their difference of character a cause of great disaster was.

For A. portrayed the landscape with a scientist's veracity.

And chiefly in the summer and in sunshine that was tropical;

He stopped his lenses down to quite their minimum capacity,

And turned out prints remarkable for detail microscopical.

But B. abhorred such work as this, and shuddered when it came in view;

Values of light and shade were worth far more to him than focal ones;

He sent to exhibitions that had some artistic aim in view,

The Salon and the Royal—not to mention all the local ones.

Now A. was vexed with B.'s success, and cried, "Upon my word it is

Too bad to play with science, and to treat it in this silly way;

What merit can there be in photographic absurdities

Like those that you exhibit in the place down Piccadilly way?"

"Your methods," B. observed, "are good, but mine are more artistic,

Experience has taught me they inevitably fewer rile;

To natural effect your work is quite antagonistical, I find it somewhat wearying and just a trifle puerile!"

"I can't imagine," A. exclaimed, "whatever you think beautiful

In smudges that excite my wrath and epithets censorial!"

"I'm sorry," B. remarked, "but with an admiration, dutiful,

I try and render Nature in a guise that is pictorial; I recognize your cleverness and technical facility, Although you show a painful lack of knowledge compositional,

And focus so absurdly sharp—which I think imbecility— Can't elevate your prints to any standard exhibitional!"

So they argued, while their talk grew faster and more furious,

Till presently they parted with expressions of ferocity, And now they never speak, and people point them out as curious

Examples of remarkably enduring animosity.

PERCY GREENBANK, IN

*The Amateur Photographer.*



## NEW SOUTH WALES.

### THE PHOTOGRAPHIC UNION OF NEW SOUTH WALES.

#### ITS SUCCESSFUL INAUGURATION.

THE recently-formed Photographic Union of New South Wales held its first general meeting, at Aarons' Exchange Hotel, on the 29th instant, Mr. J. Hubert Newman presiding. The progress which had so far been made by this new body was reported in our last issue, and was most encouraging. The Union has been established for the purpose of promoting a feeling of social intercourse among its members, to advance the Art of Photography by diffusing scientific and practical knowledge, fostering photographic literature, and stimulating discovery and invention.

The meeting was largely attended by influential and representative members. The preliminary business of the meeting having been disposed of, a few additions were made to the General Rules published last month, then followed the all-important business of the evening—the election of Office-bearers—which resulted in the following gentlemen being appointed:—

#### President:

The Hon. J. H. Carruthers (Minister for Lands.)

#### Vice-Presidents:

His Honor Judge Docker.

Mr. H. C. Russell, B.A., C.M.G. (N.S.W. Government Astronomer.)

Professor Wilson (Sydney University).

Professor Threlfall (Sydney University).

Mr. J. Inglis (late Minister of Education).

Mr. J. Hubert Newman.

#### Secretary:

Mr. Charles H. Kerry.

#### Treasurer:

Mr. A. J. Brierley.

#### Committee:

(Representing the Professionals):

Messrs. W. R. George, Muir, Gray, H. King, and C. J. Lemaire.

(Representing the Stock dealers):

Messrs. J. Harrington and Rouse.

(Representing the Process workers):

Messrs. Lawson and Plummer.

(Representing the Scientific section):

Drs. M'Carthy, Harris, Craig, and Dick,

(Representing the Amateurs):

Messrs. J. R. Yorke, Whitely King, Rich, Carruthers, and Foy.

(Representing the Employees of photographic establishments.)

Messrs. J. C. Crouden and Bell.

#### Auditors:

Messrs. Gillett and Scoullar.

Mr. Chas. H. Kerry, the Secretary, in thanking the members for his election, thought they could congratulate themselves upon having the higher offices filled by gentlemen of such standing as those who had honoured them with their patronage. He predicted a great future for the Union, the membership of which was already between 50 and 60, and it was the intention of the original organizing committee that premises should be secured in a central part of the city as soon as possible. No effort would be wanting on his part to ensure the successful carrying out of the objects they had in view. A general opinion was expressed that His Excellency the Governor should be requested to accept the position of Patron, and the Secretary was desired to communicate with His Excellency with this object.

Congratulatory remarks having been made by other gentlemen present, a most enthusiastic meeting concluded with the usual vote of thanks to the Chairman.

COMMITTEE MEETING.—The first meeting of the Committee of the Union was held at Aaron's Exchange Hotel, on the evening of the 16th inst., a full attendance of

members being present. Mr. J. Hubert Newman, Vice-President, in the chair. The minutes of the previous meeting of General Committee having been read and passed, a considerable quantity of correspondence was brought forward by the Secretary, who notified to the meeting that he had pleasure in informing those present that for the office of

**Patron,**

His Excellency Viscount Hampden, Governor of New South Wales, had graciously accepted the position, and read the following letter received from His Excellency:

Government House,

Sydney, July 15, 1896.

Sir,—In reply to your letter of the 7th inst., I am desired by His Excellency the Governor to say that he will be most happy to accept the position of Patron of the Photographic Union of N.S.W.

Yours faithfully,

S. GATHORNE HARDY, P.S.

Chas. Kerry, Esq.

The following are extracts from some of the other letters received:

Sydney, 10th July, 1896.

Dear Sir,— \* \* \* I have to acknowledge receipt of your letter of the 7th instant, intimating that I have been elected President of the Photographic Union of New South Wales, and I beg through you to thank the members for the honour and the generous way in which it has been accorded to me.

Wishing the Union the success it deserves,

Yours faithfully,

J. H. CARRUTHERS.

Chas. Kerry, Esq., Secretary Photo. Union of New South Wales.

Granville, 11th July, 1896.

Dear Sir,— \* \* \* I have much pleasure in accepting the office of Vice-President, and beg to thank the members of the Union for the honour they have done me. I shall attend at the Committee Meetings whenever I have opportunity, but I shall be away till 1st August, so shall be unable to attend the meeting on Thursday next. \* \* \*

Yours faithfully,

ERNEST B. DOCKER.

Physical Laboratory, University of Sydney,

3rd July, 1896.

Memorandum from the Professor of Physics

to

Messrs. C. H. Kerry and J. R. Yorke.

Dear Sirs,—I received your memo. on 23rd ult., and was much flattered at your proposal to me to become a Vice-President of your Photographic Union. I have much pleasure in accepting your invitation. \* \* \*

I am, yours, etc.,

— R. THRELFALL.

Mr. C. H. Kerry,

Sydney, 11th July, 1896.

308 George Street, City.

Dear Sir,—I am in receipt of yours of 7th inst., and desire, through you, to express my sense of the honour

the members of the Photographic Union of N.S.W. have bestowed upon me. I will hope to be of a little use, if not very ornamental.

Yours very truly,

JAS. INGLIS.

Letters were also received from Mr. A. J. Brierley, of Kent and Brierley, Accountants, accepting the position of Treasurer to the Union; and from various others, accepting positions to which they had been elected.

A letter was received from Mr. E. T. Davis, Hon. Secretary of the Photographic Society of N.S.W., notifying that his Council had called a meeting of the Committees of the other N.S.W. Societies, with the object of making arrangements for the holding of The Photographic Convention of Australasia in Sydney next year. After discussion, it was decided that the members should attend on the evening for which the meeting is called.

**PARLIAMENTARY RULES.**—The necessity for these being at once drafted and agreed to having been brought forward by the Secretary, it was proposed and carried, "that a Sub-Committee be appointed to prepare draft Bye-laws, and report to a meeting of the Committee to be held for their consideration—this Sub-Committee to consist of Dr. Craig, Messrs. York, Rich, Brierley, and Kerry." After discussion this was unanimously agreed to. All accounts up to date were passed for payment. The necessity of securing suitable rooms for the Union was considered, the Secretary being authorised to advertise, and, with Mr. Yorke, examine any suitable places that might be available, and report to a future meeting.

The question of arranging for general meetings of members produced an animated discussion, many practical suggestions being brought forward. It was finally agreed, on the motion of Mr. A. J. Brierley, that a Lecture Sub-Committee be appointed to draw up a scheme and report on this subject. This sub-committee to consist of the gentlemen previously appointed, with the addition of the names of Messrs. Newman and Muir.

—————  
**PHOTOGRAPHIC SOCIETY OF N.S.W.**

THE monthly Council Meeting of this Society was held at Rainford's Cambridge Club Hotel on the 10th inst., a fair attendance being present. It was decided to call a meeting of the members of committee of each Photographic Society to consider what arrangements should be made for holding the Intercolonial Exhibition and Congress of Photography in Sydney in 1897. This meeting has been called for the 28th inst. at the School of Arts.

The desirability of securing a room for the Society was considered, and the Secretary was instructed to obtain information on this point before next monthly meeting.

Since the date of this meeting the Council have secured a room in Hunter Street, which will be fitted up after a few weeks.

The annual meeting of the Society will be held at the School of Arts, Sydney, on Tuesday, the 21st inst., when the office-bearers for the ensuing year will be elected.

**LANDS DEPARTMENT PHOTO. SOCIETY.**

MATTERS in connection with the open Lantern Slide Competition, particulars of which were published in our last issue, are in a forward state. We have been asked to remind those intending to compete that entries must reach the Hon. Secretary not later than the 27th inst. The exhibition itself is to be held at the Railway Institute on the 30th inst.

—:o:—

**N.S.W. RAILWAY AND TRAMWAY CAMERA CLUB.**

THE usual meeting of the above Club was held in the Railway Institute on Monday evening, the 6th instant—Mr. Carruthers, Vice-President, in the chair.

A letter was received from the Secretary of the Lands Photographic Society re a Lantern Slide Competition, to take place in connection with their Society the last week of this month, and inviting our members to compete, upon which it was resolved that, in order to permit members to do so, the Lantern Entertainment announced to be held by the Club in the Railway Institute during this month will be postponed until the 28th August.

A letter was also received from the Secretary of the Photographic Society of New South Wales, asking the co-operation of the Committee at a proposed meeting of the various Committees of the Societies in N.S.W., to consider the advisability of holding an Exhibition and Congress in Sydney in 1897, and it was decided that the Committee attend the meeting for the purpose of discussing the project.

The Competition for Seascapes or Seaside Resorts were dealt with—Mr. Petterson securing hon. men., 1st in Class A, Sections 1 and 2; and Mr. Leslie hon. men., 1st in Class B, Section 2.

Mr. Petterson afterwards gave a few useful hints on Stereoscopic Work, and the meeting closed.

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**PHOTOGRAPHIC COMPETITION AT THE N.S.W.
POULTRY, PIGEON, AND DOG SHOW.**

THE Photographic Competition at the late Show of the N.S.W. P.P.C. and Dog Society was a rather scratch affair, as, by some oversight, the classification was omitted from the Prize Schedule. The Society is further precluded by its rules from offering money prizes for anything except the encouragement of poultry, pigeons, canaries, and dogs, but next year it is proposed to offer special prizes for photographs. The entries at the late Show were meagre, and the exhibits, with the exception of Mr. E. A. Bradford's, were of a decidedly amateurish character. There were, however, some very fine photos. shown not for competition, notably Miss Gertrude Preston's "Great Danes," exhibited by Mr. Aucher, and Mr. H. V. Arrowsmith's "English Setters," by Mr. H. King, were much admired.

SECTION VIII.—PHOTOGRAPHIC COMPETITION.

All Pictures will remain the property of the Exhibitors. Entrance free. Prizes, Certificates,

Class **A**—For the best collection of not less than three Photographs (any size) for Amateurs only.

- 1 Bradford, E. A.
- 2 Gray, A. J. H.
- 3 Caro, P. H.

Class **B**—For the best collection of not less than three Photographs (any size) for Professionals only.

No entry.

Class **C**—For the best one or more Enlargements, the work of an Amateur.

- 1 Caro, P. H.

Class **D**—For the best one or more Enlargements, the work of a Professional.

No entry.

Non-competitive Exhibitors.

King, H.

Arrowsmith, H.

Aucher, A. C. (Quodling.)

A CORRESPONDENT sends us the following description of the exhibits as they appeared from his view-point.

The photographic section at the recent Pigeon, Dog, and Canary Show fell considerably below that of any of the animate classes both in quantity and quality, many of the exhibits being libels on Nature and assaults upon Art, for which there was no apparent justification or excuse.

With about three exceptions—which in mercy to the rest we refrain from particularizing, beyond stating that they did not escape the judicial eye—the horrors gibeted in the vicinity of the organ may be passed, with the hope that such a collection of strangled, foggy cats, tailless dogs (most of them, apparently, on the point of being hung in chairs), and paralytic pups will not again disfigure decent wall space.

One aspirant for photographic fame, exhibited an artistic composition, in which a feathered apparition doing Blondin on what might have been a piece of string, to which, for some purpose not specified, a pipe was attached, a Turkish towel supplying a highly appropriate background. If it had been placed in front, however, the general effect would have been improved. Fortunately, the entries were few in number; but it is dreadful to contemplate what might have been the result had some more alluring trophies than the paper palms awarded incited the noble army of "snap-shooters" to rush into the fray and do their direful worst.

**VICTORIA.****VICTORIAN NOTES.**

MR. L. HART gave a popular lecture on "Processes or Process Work," at the Working Men's College, on Saturday evening, 27th June, at 8 o'clock, and although the weather was wet and cold, the Lecture Hall was literally packed, and included many of the profession. Dr. Kaufman took the chair. Mr. Hart led his audience up, step by step, among the photo-mechanical processes

(his students illustrating them by practical work), photolitho, collotype, photo-autocopying, zinc in all its branches (albumen, bitumen, fish glue), wet and dry plates, photo-mechanical plates, &c., &c.

At the conclusion, Dr. Kaufman remarked what a pleasure it was to see such a large audience on such a miserable night, and complimented Mr. Hart on being able to attract persons out under such circumstances. He called upon Mr. D. McIvor to move a vote of thanks to the lecturer, which he did in some few kind and appropriate remarks.

R. Craven, Esq., M.L.A., seconded the motion, and spoke in a very flattering manner of the lecturer's manner of teaching.

Mr. Hart replied, expressing the great pleasure he had in seeing such a numerous audience, and thought that it was he who ought to thank them for coming in such weather. He felt quite sure that the vote of thanks accorded him was as much intended for his intelligent pupils, who had so greatly assisted him by their work that evening, as for himself, and concluded a two hours' lecture by thanking his audience for their attendance and attention.

AMATEUR PHOTOGRAPHIC ASSOCIATION OF VICTORIA.

At the meeting of this Association, which was held on Thursday, 25th June, several objects of interest were exhibited. Mr. Watts showed an improved cutting glass for trimming stereoscopic prints in an expeditious manner; Mr. Yeates brought a simple appliance for cutting plates to any required size in the dark, and also showed a lantern-slide size pocket camera, with long and short focus lenses and a changing box, which, with the camera, could be carried in any ordinary pocket; the Secretary exhibited a camera and dark slides constructed of pasteboard, which he had built several years ago, these were for 5" x 4" and 6½" x 4½" plates, and he showed negatives which had been taken in these slides and with the camera shown, the objective used was the front combination of a French C. de V. lens reversed in the mount.

The general meeting was held in the Royal Society's House on Tuesday, 14th July. There was a large attendance, and Dr. Kaufmann occupied the chair. Mr. R. Casey was elected a member. Particulars regarding two Competitions and the forthcoming Bristol Photo. Exhibition were placed upon the table, and the optical lantern which had been presented by Messrs. J. W. Small and Co. as a prize in the Transparency Competition was also on exhibition. The members then adjourned to the lantern room, where the slides which had been handed in for competition were exhibited on the screen. The method of testing employed was as follows:—Two lanterns were used, a five-feet disc being projected by each upon the screen, the discs being side by side, and a slide was inserted in each for a definite period, at the end of which the slides were changed, that shown in the left hand lantern being transferred to the right hand instrument, and *vice versa*; then the vote

was taken by the scrutineers, the whole of the members present being the judges. The slides receiving fewest votes was discarded, and another put in its place to pass a similar ordeal. The slide which remained on the screen after all others had been passed was declared the winner, and on opening the envelope marked with the motto of this slide it was ascertained that Mr. G. Glover was the maker of it.

Mr. Glover was congratulated by the members upon having carried off the prize against over a dozen competitors, and the proceedings were brought to a close by the exhibition of slides of various subjects shown by Messrs. Holtz, Yeates, Ward, and others.

GORDON COLLEGE AMATEUR PHOTOGRAPHIC ASSOCIATION.

ANNUAL MEETING.

THERE were present about 40 members at the annual meeting of the above club, which was held in the college on Friday evening, the 3rd inst., the chair being occupied by the president (Mr. H. G. Roebuck). The report was read by the secretary, Mr. J. Hammerton, jun., and it dealt with the growth of the association since its inception in 1889 by four members, and reference was made to the progress the club had made in the past twelve months. The membership list now totalled 62, and it was stated that 25 new members had been elected during the year, and, although a sum of about £8 had to be paid for improvements to the club's lantern, the club had a credit balance at its disposal. A donation of £5 12s. 6d. had been made to the College Council for use of a room for the members' photographic exhibition recently, and pleasing reference was made to those gentlemen who had given practical lectures during the year. The club's members had been successful in winning prizes at the Ballarat, Tasmanian, Melbourne, and the Australasian photographic competitions. *The Wombat*, the club's journal, had been the means of improving the library collection, and it was hoped that the journal would be a still greater success. Publications regularly received were noticed in the report, and the best thanks of the Association were tendered to the local press and *The Australian Photographic Journal*, for publishing accounts of the meetings; and, in conclusion, it was hoped the next year's work would be as interesting and successful as what the past had been. The balance-sheet was of a decidedly satisfactory character, and showed the receipts to be £59 13s. 2d. and the expenditure £32 18s. 2d., leaving the club with a credit balance of £6 15s. The report and balance-sheet were criticised by Mr. Geo. Brinsmead, who congratulated the club upon the satisfactory position occupied by it, and it was claimed that the club was the premier one of the colony, both in number of members and for quality of work done. He had often been spoken to in favourable terms of the work done by the members. He moved that the report and balance-sheet be adopted. This was seconded by Mr. J. B. Leitch, and carried with acclamation.

The election of officers was then proceeded with, and Mr. H. G. Rosbuck was re-elected to the presidency amidst applause. The following gentlemen were then declared elected to the vacant positions: Vice-presidents, Messrs. C. O. Dentry and J. Wadelton; treasurer, Mr. R. C. Hocking; secretary, Mr. J. Hammerton, jun.; assistant secretary, Mr. A. J. Wood; question-box editor, Mr. G. H. Brinsmead; librarian, Mr. Matthews; press correspondent, Mr. W. E. Turner; general committee, Messrs. Waddell, Brinsmead, Leitch, Thacker, and Mawson. A discussion ensued as to the appointment of lantern engineers, Mr. Waddell urging that they should appoint one chief engineer and two assistant engineers. Mr. Geo. H. Brinsmead was elected chief engineer, and Messrs. Humble and Bartlett second engineers. A vote of thanks was accorded the retiring vice-presidents and treasurer on the motion of Mr. J. Hammerton, and seconded by Mr. Waddell. It was decided, on the motion of Mr. Brinsmead, and seconded by Mr. Wadelton, that a special meeting should be held to make arrangements for the continuance of the *Wombat*, the society's journal. It was mentioned, in reply to a question, that the journal had more than paid its way during the year of publication. The secretary intimated that he had received the international set of slides which are exchanged by the Colonial and English societies, and it was agreed that the slides should be shown at an entertainment to be held at the College on Monday, 13th inst. The suggestion of Mr. Mockridge that a collection be taken up at the half-yearly commencement was favourably received, and a vote of thanks to the chairman concluded the proceedings.

June 19.—Mr. Brinsmead gave a practical demonstration on platinotype preparation, printing, and toning, and was very successful. The prints treated were much admired, and showed that he had the subject well in hand, and at the conclusion a vote of thanks for the demonstration. A large attendance. Mr. Wadelton occupied the chair.

June 26.—Monthly meeting; Mr. Brinsmead in the chair. A large attendance. Correspondence and journals received. New members elected: A. Glover, E. Parkinson, E. D. Wilcox, E. Creer. Nomination of officer-bearers for the ensuing year took place. Competition for month: Best copying, A. E. Bratley, 1st; B. Stafford, 2nd; G. Brinsmead, 3rd. Landscapes: C. O. Dentry, 1st; G. Brinsmead, 2nd; J. Wadelton, 3rd; beginners, H. Wadelton. The copying caused a lot of work to be sent in, much interest being taken. The subjects were good, and the Judges (Messrs. Waddell, Leitch, and Purnell) found it a difficult task to make the awards.

—o:—

WORKING MEN'S COLLEGE PHOTOGRAPHIC CLUB.

The usual monthly meeting was held in the Club's Room on Tuesday evening, the 7th July, and, considering the boisterous and wet state of the weather, there was an excellent attendance; the chair being occupied by Mr. Camm, Vice-President.

The membership list is still growing, and, after the minutes of previous meeting had been read and confirmed, the following gentlemen were elected members Professor D. McAlpine, Captain Colin Macdonald, Andrew Pringle (London), and Messrs. Vanheems, Lumsden, and Ellis. Several other names were handed in as being proposed, including two ladies. There are now several lady members, and altogether the Club has commenced the new year excellently as far as being sure of being on a sound footing financially from the members' subscription list, and the number of names is now mounting well towards the century.

The advisability of having a Certificate of Membership was discussed, and, after several members had spoken on the subject, it was decided that there be one, and that the Committee procure a suitable design and submit it for consideration at a future date.

The Syllabus for the ensuing year was distributed, and the Hon. Secretary announced that the following gentlemen offered prizes for competitions to be held during the year: Messrs. L. W. Hart, J. P. Campbell, T. J. Eastham, Baker and Rouse, Ltd., and J. W. Small and Co.

It was resolved that a social evening be held in the Club Rooms on the occasion of the Executive Committee of the late Exhibition relinquishing office. After this had been discussed, and other matters of minor importance attended to, an Exhibition of Lantern Slides was held; and, everything being in readiness, and the lantern in its best behaviour (as it always is in the hands of Mr. Sturtevant, the Lanternist to the Club), everyone enjoyed the time thus spent. Several sets of excellent slides were put through, Mr. Ralph deviating from the usual style of slide by showing some that had been toned by various formulæ, and explaining his methods at the same time. Mr. Bennett also showed several tinted slides.

The proceedings were wound up with the usual vote of thanks to the chairman and also to the donors of the various prizes. The item on the Syllabus for the next meeting will be a paper by Mr. J. P. Campbell on "Carbon or Autotype Printing," together with a demonstration of the process, and as this gentleman has so far been very successful as a carbon printer, the evening will, no doubt, be interesting. A competition for a Kodak camera, presented by Mr. Hart for the best half-plate picture of a tree in winter will also be held. The committee will be pleased to welcome any photographic friends at any of the demonstrations.

SYLLABUS FOR AUGUST.

Aug. 4.—Demonstration: Carbon Printing, Mr. J. P. Campbell.
Competition for Pocket Kodak, presented by Mr. L. W. Hart, for best half-plate picture of a tree in winter.
,, 18.—Opals and Transparencies.

JUNIOR COMPETITIONS.

(Members who have taken up the study of Photography since July, 1894.)

A Thornton-Pickard Shutter, presented by a Club member, will be awarded to the member obtaining the highest number of points at the Competitions during the year.

The Club's Dark Room is open to members at any time during the hours which the College is open.

For all information apply to the Hon. Secretary.

Balance of Syllabus for the year will appear in next issue.

QUEENSLAND.

QUEENSLAND AMATEUR PHOTOGRAPHIC SOCIETY.

The usual monthly meeting of the Queensland Amateur Photographic Society was held in their Room, Courier Buildings, on Wednesday evening, 24th ultimo—Mr. Mactaggart, President, occupying the chair. There was an average attendance.

After the minutes of the previous meeting had been read and confirmed, a long discussion ensued as to the best means of inducing new members to join, and the present ones to attend the meetings more regularly. It was arranged to have, for the benefit of junior members, a series of Elementary Lectures and Demonstrations, to be undertaken by Mr. Robson.

A Syllabus was prepared for the balance of the year. In connection with the August Meeting—Lantern Night—it was decided to have an Exhibition of work by the members, which will in all probability take the shape of a Conversazione.

It was also decided to have half-yearly competitions for junior and senior members respectively, instead of the monthly as heretofore.

TASMANIA.

HOBART NOTES BY "SIRIUS."

It is with regret I have to chronicle the death of Henry Hall Baily, aged 57 years, one of the oldest established professional photographers in Hobart, which took place, suddenly, on June 15th, at his residence. As a youth he took to the sea, but, disliking the life, he became a student of the London School of Photography, and some years later took up his permanent residence in Hobart as a professional photographer. His work was always characterised by cleanliness and neatness, his landscape pictures being especially clear and bright. Personally, Mr. Baily was of a very quiet and unassuming disposition—rather too conservative and retiring for his interests. I am pleased to state that the business will be carried on by his son, who, I trust, will be a worthy successor to his father, and meet with every success.

The local branch of the firm Baker and Rouse has been purchased by its late manager (Mr. Trowbridge) and Mr. J. J. Sheridan. At present the shop is undergoing a process of improvement, and when in full business order promises to be an acquisition to the city. The aim of the proprietors is to run the business as a "Photographic and Art Dépôt," picture framing being an important branch of the establishment. At present the "Art" side is to the fore, the window being filled with a number of views and scenes in oil and water colours. Several coloured bromide enlargements occupy the background. The work is done on the premises by two artists in the employ of the firm. Altogether, such a business has been very much required in Hobart, and it is hoped that the new venture will be all that is anticipated.

NORTHERN TASMANIAN CAMERA CLUB.

ABOUT 200 persons assembled at the Wesleyan Schoolroom, Patterson Street, at the June Meeting of the Northern Tasmania Camera Club. The Rev. F. J. Nance, M.A., opened the entertainment with a neat little speech, in which he referred to the success attained by the Society, and especially at the recent Photographic Exhibitions, more so on account of most of the slides having been made by the members. Mr. J. Sparrow then exhibited about 150 views on the canvas, 100 of them belonging to the Club, and Mr. Nance concisely described them. The principal scenes were from New Zealand, the Australian colonies, and Tasmania, including views of the Volunteer Parade on the Cricket Ground, Launceston, on Queen's Birthday. A vote of thanks to Mr. Nance for his lecturette, and to Mr. Sparrow for exhibiting the views concluded the entertainment.

NEW ZEALAND.

WELLINGTON CAMERA CLUB.

THE Monthly Meeting for June was held. There were 24 members present, including one lady. This was one of the most enjoyable evenings this winter, thanks to Messrs. Gifford and Travers.

Mr. Gifford gave an interesting description of an exposure meter, which he has cleverly adapted for use in the Southern Hemisphere.

Mr. Travers exhibited a large number of Whole Plate Prints of his own production, illustrating his idea, as a judge, of some of the Competition Subjects, notably Reflections and Native Foliage. It is fortunate for most of the prize winners that he is not a competitor. There were also some beautiful Transparencies on the table, which Mr. Travers obtained in Canada. Much interest was shown in the collection, and many were the questions showered on Mr. Travers, which he good-naturedly answered to the satisfaction of the querists. A hope was expressed that others would follow Mr. Travers' example for the sake of the less experienced members. Special votes of thanks were passed to Messrs. Travers and Gifford.

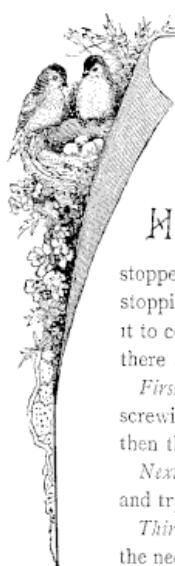
The lantern was, as usual, placed at the disposal of the Club for half an hour; but the members did not bring slides, as it was anticipated they would. Members were urged to do more work in this fascinating branch during the winter months, so that we may have more open lantern evenings.

In the competition on Architectural Subjects Mr. Gifford took first and second awards.

Miss Buller was elected a member of the Club at the last Committee Meeting.

The next meeting will be held on Thursday, July 9th, the subjects for competition being Flowers, Opals, and Enlargements.

The lantern will be at the service of the members next meeting. Members who have not yet tested their slides may have them exhibited, without necessarily stating whose work they are, by informing the Secretary.



FORMULÆ.

TO UNLOOSE STOPPER.

HAPPY is the reader who has never been bothered by an obstinate stopper, *i.e.*, one that obstinately persists in stopping in the bottle neck when we want it to come out. Should this trouble arise, there are several courses open to us.

First try to remove the stopper by a screwing sort of motion, first one way and then the other.

Next wrap a bit of rag round the stopper and try again the screw motion.

Thirdly place the bottle on the table, seize the neck with the left hand so that the ball of the thumb is against one edge of the stopper. With the other hand gently tap the stopper in an upward direction and opposite to the upward push of the left-hand thumb. For this purpose we must employ *not* a hammer or knife, but some yielding substance, *i.e.*, a piece of wood, *e.g.*, foot rule, paper knife, tool handle; or the edge of the sole of a slipper is a very safe thing to use. If too much force or a non-yielding substance be used, the chances are that the stopper will be broken. If the hand be warm and the neck grasped by the hand, the warmth so imparted is a material assistance, as it causes the neck to expand and so loosen the stopper. Therefore, persevere with this method for a minute or two, trying first one side and then another.

Fourthly.—Tie to some firm object, *e.g.*, leg of table, knob of drawer, etc., one end of a stout, smooth piece of string; take the other end of string in left hand, pass the string once round the neck of the bottle, now held in the right hand, and pass the bottle quickly to and fro so that the friction of the string heats the bottle neck. Every few minutes stop to try the third method. These two methods combined very seldom fail if sufficient patience is also employed.

Fifthly.—The heating method may be applied in another way—by holding the neck under the kitchen hot water tap and letting a quick stream of hot drops fall on it, the bottle being constantly turned round all the time. The water must not be too hot at first.

Sixthly.—Should all the above devices fail, the solution method may be tried. This consists of dissolving the substance which has got in between the stopper and the bottle neck and formed a cement. The solvent must, of course, depend upon the nature of the contents of the bottle. The best thing to try first when the bottle contains a liquid is some of the same liquid that it contains. For instance, a saturated solution of sodium sulphite often fixes its stopper; but if the bottle be inserted in a vessel containing water, some of it will probably pen-

trate between the stopper and neck, and so dissolve the salt precipitated by evaporation. In the case of varnishes, etc., such solvents as benzole, turpentine, alcohol, chloroform may be tried. Paraffin is a good penetrator in many cases.

To prevent stoppers sticking, it is a good plan (when the contents of the bottle do not forbid it) to rub the stopper with a bit of warm paraffin wax, or vaseline, and then remove all the superfluous wax, etc.—*The Amateur Photographer*.

DEVELOPING FILMS.

The best way to develop long lengths of film is to soak them thoroughly or not at all, and then to pass them, one at a time, of course, through a developing dish containing plenty of solution. No marking occurs if the process be carefully conducted, and the risk of cutting across a picture is avoided.

Spotting Prints. Albumenised Paper.

If any speck of dust or opaque matter gets between the negative and printing paper, the result is a white or light spot or patch in the print. This defect can only be remedied after the print has been toned, fixed, washed, etc., and mounted. With a fine-pointed, small brush, a little colour, to match the surrounding tint, is applied. The colours used generally are sepia, black, vandyke, lake, etc., according to the tone-colour of the print. *Moist* water colours are generally preferred to *cake*, as being more convenient. To make the colour hold to the glossy surface of the print, and *dry* shiny, a slight trace of gum arabic is used. And to make this watery colour *take* on the somewhat greasy surface, a trace of ox-gall is used just to wet the part, or what is often quite as effective and more convenient, the place is just touched with the tip of the tongue, nearly dry. Due allowance must always be made for the fact that the colour dries a little darker, duller, and colder than it seems when wet.

Preparing Negatives for Retouching.

New Way.—A writer in *Wilson's Magazine* gives a new way for preparing negatives for retouching as follows:—“The formation for a successful photogravure plate lies in the negative. A good deal can often be done with a faulty negative by retouching. In order to retouch a tooth must be secured on the negative to take the lead, and this is usually obtained by the use of retouching varnish, which has several bad features, especially when working large negatives. Now, the best thing I have found is to take a piece of cheese cloth, doubled up four times, laid flat on the table, in which is placed some pulverized pumice. The corners are then tied tight, so as to make a hard pad for a large negative—a large pad is best; for small portions of a negative a small pad is best. In using the pad, shake some of the dust on the face of the negative, without use of varnish. Then, with the pad, give it a rubbing over in a circular motion; keep this up till you have taken all the gloss out of the

JULY 20, 1896.

gelatine, dust off the loose powder, and if you have ground enough, you will find a beautiful matt surface all over the negative that is capable of taking any amount of lead of any grade. Should a mistake be made in the work, it can be ground off again. If negative takes too much lead, give it a slight rubbing with a cloth, to take some of the roughness out of the surface. This method applies especially to negatives fixed in a hypo and alum bath, such as Carbutt's."—*American Process Review*.

lute measurements—whether trimming a print or building a house—you cannot do better than use a foot-rule.

Yours faithfully,

S. SPURLING,

One of the Judges.

Launceston, July 30, 1896.



JUDGING STEREOSCOPIC PHOTOGRAPHY AT LAUNCESTON, TASMANIA.

To the Editor, *Australian Photographic Journal*.

DEAR SIR,—An article in the May number of the *A.P.J.* has just come under my notice. I will be glad of a little space to correct what is an apparent misunderstanding or else the fault of the judges in not being more explicit.

The prints in question were not outclassed on account of the height shown, we being well aware, that being immaterial within certain limits, and quite agree with your authorities on that point. The great and fatal fault was that, with the exception of those taking first place, not one set shown were properly trimmed as regards the sides and spacing, thus entailing such defects as "foreground in relief in front of mount, distance on same plane as mount, distance of foreground objects too great," etc., utterly precluding the subjects from coalescing correctly in the stereoscope, many beautiful photographs being ruined for want of knowledge of how to trim a stereoscopic print. There is only one system on which stereo prints can be properly trimmed and mounted, viz., that adopted by the first authorities in the world (I can give you the names if necessary), which ought to be well known to all who practice this beautiful branch of photography, particularly exhibitors. The judges' decision was given on artistic and stereoscopic merit alone. With the exception already mentioned, the prints generally failed grievously in stereoscopic merit; but many exquisite beautiful photographs could well lay claim to artistic worth. The mounting of ordinary photographs may not be an important matter; with stereos it is different, as, unless properly done, they are useless for their purpose. A properly mounted stereo should coalesce instantly—show correct relief, as we see in Nature—and every part of it be at back of the plane of mount, as though viewed through an aperture. I may add that when a definite system of work demands abso-

lute measurements—whether trimming a print or building a house—you cannot do better than use a foot-rule.

Yours faithfully,

S. SPURLING,

One of the Judges.

Launceston, July 30, 1896.

Intensity Coils. How made and how used.—"Dyer."—At the present time when both the scientific and photographic world are intensely interested in the various developments of electric light, this instructive little volume will prove of more than ordinary interest to both electrical and photographic students. The publishers, Messrs. Perkin, Son, & Rayment, 66 Hatton Garden, London, send us a copy of the Seventeenth Edition, which proves to be a compact text book, well arranged, freely illustrated, and containing valuable information upon all branches of electrical research. The published price of the book is only One Shilling, so that it is well within the reach of all interested.

Photography for Artists (Maclean).—The well-known Photographic publishers, Percy Lund and Co., Limited, have recently issued a number of useful text-books, neatly and strongly bound, under the designation of "The Lund Library of Photography," the most recent published of which, by Hector Maclean, F.R.P.S., F.G.S., gives useful information respecting the many uses of Photography in various walks of Pictorial and allied Arts. The book is written in an interesting manner, and is full of instructive information for both artists and photographers.

"The Half-tone Process," by Julius Verfasser, again reaches us in the shape of a second edition comprising one of the "Lund Library of photography series." The first edition of this useful publication has had such a run that the author has been induced to thoroughly revise and re-write a good deal of the book, including in the subject matter all the latest discoveries in this rapidly advancing art. Those who are possessed of copies of the first edition will find much that is new, interesting, and helpful in the second.

From the British India and Queensland Agency Co., Limited, we have received a copy of their "Handbook of Information, 1896-97," 10,000 copies of which are being distributed. The Handbook is full of useful, interesting, and descriptive information; it is fully illustrated with Half-tone Process Blocks, giving views of places visited by the Company's steamers, and will prove highly useful to both travellers and those who are forced to stay at home.

