

J. H. DALLMEYER, 19, BLOOMSBURY STREET, W.C.

DALLMEYER'S PHOTOGRAPHIC LENSES

Obtained the highest award at all the International Exhibitions.

SEE REPORT OF JURORS.

In this abridgement of J. H. Dallmeyer's General Catalogue, the several lenses are described in the order of their respective rapidity, beginning with those of the *quickest* action. A few remarks upon the capabilities of the various lenses, as a guide to intending purchasers, follow in the same order.

Extra Quick-Acting Lenses.—No. 2 C is perhaps the quickest acting lens extant. It possesses nearly double the intensity of No. 1 B Lens, and is especially suitable for quick portraits of children, or for portraits in the dull light of winter.

When required for *standing* figures, card size. distance from 14 to 15 feet, a stop must be used to obtain sufficient flatness of field. In this condition its performance, both as regards time of exposure and definition, is about equal to that of No. 1 B Lens.

The Smaller **Miniature Lens**, suitable for quick locket portraits, vignette heads, &c., works in about the same time as No. 2 C Lens.

Quick-Acting Portrait Lenses.—Nos. 1 B and 2 B, are especially constructed for card portraits. They were introduced November, 1860, and are now so extensively known and used, by photographers in all parts of the world, that any further comment is deemed superfluous. Suffice it to state that of the above two lenses the larger, or 2 B, is always to be preferred for card portraits, where space admits of its use. No. 1 B requires a distance of from 12 to 13 feet, and No. 2 B from 13 to 19 feet, for a standing figure. With open aperture these two lenses require the same exposures. Since, however, No. 2 B covers a larger plate, it can be used with a larger aperture for standing figures, card size. Hence, for this purpose, it becomes practically the quicker acting lens of the two. The increased distance also between Object and Lens, tends to better perspective in the resulting picture.

For those photographers who wish to use a longer focus lens than No. 1 B, but who have not sufficient length of gallery for No. 2 B; No. 1 B (long) has been constructed, requiring a distance of from 14 to 15 feet. This Lens is a little slower in action than No. 1 B with open aperture, but for standing figures it produces better results.

The above Lenses, and the New Stereoscopic Lens, described below, are the only ones now manufactured of the old, or Petzval, construction; all other Portrait Lenses of larger dimensions and of the old form being superseded by J. H. Dallmeyer's

New Patent Portrait Lenses.—These Lenses have now been in use for nearly two years; upwards of one thousand of them are already in the hands of some of the first photographers.

The great superiority of the New Patent Lens over the old, or Petzval's form, is that, whilst it possesses all the good qualities of the latter as regards definition, &c., it has the additional advantage of providing the means for diffusion of focus, or depth of definition, whenever that is desired. The construction of the Lens is such that, with the posterior cell of the back combination screwed *home*, the index pointing zero, it produces the sharpest possible picture of objects situated in one plane. Then, by unscrewing the posterior cell a turn, or parts of a turn of screw, the previously intensely sharp definition becomes modified, *i. e.*, diffusion of focus over several planes is the result, and this in exact proportion to the amount of unscrewing. Thus placing within reach of the artist, the power to suit his instrument, to every varying condition of subject.

Those who wish for the old class of picture, sharp in one plane only, sacrifice nothing to the new lens; for when used intact, *i. e.*, without any unscrewing of the posterior cell, the definition is, at least, equal, if not superior, to that produced by the old form of portrait lens.

For the *larger sizes* of pictures, as for the Cabinet Portrait and upwards, the advantage of the Patent Lens is at once apparent, in enabling the photographer to

produce those evenly defined, soft, and delicate portraits, so universally admired, instead of those intensely sharp pictures of objects in one plane, and then all other parts representing other planes, by contrast, as intensely fuzzy. With the old form of portrait lens no other result was possible in the larger-sized pictures, unless very small stops were used, in which case, as every photographer knows, the exposure is so protracted that a life-like portrait becomes an impossibility.

With respect to the most advantageous use of the new Lens, it may be stated that since all *small* pictures should be *sharp*, the respective lenses should be used intact, with but little unscrewing, for standing figures card or cabinet size, subject at a distance of 20 feet; and then, as the picture is taken on a larger scale, or as the subject approaches the lens, unscrew the posterior cell of the back combination, in the proportion of about a quarter of a revolution of screw for every foot of approach of subject.

The Patent Portrait Lens is made of three descriptions, as regards rapidity of action. The **B or Quick-Acting Lenses** are designed for the smaller-sized plates. Of these No. 3 B is perhaps the best adapted for the Cabinet-size Portraits; (distance for a standing figure for cabinets about 18 feet, for cards 24 feet).

The **A Lenses** require double the exposure of the B Lenses; but are to be preferred for portraits above the $\frac{1}{2}$ -plate size, for being of longer focus they allow of a greater distance between the lens and the sitter, giving greater "depth," and better "perspective," in the resulting picture.

No. 3 A is, perhaps, the best Cabinet- and whole-plate-lens, that can be possessed by a photographer, if space permits; (distance for a cabinet figure 24 feet). First-class pictures up to 10 by 8 inches have been taken with this lens. For larger portraits Nos. 4 A, 5 A, and 6 A should be used; or, if price be an objection and the studio is well lighted, then

The **D Lenses** may be chosen. These require twice the exposure of the A, and four times that of the B, Lenses. They are more especially designed for groups in the open air, or for "studies" in the studio. For general in-door everyday work, they are scarcely sufficiently rapid in action; although Messrs. Robinson, Hennah, and others have produced charming large-sized pictures with them. For out-door subjects, these lenses are generally useful, whether for groups, instantaneous effects, architecture, or landscapes, for in common with all the Patent Portrait Lenses, they are free from a central spot or "flare," even when used with the smallest diaphragms; as well as entirely free from distortion. Next in the order of rapidity is the New Patent

Rapid Rectilinear Lens, emphatically "The" Lens for all kinds of out-door photography.

This Lens, although not so rapid as the D Lens, requiring about double the exposure, is superior to it for views, because of its having only *four* instead of *six* reflecting surfaces. It is composed of two, exactly symmetrical, cemented, combinations; and, unlike all the existing double combination cemented lenses, (such as the "Globe," &c.), all requiring small stops to cure the excessive spherical aberration, the Rapid Rectilinear is *brachyplanatic*, *i. e.*, it works with the *full opening*. With open aperture this Lens possesses *four times* greater rapidity than the "Globe," and about *twice* that of the Triple Achromatic, or the Petzval Orthoscopic, Lenses. Hence its superiority for all kinds of *quick* out-door pictures, whether for groups, instantaneous effects, landscapes, architectural subjects, or dimly-lighted interiors. Producing, as it does, absolutely straight lines, it is unrivalled for copying or enlarging; and the pictures produced by it are brilliant, and free from all "flare," or central spot. With smaller stops each Lens covers the same size, or even two sizes, larger plates than those recorded. Thus the Rapid Rectilinear Lens becomes in effect a wide-angle lens, embracing angles of pictures of from 60° to 90°, the latter being probably as much as most photographers care to include in their pictures.

Either the front- or the back-combination of this lens can be used alone, as an ordinary single combination landscape lens, (focus double that of the compound lens), and although, when so used, inferior to the wide-angle single combination, it is at least equal to any of the parts of other double combinations, so employed.

The Rapid Rectilinear Lens, although not quick enough for ordinary Studio

interior, yet for all kinds of out-door work, it may be safely asserted, that it possesses qualities not to be met with in any of the existing forms of lenses, nearly all of which it is probably destined to supersede. The next Lens in the order of rapidity is the **Triple Achromatic Lens**, which was reported upon so favorably, by the *Comptes Rendus* of the International Exhibition of 1862. It has been in extensive use ever since, and its particular qualities are known to almost every photographer. It was the first *aplanatic* non-distorting view lens placed within the reach of the profession; and, with the more recent introduction of the Rapid Rectilinear Lens, it was probably the best lens extant for copying purposes, architectural views, &c.—See *Jurors' Report International Exhibition, 1862*.

The **Wide Angle Single Combination Landscape Lens** (Patent). The best Lens for landscapes, pure and simple. All the first landscape photographers are agreed that, for landscapes only, the *single* combination lens stands unrivalled.

The wide-angle single combination was constructed to meet a demand for pictures embracing large angles; and it is now generally admitted that landscapes are the only *brachyplanatic* subjects for wide-angle lenses. For work of this kind the above lens is superior to the several wide-angle multiple- or non-distorting- lenses; because, being a *single* combination, it has but *two* reflecting surfaces, and, therefore, it produces more *brilliant* pictures. It works with a proportionally larger stop, *i. e.*, it is quicker in action; and the illumination is more equal from the centre to the margin of the plate. Its only drawback is a slight distortion of straight marginal lines; but by a judicious selection of objects comprised in a picture, as by making architectural objects occupy the centre, this defect need not obtrude itself in a landscape; and is fully compensated for by greater equality of illumination, over all parts of the plate.

This lens, being composed of *three* lenses cemented together, is superior to the old *double* lenses, composed of *two*, in that it produces less distortion, gives better marginal definition, and is of much smaller size.

The **Wide Angle Rectilinear Lens** (Patent) is the next in the order of rapidity. This Lens embraces angles of pictures of nearly 100°, when used with the *smallest* stop. It is entirely free from distortion, and flare; and, although not *brachyplanatic* like the *Rapid Rectilinear*, it works with, perhaps, a larger opening than any of the existing wide-angle double combination Lenses.

The wide-angle Rectilinear Lens, is intended for architectural views, landscapes, &c., in *various* situations, where longer focus lenses cannot be used; and for these purposes, its advantages have been recognised by all such eminent professional photographers as, Messrs. Bedford, Wilson, England, Frith, Blanchard, Good, and others.

For general purposes however, more especially for architecture, the use of wide-angle lenses is not to be commended, inasmuch as pictures produced by them, when viewed from the ordinary distance of vision, *i. e.*, from 12 to 14 inches, *appear* distorted; and the foreground objects are exaggerated, and the distance is dwarfed. This is really a fault of the lens, as will be evident on looking at the picture, from a point, the distance of which is exactly equal to the focal length of lens, with which it was taken; and the general public cannot be expected to view the picture from this point, and hence discrimination in the use of these lenses becomes imperative.

Another point requiring the strictest attention is, that the camera be exactly *square* on the object; if *tilting* becomes necessary, then a swing-back must be used, allowing the camera screen or slide to be brought *parallel*, to the plane of the object, otherwise all right and parallel lines will be represented converging, *i. e.*, the tops of buildings appear as if falling together. The use of the swing-back, however, always necessitates a *smaller* stop; hence, if possible, the camera should be kept level, the front raised as much as possible, and if this be found insufficient, then a higher elevation, where necessary to take the picture, should be chosen.—These observations equally apply to the use of all other non-distorting Lenses.

Either the front- or back-combination of the wide-angle Rectilinear can be used as a *single* lens (focal length about double that of the compound lens). Photographers, not in possession of single combination lenses, will probably find this an acquisition.

DALLMEYER'S PATENT PORTRAIT LENSES (B),

Quick-acting Lenses.

No. 2 B Patent Lens, with rack and pinion movement. Diameter of Lenses, 2½ in., and back focus 6 in. *Especially constructed for Carte de Visite Portraits. Distance between Subject and Lens for a standing figure, 18 ft.*

A Set of Waterhouse Diaphragms in case 1 5 0

No. 3 B ditto ditto Diameter of Lenses 3½ in., and back focus 8 in. *Especially constructed for the New Cabinet Portraits. Distance between subject and Lens for a standing figure, 18 ft. (for Carte de Visite, distance 25 ft.)*

A Set of Waterhouse Diaphragms in case..... 1 10 0

No. 4 B ditto ditto Diameter of Lenses 4½ in., and back focus 12 in.; for pictures 8½ × 6½ in. *Distance for a Cabinet Portrait 25 ft.*

A set of Waterhouse Diaphragms in case 2 0 0

DALLMEYER'S PATENT PORTRAIT LENSES (A),

Of the ordinary intensity or rapidity.

No. 1 A*—Patent Lens, with rack and pinion movement. Diameter of front and back combinations, 2½ and 2⅝ in. respectively, and 6½ in. back focus; for pictures 5 × 4 in. 1 15 0

A Set of Waterhouse Diaphragms in case 1 5 0

No. 2 A* ditto ditto. Diameter of front and back combinations, 3½ and 3¾ in. respectively; 10 in. back focus; for pictures 6½ × 4½ in. 16 10 0

A Set of Waterhouse Diaphragms in case 1 10 0

No. 3 A* ditto ditto. Diameter of Lenses 4 in., and 12 in. back focus; for pictures 8½ × 6½ in. 25 10 0

A set of Waterhouse Diaphragms in case 1 15 0

No. 4 A ditto ditto. Diameter of Lenses 4½ in. and 14 in. back focus; for pictures 10 × 8 in. 36 10 0

A Set of Waterhouse Diaphragms in case 2 0 0

No. 5 A in rigid mount. Diameter of Lenses 5 in., and 18 in. back focus; for pictures 15 × 15 in. and under, with set of Waterhouse Diaphragms in case 50 0 0

No. 6 A ditto ditto. Diameter of Lenses 6 in., and 22 in. back focus, for pictures 20 × 16 in. and under, with a set of Waterhouse Diaphragms... 60 0 0

* These Lenses are well adapted for the New Cabinet Portraits, according to length of gallery.—Thus, No. 1 A requires a distance of 14 feet between subject and lens (as recommended if a longer focus lens can be used) No. 2 A, 20 ft., and No. 3 A, 24 ft.

DALLMEYER'S PATENT PORTRAIT AND GROUP LENSES (D)

Require double the exposure of the A Lenses.

The prices marked below include a set of Waterhouse Central Diaphragms; with the exception of No. 3 D, the Lenses are mounted in Rigid settings, i.e., with rack and pinion movement.

| | DIAM. OF LENSES. | BACK FOCUS. | SIZE OF GROUP. | SIZE OF VIEW. | £. s. d. |
|-----------------|------------------|--------------|------------------|-----------------|----------|
| No. 3 D* Patent | 2½ in. | 10½ in. | 8½ × 6½ in. | 10 × 8 in. | 8 10 0 |
| No. 4 D | 2½ " | 13 " | 10 × 8 " | 12 × 10 " | 13 10 0 |
| No. 5 D | 3½ " | 16 " | 12 × 10 " | 15 × 12 " | 17 10 0 |
| No. 6 D | 4 " | 19½ " | 15 × 12 " | 18 × 16 " | 25 0 0 |
| No. 7 D | 5 " | 24 " | 18 × 16 " | 22 × 20 " | 42 0 0 |

* Distance for a Cabinet Portrait with No. 3 D 18 ft.

DALLMEYER'S 'RAPID' RECTILINEAR LENS (Patent).

Each lens is supplied with a set of Waterhouse diaphragms. (*Observe! The apertures of these are too large to admit of being made in the form of a rotating diaphragm plate, as supplied with the "side-angle" Rectilinear.*) Each lens, marked below, with smaller stops, can be used for the next size larger view.

| Size of View, or Landscape. | Size of Group, or Portrait. | Diameter of Lenses. | Back focus. | Equiv. focus. | Price, Rigid Setting. | Price, Sliding Tube. | Price, rack and pinion. |
|-----------------------------|-----------------------------|---------------------|-------------|---------------|-----------------------|----------------------|-------------------------|
| 4 in. | 3½ by 3¼ in. | 1 in. | 5½ in. | 6 in. | £4 10 0 | £4 15 0 | £5 5 0 |
| 5 " " | 5 " 4 " " | 1¼ " " | 7½ " " | 8½ " " | 5 10 0 | 6 0 0 | 6 10 0 |
| 6 " " | 6 " 5 " " | 1½ " " | 10¼ " " | 11 " " | 7 0 0 | 7 10 0 | 8 0 0 |
| 8 " " | 8 " 6½ " " | 1¾ " " | 12¼ " " | 13 " " | 9 0 0 | 9 10 0 | 10 5 0 |
| 10 " " | 10 " 8 " " | 2 " " | 15 " " | 16 " " | 11 0 0 | 11 10 0 | 12 5 0 |
| 12 " " | 12 " 10 " " | 2½ " " | 18 " " | 19½ " " | 14 0 0 | 14 15 0 | ... |
| 15 " " | 15 " 12 " " | 3 " " | 23 " " | 24½ " " | 18 0 0 | 19 0 0 | ... |
| 20 " " | 18 " 16 " " | 3½ " " | 28 " " | 30½ " " | 25 0 0 | 26 0 0 | ... |
| 25 " " | 22 " 20 " " | 4 " " | 31 " " | 33½ " " | 30 0 0 | 31 10 0 | ... |

DALLMEYER'S TRIPLE ACHROMATIC LENS,

Dimensions and Prices, including a Set of Waterhouse Diaphragms.

| No. | Size of View, or Landscape. | Size of Group or Portrait. | Diam. of back comb. | Back Focus. | Rigid Setting. | Sliding tube adjustment. | With rack and pinion. |
|-----|-----------------------------|----------------------------|---------------------|-------------|----------------|--------------------------|-----------------------|
| 1 | 6 × 5 | 5 × 4 | 1½ | 7 | £. s. d. 4 4 0 | £. s. d. 4 10 0 | £. s. d. 5 0 0 |
| 2 | 8½ × 6½ | 7 × 6 | 2 | 10 | 5 10 0 | 6 0 0 | 6 10 0 |
| 3 | 10 × 8 | 8½ × 6½ | 2¼ | 12 | 6 10 0 | 7 5 0 | 8 0 0 |
| 4 | 12 × 10 | 10 × 8 | 2½ | 15 | 8 10 0 | 9 5 0 | 10 5 0 |
| 5 | 15 × 12 | 12 × 10 | 3¼ | 18 | 11 0 0 | 12 0 0 | 13 0 0 |
| 6 | 18 × 16 | 15 × 12 | 4 | 23 | 14 0 0 | | |
| 7 | 22 × 20 | 18 × 16 | 5 | 29 | 19 0 0 | | |
| 8 | 25 × 21 | 22 × 20 | 5½ | 31 | 24 0 0 | | |

Hook's Universal Joint Handle for 12 by 10 and 15 by 12 Triple Lenses, price £1.

DALLMEYER'S WIDE-ANGLE 'LANDSCAPE' LENSES.

(PATENT.)

The Lenses are mounted in "Rigid" tubes or settings, with "Rotating" stops.

| No. | Size of Plate. | Diameter of Lenses. | Equivalent Focus. | Price. | REMARKS. |
|-----|----------------|---------------------|-------------------|----------------|--|
| 1 | 5 × 4 | 1½ | 5½ | £. s. d. 3 5 0 | No. 1A and No. 1 are made to screw into the same flange as No. 1 Triple Achromatic Lens. Nos. 2 and 3 screw into No. 2 Triple Achromatic flange. |
| 2 | 7½ × 4½ | 1¾ | 7 | 3 15 0 | |
| 3 | 8½ × 6½ | 1⅞ | 8½ | 4 10 0 | |
| 4 | 10 × 8 | 2¼ | 10 | 5 10 0 | |
| 5 | 12 × 10 | 2½ | 12 | 7 0 0 | |
| 6 | 15 × 12 | 2¾ | 15 | 8 10 0 | |
| 7 | 18 × 16 | 3 | 18 | 10 10 0 | |
| 8 | 22 × 20 | 3½ | 22 | 14 0 0 | |
| 9 | 25 × 21 | 4¼ | 25 | 19 0 0 | |

N.B.—The Apertures of all the stops supplied with J. H. D's Lenses (Portraits, and Landscapes) are so arranged that, counting from the LARGEST to the SMALLEST, the time of exposure is DOUBLED. Stops marked X are exceptions to this rule, and require an exposure only HALF AS LONG again as the NEXT LARGER stop.

The following Lenses of the *OLD*, or *Petzval* form, are so universally known and used by almost every photographer of note, that they are retained in this price list. All other Lenses of larger dimensions, and of the old form, are now made to order only, being superseded by J. H. D.'s New Patent Portrait Lenses.

DALLMEYER'S QUICK-ACTING PORTRAIT LENSES,

(Introduced November, 1860), especially constructed for

CARTE DE VISITE PORTRAITS.

The working qualities of these Lenses will be best explained by the following brief quotations: want of space precluding lengthy extracts.

Wondrous delicacy, perfect roundness and modelling, fleshy texture and transparency, great vigour and brilliancy, rich tone, exquisite definition, &c. &c.—See *Photographic News*, July 4, 1862, noticing pictures taken by Mr. T. R. Williams, with No. 2 B Lens.

The only Prize Carte de Visite Pictures at the International Exhibition (1862) were taken by Mr. H. P. Robinson with No. 2 B Lens; and by Mr. Mullins with No. 1 B.

Specimens from the Studios of all the leading Artists can be seen at 19, Bloomsbury Street. Observe that all the specimens with No. 2 B Lens were either taken with full opening, or never less than with No. 2 stop, 1½ inch diameter.

| | |
|--|---------|
| No. 1 B Carte de Visite Lens, with rack and pinion movement, the lenses 2 inches diameter and 4½ inches back focus, for Portraits 4½ by 3½ | £ s. d. |
| A Set of Waterhouse Diaphragms in Case | 0 15 0 |
| No. 1 B [Long], with rack and pinion movement, the lenses 2½ in. diameter, and 4½ in. back focus | 6 0 0 |
| A Set of Waterhouse Diaphragms in case | 0 15 0 |

This Lens is constructed to meet the requirements of photographers who desire to use a long focus Lens than No. 1 B, but who have not sufficient length of gallery for No. 2 B.

| | |
|--|---------|
| No. 2 B Carte de Visite Lens, with rack and pinion movement, the lenses 2½ in. diameter and 6 in. back focus, for portraits 5 by 4 in. | 11 11 0 |
| A Set of Waterhouse Diaphragms, in case | 1 5 0 |
| Distance between Subject and Lens, the standard being 5 feet 8 in. for a Picture 2½ in. for No. 1 B, 12 to 13 feet; for No. 1 B (long), 14 to 15 feet; for No. 2 B, 18 to 19 feet. | |

"EXTRA" QUICK-ACTING PORTRAIT LENSES,

Especially constructed for Portraits of Children, but generally useful also for Vignettes, Cartes de Visite, Locket Portraits, &c.

| | |
|--|----------|
| No. 2 C.* Portrait Lens, with rack and pinion movement; the lenses 2½ in. diameter and 4½ in. back focus; for portraits 4½ by 3½ and under. With a Set of Waterhouse Diaphragms, in case | £15 15 0 |
|--|----------|

This Lens produces pictures in one half the time of No. 1 B [long], but the field of view is not so flat; hence, for STANDING figures, a stop must be used.

| | |
|--|---------|
| A Miniature Lens, do., do.; the lenses 1½ in. and 1½ in. diameter respectively, and 2 in. back focus; for portraits 2 in. by 2 in., and when used with stops for 2½ in. by 2½ in. With a set of Waterhouse Diaphragms, in case | £5 15 0 |
|--|---------|

| | |
|---|--------|
| A Medallion Lens. Diameter of lenses ¾ in., back focus 1 in., in a rigid mount, without stops | 2 10 0 |
|---|--------|

* Mr. Faulkner's much-admired Instantaneous Portraits of Children are taken with this Lens—Specimens on application.

DALLMEYER'S NEW STEREO SCOPIC LENS,*

(Introduced May 1860), especially constructed for "Instantaneous Views," Small Portraits, Groups, &c. Consists of two achromatic combinations of 1½ and 1½ in. diameter respectively, and 3½ in. back focus, includes a large angle, with a flat field and perfect definition.

| | |
|--|---------|
| The above, in Sliding Mount, with Waterhouse Diaphragms, each .. | £3 10 0 |
| Ditto, ditto, with rack and pinion movement | 4 0 0 |

These Lenses can be had in pairs, or four, of exactly equal foci.

In very short operating rooms this Lens can be used for Carte de Visite Portraits. N.B.—The front combination can be used alone as an ordinary 6 in. Stereoscopic View Lens, in the same mounting, simply by unscrewing and dispensing with the back, and then replacing it by the front combination.

The Hood should be taken off and screwed into the tube, in the place previously occupied by the front combination.—Front Stop for Hood 2s. 6d. each.

| | |
|---|-------------|
| Dallmeyer's Instantaneous Flap and Roller Shutter, Mann's Patent Shutter, and Mr. England's Shutter | from 0 17 6 |
|---|-------------|

* The Instantaneous Views by MM. Perrier and Soulier, Mr. England, and others; also the Instantaneous and other slides by Mr. C. S. Breece, exhibited at the International Exhibition, were taken with the above Lenses.

DALLMEYER'S NEW WIDE-ANGLE 'RECTILINEAR' LENS

(PATENT.)

For description, see J. H. D.'s paper read before the London Photographic Society June 11th, 1867.

This new combination has been constructed to meet the expressed want of photographers for a lens to enable them to photograph blocks of buildings, interiors, &c., in confined situations, where longer focus lenses cannot be used, and where absolute rectitude of lines is imperative. The already existing wide-angle non-distorting lenses are mostly defective in two respects. They require the use of very small diaphragms, to render the marginal definition passable for pictures embracing angles of 90° (i.e., $\frac{F}{f}$), and they produce more or less of a central spot in the resulting picture. The former of these defects renders these lenses comparatively useless for "interiors," and the latter for "exteriors."

J. H. D. has discovered the cause of the "central spot," and the new lens now introduced is entirely free from this defect. Also the lenses, i.e., their diameters, forms, &c., are such that for a given large angle of picture the new lens admits of the use of a larger aperture or stop than can be used with any existing non-distorting view lens (i.e., the smallest stop = $\frac{F}{f}$). It is, therefore, twice as rapid in action; the illumination from centre to margin of the picture is also more equal throughout, and the chemical and visual foci are coincident.

DIMENSIONS AND PRICES.*

The lenses are mounted in rigid settings or tubes, and each is furnished with a rotating diaphragm plate.

In the column below, the largest size of plate covered by each lens is recorded; and if microscopic definition up to the corners be required, the smallest, or smallest but one, stop should be used. If it be required to work with a large opening to obtain quick results, on size of plate named below, then the next size larger lens is to be preferred.

| No. | Largest Dimension of Plate. | Diameter of front combination. | Equivalent focus. | Back focus | Price. | Remarks. |
|-----|-----------------------------|--------------------------------|-------------------|------------|---------|--|
| 1A* | 7½ by 4½ | ¾ inch | 4 in. | 3½ in. | £4 10 0 | No. 1A and No. 1 are made to screw into the same flange as No. 1 Triple Achromatic Lens. |
| 1A | 8½ " 6½ | 1¼ " " | 5½ " " | 4½ " " | 5 10 0 | |
| 1 | 12 " 10 | 1½ " " | 7 " " | 6½ " " | 7 10 0 | |
| 2 | 15 " 12 | 2 " " | 8½ " " | 7½ " " | 10 10 0 | |
| 3 | 18 " 16 | 2½ " " | 13 " " | 11 " " | 14 0 0 | |
| 4 | 22 " 20 | 3 " " | 15½ " " | 14 " " | 20 0 0 | |

* This Lens is also well adapted for Stereoscopic Views.

Sky-shades, or shutters, as recommended by Mr. England, can be applied to the above lenses, at the following prices:—Nos. 1A, 1A, and 1, each 8s. 6d.; Nos. 2, 3, and 4, each 12s. 6d.

"I had an opportunity of trying it (No. 1A) upon Dunkeld Cathedral, and I find it is a new power. I would also like a pair of shorter focus, say 3-in., or thereabouts, for taking near views of buildings, which cannot be got with longer focussed lenses."—From a Letter by George W. Wilson, Aberdeen.

Want of space precludes quotations from numerous other letters, all of similar purport: The following eminent photographers are already using the new Lens:—Messrs. Bedford, Robinson, England, Vernon Heath, Russell Gordon, Mayall, Mayland, Frith, Blanchard, Sedgfield, Wardley, Good, Jabez Hughes, Willis, Warner, Disderi, Treble, Webber, Drayson, Bourne, of India, &c.

DALLMEYER'S NEW RECTILINEAR STEREO LENS.

Especially constructed for architectural and Landscape views, in confined situations.

Diameter of front combination, ¾ in.; back focus, 2½ in. (equivalent focus, 3 in.); mounted in rigid setting, with rotating diaphragm plate; the largest aperture of which = $\frac{F}{f}$: price, each

* Rectilinear Lenses, especially constructed for copying, embracing smaller angles (of from 60° to 70°), but allowing of the use of larger apertures, are made to order;—prices on application. N.B.—A large lens of this description has recently been constructed for the Austrian Government, for which a Certificate of Merit has been awarded. Similar lenses have also been supplied to the Governments of India, Australia, &c.

DALLMEYER'S 'WIDE-ANGLE' RECTILINEAR LENS (Patent)

The lenses are mounted in rigid settings or tubes, and each is furnished with a rotating diaphragm plate. In the column below, the largest size of plate covered by each lens is recorded; and if microscopic definition up to the corners be required, the smallest, or smaller, but one stop, should be used.

| No. | Largest Dimension of Plate. | Diameter of front combination. | Back focus. | Equivalent focus. | Price. | Remarks. |
|-----|-----------------------------|--------------------------------|-------------|-------------------|---------|----------------------------------|
| 1AA | 7½ by 4½ | 2 inch | 3½ in. | 4 in. | £4 10 0 | No. 1A and 1B are made to order. |
| 1A | 8½ " 6½ | 1½ " | 4½ " | 5½ " | 5 10 0 | into the same frame as No. 1. |
| 1 | 12 " 10 | 1½ " | 6½ " | 8 " " | 7 10 0 | |
| 2 | 15 " 12 | 2 " " | 7½ " | 8½ " | 10 10 0 | |
| 3 | 18 " 16 | 2½ " " | 11 " " | 13 " " | 14 0 0 | Triple Achromatic Lens. |
| 4 | 22 " 20 | 3 " " | 14 " " | 15½ " " | 20 0 0 | |

* This Lens is also well adapted for Stereoscopic Views.

Sky-shades, or shutters, as recommended by Mr. England, from £1 10 0

DALLMEYER'S NEW STEREOSCOPIC LENS.

(Introduced May, 1866), especially constructed for "Instantaneous Views," Small Portraits, Groups, &c. Consists of two achromatic combinations of 1¼ and 1½ in. diameter respectively, and 3½ in. back focus, includes a large angle, with a flat field and perfect definition.

The above, in Sliding Mount, with Waterhouse Diaphragms, each .. £3 10 0
Ditto, ditto, with rack and pinion movement 4 0 0

These Lenses can be had in pairs, or four, of exactly equal foci.

N.B.—The front combination can be used alone as an ordinary 6-in. Stereoscopic View Lens, in the same mounting, simply by unscrewing and dispensing with the back, and then replacing it by the front combination.

The Hood should be taken off and screwed into the tube, in the place previously occupied by the back combination.—Front Stops for Hood 2s. 6d. each.

DALLMEYER'S PATENT STEREOGRAPHIC LENS.

Diameter of front and back combinations 1½ in. and 1¼ in. respectively, and 3½ in. focus from the back glass (equivalent focus 5 inches.)

In sliding mount, with Waterhouse central diaphragms, each .. £4 5 0
Ditto ditto, with rack and pinion movement, each 4 15 0

N.B.—The front combination can be used alone and intact, (focal length 8 inches), simply by unscrewing and dispensing with the back combination, when, with a small-sized lens, will be found to cover the 7¼ by 4½-in. plate.

For very short Operating Rooms, this or the above Lens can also be used for Card Portraits.

DALLMEYER'S QUICK-ACTING STEREOSCOPIC 'LANDSCAPE' LENSES.

Especially constructed for Messrs. Wilson, England, Blanchard, Good, &c.

No. 1.—1¼ in. diameter, 4½ in. back focus, in "rigid" mount, with "rotating" diaphragm, each .. £ 2 10 0
stops each 2 0 0

No. 2.—1½ in. diameter, 6 in. back focus, in "rigid" mount, with "rotating" diaphragm, each .. £ 3 5 0
stops each 3 0 0

Dallmeyer's Instantaneous Flap Shutter, for a pair of the above .. 0 10 0

DALLMEYER'S PATENT RECTILINEAR STEREO LENS.

Especially constructed for architectural and landscape views in confined situations.

Diameter of front combination, ½ in.; back focus, 2½ in. (equivalent focus, 3 in.); mounted in rigid setting, with rotating diaphragm plate; the largest aperture of which = 1/10; price, each £ 2 10 0

For Particulars of Cameras and other Apparatus, also of Telescopes and Microscopes, see GENERAL CATALOGUE, to be had on application at

19, BLOOMSBURY STREET, LONDON, W.C.

M E D A L S

AWARDED TO

J. H. DALLMEYER,

OPTICIAN:—

INTERNATIONAL EXHIBITION, 1862:—TWO MEDALS.
DUBLIN INTERNATIONAL EXHIBITION, 1865:—PRIZE MEDAL.
BERLIN INTERNATIONAL EXHIBITION, 1865:—PRIZE MEDAL.
PARIS UNIVERSAL EXHIBITION, 1867:—TWO MEDALS, VIZ.:—
THE GOLD & SILVER Medals, being the HIGHEST award for English Photographic Lenses.

JURORS' REPORTS (Photographic Section).

INTERNATIONAL EXHIBITION, 1862.—"The Triple Achromatic Lens invented by Mr. DALLMEYER is free from chromatic and spherical aberrations. The images produced by this Lens are quite free from distortion; a wide angle of view, with good definition, is included by it. In the hands of the Jurors these qualities have been satisfactorily proved, and in the beautiful landscapes, by Mr. Wilson and others, produced by this Lens, and exhibited in the building, additional confirmations are obtained. * * Several Quick-acting Lenses, with flat field and fine definition, specially adapted for Card Portraits, have been invented by Mr. Dallmeyer. The Gold has been awarded for the introduction of novelties as well as unsurpassed excellence of manufacture."

DUBLIN INTERNATIONAL EXHIBITION, 1865.—"We would especially direct attention to the unvalued Photographic Lenses exhibited by Mr. J. H. Dallmeyer; and, more particularly, to a new Triple Meniscus, by which a landscape, subtending a like camera as wide an angle as 70°, can be photographed with extraordinary fidelity; * * and to another combination (Triple Lens), producing more limited pictures, which are in a very remarkable degree free from distortion, and of great and equable beauty throughout their whole extent."

PARIS UNIVERSAL EXHIBITION, 1867.—"Since the Exhibition of 1862 great novelties and improvements have taken place in photographic lenses. In that Exhibition the chief improvement exhibited was a triple combination, for which a medal was awarded to J. H. Dallmeyer, this being the first practically useful lens with which to photograph buildings, copy maps, prints, &c., free from distortion, embracing angles of from 60 to 70 degrees. Since that time other lenses have been introduced giving angles of upwards of 90 degrees, and amongst these may be mentioned a Wide-angle Single-combination Meniscus, composed of three cemented lenses by Dallmeyer, and the 'Rectilinear' Wide-angle View Lens by Dallmeyer. As regards the improvements introduced in lenses for portraiture, advances have been made in enabling the photographer to produce more artistic results."

A lens has been introduced, a new form of combination, by Dallmeyer, which, whilst it possesses the advantages in respect to rapidity and definition of the old form of certain lenses, can, at the will of the operator, by the simple turn of a screw, be made to avoid extreme definition or hardness over one plane, and to distribute it over several planes. The specimens exhibited, produced by this lens, seem to demonstrate that a new power is placed in the hands of the artist."

CATALOGUES,

CONTAINING FULL PARTICULARS OF

Telescopes, Microscopes, Photographic Lenses, &c.,

MAY BE HAD ON APPLICATION AT

19, BLOOMSBURY STREET, LONDON, W.C.

See also Abridgment of Catalogue facing this.