

No. 838,042.

PATENTED DEC. 11, 1906.

C. MOTTI.
PHOTOGRAPHIC APPARATUS.
APPLICATION FILED MAY 1, 1906.

4 SHEETS—SHEET 1.

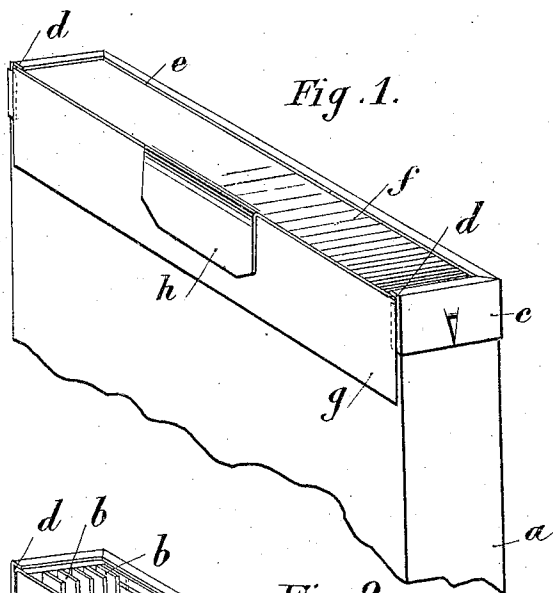


Fig. 1.

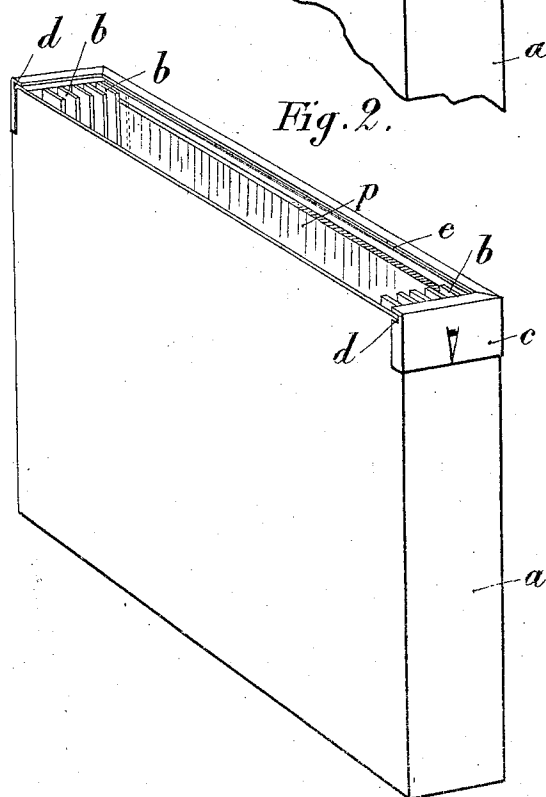


Fig. 2.

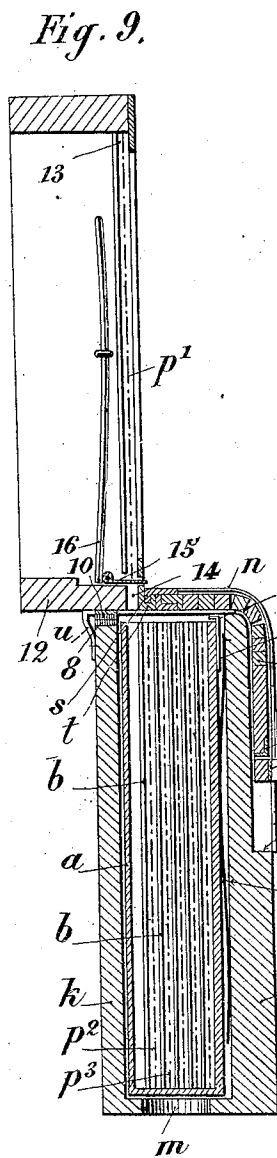


Fig. 9.

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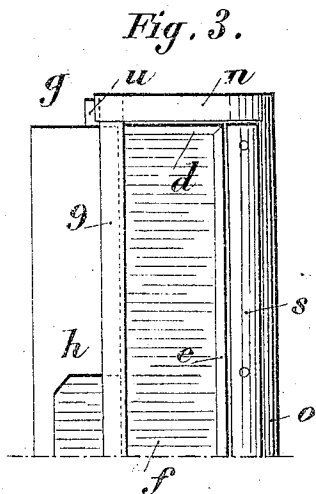
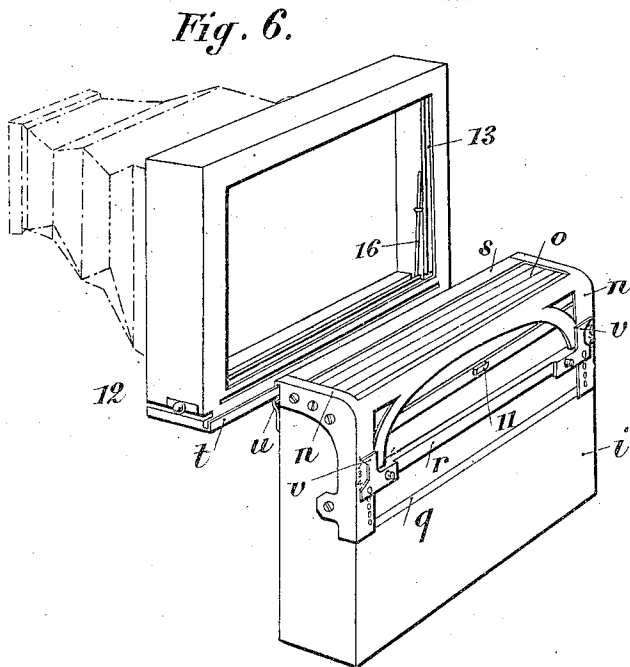
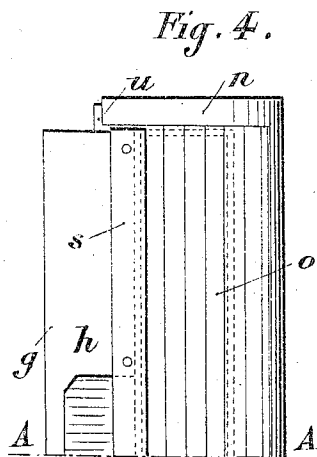
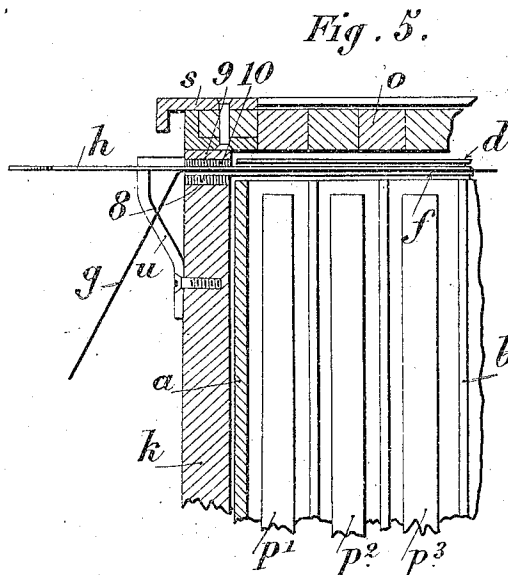
Inventor:
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4 SHEETS—SHEET 2.



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Fig. 10.

4 SHEETS—SHEET 4.

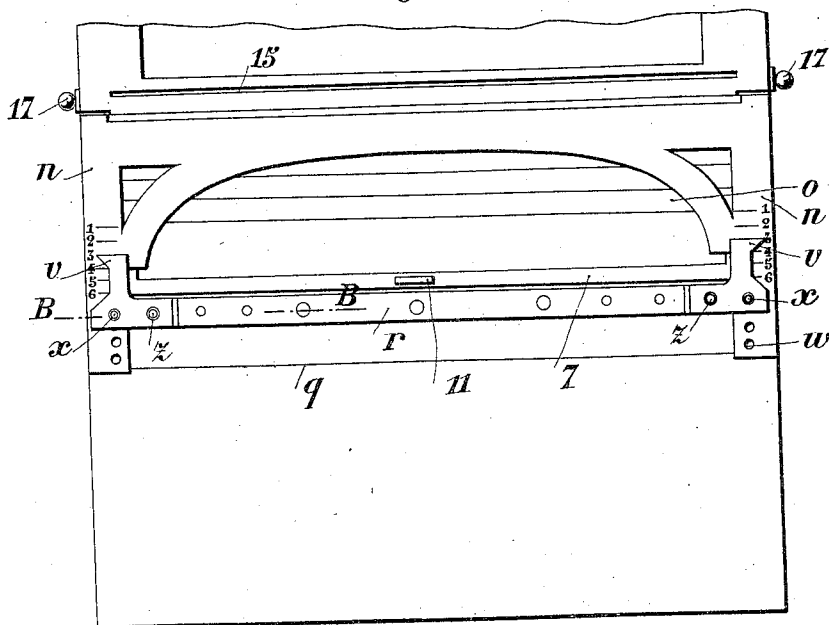


Fig. 11.

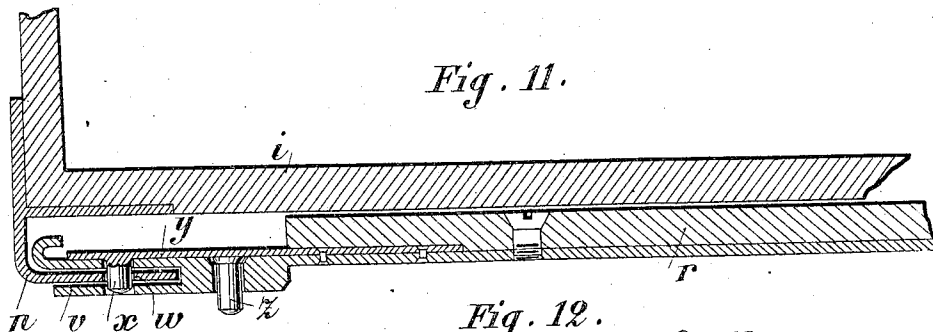
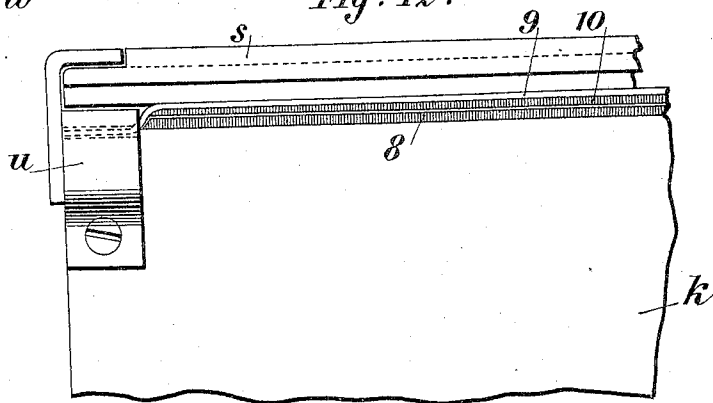


Fig. 12.



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UNITED STATES PATENT OFFICE.

CÉSAR MOTTI, OF GRASSE, FRANCE.

PHOTOGRAPHIC APPARATUS.

No. 838,042.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed May 1, 1906. Serial No. 314,652.

To all whom it may concern:

Be it known that I, CÉSAR MOTTI, a citizen of the Republic of France, residing at Grasse, (Alpes Maritimes,) France, have invented
5 Improvements in Photographic Apparatus, of which the following is a specification.

This invention has for its object to provide photographic apparatus comprising a special magazine which can be charged with plates
10 or the like and emptied in broad daylight. The magazine is constructed to receive plates without carriers arranged in a box of special construction.

The complete apparatus—i. e., the magazine, the plate-box, and dark-side—is so constructed and arranged that the operation of plate-changing is simple and rapid, plate-carriers are dispensed with, and the withdrawal of the magazine, except when it is
20 closed to the light, is rendered impossible.

The apparatus also presents other advantages, which will be hereinafter mentioned.

Figure 1 is a perspective view of the upper portion of the specially-prepared plate-box with its cover in position. Fig. 2 is a perspective view of the plate-box with the cover removed. Fig. 3 shows in half plan the plate-box arranged in the magazine before the magazine is closed. Fig. 4 is a similar
30 view to Fig. 3, but with the magazine closed. Fig. 5 is a partial transverse section, to a larger scale than the preceding figures, corresponding to the line A A of Fig. 4. Fig. 6 is a perspective view illustrating the operation of putting the filled magazine in place.
35 Figs. 7 and 8 show in transverse section and in sectional part plan, respectively, details of certain parts in positions corresponding to Fig. 6 to a larger scale. Fig. 9 is a transverse section of the whole apparatus with the
40 magazine charged and the parts being in the proper relative positions for changing the first plate. Fig. 10 shows the front of the magazine in elevation, the apparatus being
45 in position for changing an intermediate plate. Fig. 11 is a partial horizontal section corresponding to the line B B of Fig. 10, but to a larger scale. Fig. 12 is a partial rear elevation of the detached magazine.

The photographic plates are supplied to the trade in a box of cardboard or other material, the transverse walls of which are furnished with equidistant ribs *b*, that extend the whole height of the box and form guide-grooves for the various plates *p*. In the example shown the box and the magazine into

which it is inserted are constructed to hold six plates; but it is obvious that the box and magazine may be constructed to hold any other desired number.

One of the sides of the box *a* is closed to form the bottom, and the opposite side or top of the box is provided with a metallic or other sheet binding or frame *c*, folded over on one longitudinal side and on two transverse sides in such a way as to form guide-grooves *d*, Figs. 1 and 2, and an abutment *e*, Fig. 9, for a removable cover *f*. This cover is formed of a sheet of metal folded down upon itself and inclosing a piece of black paper or
65 gummed cloth *g*, Figs. 1 and 5, which before the introduction of the box into the magazine remains stuck to the outer side of the box. The cover *f* is provided with a tab *h*, formed in one with it and which is sufficiently flexible as to enable it to be lifted up
75 for the purpose of easily withdrawing the cover and to effect its subsequent replacement in position.

The magazine comprises a suitable box of convenient capacity for the reception of the plate-boxes *a*. Fixed preferably to the inside of the front wall *i* of the magazine are two spring-blades *j*, Fig. 9, which cause the plate-box to bear against the opposite wall *k*
85 of the magazine.

The bottom of the magazine is pierced with a hole *m*, Fig. 9, to enable a finger to be passed therinto and facilitate the removal of the box *a* from the magazine, and the upper portion of the front and transverse edges of the magazine are fitted with a metallic edge binding *n*, serving as a guide for a roller-blind *o*, adapted to form a cut-off shutter for the filled magazine. From the points where the guides *n* terminate the front wall *i* of the magazine is of increased thickness, so as to form at *q*, Figs. 6 and 9, an abutment or shoulder for an indicator *r*, which will be hereinafter described in detail. The extreme rear lath of the blind *o* is provided with a metallic edge portion *s*, forming a hooked catch for a longitudinal beak *t*, secured to the lower edge of the bottom of the dark-slide of the apparatus, Figs. 6, 7, 8, and 9.

Two brackets *u*, projecting from the rear wall *k* of the magazine, serve as a support to the dark-slide while it is being attached to the blind *o* of the magazine.

The gage or indicator *r*, before referred to, is furnished at its ends with indicator-poin-

ters v , which move opposite to graduations marked on the guides n . The distances apart of the lines of these graduations correspond to the pitch of the grooves in the plate-box. When the pointers v are opposite the lines marked 1, the indicating-gage r forms an abutment for the blind o at such desired height that the blind only uncovers the filled magazine up to the extent of the first groove, Fig. 9. The gage may be engaged by a catch in this position and successively in the positions corresponding to the other divisions of the graduations. For this purpose each guide n is formed with a hole w , in which works a pin x , Fig. 11, carried by a latch-spring y , that is fixed at one end to the gage r and which can be moved to disengage the pin x by pressing upon a second pin z .

The apparatus is used in the following manner: After having lifted up the tab h of a box a full of new plates the box is introduced into the wide-open magazine. The gage r is at this time directly upon the shoulder q of the magazine, and the lower edge 7 of the blind is upon the gage. The cover $f h$ bears against the upper edge of the magazine-wall k , which is there covered by a band of velvet 8, Figs. 5, 9, and 12. When the box is in place within the magazine, a metal bar 9, the lower face of which is covered with velvet 10, is placed over the cover $f h$ with its ends held under the brackets u . One of the ends of the bar 9 10 may be pivoted to the corresponding bracket in a manner which will allow of the bar being readily withdrawn or put in place. The magazine with the full box of plates then appears in plan, as shown in Fig. 3. The blind o is then raised by a button or an operating-tab 11 and brought to the end of its travel, so that it completely covers up the magazine, Figs. 4, 5, 6, 7, and 8. The cover $f h$, which slides between the two velvet strips 8 and 10, can then be withdrawn. When the cover is withdrawn, the velvet 10 bears upon the velvet 8, so preventing all penetration of light into the box a . The magazine thus filled and the blind o being drawn may have mounted upon it the dark-slide by causing the beak t of the dark-slide to engage the beak s of the magazine-blind o , Figs. 6 and 7.

The transverse walls of the dark-slide 12 are formed with guide-grooves 13 to receive the plate to be exposed. The bottom of the groove 13 is normally separated from a slot 14 in the base of the dark-slide by a register-plate 15, which springs 16 tend to keep in the position indicated in dotted lines in Figs. 7 and 8 and in full lines in Fig. 9. The groove 13 before the introduction of a plate p into the dark-slide may serve to hold a plate of ground glass for focusing.

If when the magazine is in position it be desired to pass into the dark-slide any one of the plates—plate No. 1, for example—the

gage r is latched in the position desired, so that the pointers v are opposite the divisions 1, Figs. 6 and 9. The magazine is then pushed relatively to the dark-slide until the edge 7 of the blind just abuts against the gage r , Fig. 9. The register-plate 15 is then moved by pressing on the buttons 17, so as to bring the register-plate into the position indicated in full lines in Figs. 7 and 8. As the slot 14 of the dark-slide and the guides 13 are now opposite the grooves of the box a , which hold the plate p' , all that is necessary is to invert the apparatus to cause this plate to pass from the box a into the chamber 12, where it will be retained by the register 15, which when released will be returned to the normal position by its springs 16.

When the beak s of the blind o and the beak t of the dark-slide are in engagement, as best seen in Figs. 6, 7, and 9, the blind and dark-slide may be considered to form an integral structure. When it is desired to pass a plate from the box or magazine into the dark-slide, the blind o , with its beak s , with which the beak t engages, is drawn forward over the magazine, thereby bringing the end of the beaks s and t under the metallic guides n , which will prevent the disengagement of the beaks, the disengagement being effected by sliding either beak out of the other. The disengagement can take place only when the parts are in such position—for example, as seen in Fig. 6—that the ends of the beaks s and t are clear of the guides n and may be slid laterally.

When the dark-slide is charged with a plate to be exposed, the magazine may be left upon or removed from the slide, as desired. Once the plate has been exposed it can be brought back into the groove which it originally occupied in the box a . For this purpose if the apparatus is still in position it is only necessary to manipulate the register 15 so that the plate p' falls into its groove. If it be desired to expose any other plate—the plate p'' , for example—the gage r is latched with its pointers opposite the indications 3, Fig. 10, the dark-slide is shifted relatively to the magazine until the blind o abuts against the gage, and the apparatus is turned over and the buttons 17 pushed so as to allow the plate p'' to pass from the groove which it occupies in the box a into the grooves 13 of the dark-slide.

It will be seen that it is not necessary to expose the plates in consecutive order, so that the magazine may be charged with plates of different emulsions and the plates may be used in any order.

When all the plates are exposed and returned to the box a , the magazine is detached from the dark-slide, which necessitates the blind o being closed, Fig. 6. The cover $f h$ (which is passed between the velvet strips 8 and 10) is now put back in place.

When the cover is in place, Fig. 4, the magazine is uncovered by pushing back the blind *o*, Fig. 3, the bar *9* is then withdrawn, and finally the box *a* is removed from the magazine. The removal of the box *a* is facilitated by passing a finger into the hole *m*. Once the box is withdrawn the paper tab *g* can be stuck down again and the tab *h* lowered, Fig. 1.

If it is not desired to have a new box *a* at the time of providing fresh plates, a former box may be kept and recharged away from the light with plates of any source of origin.

The appliance reduces to a minimum the mechanism for changing plates, and consequently the weight as well as the volume of the apparatus. The weight is still further reduced, owing to the fact that plate-carriers are done away with.

What I claim is—

1. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, a blind controlling the mouth of said magazine, means for withdrawing the cover of said plate-box when it is within said magazine, a beak on said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

2. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, a roller-blind controlling the mouth of said magazine, a beak on the rear extremity of said blind, means for withdrawing the cover of said plate-box when it is within said magazine, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

3. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, a blind controlling the mouth of said magazine, means for withdrawing the cover of said plate-box when it is within said magazine, a beak on said blind, means whereby said blind can be adjusted in any desired intermediate position between its wide-open and closed positions, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

4. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, a blind controlling the mouth of said magazine, means for with-

drawing the cover of said plate-box when it is within said magazine, a beak on said blind, an adjustable bar carried by said magazine against which the front edge of said blind can be placed, an indicator for facilitating the adjustment of said bar, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

5. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, springs within said magazine adapted to press a plate-box within said magazine toward the rear wall thereof, a strip of packing material on the upper face of the rear wall of said magazine, a removable bar adapted to be placed above the upper face of said rear wall, a strip of packing material on the under side of said bar, a blind controlling the mouth of said magazine, means for withdrawing said plate-box cover between the upper face of said rear wall and the under side of said bar when said plate-box is within said magazine, a beak on said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

6. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, guides on said magazine, a roller-blind working in said guides controlling the mouth of said magazine, an adjustable bar on said magazine against which the lower edge of said roller-blind can be placed, pointers on the ends of said bar, there being indicating-marks on said magazine over which said pointers work, means for fixing said bar in any desired position, means for withdrawing the cover of said plate-box when it is within said magazine, a beak on said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

7. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, springs within said magazine adapted to press a plate-box within the said magazine toward the rear wall thereof, a strip of packing material on the upper face of the rear wall of said magazine, a removable bar adapted to be placed above the upper face of said rear wall, a strip of packing material on the under side of said bar, guides on said magazine, a roller-blind

working in said guides controlling the mouth of said magazine, an adjustable bar on said magazine against which the lower edge of said roller-blind can be placed, pointers on the ends of said bar, there being indicating-marks on said magazine over which said pointers work, means for fixing said bar in any desired position, means for withdrawing said plate-box cover between the upper face of said rear wall and the under side of said bar when said plate-box is within said magazine, a beak on said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

8. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, guides on said magazine, a roller-blind working in said guides controlling the mouth of said magazine, an adjustable bar on said magazine against which the lower edge of said roller-blind can be placed, pointers on the ends of said bar, there being indicating-marks on said magazine over which said pointers work, means for fixing said bar in any desired position, means for withdrawing the cover of said plate-box when it is within said magazine, a downwardly-extending beak on the rear edge of said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

9. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine adapted to contain said plate-box, springs within said magazine adapted to press a plate-box within said magazine toward the rear wall thereof, a strip of packing material on the upper face of the rear wall of said magazine, a removable bar adapted to be placed above the upper face of said rear wall, a strip of packing material on the under side of said bar, guides on said magazine, a roller-blind working in said guides controlling the mouth of said magazine, an adjustable bar on said magazine against which the lower edge of said roller-blind can be placed, pointers on the ends of said bar, there being indicating-marks on said magazine over which said pointers work, means for fixing said bar in any desired position, means for withdrawing said plate-box cover between the upper face of said rear wall and the under side of said bar when said plate-box is within said magazine, a downwardly-extending beak on the rear edge of said blind, a dark-slide having a

slot therein, a part on said dark-slide adapted to engage said beak, brackets on the rear of said magazine adapted to guide and support said dark-slide while being engaged with said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

10. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, a magazine formed with a thumb or finger hole in its bottom wall adapted to contain said plate-box, a blind controlling the mouth of said magazine, means for withdrawing the cover of said plate-box when it is within said magazine, a beak on said blind, a dark-slide having a slot therein, a part on said dark-slide adapted to engage said beak, a plate for controlling the slot in said dark-slide, and means for moving said plate, substantially as hereinbefore described.

11. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, comprising a piece of flexible gummed material the end of which is adapted to be stuck to the outer side of the plate-box and a metal sheath for said material, and a metallic operating-tab for said cover, substantially as set forth.

12. In photographic apparatus, a plate-box, plate-guides within said box, a light-tight cover for said box, comprising a piece of flexible gummed material the end of which is adapted to be stuck to the outer side of the plate-box and a metal sheath for said material, and a metallic operating-tab for said cover adapted to be bent down out of the way against the outer side of the box, substantially as set forth.

13. In photographic apparatus, an apertured dark-slide, a plate-guide in said slide, a shutter controlling the aperture in said slide, a beak on said slide, a plate-magazine a sectional blind for closing said magazine and a part on said blind adapted to be engaged by said beak, substantially as set forth.

14. In photographic apparatus, an apertured dark-slide, a plate-guide in said slide, a shutter controlling the aperture in said slide, springs tending to keep said shutter in its closed position, means for moving said shutter against the action of said springs, a beak on said slide, a plate-magazine a sectional blind for closing said magazine and a part on said blind adapted to be engaged by said beak, substantially as set forth.

Signed at the consulate of the United States of America at Nice, France, this 2d day of April, 1906.

CÉSAR MOTTI. [L. s.]

Witnesses:

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