No. 810,418. PATENTED JAN. 23, 1906.

E. O. KEPLER.

DEVELOPING CABINET FOR PHOTOGRAPHIC PURPOSES.

APPLICATION FILED APR. 17, 1905.

2 SHEETS—SHEET 1.

Fig. 4.

Fig. 1.

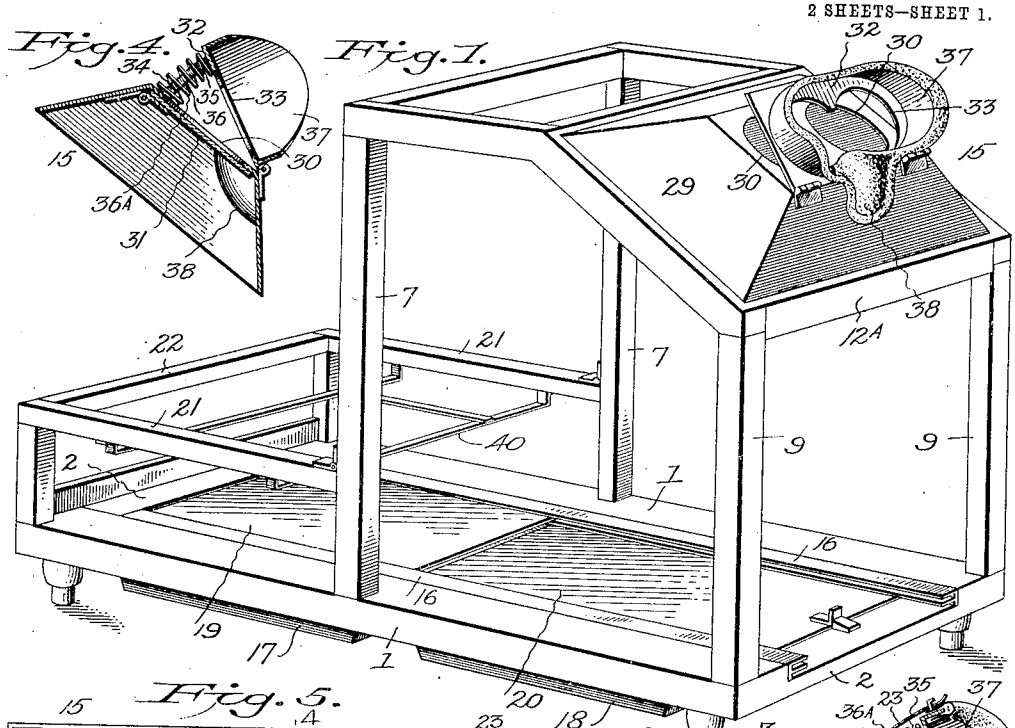
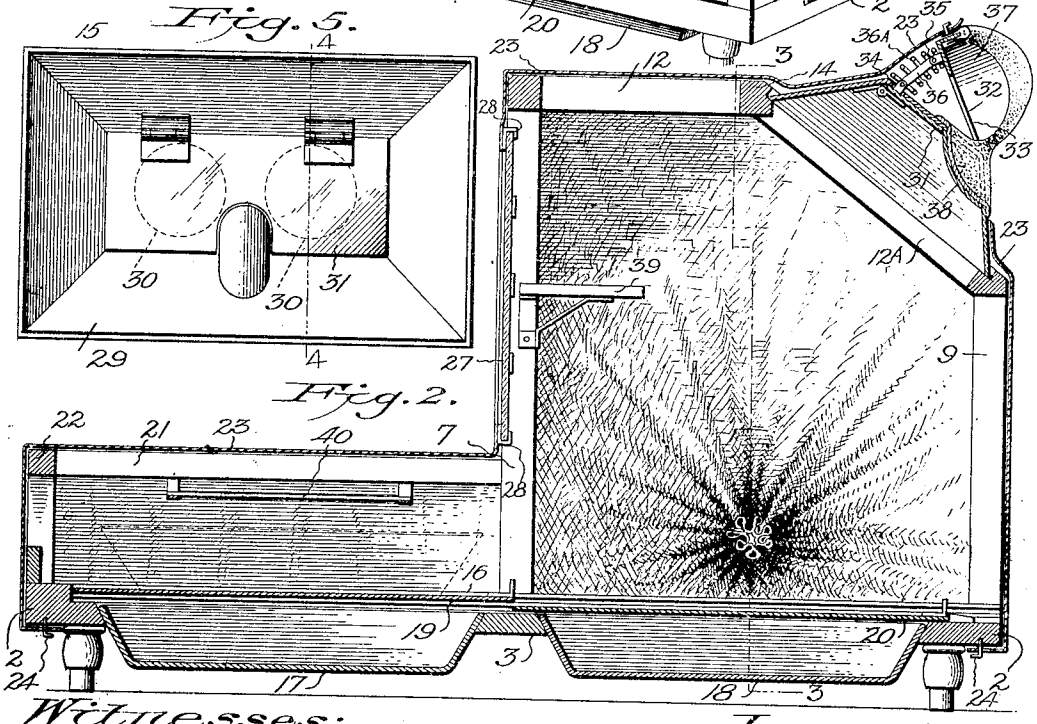


Fig. 5.

Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

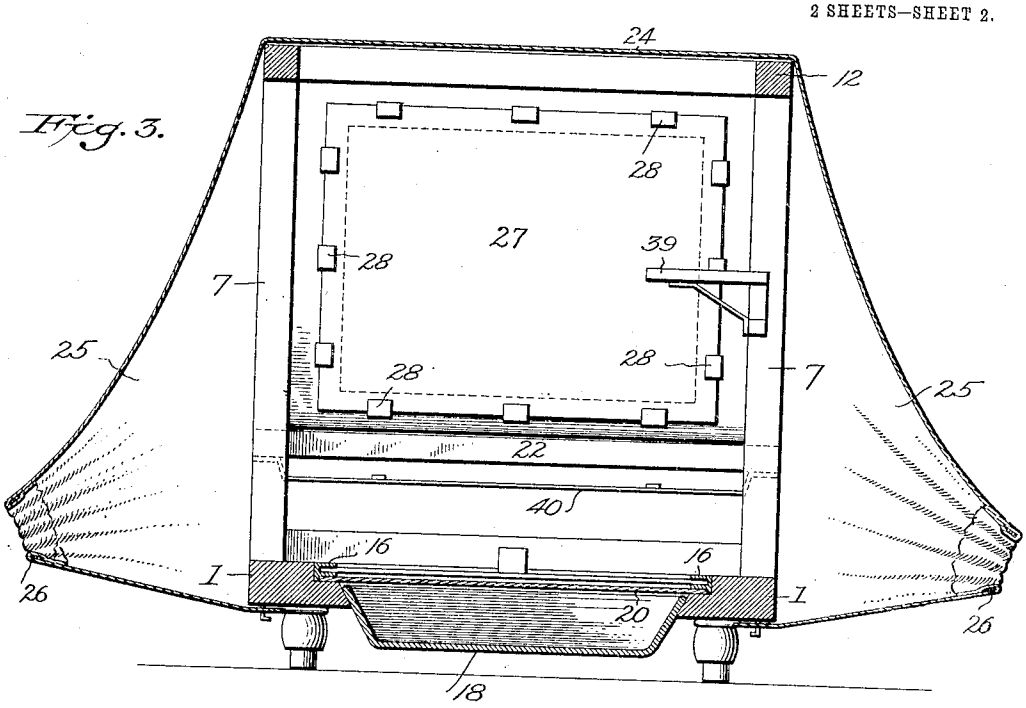
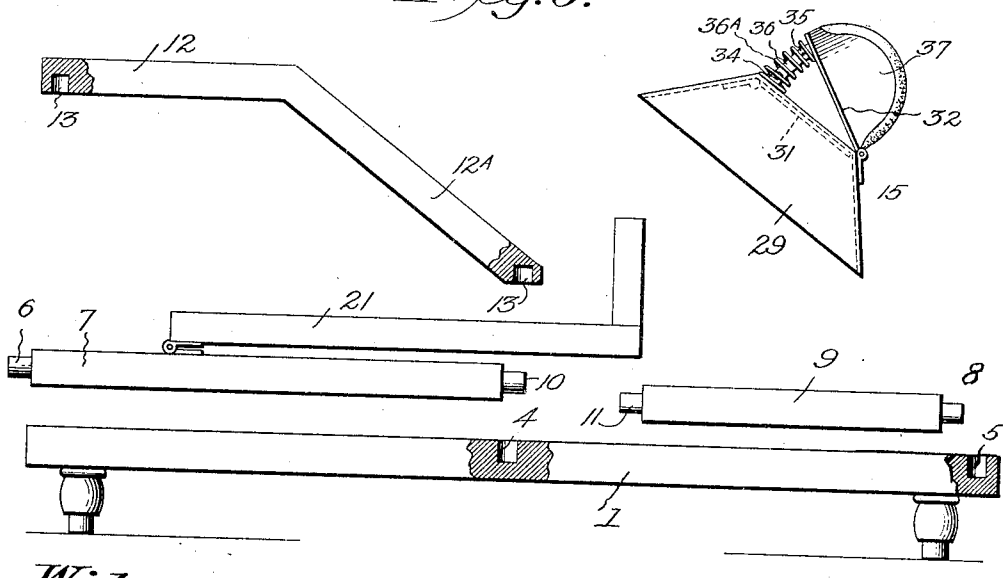


Fig. 6.



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UNITED STATES PATENT OFFICE.

EMANUEL O. KEPLER, OF DENVER, COLORADO.

DEVELOPING-CABINET FOR PHOTOGRAPHIC PURPOSES.

No. 810,418. Specification of Letters Patent. Patented Jan. 23, 1906.

Application filed April 17, 1905. Serial No. 256,009.

To all whom it may concern:

Be it known that I, EMANUEL O. KEPLER, a citizen of the United States of America, residing in the city and county of Denver and State of Colorado, have invented a new and useful Developing-Cabinet for Photographic Purposes, of which the following is a specification.

My invention relates to improvements in developing-cabinets for photographic purposes.

The objects of the invention are, first, to provide a light, portable, knockdown cabinet which may be quickly assembled or taken apart and which in either case occupies but a small amount of space; second, to provide a portable knockdown cabinet for the developing of photographic plates and cut films and for the reloading of plate-holders wherein either daylight or any character of artificial light may be employed, the artificial light when used being outside of the cabinet and in no way connected with it; third, to provide a portable knockdown cabinet which is operated from the outside and which is so arranged that the progress of developing may be watched continuously or at intervals without danger of admitting light to the interior of the cabinet; fourth, to provide a light, compact, knockdown cabinet for photographic-plate developing and for the reloading of plate-holders comprising a framework covered with a suitable light-proof material, which is provided at the sides with openings through which the hands may be inserted or withdrawn without admitting daylight and which is provided with a spring-controlled sight-opener, through which the operator may inspect the work being done in the cabinet either continuously or at intervals, the said cover being provided with a glass of the proper color which will admit light, thus enabling the operator to properly perform his work.

The invention further consists of certain details of construction, which are fully set forth in the accompanying specification and claims.

In the accompanying drawings, Figure 1 is a perspective view of the framework of the cabinet, the light-proof cover being removed. Fig. 2 is a vertical longitudinal sectional view of the cabinet as it appears when ready for use. Fig. 3 is a vertical transverse sectional view on the dotted line 3 3 of Fig. 2. Fig. 4 is a vertical transverse sectional view through the improved sight-opener, taken on line 4 4 of Fig. 5. Fig. 5 is a bottom plan view thereof, and Fig. 6 is a view showing the parts of the framework disconnected one from the other.

Referring to the accompanying drawings, the numeral 1 indicates a pair of horizontally-disposed strips which form the base of the framework of the improved cabinet. These strips are connected at their ends by strips 2 and centrally by a strip 3. The side strips are provided centrally and adjacent to one end with mortises 4 and 5, respectively, and in the mortises 4 are inserted tenons 6 upon the lower ends of posts 7, while in the mortises 5 are inserted tenons 8 upon the lower ends of posts 9. The posts 7 and 9 are formed with tenons 10 and 11, respectively, upon their upper ends, and the posts 9 are shorter than the posts 7. A rectangular frame 12 is supported by the posts 7 and 9, and this frame is provided at its four corners with mortises 13, which fit upon the tenons at the upper ends of the said posts. The four posts and the frame 12 form the framework of the forward or main portion of the cabinet. The frame 12 is so formed that its rear half is on a horizontal plane, while the forward half inclines at an angle of substantially forty-five degrees. A strip 14 extends across this frame at the junction of the horizontal and inclined portions, dividing the main frame into two smaller frames, and the inner edges of the inclined frame 12^A thus formed are rabbeted for a slight depth to receive and support an improved sight opener and closer device 15, which affords a view of the interior of the cabinet and which will hereinafter be fully described.

The side strips 1 are rabbeted on their inner edges, as shown in Fig. 3, and a pair of suitable slideways 16 are fitted in the rabbets or recesses so as to lie flush with the upper faces of the strips. The inner edges of the side strips and of the strips 2 and 3 have an inward slant or incline, and these side and end strips, together with the middle strip, form two rectangular openings, in each of which is supported a suitable tray. These trays 17 and 18 have slanting sides, as is usual, and as the sides of the openings are likewise slanted the trays will be supported, as shown in Fig. 2. Within the slideways are fitted a pair of horizontal sliding covers or lids 19 and 20, which are aranged to slide one above the other, so that either cover may

be slid to either end of the cabinet. A pair of rails 21 are hinged to the posts 7 a suitable distance above their lower ends, and these rails extend to the rear end of the cabinet and are connected by a strip 22. These rails have short uprights secured to their ends, which rest upon the side strips 1 and support the said rails, and these uprights and rails form the framework of a second chamber rear of the main chamber, which is much less in height than the main chamber to permit of a window of colored glass being placed in the rear end of the said main chamber.

The entire cabinet is inclosed by a suitable light-proof fabric 23, preferably black rubber cloth, which is fashioned to conform to the outlines of the cabinet. This cover may be secured to the cabinet by passing its lower edges under the side and end strips 1 and 2, which are provided with hooks 24, which engage openings in the edges of the cover or by any other suitable fastening device which will serve to hold the cover in place. The sides of the cover adjacent to the forward end of the cabinet are formed somewhat after the fashion of a loose sleeve, through which the hands may be passed into the cabinet. These sleeves 25 are provided at their ends with hems which inclose elastic bands 26, that draw the ends of the sleeves together, so as to normally exclude the light, and when the hands are passed through the ends of the sleeves into the cabinet the elastic bands will draw the sleeves closely around the wrists, and thus prevent the entrance of light. The length of these sleeves will permit of the free use of the hands and arms in developing the plates or reloading the plate-holders.

The portion of the cover which extends across the rear end of the main part of the cabinet supports a red-glass plate 27, through which light is admitted to the cabinet. A hole is cut in the cover a little smaller than the size of the glass plate, and around the edges of the hole are stitched or otherwise secured metal clips 28, which are bent over the edge of the plate and securely hold it in place.

The improved sight-opener 15 comprises a cap 29, which is preferably substantially of the form of a frustum of a pyramid, the top of which is provided with a pair of sight-openings 30, beneath which is hinged a shutter 31, which normally closes the openings 30. To the forward edge of the top of the cap is hinged a plate 32, having an opening 33, which registers with the openings 30 in the cap. A clip 34 is secured adjacent to the rear edge of the shutter 31 and midway of its length, and this clip extends up through an opening in the top of the cap. A similar clip 35 is secured near the upper edge of the hinged plate 32, and these clips are connected by an arm 36, the ends of which are pivoted to the clips. A coiled spring 36[A], which encircles the arm 36, is interposed between the cap and hinged plate and normally holds the upper end of the plate away from the cap, and the shutter 31, being connected to the plate by the arm 36, is thus held against the top of the cap, so as to cover the openings 30. When, however, the plate is pressed down, the arm 36 will press on the shutter and swing it out, so as to entirely uncover the openings 30 in the cap and permit an unobstructed view of the interior of the cabinet. A screen 37 is secured upon the front side of the hinged plate, and this screen is adapted to fit around the forehead and sides of the face, as in the case of the ordinary stereoscope, and a depression 38 is formed, partly in the top and partly in the forward side of the cap, in which the nose will rest. The edge of the screen and the depression are faced with a suitable padding material, which will not only cushion the pressure of the face against the screen, but will fit around the face and nose so as to prevent the entrance of light to the interior of the cabinet when the plate is pressed down by the face of the operator.

A shelf 39 may be secured to one of the posts 7 or 9, upon which an ordinary graduate may be placed.

In operation the cabinet is arranged as shown in Fig. 2, and one of the trays may be filled with water, while the other may be filled with a suitable chemical, such as thiosulfate of soda. The tray not in immediate use may be covered by its sliding lid, while the lid of the other tray is pushed back, under, or over, as the case may be, so as to be out of the way, and a tray containing developing liquid may be placed upon one of the lids, as shown by dotted lines in Fig. 2. The front portion of the light-proof cover may be unfastened at the bottom, so as to pass whatever is required into the cabinet. A rack 40 is secured to the strips 21 at the rear of the cabinet and serves to hold the plate-holders.

When everything has been arranged for developing the plates, the operator passes his hands through the sleeves 25 and presses his face against the screen 37, which will depress the plate 32 and open the shutter 31, thus affording a view of the interior of the cabinet, which is lighted by the light which comes through the red-glass plate 27. The operator may now proceed to develop the plates and during the process may remove his hands from the sleeves or his face from the hinged plate 32 without any danger of admitting light to the cabinet. After the developing is completed the plates and other objects within the cabinet may be removed by unfastening the cover at the forward end of the cabinet, as previously described.

When the cabinet is to be carried from place to place, the cover is removed and the cabinet is taken apart, as shown by Fig. 6, after which it may be packed in a suitable receptacle, so as to occupy but little space.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cabinet for the purpose described, comprising a frame, composed of horizontal side strips having slideways on their inner edges, and provided centrally and at one end with mortises, said strips being connected centrally and at the ends by cross-strips; upright posts having tenons which enter the mortises of said horizontal strips; a frame upon the top of said posts, the front portion of which inclines; a cap upon the inclined portion of the frame, having sight-openings and a shutter for normally closing said openings; a frame hinged near the lower ends of the rear posts, which extends to the ends of and rests upon the horizontal strips; sliding lids in said slideways; trays in said frame beneath said lids; and a light-proof cover for said frame, having sleeves at the sides thereof and a window of colored glass.

2. A cabinet for the purpose specified, comprising a horizontal platform, having rectangular, tray-supporting openings; and trays in said openings; sliding covers above said trays; upright posts at the center and at one end of said platform; a frame upon the top of said posts, the forward portion of which is at an incline; strips secured near the bottom of said center posts and extending to the rear end of the platform, and uprights for supporting the rear ends thereof; a light-proof cover for the frame thus formed, which conforms to the outline thereof, and thereby forms two chambers of unequal height; a colored-glass window in one end of the taller chamber; hand-receiving sleeves upon the sides of said cover, and a cap upon the inclined portion of the said top frame, having sight-openings, and a spring-controlled shutter for normally closing said openings.

3. A cabinet for the purpose described, comprising two light-proof chambers of unequal height, the larger of which is provided with hand-receiving openings in its sides, a sight-opening in its top and a colored-glass window in its end adjoining the smaller chamber, and a tray in the bottom of each chamber, and a sliding cover over each tray.

4. A cabinet for the purpose described, comprising two light-proof chambers of unequal height, the smaller of which is hinged to the larger chamber, a tray in the bottom of each chamber, and a sliding cover over each tray, and having the larger chamber of the two provided with a colored-glass window in its end adjoining the smaller chamber, and positioned above the smaller chamber, and also provided with hand-openings in its sides and with a sight-opening in its top.

In testimony whereof I affix my signature in presence of two witnesses.

EMANUEL O. KEPLER.

Witnesses:
G. SARGENT ELLIOTT,
BESSIE THOMPSON.