

L. L. CAMPBELL.
 PHOTOGRAPHIC PRINTING FRAME.
 APPLICATION FILED FEB. 18, 1913.

1,106,489.

Patented Aug. 11, 1914.

Fig. 1.

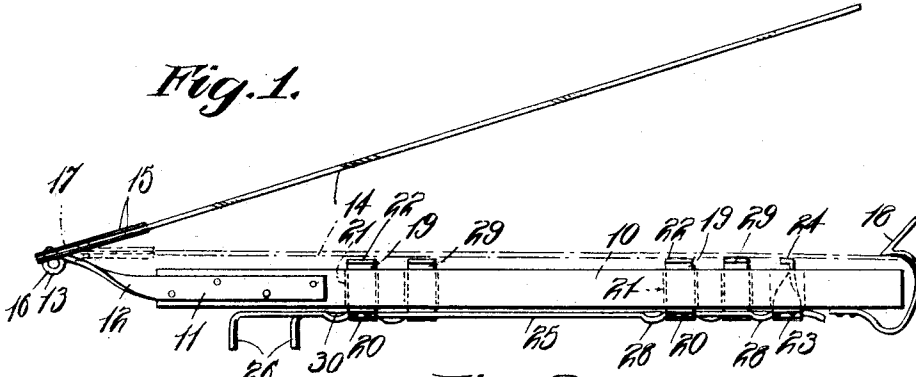


Fig. 2.

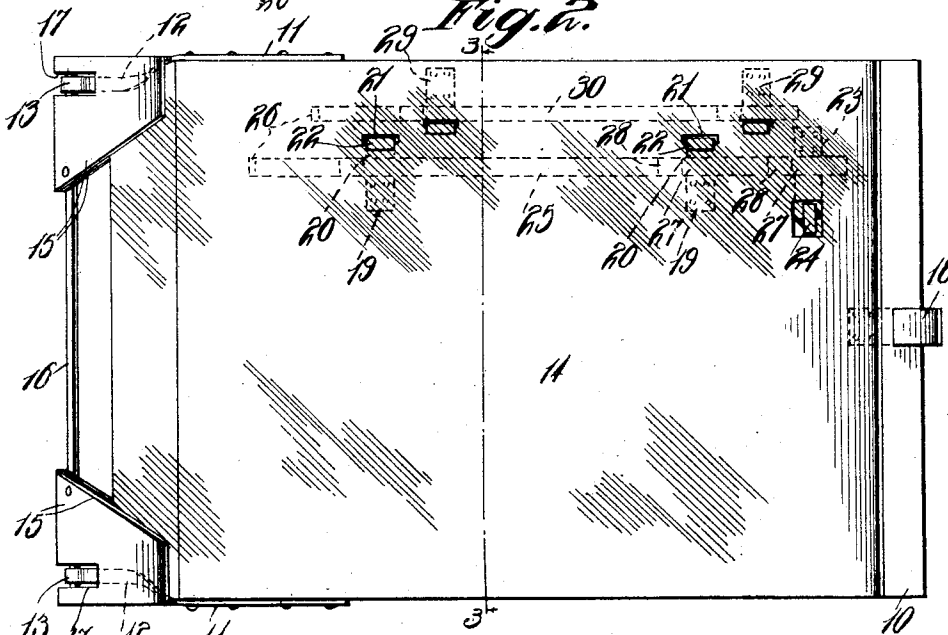


Fig. 3.

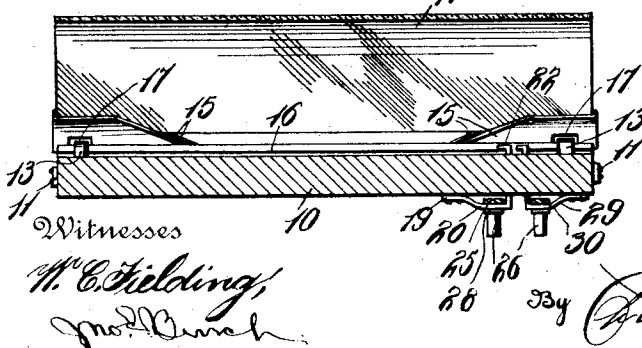
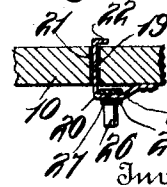


Fig. 4.



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PHOTOGRAPHIC-PRINTING FRAME.

1,106,489.

Specification of Letters Patent.

Patented Aug. 11, 1914.

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To all whom it may concern:

Be it known that I, LAYARD L. CAMPBELL, a citizen of the United States, residing at New Brighton, in the county of Richmond, State of New York, have invented certain new and useful Improvements in Photographic-Printing Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to photographic printing frames or holders for printing photographs and the like.

Particular objects of the invention reside in the provision of an improved frame or holder including a back board and a cover plate of glass hinged thereto and normally held spaced therefrom but adapted to be held toward the back board when the negative and sensitized paper are secured to the back board.

The invention further resides in the provision of novel locking means adapted to be carried by the back board or fitted to an ordinary printing frame to hold the sensitized paper and negative in different relative positions in a convenient and positive manner and also to permit the same to be readily removed, thus providing for greater ease, rapidity and accuracy in printing, owing to the fact that the work is always face up.

With the above and other objects in view, the invention resides more particularly in the peculiar combinations and arrangements of parts which will be partly illustrated as a preferred embodiment in the accompanying drawings and described in the specification, although the invention is protected for all desirable changes and uses within the scope of the invention as claimed.

Figure 1 is an edge elevation of the improved photographic printing frame with the glass plate in solid lines in an elevated position and in dotted lines in a lowered or operative position. Fig. 2 is a top plan view with the gripping elements indicated in dotted lines. Fig. 3 is a cross sectional view taken on the line 3-3 of Fig. 2. Fig. 4 is a detailed sectional view showing one of the gripping members.

The improved printing frame is shown as embodying in its preferred construction, a back board 10 of rectangular form, the same having secured to its longitudinal edges near one end a pair of spring plates 11 which

have their extremities 12 projecting rearwardly of the board. These portions 12 are twisted whereby their rear extremities are horizontally disposed and adapted to lie within the area of the longitudinal edges of the back board, the extreme ends of the plates being formed with circular bearing portions 13 which are bent upwardly. The plates 12 form springs which serve for the attachment of a glass cover plate 14 forming the face of the frame, although it is understood that this plate may be of any transparent material. At the corners of the plate 14 corresponding to the corners of the back board to which the plates 11 are secured, are attached spaced clamping plates 15 between which the glass is secured or glued, these plates 15 forming holders. The free edges of the clamping plates 15 carry a pivot 16 around which the portions 13 are engaged but extending through recesses 17 in the free edges of the clamping plates spaced from their longitudinal edges and by this attachment the cover plate is held normally in raised position but adapted to be moved toward the back plate and held by a spring catch 18. This spring catch is secured to the free edge of the back board centrally of its short axis.

In order to hold the negative and sensitized paper to the back board, gripping devices are provided. The gripping device for the sensitized paper embodies a plurality of spring clips 19 consisting of sections of spring metal secured to the bottom face of the back board, the same having downwardly inclined and offset portions 20 spaced from the bottom face of the back board and then passed vertically through slots in the same as shown at 21 while their upper ends are bent parallel to the face of the board as shown at 22 whereby the resiliency of the strips forming the grips or clips proper will permit them to move through the slots to move the portions 22 toward and away from the face of the board. These grips 19 are arranged transversely of the board but their portions 22 are arranged longitudinally to hold the upper edge of the paper therebeneath. The free edge of the paper is held beneath a clamp 23, the gripping portion 24 of which is arranged transversely of the board by twisting the metal forming the same at right angles. An operating member is provided for simultaneously moving the clips or grips 22 and 24

toward and away from the face of the back board, the same consisting of a flat rod or bar 25 having a depending or an angular gripping portion 26 at one extremity and a plurality of alternate depressions or projections 27 and 28 respectively arranged in successive relation at spaced points along the bar. Thus by shifting the bar longitudinally between the depressed portions 20 of the grips or clips and the bottom face of the back board, the depressions 27 will be brought into alinement with the grips and the latter due to their normal tendency to move upward will space the portions 22 from the face of the back board, this being the inoperative position whereby the paper may be engaged therebeneath. The paper is then gripped by shifting the bar to bring the projections to alinement with the grips and thus by exerting downward pressure thereon, draw the angular portions 22 toward the face of the board and in binding contact with the paper. It will thus be seen that the grips 19 will engage the top edge of the paper and the grip 23 will engage one end thereof to positively hold sensitized paper against movement. The negative is held in position over the sensitized paper by means of grips 29 which are constructed in a similar manner as the grips 19 but which are located near the top edge of the board and to one side of the grips 19 toward the grip 23 so that when the negative is placed therebeneath it may be held or freed by shifting the grips 29 through the instrumentality of a bar 30 provided with similar depressions and projections as the bar 25 is provided with, with the exception of those for operating the grip 23. The bar 30 is also provided with a similar gripping portion 26 whereby it may be shifted and it will be observed that the bars through the instrumentality of the alternate depressions and projections 27 and 28 are formed with substantially cam-like faces to cause the positive application of the grips.

In the operation of the device, the sensitized paper is first locked in position beneath the grips 19 and 23, face-side up, after which the negative and mask if desired, is locked in any position or angle relative to the sensitized paper by the grips 29. The glass cover plate 14 is then moved on its pivot against the action of the springs 12 and held beneath the spring catch 18. The paper and negative are thus held from displacement and exposure is then made. The advantage of this structure is that the printing may be done with greater ease, rapidity and accuracy as the work is always face upward and can be easily arranged and locked in any desired position.

I claim:—

1. A photographic printing frame embodying a back member, spring plates se-

cured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twisted substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates and means for holding said cover plate toward the back member.

2. A photographic printing frame embodying a back member, spring plates secured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twisted substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates and means for holding said cover plate toward the back member, said cover plate being held normally spaced from the back member by the spring plates.

3. A photographic printing frame embodying a back member, spring plates secured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twisted substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates, means for holding said cover plate toward the back member and gripping members carried by the back member.

4. The combination with a back member and a transparent cover plate for the same; of gripping members carried by the back member, said gripping members embodying angular clips anchored to the back member and movable through the same, said clips having gripping portions overlying the face of the back member and means for moving said gripping portions toward and away from the face of the back member.

5. The combination with a back member and a transparent cover plate for the same; of gripping members carried by the back member, said gripping members embodying angular clips anchored to the back member and movable through the same, said clips having gripping portions overlying the face of the back member, said clips having portions spaced from the back member and bars engaged between said portions and the back member, said bars having cam-like faces to alternately engage between the clips and the back member whereby the gripping portions are similarly moved toward or spaced from the face of the back member.

6. The combination with a back member

and a transparent cover plate for the same;
of gripping members carried by the back
member, said gripping members embodying
angular clips anchored to the back member
5 and movable through the same, said clips
having gripping portions overlying the face
of the back member, said clips having por-
tions spaced from the back member, and bars
engaged between said portions and the back
10 member, said bars having alternate depres-
sions and projections to alternately engage

between the clips and the back member
whereby the gripping portions are similarly
moved toward or spaced from the face of the
back member.

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

LAYARD L. CAMPBELL.

Witnesses:

NATHAN RAPPAPORT,
P. C. MEYERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."