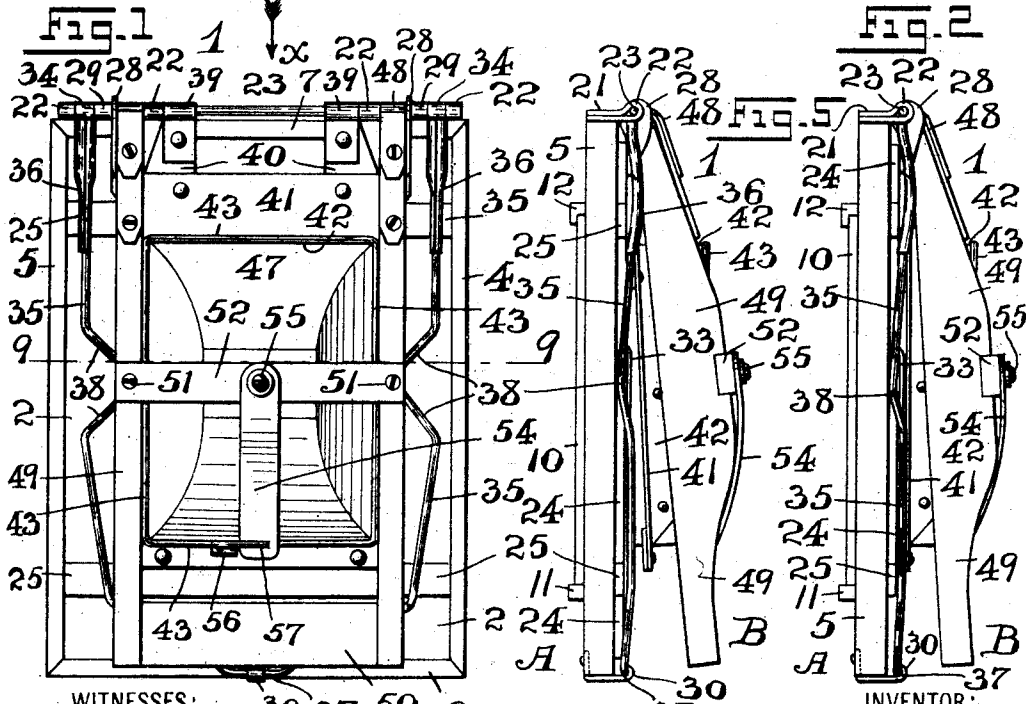
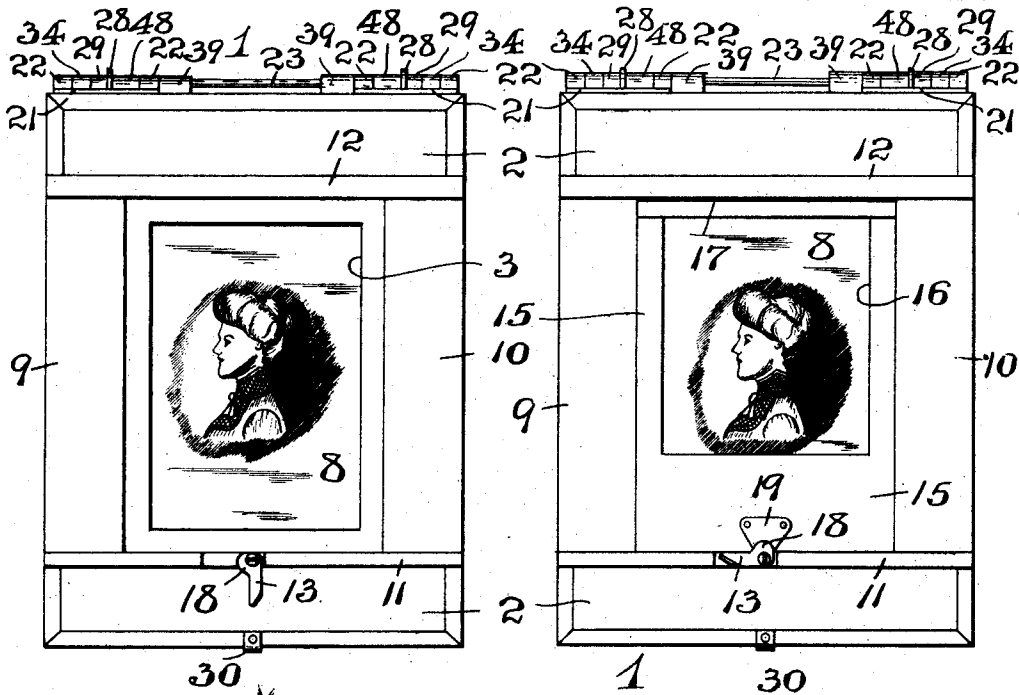


L. VAN HIRTUM.
 PHOTOGRAPHIC PRINTING FRAME.
 APPLICATION FILED DEC. 9, 1909.

977,525.

Patented Dec. 6, 1910.

3 SHEETS—SHEET 1.



WITNESSES:
Eudk H. W. Fraentzel
Anna H. Alter

Fig. 3

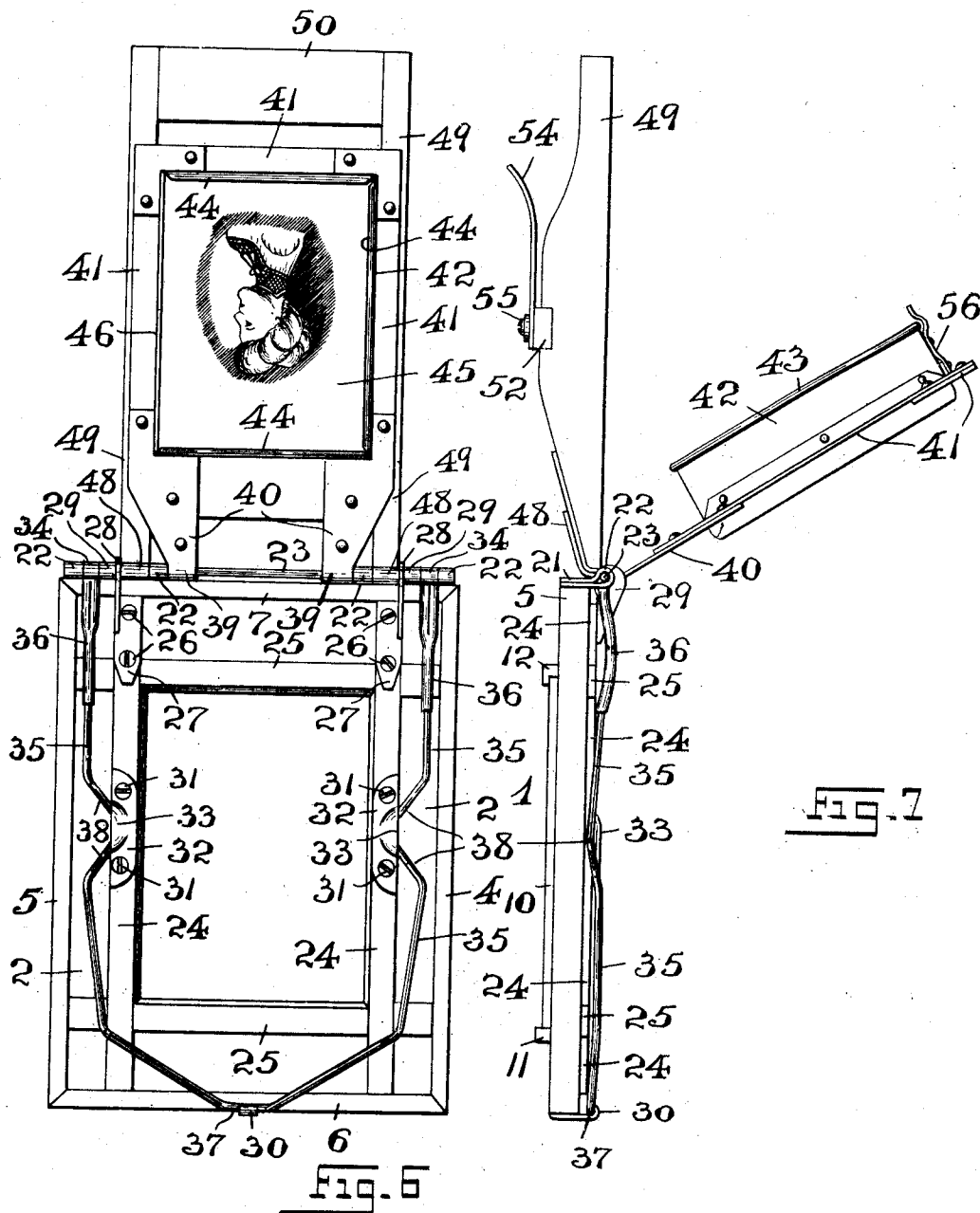
Fig. 4
 BY *Leo Van Hirtum*
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 ATTORNEYS

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3 SHEETS—SHEET 2.



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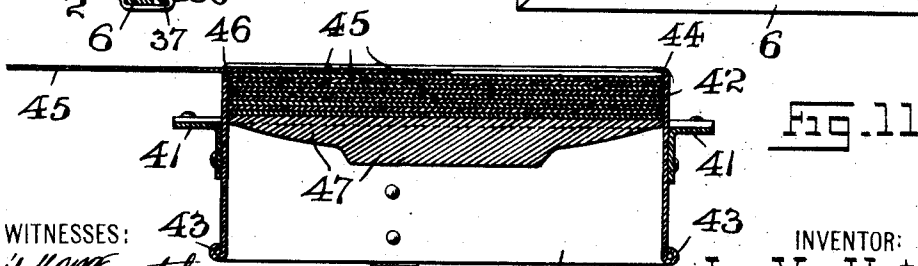
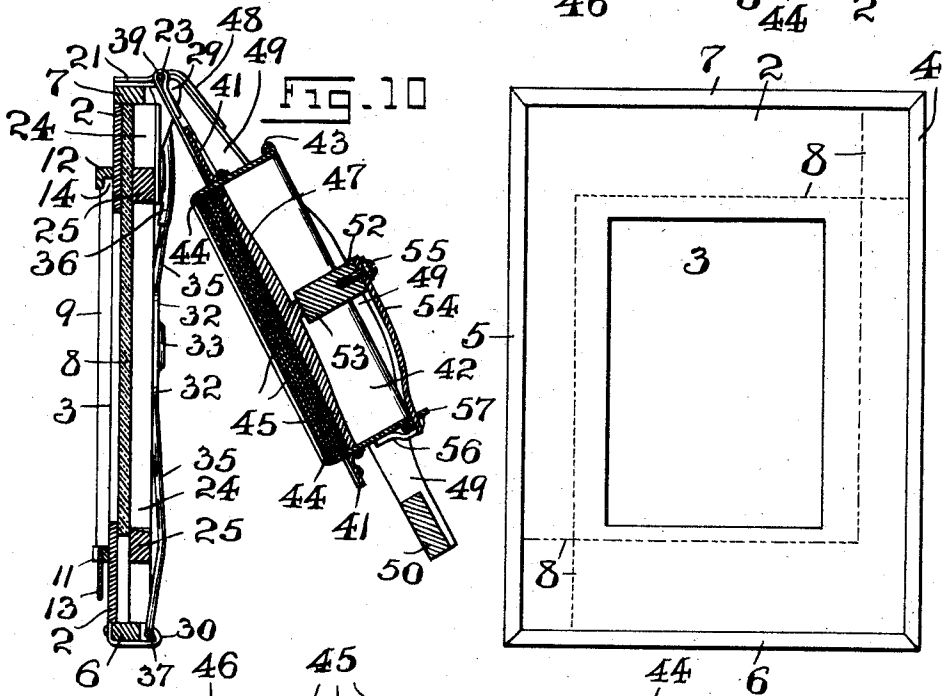
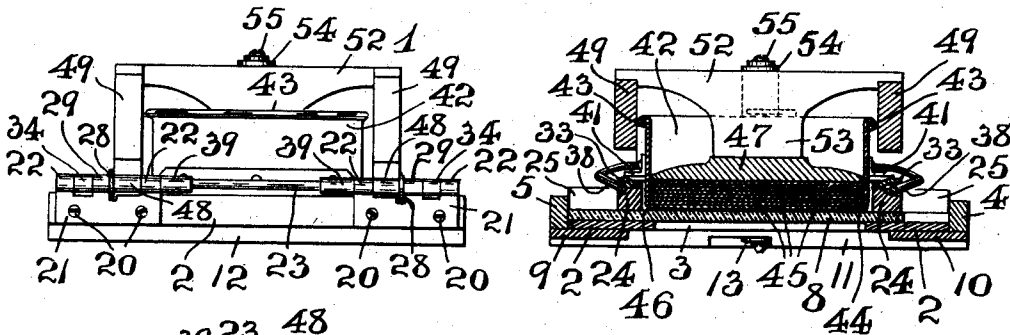
977,525.

Patented Dec. 6, 1910.

3 SHEETS—SHEET 3.

Fig. 8

Fig. 9



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 ATTORNEYS

UNITED STATES PATENT OFFICE.

LEO VAN HIRTUM, OF NEWARK, NEW JERSEY.

PHOTOGRAPHIC-PRINTING FRAME.

977,525.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed December 9, 1909. Serial No. 532,188.

To all whom it may concern:

Be it known that I, LEO VAN HIRTUM, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention has reference, generally, to improvements in printing frames for photographers' and other similar uses; and, the present invention relates, more particularly, to a novel printing frame of the general character hereinafter more particularly set forth, and which is especially adapted for use in the rapid development of photographic pictures upon the backs of postal cards, and in fact upon cards of the various kinds.

The present invention, therefore, has for its principal object to provide a simply constructed and easily operated printing frame which is especially adapted for use in the rapid development of photographic pictures upon the backs of postal cards, and the like; and, the invention has for its further object to provide in connection with a printing frame, a postal-card receiver and holder in which any desired number of such cards, which are to be printed, are placed or stacked one upon the other, so that the sensitized surface of the uppermost card can be exposed to the light, and after said exposure easily removed from the said receiver and holder and the frame, for the development of the picture, and whereby the next card moves into place so that its sensitized surface can be exposed to the light, and the card readily removed for development.

Other objects of this invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the present invention.

With the various objects of this invention in view, the said invention consists, primarily, in the novel printing frame hereinafter set forth; and, the invention consists, furthermore, in the novel arrangements and

combinations of the various devices and parts, as well as in the details of the construction of the said parts, all of which will be more fully described in the following specification and then finally embodied in the clauses of the claims which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a front face view of a printing frame showing one embodiment of the principles of the present invention; and Fig. 2 is a similar view of the same frame, with the exposing opening in the front of the frame provided with an auxiliary frame arranged in said opening for reducing the said opening. Fig. 3 is a rear face view of the frame; Fig. 4 is a side view of the frame, showing the hinged members of the frame in their normal initial positions; and Fig. 5 is a similar view of the same parts, showing the hinged members of the frame in their compressed relations while exposing the sensitized surface of the card to the light. Fig. 6 is a face view of the various hinged members or elements of the printing frame, showing the hinged members which carry the postal-card receiver or holder in their opened relation; and Fig. 7 is a side elevation of the several hinged members or elements represented in said Fig. 6, showing the hinged members or elements in their variously separated relations. Fig. 8 is an end view of the printing frame, looking in the direction of the arrow α in said Fig. 3; and Fig. 9 is a transverse section taken on line 9—9 in said Fig. 3. Fig. 10 is a central longitudinal vertical section of the hinged members or elements of the printing frame, said view showing the hinged members or elements in their separated relations. Fig. 11 is an inner face view of the main body-portion of the printing frame provided with the exposing opening; and Fig. 12 is a transverse vertical section made on an enlarged scale, said section showing in position therein a number of sensitized postal-cards, the upper card being indicated in the position about to be removed from the card-receiver and holder.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring now to the said drawings, the

reference-character 1 indicates one embodiment of a complete printing apparatus made according to the principles of the present invention, the said apparatus comprising a main frame-like body 2, formed with a suitably arranged and suitably shaped exposing opening, as 3, and surrounded upon its marginal edges with rearwardly projecting side-pieces 4 and 5, and end-pieces 6 and 7, all arranged to provide a receiving frame in which may be placed the negative or plate 8, upon which the picture has been taken and has been developed, said negative or plate 8 being arranged over the said opening 3 for the purpose of printing, as will be clearly understood. Upon its front face, so as to suitably surround said opening 3, substantially in the manner shown in said Figs. 1 and 2 of the drawings, are raised portions 9, 10, 11 and 12, the portion 11 being provided with a suitably formed pivoted catch 13, and the portion 12 being formed with an undercut or receiving part 14, clearly shown in Fig. 10 of the drawings. The purpose of said raised portions 9, 10, 11 and 12 is to provide upon the front face of the said main frame-like body 2, a depression in which may be arranged an auxiliary frame 15 formed with an exposing opening 16 which may be of any suitable shape, and which is smaller than the opening 3 in said body 2. To secure said auxiliary frame 15 in said depression, its marginal edge-portion 17 is slipped into the undercut or receiving part 14, the pivoted catch 13, which is formed with a holding or retaining portion 18, being turned into the position indicated in Fig. 2 of the drawings, so that its holding or retaining portion 18 is moved into holding engagement with the upper surface of a plate 19 with which said auxiliary frame 15 is provided, substantially in the manner illustrated in said Fig. 2, and whereby the said auxiliary frame 15 is held in its operative position in the recessed front of the main frame-like body 2, so as to reduce the exposing opening, as will be clearly evident. As shown, the said main frame-like body 2 has suitably secured upon one of its edge-portions, by means of screws 20, or other suitable fastening devices, suitably formed hinge-plates 21, each plate being provided with suitably disposed pintle-receiving ears or lugs 22, for the reception and mounting therein of the pintle or rod 23, which extends preferably across the back edge-portion of the body 2, substantially in the manner shown in the several figures of the drawings.

Removably disposed within the negative or plate-receiving space of the said main frame-like body 2 is a negative or plate-holding device, consisting, essentially, and as more clearly illustrated in Fig. 6 of the drawings, of a pair of longitudinally extending bars 24, and a pair of laterally extending cross-bars 25, said bars 24 and 25 being suitably secured together near their respective end-portions, so as to form a plate-holder of substantially the shape shown in the drawings. Suitably secured to one of the end-portions of the longitudinally extending bars 24, by means of screws 26, or other suitable fastening means, are hinge-plates 27, each plate 27 being formed with an arm 28 having a pintle-receiving portion, as 29, arranged upon the previously mentioned pintle or rod 23, and whereby the negative or plate-holding device is pivotally connected with the said pintle or rod 23, so that it can be lifted out of or arranged in the negative or plate-receiving space in the main frame-like body 2 in a hinge-like manner. That the said negative or plate-holding device can be suitably held or retained in its pressing engagement with the negative or plate 8, the said main frame-like body 2 is provided with a suitably constructed spring-catch, as 30, and each longitudinally extending bar or rod 24 of the negative or plate-holding device has suitably secured thereto, by means of screws 31 or other suitable fastening means, a plate 32, each plate being provided with a suitably formed receiving and holding portion, as 33, substantially as shown. Pivotally connected with the pintle or rod 23, by means of pintle-receiving ears or lugs 34, are the longitudinally extending arms 35 of a clamping or holding device which is made, preferably, from spring-wire. The said pintle-receiving ears or lugs 34 may be connected with said arms 35 in any suitable manner, in this case, by means of tubular members 36, into which the end-portions of said arms 35 are fitted, and said members 36 being securely clamped upon the said end-portions of the arms 35. The said arms 35 are connected by means of a laterally extending connecting portion 37, adapted to be sprung or forced into separably holding engagement with the previously mentioned spring-catch 30, and each arm 35 being formed with a laterally and inwardly projecting holding or engaging portion 38. The spring-like clamping or retaining device thus provided, in addition to being pivotally connected with the pintle or rod 23, is by means of these holding or engaging portions 38, which are sprung into the receiving and holding portions 33 of the plates 32, also securely and still separably connected with the negative or plate-holding device which is composed of the bars 24 and 25. Thus, when a negative or plate 8 has been placed in the receiving portion in the back of the main frame-like body 2, and when the said negative or plate holding device and the spring-like holding or clamping device are lowered, the connecting portion 37 is sprung beneath the catching portion

or nosing of the spring-catch 30, so that the said spring-like holding or clamping device will forcibly press the said negative or plate holding or clamping device upon the back of the said negative or plate 8, whereby the latter is securely retained in its fixed printing position in the main frame-like body 2, as will be clearly understood.

Pivotally connected with the said pintle or rod 23, by means of suitable pintle-receiving ears or lugs 39 are suitable arms 40, said arms 40 carrying a frame-like member 41 upon which is suitably mounted an open card-receiver and holder 42, substantially as illustrated in the several figures of the drawings. The said card-receiver or holder 42 has one of its open portions surrounded by a marginal bead 43, and connected with one of the longitudinal marginal edge-portions and with the two laterally extending marginal edge-portions, which surround the other open portion of said holder and receiver 42, are the slightly inwardly projecting-retaining shoulders 44, as clearly shown in Figs. 6, 10 and 12 of the drawings, so as to hold a suitable number of cards 45 within the receiver and holder 42, and providing a withdrawing or slipping-out space 46, at one side-edge of the said card-receiver and holder 42, substantially as illustrated in Figs. 6 and 12 of the drawings, whereby, after the sensitized surface of the uppermost card has been exposed to the light, it can be removed from the slipping-out space 46 at the edge of the holder 42, to permit the next succeeding card to move into position for exposing its sensitized surface to the light, substantially in the manner and for the purposes to be presently more fully set forth. In order that the pack or stack of cards 45 will be properly retained within the said receiver and holder 42, there is loosely arranged within said receiver and holder a presser-plate 47, and suitably hinged or pivoted upon the pintle or rod 23, by means of suitably formed hinges 48, is an auxiliary clamping frame. This latter clamping frame consists, essentially, of a pair of longitudinally extending arms or bars 49, and a front cross-bar or member 50, said arms or bars 49 being preferably of the configuration shown more particularly in Figs. 3, 4 and 5 of the drawings. Suitably secured to said arms or bars 49, by means of screws 51, or other suitable fastening means, is a laterally extending presser-bar 52 which is formed with a downwardly projecting portion 53 which extends into the said card-receiver and holder, and can be made to bear directly upon the said presser-plate 47, by means of a spring-plate or arm 54 which is pivoted at its one end, by means of a pivot-post or screw 55 to said laterally extending cross or presser-bar 52, and said spring-plate or arm 54 is adapted to be brought into

clamping and holding engagement with the retaining arm or projection 57 of a catch-plate 56 which is secured to the front edge portion of the card-receiver and holder 42; and, thereby the lower surface-portions of the said longitudinally extending arms or bars 49 are brought into forcible bearing engagement with the longitudinal side-pieces of the frame-like member 41, as clearly represented in Fig. 9 of the drawings.

From the above description and from an inspection of the several figures of the drawings, it will be clearly evident, that while the device for securing the negative or plate 8 in place, and the clamping device used in connection therewith, as well as the card-receiving and holding device, and the clamping frame to be used in connection therewith, are all hinged or pivotally connected with the pintle or rod 23 of the main frame-like body 2, each has an independent pivotal movement; but, it will also be seen, that the device for securing the negative or plate 8 in place, and the pivoted clamping device used in connection may be operatively connected, so that they will receive a combined pivotal movement, and that the said card-receiving and holding device and the clamping frame to be used in connection therewith may also be operatively connected, so that they will receive a combined pivotal movement. Having in this manner arranged all of said devices and parts in their assembled relations, the printing frame is now ready for printing, that is for the exposure of the sensitized surface of the uppermost card to the light. In using the device, during such exposure, the devices and parts, which are normally in the positions indicated in Fig. 4, are brought into their closed or contacting relation shown in Fig. 5, by the operator taking hold of the device at the points A and B in said Figs. 4 and 5, and, by squeezing the parts together into the positions shown in said Fig. 5, bringing the sensitive surface of the uppermost card directly upon the back of the negative 8 for printing, as will be clearly evident.

The device, after having been placed by the operator under the light, so that the light-rays will strike upon the face of the negative 8, can be separated in the manner indicated more particularly in Figs. 6 and 10 of the drawings, to enable the exposed and uppermost card to be slipped from the card-receiver and holder, in the manner herein-above mentioned, and to bring the sensitized surface of the next succeeding card automatically into its exposed relation, so as to be placed directly upon the back of the negative or plate 8 for exposure, in the same manner as previously set forth. After all the cards have been exposed and removed from the card-receiver and holder, the card-receiver and holder is separated from its

hinged or pivoted clamping frame in the manner illustrated in Fig. 7 of the drawings, and the presser-plate 47 removed, so as to arrange another pile or stack of cards in said card-receiver or holder, whereupon the several devices and parts can be brought into their variously engaging relations in the manner illustrated in the drawings, and described in the foregoing specification for successively printing upon the sensitized surfaces of the cards.

In the production of the negatives, it very often happens that the picture which is produced upon the plate is not correctly or perfectly centered upon the plate. With the form of frame-like body 2 made as in the present construction and with the herein described clamping device used in connection therewith, it is possible to perfectly center that part of the negative which is to be reproduced upon the card directly back of the exposing opening in said body 2, the negative being capable of both lateral and vertical adjustment within the negative-receiving recess of the said main body 2, as clearly indicated by the dotted lines shown in Fig. 11 of the drawings, which represent two of such adjusted positions of the negatives. This form of frame-like body 2 also permits, within a certain range, the use in connection with its exposing opening, of plates or negatives of different sizes.

Of course, I am aware that changes may be made in the arrangements and combinations of the various devices and parts, as well as in the details of the construction of the same, without departing from the scope of my present invention as set forth in the foregoing specification, and as defined in the claims which are appended to the specification. Hence, I do not limit my present invention to the exact arrangements and combinations of the devices and parts as described in the foregoing specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

I claim:—

1. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder being adapted to receive a card having a sensitized face, and a clamping means also connected with the back of said frame-like body for forcing said card-receiver and holder, and the sensi-

tized surface of the card against the back of the negative, substantially as and for the purposes set forth.

2. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and open bottom and being adapted to receive a stack of cards, each card having a sensitized face, and means on three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, substantially as and for the purposes set forth.

3. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder, having an open top and open bottom and being adapted to receive a stack of cards, each card having a sensitized face, means on the three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, and a clamping means also connected with the back of said frame-like body for forcing said card-receiver and holder, and the sensitized surface of the uppermost card therein against the back of the negative, substantially as and for the purposes set forth.

4. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved

against a negative in said negative holding device, said receiver and holder having an open top and open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, substantially as and for the purposes set forth.

5. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative holding device in said space, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, and a clamping means also connected with the back of said frame-like body for forcing said card-receiver and holder, and the sensitized surface of the uppermost card therein against the back of the negative, substantially as and for the purposes set forth.

6. In a photographic printing frame, a frame-like main body provided with an exposing opening, said main body being narrower one way than the other and being provided in the back with a negative-receiving space, a negative-holding device in said space, a pintle mounted on and extending along one of the narrower edge-portions of said frame-like body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder, said receiver and holder being adapted to receive a card having a sensitized face, a means of pivotal connection between said card-receiver and holder and said pintle, a clamping means for forcing said card receiver and

holder, and the sensitized surface of the card against the back of the negative, and a means of pivotal connection between said clamping means and said pintle, substantially as and for the purposes set forth.

7. In a photographic printing frame, a frame-like main body provided with an exposing opening, said main body being narrower one way than the other and being provided in the back with a negative-receiving space, a negative-holding device in said space, a pintle mounted on and extending along one of the narrower edge-portions of said frame-like body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, and means on three sides of the open-bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, substantially as and for the purposes set forth.

8. In a photographic printing frame, a frame-like main body provided with an exposing opening, said main body being narrower one way than the other and being provided in the back with a negative-receiving space, a negative-holding device in said space, a pintle mounted on and extending along one of the narrower edge-portions of said frame-like body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, means on three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, a clamping means for forcing said card-receiver and holder, and

the sensitized surface of the uppermost card therein against the back of the negative, and a means of pivotal connection between said clamping means and said pintle, substantially as and for the purposes set forth.

9. In a photographic printing frame, a frame-like main body provided with an exposing opening, said main body being narrower one way than the other and being provided in the back with a negative-receiving space, a negative-holding device in said space, a pintle mounted on and extending along one of the narrower edge-portions of said frame-like body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, substantially as and for the purposes set forth.

10. In a photographic printing frame, a frame-like main body provided with an exposing opening, said main body being narrower one way than the other and being provided in the back with a negative-receiving space, a negative-holding device in said space, a pintle mounted on and extending along one of the narrower edge-portions of said frame-like body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with

a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, and a clamping means for forcing said card-receiver and holder, and the sensitized surface of the uppermost card therein against the back of the negative, substantially as and for the purposes set forth.

11. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder, said receiver and holder being adapted to receive a card having a sensitized face, a means of pivotal connection between said card-receiver and holder and said pintle, a clamping means for forcing said card-receiver and holder, and the sensitized surface of the card against the back of the negative, and a means of pivotal connection between said clamping means and said pintle, substantially as and for the purposes set forth.

12. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, and means on three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the receiver and holder, substantially as and for the purposes set forth.

13. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being

provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, means on three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the receiver and holder. a clamping means also connected with the back of said frame-like body for forcing said card-receiver and holder, and the sensitized surface of the uppermost card therein against the back of the negative, and a means of pivotal connection between said clamping means and said pintle, substantially as and for the purposes set forth.

14. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, substantially as and for the purposes set forth.

15. In a photographic printing frame, a

frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, a means of pivotal connection between said holding device and said pintle, a spring-like clamping means adapted to be brought into engagement with said negative-holding device, for clamping the negative in place, a means of pivotal connection between said clamping means and said pintle, a card-receiver and holder movably connected with the back of said frame-like body and adapted to be moved against a negative in said negative holding device, said receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of the said receiver and holder, a clamping means also connected with the back of said frame-like body for forcing said card-receiver and holder, and the sensitized surface of the uppermost card therein against the back of the negative, and a means of pivotal connection between said clamping means and said pintle, substantially as and for the purposes set forth.

16. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, plates secured to said device, said plates being formed with receiving and holding portions, and a spring-like clamping means pivotally connected with said main body, for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, engaging portions connected with said arms, said engaging portions being adapted to be sprung into holding engagement with the receiving and holding portions of the negative-holding device, and means upon said main body with which said laterally extending connecting portion of the clamping means is adapted to be brought into separable holding engagement, substantially as and for the purposes set forth.

17. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, a negative-holding device in said space, plates secured to said device, said

plates being formed with receiving and holding portions, and a spring-like clamping means pivotally connected with said main body, for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, engaging portions connected with said arms, said engaging portions being adapted to be sprung into holding engagement with the receiving and holding portions of the negative-holding device, and a spring-catch upon said main body and with which said laterally extending connecting portion of the clamping means is adapted to be brought into separable holding engagement, substantially as and for the purposes set forth.

18. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, plates secured to said device, said plates being formed with receiving and holding portions, and a spring-like clamping means pivotally connected with said pintle for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, engaging portions connected with said arms, said engaging portions being adapted to be sprung into holding engagement with the receiving and holding portions of the negative-holding device, and means upon said main body and with which said laterally extending connecting portion of the clamping means is adapted to be brought into separable holding engagement, substantially as and for the purposes set forth.

19. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of said main body, plates secured to said device, said plates being formed with receiving and holding portions, and a spring-like clamping means pivotally connected with said pintle for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, engaging portions connected with said arms, said engaging portions being adapted to be sprung into holding engagement with the receiving and holding portions of the negative-holding device, and a spring-catch upon said main body and with which said laterally extending connecting portion of the clamping means is adapted to be brought into sep-

arable holding engagement, substantially as and for the purposes set forth.

20. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of the main body, said device consisting of longitudinally extending bars, and laterally extending connecting bars, hinge-plates secured to said longitudinally extending bars and pivotally mounted upon said pintle, a second set of plates secured to said longitudinally extending bars and formed with receiving and holding portions, and a spring-like clamping means for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, hinge-plates connected with said arms and pivotally mounted upon said pintle, engaging portions also connected with said arms, said engaging-portsions being adapted to be sprung into holding engagement with the receiving and holding portions of the said longitudinally extending bars of the negative-holding device, and means upon said main body with which said laterally extending portion of the clamping means is adapted to be brought into separable holding engagement, substantially as and for the purposes set forth.

21. In a photographic printing frame, a frame-like main-body provided with an exposing opening and said main body being provided in the back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, a negative-holding device in the negative-receiving space of the main body, said device consisting of longitudinally extending bars and laterally extending connecting bars, hinge-plates secured to said longitudinally extending bars and pivotally mounted upon said pintle, a second set of plates secured to said longitudinally extending bars and formed with receiving and holding portions, and a spring-like clamping means for clamping the negative in place, and comprising longitudinally extending arms, a laterally extending connecting portion, hinge-plates connected with said arms and pivotally mounted upon said pintle, engaging portions also connected with said arms, said engaging portions being adapted to be sprung into holding engagement with the receiving and holding portions of the said longitudinally extending bars of the negative-holding device, and a spring-catch upon said main body and with which said laterally extending connecting portion of the clamping means is adapt-

ed to be brought into separable holding engagement, substantially as and for the purposes set forth.

22. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, a card-receiver and holder movably connected with the back of said frame-like body, said card-receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, means on the three side of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, a presser-plate within said receiver and holder, a catch connected with said receiver and holder, a frame-like clamping means pivotally connected with said main body, a presser-bar connected with said clamping means for engagement with said pressure-plate, and a spring-plate pivotally connected with said presser-bar and adapted to be brought into removable holding engagement with said catch, substantially as and for the purposes set forth.

23. In a photographic printing frame, a frame-like main-body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, a card-receiver and holder movably connected with the back of said frame-like body, said card-receiver and holder having an open top and an open-bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of said receiver and holder, substantially as and for the purposes set forth.

24. In a photographic printing frame, a frame-like main-body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, a card-receiver and holder movably connected with the back of said frame-like body, said card-receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the upper-

most card from the side of said receiver and holder, a presser-plate within said receiver and holder, a catch connected with said receiver and holder, a frame-like clamping means pivotally connected with said main body, a presser-bar connected with said clamping means for engagement with said presser-plate, and a spring-plate pivotally connected with said presser-bar and adapted to be brought into removable holding engagement with said catch, substantially as and for the purposes set forth.

25. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, pintle-receiving ears mounted upon said pintle, arms extending from said ears, a frame-like member carried by said arms, a card-receiver and holder mounted upon said frame-like member, said card-receiver and holder having an open top and an open bottom, and being adapted to receive a stack of cards, each card having a sensitized face, and means on three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, substantially as and for the purposes set forth.

26. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, pintle-receiving ears mounted upon said pintle, arms extending from said ears, a frame-like member carried by said arms, a card-receiver and holder mounted upon said frame-like member, said card-receiver and holder having an open top and an open bottom and being adapted to receive a stack of cards, each card having a sensitized face, means on the three sides of the open bottom of said receiver and holder for retaining the cards in position, and the fourth side of the open bottom being made with a slip-out space for sliding the uppermost card from the said receiver and holder, a presser-plate within said receiver and holder, a catch connected with said receiver and holder, a frame-like clamping means, hinge-plates secured to said clamping means, said hinge-plates being pivotally mounted upon said pintle, a presser-bar connected with said clamping means for engagement with said presser-plate, and a spring-plate pivotally connected with said presser-bar and adapted to be brought into removable

holding engagement with said catch, substantially as and for the purposes set forth.

27. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, pintle-receiving ears mounted upon said pintle, arms extending from said ears, a frame-like member carried by said arms, a card-receiver and holder mounted upon said frame-like member, said card-receiver and holder having an open top and an open bottom, and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of said receiver and holder, substantially as and for the purposes set forth.

28. In a photographic printing frame, a frame-like main body provided with an exposing opening and said main body being provided in its back with a negative-receiving space, pintle-receiving ears secured at one edge of said main body, a pintle mounted in said ears, pintle-receiving ears mounted upon said pintle, arms extending from said ears, a frame-like member carried by

said arms, a card-receiver and holder mounted upon said frame-like member, said card-receiver and holder having an open top and an open bottom, and being adapted to receive a stack of cards, each card having a sensitized face, said card-receiver and holder being surrounded on three sides of its open bottom with inwardly projecting shoulders for retaining the cards within said receiver and holder, and formed at the fourth side of said open bottom with a slipping-out space for slipping the uppermost card from the side of said receiver and holder, a presser-plate within said receiver and holder, a catch connected with said receiver and holder, a frame-like clamping means, hinge-plates secured to said clamping means, said hinge-plates being pivotally mounted upon said pintle, a presser-bar connected with said clamping means for engagement with said presser-plate, and a spring-plate pivotally connected with said presser-bar and adapted to be brought into removable holding engagement with said catch, substantially as and for the purposes set forth.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 7th day of December 1909.

LEO VAN HIRTUM.

Witnesses:

FREDK. C. FRAENTZEL,
FREDK. H. W. FRAENTZEL.