

L. D. GAGNÉ.
PRINTING FRAME.

APPLICATION FILED MAR. 27, 1909.

935,486.

Patented Sept. 28, 1909.

Fig. 1.

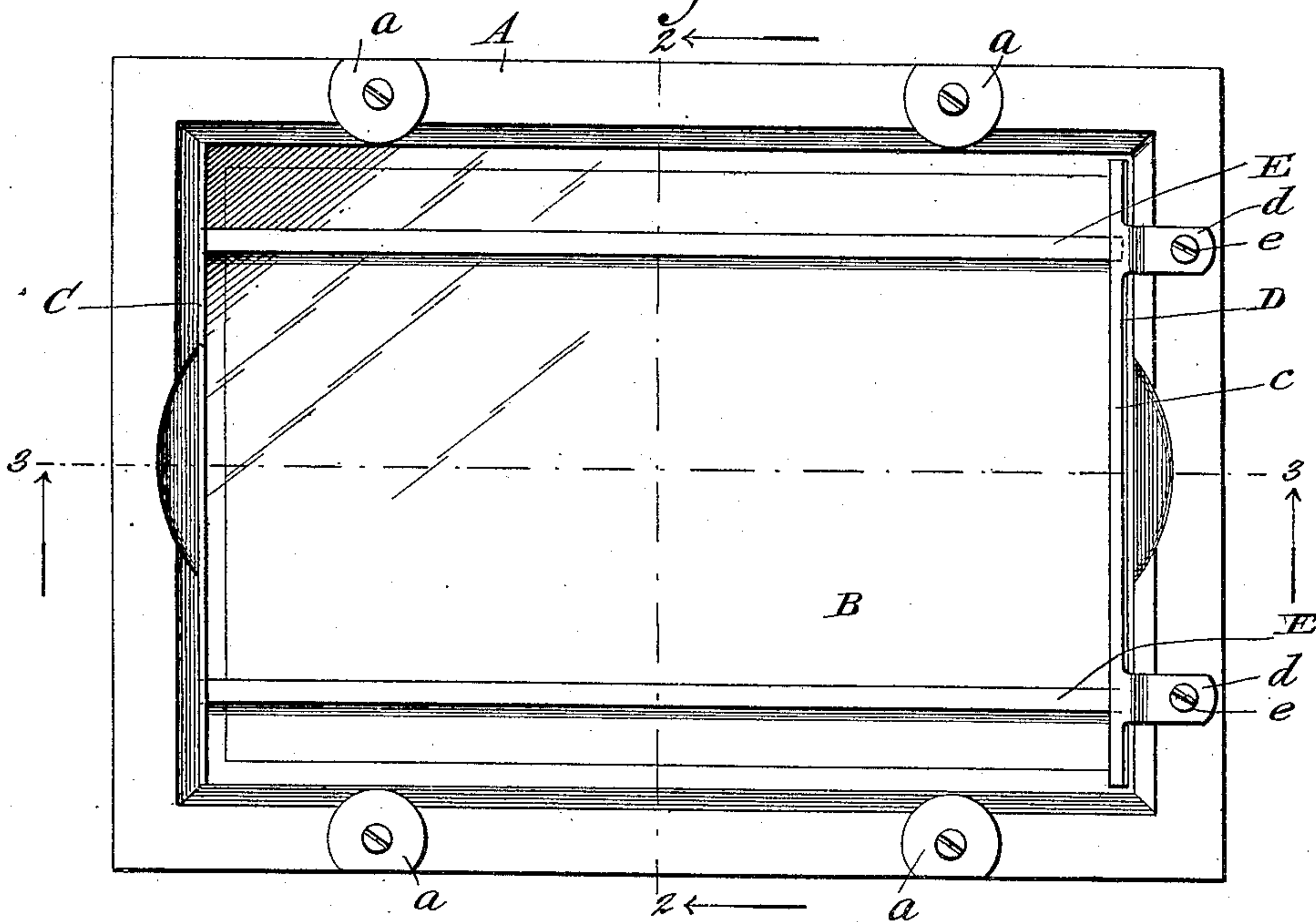


Fig. 2.

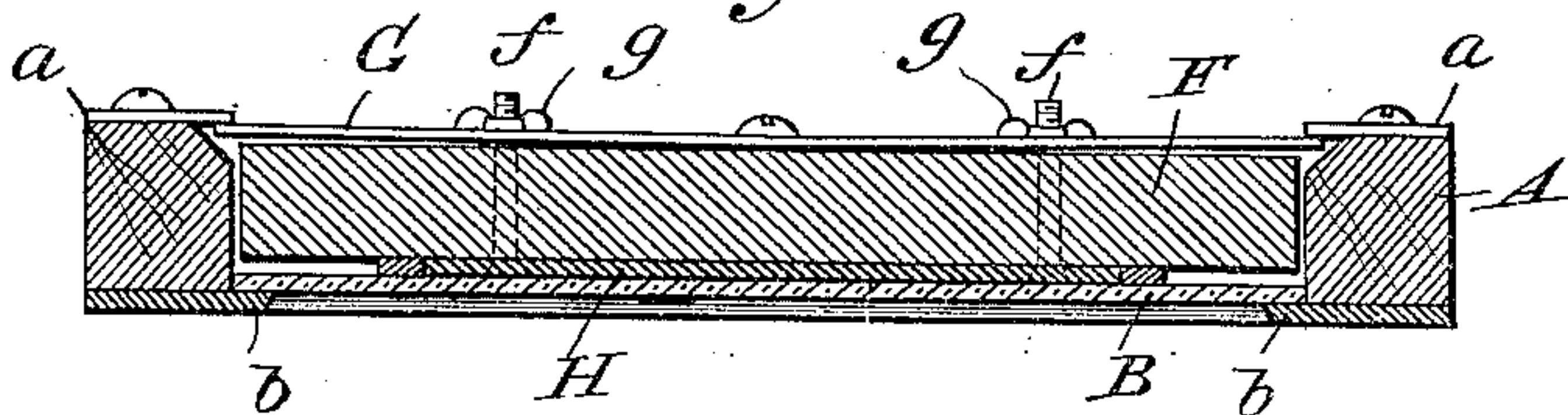


Fig. 3.

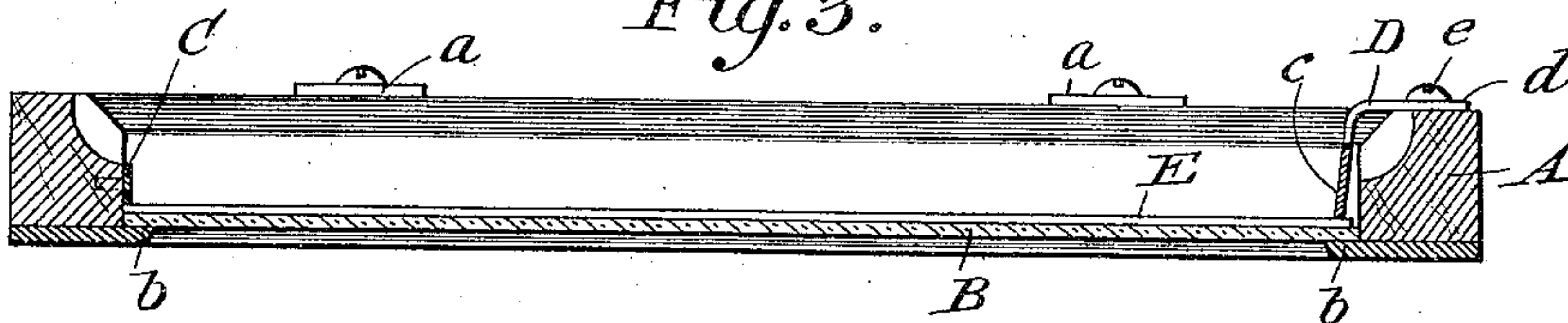


Fig. 4.

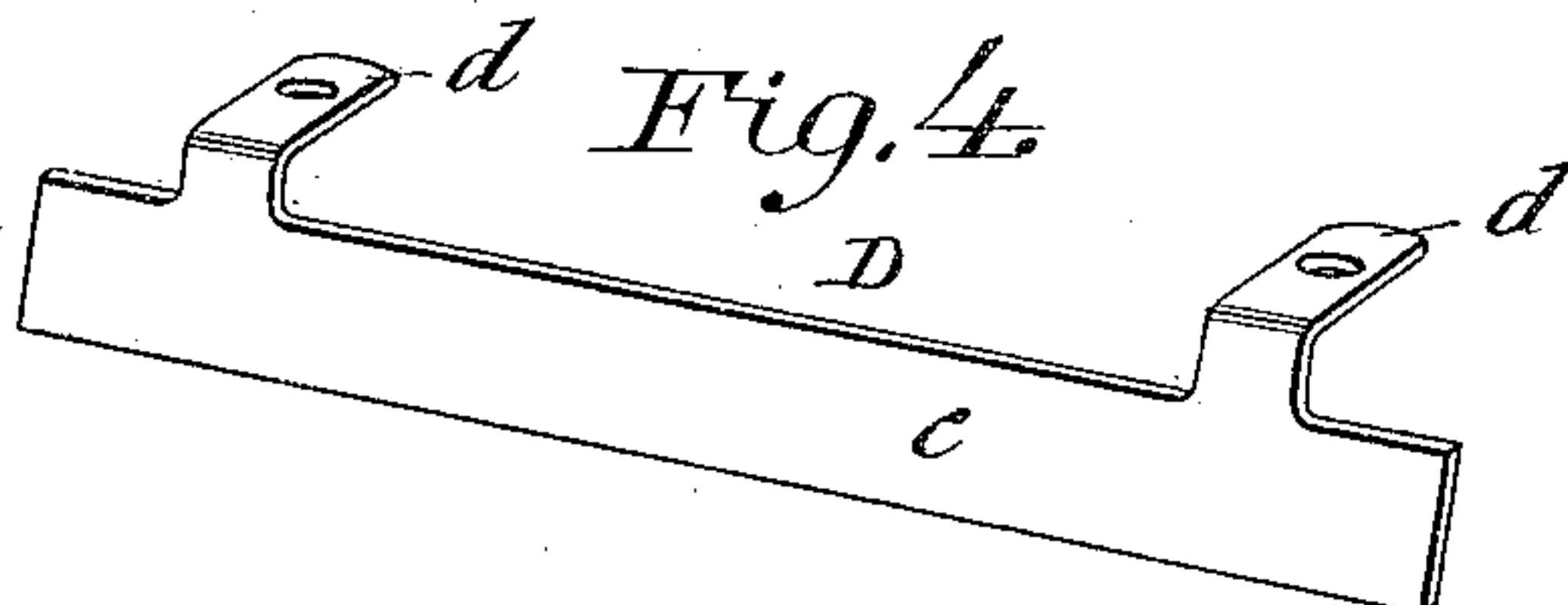
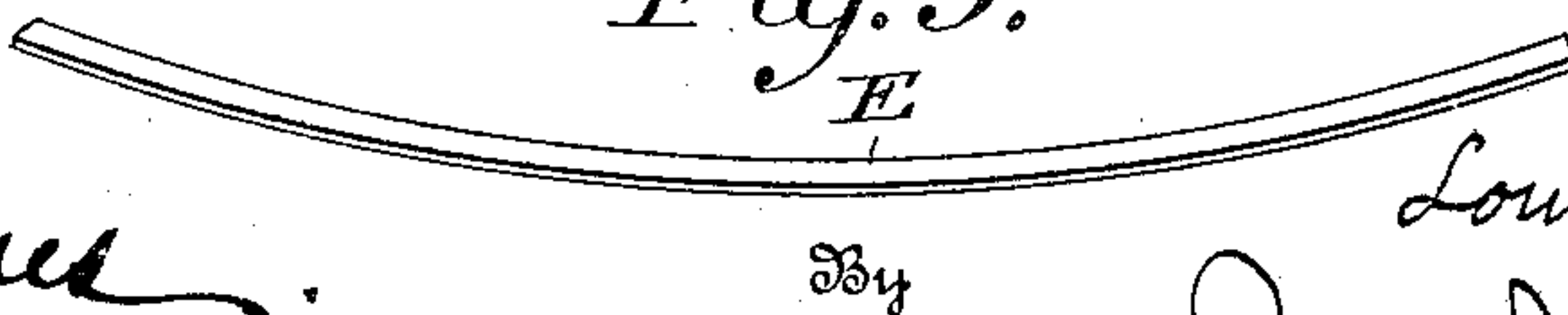


Fig. 5.



Inventor

Witnesses

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LOUIS D. GAGNÉ, OF MANCHESTER, NEW HAMPSHIRE.

PRINTING-FRAME.

935,486.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed March 27, 1909. Serial No. 486,182.

To all whom it may concern:

Be it known that I, LOUIS D. GAGNÉ, a citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented new and useful Improvements in Printing-Frames, of which the following is a specification.

My invention has reference to printing frames such as are designed for use in the photographic art.

The object of the invention is to provide a printing frame embodying certain simple and efficient appurtenances for holding films, drawings, and patterns for oval or round pictures in place against the glass of the frame when the back of the frame is removed, this in order that a number of pieces of sensitized paper may with facility be placed in the frame in succession.

Other objects and advantageous features of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a plan view of a printing frame constructed in accordance with my invention, as said frame appears when its back is removed. Fig. 2 is a section, taken in the plane indicated by the line 2—2 of Fig. 1 and illustrating the back as properly positioned and secured, relative to the frame and my improvements therein. Fig. 3 is a longitudinal section, taken in the plane indicated by the line 3—3 of Fig. 1. Fig. 4 is a perspective view of the resilient retaining device comprised in my improvements. Fig. 5 is a detail view illustrating in its normal condition one of the strips for bearing directly on the film or other device to be held against the frame glass.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the frame of my improvements, which is preferably of wood and rectangular in form. The said frame is provided on the back of its side bars with keeper plates *a*, and at its forward side it is provided with inwardly directed flanges *b*, designed to serve the conventional purpose of an abutment for the pane of glass B.

C is a strip of brass or other suitable material, screwed or otherwise fixedly secured to the inner side of one end bar of the frame A.

D is the resilient retaining device comprised in my improvements and carried by the opposite end bar of the frame A, and E E are the normally bowed resilient strips which are designed to bear on a film or the like at points adjacent the edges thereof with a view of holding the said film or other article under pressure against the pane of glass B. The resilient retaining device D may be of any construction consonant with the purpose of my invention without involving departure from the scope of the same as claimed, though I prefer to have it comprise a body portion *c*, and apertured lugs *d*, the latter being disposed at an angle to the body *c* and superposed on and connected through screws *e* to the end bar of frame A opposite the end bar that carries the keeper strip C. The body *c* of the device D extends from the point adjacent the inner side of one side bar of the frame to a point adjacent the inner side of the other side bar of the frame, and by reference to Fig. 3 it will be manifest that the said body *c* is normally disposed at an acute angle to the inner side of the adjacent end bar of the frame. From this it follows that after the film or other article is placed against the inner side of the pane of glass B, it is simply necessary in order to secure the said article in position, to first place the ends of the strips under the keeper strip C, and then press the opposite ends of the strips E downwardly against the body *c* of the retaining device D until the last named ends of the strips are below the body *c*, whereupon the said body will spring back into the position shown in Fig. 3, with the result that the said ends of the strips will be interposed and securely held between the body *c* of the retaining device and the pane of glass B, and the strips E, in turn, will hold the film or other article flat against the inner side of the glass.

F is the back of the frame which is provided with the conventional normally bowed springs G, designed to cooperate with the before-mentioned keeper-plates *a*, and H is a pad connected to the inner side of the back F, and designed to rest between the strips E in order to snugly hold the sensitized paper under pressure and directly against the inner side of the film or the like. The said pad H is preferably connected to the back F in a detachable manner, and through the medium of screws *f* and wing-nuts *g*, this in order that the back may be equipped with a pad

corresponding in width to the distance between the strips E.

In the practical use of a printing frame embodying my invention, the film, for instance, is arranged against the inner side of the pane of glass B, and the strips E are arranged over the edge portions of the film, and the ends of said strips adjacent the keeper-bar or strip C are placed under said bar or strip C, after which the opposite ends of the strips E are crowded down against the body *c* of the retaining device D, whereupon the said body *c* will give outwardly and permit the ends of the strips to rest immediately above the pane of glass, and then the said body will spring back into the position shown in Fig. 3 and securely hold the strips E in the position stated. With the film secured in the manner described in detail, a piece of sensitized paper is placed against the film and the back F is arranged and secured in the frame A in the ordinary well known manner. Then, after the first print is made, the frame is opened and the piece of sensitized paper is removed, and a piece of similar material is placed and secured in position, and this operation is repeated until the desired number of copies is made, it being here noted that the placing of the number of pieces of sensitized paper in position in succession will not have any tendency whatever to shift the film because of the fastening of the latter between the resilient strips E and the inner side of the pane of glass B. It will be understood, however, that when it is desired to remove the film, the same may be expeditiously and easily accomplished after the body *c* of the retaining device D is pressed outwardly or toward the adjacent end bar of the frame to release the strips E at one end of the frame, and the opposite ends of the strips are withdrawn from under the keeper-bar C.

In addition to the practical advantages hereinbefore ascribed to my novel printing frame adjuncts, it will be apparent that the said adjuncts are simple and inexpensive in construction, are susceptible of ready application to printing frames such as at present in use without the employment of skilled labor, and are adapted to last quite as long as the parts of an ordinary printing frame.

The construction herein illustrated and described forms the best practical embodiment of my invention that I have as yet devised, but it is obvious that in the future practice of the invention such changes in the form, construction and relative arrangement of parts may be made as do not involve departure from the scope of my invention as defined in my appended claims.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. The combination in a printing frame,

of an open frame, a pane of glass arranged therein, a removable back, means for detachably securing the back in the open frame, a keeper means at the inner side of one bar of the open frame, a keeper means carried by and movable with respect to an opposite bar of the open frame, and a strip detachably engaged at its ends with the said keeper means.

2. The combination in a printing frame, of an open frame, a pane of glass arranged therein, a removable back, means for detachably securing the back in the open frame, a keeper bar arranged at the inner side of one bar of the open frame and fixed with respect to said bar at a slight distance from the inner side of the pane of glass, a resilient device carried by an opposite bar of the open frame and normally disposed at an acute angle to the inner side of the said bar, and normally bowed resilient strips detachably engaged at their ends with the keeper bar and the resilient retaining device, whereby the said strips are held in a flat state adjacent the inner side of the pane of glass and are adapted to hold a film or other article under pressure against said inner side of the pane of glass.

3. In a printing frame, the combination of an open frame having flanges adjacent its forward side adapted to form abutments for a pane of glass, the said pane of glass, a keeper bar arranged at the inner side of one bar of the open frame and fixed with respect to said bar at a slight distance from the inner side of the glass, a resilient device comprising a body normally disposed at an acute angle to the inner side of an opposite bar of the frame, and apertured lugs disposed at an angle to said body and fixedly connected to the inner side of the said bar, normally bowed resilient strips detachably engaged at their ends with the keeper bar and the body of the resilient retaining device and held thereby in a flat state and adjacent the inner side of the glass, a removable back, a pad carried at the inner side thereof and adapted to rest between the resilient strips, and means for detachably holding the back under pressure in the open frame.

4. In a printing frame, the combination of an open frame, a pane of glass therein, keepers located at the inner sides of opposite bars of the open frame; one of the said keepers being resilient and adapted to give outwardly when subjected to pressure, strips detachably held between the said keepers and the inner side of the glass and adapted to be positioned at various distances apart, a back removably held under pressure in the open frame, and a pad carried by the back and adapted to rest between the strips and detachably connected with the back, whereby it may be removed and replaced with a new pad when it is desired to increase or diminish the distance between the strips.

5. In a printing frame, the combination of an open frame, a pane of glass therein, keepers located at the inner sides of opposite bars of the open frame; one of the said keepers being resilient and adapted to give outwardly when subjected to pressure, a strip detachably held between the said keepers and the inner side of the glass, and a back removably held in the open frame.

10 6. In a printing frame, the combination of an open frame, a pane of glass arranged therein, keepers located at the inner side of opposite bars of the open frame, and a normally bowed, resilient strip held in a flat state between the pane of glass and the said keepers and detachable from the latter.

7. In a printing frame, the combination of an open frame, a pane of glass therein, keepers located at the inner side of opposite bars of the open frame; one of the said keepers being resilient and adapted to give outwardly when subjected to pressure, and a normally bowed, resilient strip held in a flat state between the pane of glass and the said keepers and detachable from the latter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS D. GAGNÉ.

Witnesses:

JOSEPH A. BOIVIN,
ERNST L. OUCTIL.