(No Model.)

F. O. BYNOE.

PHOTOGRAPHIC PRINTING FRAME.

No. 484,175. Patented Oct. 11, 1892.

FIG. 1.

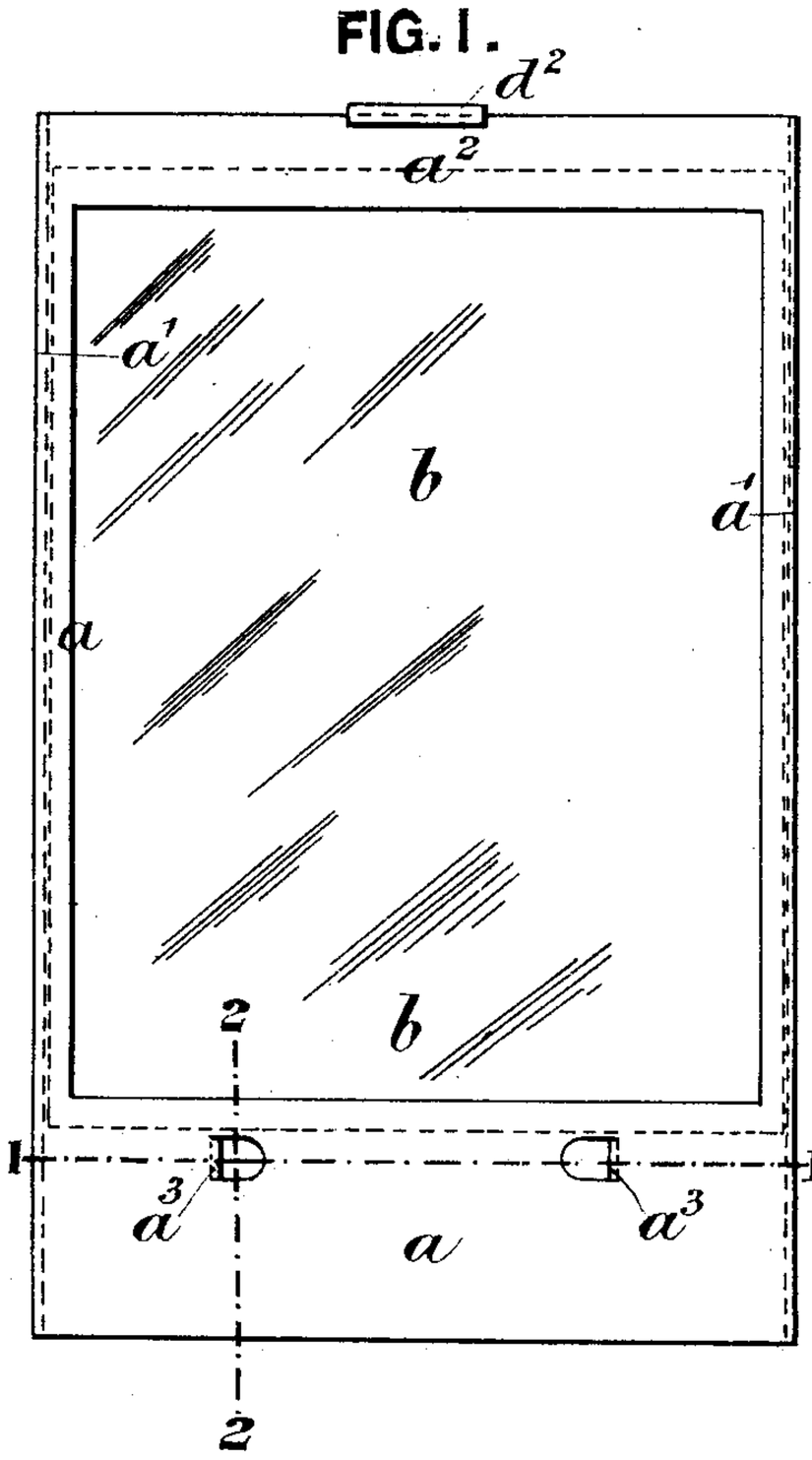


FIG. 2.

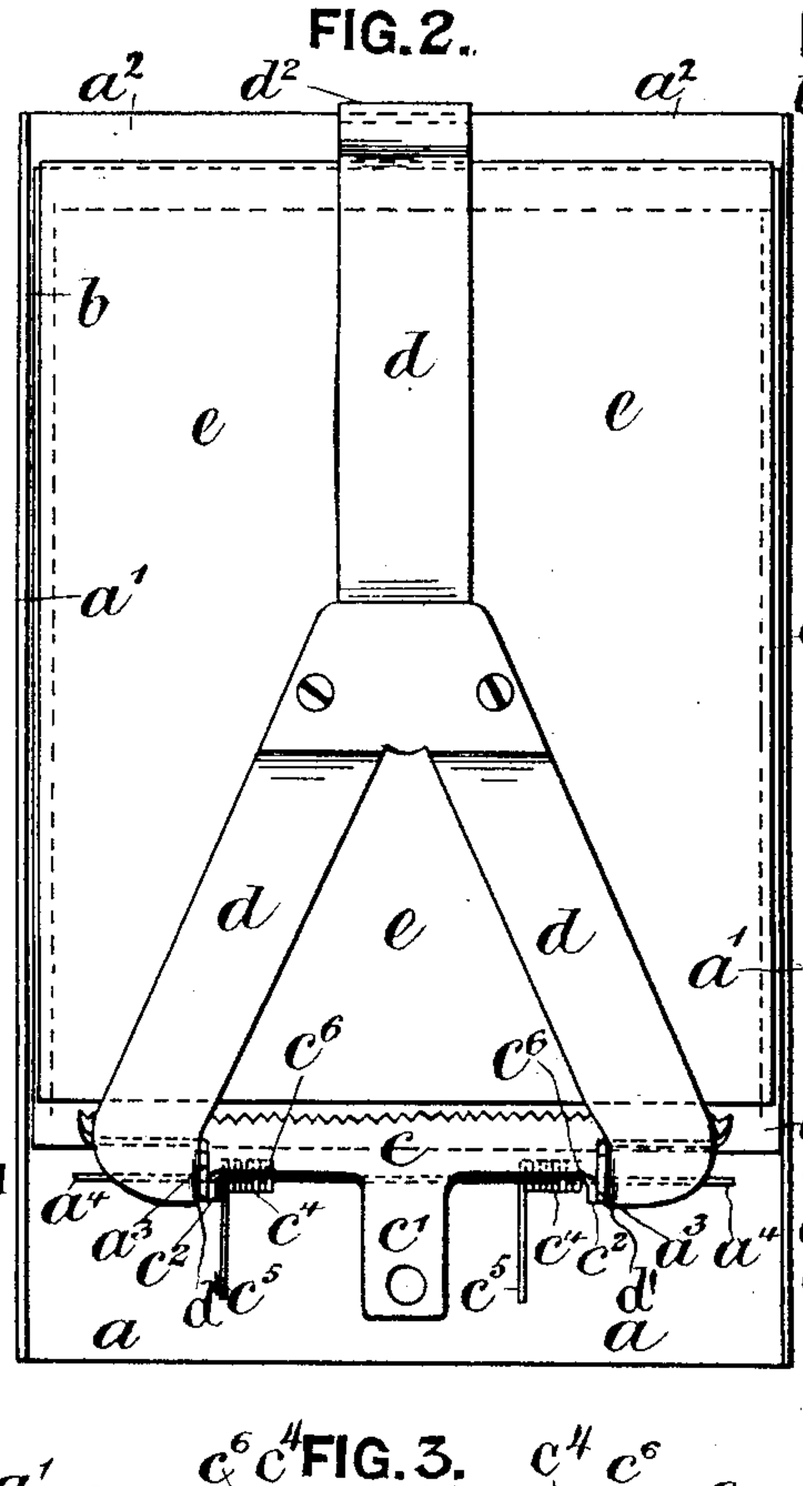


FIG. 4.

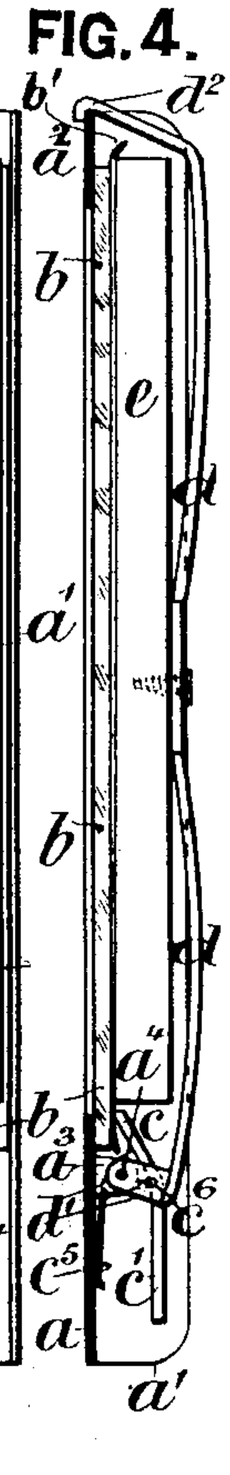


FIG. 5.

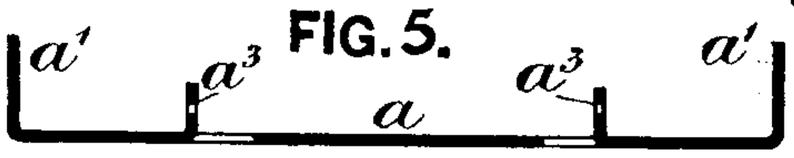


FIG. 3.

FIG. 6.

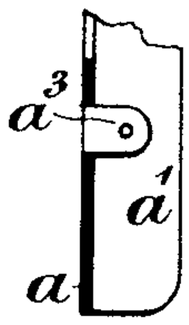


FIG. 7.

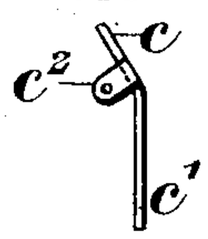
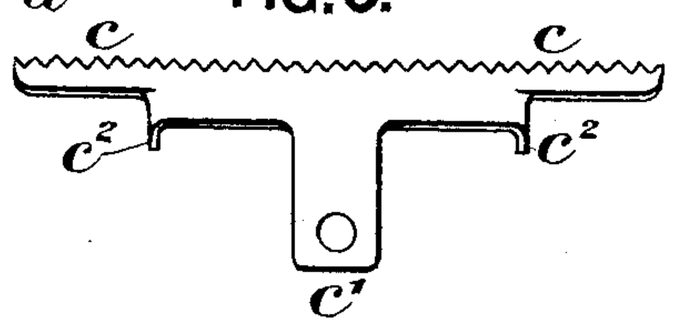


FIG. 8.



Attest:
Geo. E. Crosby.
Harry S. Robertson.

Inventor:
Frederick O. Bynoe
By. Knight Bros.
Attorneys.

UNITED STATES PATENT OFFICE.

FREDERICK O. BYNOE, OF LONDON, ENGLAND.

PHOTOGRAPHIC-PRINTING FRAME.

SPECIFICATION forming part of Letters Patent No. 484,175, dated October 11, 1892.

Application filed June 28, 1892. Serial No. 438,299. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK OATLEY BYNOE, a subject of the Queen of Great Britain, residing at 68 Cornhill, in the city of London, England, have invented certain new and useful Improvements in Photographic-Printing Frames, of which the following is a specification.

The invention relates primarily to photographic-printing frames; and the improvements consist of means whereby the negative and the print are held along one edge and the entire surface capable of being completely exposed and examined without fear of shifting the said negative and print in relation to each other. For this purpose I form the frame preferably of metal, having raised sides and an open front end to enable the glass to be readily placed in position. Along the back end of the frame is fixed a spring clipping-jaw of suitable length, and provided with a lever-handle by which it can be readily operated when it is desired to insert and release the negative and printing-paper, both of which have one of their edges inserted under the spring-clip. On the clip-hinge pin is mounted a flat metal spring-carrier, to which the pressure-board is fixed, and the front end of said carrier is extended and formed as a spring-catch to catch onto the front edge of the frame. The said carrier is divided and formed so as to bear on the center of the back board, and thereby produce an equal pressure thereon.

A frame constructed as above described can also be used for transparent slates and for copying drawings. The frame can be formed by punching a sheet of metal with the necessary opening and flanges or sides, as also with perforated raised lugs forming parts of the back-board-carrier hinge. The spring-carrier is also formed by punching and bending a sheet of metal to the required shape, and with perforated lugs to form the second parts of the hinge.

In order that the said invention may be more clearly understood and readily carried into effect, I will proceed, aided by the accompanying drawings, more fully to describe the same.

Figure 1 is a front view, Fig. 2 is a back view, and Fig. 3 is an view, of the improved photographic-printing frame. Fig. 4 is a side view of same, partly in section. Fig. 5 is a section of the front plate, taken on the line 1 1 of Fig. 1. Fig. 6 is a section of the front plate, taken on the line 2 2 of Fig. 1. Figs. 7 and 8 are respectively an edge view and a plan of the clipping-jaw separately.

In all the figures like parts are indicated by similar letters of reference.

The frame *a* is preferably formed of metal, having raised sides *a'* and an open front end a^2 to enable the glass or negative *b* to be readily placed in position. Along the back end of the frame is fixed a spring clipping-jaw *c*, of suitable length and provided with a lever-handle *c'*, by which it can be readily operated when it is desired to insert and release the negative *b* and printing-paper *b'*, both of which have one of their edges inserted under the spring-clip *c*. This spring clipping-jaw is preferably stamped out of sheet metal. It is provided with a serrated edge in order to hold the paper firmly, and has two perforated hinge-lugs c^2. The front frame *a* is formed with two perforated hinge-lugs a^3, which carry a hinge-pin a^4, and upon which is mounted the said spring-clip *c* by means of the lugs c^2. Two coiled springs c^4 are also mounted upon the hinge-pin a^4. Each of these springs has one member c^5 bearing upon the back of the front frame *a* and the other member c^6 bearing against the back of the spring-clip *c* and tending to close the serrated jaw against the printing-paper and negative.

On the clip hinge-pin a^4 is mounted a flat metal spring-carrier *d* by means of lugs *d'*, and to which the pressure-board *e* is fixed by screws or in any other convenient manner. The front end of said carrier *d* is extended and formed as a spring-catch d^2 to catch onto the front edge of the frame *a*. The said spring-carrier is divided and formed so as to bear on the center of the back board, and thereby cause an equal pressure to be exerted by the same upon every part of the negative.

The frame *a* can be formed by punching a sheet of metal with the necessary opening and flanges or sides *a'*, as also with perfo-

rated raised lugs a^3, forming parts of the spring-clip hinge and back-board-carrier hinge. The spring-clip c is also formed by punching and bending a sheet of metal to the required shape and with the perforated lugs c^2, and the spring-carrier d is likewise formed by punching and bending a sheet of metal to the required shape and with the perforated lugs d'.

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

1. The combination, in a photographic-printing frame, of the frame a, a spring-clip pivoted to one end of said frame, a pressure-board fitting in said frame, and a spring-carrier carrying the pressure-board, the spring-clip and carrier being both mounted on the same hinge-pin, substantially as set forth.

2. A photographic-printing frame constructed with a front a, having two perforated lugs a^3, through which is passed a hinge-pin a^4, carrying a spring-clip c, provided with a lever-handle c', and also carrying a spring-carrier d, on which the pressure-board e is fixed, said spring-carrier d being provided with a catch d^2 to catch over the front edge of the frame a, substantially as herein shown and described, and for the purpose stated.

FREDK. O. BYNOE.

Witnesses:
CLAUDE K. MILLS,
WALTER E. ROCHE.