

(No Model.)

J. SHUTTING.
PHOTOGRAPHIC PRINTING FRAME.

No. 497,691.

Patented May 16, 1893.

Fig. 1.

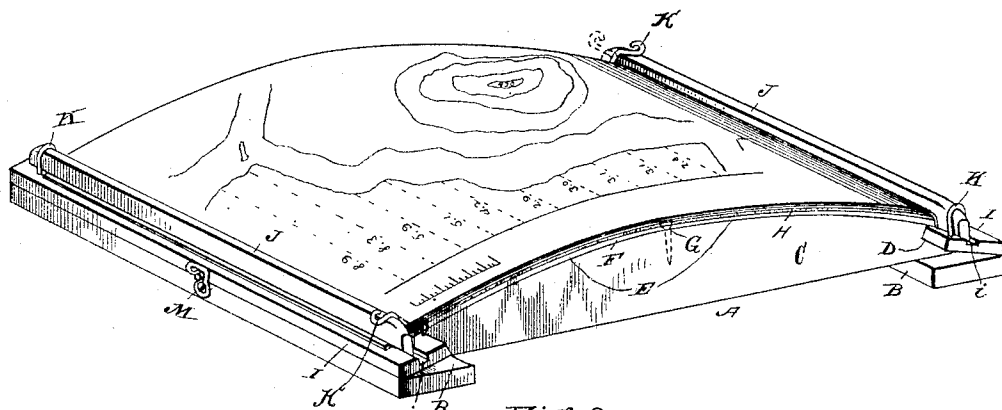


Fig. 2.

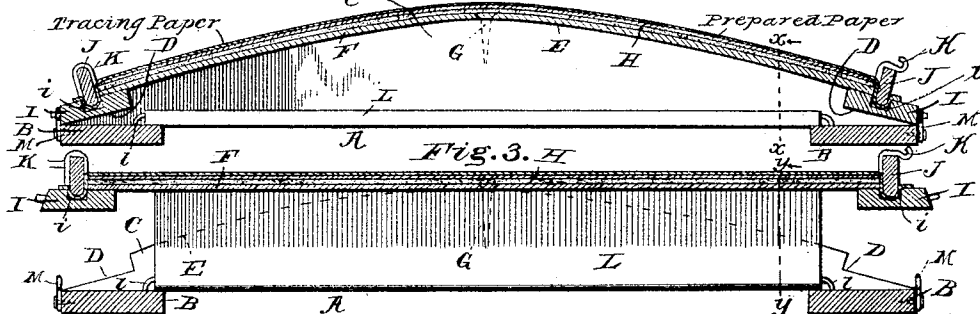


Fig. 3.

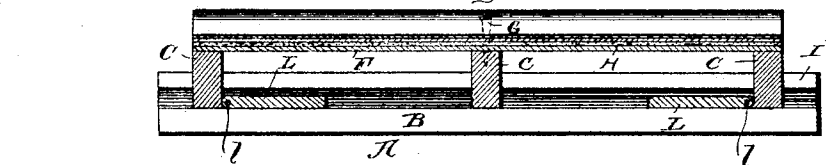


Fig. 4.

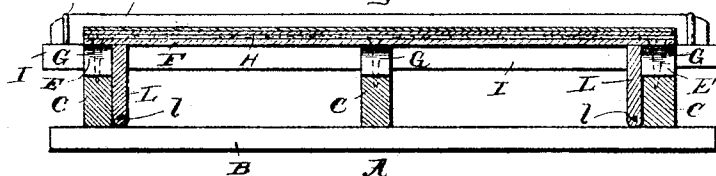
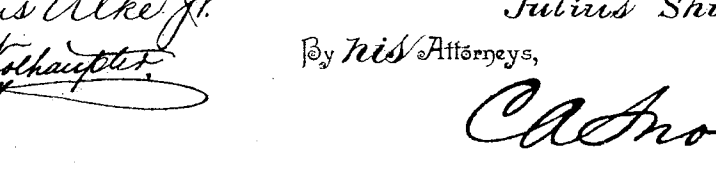


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS SHUTTING, OF NASHVILLE, TENNESSEE.

PHOTOGRAPHIC-PRINTING FRAME.

SPECIFICATION forming part of Letters Patent No. 497,691, dated May 16, 1893.

Application filed November 18, 1892. Serial No. 452,418. (No model.)

To all whom it may concern:

Be it known that I, JULIUS SHUTTING, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Blue-Print Frame, of which the following is a specification.

This invention relates to printing frames; and it has for its object to provide an improvement in that class of printing frames commonly known as blue print frames, but which of course can be used for other printing purposes.

To this end the invention primarily contemplates an improved construction of printing frame which shall be extremely light and durable and which at the same time dispenses with the heavy glass plates of the ordinary cumbersome blue print frames. The frame also contemplates special improvements in the fastening devices for the paper and for the stretching of the same.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a blue print frame constructed in accordance with this invention and in its closed position. Fig. 2 is a central longitudinal sectional view thereof, the frame being closed. Fig. 3 is a similar view with the frame open. Fig. 4 is a detail sectional view on the line $x-x$ of Fig. 2. Fig. 5 is a similar view on the line $y-y$ of Fig. 3.

Referring to the accompanying drawings:—A represents a base frame comprising the opposite end sills or bars B, connected by the longitudinally disposed frame bars C. The parallel frame bars C, are provided with notched seats D, at their ends secured to the sills B, and with the upper curved edges E, curving regularly from one end to the other and adapted to form a support for the flexible bed board F.

The flexible bed board F, is made of paste-board or other flexible material and is firmly secured at its center as at G, to the central highest point of the top curved edges of each of the boards C, so that the opposite ends of

said bed-board on both sides of the central securing points G, are free to be raised from the curved ends of the boards C, or clamped thereto as the frame is opened or closed, respectively.

The flexible bed-board F, is preferably covered with a covering of soft felt H, which insures a better contact for the paper placed thereon, and has its opposite ends secured to the movable end strips I, provided with the longitudinally disposed face grooves, extending from end to end, and into which are clamped the opposite ends of the tracing linen or other transparent or flexible material from which prints are being taken on the usual sensitized paper. Working over the ends of the tracings are the removable clamping bars or strips J, the opposite ends of which removably engage the fastening stops K, which stops serve to hold the said clamping bars or strips into the grooves of the strips I, and therefore hold the ends of the paper tightly in said grooves.

Before placing the sensitized paper and the tracing or other paper onto the bed-board F, the said bed-board is supported rigidly in a horizontal position by means of the opposite hinged supporting wings L. The said opposite supporting wings L, are hinged at l , to opposite inner sides of the base frame A, and are adapted to be turned up into a vertical position flat against the opposite frame bars C, so that their swinging edges form a flat horizontal support for the bed-board as clearly illustrated in Figs. 3 and 5. Now it will be clear that in this horizontal position of the board, the sensitized paper x , is placed thereon face upward, after which the tracing or other paper x' having the matter to be printed, is placed on the sensitized paper and its opposite ends secured by means of the end clamping strips herein described. The opposite hinged wings are now lowered into a horizontal position out of contact with the bed-board as shown in Figs. 2 and 4, so that the movable end strips I can be brought down into the notched seats D, at the opposite ends of the base frame, so that said strips meet the end sills to which the same are clamped by means of the catches M, arranged at each end of the frame. The flexible bed-board carrying the printing paper, &c., is therefore made to con-

form to the top curvature of the frame bars C, and therefore causes the top sheet of paper on which the drawings or other matter are made, to be stretched smoothly out so that
 5 there shall be no creases or folds to interfere with a perfect exposure. By releasing the end catches M, and readjusting the wings L, the frame can be opened ready for further prints.

10 It is now thought that the construction, operation and many advantages of the herein described frame are apparent, and it is to be understood that changes in the form, proportion and the minor details of construction as
 15 are embraced in the terms of the appended claims, may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a printing frame, a base frame having upper curved edges, and a flexible bed-board secured at its center to the center of said
 25 curved edges and adapted to be removably clamped at its ends over said curved edges, substantially as set forth.

2. In a printing frame, a curved base frame, a flexible bed-board secured at its center to
 30 the highest point on said bed frame, means for supporting said bed-board in a horizontal position, and means for clamping the ends thereof to said base frame, substantially as set forth.

35 3. In a printing frame, the base frame com-

prising the opposite end sills and the parallel connecting frame bars having curved upper edges, a flexible bed-board fixedly secured at its center to the highest point of said edges, paper clamping devices at the free ends of
 40 said bed-board, hinged supporting wings arranged within the base frame and adapted to hold the bed-board in a horizontal position when the frame is open, and catches for the free ends of the bed-board when the same is
 45 stretched entirely over said curved edges, substantially as set forth.

4. In a printing frame, the base frame comprising the opposite end sills and parallel connecting frame bars having upper curved
 50 edges and end seats, a cushioned flexible bed-board fixedly secured at its center to the center of said curved edges, grooved movable end strips secured to the ends of said bed-board, clamping bars or strips removably held into
 55 engagement with the grooves of said end strips, which latter are adapted to be clamped into the said end seats when the frame is closed, and hinged supporting wings hinged
 60 within opposite sides of the base frame and adapted in their vertical positions to hold the bed-board in a horizontal position, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
 65 the presence of two witnesses.

JULIUS SHUTTING.

Witnesses:

W. F. GREEN,
 FRED J. H. LELAND.