

(No Model.)

2 Sheets—Sheet 1.

H. T. C. WISE.  
DUPLICATING APPARATUS.

No. 479,968.

Patented Aug. 2, 1892.

Fig. 1.

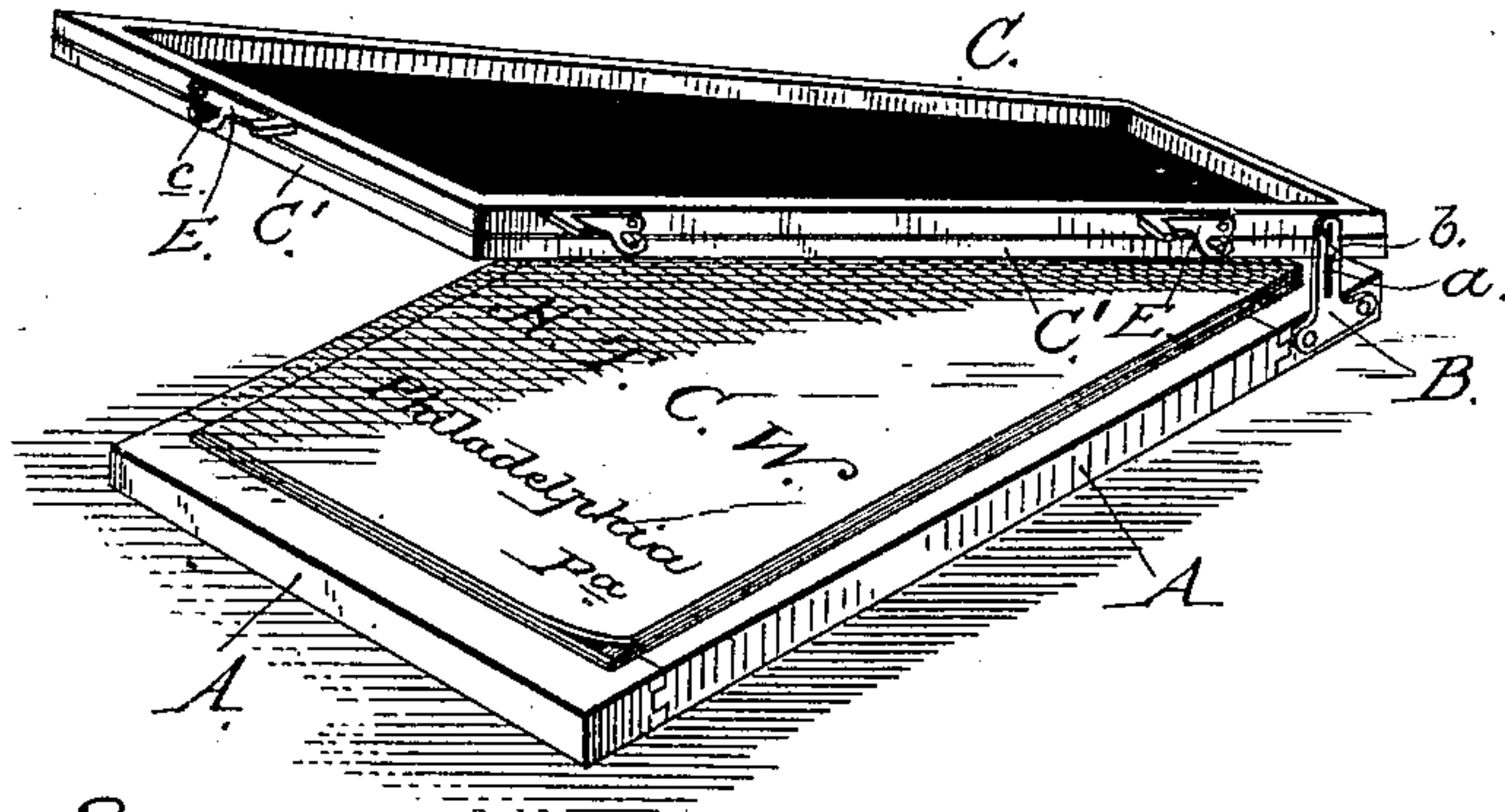


Fig. 2.

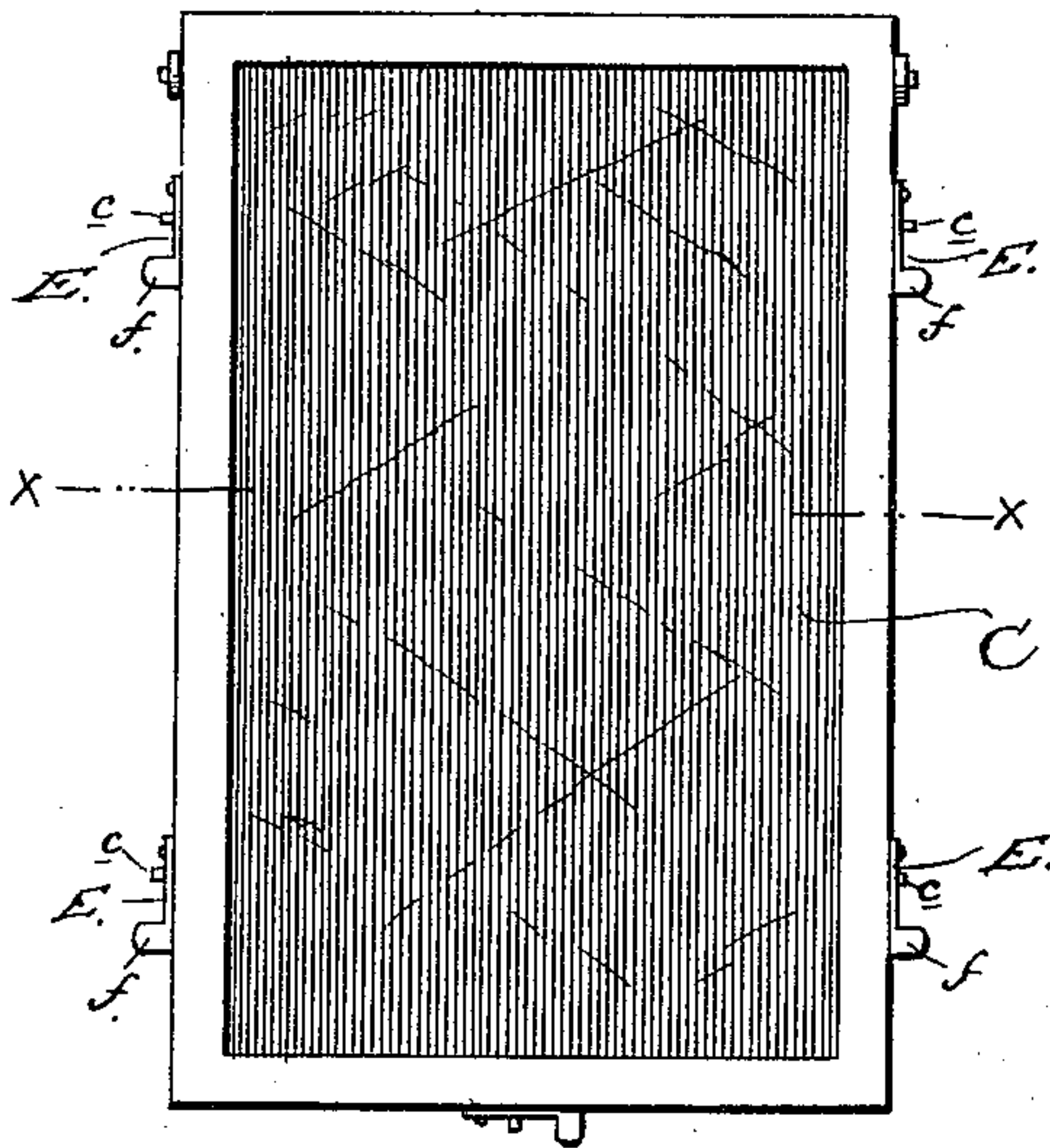
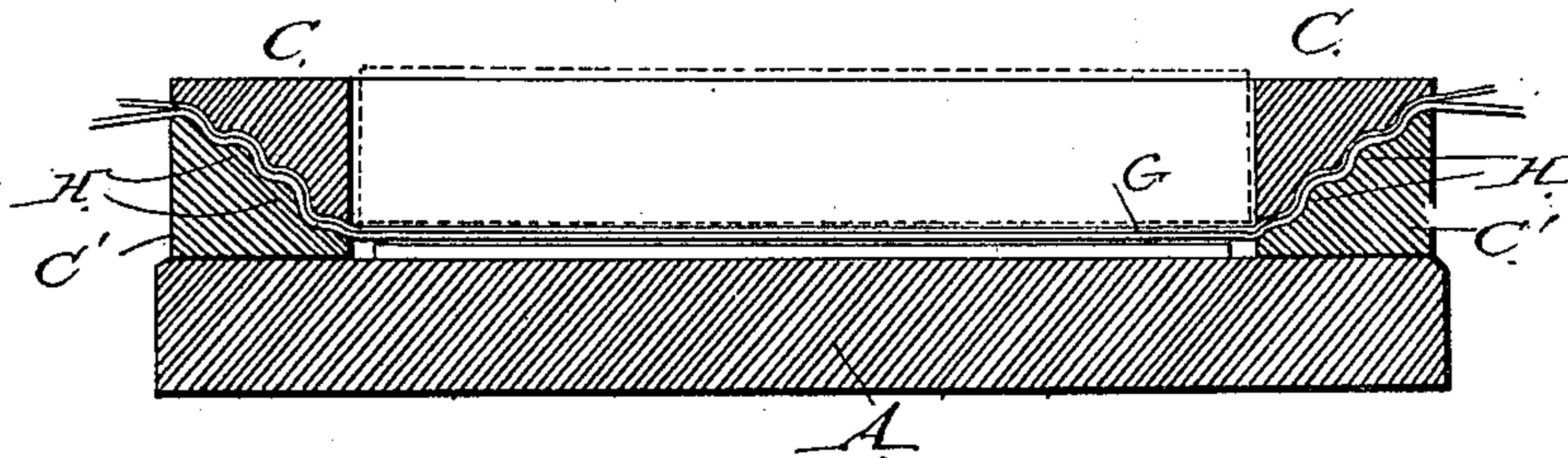


Fig. 3.



WITNESSES  
*Chapman Fowler*  
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INVENTOR  
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(No Model.)

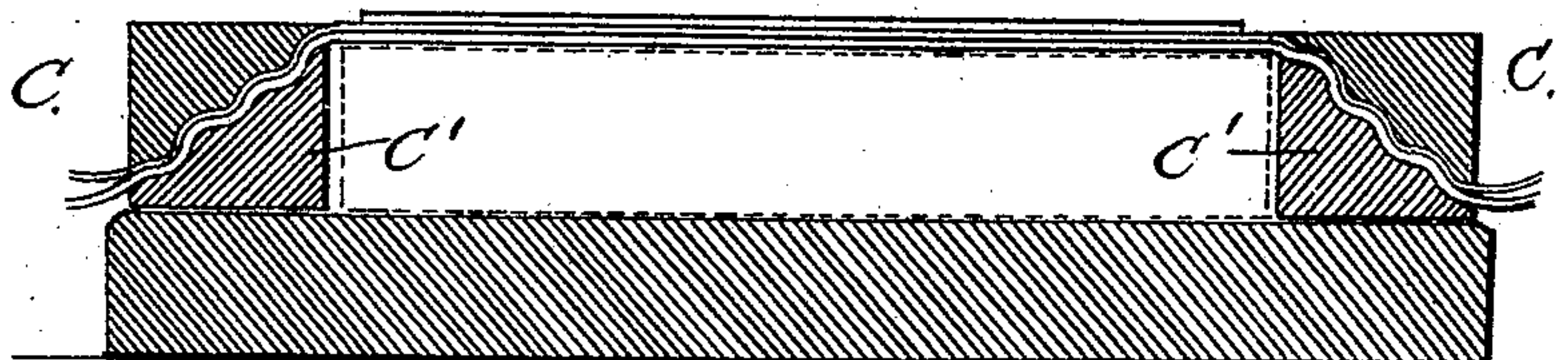
2 Sheets—Sheet 2.

H. T. C. WISE.  
DUPLICATING APPARATUS.

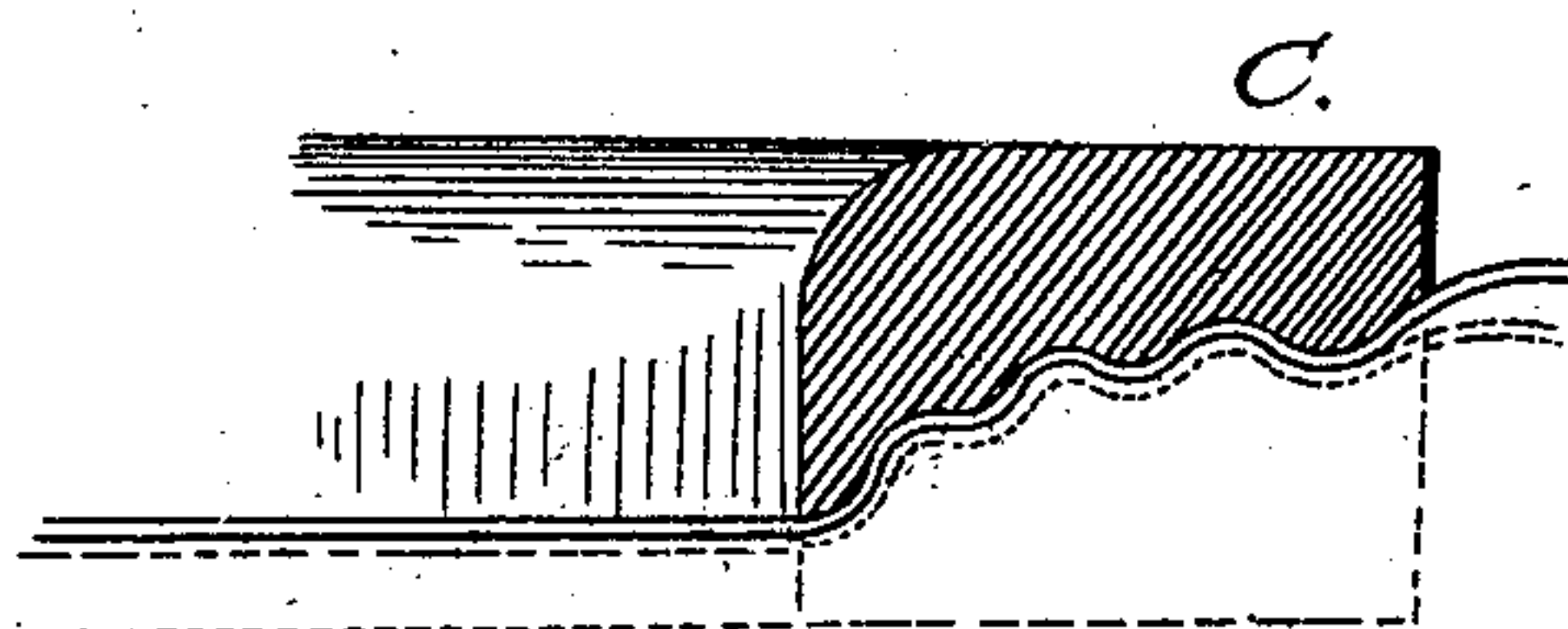
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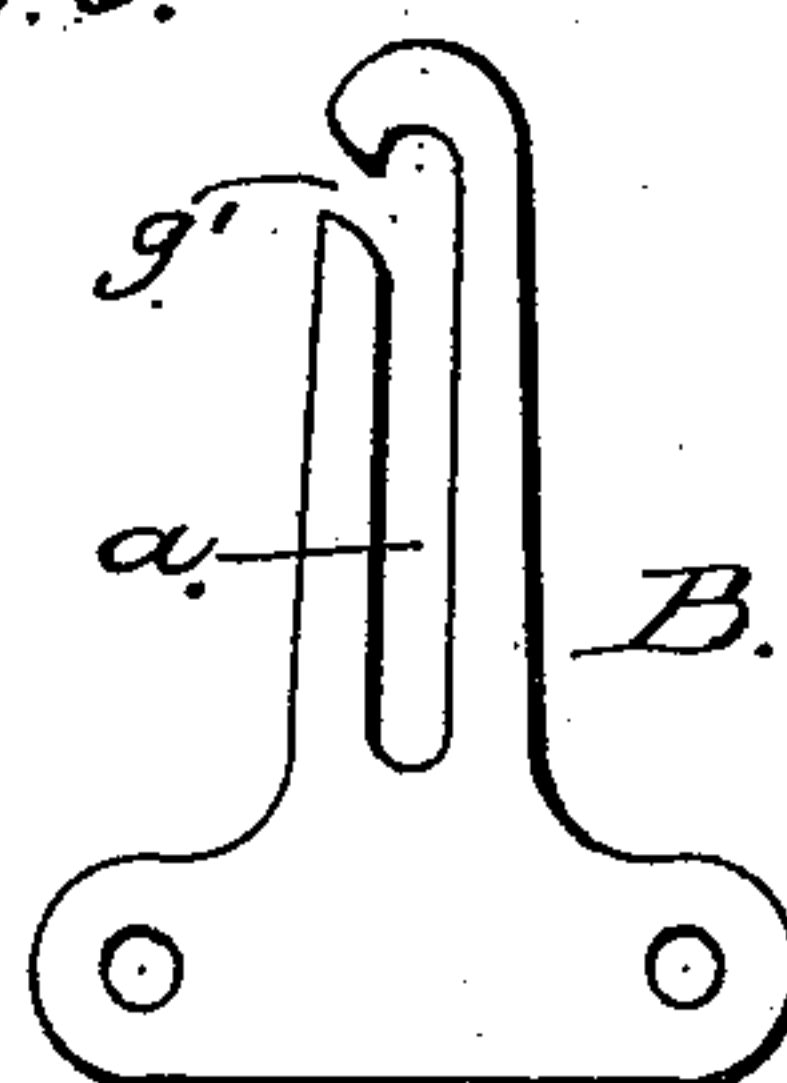
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

HENRY T. C. WISE, OF PHILADELPHIA, PENNSYLVANIA.

## DUPLICATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 479,968, dated August 2, 1892.

Application filed October 27, 1890. Serial No. 369,508. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY T. C. WISE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Duplicating Apparatus, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a duplicating apparatus, showing the upper section of the clamping-frame in an elevated position. Fig. 2 is a plan view of the apparatus in its normal position. Fig. 3 is an enlarged sectional view on the line  $x x$  of Fig. 2. Fig. 4 is a similar view showing the stencil-sheet and clamping-frame in an inverted position. Fig. 5 is an enlarged sectional view showing the corrugated or wave-like meeting-faces of the clamping-frame. Fig. 6 represents another form of standard.

My invention relates to an apparatus adapted to receive stencil or other printing sheets or plates having designs, letters, or characters of any form made therein or thereon, and from which copies or impressions or depressions are taken by roller, pad, or any other process; and my invention consists of the constructions, combinations, and arrangements of devices, which I shall fully describe and claim.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now describe its construction and indicate the manner in which the same is carried out.

In the accompanying drawings, A indicates a suitable bed, which serves as a platen in the manner common to this class of devices, and upon which the sheets to be printed are placed. To the opposite sides of the base, near the rear end, are secured vertical standards B, having elongated slots  $a$ , adapted to receive the pins  $b$ , projecting from the sides of the lower section  $C'$  of the clamping-frame C, whereby a hinge connection is formed between the clamping-frame and the base to permit the said frame to be turned back into the position shown in Fig. 1 to allow the re-

moval of the printed sheets. By constructing hinge-standards with elongated slots it is manifest that the clamping-frame is allowed vertical movement, so that any desired number of sheets may be placed upon the base without affecting the operation of the apparatus, while at the same time the stencil lies close against the sheets or surface to be printed. I can also place a plurality of blotters between the printing-bed and stencil-sheet, if desired.

The clamping-frame C, as above described, consists of an upper and lower section, the lower section being provided with pins  $c$ , projecting from its sides and the upper section having pivotally secured to its sides the hooks E, having handle portions  $f$ , by which they are operated, and curved slots  $g$ , whose walls act as cams, the said slots being designed to receive the pins on the lower section of the frame C, whereby the two sections of said frame may be tightly drawn together and the edges of the stencil-sheet and diaphragm or protection-sheet G, when such is used, clamped tightly in position to prevent the sheets "bagging" and the consequent wrinkling or creasing of the stencil-sheet. To securely hold the edges of the stencil-sheet, I corrugate the meeting surfaces of the two sections of the clamping-frame or otherwise form said surfaces with wave-like grooves and beads H, which construction, combined with the clamping-levers, enables me to securely clamp extreme thicknesses of material with equal facility and as securely as if the most delicate materials were used, which is not possible, as far as I am aware, with any device of a similar nature in use at the present time.

The advantages of the slotted hinge connection for the two sections of the frame C have been explained in so far as it related to the frame lying flat upon its bed, whatever be its distance from said bed, because of the intervening sheets or matter. Among other advantages ascribed to this peculiar hinge connection may be noted that in conjunction with the short slot  $g'$ , which intersects the vertical slot, it enables me to hinge the frame C to the base in its normal position, as shown

in Fig. 3; or the frame may be inverted to permit the introduction of the ink-roller pad or surface beneath the stencil-sheet, as shown in Fig. 4. Heretofore two separate machines  
5 were necessary to accomplish this desirable result; but I am enabled to effect the same result in a single machine by the use of the slotted hinge-standards before described.

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

In a duplicating apparatus, a bed, a two-

part stencil-carrying frame having the pins  
6, and slotted standards having branch slots  
through which the pins pass to enable the 15  
frame to be removed and reversed, whereby  
impressions may be taken from either side of  
the stencil-sheet, substantially as herein de-  
scribed.

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Witnesses:

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BENJ. S. BANKS.