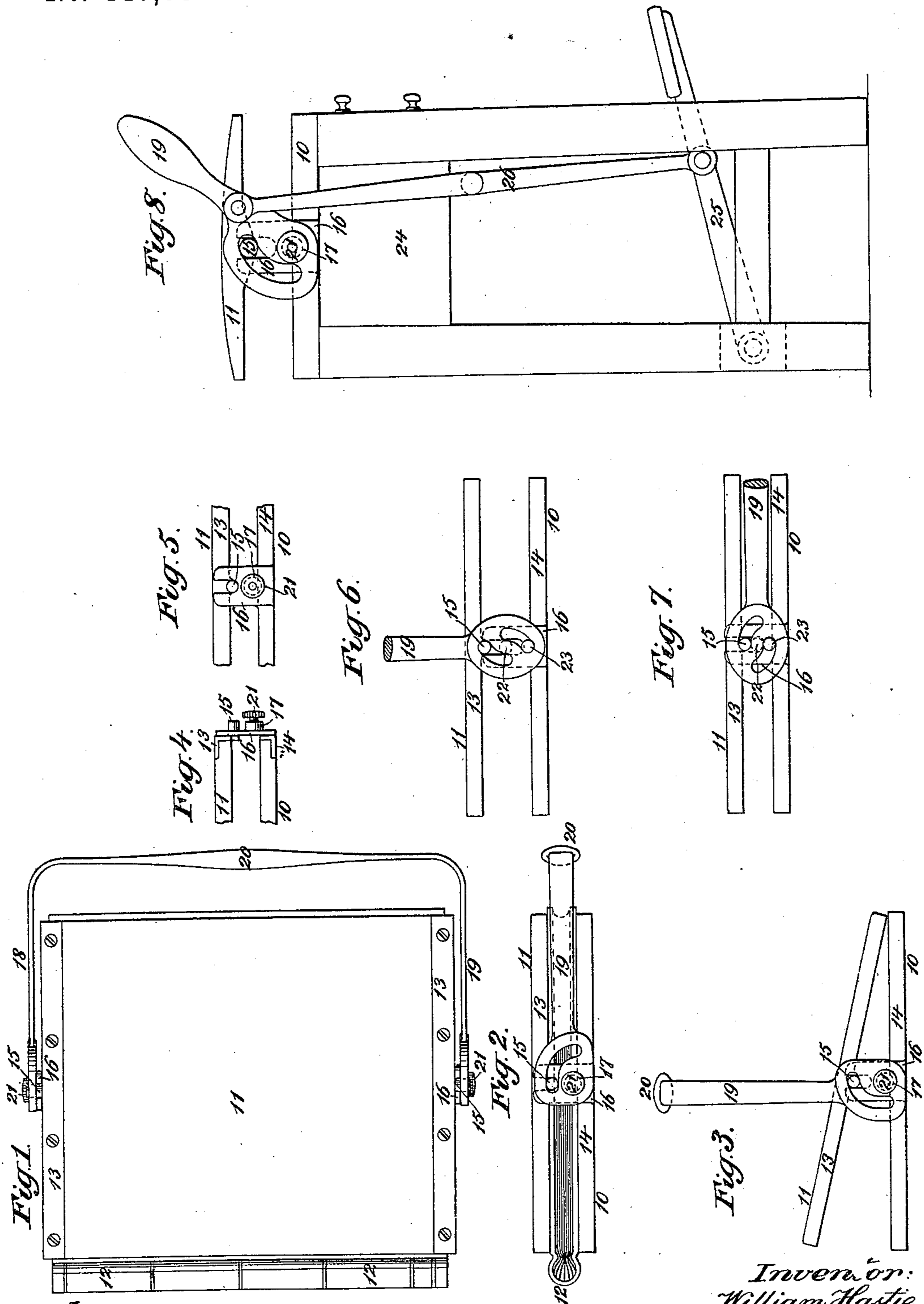


(No Model.)

W. HASTIE.  
COPYING PRESS.

No. 448,858.

Patented Mar. 24, 1891.



Witnesses:  
O. Sundgren  
D. H. Hayward

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# UNITED STATES PATENT OFFICE.

WILLIAM HASTIE, OF GLASGOW, SCOTLAND.

## COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 448,858, dated March 24, 1891.

Application filed September 1, 1890. Serial No. 363,658. (No model.) Patented in England May 23, 1888, No. 7,569.

*To all whom it may concern:*

Be it known that I, WILLIAM HASTIE, of Glasgow, in the county of Lanark, Scotland, have invented a new and useful Improvement in Copying-Presses, (for which I have obtained patent in Great Britain, No. 7,569, dated May 23, 1888,) of which the following is a specification, reference being had to the accompanying drawings.

My improvement consists in the novel combination, with the bed and platen of a copying-press, as hereinafter described and claimed, of certain simple devices whereby the pressure is applied in a very effective manner and is very quickly applied and removed.

The invention is applicable with especial advantage to portable copying-presses, but may also be applied to standing presses.

Figures 1 and 2 in the drawings represent, respectively, a plan and an end elevation of one example of a portable copying-press embodying my invention, showing it in its closed condition. Fig. 3 represents an end elevation of the press in its open condition. Figs. 4 and 5 represent, respectively, side and end views of certain details of the same example. Figs. 6 and 7 represent end views of a modification of the details of the portable press, showing the parts in the positions which they occupy when the press is open and when it is closed. Fig. 8 is an end view illustrating the application of the invention to a standing press.

Similar figures of reference designate corresponding parts in all the figures.

My improved portable press, as shown in Figs. 1 to 5, comprises a bottom board or base-plate 10 and an upper board, plate, or platen 11, between which the letter-copying book 12 is to be placed. The bottom plate 10 and the platen 11 are by preference made of wood, bound or strengthened by angle-pieces 13 14, of steel or other metal, at the ends. Strong metal pins 15, cast in a piece with the angle-pieces 13, project from the middles of the opposite ends of the platen 11, and these pins 15 work in guide-slots formed in lugs 16, cast in a piece with and projecting up from the angle-pieces 14 on the bottom plate 10. These

slotted lugs being rigidly secured to the bottom plate or base 10, not only form guides for the pins 15, but their inner faces form guides for the upper plate or platen 11.

On pins 17, cast on lugs 16, there are centered two levers 18 19, which are connected at their outer ends by a cross-bar 20, made in the same piece with them. The levers 18 19 are held on the pins 17 by screws 21, and have eccentric curved slots formed in them at a little distance from their centers, the pins 15 of the platen 11 projecting through these slots. The slots in the levers 18 19 are shaped eccentrically, and so that when the levers are vertical, Fig. 3, the platen 11 is, by means of its pins 15, held at its greatest distance above the bottom board or plate 10. As the levers 18 19 are turned down by means of their cross bar or handle 20, they bring to act on the platen-pins 15 parts of the edges of the slots which are gradually nearer the centers, and these edges, acting wedgewise on the platen-pins 15, press down the platen 11 in a sufficiently forcible manner for the copying operation. When the levers 18 19 are turned down, the whole press assumes an extremely compact form, Figs. 1 and 2, for putting into a traveling bag or box; or it may be very conveniently carried by means of the cross-bar 20, which combines with the levers 18 19 to form a bail of which the said cross-bar is the handle.

In the modification shown in Figs. 6 and 7 the extent of lift of the platen is considerably increased by having two eccentric-slots in the end of each lever 18 19, instead of only one, as hereinbefore described, each lever being in this case centered on pins 22, which work loose in the slots in the lugs 16. Pins 23, cast in a piece with the angle-pieces 14 of the bottom plate 10, are provided to work in the additional eccentric-slots of the levers 18 19. The plate 10 and platen 11 in the press shown in Fig. 8 are made of metal, the angle-pieces 13 14 being dispensed with and the bottom plate 10 being fixed to table 24. The levers 18 19, with the eccentric or wedge-action slots, are connected to and actuated by a treadle 25 through a forked connecting-rod 26, the

levers 18 19 being in the form of handles, merely to assist in starting or releasing the press.

What I claim as my invention, and desire  
5 to secure by Letters Patent, is—

The combination of the board or plate 10, provided at its opposite ends with slotted guide-lugs 16, the board or plate 11, fitted between said guide-lugs to be guided thereby,  
10 the eccentrically-slotted levers 18 19, pivoted

to said lugs 16, and the pins 15 on said plate 11, passing through the slots of the guide-lugs and engaging with the eccentric-slots of the levers, substantially as herein described.

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