

(No Model.)

W. H. PRICE, Jr.  
PRINTING PRESS.

No. 420,017.

Patented Jan. 21, 1890.

Fig. 1

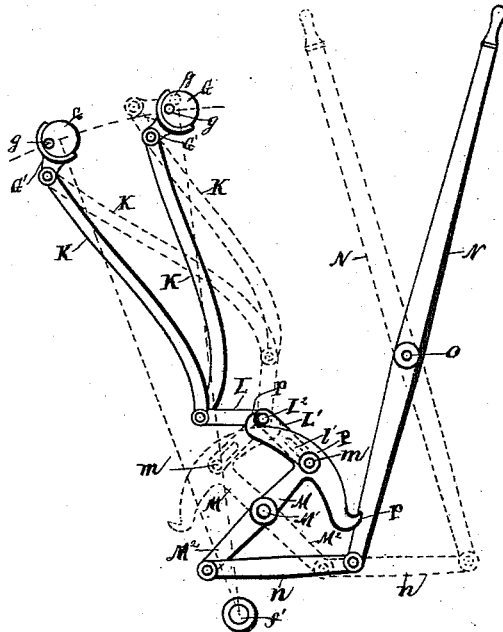
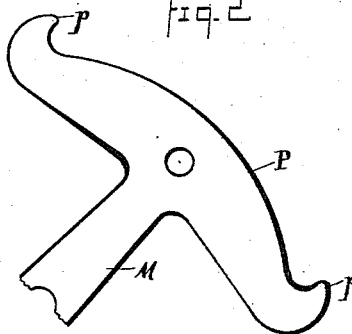


Fig. 2



Witnesses.

B. S. Lowrie.  
Geo. W. King

Inventor

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# UNITED STATES PATENT OFFICE.

WILLIAM H. PRICE, JR., OF CLEVELAND, OHIO, ASSIGNOR TO CHANDLER & PRICE, OF SAME PLACE.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 420,017, dated January 21, 1890.

Application filed March 23, 1889. Serial No. 304,431. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. PRICE, Jr., of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in printing-presses, more especially for that portion of the mechanism known as "impression throw-off," and is designed as an improvement over devices for which United States Letters Patent No. 318,798 were granted to me May 26, 1885, and to which reference is hereby made, the present invention consisting in the addition of a counter-balance that serves also as a stop in shifting the mechanism in either direction.

In the accompanying drawings, Figure 1 is a diagram representing a side view in elevation, showing, respectively, in solid and dotted lines different positions of the throw-off mechanism, but also embodying my invention. Fig. 2 is an enlarged side elevation of the counter-balance and stops, showing a portion of the arm integral therewith.

Whereas in applying my present invention I use the devices entire and without change that were shown and described in my former Letters Patent aforesaid, it is believed that my present invention will be readily understood by means of this specification and the accompanying drawings, and to avoid confusion the letters of these drawings are the same as in the aforesaid patent.

G is the lateral shaft of the "bed," the two positions forward and rearward being shown, this shaft having wrists *g* for connecting with the side bars of the press. Shaft G has attached a rock-arm G', the latter connecting with rod K, and the latter in turn connecting with rock-arm L. Rock-arms L and L' are usually integral, the connecting-hub being mounted on rock-shaft L<sup>2</sup>. Arm L' has a longitudinal slot *l'*, in which operates wrist *m* of rock-arm M, the latter being mounted on rock-shaft M'. On this latter shaft is mounted rock-arm M<sup>2</sup>, the same being connected by link *n* with shifting hand-lever

N, the latter being fulcrumed at O. By operating this hand-lever the throw-off mechanism is shifted to the positions shown, respectively, in solid and dotted lines, the entire press and mechanism being shown and described in the aforesaid patent. It was supposed that the hand-lever by reason of its overhanging the line of gravity at either extreme of its throw would always hold the parts in position without fastening; but it was found that in some instances, more especially with small quick-running presses, the jar of the machinery would slightly move the throw-off mechanism. At least in such cases the operators would never admit that they had accidentally or inadvertently moved the hand-lever.

My present invention consists in adding to the extreme of arm M a counter-balance P, the arm and counter-balance being preferably cast integral. Counter-balance P has hook ends *p*, adapted to engage shaft L<sup>2</sup> at either extreme of the throw of arm M, thus constituting positive stops that limit the movement of lever N and the connected mechanism. The counter-balance is of considerable weight, and in either of its two positions so far overhangs the line of gravity that there is no danger of the mechanism being inadvertently shifted or being moved by the jar of the machinery. The counter-balance might be connected with an arm other than arm M, mounted on shaft M', but this would involve extra expense and would evidently be within the spirit and scope of my invention.

What I claim is—

The combination of impression-throw-off mechanism, substantially as indicated, including shaft L<sup>2</sup> and arm M, with counter-balance P, integral or connected with arm M, the counter-balance having extremes adapted to engage shaft L<sup>2</sup>, and serve as stops, substantially as and for the purpose set forth.

In testimony whereof I sign this specification in the presence of two witnesses, this 2d day of March, 1889.

WILLIAM H. PRICE, JR.

Witnesses:

CHAS. H. DORER,  
CHAS. R. PHILLIPS.