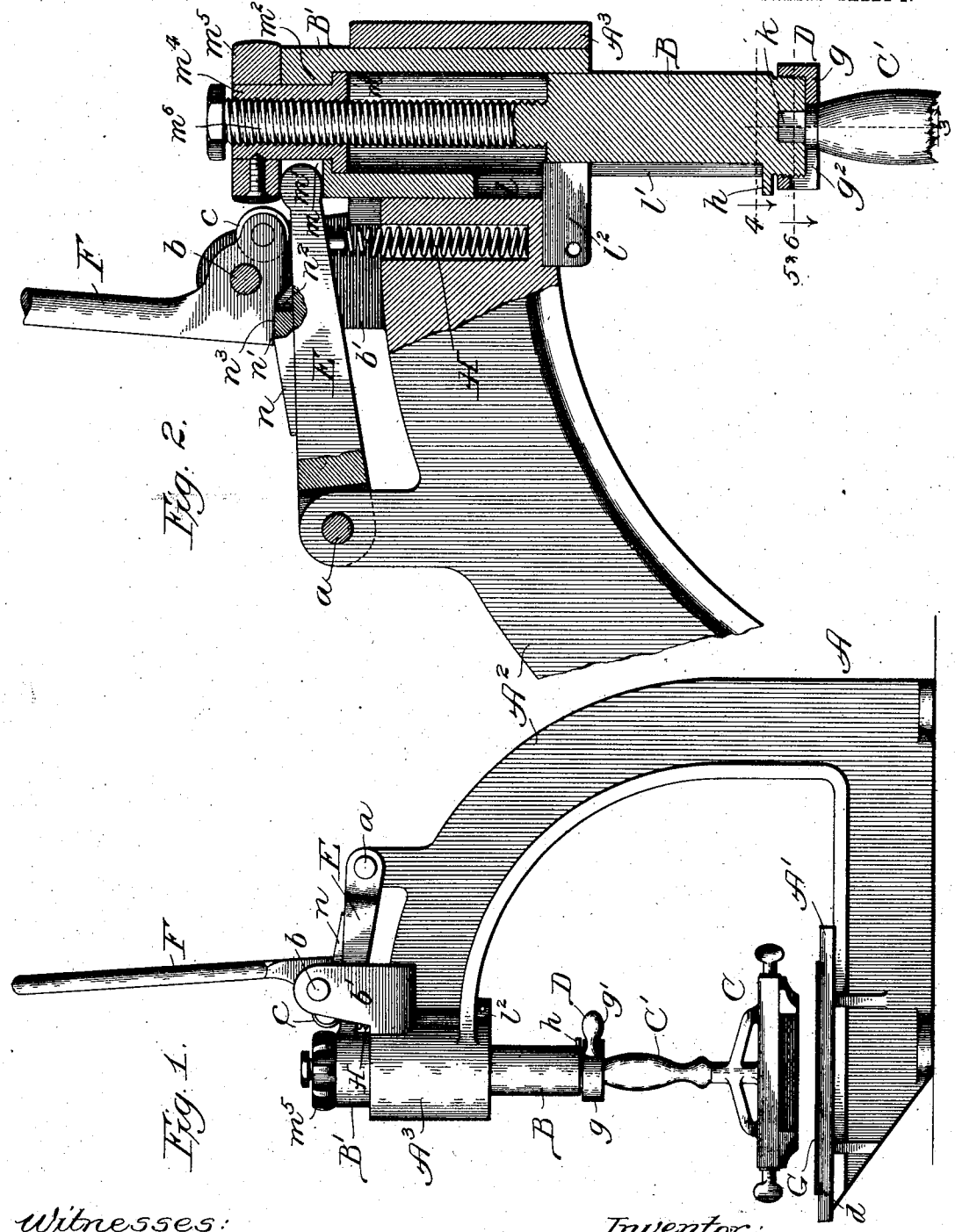
No. 761,991. PATENTED JUNE 7, 1904.

H. L. PHELPS.

PRINTING OR EMBOSSING PRESS.

APPLICATION FILED AUG. 6, 1903.

NO MODEL. 2 SHEETS—SHEET 1.



Witnesses:
Chas. Clybod.
John Enders.

Inventor:
Harry L. Phelps.
By Dyrenforth, Dyrenforth and Lee,
Att'ys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

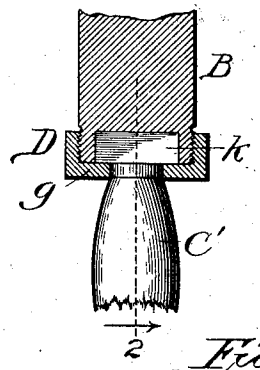


Fig. 4.

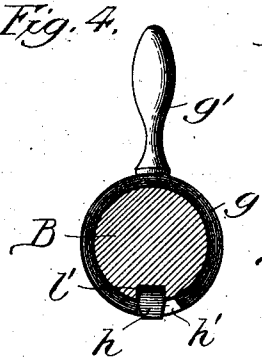


Fig. 5.

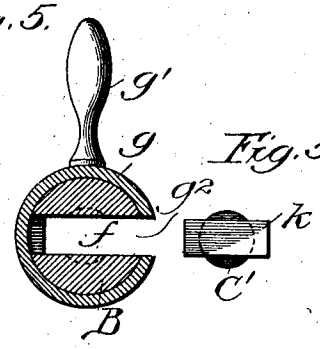


Fig. 5ª.

Fig. 6.

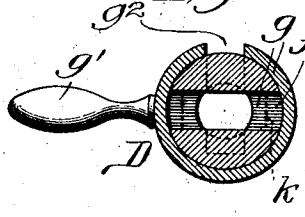


Fig. 7.

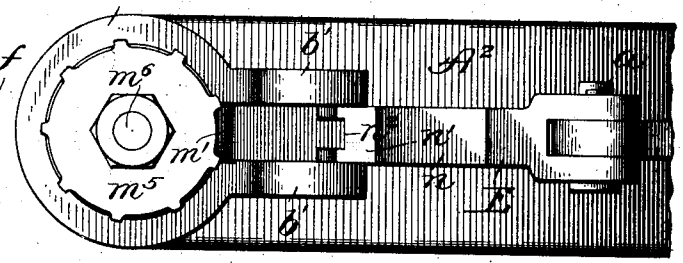
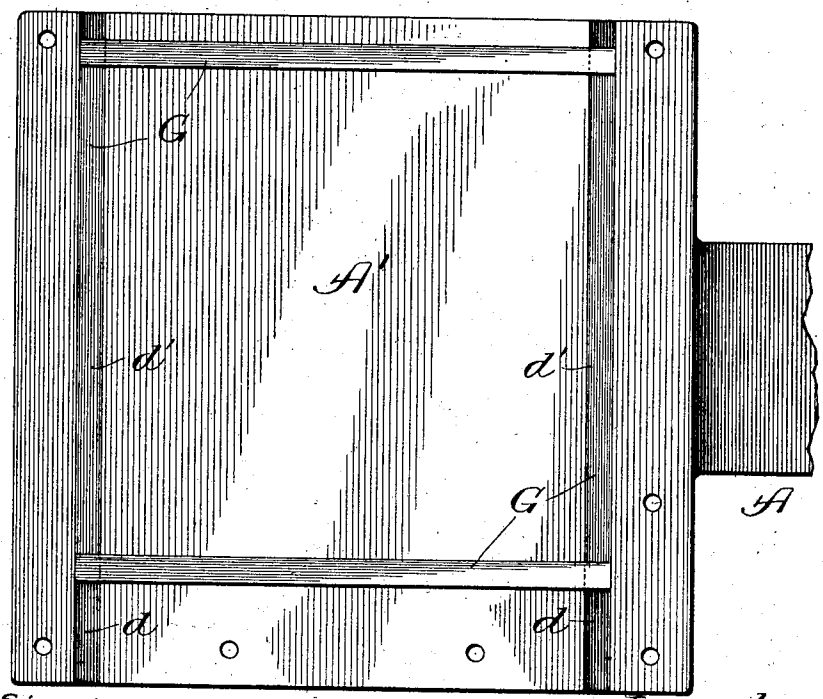


Fig. 8.



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 761,991. Patented June 7, 1904.

UNITED STATES PATENT OFFICE.

HARRY L. PHELPS, OF CHICAGO, ILLINOIS.

PRINTING OR EMBOSSING PRESS.

SPECIFICATION forming part of Letters Patent No. 761,991, dated June 7, 1904.

Application filed August 6, 1903. Serial No. 168,451. (No model.)

To all whom it may concern:

Be it known that I, HARRY L. PHELPS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Printing or Embossing Presses, of which the following is a specification.

My invention relates particularly to presses for use in embossing leather or for other similar uses.

My primary object is to provide an improved press of this character, particular attention having been paid to securing simplicity of construction and ready adjustment of parts.

The invention is shown in its preferred embodiment in the accompanying drawings, in which—

Figure 1 is a side view of my embossing-machine; Fig. 2, an enlarged broken vertical section of the same, the section being taken as indicated at line 2 of Fig. 3; Fig. 3, a broken sectional view taken as indicated at line 3 of Fig. 2; Fig. 4, a section taken as indicated at line 4 of Fig. 2; Fig. 5, a section taken as indicated at line 5 of Fig. 2, the fastening device for the embossing-head being in the open position; Fig. 5^a, a plan view of the stock of the embossing-head, showing the same in position to be inserted; Fig. 6, a section similar to Fig. 5, but showing the fastening device in the closed position; Fig. 7, a plan view of the arm of the main frame and attendant parts, the operating-lever being removed; and Fig. 8, a plan view of the base of the machine.

A represents a frame having a bed-plate A′ and a standard A^2, equipped with a vertical guide A^3; B, a plunger or reciprocating stock-holder adjustably connected with a sleeve B′, movable in the guide A^3; C, an embossing-head provided with a stock C′, movably connected with the stock-holder B by a fastening device D; E, a lever connected at its rear end by a pivot *a* with the standard A^2 and serving to actuate the plunger B, and F a bell-crank hand-lever connected by a pivot *b* with a yoke *b*′, with which the standard A^2 is equipped, and provided at its short arm with a roller *c*, which works upon the lever E.

The bed-plate A′ is provided with transverse grooves *d*, in which fit bars or members *d*′ of an adjustable frame G, which serves as a gage by means of which the material to be embossed may be properly located upon the bed-plate. The printing-frame or embossing-head C may be of any desired construction. It is ordinarily provided with letters or a design in relief of a metal which permits it to be heated.

The plunger B is provided at its lower end with a central transverse slot *f*, as shown in Fig. 6, and is externally threaded, as shown in Fig. 2. The fastening device B comprises a cap or ring *g*, having an upturned flange which is internally threaded, and a handle *g*′. The member *g* is provided with a slot g^2, which is cut into the bottom of the member and into the lower portion of the upturned flange at one side of the member. The plunger B is provided at the rear side of its lower end with a stop *h*, and the flange of the member *g* is provided with a stop *h*′, which engages the same when the fastening device is in the open position. (Shown in Figs. 4 and 5.) In this position of the parts the slot g^2 registers with the slot *f* in the lower end of the plunger. The stock C′ of the embossing-head has at its upper end a rectangular cross-piece *k*, provided with projecting ends, this cross-piece being of suitable dimensions to fit within the socket *f*. In the open position of the fastening device the slot g^2 serves as a guide for directing the upper end of the stock of the embossing-head to its socket. When the member *g* is turned through the medium of the handle *g*′, it is raised through the medium of the screw connection, while at the same time its bottom walls or flanges are brought beneath the projecting ends of the cross-piece *k*, thereby securing the stock firmly to the plunger.

The sleeve B′ is provided at its rear side with a slot *l*, and the plunger B is provided at its rear side with a slot *l*′. The frame-standard is provided with a projection l^2, which extends into these slots, thereby preventing the plunger and sleeve from turning. The sleeve also is provided at its upper end with a recess *m*, into which extends the rounded end or head *m*′ of the lever E. The sleeve is further provided at its upper end with an

internal flange m^2, with which engages the external flange m^3 of an upwardly-extending sleeve m^4. The sleeve m^4 projects some distance above the upper end of the sleeve B′ and has firmly secured to it a hand-wheel m^5. The sleeve m^4 is internally threaded and fits upon the threaded reduced end m^6 of the plunger B. It will be observed that the sleeve m^4, flange m^3, and hand-wheel m^5 form in reality a nut which is confined against movement longitudinally with relation to the sleeve B′. When this nut is turned, the plunger B is raised or lowered, according to the direction in which the nut is turned. The hand-wheel m^5 serves to hold the extremity m' of the lever E in proper relation to the sleeve B′. The lever E is normally held in elevated position by a spring H, located beneath the lever and extending parallel with the plunger B. The lever E is provided on its upper surface with a projection n, having a horizontal shoulder n' and a vertical shoulder n^2. The lever F when in its position of rest has a horizontal shoulder n^3, which engages the shoulder n', thereby limiting the upward movement of the plunger. When the lever F is depressed, the roller c moves along the upper surface of the lever E till the shoulder n^2 is encountered, whereby the downward movement of the plunger B is limited. It thus appears that the plunger has a given stroke and that it may be preparatorily adjusted in height to accommodate different thicknesses of material beneath the embossing-head.

From the foregoing detailed description the operation will be readily understood. The printing device or embossing device, as the case may be, is connected with the plunger or stock-holder B by sliding the head k of the stock inwardly by a lateral movement when the fastening device is in the position shown in Figs. 4 and 5, after which the fastening device is moved to the closed position, thereby securing the stock in place. The plunger B is adjusted with relation to the sleeve B′, according to the height of the work which is placed upon the bed A′. The material is then placed in position on the bed-plate and the hand-lever operated, the movement of the hand-lever being limited, as described. In the printing or embossing operation for which the press was particularly designed gold-leaf is applied to the upper surface of the leather to be embossed, the printing or embossing head is preliminarily heated, and after the latter is secured to the plunger the pressing operation is performed, as already described.

It will be understood that changes in details of construction within the spirit of my invention may be made. Hence no undue limitation should be understood from the foregoing detailed description.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a press of the character described, a plunger having its lower end provided with a central transverse slot extending inwardly from one wall, a cap-piece having threaded connection with said plunger and provided with a transverse slot extending inwardly from one wall and registering with said first-named slot in the open position, means for turning said cap-piece, and a stock provided at its upper end with a head fitting within the slot in said plunger.

2. In a press of the character described, the combination of a plunger having a transverse slot extending inwardly from one lateral wall at the lower end of the plunger, a cap-piece having threaded connection with the lower end of the plunger and having a transverse slot extending inwardly from one lateral wall and registering with said first-named slot, stops on said cap-piece and plunger engaging each other, and a stock having a head fitting in said first-named slot and provided with projections engaged by the inner surface of the bottom of said cap-piece, for the purpose set forth.

3. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger movable in said guide, a lever pivotally connected with said frame and having connection with said plunger, and a bell-crank hand-lever pivoted on said frame and having a short arm serving to actuate said first-named lever.

4. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger movable in said guide, a lever pivotally connected with said frame and having connection with said plunger, and a bell-crank hand-lever pivoted on said frame and having a short arm equipped with a roller working upon said first-named lever.

5. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger reciprocable in said guide, a lever pivotally connected at its rear portion with said frame and having engagement at its front portion with said plunger, and a normally elevated forwardly-swinging hand-lever pivotally supported on said frame and having a short arm serving to depress said first-named lever.

6. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger reciprocable in said guide, a lever pivotally connected at its rear portion with said frame and having engagement at its front portion with said plunger, and a normally elevated forwardly-swinging hand-lever pivotally supported on said frame and having a short arm equipped with a roller working upon said first-named lever.

7. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger reciprocable in said guide, a lever pivotally connected at its rear portion with said frame and having engagement at its

front portion with said plunger, and a normally elevated forwardly-swinging hand-lever pivotally supported on said frame and having a shoulder engaging a shoulder on said first-named lever in the position of rest, a roller connected with said hand-lever and working upon said first-named lever, and a shoulder on said first-named lever limiting the rearward travel of said roller, for the purpose set forth.

8. In a press of the character described, the combination of a suitable frame provided with a guide, a plunger reciprocable in said guide, a lever pivotally connected at its rear end with said frame and having its front end connected with said plunger, a spring confined between said lever and said frame and tending to hold the lever normally elevated, and a hand-lever serving to depress said first-named lever.

9. In a press of the character described, the combination of a frame provided with a guide, a sleeve movable longitudinally in said guide, a nut connected with the upper portion of said sleeve and immovable longitudinally with relation thereto, and a plunger having a threaded upper end extending into said sleeve and connected with said nut.

10. In a press of the character described, the combination of a frame provided with a guide, a non-rotatable sleeve movable longitudinally in said guide and provided at its upper end with a recess, a non-rotatable plunger extending through said sleeve and having a threaded upper end, a sectionally-constructed nut having flanged connection with said sleeve, the upper portion of said nut serving as a hand-wheel and as an upper wall for said recess, a lever pivotally connected at its rear portion with said frame and having its front end projecting into said recess, and means for actuating said lever.

HARRY L. PHELPS.

In presence of—
W. B. DAVIES,
SAML. G. PRINCE.