F. L. Bailey. Sheet 1. 4 Sheets.

Printing Press.

No. 27197. Patented Feb. 21. 1860.

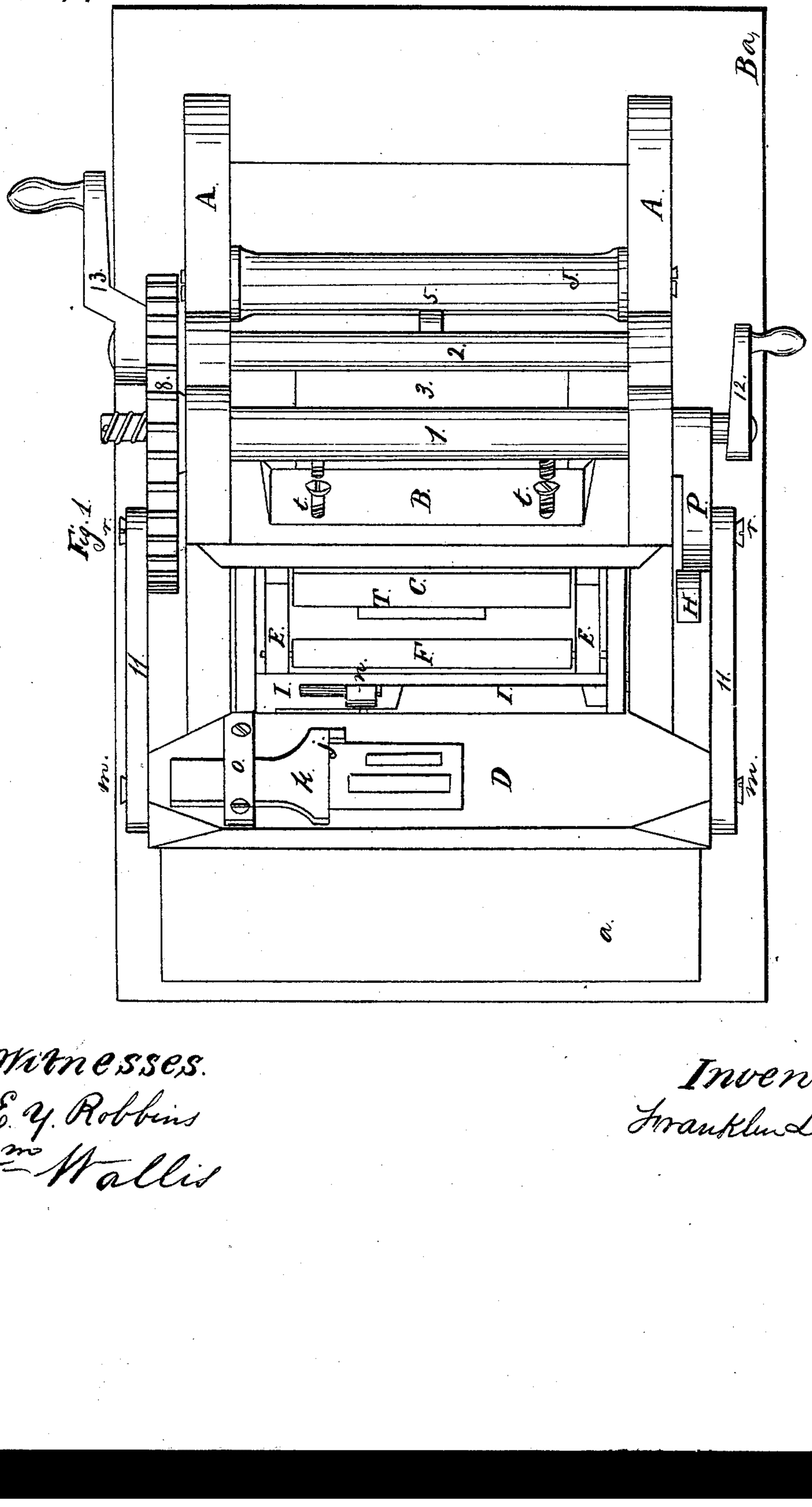


Fig. 1.

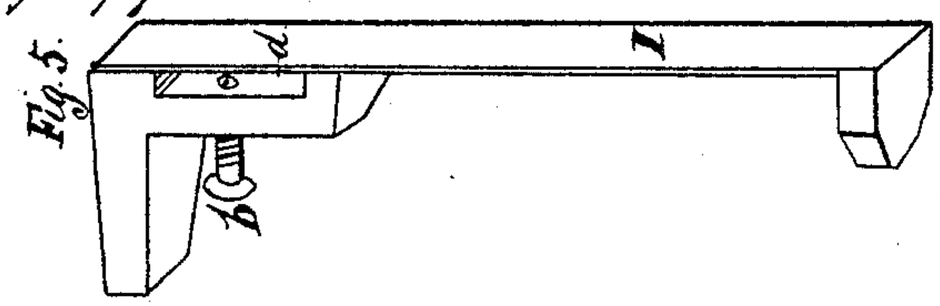
Witnesses.
E. Y. Robbins
Wm. Wallis

Inventor.
Franklin L. Bailey

F. L. Bailey. Sheet 2. 4 Sheets.

Printing Press.

No. 27197. Patented Feb. 21. 1860.



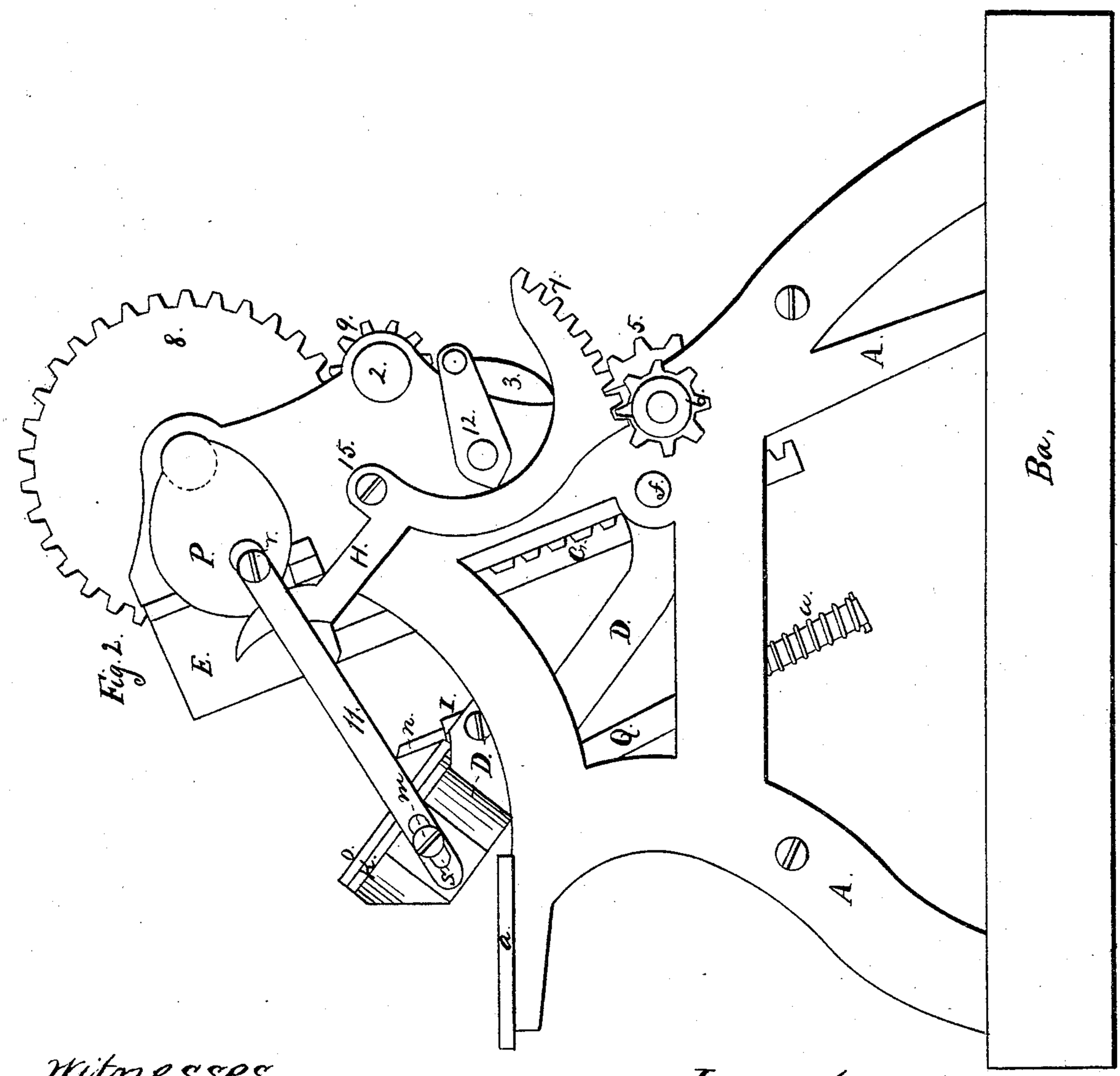


Fig. 2.

Witnesses.
E. Y. Robbins.
Wm. Wallis.

Inventor
Franklin L. Bailey.

F. L. Bailey. Sheet 3. 4 Sheets.

Printing Press.

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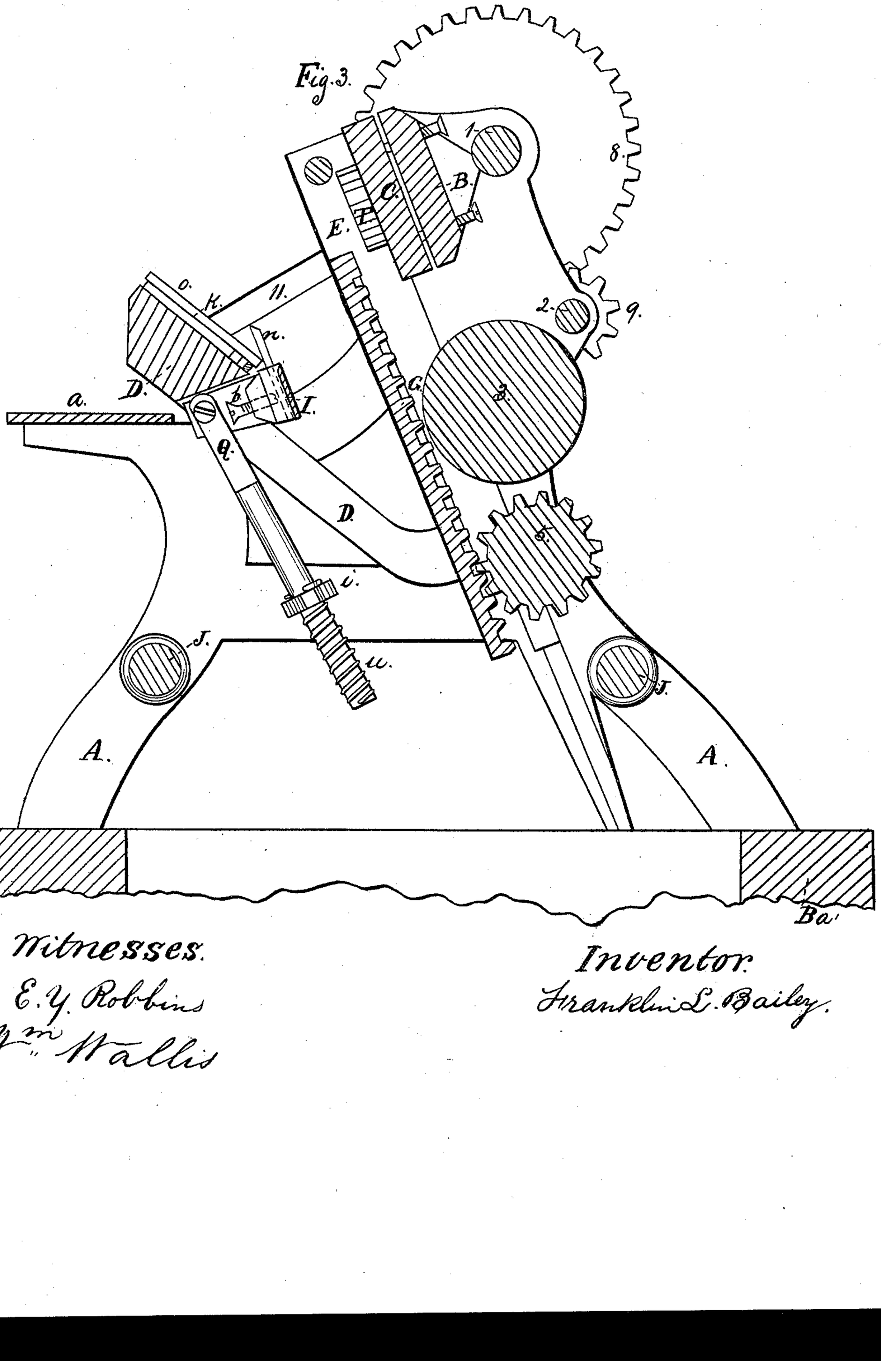
Fig. 3.



Witnesses.

E. Y. Robbins

Wm. Wallis

Inventor.

Franklin L. Bailey.

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Printing Press.

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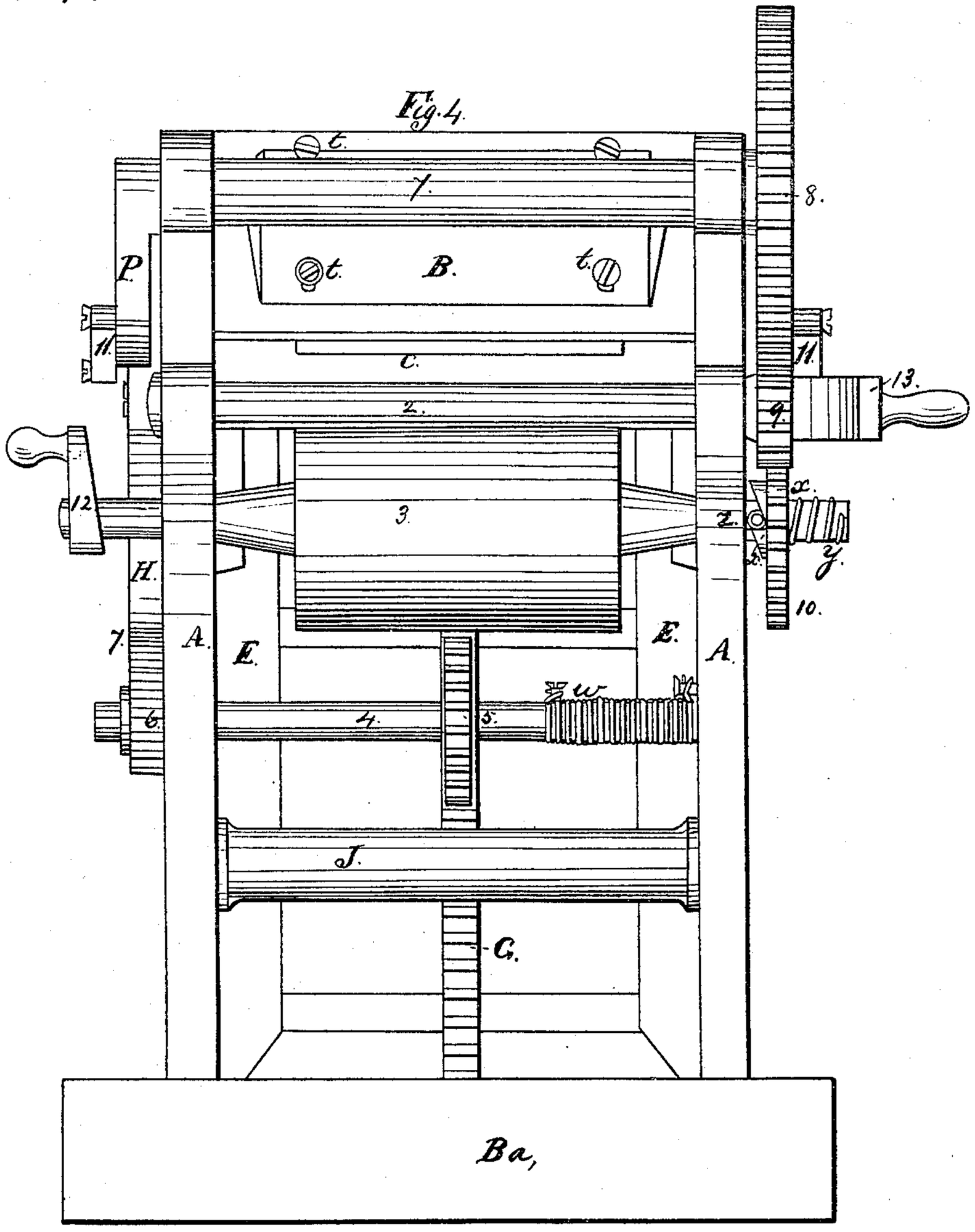
Fig. 4.



Witnesses.
E. Y. Robbins
Wm Wallis

Inventor.
Franklin L. Bailey

UNITED STATES PATENT OFFICE.

FRANKLIN L. BAILEY, OF BOSTON, MASSACHUSETTS.

PRINTING-PRESS.

Specification of Letters Patent No. 27,197, dated February 21, 1860.

To all whom it may concern:

Be it known that I, FRANKLIN L. BAILEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Printing-Press; and I hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a plan view. Fig. 2, is a side view. Fig. 3, is a longitudinal vertical section. Fig. 4, is a back end view. Fig. 5, is a detached view of the nipper bar as seen in Fig. 3, to be hereinafter referred to.

In the above figures B*a*, denotes the base, which, with the sides A, A, the girts J, J, and the cross beam B, constitute the frame of the press.

In Fig. 3, C, represents a stationary but adjustable bed, placed in an inclined position under the beam B. On its lower side is seen the type-form T.

D, as seen in Fig. 1, is the platen, on which the paper to be printed is placed. This platen being hinged at *f*, (Fig. 2,) is made to swing up against the type T, and give the impression.

1, is a revolving shaft having on one end a cam P, on the opposite end a large gear 8, to the outer surface of which cam and gear, are hinged one end of each of the two arms 11, 11, by the screws *r*, *r*; the lower ends of said arms are hinged to the vibrating platen D. By this means upon the rotation of the shaft 1, the platen is brought, alternatively, face to face, up against the type T, and allowed to fall back by its own gravity to the lowest inclined position as seen in Figs. 2 and 1. The platen comes to a state of rest when in this position (for the purpose of a better opportunity to lay the sheet of paper), by coming in contact with the frame A, A. Meanwhile the shaft 1, having a continual rotation, the arms 11, 11, will have a continued downward and upward motion at the point *s*, as seen in Fig. 2, and for the purpose of discontinuing for a brief period of time, this downward and upward motion in the platen D, the slots *s*, in the arms, as seen in Fig. 2, are made. These slots by sliding on the screws *m*, *m*, allow a rest to the platen, until, on the upward movement of the arms the lower end of the slots come in contact with the screws *m*, *m*, then take the platen along in their upward course. This mode of giving the impression by the screws or cranks *r*, *r*, and the arms 11, 11, is the most simple and the strongest known. It seemed very desirable to give a little rest to the platen for the purpose of greater facility in laying the sheet to be printed. This I have effected (and in this consists my improvement) as above described, by the slots *s*, *s*, in the arms 11, 11. This peculiar mode of giving the impression is, in impelling or pulling the platen against the form simply by cranks, without the intervention of other parts.

To the platen, and on its lower side, is hinged a nipper bar I, as seen in Figs. 1, 2 and 3. This bar is made to vibrate by the joint movement of the platen and connecting rod Q, said rod being hinged to an elbow on said bar. By the upward movement of the platen this rod is drawn through a stud *i*, on frame A, (Fig. 3) the spring *w* clasping the nipper *n*, down on to the card or paper. A pin *i*, goes through the same rod which, impinging on the top of the stud at *i*, on the downward movement of the platen lifts said nipper *n* from the platen.

The nipper *n*, is made vertically adjustable in the shallow oblong slot *d*, in the bar I, (Fig. 5,) and made fast by the screw *b*, thereby avoiding the necessity of having a slot in the nipper, also is more simple and stronger.

In Fig. 1, at *k*, is seen a guide to be used in printing cards. This guide has an elbow, *j* on its lower side against which the card is placed and held by the hand until the nipper *n*, holds it, which, on the descent of the platen lifts from it again and allows the card to drop into a box below. This guide is capable of an adjustment vertically as well as horizontally, on the platen D, (Fig. 1,) by being placed under the clamp *o*, through which two screws pass into the platen.

In Figs. 2 and 4, at 2, is a shaft having a pinion *g*, and crank 13, on the same end, said pinion joins and gives motion to the large gear 8. This pinion 9, also joins and gives motion to the gear 10, (in Fig. 4) and this gear by means of the clutch *x*, *x*, pin Z, and spiral spring *y*, which are upon one end of the shaft of the ink-cylinder 3, gives motion to this cylinder.

It being very desirable to distribute the ink on the surface of the cylinder 3, by hand, when a fresh supply is put on, or different quality, or color, previous to running the roller over the form, this is done

by revolving said cylinder by the crank 12; the gear 10, capable of a lateral motion, being forced outward by the pin Z, and the inclines on the clutches *x*, *x*, will allow it to be revolved in one direction, for said purpose; the spring *y*, forces the gear and clutch into place to be operated by the running of the press, and with the other parts.

In Fig. 2, at H, is a vibrating lever hinged at 15. One end of this lever is made to bear against the rotating cam P, and to be operated by it. On the opposite end at 7, is a segmental rack, which joins and puts in motion the pinion 6, on the shaft 4, as seen in Fig. 4. On this shaft 4, is fixed the gear 5, (Fig. 3) which joins and puts in motion the straight rack G, and the carriage E.

On this carriage is a roller F, which is made to move from the ink cylinder up against the type T, to give them a coating of ink. This is done by the above described means of said cam P, lever H, and rack 7, pinion 6, gear 5, and rack G.

The spiral spring *w* on the shaft 4, serves to draw the roller carriage downward, if gravity is not sufficient, after the cam P, has forced it to its highest point, as seen in Fig. 3.

I will now describe the operation of this press. A card having been placed on the face of the platen D, against the guide *k*, motion is given to the press by crank 13, the platen is drawn upward, the nipper clasps the card in its upward motion toward the type, meanwhile the cam P, receding, allows the roller carriage to drop down so the roller F, will rest against the ink cylinder just previous to the time the platen reaches the form to take the impression. The upward movement of the platen completed, it then falls back, the roller carriage again rises, the nipper lifts from the card allowing it to drop, and the platen comes to a state of rest, as before.

I do not claim giving rest and motion to a vibrating platen, broadly, as that has been done in various ways, but

I claim—

1. Giving to the vibrating platen its periods of rest and motion, for the purpose described, when operated by the arms 11, 11, and shaft 1.

2. I claim the cavity *d*, and screw *b*, for the purpose set forth.

3. I claim the combination of the rack G, and cam P, for the purpose set forth.

4. I claim the combination of the guide *k*, and vibrating platen D, for the purpose set forth.

In testimony whereof I have hereunto set my signature, this tenth day of January A. D. one thousand eight hundred and sixty.

FRANKLIN L. BAILEY.

Witnesses:

E. B. Elliott,

Wm. Wallis.