

(No Model.)

3 Sheets—Sheet 1.

J. CASEY.

BOX PRINTING MACHINE.

No. 363,986.

Patented May 31, 1887.

Fig. 1.

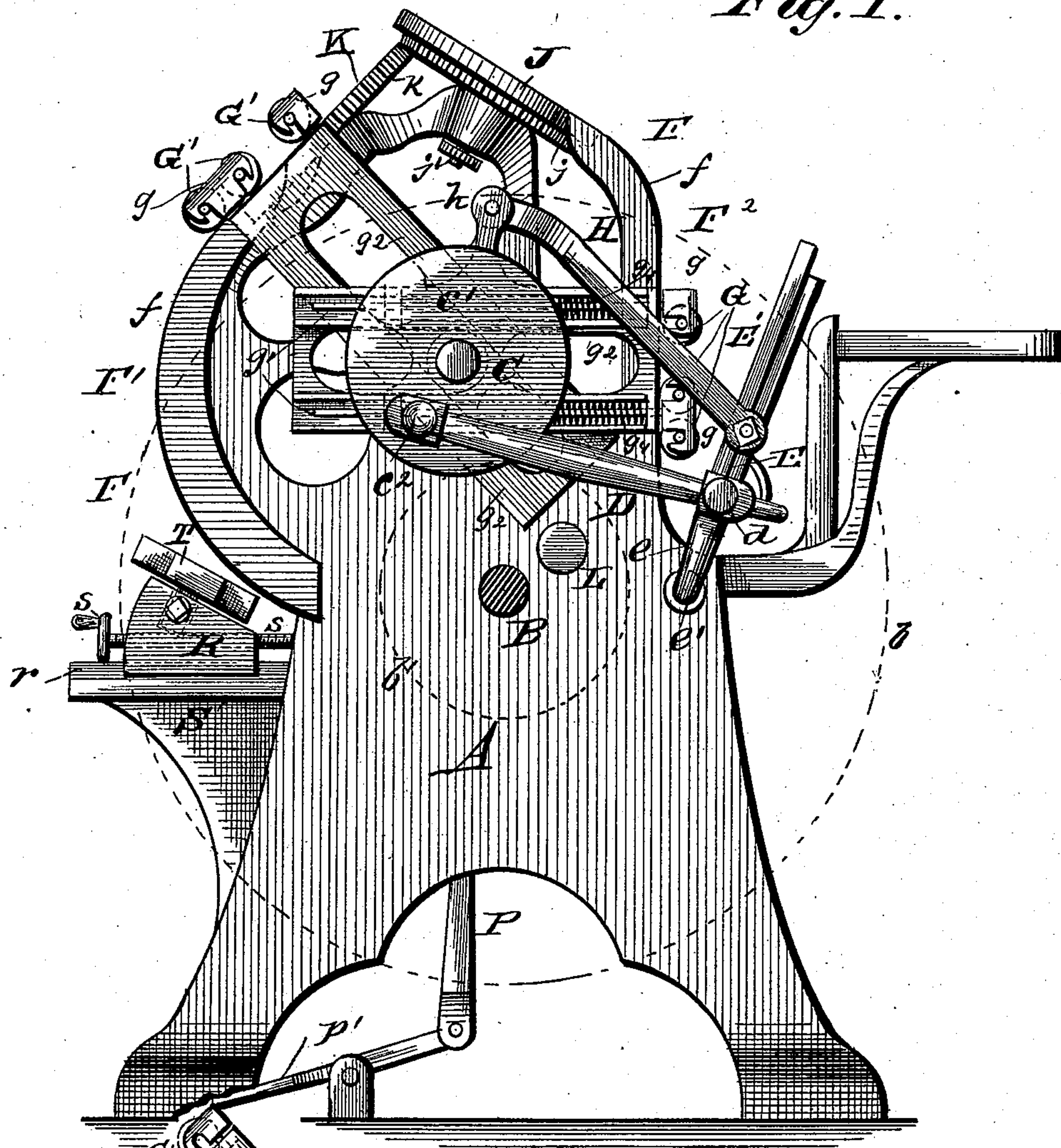


Fig. 4.

WITNESSES
Phil. Musi.
Bey. Fugitt.

INVENTOR

J. Casey.

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(No Model.)

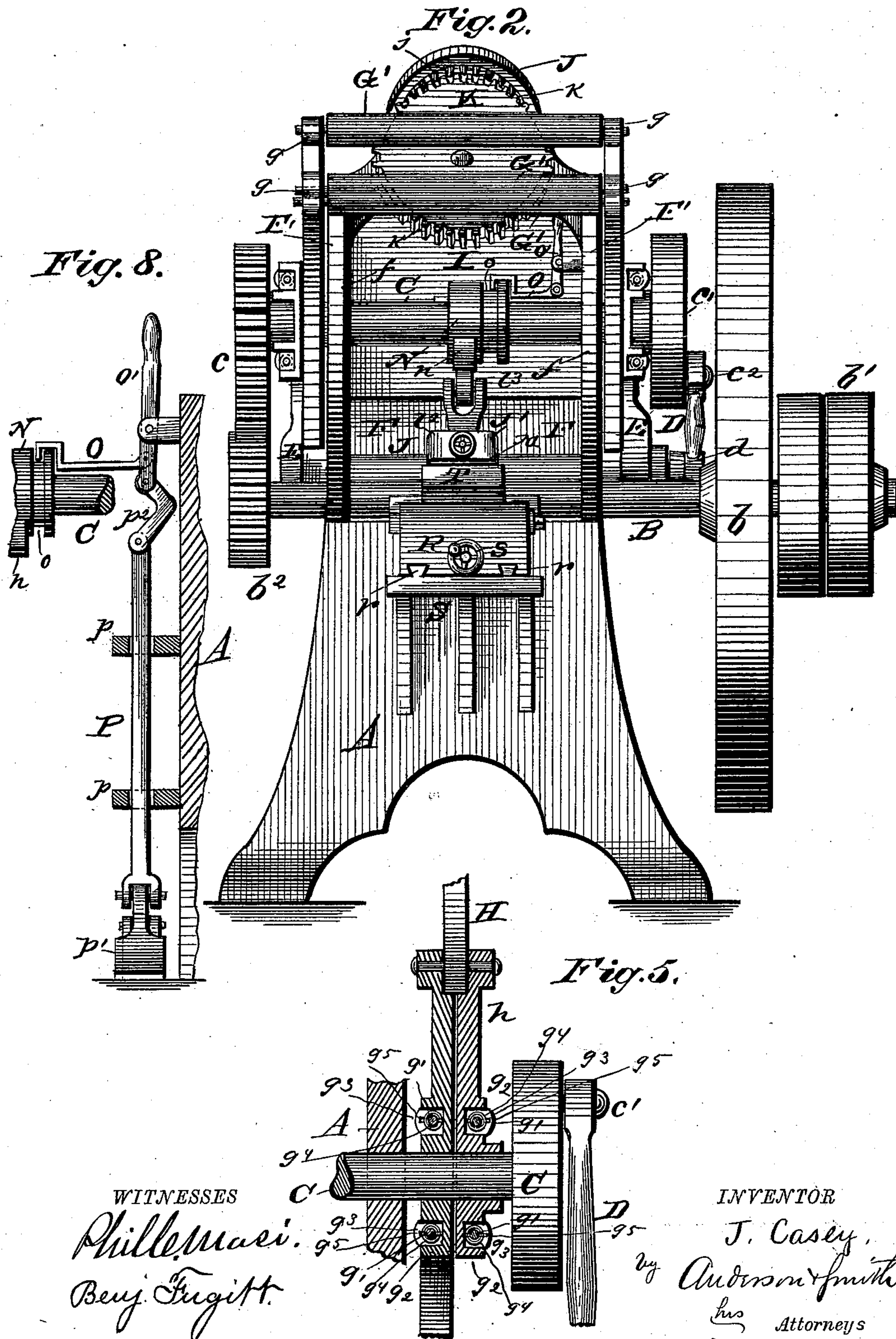
3 Sheets—Sheet 2.

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No. 363,986.

Patented May 31, 1887.



N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

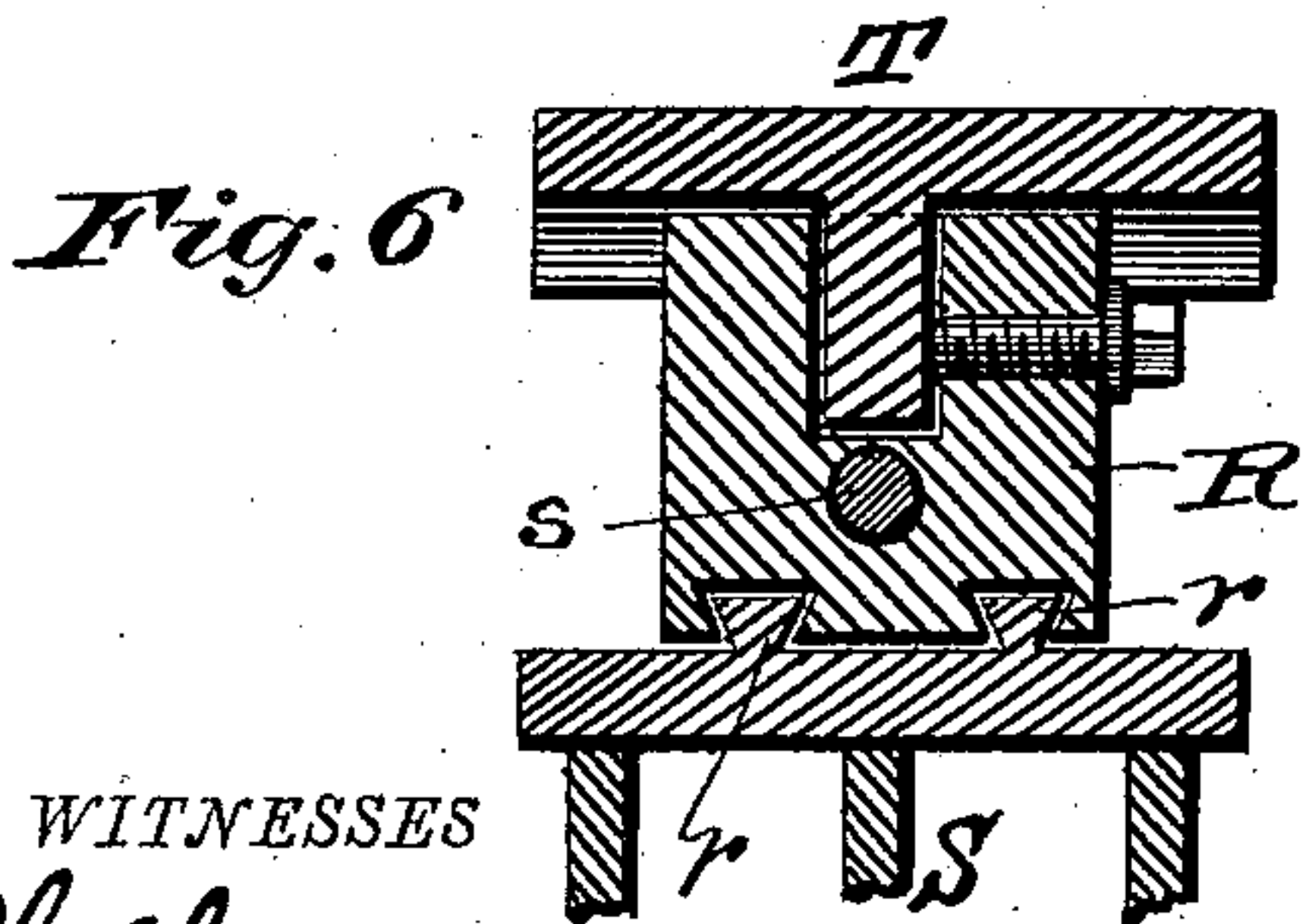
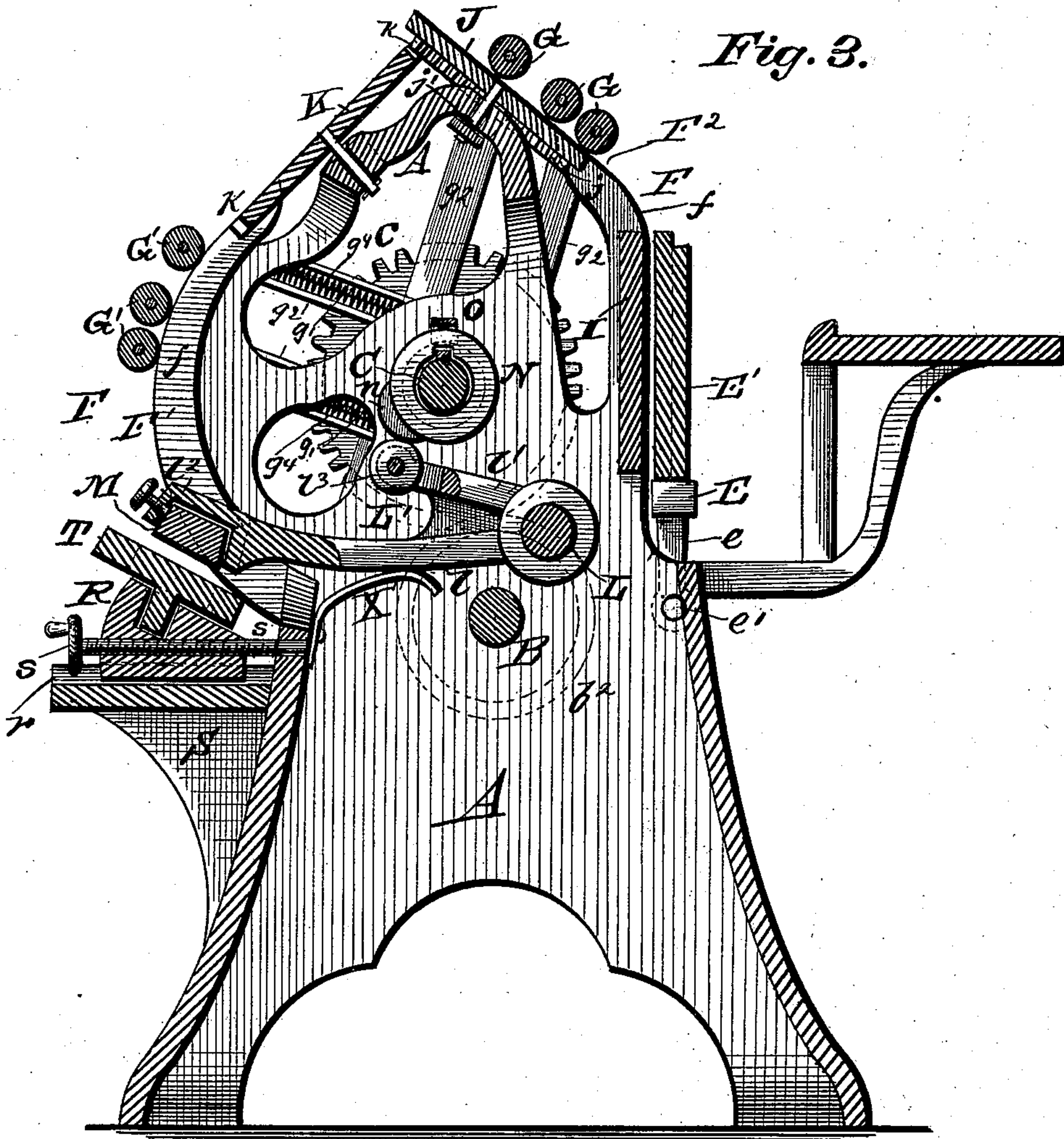
3 Sheets—Sheet 3.

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WITNESSES

Phile Masi.
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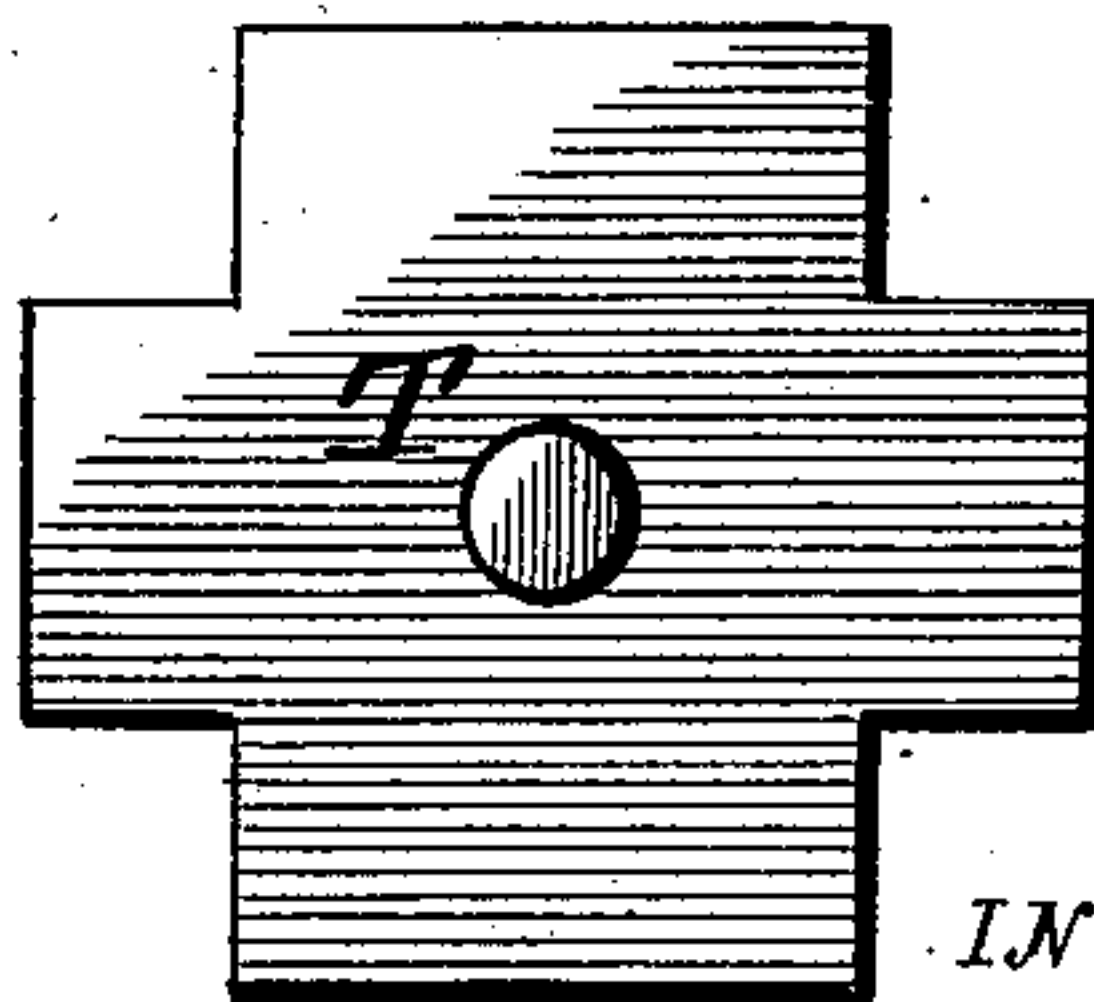


Fig. 7.

INVENTOR

J. Casey

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UNITED STATES PATENT OFFICE.

JEREMIAH CASEY, OF NEW YORK, N. Y.

BOX-PRINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 363,986, dated May 31, 1887.

Application filed April 3, 1886. Serial No. 197,699. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH CASEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Box-Printing Machines; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a side elevation. Fig. 2 is an end elevation. Fig. 3 is a vertical longitudinal section. Fig. 4 is a detail of the inking-roller device. Figs. 5, 6, 7, and 8 are detail views.

This invention relates to improvements in printing-presses, being adapted to print upon wood, and more especially upon the sides and ends of cigar-boxes when the same are put together; and it consists in the construction and novel combination of parts, as hereinafter described, and pointed out in the claims.

The improvement is preferably connected with a press of ordinary construction, both having one frame in common. The construction of the ordinary press will, as far as practicable, be first described, but in the description it will be necessary to mention some points of the improvement.

Referring to the accompanying drawings by letter, A designates the frame common to the improvement and to an ordinary press associated therewith.

B is the main or driving shaft, journaled in the sides of the frame, and carrying on one end, outside of its journal, the fly-wheel *b* and pulley *b'*, by means of which and a belt it is driven from any suitable source of power.

*b*² is a pinion on the other end of the shaft B, meshing with a gear-wheel, *c*, on the end of a shaft, C, which has its bearings in the sides of the frame A, and carries on its other end, outside of its bearings, a disk, *c'*, provided with a wrist-pin, *c*².

D is a pitman, one end of which is journaled on the said wrist-pin and the other end on a

pin, *d*, standing laterally from the side edge of the platen-frame E.

E' is the platen secured in the upper part of said frame, and having extending from the corners of its lower edge the legs *e e*, which form part of the platen-frame, and are pivoted at their lower ends upon the sides of the main frame at the opposite and corresponding points, *e' e'*.

It is evident from the described construction that the rotation of the gear-wheel *b* will by means of the pitman cause the platen and its frame to vibrate upon the pivot-points *e'*.

F is the guide-frame for the rollers, having the side guide-bars, *f f*, as usual. In this case the guide-frame is made double, one part pertaining to the ordinary press and the other to the improvement, both parts being continuous with one another. The part pertaining to the improvement will be designated by F' and the part pertaining to the ordinary press by F².

G G are the rollers of the set pertaining to the ordinary press, preferably three in number, and G' are those pertaining to the improvement. Both sets have the ends of their axles journaled in notches in the blocks *g*, secured to the ends of the rods *g'*, which are attached to the side bars, *g*², of the roller-frame. The rollers G travel over the part F² of the guide-frame, and the rollers G' over the part F' of the same, the rods *g'* moving in grooves in the side bars, *g*².

*g*³ *g*³ are guide-loops or staples on the side bars for the passage of the rods *g'*, and *g*⁴ *g*⁴ are spiral springs surrounding the said rods between the staples, as shown.

*g*⁵ *g*⁵ are pins against which the said springs act to drive the rods *g'* inward. The bars *g'* of the ordinary press are situated on the outside of the outer bar, *g*², and the rods *g'* of the improvement are on the inner side of the inner bar.

H is a suitably-curved connecting-rod, pivoted at its lower end above the pin *d*, inside of the pitman, and at its upper end upon a projection, *h*, rising from the side bar, *g*², of the guide-frame on the corresponding side of the machine. The said projection rises from the central point of the side bars where the same coalesce.

I is the form, secured between the guide-bars f of the part E^2 of the guide-frame in proper position to meet the platen when the latter is moved inward by the pitman D. It is evident that when the platen is thus moved inward the upper end of the rod H will be elevated and will carry the roller-frame upward, so that the rollers G and G' will pass over their respective distributing-plates, hereinafter described.

J is the distributing-plate of the ordinary press of usual construction, and rotated gradually in the usual manner by means of a crown-ratchet on its under surface and a pawl engaging therewith, which pawl is connected to the main frame and actuated by the working of the machine. The plate is provided on its under surface with a concentric ratchet, j , near its edge, and its stem is journaled in the top of the main frame A.

K is the distributing-plate of the improvement, also having its stem journaled in the upper part of the main frame, and its periphery is provided with the teeth k , which mesh with the rack j , so that the rotation of the plate J rotates the plate K.

L is a shaft journaled in the sides of the main frame and having secured to it the frame L', that carries the stamping or branding die, M. The said frame is V-shaped, being composed of two arms, l l' . The lower arm, l , has at its end a properly-shaped box, l^2 , open below, in which box the stamping-die M is inserted and held therein by proper set-screws. The upper arm, l' , is bifurcated at its end, and has journaled between the arms of the bifurcation the axis of a friction-roller, l^3 , as shown. To strengthen the frame L', it is provided with a web between its arms.

N is a cam-roller, splined on the shaft C and provided in its periphery with the cam-lug n , adapted to bear upon the roller l^3 and depress the frame L' and die M as the roller N rotates with the shaft C.

X is a strong spring, having its lower end secured to the frame of the machine and its upper end bearing against the lower surface of the lower arm, l , so as to elevate the same after the frame L' has been depressed by the cam-roller.

O is a rod having its inner end bent down and inserted into a circumferential groove, o , in the roller N outside of the cam-lug. The outer end of said rod is pivoted to the end of the lower arm of a lever, o' , which is pivoted to a projection standing inward from the main frame. By means of said lever and rod the roller N may be slid by hand on the shaft C, so that the cam-lug will not impinge on the friction-roller l^3 and the frame L' will not be actuated. If the hands are employed so that it is not convenient to use the lever o' directly, the cam-lug may be disengaged from the friction-roller by the following mechanism.

P is a vertical rod moving in the guides p p , standing inward from the side of the main

frame, and p' is a treadle pivoted to the lower end of said rod and having its shaft journaled in the main frame.

p^2 is a curved link pivoted to the upper end of the rod P and to the lower arm of the lever o' . By pressing on the treadle with the foot the curved link is made to move the lower arm of the lever, and consequently, by means of the rod O, slide the roller N on the shaft C and disengage it from the friction-roller.

R is a bed-block, having its upper surface inclined to correspond to the inclination of the stamping or branding die M. The block R is grooved to slide on the dovetailed ways r r , formed in the upper surface of a support, S, forming part of the main frame, rigidly secured thereto. s is a screw having a hand-wheel on its outer end, passing through a threaded opening in the bed-block and engaging in an unthreaded opening on the main frame. By means of the said screw the bed-block may be moved inward or outward.

T is a rectangular block, pivoted centrally upon the upper surface of the bed-block in such manner that either its side or its end will project a suitable distance outward from the same when either is turned outward on its pivot. The side is of proper length to enter a cigar-box and support the side of the same when being printed or stamped by the stamping-die M, and the end serves the same purpose for the end of the cigar-box.

The bed-block R is made adjustable in position to accommodate different thicknesses of wood. It is drawn outward when printing on thick pieces and moved inward when printing on thin pieces.

Having described this invention, what I claim is—

1. In a printing-press, the combination of the cam-roller having the cam-lug on its periphery, the cam-roller shaft, the stamping-die frame having a friction roller in its upper arm to engage against the cam-lug and carrying the stamping-die at the end of its lower arm, the stamping die, the bed-block attached to and adjustable upon a support secured to the main frame, and the block pivoted by its center to the bed-block and adapted to support a box while the latter is receiving the impact of the stamping-die, substantially as specified.

2. In a printing-press, the combination of the main frame, the main shaft B, carrying the fly-wheel b , pulley b' , and pinion b^2 , the shaft C, carrying the gear-wheel c , disk c' , pivoted with the wrist-pin c^2 , and cam-roller N, having the cam-lug m , the pitman D, the platen-frame E, the guide-frame F, the rollers G G', the roller-frame having properly-shaped side bars, the connecting-rod H, the distributing-plates J and K, the stamped die-frame L, secured to the shaft J, the stamping-die M, the adjustable bed-block R, and the block T, pivoted thereto, substantially as specified.

3. In a printing-press, the cam-roller pro-

vided with the cam-lug, and splined upon and
turning with a shaft rotated by the main
shaft by means substantially as described, the
stamping-die frame secured to a shaft jour-
5 naled in the main frame, and having its up-
per arm engaged against the cam-lug, the
rod O, engaging a circumferential groove in
the cam-roller, the pivoted lever o', the ver-

tical rod P, the treadle p, and curved link p²,
substantially as specified. 10

In testimony whereof I affix my signature in
presence of two witnesses.

JEREMIAH CASEY.

Witnesses:

PHIL. C. MAST,
THEODORE S. WEST.