

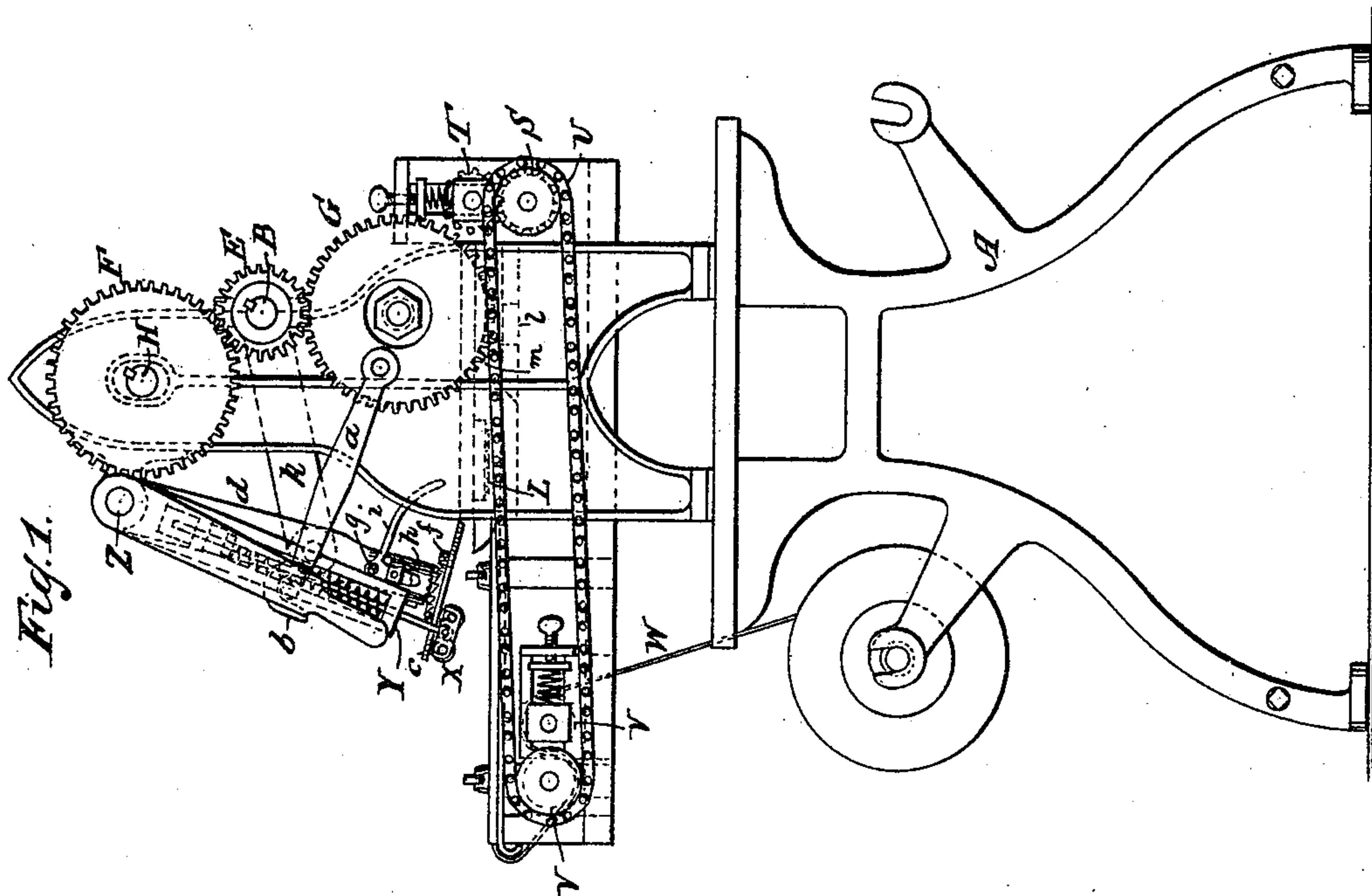
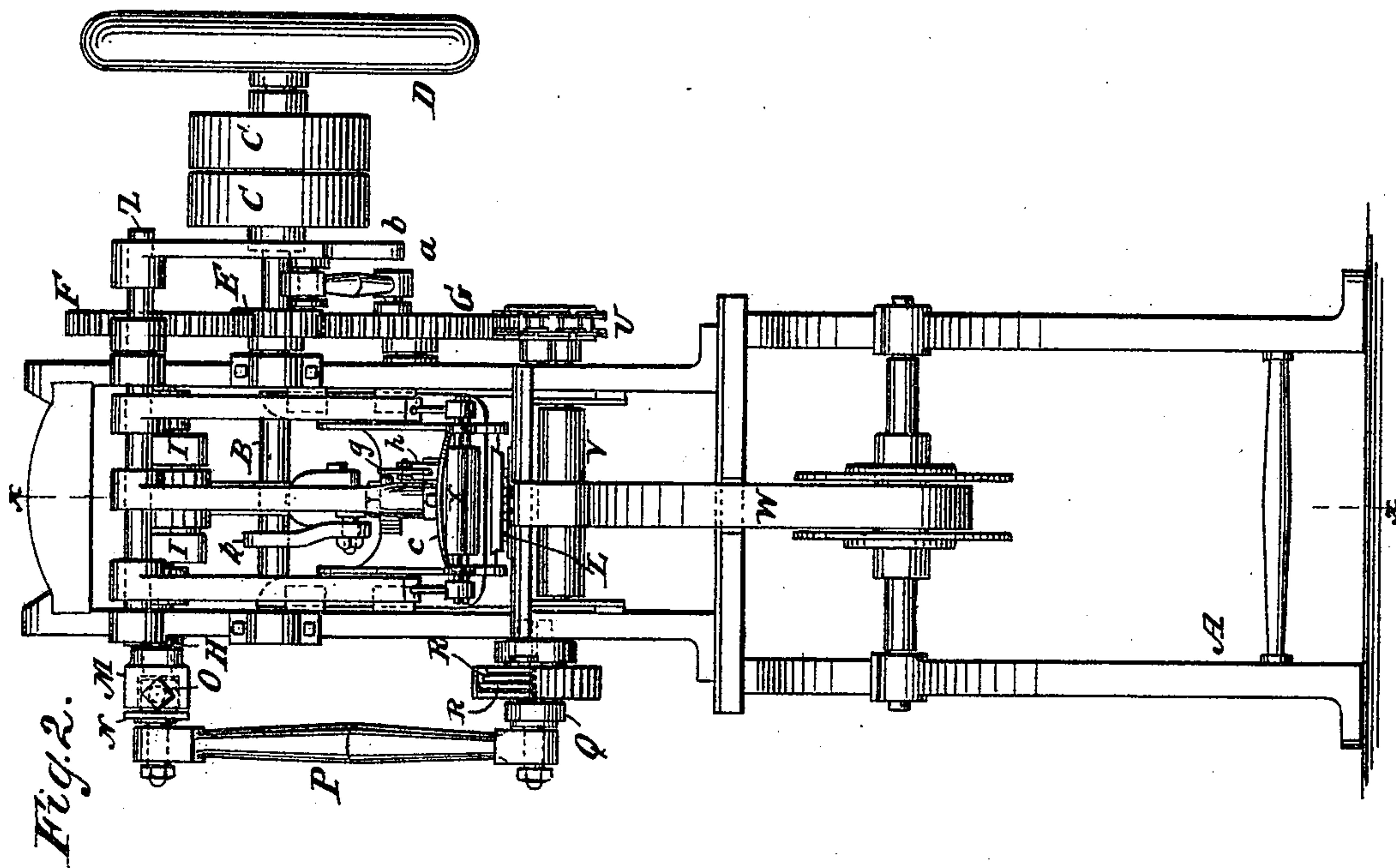
(No Model.)

3 Sheets—Sheet 1.

C. H. COTTON.  
PRINTING PRESS.

No. 438,988.

Patented Oct. 21, 1890.



WITNESSES:

*Eduard Wolff.*  
*William Miller.*

INVENTOR:

*Clifton H. Cotton.*

BY

*Van Sester & Co.*

ATTORNEYS

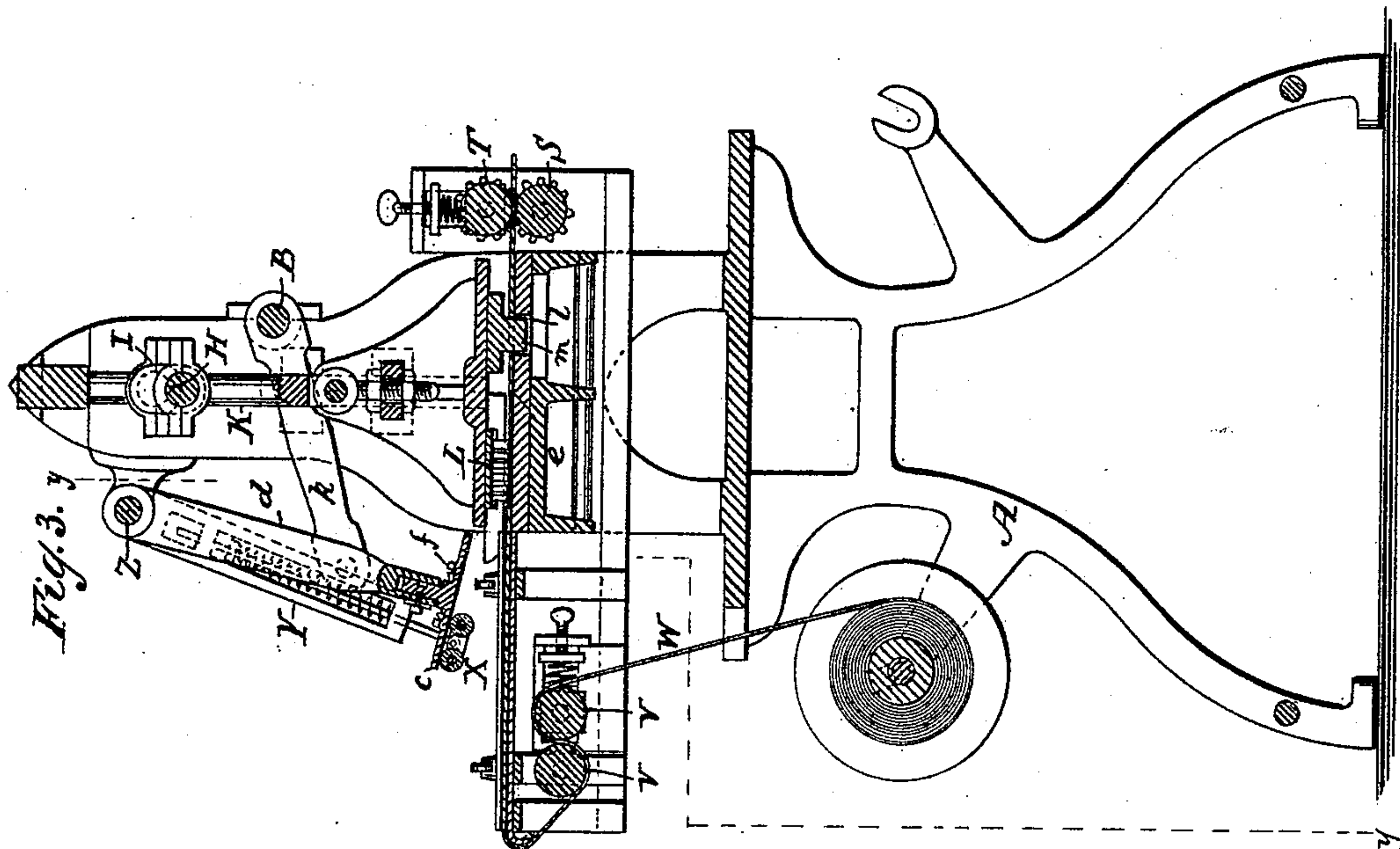
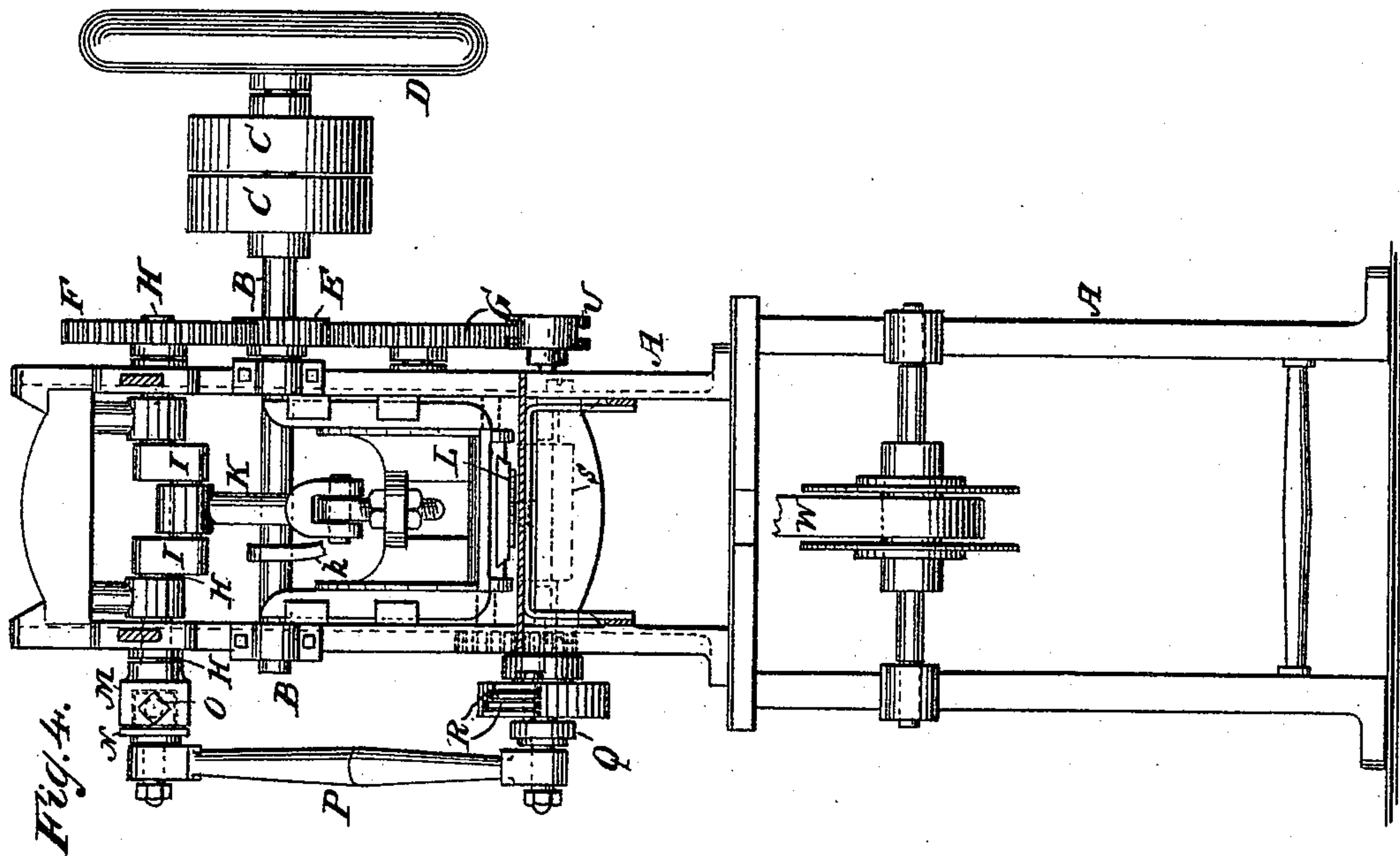
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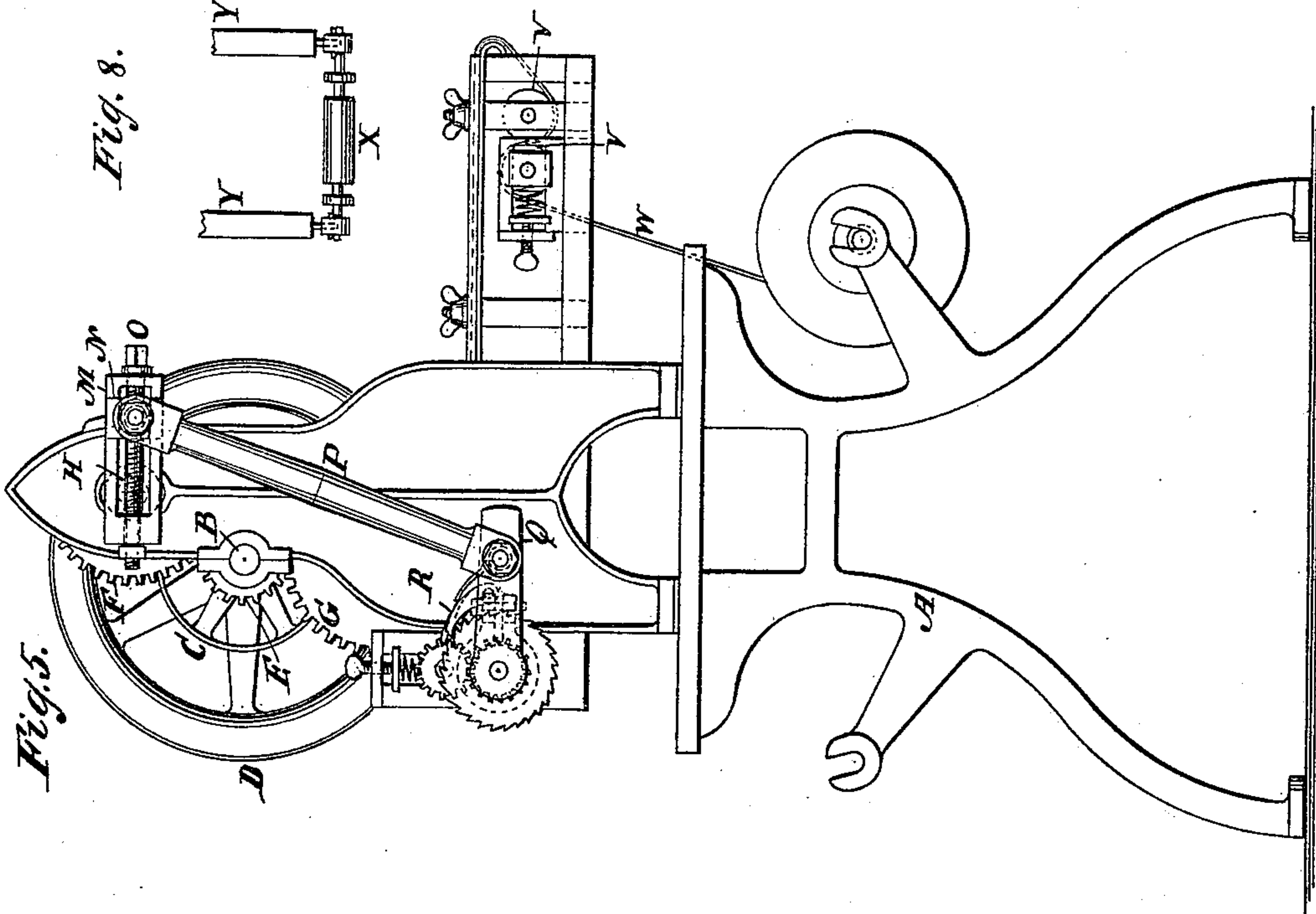
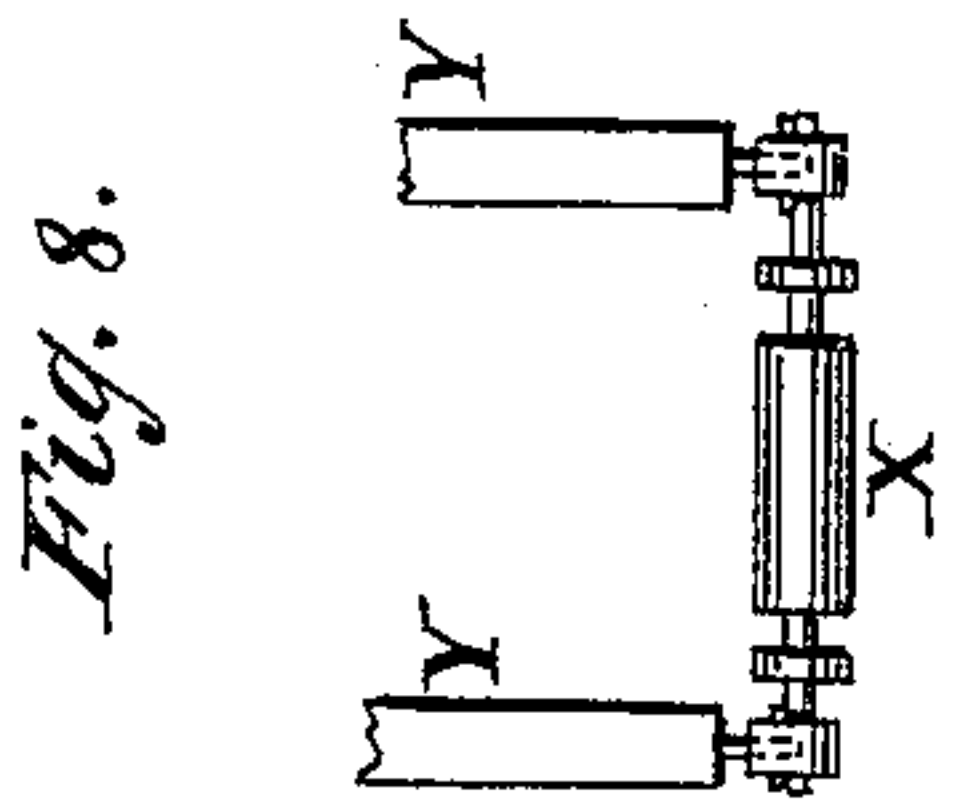
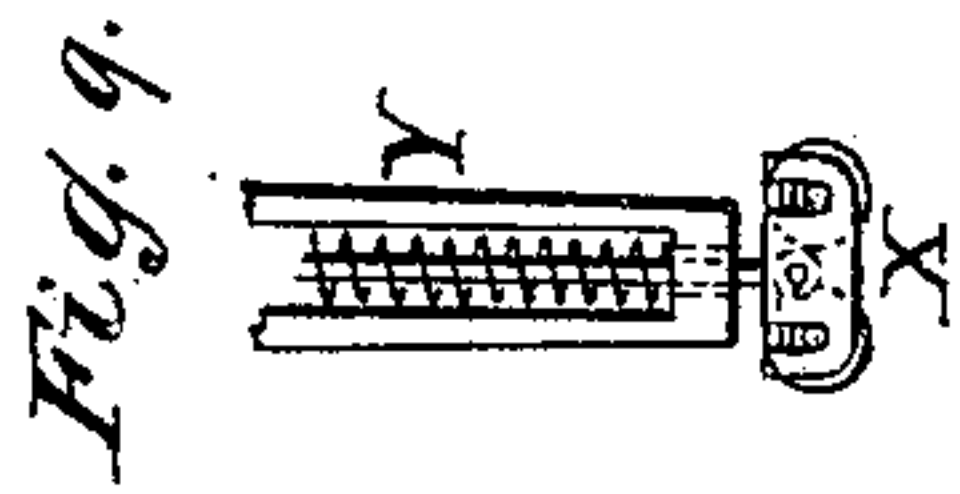
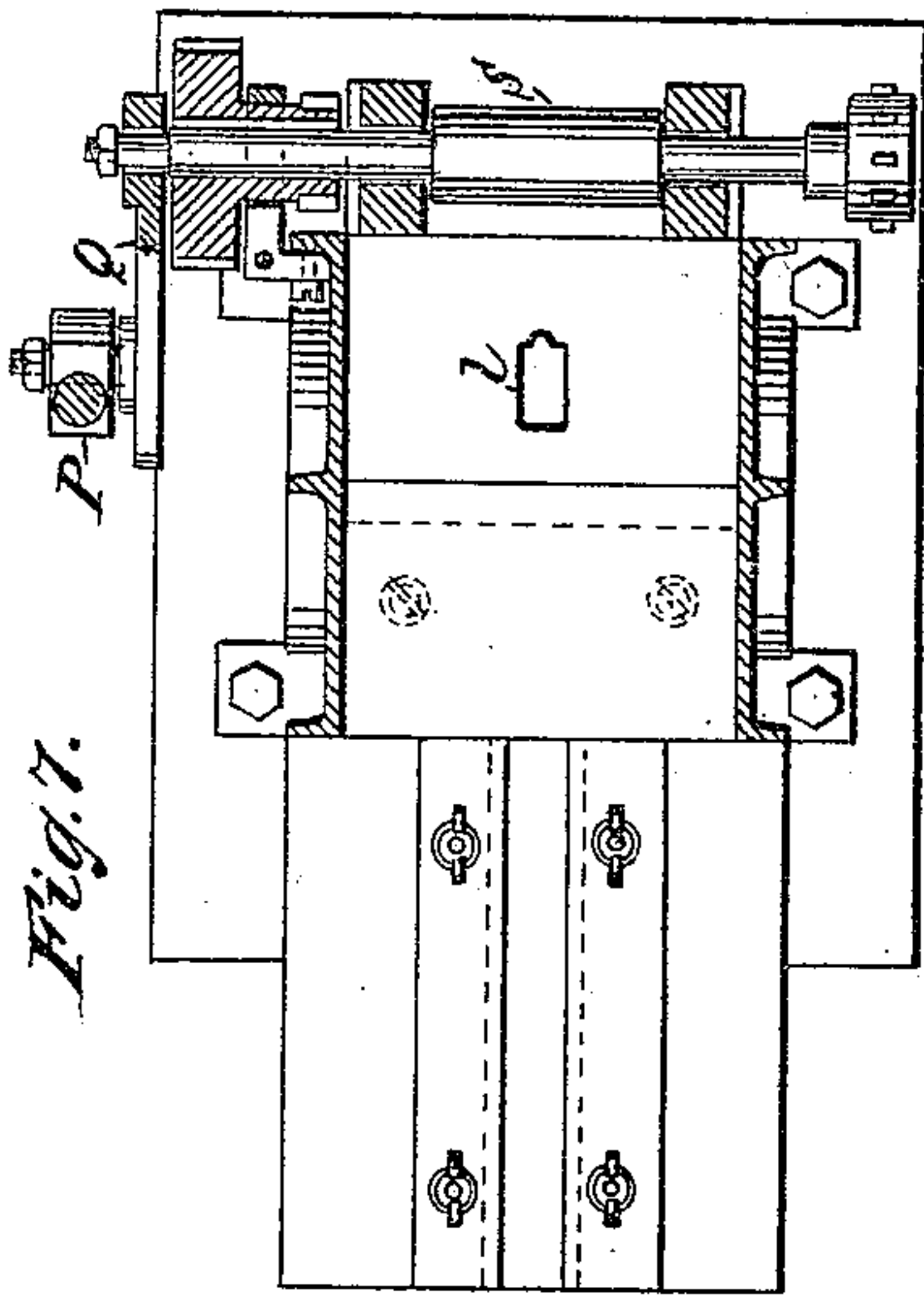
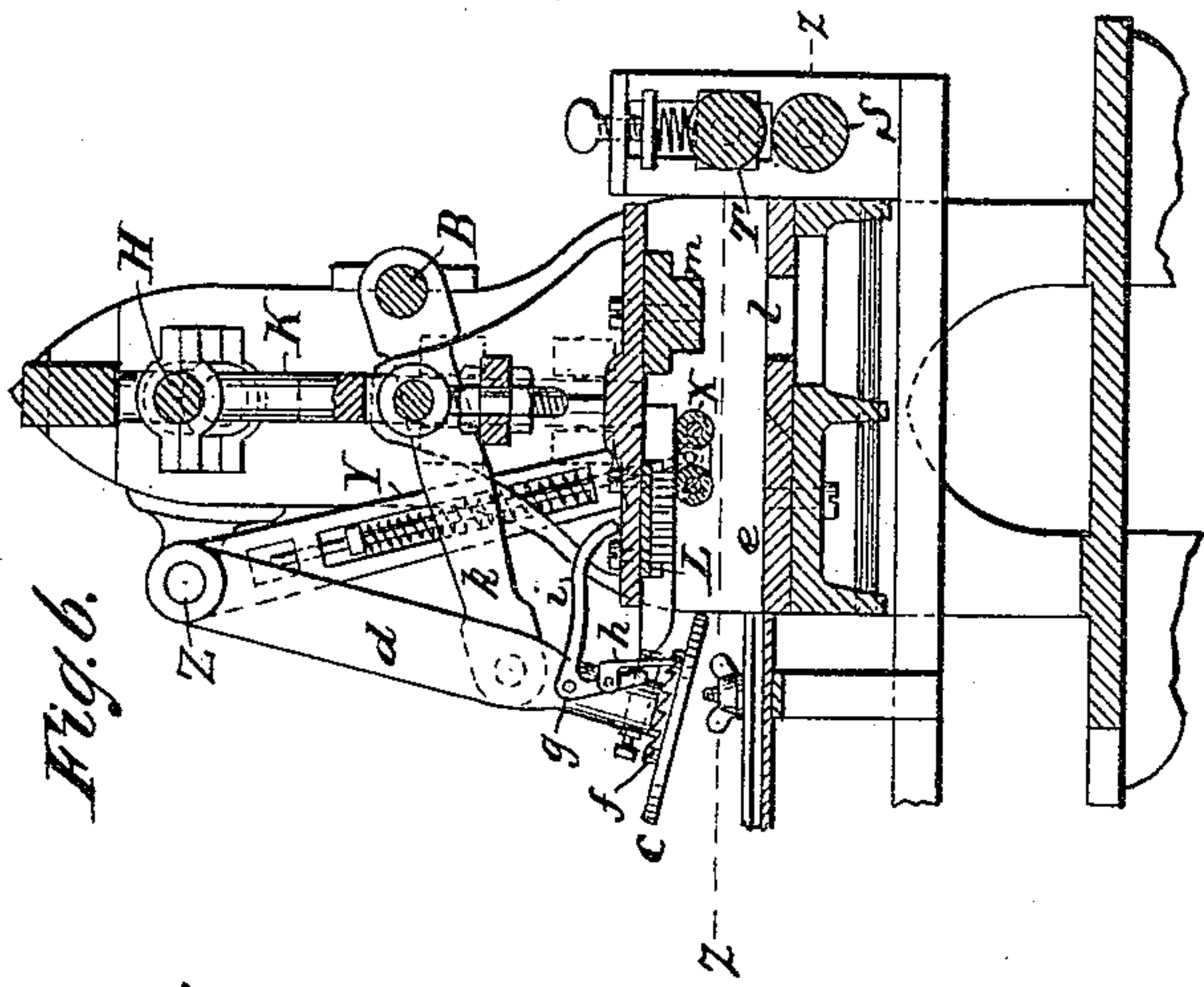
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WITNESSES:

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# UNITED STATES PATENT OFFICE.

CLIFTON H. COTTON, OF BROOKLYN, NEW YORK.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 438,988, dated October 21, 1890.

Application filed October 24, 1889. Serial No. 328,062. (No model.)

*To all whom it may concern:*

Be it known that I, CLIFTON H. COTTON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Printing-Presses, of which the following is a specification.

This invention relates to improvements in printing-presses and the invention consists in the details of construction set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a printing-press. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a section along  $xx$ , Fig. 2. Fig. 4 is a section along  $yy$ , Fig. 3. Fig. 5 shows a side elevation of a printing-press, showing the opposite side from that exposed in Fig. 1. Fig. 6 is a section similar to Fig. 3, showing parts in a different position than in Fig. 3. Fig. 7 is a section along  $zz$ , Fig. 6. Figs. 8 and 9 are detail views of inking-rollers.

Similar letters indicate corresponding parts. In the drawings, the letter A indicates a frame or support having a driving-shaft B. The shaft B is shown as having fast and loose pulleys C C, so that said shaft can be readily started or stopped, and also a fly-wheel D. The shaft B has a gear-wheel E, imparting motion to the gear-wheels F G. The shaft H of the gear-wheel F has a crank I, whose link K imparts a reciprocating motion to the type-bed carrying the type L. On said shaft H is mounted a slotted crank-arm M, so as to turn with the shaft. A box or slide N, Fig. 5, is adjustable along the crank-arm M by means of screws O. Said slide N is jointed to a link P, and as the crank-arm M rotates said link P is reciprocated, so as to impart an oscillatory motion to the arm Q, having one or more pawls R, which engage a ratchet-wheel secured to the feed-roller S, so as to impart an intermittent rotation to said feed-roller. By adjusting the slide N nearer to or farther from the free end of the arm M the reciprocation of the link P and consequent amount of feed caused by the roller S can be varied. By this means the shaft H, with its duplex-crank I M, serves to raise and lower the type bed or carrier and also to operate the link,

which effects the intermittent motion of the feed-rollers.

The roller S acts in connection with a roller T, said rollers being connected by gears and one of said rollers being adjustable toward and from the other roller, so that said rollers can be adjusted to varying thicknesses of material fed between said rollers. A belt or chain U connects the feed-rollers S T with the feed-rollers V, so that the material to be printed—such as a strip W—can be fed at both ends of the machine, thus avoiding risk of tearing or injury in case the strip W is of delicate material. The rollers V can be made adjustable with respect to one another the same as the rollers S T.

The inking-rollers X are mounted on the arm or frame Y, swinging on the joint Z. A link  $a$  is connected by a hook  $b$  or other detachable connection to the arm Y, and said link  $a$  is reciprocated by the gear-wheel G. When the type L are away from the material to be printed, Fig. 6, the inking-rollers X are drawn past the type so as to ink the latter. When the type are engaged in printing, the link  $a$  has moved the inking-rollers to the inking-table  $c$ , Fig. 1. By having the hook or detachable connection  $b$  between the link  $a$  and arm Y the link can be readily detached from the arm and said arm, with the inking-rollers, be swung out of the way.

The inking-table  $c$  is rotary on the arm  $d$ , and said table has ratchet-teeth  $f$  engaged by the arm  $h$  of the lever  $h i$ , fulcrumed at  $g$ . As the type L reciprocate, the type-carrier strikes against the lever-arm  $i$ , and the consequent oscillations of the lever  $h i$  cause the inking-table to rotate, so as to secure an even distribution of ink. The table-supporting arm  $d$  is jointed at Z, and said arm  $d$  is held in position by an arm  $k$ , extending from the shaft B to the arm  $d$ . Said arm  $k$  sits loosely about the shaft B, so that said shaft can readily turn in the arm  $k$ . The material or strip W while being printed rests on a suitable bed or support  $e$ , over which it is fed by the feed-rollers S T V. By having the bed  $e$  provided with a die or perforation  $l$  and the type-carrier with a corresponding punch  $m$ , tags or tickets can be punched out of the strip W as it is fed along. The feed-rollers S T V hold



the strip W under suitable tension while being punched, and said feed-rollers being capable of operating for an indefinite period can be made to feed a strip of indefinite length.

- 5 By having the strip W wider than the punch *m* and die *l* said strip will not be severed by the punch and die.

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

- 10 1. In a printing-machine, the combination of an impression-bed *e*, a rising and falling type-carrier, a driving-shaft B, a duplex crank-shaft H, arranged above and connected with the type-carrier, the driving-gears E, F,  
15 and G, the pendulous arm *d*, supporting the inking-table *c*, the pendulous oscillating frame Y, carrying the inking-rollers which move beneath the table and type-carrier, the link *a*, operated by one of the gears and detachably  
20 connected with the inking-roller frame, the pairs of feed-rolls arranged, respectively, at opposite ends of the type-carrier, a link P,

connected with and operated by the duplex crank-shaft, and devices actuated by said link to intermittently rotate the feed-rolls, 25 substantially as described.

2. In a printing-machine, the combination of an impression-bed having near one end a die, a reciprocating type-carrier having a punch co-operating with the die, inking mechanism for the type, two pairs of feed-rolls arranged, respectively, at opposite ends of the impression-bed, an endless chain connecting a roll of one pair with a roll of the other pair of feed-rolls, and means for reciprocating the 30 type-carrier and intermittently rotating one of the feed-rolls, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CLIFTON H. COTTON.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.