

(No Model.)

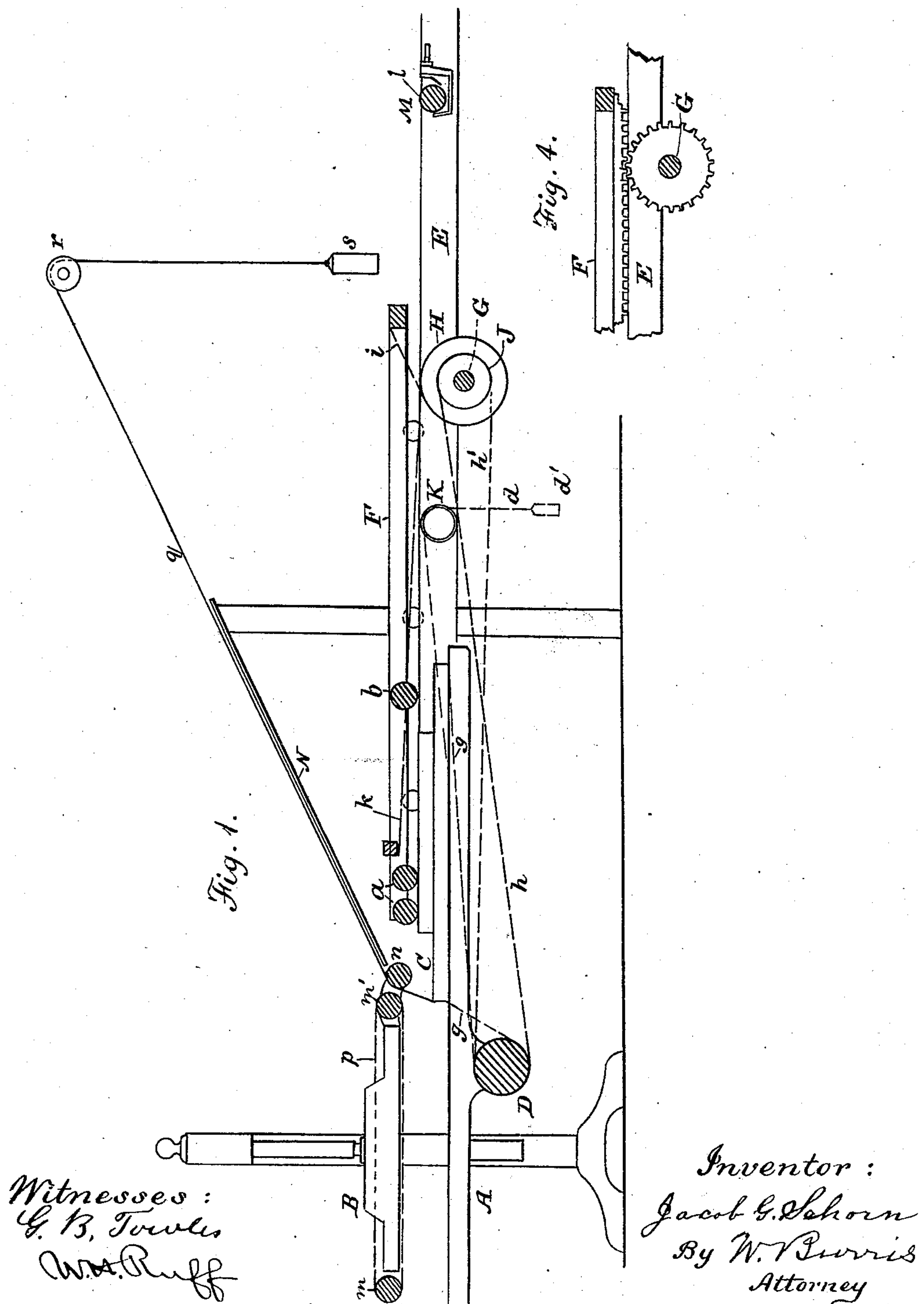
2 Sheets—Sheet 1.

J. G. SEHORN.

PLATEN PRINTING MACHINE.

No. 369,081.

Patented Aug. 30, 1887.



(No Model.)

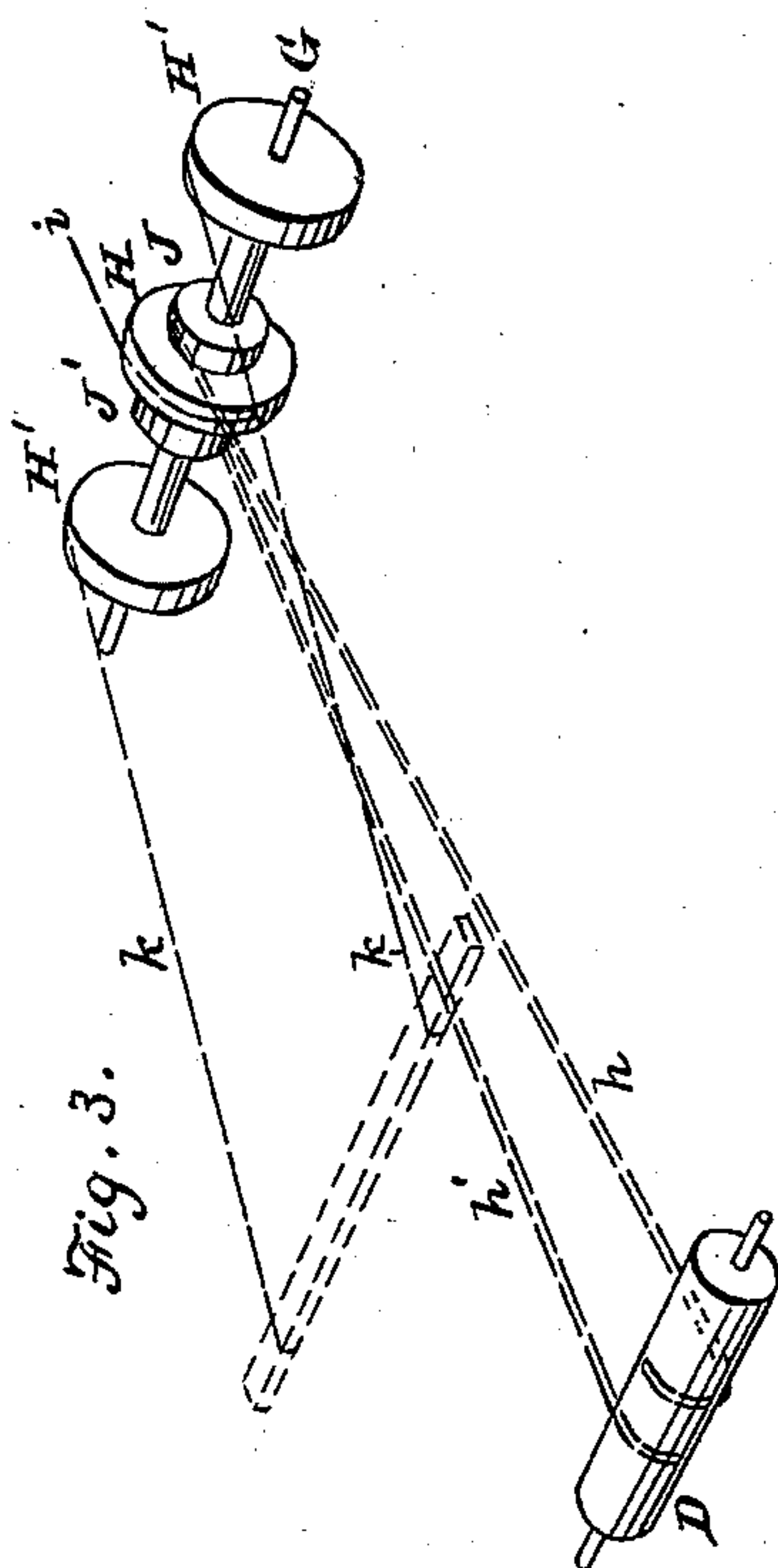
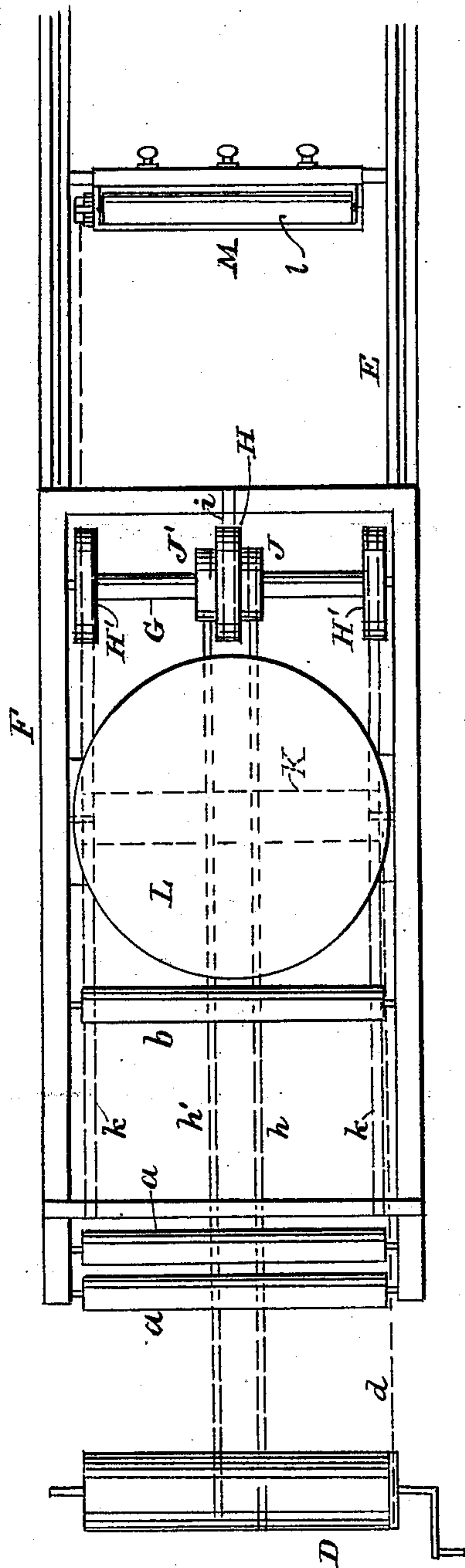
2 Sheets—Sheet 2.

J. G. SEHORN.
PLATEN PRINTING MACHINE.

No. 369,081.

Patented Aug. 30, 1887.

Fig. 2.



Witnesses:
G. B. Fowler.
W. A. Ruff

Inventor:
Jacob G. Sehorn
By W. V. Purvis
Attorney

UNITED STATES PATENT OFFICE.

JACOB G. SEHORN, OF MUSCATINE, IOWA.

PLATEN PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 369,081, dated August 30, 1887.

Application filed October 26, 1886. Serial No. 217,250. (No model.)

To all whom it may concern:

Be it known that I, JACOB G. SEHORN, a citizen of the United States of America, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Platen Printing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to attachments for printing-presses, more particularly adapted for hand-presses; and it consists of certain improved devices for applying the ink to the form and for feeding the sheets to the press, the object being to facilitate, reduce the cost, and improve the quality of press-work of that class of presses by securing greater speed in operation and better inking by more perfect distribution of ink.

In the accompanying drawings, Figure 1 is a vertical longitudinal section showing my improvements applied to a hand-press. Fig. 2 is a plan view of carriage and other details. Fig. 3 illustrates in perspective the pulleys and rounce. Fig. 4 shows a modification in construction of carriage and connection with pulley-shaft.

A designates the frame of a printing-press; B, the platen; C, the press-bed, and D the rounce provided with a crank.

Extending rearward from the frame A is a frame, E, which supports an adjustable way or track for a light carriage, F, which is in the form of a rectangular frame provided with rollers. One or more adjustable form-rollers, *a*, are placed at the forward end of the carriage, and are journaled therein. Rearward from rollers *a* is one or more distributing-rollers, *b*, mounted on the carriage.

G indicates a shaft extending across the frame E and having its bearings therein. On the shaft G are several fixed pulleys, there being a central pulley, H, a similar pulley, H', at each end of the shaft or near the sides of frame E, and two pulleys, J and J', of less size, one being on each side of central pulley, H. To these pulleys on shaft G are attached the straps or bands through which the movements of the carriage F are effected, as hereinafter set forth.

To the rounce D or pulleys formed thereon

straps or bands are attached and connect the rounce with the press-bed and the pulley-shaft G. The bands *g g* are attached to the rounce and wind thereon in opposite directions, said bands being also attached to opposite ends of the press-bed, respectively, to produce the outward and inward movements of the bed. The bands or straps *h* and *h'* are attached to pulleys J and J' on shaft G, and, winding thereon in opposite directions, extend to and are connected with the rounce on opposite sides of the same, respectively, in such a manner as to rotate the shaft G in a direction the reverse of the motion of the rounce. To the central pulley, H, is attached a band, *i*, or strap, connecting said pulley with the rear end of the carriage F and serving to draw the carriage inward. The bands *k* connect the two pulleys H' with the forward end of the carriage and wind upon the pulleys in such manner as to move the carriage outward. Instead of the two pulleys H' and their connecting-bands, cog-wheels and toothed racks arranged to engage with them may be used, when the pulleys H and H', with their connecting-bands, may be dispensed with. (See Fig. 4.)

It will be seen from this construction of rounce, pulleys, and bands that when the rounce-shaft is rotated the press-bed and the inking-carriage F are moved in opposite directions, rotating the rounce in one direction bringing them together, and rotating it in the opposite direction driving them apart.

K is an ink-cylinder journaled in frame E and operated by means of weighted cords *d*, attached to either the press-bed or the rounce. When the press-bed is moved inward, the weight *d'* is drawn up, and when the form-rollers *a*, as the carriage F moves rearward, reach a point over the cylinder K, a pawl is disengaged and the weight causes the cylinder to rotate and thus ink the rollers, the operation being automatic. The said cylinder, being generally used for color-work or ordinary printing, is removable, and an inking-disk, L, may be substituted for the cylinder, and as the press-bed moves outward the disk is caused to make a slight rotary movement by means of a spring-pawl and ratchet engaging with teeth at or under the edge of the disk.

The distributing-roller, being moved back to

a fountain, M, receives ink from it and spreads it on the disk, from whence it is taken by form-rollers *a*. The fountain M consists of a small cylinder, *l*, placed in an ink-trough and jour-
 5 naled therein, the flow of ink being regulated by thumb-screws. One end of the shaft of the cylinder *l* is extended and is provided with a small ratchet-wheel, which is operated by a pivoted weighted arm connected by a cord
 10 with the press bed or carriage, and by such or other suitable means the cylinder is turned automatically to present a different surface to the distributing-roller at each of its successive movements to the fountain.

15 In my construction the "tympan" and the "frisket" are dispensed with and the blanket is secured to the platen, the following-described means being provided for feeding the paper to the press and taking it therefrom:

20 At the ends of the platen are mounted the rollers or pulleys *m m'*, an additional roller or pulley, *n*, being mounted at the rear end. Tapes or bands *p*, passing about the platen lengthwise, are carried by the rollers *m m'*. Two
 25 other tapes or bands, *q*, have their forward ends fastened to the forward end of the bed C or to the rounce D, and, extending rearward directly under the tapes *p*, pass upward between the rollers *m'* and *n'*, over a feed-board,
 30 N, supported in an inclined position, and over pulleys *r*, the bands having weights *s* to keep them tightened and cause friction as the sheets of paper are carried under the platen from the feed-board, on which they are placed and to
 35 which they are returned. A rapid and steady passage of the sheets of paper from the feed-board to proper position under the platen is thus effected by means of the tapes *p* and *q* and the rollers carried on the platen.

I claim—

1. In combination with the rounce of a bed-
 and-platen printing-press, an inking-carriage
 mounted on a frame extending from the press,
 a rotative shaft having bearings in said frame,
 and means of engagement with the carriage, 45
 said shaft being provided with pulleys J and J', which are connected by bands *h h'* with the press-rounce, whereby a reciprocating move-
 ment may be given to the inking-carriage,
 substantially as and for the purposes described. 50

2. In combination with the bed of a press and the rounce which is connected with and imparts motion to the bed, a frame, E, with shaft G, provided with pulleys H H' and J J',
 a carriage bearing inking and distributing 55
 rollers, and having its forward part connected by bands with pulleys H' and its rear with pulley H, and bands *h h'*, connecting pulleys J J' with the rounce, substantially as set forth.

3. In combination with the platen provided 60
 with rollers and pulleys *m, m'*, and *n*, a feed-board, N, tapes *q* passing over roller *n*, and adapted to be drawn inward and outward alternately as the press is operated, substantially
 as set forth and described. 65

4. In combination with the platen provided with rollers and pulleys *m, m'*, and *n* and bands *p*, the movable press-bed, feed-board N, bands *q*, and weights attached to said bands, substan-
 tially as described, for the purpose set forth. 70

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

JACOB G. SEHORN.

Witnesses:

H. V. HOWARD,
 S. E. HOOVER.