(No Model.)

# T. H. COLE.

## RECIPROCATING PRINTING MACHINE.

No. 370,245. Patented Sept. 20, 1887.

*Fig. 1.*

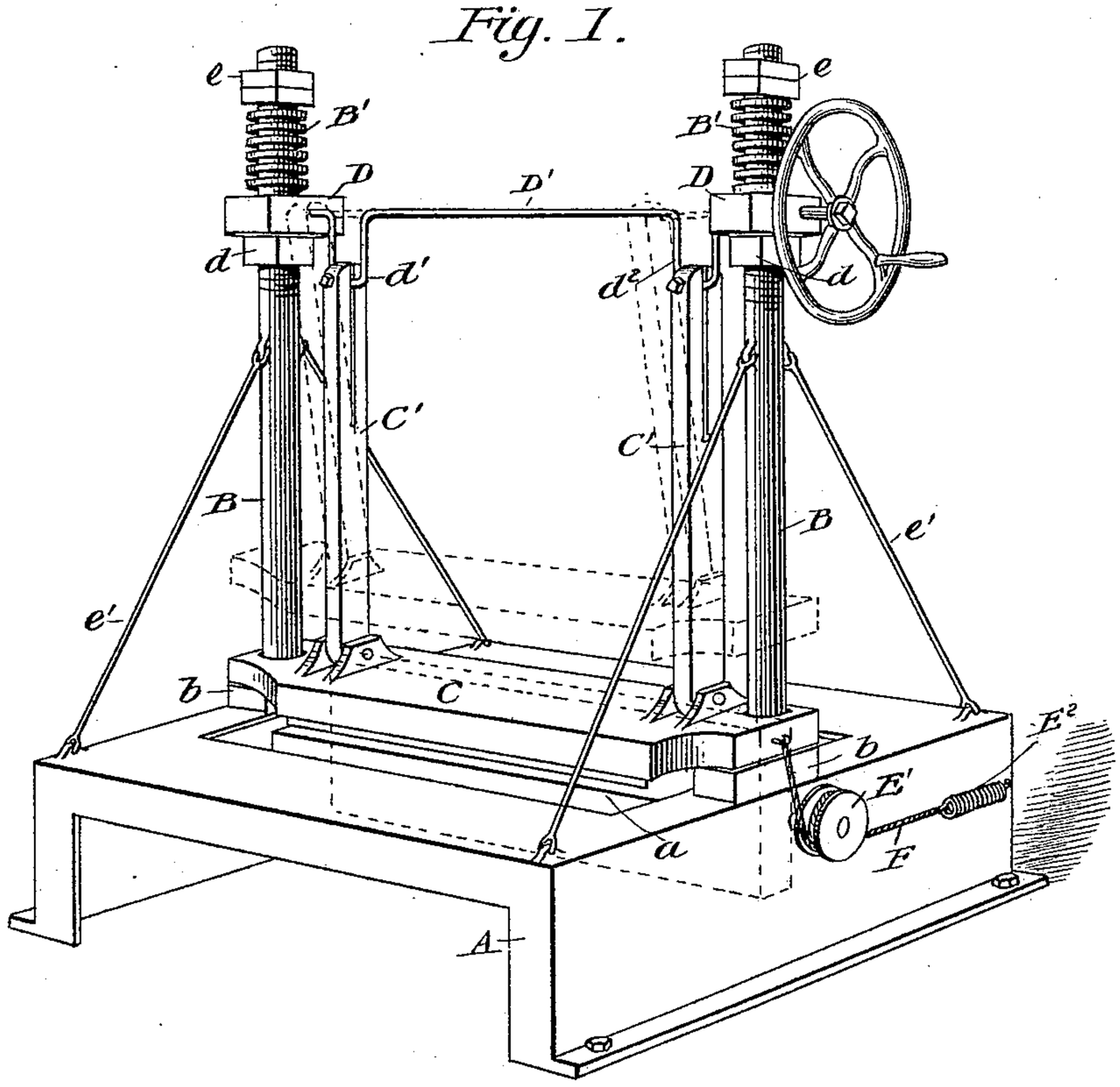



*Fig. 2.*

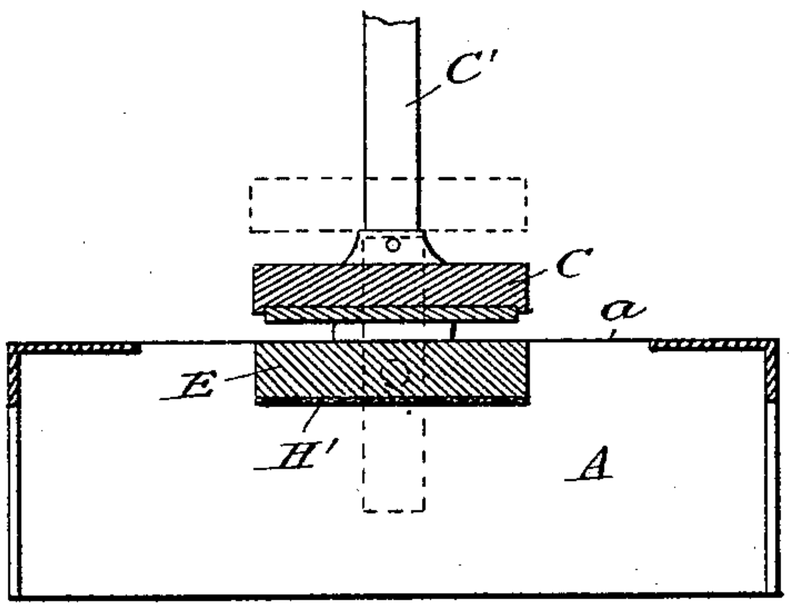
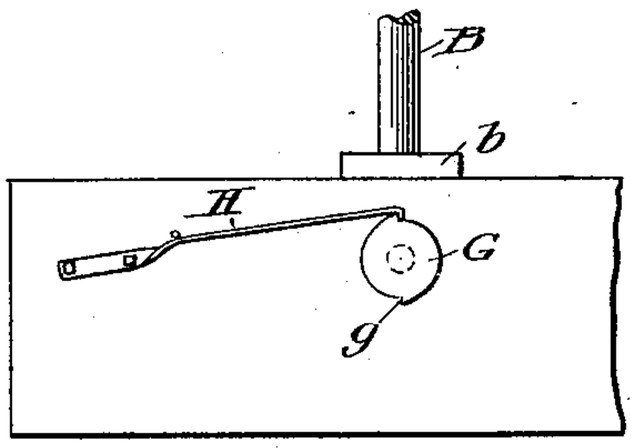



*Fig. 3.*

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THOMAS H. COLE, OF EAST ALBANY, NEW YORK.

## RECIPROCATING PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,245, dated September 20, 1887.

Application filed May 5, 1887. Serial No. 237,226. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. COLE, of East Albany, in the county of Rensselaer and State of New York, have invented a new and Improved Reciprocating Printing-Machine, of which the following is a full, clear, and exact description.

My invention relates to an improvement in self-inking printing-presses, and has for its object to provide a press having a revolving bed adapted to serve as an inking-pad upon one face and platen upon the other face, and wherein, also, the printed matter will be automatically delivered from the platen into any suitable receptacle placed beneath the same.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the press; and Fig. 2 is a transverse sectional view through the base, revolving bed, and platen. Fig. 3 is a partial elevation of one side.

In carrying out the invention, the press is provided with a suitable base, A, having open ends and a top elevation above the surface, upon which the base rests, the said top being provided with a central rectangular aperture, *a*, of a loop nearly equal to the width of the base.

Upon the base at the sides centrally the aperture *a* standards B are supported in any well-known or approved manner, the upper ends of which standards are threaded, as shown in Fig. 1, and at the base of the standards blocks *b* are provided to determine the proper distance that the type-carrier shall approach the platen and the inking-pad.

The type-carrier C is provided with apertures at each end, and the said carrier, by means of said apertures, is adapted to slide upon the standards B. At the top of each standard a nut, *d*, is screwed a distance downward, adapted to form the support for blocks D, which blocks D project at one side beyond the standards. In the projecting ends of the said blocks D a crank-shaft, D′, is journaled, said crank-shaft being provided with two crank-arms, $b'$ $b^2$, between the standards B. The vertical adjustment of the crank-shaft is provided for by springs B′, preferably spiral, coiled around the standard to a bearing upon the blocks D, a proper degree of tension being exerted upon the said springs by a nut, *e*, screwed upon the standards and compressing the said springs, which nut may be followed by a lock-nut, if found desirable.

One end of the crank-shaft is shown as provided with a hand-wheel; but motion may be communicated in any other well-known manner.

The crank-arms $d'$ $d^2$ are pivotally connected with the upper surface of the carrier C by pitmen C′ of equal length. The standards B, if found desirable, are braced by rods *e′*, attached to said standards, and to the base A, as illustrated in Fig. 1.

Centrally within the aperture *a* and transversely the base a block, E, is journaled in the frame near the upper edge, the trunnions thereof extending through the frame upon each side, aligning vertically with the standards B.

Upon one trunnion outside the frame a grooved wheel, E′, is keyed, and at the end of the base on the same side, in horizontal alignment with said pulley, one end of a spring, $E^2$, is secured, the other end being attached to a cord or rope, F, which cord is passed around the said pulley two or three times and fastened to the end of the type-carrier C about the center, as shown in Fig. 1.

To the other trunnion of the revolving block E a disk, G, is secured, provided with peripheral notches *g*, one directly opposite the other, and a spring, H, having a downwardly-bent free and preferably slotted end, is held in engagement with the periphery of said disk in contact with one of the notches *g*.

Both faces of the revolving block E are made smooth. One face thereof is provided with an inking-pad, H′.

In operation, the rubber or metal type or form having been properly attached to the carrier, the crank-shaft is revolved, and upon the upward motion of the carrier, by reason of the pulley E′ and cord and spring $E^2$ and F, the block E is caused to make one-half of a revolution, carrying the printed matter with it, which brings the pad side up, the printed matter aforesaid having been deposited in any suitable receptacle beneath the revolving block, the block is

held in a horizontal position, pad upward, by the disk G until the carrier descends for inking. After the type has been inked on the terminus of the downstroke, and as the carrier again travels upward, the bed again reverses and the platen is presented. The matter to be printed is laid thereon and is printed on the next downstroke, and is then to be delivered from said platen upon the next upstroke, and thereafter the type is again inked.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A printing-press provided with a reciprocating type-carrier and a revoluble block, one side of which block constitutes the inking-pad and the reverse side a platen, substantially as shown and described.

2. A printing-press provided with a reciprocating type-carrier and a revoluble block having one surface provided with an inking-pad, substantially as shown and described.

3. A printing-press provided with a reciprocating type-carrier, a revoluble block having an inking-pad integral with one surface, and means for revolving said block, substantially as herein shown and described.

4. The combination, with the base and a revoluble block journaled thereon provided upon one face with an inking-pad, of an adjustable reciprocating type-carrier guided by standards attached to the base and reciprocated by a crank-shaft, and means for revolving said block, substantially as herein shown and described.

5. The combination, with an apertured base provided with standards, of a type-carrier held to slide on said standards, an adjustable crank-shaft journaled on said standards and connected with the carrier, a block constituting a platen and inking-pad journaled in said base, and means for revolving said block through a half-revolution on the upward movement of the type-carrier and holding said block during the downward movement of the carrier, substantially as shown and described.

6. In a printing-press, the combination, with the base A, the rotary block E, having an inking-surface, H′, the pulley E′, notched disk G, springs $E^2$ and H, and the cord or rope F, of the carrier C, the standard B, the adjustable journal-blocks D, the crank-shaft D′, and pitmen C′, all arranged to operate substantially as herein set forth.

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Witnesses:
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