

G. W. HUNT.  
Oscillating Printing-Press.  
No. 213,658. Patented Mar. 25, 1879.

Fig. 2.

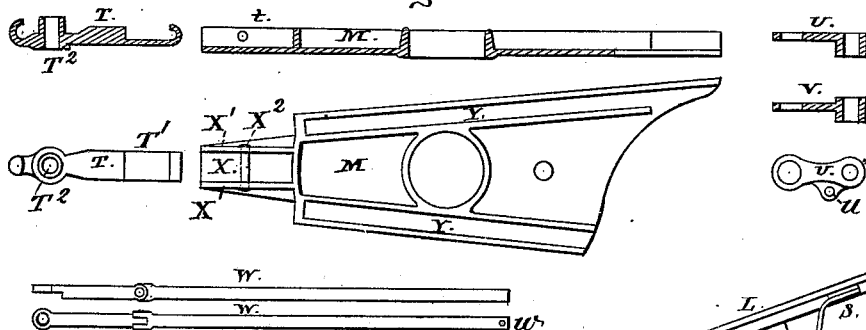
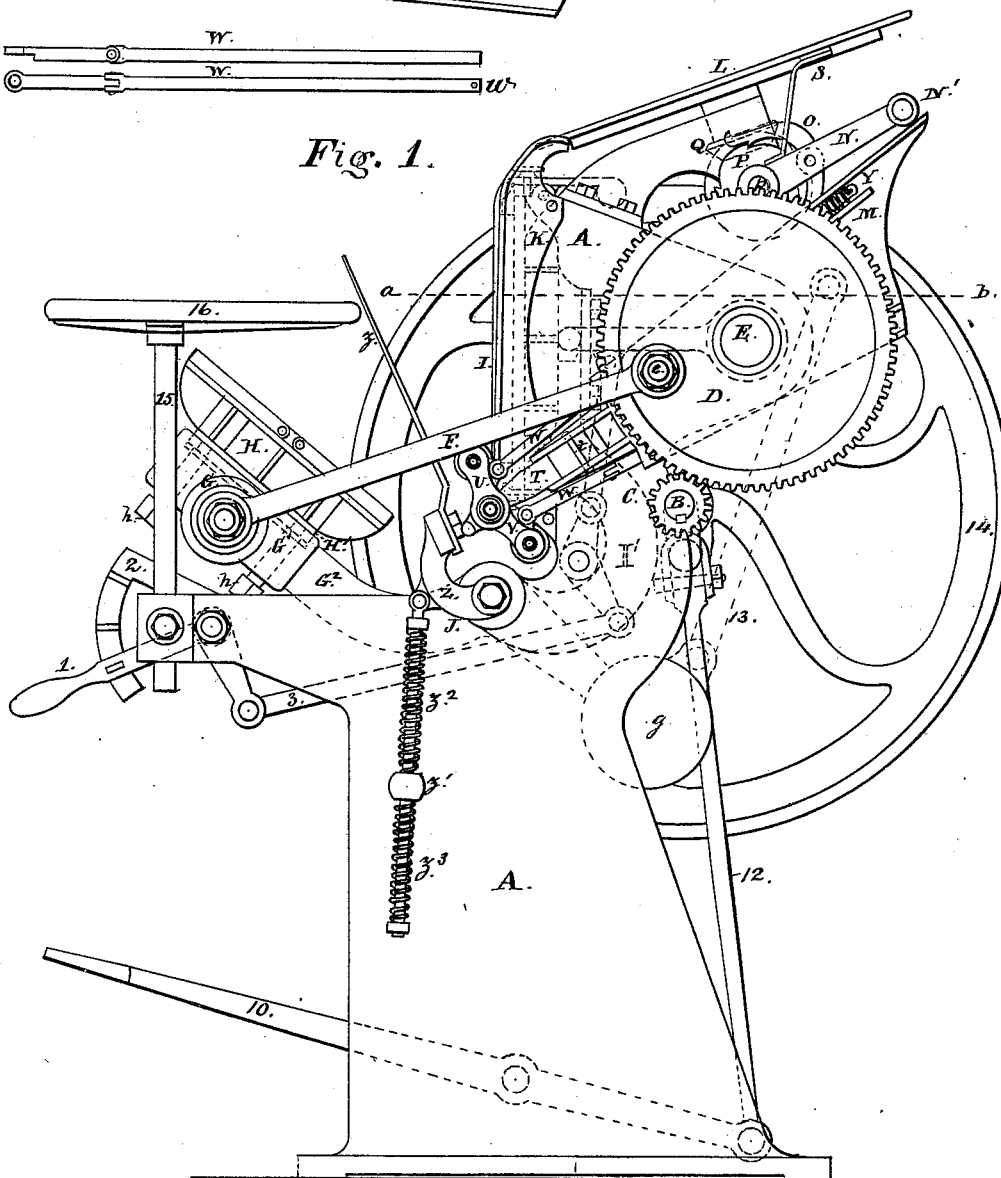


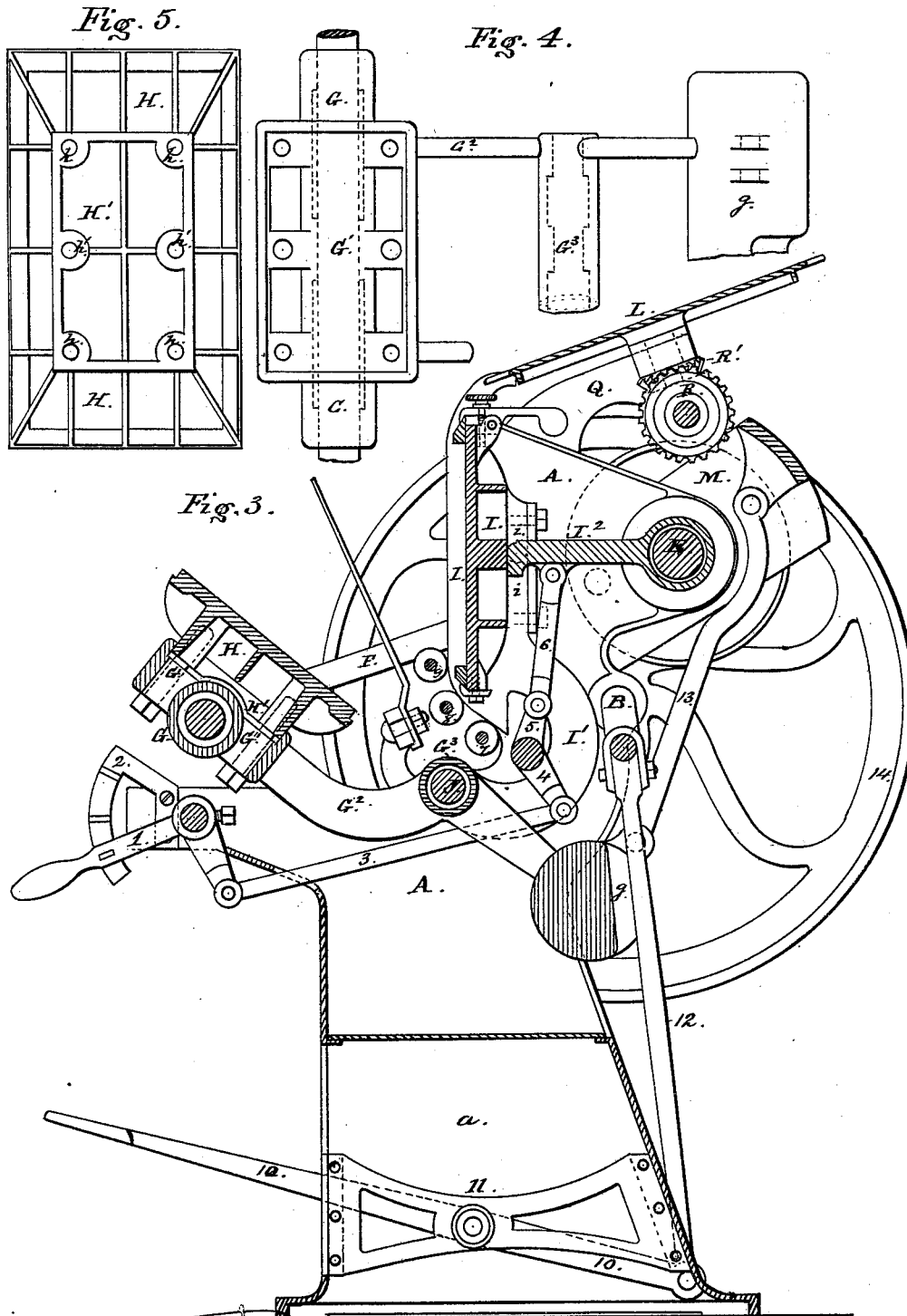
Fig. 1.



Witnesses.  
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Inventor.  
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Witnesses:  
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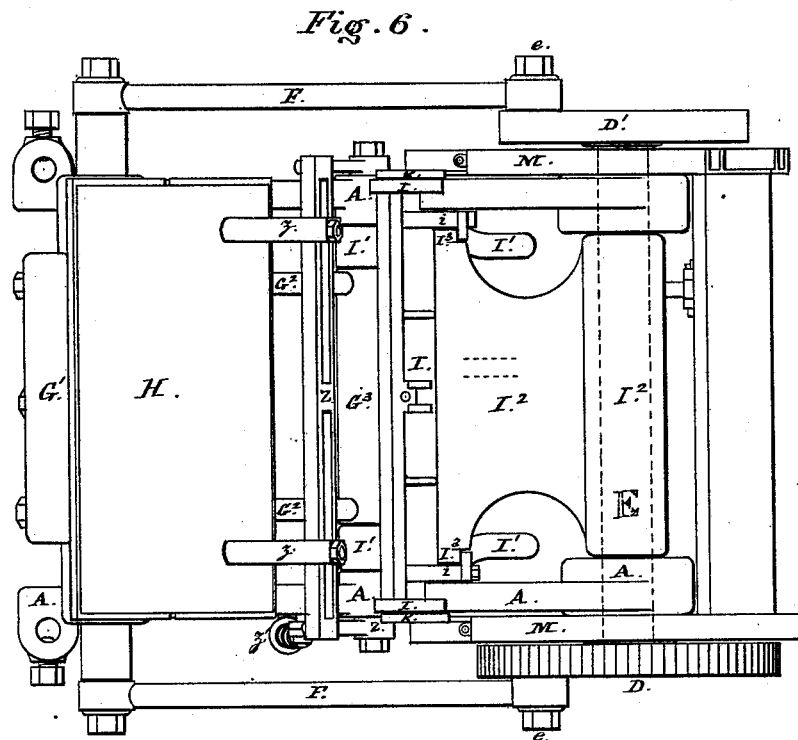
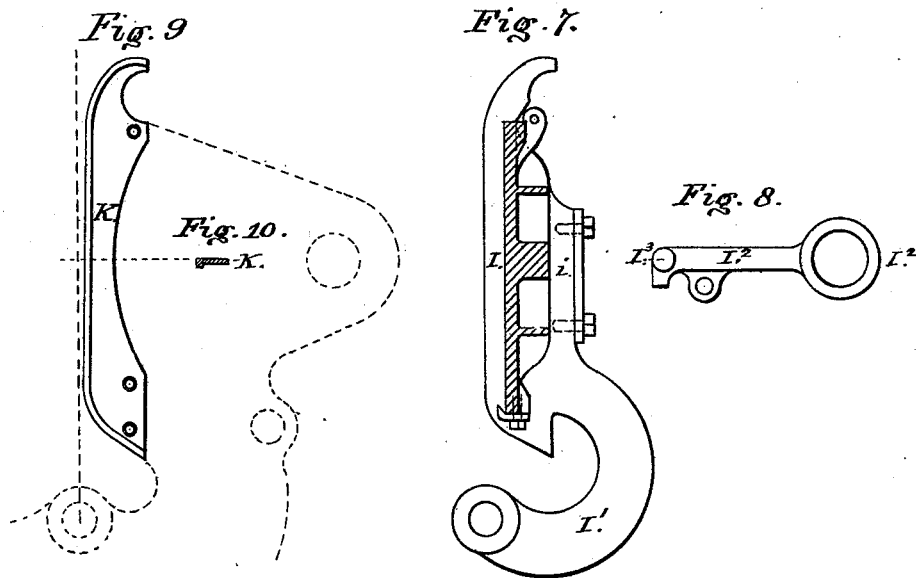
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## Oscillating Printing-Press.

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Scale. 2.in' One Foot.

Witnesses.  
*The Hopking*  
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# UNITED STATES PATENT OFFICE.

GEORGE W. HUNT, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN OSCILLATING PRINTING-PRESSES.

Specification forming part of Letters Patent No. **213,658**, dated March 25, 1879; application filed July 3, 1878.

*To all whom it may concern:*

Be it known that I, GEO. W. HUNT, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Oscillating Printing-Presses, of which the following is a specification:

This invention relates to that class of printing-presses recognized and known as "bed and platen jobbers;" and it consists in devices for operating the adjustable back-brace, and an adjustable bed, by means of which suspension of inking and impression may be effected by the operator; also, in the combination of roller-heads with jointed holding-rods, as will hereinafter more fully appear.

The suspension of the ink-distribution is done as follows, viz: An extra set of bearers, exact in size and shape with the bearers of the bed, are attached to either side of the press a little back of the line of impression and exactly in the position which the bed assumes when thrown back to avoid the impression. While in this position the inking-rollers touch the type, but by dropping or drawing down the brace the bed is drawn still farther back and behind these extra bearers, and the ink-rollers held in suspension and kept away from touching the type as they pass and repass to and from the disk.

The roller-carriers, by making the heads solid and providing the same with hinged spring-rods, can be opened off sidewise from the roller-stocks. By solid heads, I mean cast or drilled to receive the ends of the roller-stocks or arbors not open like the hooks usually employed.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a printing-press embodying my invention. Fig. 2 is a group of parts forming the roller-carrier arm. Fig. 3 is a vertical longitudinal section of the press. Fig. 4 is a top-plan view of platen-beam, showing the socket or recess into which the back of platen is fitted, also the position of impression and retaining screws. Fig. 5 is a view of back of platen, showing the box form of the strengthening-ribs adapted and fitted to the recess in the platen-beam, also the position of the screws. Fig. 6 is a top-plan view of press

and back brace. Fig. 7 is a vertical section of the bed; Fig. 8, a side or edge view of back brace. Fig. 9 is a side view of one of the extra or bridging bearers, its position when attached to frame, shown by the vertical dotted line of impression, and outline of the frame of press. Fig. 10 is a horizontal section of the bridging-bearer.

The frame A, of cast-iron, is designed to be cast in one piece; B, the treadle or driving-shaft; C, driving-pinion; D, geared plate-wheel; D', plate-wheel, mate to D, attached or mounted upon the projecting ends of the main crank-shaft E; *e e*, studs in the plate-wheels D and D'; F F, connecting-rods; G, platen-beam; G<sup>1</sup>, socket or recess; G<sup>2</sup>, arms attaching beam G to hub or sleeve G<sup>3</sup>; *g*, counter-balance; H, the platen; H', back projection of the platen adapted and fitted to the recess G<sup>1</sup> in the beam G, which prevents any lateral motion of the platen in case the platen-bolts are loosened, and the platen adjusted in its position, thus avoiding any loss of register; *h*, impression-bolts; *h'*, retaining-bolts; I, the bed of press; I<sup>1</sup>, arms of bed; I<sup>2</sup>, back brace; I<sup>3</sup>, hubs or bosses on the impinging end of the brace I<sup>2</sup>, fitted to the grooves *i i* in the back projection of the bed I; J, supporting shaft or axis upon which the bed I and the platen-beam G and attached platen H are mounted. K are the bridging-bearers; L, the circular ink-disk; M, the roller-carrier arm; N, pawl-lever; N', friction-roller; O, pawl; P, ratchet-wheel; Q, standard or support for ink-disk; R, large miter-gear; R', small miter-gear; S, check; T, sliding head; U and V, carrier-heads attached to T; W W, hinged spring-rods; X, groove in arm M, into which the shank of the sliding head T is fitted; Y Y, grooves in said arm M for the shanks of the hinged rods and operating-springs; Z, griper-frame; *z*, grippers; *z'*, swivel hub; *z*<sup>1</sup>, upper spring; *z*<sup>2</sup>, lower spring.

M are wing-formed levers or roller-carriers, which are pivoted near their centers on the shaft E, and are operated by the connecting-rod 13. The smaller or fore end of these carriers is provided with flanges X<sup>1</sup>, through which a pin, X<sup>2</sup>, is passed to retain the stems T<sup>1</sup> of the roller-heads, and retain them in position. These roller-heads are provided with holes T<sup>2</sup>,

into which the journals of the center roller are placed. There are also roller-carriers U and V, which are placed upon the journals of the center roller inside of roller-heads T, and provided with perforated ears U', to which are attached the jointed arms or connecting-rods W, which are operated by the springs Y, which springs are attached to the rods W at the holes w.

The stem T<sup>1</sup> works freely in the recess X, and is operated in its return motion by the springs Y. To remove the rollers, first remove the pins X<sup>2</sup>, when the roller-heads may be swung off by means of the operation of the joints in the rods W.

1 is a hand-lever; 2, friction-spring; 3, connecting-link; 4 and 5, bell-crank lever; 6, link connecting double crank with the under side of the back brace I<sup>2</sup>. 7 8 9 are composition rollers; 10, foot-treadle; 11, support for treadle; 12, treadle-rod; 13, link connecting the carrier-arms M with the platen counter-balance g; 15, support for paper-table; 16, paper-table.

The operation of my press is as follows: When made ready by the operator, in the usual manner, and ink placed upon the disk, the hand-lever 1 at his left hand is raised to the upper notch in the friction-spring 2, and the back brace drawn down, and the bed drawn back behind the bridge-bearers K. Power is now applied to the driving-shaft B from the treadle, or otherwise, and transmitted through the pinion C to the geared plate-wheel D, and the same, with the shaft E and opposite wheel, D', caused to revolve, and, through the studs e e and connections F F, motion is given to the platen-beam G and attached platen H, and said platen is made to move in the arc of a circle corresponding to the length of the radius from the center of its shaft or axis J, upon which it is mounted, and a continuous vibratory movement is thus imparted to it from the operator, and up to a vertical position in a line with the face of the bed I, or line of impression, and backward in a curved and downward movement to an inclined position at an angle with a horizontal. By and through the counter-balance g and the link 13 a corre-

sponding vibratory movement is given to the roller-arms M, which are mounted upon and have the shaft E for an axis, and the attached carrier-head T, U, and V and ink-rollers 7, 8, and 9 are caused to pass, by the action of the springs upon the hinged rods W, along the face-line, and upon the bearers K and ink-disk L, in a continuous movement to and fro, until, by the repeated action of the rollers upon the ink-disk, the ink is properly broken up and prepared for distribution upon the type. The hand-lever 1 is now lowered to the center notch in the friction-spring 2, and the bed, with the type-form brought up to the face-line of the bearers K, and in position to receive the ink from the form-rollers. When the type is properly covered with ink, a blank sheet laid upon the tympan or platen H, then the lever 1 may be lowered to the lowest position, as shown in Figs. 1 and 3. This brings the bed up to the line of impression, in which the form of type upon said bed I receives and prints as the sheet is brought up by the platen H, operated as before described.

What I claim is—

1. In a printing-press, the back brace I<sup>2</sup>, constructed with the lugs I<sup>3</sup>, in combination with the bed I and the shaft E, the link 6, the bell-crank lever 4 and 5, the connecting-link 3, the notched segment 2, and the hand-lever 1, for operating the same, substantially as set forth.

2. In a printing-press, in combination with an adjustable bed having roller-bearers attached, the stationary bridge-bearers K, roller-carriers, and ink-rollers, substantially as described, and for the purposes set forth.

3. In a printing-press, the combination of the ink-rollers with the solid roller heads and carriers T U V, constructed as described, and attached to the roller-carriers M by the stems T<sup>1</sup>, the pins X<sup>2</sup>, the flanges X<sup>1</sup>, and the jointed rods W, as and for the purposes substantially as set forth.

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Witnesses:

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