(No Model.)

G. W. PROUTY.

PRINTING PRESS.

No. 566,223. Patented Aug. 18, 1896.

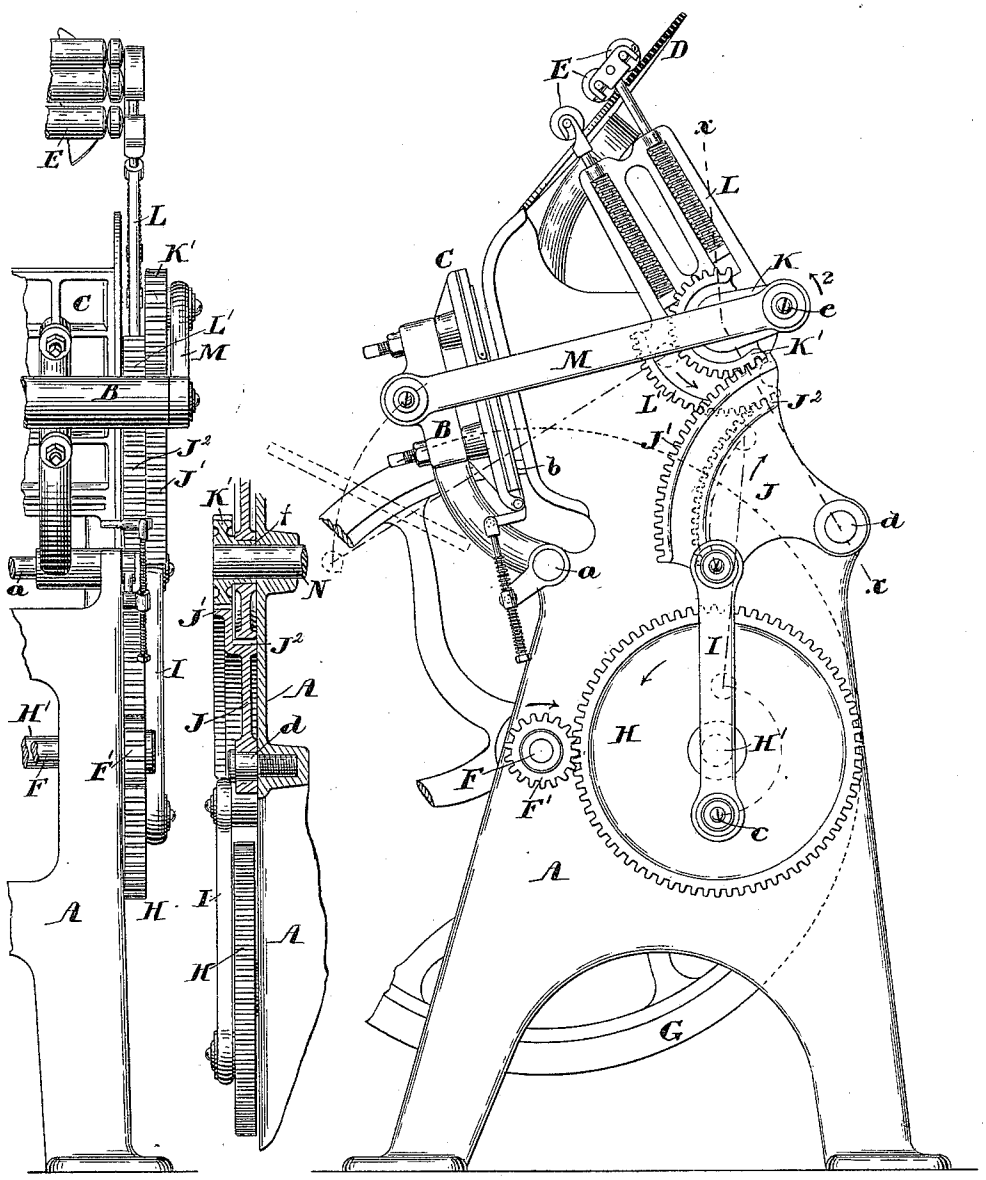

Fig. 2. Fig. 3. Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE W. PROUTY, OF BOSTON, MASSACHUSETTS.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 566,223, dated August 18, 1896.

Application filed November 29, 1895. Serial No. 570,328. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PROUTY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Printing-Presses, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to printing-presses; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings and to the claims hereto appended and in which my invention is clearly pointed out.

Figure 1 of the drawings is a side elevation of a printing-press embodying my invention. Fig. 2 is a front elevation of a portion of the frame, platen, and ink-rollers, and showing the gearing at one side of the machine for operating the platen and inking-rollers; and Fig. 3 is a section on line *x x* on Fig. 1, looking toward the left of said figure and illustrating the construction and arrangement of the gear-segments for operating the platen and inking-rollers.

In the drawings, A is the frame. B is the platen-yoke pivoted to said frame at *a*. C is the platen. D is the ink-distributing plate; E E, the inking-rollers, and *b* the gripper-fingers, all of which may be of any well-known or suitable construction.

F is the driving-shaft, mounted in suitable bearings in the frame A, and has secured upon one end thereof outside of said frame the pinion F′ and upon its other end the fly-wheel G, and it may have rotary motion applied to it by means of a belt and pulley or by a treadle and crank (not shown) in any well-known manner.

The pinion F′ engages and imparts motion to the spur gear-wheel H, mounted upon one end of the shaft H′, and having set therein the crank-pin *c*, which has mounted thereon one end of the connecting-rod I, the opposite end of which is pivoted to the segmental casting J, mounted upon a stud or shaft *d*, about the axis of which it may be oscillated by the revolution of the shaft H′.

The shaft H′ has secured upon its opposite end a crank-disk, having a crank-pin corresponding to the pin *c*, and said disk may be provided with teeth, as on the wheel H, and be engaged by a pinion on the shaft, or said pinion and teeth may be dispensed with, as may be desired.

The segmental casting J is provided with two sets of gear-teeth J′ and J^2, arranged in segments of circles at different distances from their axis of motion and in different vertical planes, as shown in Fig. 3, and may be formed in one piece or in two pieces bolted together. The segmental series of teeth J′ engage with and impart motion to the segment K′, formed in one piece with the crank K, and the segmental series of teeth J^2 engage with and impart motion to the teeth of the segment L′, formed in one piece with the roller wing or frame L.

The crank K is provided with a crank-pin *e*, upon which is mounted one end of the draw-bar M, the opposite end of which is pivoted to the platen-yoke B, as shown in Fig. 1.

The crank K and segment K′ are provided with an inwardly-projecting hub *f* and are firmly secured upon the shaft N, so as to be moved about the axis of said shaft therewith.

The roller wing or frame L, having formed thereon the toothed segment L′, is mounted loosely upon the hub *f* of the crank K, so as to be movable about the axis of said shaft N independently thereof and of the crank K, though moving in the same direction and at the same time therewith, but at a different speed.

The connecting-rod I, segments J, J′, J^2, K′, and L′, the roller-frame L, and the draw-bar M are all duplicated upon the side of the press opposite to that shown in Fig. 1.

The radii of the several segmental gears are so proportioned relative to each other that while the roller-frames are moving through an arc of about one hundred degrees the crank-pin *e* moves through an arc of about two hundred and three degrees, thereby carrying the platen to its lowermost position before the crank-pin has completed its movement in the direction indicated by the arrow 2, so that the platen will remain substantially in a state of rest or standstill for a considerable time while the crank-pin is approaching, passing, reapproaching, and repassing its point of dead-center, thus giving ample time to feed the press while said platen is moving

so slightly as to be for all practical purposes substantially at a standstill. By this arrangement the construction of the press is simplified and cheapened, and a very effective and durable press is the result.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a printing-press the combination with the platen and inking-roller frame, of a pair of toothed segments arranged in different vertical planes and at different distances from a common axis about which they oscillate in unison; a crank and connecting-rod for oscillating said toothed segments; a crank and draw-bar for operating the platen; a toothed segment formed in one piece with said platen-operating crank and engaging one of said pair of toothed segments; and another toothed segment formed in one piece with the inking-roller frame and engaging the other of said pair of toothed segments.

2. In a printing-press, the combination, with the platen and inking-roller frame, of a pair of toothed segments formed in one piece but arranged in different vertical planes and at different distances from a common axis about which they oscillate in unison a revolving crank and a connecting-rod for operating said toothed segments; an oscillating crank and a draw-bar for operating said platen; a toothed segment formed in one piece with said oscillating crank and engaged and operated by one of said pair of toothed segments; and a toothed segment formed in one piece with the roller-frame and engaged and operated by the other of said pair of toothed segments.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 23d day of November, A. D. 1895.

GEORGE W. PROUTY.

Witnesses:

N. C. LOMBARD,

JAMES DAYTON.