

No. 873,267.

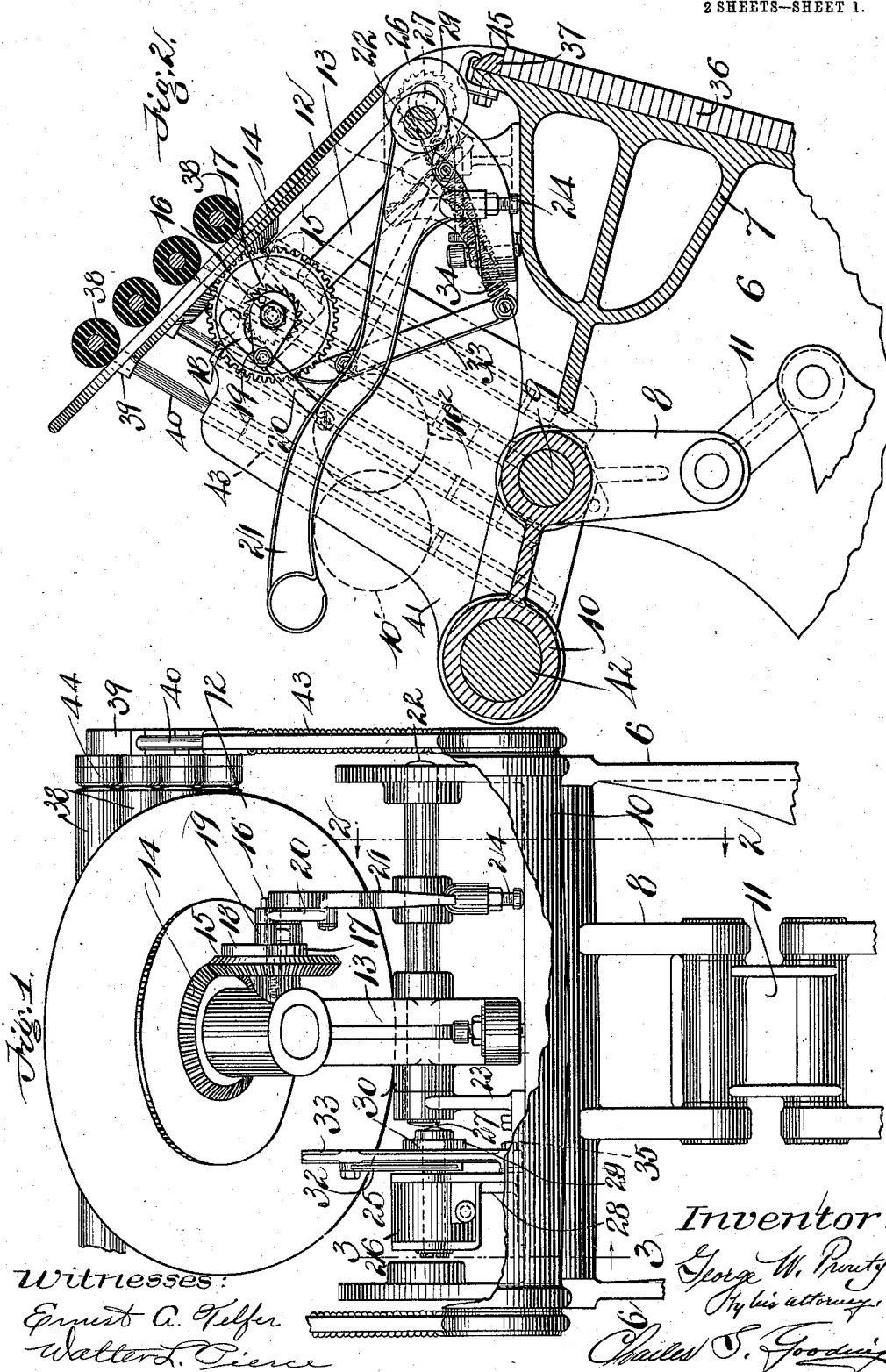
PATENTED DEC. 10, 1907.

G. W. PROUTY.

INK DISTRIBUTING MECHANISM FOR PRINTING PRESSES.

APPLICATION FILED FEB. 26, 1907.

2 SHEETS--SHEET 1.



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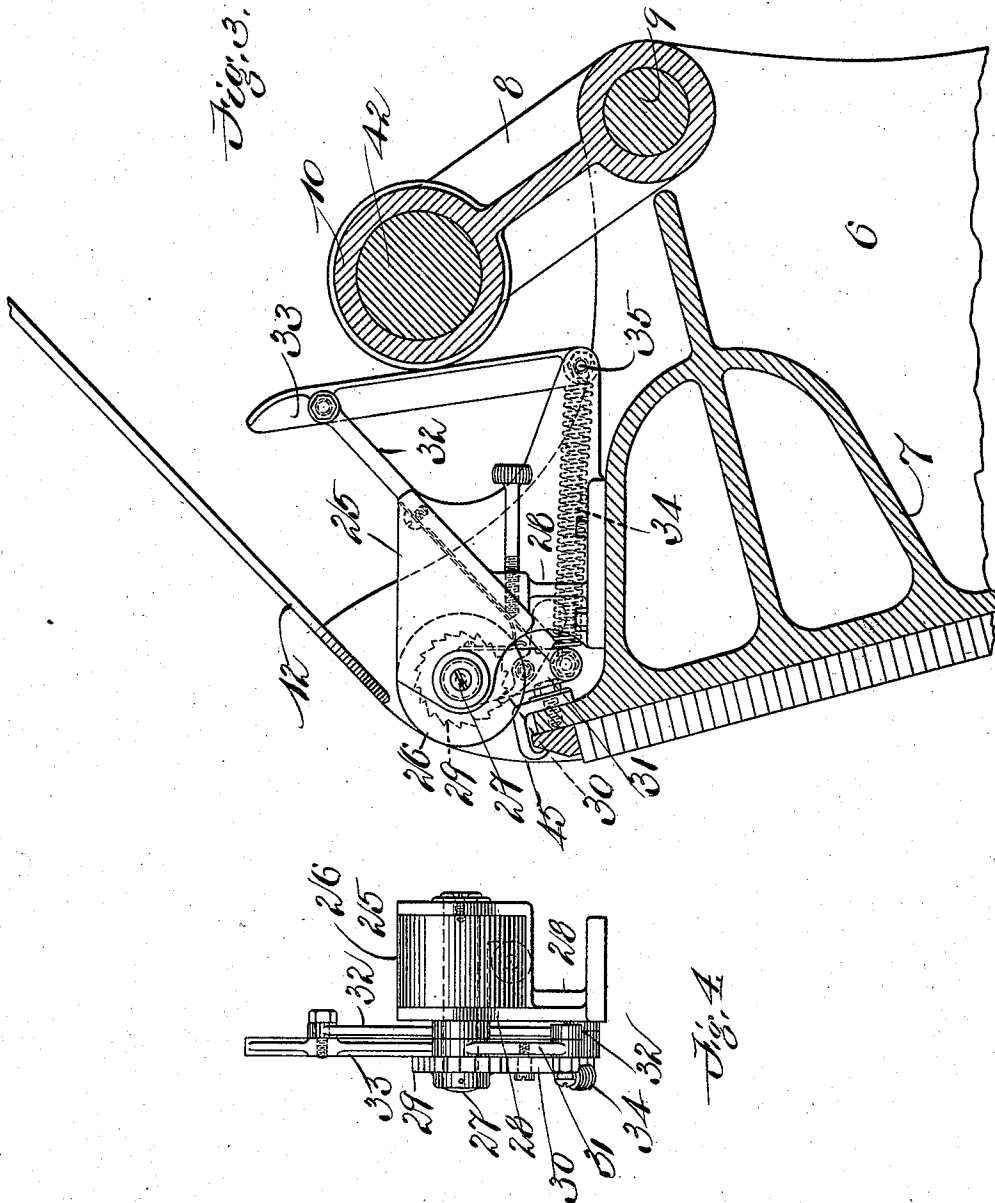
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2 SHEETS—SHEET 2.



Witnesses:

Ernest A. Telfer
Walter L. Paine

Inventor:

G. W. Prouty
by his attorney
Charles S. Gooding

UNITED STATES PATENT OFFICE.

GEORGE W. PROUTY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE IMPERIAL ART PRESS CO., A CORPORATION OF MAINE.

INK-DISTRIBUTING MECHANISM FOR PRINTING-PRESSES.

No. 873,267.

Specification of Letters Patent.

Patented Dec. 10, 1907.

Application filed February 26, 1907, Serial No. 359,409.

To all whom it may concern:

Be it known that I, GEORGE W. PROUTY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Ink-Distributing Mechanism for Printing-Presses, of which the following is a specification.

This invention relates to an improved ink distributing mechanism for platen printing presses, the same being an improvement upon and particularly applicable to the style of printing press for which Letters Patent of the United States No. 735,818 were issued to me August 11, 1903, and to which patent reference may be had for illustration of certain portions of the press not illustrated in the accompanying drawings.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a rear elevation of the upper portion of my improved printing press, the same being broken away to save space in the drawings. Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1 looking toward the left in said figure. Fig. 3 is a sectional elevation similar to Fig. 2 taken on line 3—3 of Fig. 1 looking toward the right in said figure and illustrating in detail the ink fountain and its operating mechanism. Fig. 4 is a detail front elevation of the ink fountain and its operating mechanism.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 6 is the frame of the machine, 7 the type-bed and 8 an elbow rock-lever fast to a shaft 9 journaled to rock in bearings formed in the frame 6. The elbow lever has a hub 10 extending parallel to the shaft 9 between the sides of the frame 6. A rocking motion is imparted to the elbow lever 8 by a link 11 and suitable connecting mechanism (not shown in the drawings, but preferably the same as that illustrated and described in said patent).

I will now proceed to describe in detail the mechanism by means of which an intermittent rotary motion is imparted to the ink distributor disk 12. Said distributor disk is journaled to rotate upon a bracket 13 fast to the frame 6 and has a bevel gear 14 fast to the under side thereof and meshing into another

bevel gear 15 which is journaled to rotate upon a stud 16 fast to the bracket 13. A ratchet 17 is fast to the gear 15 and is engaged and rotated by a pawl 18 pivoted to a pawl-lever 19 which, in turn, is pivoted to rock upon the stud 16. The pawl-lever 19 is connected by a link 20 to an arm 21 pivoted to a shaft 22 journaled in bearings formed in a bracket 23 at one end thereof and in one of the side frames 6 at the other end thereof. The arm 21 has a stop-screw 24 screwed thereinto and adjustable by reason of said screw-threaded engagement, said stop-screw being adapted to strike against the type-bed 7 when the arm 21 is in its lowermost position as illustrated in Figs. 1 and 2.

A rocking motion is imparted to the arm 21 by the elbow lever 8 during the latter part of the forward motion of said elbow lever, the hub 10 of said elbow lever striking against the under side of the arm 21 when in the position illustrated in dotted lines and marked 10' (Fig. 2). A continued rocking movement of the elbow lever brings the hub 10 into the position of the dotted circle marked 10², thus causing the arm 21 to move upwardly and moving the link 20 with it to impart a forward rocking movement to the pawl-lever 19 and thus through the pawl 18 imparting a forward rotary movement to the ratchet 17 and gear 15. The gear 15 meshing into the gear 14, it will be seen that a rotary movement is imparted to said gear 14 and to the distributor disk 12 to which it is fastened.

The type 36 is set up in a form 37 and attached to the type-bed in the usual manner. The mechanism for imparting an intermittent rotary movement to the ink-fountain roll is particularly illustrated in Figs. 3 and 4. It will be noted that the ink-fountain and ink-fountain roll are located between the distributor disk and the type-bed, so that the ink is taken by the inking rollers and carried directly to the distributor disk during the upward movement of the rolls, as hereinbefore described.

The ink fountain 25 is of well-known construction and has an ink-fountain roll 26 journaled to rotate therein. Said ink-fountain roll is fastened to a shaft 27 journaled to rotate in a bracket 28 which is fastened to the type-bed of the machine. A ratchet 29 is fastened to the shaft 27 and is intermittently rotated by means of a pawl 30 pivoted

to a pawl-lever 31 which, in turn, is pivoted to rock upon the ink fountain bracket 28. The lever 31 is connected by a link 32 to an arm 33 pivoted to the ink fountain bracket 28. A spiral spring 34 is connected at one end to the lever 31 and at the other end to a stud 35 upon which the lever 33 is journaled to rock.

The operation of the mechanism for rotating the ink fountain roll is as follows: The hub 10 of the elbow lever 8 contacts with the arm 33 as said elbow lever is rocked from the position shown in Fig. 2 to that shown in Fig. 3 and slides in contact with said arm 33 while the arm is rocked upon its pivotal stud 35. The link 32 rocks the pawl-lever 31 upon the ink fountain shaft 27 and by means of the pawl 30 imparts a rotary motion to the ratchet 29, thus also rotating the ink fountain roll 26.

The inking rolls 38 are operated to be carried over and in contact with the ink fountain roll and across the distributor disk and back by mechanism the same as that illustrated and described in said patent, said inking rolls being mounted in saddles 39 carried by rods 40 mounted to slide in the carrying plates 41, said carrying plates being pivoted on the shaft 9 and pivotally connected to a shaft 42 which extends through the hub 10 and projecting beyond the opposite ends thereof is connected to the carrying plates 41 upon opposite sides of the machine. Spiral springs 43 encircle the rods 40 and are arranged to press the ink roller guiding trucks 44 into contact with the guide tracks 45 formed upon the frame 6.

The general operation of the ink distributing devices hereinbefore described is as follows: Assuming the ink carrying rolls to be in the position illustrated in Fig. 4 of said patent, the elbow lever 8 is rocked to carry the rolls first across the type 36, then into contact with the ink fountain roll 26 and finally across the distributor disk 12 to the position corresponding to that illustrated in Fig. 2 of said patent. The rolls are then returned passing across the distributor disk in the opposite direction over and in contact with the ink fountain roll and across the type to the point of beginning beneath said type, or to a position corresponding to that illustrated in Fig. 4 of said patent. During the upward movement of the rolls and before said rolls come into contact with the distributor disk 12, the hub 10 of the elbow lever 8 contacts with the under side of the arm 21 (Fig. 2) and imparts a rotary movement to the distributor disk, said hub sliding in contact with the under side of said arm while imparting this movement to the distributor disk. Upon the return movement of said rolls the arm 21 moves downwardly and

draws the pawl 18 backwardly upon the teeth of the ratchet 17 without rotating the disk. During the latter part of the rocking movement of said elbow lever and while the rolls are moving upwardly to be brought into contact with the distributor disk and while said rolls are in contact with said distributor disk, the hub 10 engages the arm 33 and sliding in contact therewith moves said arm to the position illustrated in Fig. 3, thus rotating the ink fountain roll to bring a new supply of ink from the fountain to be taken by the ink fountain rolls as they ascend.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. In a printing press, an ink distributor disk and mechanism adapted to impart an intermittent rotary motion thereto embodying a pivoted arm and a rock-lever adapted to engage said arm in sliding contact during a portion of its rocking movement and a stop-screw on said arm adapted to engage a stationary member, whereby the extent of movement of said arm in one direction may be determined.

2. In a printing press, an ink distributor disk, an elbow lever, a pair of bevel gears operatively connected to said distributor disk, a pawl and ratchet mechanism connected to one of said bevel gears and adapted to impart an intermittent rotary motion thereto, a pivoted arm, a link connecting said arm and ratchet mechanism, a rock-lever adapted to engage said arm and impart a rocking movement thereto during a portion of the rocking movement of said rock-lever, and a stop-screw having screw-threaded engagement with said arm and adapted to engage a stationary member, whereby the extent of movement of said arm in one direction is limited.

3. In a printing press, an ink distributor disk, a bevel gear fast to said disk, a second bevel gear meshing into said first bevel gear, a ratchet connected to said second bevel gear, a pawl adapted to operatively engage said ratchet, a rocking pawl carrier on which said pawl is mounted, a pivoted arm, a link connecting said arm and said pawl carrier, a rock-lever adapted to engage said arm and impart a rocking movement thereto during a portion of the rocking movement of said rock-lever, and an adjustable stop adapted to limit the extent of movement of said arm in one direction.

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

GEORGE W. PROUTY.

Witnesses:

LOUIS A. JONES,
EDWARD SHORE.