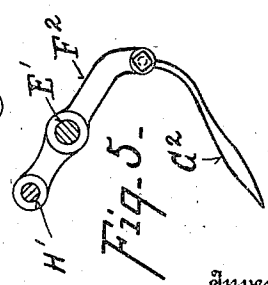
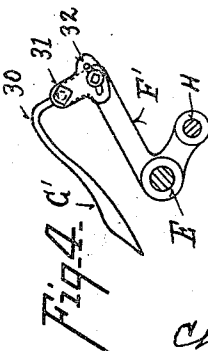
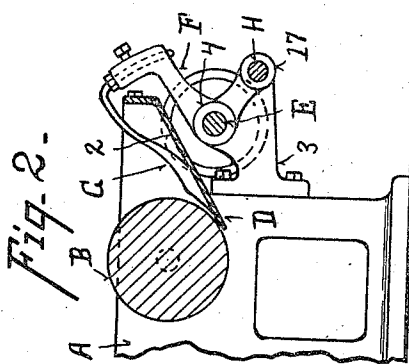
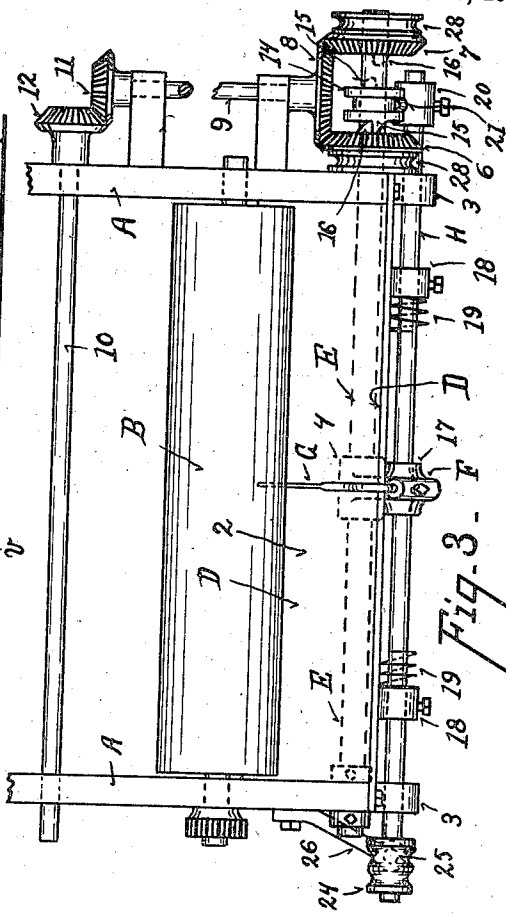
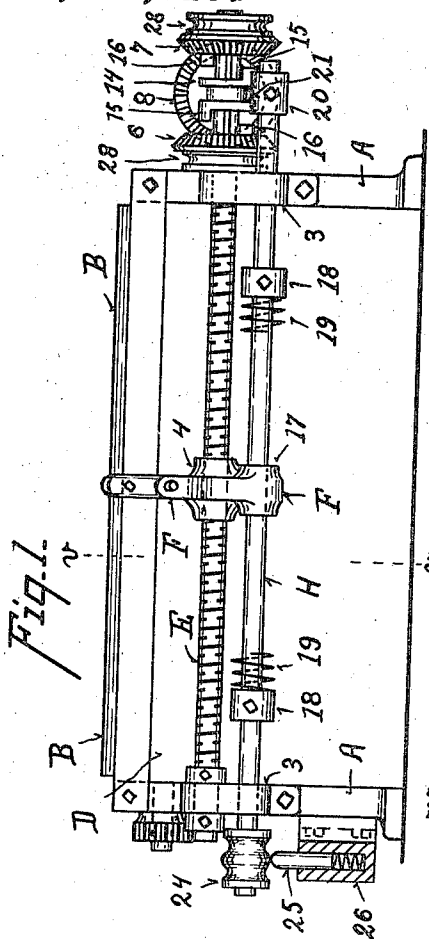


C. H. BUETTNER.
 INK MIXING MECHANISM FOR PRINTING PRESSES.
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1,142,019.

Patented June 8, 1915.



Witnesses

W. Thornton Bogert
 A. Skason

By

Inventor
 Charles H. Buettner

C. W. Miles,

Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. BUETTNER, OF CINCINNATI, OHIO.

INK-MIXING MECHANISM FOR PRINTING-PRESSES.

1,142,019.

Specification of Letters Patent.

Patented June 8, 1915.

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To all whom it may concern:

Be it known that I, CHARLES H. BUETTNER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ink-Mixing Mechanism for Printing-Presses, of which the following is a specification.

My invention relates to improvements in ink distributing mechanism for printing presses.

One of its objects is to provide improved mechanism to distribute the ink on the ink fountain, and to prevent lint or other foreign matter from gathering or concentrating at any point to interfere with a regular and uniform application of ink to the inking roller.

Another object is to provide adjustable means to provide for distributing ink to any desired portion of the inking roller.

Another object is to provide with a distributor traveling to and fro over the ink fountain an improved power driven mechanism to automatically feed and reverse the movements of said distributor.

My invention also comprises certain details of form, combination and arrangement all of which will be fully set forth in the description of the accompanying drawings, in which:

Figure 1, is an end view of a printing press with my improvements attached thereto. Fig. 2, is a sectional view on line V V of Fig. 1. Fig. 3, is a top plan view of the same. Fig. 4, is a detail of a modification. Fig. 5, is a detail of another modification.

The accompanying drawings illustrate the preferred embodiments of my invention in which, A represents the frame of an ordinary type of printing press.

B represents a roller or cylinder which serves to take up the printers' ink from the ink fountain and apply it to one or more rollers, not shown, which in turn apply the ink to the face of the type.

D represents an ink fountain of usual type having an inclined face 2 upon which the printers' ink is distributed and from the lower edge of which the ink is taken up by the roller B as it revolves.

In practice lint freed from the paper and other dust and foreign matter falls upon the ink fountain and is carried into contact with the roller B. The respective units of

this foreign matter also apparently appear to exert an attractive force upon one another, causing clots or accumulations of such foreign matter at different points, which in turn interfere with and tend to prevent a uniform feed of ink to the roller B, and thereby a streaked or uneven application of ink to the face of the type. The general practice heretofore has been for the operator using a knife or palette knife to insert the knife and run it across the fountain close to the roller B at frequent intervals to break up any accumulations of foreign matter and distribute the ink so as to secure a uniform feed of ink to the face of the type. This is a dangerous and difficult operation as it must be performed without stopping the printing press, and between intervals of the press movement, to avoid catching the knife or hand of the operator in the mechanism.

In order to automatically distribute the ink upon the fountain and to prevent accumulations of foreign matter at points where it would prevent a uniform supply of ink over the face of the type, I provide a feed shaft E which is rotatably mounted in brackets 3 which are bolted to the frame A. The shaft E is preferably threaded with a coarse pitch thread which is threaded into the hub 4 of a traveling carriage F which travels backward and forward along the feed shaft E. An ink distributing blade or palette knife G is detachably mounted on the carriage F to travel therewith across the face of the ink fountain, and to distribute the ink thereon close to the roller B, and also to break up or dislodge any accumulating bodies of foreign matter which would be liable to interfere with the regular and uniform distribution of ink.

At one end the shaft E is provided with a pair of beveled gears 6 and 7 loosely mounted on said shaft E and driven in opposite directions by means of a beveled gear 8 on shaft 9, which receives motion from one or other of the shafts of the printing press, as for instance the shaft 10 shown in Fig. 3, by means of a pair of beveled gears 11 and 12. A sliding clutch member 14 is splined to the shaft E between the gears 6 and 7, and has clutch teeth 15 at opposite ends to engage the clutch teeth 16 of the respective gears 6 and 7, thereby enabling the shaft E to be alternately driven in opposite

directions by shifting the clutch member 14 endwise.

A shifting rod H is also mounted in bearings in the brackets 3 so as to be shifted endwise relative to its bearings. The carriage F has a hub 17 through which the rod H passes. Adjustable collars 18 are carried by the rod H and preferably springs 19 are interposed between said collars and the hub 17 to cushion the engagement of said hub and collars, and to insure a full endwise movement of the rod H after it has once commenced to move. The rod H has a hub 20 carrying a stud or roller 21, which engages an annular groove in the clutch member 14, to cause said clutch member to move endwise with the rod H. The rod H is also preferably provided with a grooved roller 24 which is engaged by a spring actuated dog or latch 25 seated in a recess in bracket 26 to prevent accidental displacement of the rod H endwise, and at the same time to enable said rod to be shifted endwise by the engagement of the carriage F through the springs 19 with the collars 18.

I have illustrated belt grooves 28 on the members 6 and 7 in order that if desired said members may be driven in opposite directions respectively by straight and cross belts from belt pulleys on the shaft 10 in place of employing the beveled gears 8, 11 and 12.

By shifting the collars 18 upon the rod H the travel of the carriage may be regulated to cover all or any desired portion of the face of the ink fountain, and it is frequently desirable to place dams across the fountain and ink only a portion of the face of the roller B.

As illustrated in Figs. 1, 2 and 3 the shank of the blade G is curved with the point of the blade as a center and seated in a socket in the carriage E and locked in place by means of a set screw, thus enabling the blade to be inserted, removed or adjusted without interfering with the roll or fountain. As illustrated in Fig. 4, the shank 30 of the blade is pivoted to the carriage F at 31, and is adjustable by means of the slot 32 and is also detachable. In Fig. 5 I have illustrated a modification adapted to other types of presses in which the members E' H' are mounted above the roller B and the blade G² is detachably clamped to the carriage F² in a dependent position.

The mechanism herein illustrated and described is capable of considerable modification without departing from the principle of my invention.

Having described my invention what I claim is:

1. In an ink distributing mechanism, an ink distributing member in combination with feeding mechanism comprising a traveling carriage on which said ink distributing member is adjustably mounted with the free end of said ink distributing member as the center of adjustment, the ink fountain to feed said carriage backward and forward, mechanism to drive said feed shaft alternately in opposite directions, a shifting rod to reverse the direction of rotation of said feed shaft, and means carried by said carriage to actuate said shifting rod when said ink distributing member has reached the limits of its path of travel.

2. In an ink distributing mechanism, an ink distributing member in combination with feeding mechanism comprising a carriage on which said ink distributing member is mounted to travel to and fro across the printing press, a threaded feed shaft to feed said carriage in either direction, clutch members loose on said feed shaft and positively driven in opposite directions, a sliding clutch member nonrotatably carried by said feed shaft, a shifting rod provided with adjustable resilient stop members to be engaged by said carriage, said carriage to shift said sliding clutch member alternately into engagement with the respective loosely mounted clutch members to reverse the direction of feed of said carriage.

3. In an ink distributing mechanism, an ink distributing member in combination with feeding mechanism comprising a carriage on which said ink distributing member is mounted to travel to and fro across the printing press, a threaded feed shaft to feed said carriage in either direction, clutch members loose on said feed shaft and positively driven in opposite directions, a sliding clutch member nonrotatably carried by said feed shaft, a shifting rod movable endwise and engaging said sliding clutch member, and adjustable spring cushioned collars on said shifting rod to be engaged by said carriage to shift said sliding clutch member alternately into engagement with the respective loosely mounted clutch members to reverse the direction of feed of said carriage.

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

CHARLES H. BUETTNER.

Witnesses:

C. W. MILES,

W. THORNTON BOGERT.