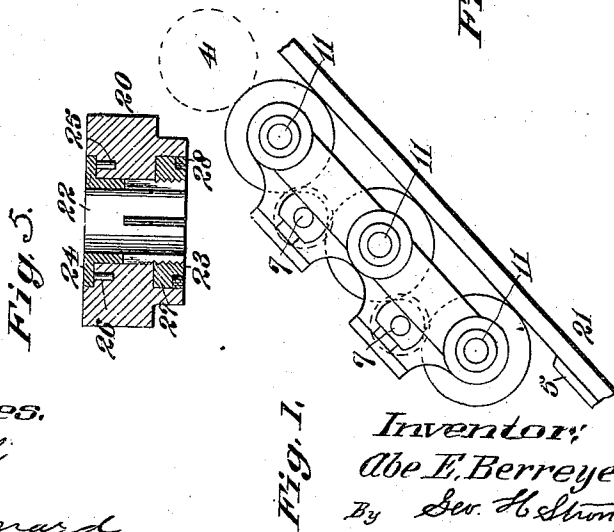
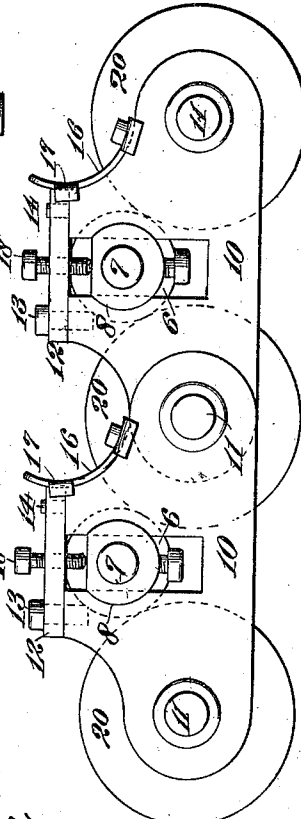
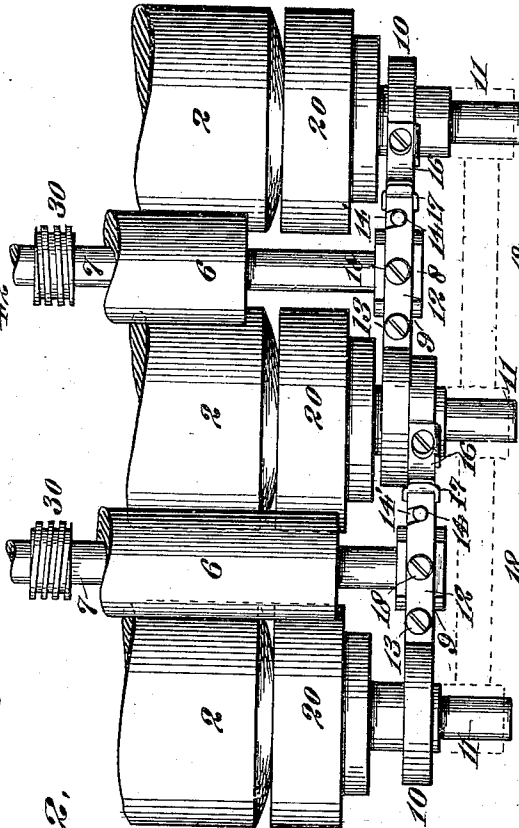
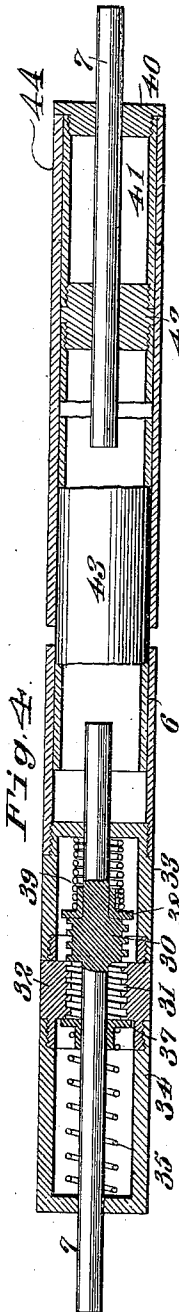


A. E. BERREYESA.
INK DISTRIBUTER.
APPLICATION FILED SEPT. 28, 1910.

991,193.

Patented May 2, 1911.



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UNITED STATES PATENT OFFICE.

ABE E. BERREYESA, OF OAKLAND, CALIFORNIA.

INK-DISTRIBUTER.

991,193.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed September 28, 1910. Serial No. 584,278.

To all whom it may concern:

Be it known that I, ABE E. BERREYESA, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Ink-Distributers, of which the following is a specification.

This invention pertains to an inking mechanism and is particularly relevant to an inking apparatus used in conjunction with platen presses.

There are certain well known standard platen presses extensively in use in which the form-rollers or distributers are journaled in a substantial ridged frame which is given a rectilinear motion between the ink fountain and the form in the press and it is the object of my invention to introduce and use in conjunction with these standard form-rollers equalizing rollers adapted for longitudinal engagement with the rollers and designed to have a longitudinal vibratory motion thereon; to provide in combination with the form-rollers an improved friction collar, whereby the rollers are revolved, and to combine a simple, reliable and automatic mechanism for axially reciprocating the equalizing rollers; and also to provide means whereby the equalizing roller may be connected and easily detached from its bearing; and particularly to provide a substantial bearing for the equalizing rollers.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which;

Figure 1 is a diagrammatic view showing the device applied. Fig. 2 is a plane view partly in section. Fig. 3 is an end view of the same partly broken away. Fig. 4 is a detail sectional view of an equalizing roller. Fig. 5 is a sectional detail of a set collar.

In the present embodiment of my invention, 2 represents the usual form-rollers or distributers which are mounted for rotation in a suitable frame 3 adapted to reciprocate between an appropriate ink feeding mechanism as indicated diagrammatically at 4 and the form indicated at 5.

In the form of press on which my invention is used, the rollers 2 do not have any independent longitudinal or parallel movement, being simply rectilinearly moved to

and fro between the ink mechanism 4 and the form 5 in a common plane.

For the purpose of obtaining a more even distribution of the ink from the rollers 2 to the form 5 I introduce a plurality of parallel equalizing rollers 6 revolubly mounted upon sectional spindles 7 secured in set collars 8, slotted upon opposite sides at 9 and adapted to be adjusted in their respective bearings 10 which form, substantially, links in which are journaled for rotation the shafts or stocks 11 to which are secured the form-rollers 2.

In the present form of my equalizing device, the supporting link 10 which forms the bearing for the spindles 7 of the equalizing rollers 6 are here shown as being of an integral continuous piece suitably perforated to form the journals for the stocks or shafts 11, for the reason that in the presses for which this device is adapted there is no relative variation out of a common plane of the form rollers 2, thus permitting me to journal these rollers 2 in this solid link and afford a firm and effective bearing for the spindles 7.

In order to facilitate the removal of equalizing rollers 6 from their bearings 10, I provide a cap 12 pivoted at 13 upon the bearing link 10 and the bearing cap 12 may be swung about its pivot 13 so as to permit the slotted collar 8 to be easily lifted from, or inserted in its bearing socket.

Any suitable alining stop may be employed to limit and position the bearing cap 12 when it is in its operative position above the collar 8, and as shown, I have provided a pin or equivalent device 14 projecting from the top of the bearing 10 and adapted to enter a recess 14 formed in one side of the cap 12 so that when the cap is swung around into contact with the pin 14 the cap will then be in its proper relative position above the collar 8, and to prevent the accidental opening or movement of the cap 12, I provide a suitable spring 16 having angular flanges 17 adapted to embrace the edges of the bearing cap 12 and thus prevent its movement.

The spindle 7 is adjustably mounted in the bearing 10 so as to accommodate itself to the gradual decrease of diameter of the form rollers 2 with age and in order to maintain the periphery of the equalizing roller 6 upon its adjacent parallel rollers 2, a set screw or other equivalent device 18 is provided in the

bearing cap 12 and adapted to be screwed down so as to firmly press upon the collar 8 and prevent outward movement of the equalizing roller 2.

5 For the purpose of revolving the form-rollers 2 as they reciprocate, I employ suitable friction collars 20 adapted to bear upon track ways 21, the collars being detachably clamped upon their respective stock shafts
10 11 to which the form-rollers 2 are secured by means of a split sleeve 22 which is externally threaded as at 23 and flanged as at 24. On the flange 24, is provided suitable projections 25 adapted to register with the com-
15 plementary perforations or recesses 26 formed in the counter-sunk side of the friction roller 20, the tubular slotted portion of the clamping sleeve 22 projecting centrally through the collar and being adapted to receive the internally threaded annulus 27,
20 whereby the slotted sleeve is contracted as the annulus is advanced upon the threads 23 which are preferably slightly tapered. I have found that this clamping device is extremely efficient, simple and reliable. One
25 of the advantages of this form of construction is that the complementary clamping members as the sleeve 22 and the annulus 27 when assembled in position are entirely in-
30 closed or within the side planes of the friction collar or driving wheel 20, and in order to accomplish the unscrewing of the annulus 27 from the split sleeve, one side of the annu-
lus is recessed as at 28 to receive a spanner
35 wrench, whereby it may be unscrewed. By means of this frictional runner as it travels upon its track ways 21, the shafts or stocks 11, carrying the form-rollers 2 are revolved, thus transmitting motion from the form-
40 rollers 2 to the equalizing rollers 6 which bear upon the form-rollers.

The axial reciprocation of the equalizing rollers 6 may be accomplished by forming upon one of the spindles 7 a fixed thread
45 30 adapted to engage internal threads 31 formed upon a flanged coupler 32 having an external diameter equal to that of the tube 6 which forms the equalizing roller. Between the equalizing roller section 6 and the
50 coupler 32 is secured a cup 33 upon which one end of the tube 6 is screwed and into the other end of which is screwed the threaded nut 32. Upon the other end of the threaded
nut 32 is secured an extension or spring receiving member 34 which forms one end of
55 the sectional equalizing roller 6. Butting against the inside of the end section 34, is a spring 35 normally effective against a washer 37 and which is reactive against the
60 threaded part 30 of the spindles 7 when this part moves into engagement with the washer 37. On the opposite side of the coupler nut 32 is another washer 38 normally under tension of a spring 39 which is shown in
65 Fig. 4 as being under compression and effec-

tive to shift the tube 6 in the direction of the arrow.

The rotation of the tubular sectional equalizing rollers 6 will cause the threaded
portion 30 of the spindle 7 to engage the
70 threads 31 and automatically feed and axially, shift the tube 6 in one direction until the nut 32 passes off the threads 31, a continued rotation of the cylinder or roller 6
75 being without axial movement. Immediately upon the reversal of the direction of rotation, the compressed spring causes the threads of the coupler 32 to again pick up the threads 30 and oppositely shift the tube
80 6, placing under tension the other spring.

If desired, the roller section may be caused to move oppositely simply by forming right and left hand threads upon the spindles 7. Upon the other section of the spindle 7 is
85 slidably mounted a bushing 40, upon which is secured a tubular spacer section 41, to which is attached a bearing bushing 42 from one side of which projects an extended, internal sleeve 43. By means of this connected
90 series of sections 41-42-43, etc., last of which is telescopic within the tubular roller 6, the overall length of the roller may be increased to any desired size by the intro-
95 duction of spacing collars 44 mounted adjacent to the bushing 40 and between the contiguous ends of the casing or cylinder 6.

By this construction I am enabled to provide an adjustable, vibratory, equalizing roller 6 which, being longitudinally shift-
100 able across the surface of the form-rollers 2, prevents the formation of streaky deposits of ink on the form 5 in the press.

Having thus described my invention, what I claim and desire to secure by Letters Pat-
105 ent is—

1. In a printing press, the combination with an ink supplying device and a form, of a plurality of form-inking rollers, a bearing member for said rollers whereby the latter
are moved in a common, straight plane, a
110 plurality of intermediate equalizing rollers disposed above the center of, and adapted to bear upon, the form-rollers, spindles upon which the equalizing rollers may revolve,
115 shafts rotatably journaled in said bearing member and upon which the form-rollers are secured, friction rollers secured upon the form-roller shafts and adapted to revolve upon trackways, means comprising a split
120 threaded sleeve secured in said friction rollers, and an annulus adapted to contract the split sleeve to frictionally bind upon said shafts.

2. An inking device for printing presses, comprising ink receiving and distributing
125 form-rollers, shafts upon which said rollers are secured, connections between said shafts, equalizing rollers mounted in the spaces between the form-rollers and adapted to bear thereon above their axis, spindles upon which
130

said equalizing rollers may revolve, bearing members secured upon said spindles and adapted to be removably and unturnably mounted in the aforesaid connections, frictional driving collars secured upon said shafts for revolving the same, means for detachably securing the frictional collars upon the shaft, said means including a split, externally threaded sleeve having a flange at one end provided with projections adapted to register with recesses in one side of said collar, and an internally threaded annulus whereby the split sleeve may be contracted to frictionally bind upon its respective shafts.

3. An inking mechanism comprising form-rollers, shafts therefor, carriers in which said shafts are rotatably journaled, friction wheels whereby said shafts are revolved, independent links connecting adjacent pairs of shafts, equalizing rollers, spindles upon which said equalizing rollers are revoluble, bearing members adapted to be retained against rotation by said links, means secured upon the

spindles of the equalizing rollers whereby the rollers are axially movable, said means including threads formed upon a portion of the spindle, an internally threaded coupler section in the equalizing roller adapted to alternately engage and shift across the threads of the spindle, and resilient devices reactive upon opposite sides of the coupler to normally press the latter into engagement with threads of the spindle whereby, when the motion of the equalizing roller is reversed, the threads of the spindle will intermesh with the threads of the coupler and the direction of the axial motion of the equalizing roller be controlled.

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

ABE E. BERREYESA.

Witnesses:

CHARLES EDELMAN,
M. G. OAK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
