W. M. SHULTZ.

DISTRIBUTING ROLLER FOR PRINTING PRESSES.

APPLICATION FILED APR. 25, 1917.

1,294,961. Patented Feb. 18, 1919.

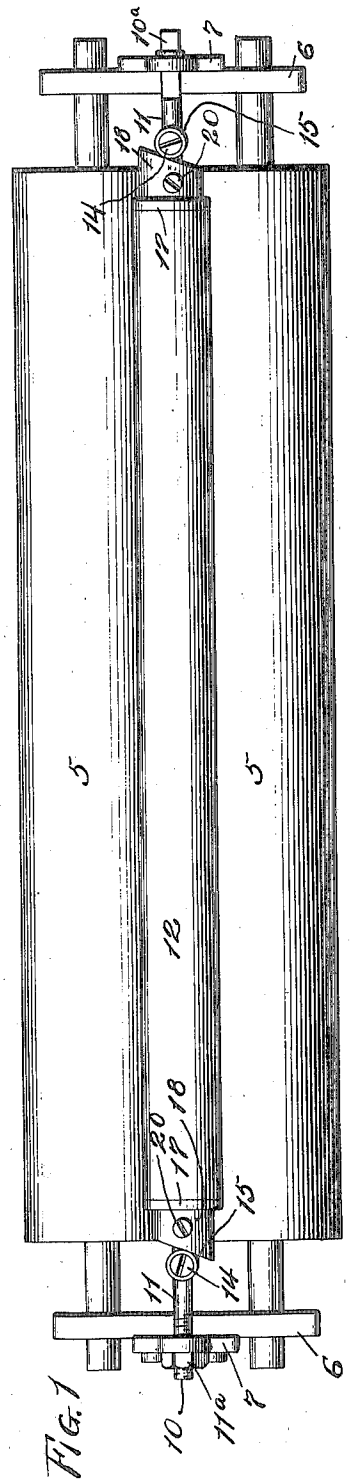


FIG. 1

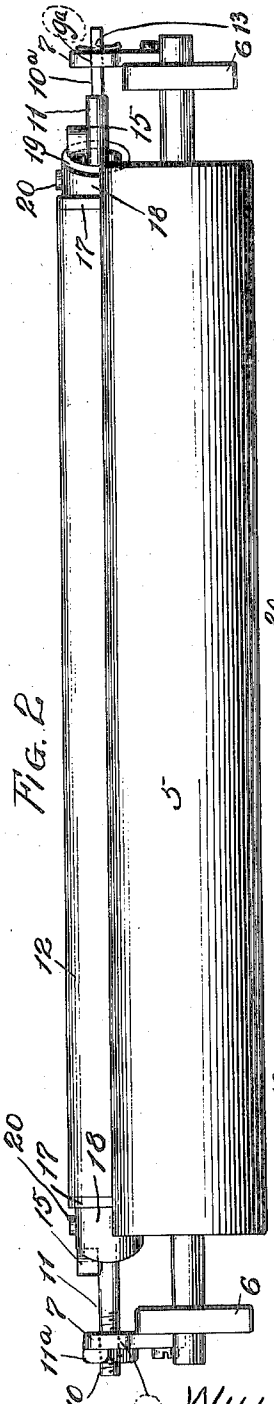


FIG. 2

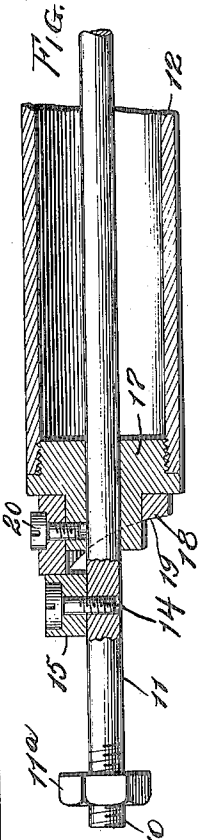


FIG. 4.

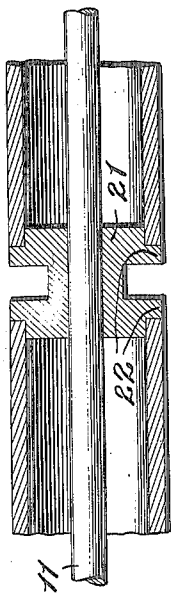


FIG. 5.

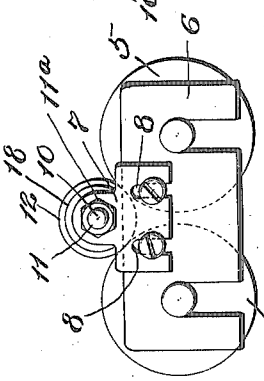


FIG. 3

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DISTRIBUTING-ROLLER FOR PRINTING-PRESSES.

1,294,961. Specification of Letters Patent. Patented Feb. 18, 1919.

Application filed April 25, 1917. Serial No. 164,340.

To all whom it may concern:

Be it known that I, WILLIAM M. SHULTZ, a citizen of the United States, and resident of St. Louis and State of Missouri, have invented certain new and useful Improvements in Distributing-Rollers for Printing-Presses, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "riding and distributing rollers for printing presses", wherein a roller, convertible to continuous or sectional, is mounted on a shaft, supported in adjustable bearings and related to the bearings of the form inking rollers in a manner to produce rigidity of the press frame and wherein oppositely disposed and axially adjustable cams are secured to the rollers and operate in conjunction with fixed projections on the shaft for vibrating the roller for purposes of ink distribution.

My object is to provide a simple and inexpensive ink distributing roller, which may be readily attached to an ordinary press,—such for instance as of the Gordon type, and which may be readily converted from a continuous to a sectional roller and which may be employed either as a simple rider or a vibrating distributing roller.

My improvements consist in the novel construction, arrangement and combination of parts, which will be fully, clearly and concisely set forth in my specification, pointed out in my claims and illustrated by the accompanying drawings in which,—

Figure 1 is a plan showing my improved roller and its relation with form inking rollers.

Fig. 2 is an elevation of the rollers, as shown in Fig. 1.

Fig. 3 is an end elevation of the rollers.

Fig. 4 is a fragmental longitudinal sectional elevation showing the cam for axially moving the roller, and

Fig. 5 is a fragmental sectional elevation, showing the construction of a sectional roller.

Referring to the drawings by numerals, 5 designates the form inking rollers which are, or may be of ordinary construction and journaled to rotate in saddles 6 secured in a common manner to the frame of the press, and arranged to be rotated by traction over an inked surface, then over the form, as is usual with presses of the Gordon type.

Secured to each saddle and projecting upwardly therefrom, from their outside lateral faces is a bracket 7 having means, such as the slots 8, for their adjustments relative to the saddles and formed through the one bracket is a circular hole 9 and the other a non-circular hole 9^a arranged to receive the circular and non-circular ends 10 and 10^a of shaft 11 arranged for the support of the riding or distributing roller 12, whose periphery engages each of the form inking rollers 5.

In order to prevent axial movement of the shaft 11, in one direction, I employ a nut 11^a on the circular end 9 of the shaft and form a hole 13 through its non-circular end 9^a for the reception of a pin or cotter which nut and pin in their engagement with the brackets, cause the shaft to serve as a "tie" between the saddles and thus overcome the usual tendency to relative vibrations of the saddles and axial movements of the form inking rollers.

Formed in the shaft 11 adjacent each of its ends, is an internally threaded seat arranged to receive a screw 14, preferably provided with a friction roller 15 and which screws serve to secure the riding and distributing roller 12 in place on its shaft.

The roller 12 as shown, is formed tubular, and at each end is internally threaded to receive the collars 17, rotatably mounted on the shaft and having a threaded peripheral portion, for securing in the end of the roller, and a smooth peripheral portion to receive a sleeve 18, whose outer lateral face 19 is of spiral formation to serve as a cam, and which sleeve is secured against rotation on the collar 17 by means of a screw 20.

It will be obvious that with the sleeves 18 or cams arranged on the shaft with their longest projections in diametrically opposite arrangement, the cams in engaging the friction rollers 15, will be axially moved maximum distances, and by a different relative disposition of the cams the roller may be given any desired axial movement or held by the cams against axial movement, as when the longest projection of one cam is arranged diametrically opposite the shortest projection of its companion cam.

It will be obvious further, that by an

adjustment of the brackets supporting the shaft the roller may be shifted to vary its tractional relationship with the form inking rollers.

By reason of the screws holding the friction rollers and the cams, it is obvious that the shaft may be withdrawn from the rollers and that the same shaft, collars, cams and friction rollers may be employed with either a continuous or a sectional roller.

In Fig. 5 I show a sectional roller, whose outermost sections have their outer ends internally threaded in the same manner as the ends of the continuous rollers described, but whose inner ends are axially spaced and supported on a collar 21, having the spaced annular flanges 22, and in this connection it is to be understood that this spacing of the flanges 22 is preferably slightly in excess of the maximum axial movement of the roller, in order to obviate the lapping of one section of the roller over an inked surface feeding a second roller section when, of course, the "job" is a multi-color one.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent of the United States, therefor, is:—

1. An ink distributing means for printing presses, comprising a tubular roller internally threaded at each of its ends, a collar having a threaded connection at each end of the roller, a cam faced sleeve detachably secured to each collar, a friction roller and means for detachably securing the friction roller to the shaft adjacent each cam sleeve, brackets for the support of said shaft, means for preventing rotation of the shaft in said brackets, said brackets being slotted to provide for their being adjustably secured to their supports.

2. An ink distributing means for printing presses comprising a pair of ordinary ink rollers, an adjustable shaft mounted above and between said ink rollers, removable friction rollers secured adjacent to the ends of said shaft, an ink distributing roller of less length and diameter than the ink rollers revolubly mounted on said shaft, between the friction rollers, and adjustable therewith, and oppositely disposed removable cam faces carried by the ends of said ink roller and contacting with the friction rollers.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

WILLIAM M. SHULTZ.

Witnesses:
R. G. Orwig,
M. E. Klee.