J. W. REEVES.

INK DISTRIBUTING ROLLER FOR PRINTING PRESSES.

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1,154,727.

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Fig. I.

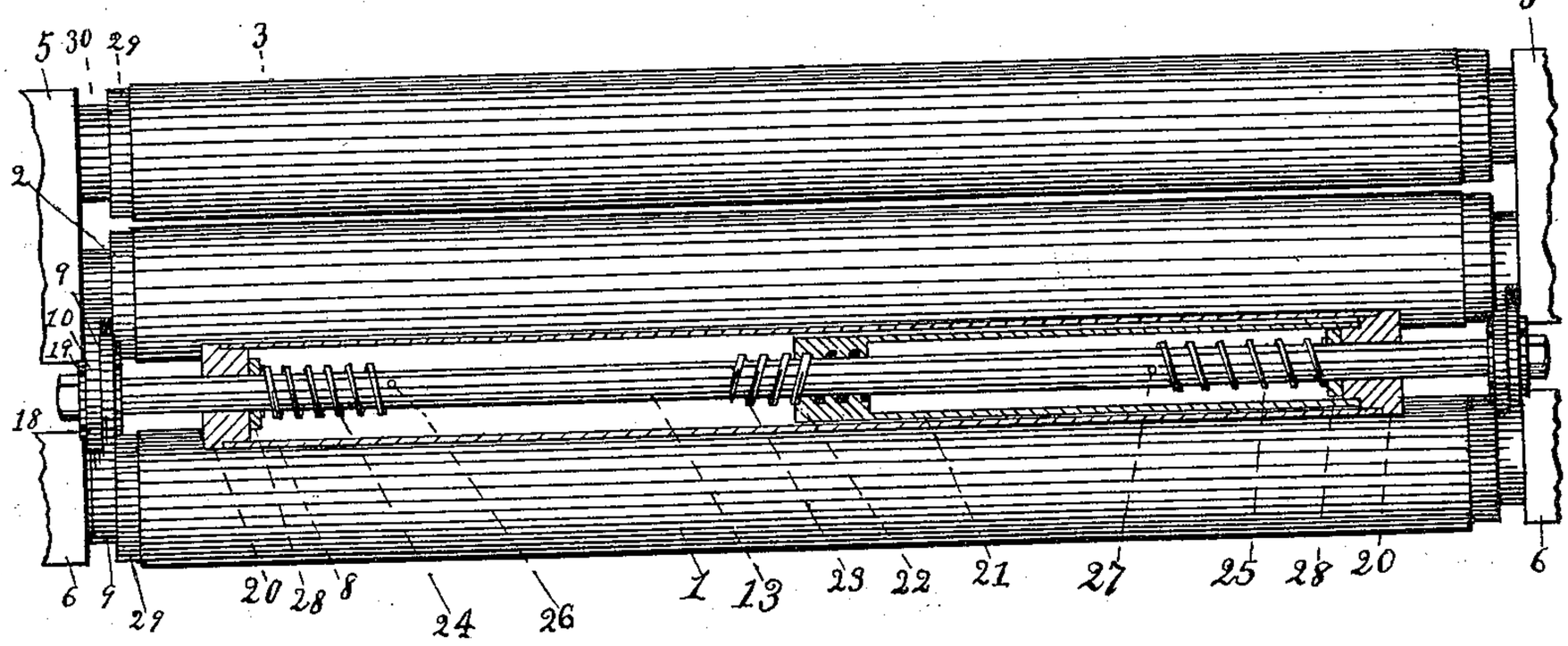
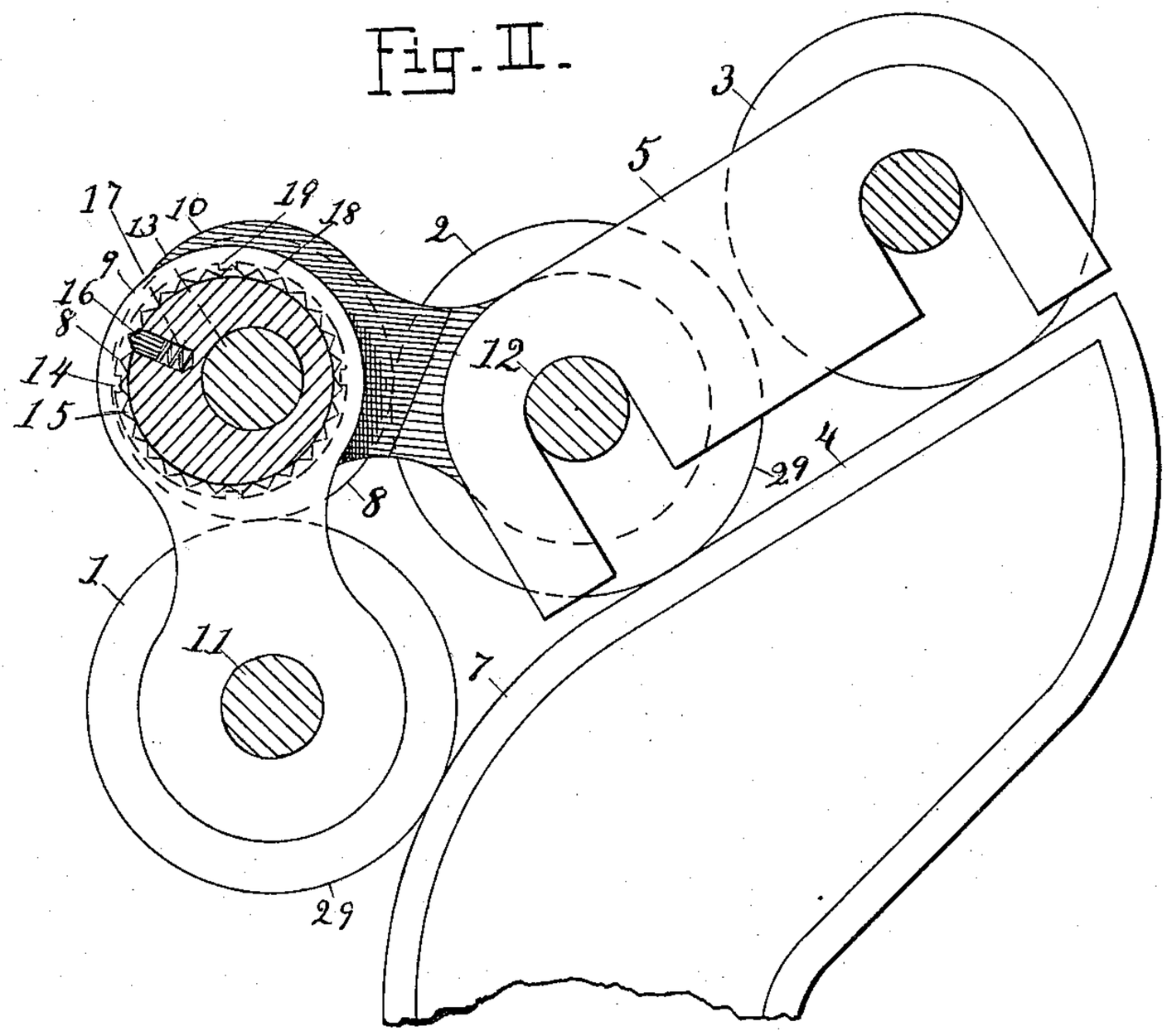


Fig. II.



Witnesses

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INK-DISTRIBUTING ROLLER FOR PRINTING-PRESSES.

1,154,727. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed March 29, 1915. Serial No. 17,629.

To all whom it may concern:

Be it known that I, JAMES W. REEVES, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Ink-Distributing Rollers for Printing-Presses, of which the following is a specification.

This invention relates to ink distributing rollers for printing presses and its object is to so connect a distributing roller with two adjacent inking rollers that perfect contact shall be maintained between these rollers, both while they travel in a straight line and while they travel over the corners of the guide ways; to provide means for adjusting the distributing roller to inking rollers of different sizes and to the shrinking of the rollers in service; and means for maintaining the distributing roller in its proper longitudinal relation to the inking rollers.

To this end my invention consists in the construction and combination of parts forming an ink distributing roller for printing presses hereinafter more fully described and particularly stated in the claims, reference being had to the accompanying drawings in which:

Figure I. is a top view of three inking rollers showing my distributing roller in longitudinal section. Fig. II. is an end view of the same on a larger scale, partly in vertical section.

Numerals 1, 2, and 3 represent common inking rollers mounted as usual to travel to and fro on guide ways 4, of a printing press. The rollers 2, and 3, are permanently yoked together by their end bearings 5, but the roller 1, is mounted in end bearings 6, that permit it to move a little to and from the roller 2, in passing over the curve 7, of the guide way 4. To accommodate this variable movement, I mount the shaft 13, of my distributing roller 8, in knuckle jointed links 9 and 10, the outer end of link 9, being mounted on the shaft 11 of roller 1, and the outer end of link 10, being mounted on the shaft 12, of roller 2, but I interpose an eccentric 14, between each link and the shaft 13, whereby the length of the link, or the radial distance between the two bearings in each link may be adjusted to bring the distributing roller 8, into rolling contact with rollers 1, and 2, of various sizes when new, or that become worn in service. The inner periphery of the link around the eccentric is provided with notches 15, to be engaged by a detent 16, in the eccentric, that is impelled into service by a spring 17. Each eccentric has an externally flanged head 18, provided with notches 19, that may be engaged by a spanner to turn the eccentric and force the detent out of its notch when adjusting it.

In Fig. II. the flange and notches are shown in dotted lines. The roller 8, is a tube mounted by means of plug ends 20, to revolve freely on the shaft 13, and is shorter than the inking rollers to permit longitudinal play relative to the said rollers for the purpose of distributing along them the ink that is gathered on them by usual means. An inner tube 21, attached to one of the plugs 20, carries a screw nut 22, that is engaged by a screw thread 23, on the shaft 13, and this shaft is secured to some one of the links 9, or 10, so that it does not revolve with the roller 8. Springs 24, and 25, having their inner ends secured to the shaft 13, at 26, and 27, respectively press on leather washers 28 that rest against the plugs 20. The nut 22, and screw 23, are so proportioned in length that the nut passes entirely off from the screw before the rollers quite complete their traverses either way and leaves the rollers free to turn a little more without any possibility of bumping the distributing roller 8, against the end bearings, then the springs 24 and 25, impel the nut to engage the screw as soon as it is started in the reverse direction by the return movement of the inking rollers. As the roller 1, is the last to leave the type before printing takes place it is essential that the ink be evenly distributed along its whole length, therefore I give the endwise reciprocating motion described to roller 8; and for the same reason I connect the roller 8, with the two adjacent rollers 1 and 2, by means of the links 9, and 10, so that these rollers must remain continually in contact, for if they were to separate at any time a ridge of ink would be left on the rollers at the line of separation. The usual inking rollers are provided with steel ends 29, to roll on the guide ways 4, therefore to adapt my distributing roller to printing presses now in service, I have only to cut off the hub por-

tions 30, from these steel ends of rollers 1 and 2, to admit my links 9 and 10, to take bearing on the shafts 11 and 12; or I may substitute steel ends of the thickness of the roller portions 29, for those on a press. The nut 22, is mounted midway the length of roller 8, to balance the action from any looseness in bearings.

I claim:

1. In a device of the character described, a pair of inking rollers mounted in yoke bearings; a third inking roller mounted alongside one of the first named rollers in bearings independent thereof; antifriction rollers on the shafts of the inking rollers and tracks for them to travel on; pairs of links having knuckle joints and connected with the shafts of the said third roller and the roller adjacent thereto, and an ink distributing roller mounted on a shaft at the knuckle joint of the said links and fitted for longitudinal reciprocating movement, whereby the reciprocating roller may rise and fall to remain in contact with its two adjacent rollers in passing over curved tracks.

2. In a device of the character described, an ink distributing roller; a shaft therefor; a pair of links serving as a bearing for each end of the shaft, the opposite ends of the links fitted for concentric connection with two adjacent inking rollers; and eccentric cams interposed in the bearings of the distributing roller.

3. In a device of the character described, an ink distributing roller; link bearings to connect it with adjacent inking rollers; an eccentric cam serving as a bearing in each link; notches in the inner periphery of the link around the cam and a spring impelled detent to the cam to engage the said notches.

In testimony whereof I affix my signature in presence of a witness.

JAMES W. REEVES.

Witness:
JAMES J. SMITH.