(No Model.)

E. P. SHELDON.

INK ROLLER MECHANISM.

No. 558,214. Patented Apr. 14, 1896.

Fig. 3.

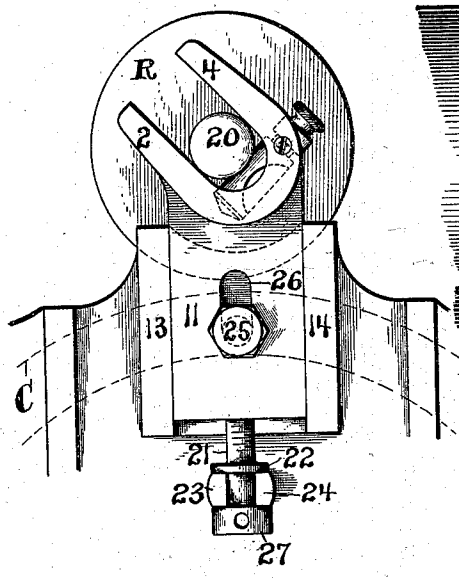


Fig. 2.

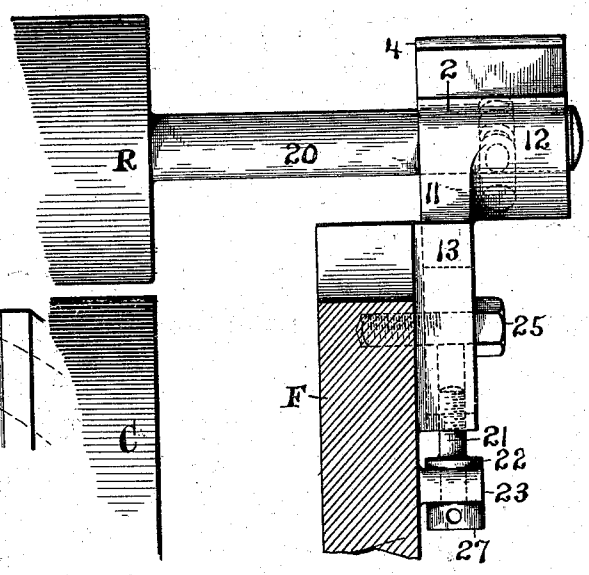


Fig. 4.

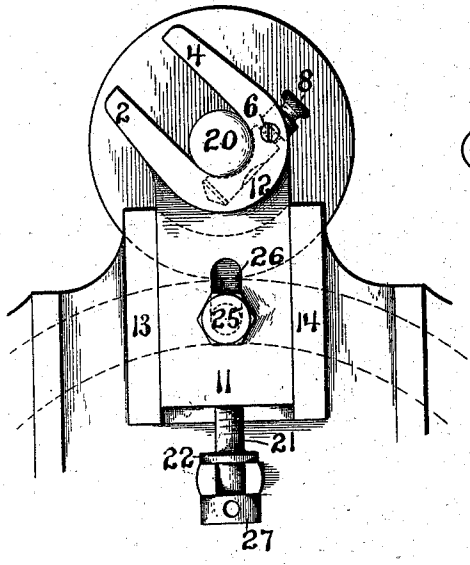
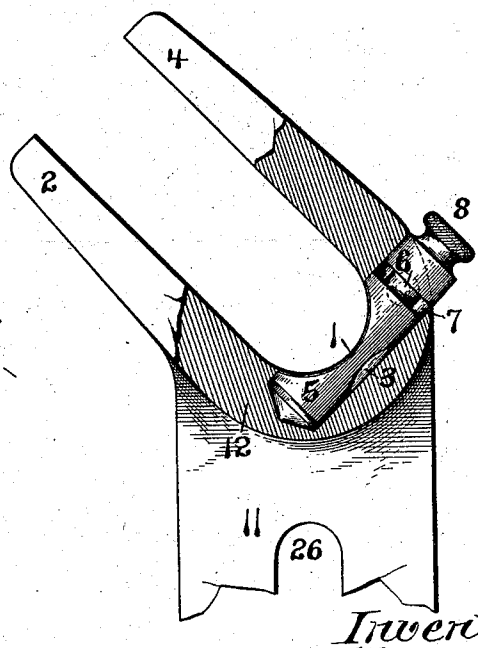


Fig. 1.



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UNITED STATES PATENT OFFICE.

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INK-ROLLER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 558,214, dated April 14, 1896.

Application filed August 9, 1895. Serial No. 558,760. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. SHELDON, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Ink-Roller Mechanisms, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to provide a simple and effective means for holding composition ink-rollers out of contact with the printing-form when the printing-machine is out of operation, so as to prevent the surfaces of the rollers from becoming flattened and injured.

The invention consists in providing the sockets in which the shafts of the composition inking-rollers revolve with means for elevating the roller-shaft bearings thereof, whereby through a slight movement thereof, preferably rotation, the roller-shafts may be raised sufficiently to lift the rollers out of contact with the printing-form.

There may be various forms of this invention, but a simple, cheap, and effective embodiment of it is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of the head of a roller-socket provided with the preferred form of this invention. Fig. 2 is a side elevation of one end of a composition inking-roller with this improvement applied to it and showing its relation to the form. Fig. 3 is an end elevation of the same, and Fig. 4 is an end elevation similar to that embodied in Fig. 3.

In Figs. 2 and 3 the inking-roller is shown as raised out of contact with the form, and in Fig. 4 the inking-roller is shown in working relation to the form.

In the ordinary practice of lifting composition rollers out of contact with the form when the printing-machine is out of operation said rollers are removed from their sockets and supported by being rested upon projecting seats provided on the sockets or the side frames. To do this requires the simultaneous act of two men, one at each end of the roller, and the existing structures are such that this act must carry the rollers clear of their sockets and remove the same a considerable distance from their operative position.

The present invention is embodied as a part of the ordinary roller-socket. This roller-socket consists, as usual, of a head 12, provided with projecting inclined arms 2 4, between which the shaft 20 of the composition inking-roller R is embraced, seated, and rotates, and having a shank 11, which slides between vertical ways 13 14, projecting from the side frame, and is adjusted therein by means of a screw-bolt 21, the threaded end of which enters the shank 11 of the socket and raises and lowers said socket by reason of the bearing-flange 22, which rests upon the seat 23 24, the screw-bolt 21 being turned by a head 27 and the position of adjustment of said roller-socket being maintained by a set-screw 25, which passes through an elongated slot 26 in the shank 11 of the socket-holder.

The preferable means for embodying this invention are found in a rotating lifting-bearing 5 for the shaft of the said composition roller. As illustrated, this lifting-bearing for the roller-shaft is composed of a bolt 5, having a round body which is inserted so as to be revoluble in a circular bearing bored in the head 12 at right angles to the direction of the arms 2 4, which bolt preferably has formed in its body a curved seat 1, shaped to fit the shaft 20 of the roller, and of a depth suitable not only to receive and support said shaft, but allow it to properly revolve when the roller itself is in working contact with the form. Diametrically opposite to this seat 1 there is provided a second curved seat 3, which is a shallow but curved depression that fits the said shaft 20, the purpose of which is that when the shaft rests therein to support the roller R out of contact with the form or type cylinder C to protect it from injury, the bearing thus afforded the shaft will cause the latter to act as a lock that will resist any tendency of the bolt 5 to rotate and thus return the roller R into contact with the form, and although when the roller is thus supported it may be turned and vibrated longitudinally its periphery will be maintained in such a plane with respect to the form as

will prevent its contact therewith. The shank of this bolt 5 is provided with a milled head 8 to enable it to be readily turned, and is countersunk, as at 7, to receive the stem of a holding-screw 6, which retains the bolt 5 in proper relation to the arms 2 4 in all positions of its rotation. When provided with this lifting-bearing, it will be perceived that a single operator may raise and support the composition inking-roller out of contact with the form-cylinder by first lifting the shaft so that it clears the seat 1, then turning the bolt 5 so that its seat 3 is presented to and has the shaft rested upon it. When one or both ends of said shaft are supported in the seats 3, the composition inking-roller will be supported sufficiently out of contact with the form as to escape injury to its soft body and yet permit said roller to be moved longitudinally without injury if the printing-machine should be set into operation when the roller is in this position, the structure also being such as to enable the roller to be quickly returned to its operative position by a mere semirotation of the bolt 5, which may be performed while the machine is in operation. The movement of this lifting-bearing while preferably rotative may be made a longitudinal one. Thus if the bolt 5 be made long enough to carry the seats 1 and 3 in succession upon it longitudinally and is arranged so as to be moved endwise and carry its seat 1 from under the shaft and present its seat 3 thereto, and is provided with fastening means for holding the bolt in both of these positions of adjustment, it is obvious that the advantages of this invention will be attained. Of course the seat 3, while being shown as a shallow curved one, need not be anything more than a bearing-surface such as the exterior surface of the bolt would present, but it is preferable to have it depressed and curved, as shown.

The invention resides, broadly, in providing the socket with means not only for so supporting the bearings for the shaft of the composition inking-roller as not only to maintain the latter in working position in relation to the form, but also support the same in a raised position out of contact with the form, in which position it may be moved over the same without injury. It follows that an embodiment of it may vary from the structures described herein without departing from the invention.

What I claim is—

1. The combination with the sockets in which the shafts of the composition inking-rollers of a printing-machine revolve, with means for raising and lowering the roller-shaft bearings independent of their ordinary adjustment, the same consisting of a rotating lifting-bolt that is supplied with opposed bearings that respectively support said roller through its shaft in and out of operative position substantially as described.

2. The combination with the shaft of a composition inking-roller, and the sockets for the same, of a lifting-bolt 4 rotating transversely to said shaft whereby an inking-roller is supported in and out of operative position with respect to the form, substantially as described.

3. The combination with the arms forming the head of a roller-socket, of a rotative bolt, as 5, transversely arranged with respect to the ink-roller shaft and provided with the seat 1, substantially as described.

4. The combination with the arms forming the head of a roller-socket, of a rotative bolt, as 5, transversely arranged with respect to the ink-roller shaft and provided with the seat 3, substantially as described.

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

E. P. SHELDON.

Witnesses:
F. W. H. CRANE,
E. L. SPEIR.