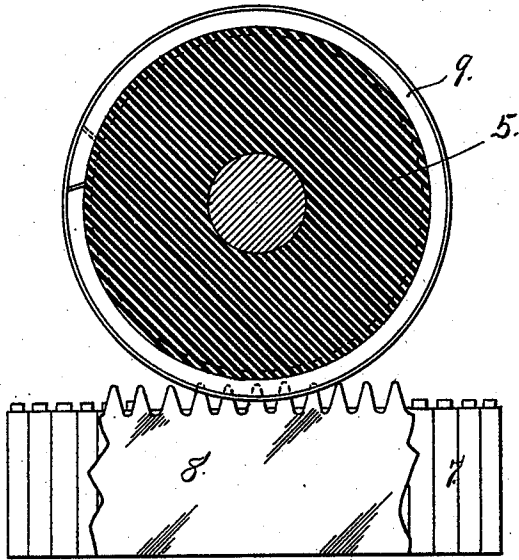
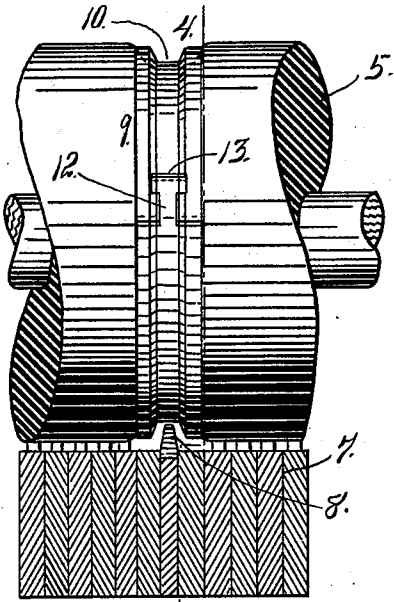


W. O. DRAY.
 INK ROLLER PROTECTOR.
 APPLICATION FILED OCT. 13, 1910.

1,000,331.

Patented Aug. 8, 1911.
 2 SHEETS—SHEET 2.



← 4 Fig. 3.

Fig. 4.

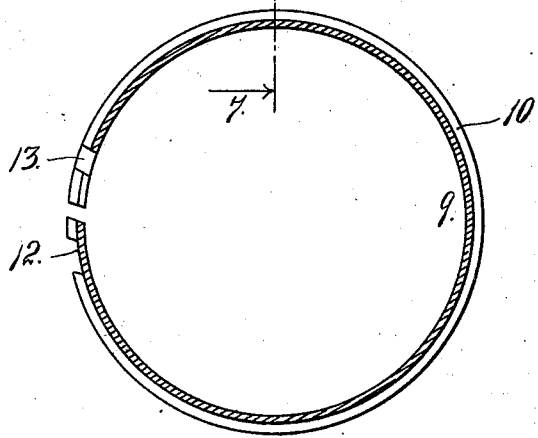
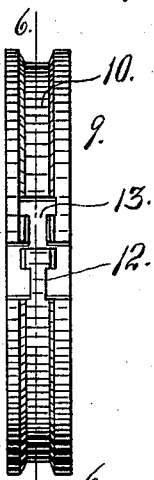


Fig. 5.

Fig. 7.

Fig. 6.

Witnesses
Otto C. Haddock.
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UNITED STATES PATENT OFFICE.

WILLIAM O. DRAY, OF DENVER, COLORADO.

INK-ROLLER PROTECTOR.

1,000,331.

Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed October 13, 1910. Serial No. 586,857.

To all whom it may concern:

Be it known that I, WILLIAM O. DRAY, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Ink-Roller Protectors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in means for protecting the inking rollers employed in connection with printing presses. My improvement serves to protect the ink roller from injury resulting from engagement with the perforating device during the operation of inking the forms in all work where perforators are employed. As these perforators must project above the printing surface of the type, they act upon the inking roller and seriously injure the same during the inking operation.

My improvement consists in applying a circumferentially grooved ring to the compressible material of the inking roller, whereby the ring, which is comparatively thin, is embedded in the surface of the roller and so located that the groove in its outer surface forms a path for the perforating device of the form, thus preventing the latter from cutting and destroying the roller.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a top plan view of an inking roller equipped with my improvement, the roller in this view being shown in connection with the pad or plate from which it receives its supply of ink preparatory to its use upon the form or printing surface to be inked. Fig. 2 is a similar view showing my improved device employed in connection with an inking roller, the latter being illustrated in connection with a form to be inked. Fig. 3 is a fragmentary sectional view with the parts shown on a larger scale. Fig. 4 is a section taken on the line 4—4 Fig. 3. Fig. 5 is a

detail view of my improved protecting ring whose extremities are shown disconnected in this view. Fig. 6 is a section taken on the line 6—6 Fig. 5. Fig. 7 is a section taken on the line 7—7 Fig. 6.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate an inking roller; 6 the inking pad or plate from which the roller receives its supply; 7 the printing form or surface to be inked; and 8 a row of teeth adapted to perforate the paper during the printing operation.

My improvement consists of a ring 9 which is centrally and circumferentially grooved exteriorly as shown at 10, the depth of the groove being sufficient to allow the teeth 8 to enter when the ring is applied to the roller. This ring is divided and its extremities are adapted to interlock when the ring is contracted sufficiently to cause it to embed itself within the comparatively soft rubber surface of the inking roller. As shown in the drawing one extremity of the ring is T-shaped as shown at 12, while its opposite extremity has a counterpart recess 13 into which the T-shaped member of the opposite end may enter for interlocking purposes when the ring is pressed together and properly manipulated.

The ring has sufficient yielding capacity that when its ends are disconnected, it may be made to spring apart far enough to allow it to pass freely over the roller endwise until it reaches the proper position. It may then be contracted by the use of a suitable tool, sufficiently to cause its extremities to interlock, and when so applied it will be forced into the material of the roller so that its outer surface shall be slightly below the adjacent surface of the roller, so that it cannot possibly interfere with the inking operation. The ring is, of course, so located upon the roller that its groove 10 will be in alignment with the perforating teeth 8 upon the form.

Of course it will be understood that a number of these rings may be applied to the same roller if desired, or if occasion may require. For instance, it may often happen that the paper to be printed must have several rows of perforations formed therein simultaneously. In this case the inking roller should have as many protecting rings as there are rows of perforating teeth 8.

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Having thus described my invention, what I claim is:

The combination with an inking roller for printing press use, the said roller having a circumferential groove, of a ring of different material than the roller arranged within the groove, the groove of the roller being of sufficient depth so that the ring when placed therein will have its entire periphery below the surface of the roller, the

said ring being circumferentially grooved to receive the perforating device carried by the press, substantially as described.

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

WILLIAM O. DRAY.

Witnesses:

F. E. BOWEN,
HORTENSE UHLRICH.

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