J. L. FIRM.

Device for Protecting the Ends of Rolls of Paper, &c.

No. 160,175. Patented Feb. 23, 1875.

Fig. 1.

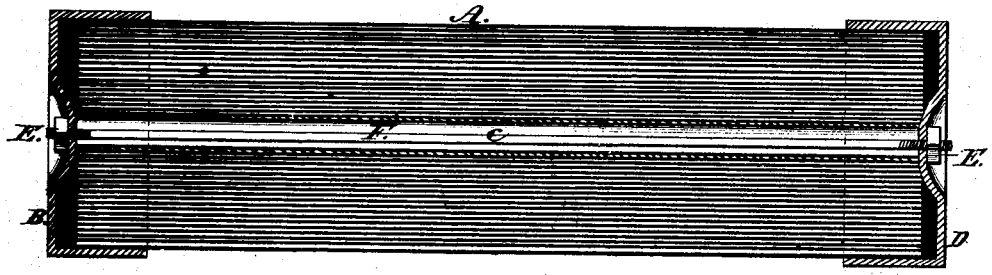
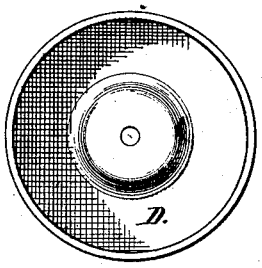


Fig. 2.

Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH L. FIRM, OF NEW YORK, N. Y.

IMPROVEMENT IN DEVICES FOR PROTECTING THE ENDS OF ROLLS OF PAPER, &c.

Specification forming part of Letters Patent No. **160,175**, dated February 23, 1875; application filed March 10, 1874.

To all whom it may concern:

Be it known that I, JOSEPH L. FIRM, of New York, in the county and State of New York, have invented an Improvement in Devices for Protecting the Ends of Rolls of Paper, Cloth, and other Fabrics, of which the following is a specification:

My invention relates to certain devices to be applied to rolls of fabrics of various kinds, particularly paper, so that said rolls may be handled, transported, or set on end without injury to the edges of the fabric. The invention consists in the combination of a tube running through the center of the roll, two caps placed on the ends of the roll, and a rod running through the tube and the centers of the caps, and securing them in place by means of nuts and screw-threads, in the manner and for the purpose hereinafter particularly described.

In the accompanying drawing, Figure 1 is a longitudinal sectional view of a roll with my invention applied thereto. Fig. 2 is a side view, and Fig. 3 an end view, of one of the caps.

A represents a roll of paper, such as is used in some printing-presses now in use for printing from a continuous sheet. Such rolls, when made up at the factory, are wound around a tube, F, and when placed in the press to be printed, a shaft is passed through this tube, and the roll revolves around said shaft. These rolls are usually wrapped in coarse paper, which does not afford sufficient protection, so that in handling, transporting, and setting the rolls on end, the edges of the paper sometimes become soiled, broken, or torn. To protect the roll from such injury I employ the caps B D, placing one over each end of the roll, and securing them in place by the rod C, which passes readily through the tube, and has a screw-thread on each end, or a head on one end and a screw-thread on the other, for engagement with a nut or thumb-screw. The caps B D are made of metal, and may be formed by casting or by striking them out of plate or sheet metal. The sides or edges of the caps are bent or turned at right angles to the ends a sufficient distance to extend from said ends toward each other far enough to protect the edges of the roll. The ends or faces of the caps are countersunk in the center for the admission of the nuts, so that said nuts may lie below the surface of said ends, as shown in Fig. 1, and be out of the way when the roll is placed on end. When the roll is to be placed in the press for use, the rod C and caps B and D are removed, and the roll applied to the press by passing a shaft through the tube, as before described. When the paper is all unwound from the tube, said tube and the caps and rod are laid aside to be returned to the factory.

Although this invention is particularly applicable to rolls of paper used for printing purposes, yet it is readily applicable to rolls of carpet, cloth, or other fabric, by passing the rod through the center of the roll, independently of the tubes used in the paper rolls.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the tube F, the caps B D, countersunk in the center, and the screw-rod C, substantially as and for the purpose shown and described.

JOSEPH L. FIRM.

Witnesses:
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