May 10, 1955 S. E. MARTINEAU 2,708,031

PAPER ROLL PROTECTOR

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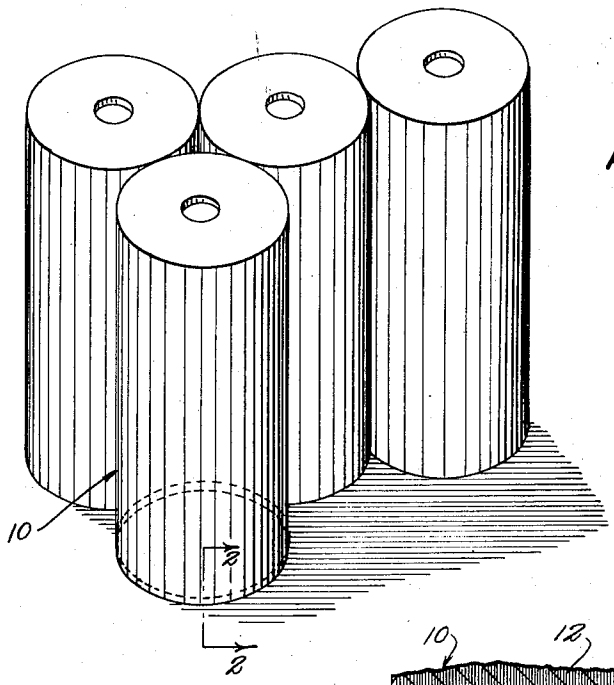


FIG. 1.

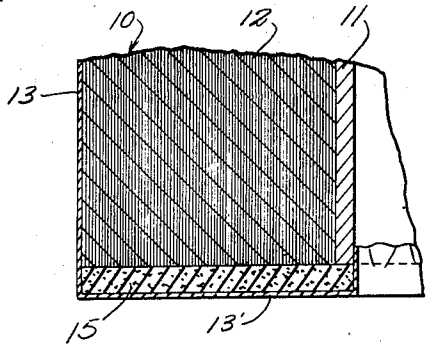


FIG. 2.

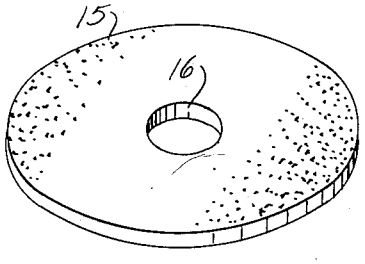


FIG. 3.

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PAPER ROLL PROTECTOR

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2 Claims. (Cl. 206—59)

This invention relates to paper roll protectors and more particularly to a protective pad or cushion for an end of a roll of paper, such as a roll of newsprint paper.

It is among the objects of the invention to provide a paper roll protector in the form of a flat pad or cushion of resilient material, such as solid or expanded rubber, which may be placed over one end of a heavy roll of paper, such as a roll of newsprint paper, in covering relationship to the corresponding end of the paper roll so that the roll can be placed on the end protected by the pad or cushion and supported or transported on such end without damage to the paper at the protected end of the roll; which can be enclosed in the paper wrapping at the corresponding end of the paper roll and requires only an insignificant amount of additional time and labor for its inclusion in the roll wrapping; which is of light weight and easy to handle and can be returned to the paper manufacturer along with the emptied roll cores so that it can be reused a large number of times; and which is simple and durable in construction, economical to manufacture, and effective and efficient in use.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawing, wherein:

Figure 1 is a perspective view of a group of heavy paper rolls, such as rolls of newsprint paper, disposed in upright position with one end of each roll resting on a floor;

Figure 2 is a fragmentary cross sectional view on an enlarged scale on the line 2—2 of Figure 1; and

Figure 3 is a perspective view of a paper roll protector illustrative of the invention.

With continued reference to the drawing, the numeral 10 generally indicates a heavy roll of paper, such as a roll of newsprint paper. As is well known, rolls of newsprint paper are heavy and bulky and difficult to handle and are usually placed on end during transportation or storage since, because of their length and cylindrical shape, a great deal of space would be wasted if they were placed on their sides and there would also be a tendency for the rolls to roll along the floor on which they were supported with consequent danger to persons working near or with the rolls.

When the rolls are placed on end, as illustrated in Figure 1, for convenience and safety in handling, the edge of the newsprint paper at the bottom end of the roll is frequently damaged by being wrinkled, bent or torn and, in such a case, a strip of the entire piece of newsprint paper may have to be removed along one edge of the paper in order to salvage the remainder of the paper, resulting in an expensive waste of paper and in inconvenience in utilizing the narrower length of paper. This waste of newsprint paper, although amounting to large sums of money every year in this country alone, has heretofore been considered unavoidable and an investigation of the paper manufacturing and printing industries has disclosed no successful attempt toward eliminating it.

Each paper roll 10, as illustrated in Figure 2, includes a tubular core 11 of cylindrical shape formed of a suitable rigid material, such as wood, compressed fiber or laminated paper, a body 12 of newsprint paper wound on to the core 11 to provide a roll of cylindrical shape and of a predetermined length and diameter and a wrapping 13 of tough, heavy paper, such as kraft paper, extending around and over the ends of the roll. The portion 13' of the wrapping extending over the ends of the roll is centrally apertured and folded inwardly of the adjacent end of the tubular core 11 to provide openings in the wrapping registering with the bore of the tubular core for the insertion of the usual appliances into the ends of the core for lifting and moving the paper rolls and supporting them in position for the paper to be wound off of the roll.

In accordance with the present invention, a flat pad or cushion 15 of resiliently elastic material, such as a solid body of soft rubber or a body of expanded rubber is placed over one end of the roll of paper in covering relationship to the end of the body 12 of newsprint paper before the wrapping 13 is applied to the roll or, at least, before the wrapping of the roll is completed.

This pad or cushion 15 is a flat body of circular shape having substantially parallel major surfaces and has a diameter substantially equal to the diameter of the body 12 of newsprint paper wound on the core 11. At its center the cushion is provided with a circular aperture 16 of substantially the same diameter as the diameter of the bore of the tubular core 11 of the roll and this aperture registers with the corresponding end of the bore in the tubular core.

In applying the protector to the end of the paper roll, before the portion 13' of the wrapping 13 is placed over the corresponding end of the roll, the protected pad or cushion 15 is placed in covering relationship to the end of the paper roll and the portion 13' of the wrapping is then placed over the outer side of this pad or cushion to secure the protector in position against the corresponding end of the roll.

If desired, the end portion of the first wrapping may be placed over the selected end of the paper roll, the protective pad 15 placed against the outer side of this end portion of the wrapping and an outer wrapping may be then secured to the first wrapping and over the side of the protective pad remote from the end of the roll to secure the pad in proper position to protect the adjacent end of the paper roll.

With the protective pad or cushion 15 in place, if a paper roll is tilted or otherwise moved so that its weight is unevenly distributed over its bottom end, the elastic material of the protective pad or cushion will be compressed at the location of the greatest concentration of weight and will tend to distribute this concentrated weight over a sufficient area of the end surface of the roll to avoid damage to the paper of the roll. After a roll has been unwrapped at the printing plant using the paper, it is customary to return the tubular core on which the rolls are wound to the paper manufacturer for reuse. The protective pad or cushion 15 of the present invention can be easily returned to the manufacturer along with the empty cores so that these protectors can also be reused a large number of times making the expense incident to their provision substantially insignificant.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the mean-

ing and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. In combination with a rigid core, a sheet of newsprint paper tightly wound about said core to form a roll, and a heavy paper wrapping extending about and over the ends of said roll, said roll being adapted to be stored by standing it upon one end thereof, of a flat pad interposed between the heavy paper wrapping extending over the one end of said roll on which the latter is stood for storage and the last-named one end of said roll and abutting against said one roll end and retained in the abutting position against said one end of said roll solely by the heavy paper wrapping extending over the aforementioned roll end, said pad being fabricated of resilient material and being conformably shaped to fit said one end of said roll.

2. In combination with a rigid core having a bore extending axially therethrough, a sheet of newsprint paper tightly wound about said core to form a roll, and a heavy paper wrapping extending about and over the ends of

said roll, each of the portions of the heavy paper wrapping extending over the ends of said roll having an opening registering with the adjacent bore end of said core, said roll being adapted to be stored by standing it upon one end thereof, of a flat pad interposed between the heavy paper wrapping extending over the one end of said roll on which the latter is stood for storage and the last-named one end of said roll and abutting against said one roll end and retained in the abutting position against said one end of said roll solely by the heavy paper wrapping extending over the aforementioned roll end, there being an aperture in said pad registering with the opening in the portion of the heavy paper wrapping extending over said one roll end, said pad being fabricated of resilient material and being conformably shaped to fit said one end of said roll.

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