

(No Model.)

C. L. DUVAL.
PROTECTIVE GUARD FOR PAPER ROLLS.

No. 542,728.

Patented July 16, 1895.

Fig. 1.

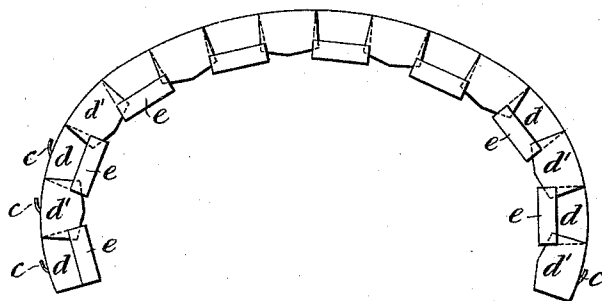


Fig. 2.

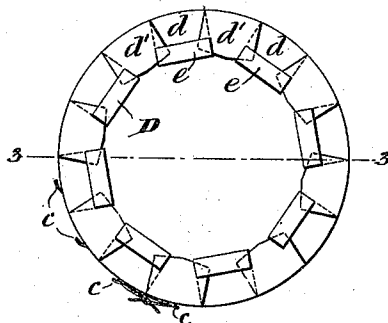


Fig. 5.

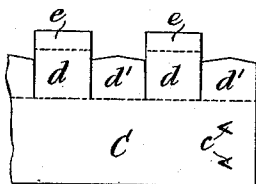


Fig. 6.

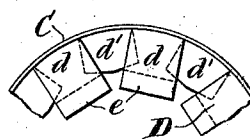


Fig. 3.

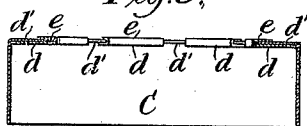
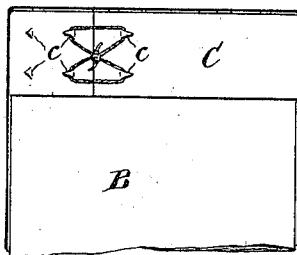


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES LOUIS DUVAL, OF BAYONNE, NEW JERSEY.

PROTECTIVE GUARD FOR PAPER-ROLLS.

SPECIFICATION forming part of Letters Patent No. 542,728, dated July 16, 1895.

Application filed August 14, 1894. Serial No. 520,272. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LOUIS DUVAL, of Bayonne, New Jersey, have invented a new and useful Improvement in Protective Guards for Paper-Rolls, of which the following is a description, referring to the accompanying drawings, which form a part of this specification.

My invention is particularly designed to protect the ends of the rolls of paper used for printing the daily and other papers. In its broader aspects it is applicable to any similar material or use.

Briefly, it consists of metallic guards adapted to surround and protect the extreme ends of the roll, extending several inches down the roll and several inches radially inward across the ends of the roll from the extreme edge. The guard is made flexible and readily adapts itself to varying diameters of the rolls, so that it may at once be applied to a roll and the ends drawn snugly together and secured, after which the roll may be protected from abrasion and soiling by paper or other cover entirely surrounding the roll and the guards.

The arrangement and conformation of my guards will be better understood from the accompanying drawings, which illustrate one preferred form.

Figure 1 shows one guard stretched open; Fig. 2, the same in end view in position upon the end of the roll; Fig. 3, an axial cross-section; Fig. 4, a side view showing the way the meeting ends of the guard are secured together; Fig. 5, an illustration of the blank from which the guards are made, and Fig. 6 a portion of a guard partly formed from such blank.

Throughout the figures like letters of reference indicate like parts.

The guard, when closed and in position, as in Figs. 2, 3, and 4, forms, in a manner, a circular angle-iron over the rectangular edge where the ends of the roll meet the circumferential side. The roll is indicated by B, the cylindrical portion of the guard by C, and the portion which covers the end of the roll by D. The end portion D, as clearly seen in Figs. 1, 2, and 3, is formed of sectional flaps or turned-up portions d d' , alternately overlying and underlying each other, the ends of

the underlying portions d being turned up and reversed over the corners of the overlying portions d' , as at e .

In Fig. 5 the form of the blank is so clearly shown that it is unnecessary to explain the manner in which it may be stamped out and the ends e turned up and back. The lines of folding are indicated by dotted lines in the drawings, and in Fig. 3 the manner in which the under and overlying portions lie together is clearly indicated in cross-section as taken on the plane 3 3 of Fig. 2. All the edges exposed on the under side of the guard are carefully smoothed off wherever necessary, and in this manner all danger of injuring the end of the roll is prevented.

When the guard is used for a large roll the overlying and underlying flaps or portions d d' slide upon each other, allowing the guard to be opened out, as in Fig. 1. Indeed, if it were necessary to use the guards for an unusually large roll two or more of them could be used conjointly. Where the meeting ends come together one end, terminating in a portion d' , is thrust under the turned-over end e of the portion d , which forms the other end of the guard, and the continuous cylindrical portion C of the guard is overlapped to correspond, as in Fig. 4. The metal of this cylindrical portion C is stamped up into the hook-shaped projections c , which are used to lace the meeting ends together after they are put in place upon the ends of the roll, as clearly shown in Fig. 4.

Where the guard is to be used with a roll much smaller than it is designed for new hooks may be readily formed by striking up the metal in the same manner and the guard overlapped and laced as before.

While I have described my guards in the most preferred form I have not limited myself to any particular material, though I prefer the use of soft sheet iron or steel. So also I have omitted the enumeration of many modifications and the description of minor details, because to set these forth at length would obscure rather than make clear the more essential features of my invention.

I claim, however, and desire to secure by Letters Patent, together with all such changes and additions as may be made by mere skill

in the art, and with only the limitations and restrictions as expressed or by law implied in view of the state of the art, the following:

1. The adjustable guard consisting of the
5 flexible cylindrical portion C and the sectional
turned-over portions *d d'* arranged to play
upon each other and permit the adjustment
of the guard, the ends of the portion *d* being
turned over the alternate portions *d'* as at *e*,
10 and hooks or fastening devices *c* being formed
integrally with the said guard, substantially
as set forth.

2. The flexible adjustable guard consisting
of a metallic plate or blank having turned up
15 sectional portions *d d'* interlocking and play-
ing upon each other to permit the adjustment
of the said guard, and means for securing the

ends of the said guard together, substantially
as set forth.

3. A guard for the purposes described con- 20
sisting of a cylindrical portion C and the sec-
tional end portion D, the sections of such end
portion interlocking and playing upon each
other to permit the adjustment of the said
guard, substantially as set forth. 25

In testimony whereof I have hereunto set
my hand, at the city of New York, this 9th day
of August, 1894, in the presence of two sub-
scribing witnesses.

CHARLES LOUIS DUVAL.

Witnesses:

FRED P. BUELL,
Z. F. HAWKES.