

(No Model.)

L. P. BARDWELL.

PRINTER'S ROLLER.

No. 271,567.

Patented Jan. 30, 1883.

Fig. 1,

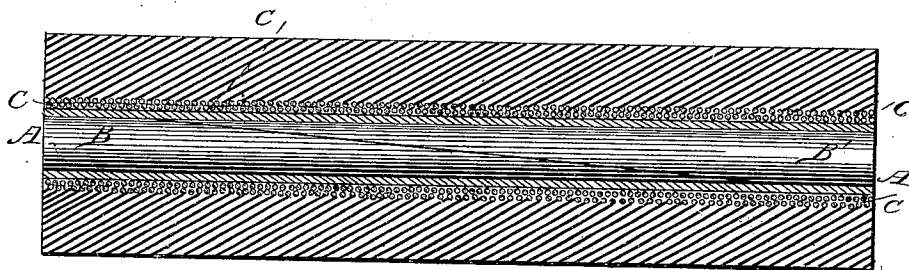


Fig. 2,

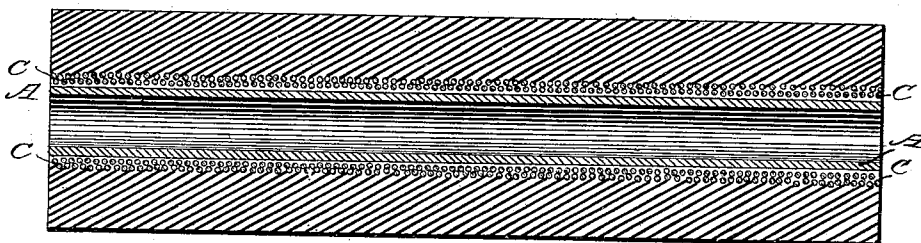


Fig. 3,

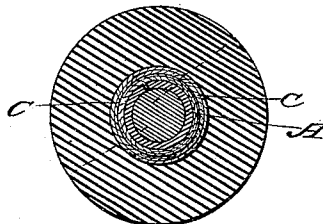


Fig. 4,



WITNESSES:

Wm. L. Dietrich
Charles H. Baker

Lucian P. Bardwell.
INVENTOR.

by Louis Bagge & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LUCIAN P. BARDWELL, OF MARION, IOWA.

PRINTER'S ROLLER.

SPECIFICATION forming part of Letters Patent No. 271,567, dated January 30, 1883.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, LUCIAN P. BARDWELL, of Marion, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Printers' Rollers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal section of my improved printer's roller with its false core. Fig. 2 is a similar view of the same as it appears after the false core has been removed and it is ready for the insertion of the permanent core. Fig. 3 is a cross-section of the roller, with its twine-wound inside tube and permanent core; and Fig. 4 is a side view of the false core removed from the roller after casting.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to printers' rollers, or inking-rollers for inking type in printing-presses; and it consists in the detailed construction of a tubular roller as an article of manufacture, as and for the purpose hereinafter more fully described.

My improved tubular printer's roller is cast upon a tubular core, (shown at A in the accompanying drawings,) made of card-board. The card-board, having been first cut to the proper length and width, is wound around a false core, which is made in two sections, B and B', of wood, metal, or any other suitable material. The sides of the sections B and B' facing each other are cut off obliquely or slanting; as clearly shown in the drawings, the slant or bevel running in opposite directions, so that when placed together they will form a perfect cylinder, forming the core of the tube A. These false cores are made in sizes to correspond to the standard sizes of the permanent cores used in printing-press rollers, and the manner of arranging and using them for casting is as follows: The parts B and B' having been placed in juxtaposition, the card-board is wound around them to form the tube shown at A, and held temporarily in position by slipping

two or three rubber bands over it. I then take a piece of any suitable twine or cord, and, commencing at the middle of tube A, wind the twine tightly around it to the end, thence back again across the middle to the other end, and back to the middle again, where the cord or twine is tied, thus making a twine covering around the card-board tube, as shown at C, when the false core, with its tube, is ready to be placed in the mold. After casting, the whole is withdrawn from the mold and the composition is properly trimmed on the tube, after which the false core is removed from tube A by pulling the parts B and B' in opposite directions. The roller is then ready to be put upon the permanent core when wanted for use. This may be done in various ways, which will readily suggest themselves to the practical printer. By brushing the permanent core with melted glue, paste, or any other suitable adhesive substance, the card-board tube will be fixed as firmly upon the permanent core as if the roller had been cast upon it. If necessary to make a snug or perfect fit, the permanent core may be wound with twine or paper until it is of the requisite dimensions to fit the tubular core A of the roller.

Card-board possesses advantages over other material in the construction of the cores on account of its cheapness and ductility, and also because the twine, when wound tightly around it, will so indent it as to form a slightly corrugated inner surface, which operates to hold the roller firmly upon its permanent core without slipping, besides forming creases, which make room for the glue or other adhesive substance used for fixing the roller upon the core.

These tubular rollers may be kept on hand any length of time, and are always ready for use. It is obvious that any desired or approved roller composition may be used in their manufacture, and that they may be manufactured to order of any desired length and diameter.

I am aware that rollers for chromatic printing or color-printing have been composed of detachable bushes faced with rubber, and used upon the stock or core, in combination with washers inserted between the sections to hold the rubber from spreading, as shown and

described in Robert J. Stuart's patent of July 18, 1871, No. 117,219; but I do not claim a sectionally-constructed roller.

What I claim as my improvement, and desire to secure by Letters Patent of the United States, is—

As an improved article of manufacture, a printer's roller having a tubular core made of card-board wound with twine, substantially

as and for the purpose herein shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

LUCIAN P. BARDWELL.

Witnesses:

DAVID MAGEE,

OTIS T. RICHMOND.