No. 841,539. PATENTED JAN. 15, 1907.

J. C. KIMSEY.

BLANK FOR PAPER TUBES.

APPLICATION FILED MAY 10, 1904.

Fig. 1.

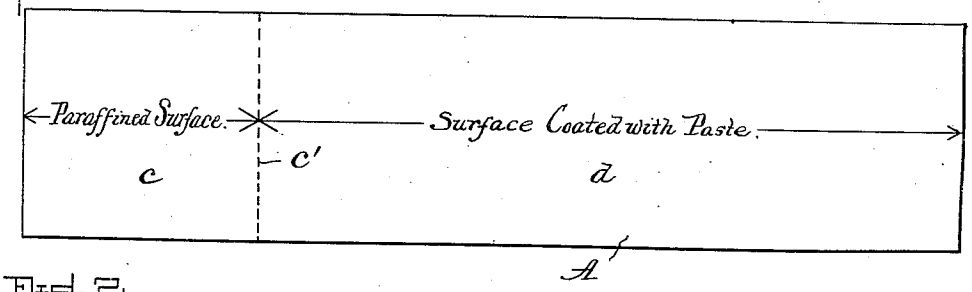


Fig. 2.

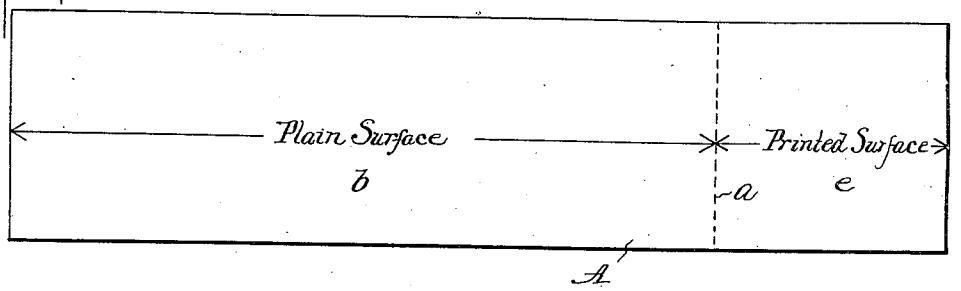


Fig. 3.

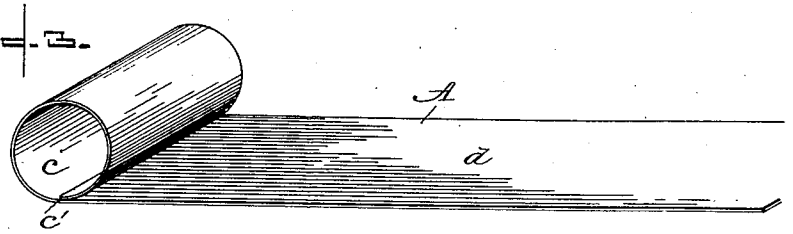


Fig. 4.

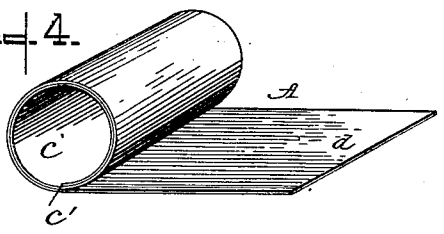
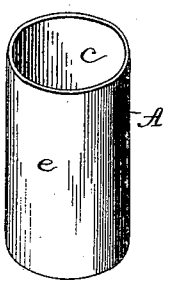


Fig. 5.



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BLANK FOR PAPER TUBES.

No. 841,539. Specification of Letters Patent. Patented Jan. 15, 1907.

Application filed May 10, 1904. Serial No. 207,224.

To all whom it may concern:

Be it known that I, JAMES C. KIMSEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Blanks for Paper Tubes, of which the following is a specification.

My invention relates to certain improvements in paper tubes, and more especially to that class of paper tubes employed in the manufacture of boxes or containers for articles of merchandise, and which are provided interiorly with a coating of paraffin or other impervious material and exteriorly with printed matter descriptive of the goods, &c. In the manufacture of these tubes it is customary to roll a sheet of paper over a cylinder or mandrel and during such operation supply paste to the paper, so that the several thicknesses constituting the body of the tube will be pasted together, the strength of the tube depending of course upon the number of thicknesses applied, and in making up boxes or containers from such tubes they are in many instances coated interiorly with paraffin, usually accomplished by dipping or by application to the interior surface only. Such boxes or containers are then supplied with labels, either on a sheet pasted to the box or printed directly on the outside of the box.

It is the purpose of my present invention to coat with paraffin that portion of the tube-blank which will form the interior of the tube, leaving the balance of the blank so that paste can be applied thereto to unite the several thicknesses when the blank is made into a tube.

In the accompanying drawings, Figure 1 is a face view of the sheet of paper from which the tube is rolled, showing that side to which the paraffin and paste are applied. Fig. 2 is a similar view of the reverse side of the sheet, showing the side containing the printed matter. Figs. 3 and 4 are perspective views illustrating successive stages in the formation of the tube in accordance with my invention, and Fig. 5 is a perspective view of the completed tube.

Similar letters of reference indicate similar parts in all the figures of the drawings.

In the drawings I have illustrated the tube of a length sufficient for a paper box or container of the conventional size; but it will be understood that in the practice of the invention the tubes will be made of sufficient length, so that several boxes or bodies therefor may be cut from a single tube, and in some instances the tube may be made in tapered form and polygonal instead of cylindrical.

In carrying out my invention I take a sheet of paper, as A, of a length and width commensurate with the size and length of tube required. On one side of this sheet and at one end thereof, covering a surface representing the exterior of the completed tube, terminating in the present instance at the dotted line *a*, as shown in Fig. 2, I print the label or other matter which is to be upon the box or container formed from the tube, leaving the balance of the sheet, as *b*, preferably plain. On the other side of the sheet and at the end thereof opposite the label is a coating of paraffin, as *c*, Fig. 1, such paraffined surface extending the full width of the sheet and inwardly from the edge a distance corresponding to that of the inner circumference of the completed tube, as at *c'*, and from the inner edge of the paraffined surface the balance of the sheet is coated with paste *d*, which latter may be applied either before or during the operation of rolling the paper to form the tube.

The sheet is mound or rolled in the usual manner, beginning in the present instance at that end which is provided with the paraffined surface and so that the first turn will bring the edge of said sheet at the point *c'*, where the adhesive surface *d* begins, with the paraffined surface at the inner side. In this way that part of the sheet which is coated with paraffin forms the inner surface of the tube. The sheet is then wound to provide the several thicknesses which are pasted together, and the last lap or turn of the sheet brings that part upon which the label is printed on the outer side of the tube, it being understood, of course, that the width of the surfaces containing the paraffin and label equals the inner and outer surfaces of the tube, respectively, while the intermediate portion of the sheet equals exactly the number of turns or laps it is desired the tube shall contain to give the required body thereto.

It is obvious that instead of applying the paste to that part or surface of the sheet contained between the paraffined portion and opposite edge the same could be applied on the other side of the sheet or the plain surface *b*, or on both, inasmuch as when the sheet of paper is rolled in forming the tube these surfaces are pasted together. It is also obvious that when the sheet is rolled as herein set forth no paste will be upon either the paraffined or printed surfaces, which provide the inner and outer sides of the tube, respectively.

By my invention the blank or sheet from which the tube is formed is prepared before it is wound—that is, it is provided with the coatings of paraffin and paste and in some instances with the printed label. The sheets thus prepared are then wound in the usual manner to complete the tube and provide an inner paraffined surface and, if desired, an outer printed surface, the printed matter on the latter being spaced apart to provide a label for each box when the tube is made of such length as to provide several boxes. This results in considerable saving of time and expense in the manufacture of paper tubes for boxes or containers and also provides a better finish for the inner and outer sides than by the usual method.

It will be understood that the sheets may be prepared from a continuous paper-roll, the opposite sides being provided with paraffin paste and printed matter, as heretofore set forth, and the tubes rolled so that the inner surface will be coated with paraffin, the several thicknesses glued together, and the outer surface of the tube printed.

I claim—

As a new article of manufacture, a blank for making paper tubes, said blank having a portion of its surface coated with paraffin equal in width to the inner diameter of the tube to be formed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES C. KIMSEY.

Witnesses:

THOS. SHALLCROSS, JR.,

JOHN E. TAYLOR.