(No Model.)

J. P. BUCKINGHAM.

MAILING TUBE.

No. 347,416. Patented Aug. 17, 1886.

Fig. 1.

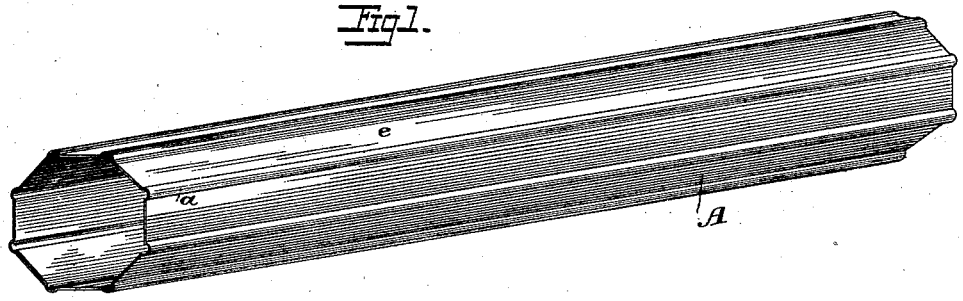


Fig. 2.

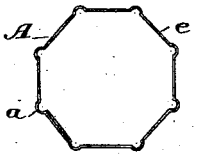


Fig. 3.

Fig. 4.

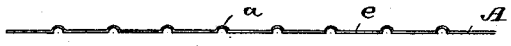
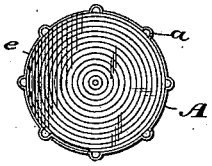


Fig. 5.



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UNITED STATES PATENT OFFICE.

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MAILING-TUBE.

SPECIFICATION forming part of Letters Patent No. 347,416, dated August 17, 1886.

Application filed August 17, 1885. Serial No. 174,601. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. BUCKINGHAM, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Mailing-Tubes, of which the following is a specification.

My invention consists of an improved mailing-tube, which is a hollow cylinder or paper or other suitable material corrugated to form external ribs, which impart increased stiffness, permit the tube to be folded flat for transportation, and render the tube slightly elastic, so as to cause it to bind closely upon the contents and retain them.

In the drawings, Figure 1 is a perspective view showing my improved mailing-tube. Fig. 2 is a transverse section. Fig. 3 is an end view showing the tube folded flat. Fig. 4 is an end view showing the tube containing a package of material for mailing.

Ordinary mailing-tubes consist of sheets of plain paper or board bent to form hollow cylinders, in which the materials to be mailed are placed and secured by strings passing through the tubes and through the roll of contents, or by inclosing both tube and contents in suitable wrappers. There are many objections to mailing-tubes of this character. Thus, in order to secure the proper stiffness, they must be made of heavy board, the weight of which increases the cost of mailing. If the contents do not fit tightly within the tubes, they are apt to slip out and be lost, thus necessitating the use of tying-cords or outside wrappers, both of which are objectionable on account of expense of delay and packing, another objection resulting from the increased weight of the inclosing-wrapper. The cylindrical tubes also take up considerable room in stowage or transportation and when flattened by pressure are destroyed, the flattening causing them to break or crease in such manner as to destroy their stiffness and rigidity, so that they could not be mailed with contents without injury to the latter. To overcome these difficulties I make a mailing-tube of stiff paper or board and with longitudinal corrugations *a* projecting onto the external surface. As the corrugations *a* impart considerable stiffness to the tube, I am enabled to make the latter of thinner board than would be possible to use if the tube were cylindrical and without ribs, so that the required stiffness is secured with less weight and a considerable saving of expense in mailing. The presence of the ribs or corrugations also permits the tube to be flattened, as the board will bend readily along the corrugated portions without being folded so sharply as to break, and the folding being upon straight lines upon opposite sides permits the parts to be brought to the position shown in Fig. 3, thus greatly reducing the room required for packing the article. One of the chief advantages, however, results from the somewhat elastic character of the tube, which causes it to hug closely the contents and prevent their escape without the use of the ordinary tying-cords or wrappers.

In making the tube it is preferably formed by first embossing a strip, A, of paper, Fig. 4, so as to form the corrugations or ribs *a*. The opposite edges of the strip are then cemented together to form a tube of a polygonal shape, as shown in Fig. 2. When a mass of papers—as drawings, manuscripts, or other matter—is rolled tightly and introduced into a tube of this character, the flat sides *e*, Fig. 2, will be pressed outward to form curved sections connecting the shorter curved sections constituting the ribs, each of which will yield to a limited extent, but will not become flattened from the expansion of the contents, so that there is a constant spring-pressure upon the contents, which causes the tube to hug the latter closely, thereby retaining them and preventing their escape during transportation.

I have described the tube as being made from a flat sheet, A; but it will be evident that an ordinary cylindrical tube may first be made, and that this tube may then be corrugated longitudinally by passing it through suitable dies, so as to reduce it to the shape shown in Figs. 2 or 5.

When greater strength is required, the tube may be made from a compound sheet—as, for instance, paper and textile fabric, or veneer and textile fabric, or other material or materials.

I claim—

1. A tubular paper case of roll form, the body

of which is divided into panels by longitudinal creases, which permit the roll to be flattened.

2. A folding mailing-tube consisting of a continuous hollow cylinder of paper or other material, corrugated to form longitudinal external ribs defining the line of fold, substantially as and for the purpose set forth.

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

JOSEPH P. BUCKINGHAM.

Witnesses:
EDW. LEES COFFEY,
MILTON COWEN.