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A. A. BANKS.
MAILING TUBE.
FILED AUG. 9, 1920.

Fig. 1.

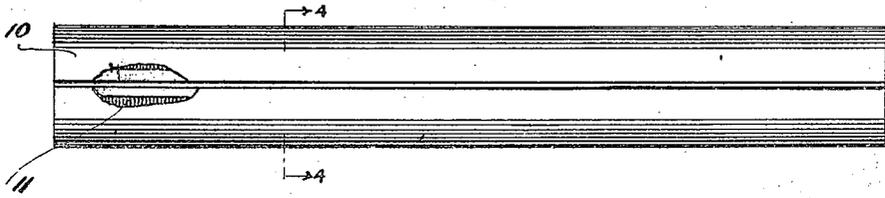


Fig. 2.



Fig. 3.

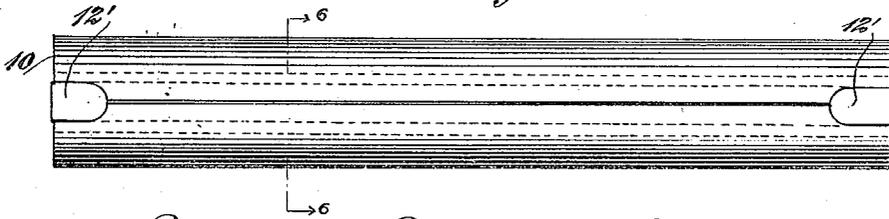


Fig. 4.

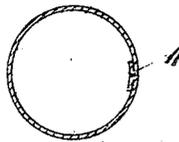


Fig. 5.

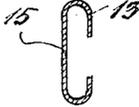


Fig. 6.

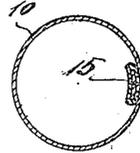


Fig. 7.

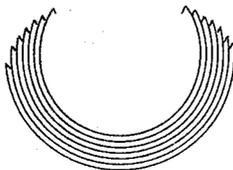
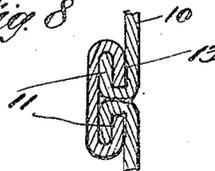


Fig. 8.



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UNITED STATES PATENT OFFICE.

ALFONSO A. BANKS, OF NEW YORK, N. Y.

MAILING TUBE.

Application filed August 9, 1920. Serial No. 402,329.

To all whom it may concern:

Be it known that I, ALFONSO A. BANKS, a citizen of the United States, and resident of New York city, 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.

This invention relates to office supplies, stationery, etc., as are particularly used as wrappers for mailing papers and parcels, where it is necessary to wrap same in such a manner that the enclosure will not be damaged by crushing, crumpling or handling in transit in the mails.

The object of my invention is to provide a tubular container or mailing tube, in which enclosures may be carefully wrapped for mailing and securely sealed against accidental displacement, so that adequate protection will be provided for all enclosures. A further object of the invention is to provide a mailing tube, which will occupy when transported commercially in quantities a minimum of space, which is accomplished by making a device from a flat piece of material. A further object is to provide a mailing tube which will be inexpensive to manufacture and easily manipulated for use and a still further object is to provide a mailing tube from which the enclosures may be easily and quickly removed and a further object is to provide a mailing tube, which may be used repeatedly if desired.

With this and further objects in view reference may be had to the accompanying drawings in which Figure 1 is a side view of my mailing tube in position for sealing or for being secured in tubular form by the sealing means provided, constituting a part of my invention. A portion of the wall of the tube in this view is broken to show interior features of construction. Fig. 2 is a plan of the sealing means or means for securing the mailing tube in tubular form. Fig. 3 is a view of the mailing tube and sealing means in assembled relation and sealed ready for use, whereby the tubular form of the device is made secure. Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1. Fig. 5 is a sectional view taken on the line 5—5 of Fig. 2. Fig. 6 is a sectional view taken on the line 6—6 of Fig. 3. Fig. 7 is a diagrammatic view showing the manner in which the tubular parts may

be arranged together in concentrically disposed groups one within the other and Fig. 8 is a fragmentary detail view on an enlarged scale showing the inter-fitting relation.

In the practice of my invention rectangular sheets are cut from paper, cardboard or other desired material, which when disposed in tubular form will make a tube of the desired dimensions as shown in Fig. 1 designated by numeral 10. The edges of these sheets are then folded in overlapping relation upon the body of the sheet of material and pressed by manual pressure or any desired mechanical means, so that the folded edges will retain the position forming a pleat on the opposite edges of the sheet, of which the tube is to be formed; as will be obvious it may be desirable to compress these folded edges beneath a hot iron or stamp compressor, using moisture or stiffening of some kind to insure their retaining the folded position when the tube is made up into form for use. These folded edges are turned inwardly and serve to retain the device in tubular form, as indicated by numeral 11, as will presently be explained. The next step in the construction of the device is to make the sealing means, which is shown in Fig. 2 and Fig. 5, Fig. 5 being an enlarged sectional view on line 5—5 of Fig. 2. First a strip is cut by stamp or stencil process from a sheet of material of any suitable character, preferably thin metal, and with end portions rounded as indicated by numeral 12, narrower than the body of the strip which is then bent upwardly and toward the center of the strip, as shown by numeral 13, see Figures 2 and 5, thus forming a double channel with a narrow opening between the turned edges of the strip as 14, to assemble the tube and make it ready for use. One of the sheets of material of which the tubular portion is formed is taken and rolled into tubular form with the edges 11 disposed inwardly, as described when they are brought into mailing relation. The tubular member is thus firmly held with one hand and with the other hand the double channel member 15 is grasped and the end of the channel member or sealing means is inserted in the end of the tube 10 in such a manner that the flanges or edges 13 engage within the overlapping edges 11 of the tube 10 as in a groove. The chan-

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nel member is then forced over the overlapping edges of the tubular member throughout the entire length of the tube, until the foremost end or inner end protrudes from the opposite end of the tube. This channel member is of such a length that when thus inserted in the tubular member, with which it is designed to be used the rounded ends 12 which extends upwardly beyond the respective ends of the tubular member and the overlapping edges or pleats 11 are securely held one within each of the grooves or channels under the overlapping edges 13 of the channel member, as shown in Fig. 6 of the drawings, also in the fragmentary detail view made on an enlarged scale Fig. 8.

It will now be seen that the edges of the tubular member are held firmly together making a complete tubular container by the channel member 15. The next and final step is to bend upwardly the ends 12 of the channel member or sealing means and compress them closely against the outer surface of the tubular member, as shown at 12' in Fig. 3; thus the rounded ends 12 serve as clips to prevent the channel member 15 from moving longitudinally and slipping out of the tube, whereby the tube member would be released and the parcels or other matter contained therein unwrapped and exposed. Thus the formation of the mailing tube and the sealing of same into a permanent form for use is complete. The tube now resembles in appearance and is the equivalent for all practical purposes of an ordinary pasteboard mailing tube, and to mail articles therein it is used in precisely the same manner as an ordinary pasteboard mailing tube.

It is contemplated in the manufacture of these mailing tubes for commercial purposes that they will be made of various lengths, in sizes of varying diameters.

For shipment the sheets will fold at edges for constructing the tubular proportion and the device may be made for and packed in cases of desired depth, thus economizing space for storing and shipment. The sealing means or channel members 15 may be packed in quantities in cases of the desired capacity, a sufficient number thereof being packed and shipped with each order of the mailing device, to accompany the number

of sheets from which the tubular member of the device is formed.

While I have described one specific form of my device, I do not wish to limit myself to the specific form of construction described and shown in this application, but reserve the right to depart therefrom within the spirit and reasonable scope and objects of this invention.

Having thus described my invention what I claim as new and desire to protect by Letters Patent of the United States, is:

1. A mailing tube comprising a flat piece of material adapted to be disposed in tubular formation and having integral inturned flanges formed on its respective longitudinal edges, a separate member adapted for engaging the edge flanges of the tubular member to maintain the same in closed position, so as to form a substantial and permanent mailing tube.

2. In a mailing tube a piece of flexible material having grooved parallel longitudinal edges formed integral therewith and adapted to be rolled in tubular form, so that the grooved edges thereof are adjacent one to another, and a channeled locking member, said grooves adapted to telescopically receive said channeled member, and means comprising integral end extensions on said channel members for retaining the channel member in fixed longitudinal relation with the tube.

3. In a mailing tube, a tubular portion formed of a sheet of flexible material having mating edges and grooves formed integrally therewith by folding the edges upon the body thereof, sealing means for retaining the tubular form of the device comprising a channel member having two grooves, one adapted to engage each of said mating edges and having inwardly turned edges for engaging beneath said mating edges as a tongue within a mating groove and clips extending beyond the end of the tubular member and formed integrally therewith for securing the channel member in position for retaining the edges, when they are bent to engage the outer surface of the tube.

Signed at the city of New York, State of New York, this 16 day of June A. D. 1920.

ALFONSO A. BANKS.