No. 777,771. PATENTED DEC. 20, 1904.

F. W. BETTIS.

MAILING TUBE.

APPLICATION FILED FEB. 6, 1904.

NO MODEL.

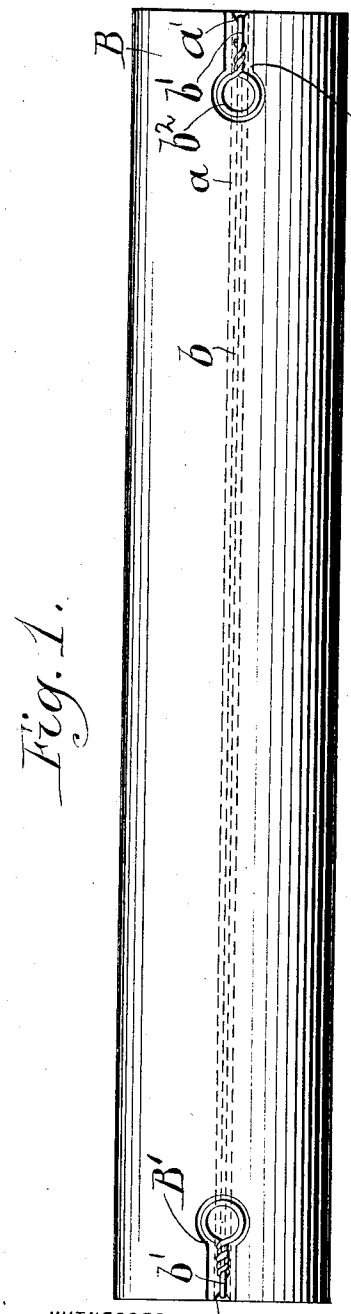


Fig. 1.

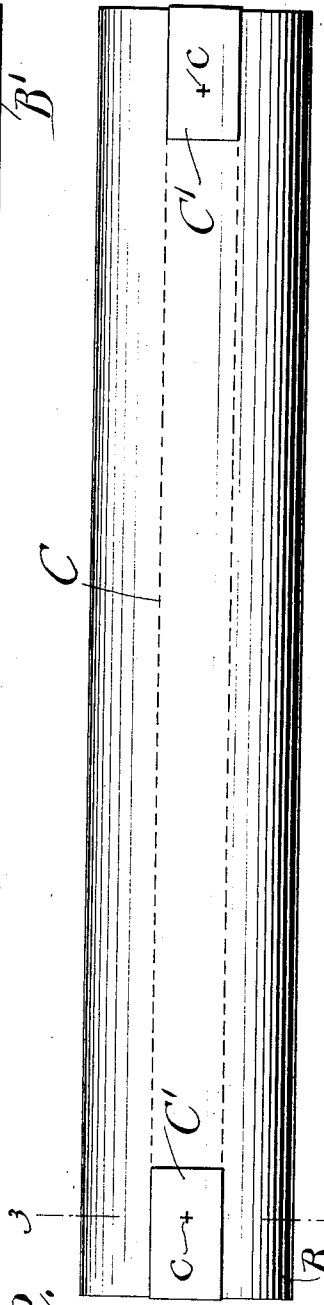


Fig. 2.

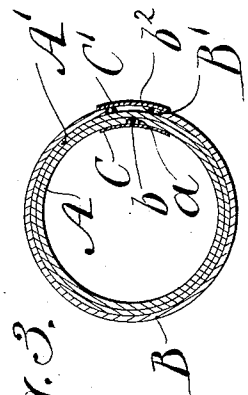


Fig. 3.

WITNESSES:

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No. 777,771. Patented December 20, 1904.

UNITED STATES PATENT OFFICE.

FRANK WILSON BETTIS, OF ALBION, NEW YORK.

MAILING-TUBE.

SPECIFICATION forming part of Letters Patent No. 777,771, dated December 20, 1904.

Application filed February 6, 1904. Serial No. 192,296.

To all whom it may concern:

Be it known that I, FRANK WILSON BETTIS, a citizen of the United States, and a resident of Albion, in the county of Orleans and State of New York, have invented certain new and useful Improvements in Mailing-Tubes, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

The subject of this invention is an improved mailing-tube having for its more prominent object capacity whereby such tube may be readily and quickly opened throughout its entire length in order to facilitate the removal of its contents.

With the above and other purposes in view the invention comprises a tube having peculiarly combined therewith a longitudinally-disposed rupturing wire or strand, the arrangement being such that said wire or strand is effectively masked at the interior of the tube, while a practically continuous surface is presented within the latter, being so conditioned at the exterior of the tube that a portion of the wire, while normally concealed, is readily accessible to be grasped by the fingers and afford the requisite hold for exerting the pull required in the operation of opening the tube.

There are other important features connected with the invention, which, besides those alluded to, are clearly set forth in the subsequent detailed description.

In the accompanying drawings, forming part of this specification, Figure 1 is an exterior view of the improved mailing-tube and illustrating the same in the condition it appears prior to the application of the masking-strip. Fig. 2 is a similar view showing the same with the masking-strip applied. Fig. 3 is a transverse section of the tube taken in the plane indicated by the broken line 3 3, Fig. 2.

In the production of the improved mailing-tube I take a paper-board tube of the required length and composed of several thicknesses or shells, as A, A′, and B. Formed in the interior surface of the tube is a longitudinal channel *a*, which communicates at each end of the tube with a lateral notch *a′* for accommodating the lateral bends of a rupturing-wire. The shells embodying the tube are preferably pasted together to form a strong structure capable of sustaining considerable lateral pressure without liability of bending or collapsing the tube when in transit.

Within the channel *a* is located the rupturing wire or strand *b*, which will preferably be of such thickness that it will lie flush with the inner surface of the tube. This wire or strand *b* is of such length that terminal portions *b′* thereof extend beyond the ends of the tube and are provided with loops or eyes b^2 to facilitate its engagement by a short rod or other instrument in the hands of the person desirous of opening the tube.

When the wire or strand *b* is in the position indicated in Figs. 1 and 3, the terminal portions *b′*, together with their loops, can be folded back to lie externally, so as to retain the wire against longitudinal shifting and avoid the objectionable projection of said terminal portions, end extensions of the wire being prevented by means of the notches *a′*, which contain the lateral bends of the wire. These notches are **V**-shaped, whereby they embody an effectual starting-point for rupturing the tube, as will be hereinafter described.

For the purpose of snugly disposing the folded terminal portions of the wire the each end part of the outer shell is slotted or cut away to present recesses B′ of such character and configuration that said terminal portions when folded, as stated, will occupy positions within said recesses, and thereby not only be flush with the outer surface presented by said shell, but will be retained against circumferential shifting.

The liability of the wire to leave its channel or become engaged by the tube contents are both avoided by a longitudinally-extending guard-strip C, of thin paper, which is pasted to the inner surface of the tube A so as to cover both the channel and its contained wire, the thin character of the paper contributing when such strip is in position to secure a practically continuous circular surface at the tube interior. The strip C is of such length that

its end portions C′ will extend beyond the ends of the tube and can be folded over and pasted to effectively cover and conceal the presence of the folded terminals of the wire. The portions C′ when turned and pasted as described may be provided on their exposed faces with some mark or symbol *c* to indicate the presence beneath of the looped terminals.

With the improved mailing-tube constituted as described it will be readily comprehended that matter to be transmitted through the mails may be introduced endwise, after the manner of an ordinary tube.

When it is desired to remove the contents, the same may be readily accomplished by first tearing away one portion C′ of the paper guard, and after one of the loops b^2 is grasped by one hand the second loop can be seized by the remaining hand and force exerted to cause the wire *b* to tear through all the parts of the tube back of the channel *a*, and thus divide the entire tube in a longitudinal direction, and thereby release and permit the convenient removal of the contents. This operation is facilitated by the presence of the V-shaped end notches *a′*, which act as guides to start the rupture at their apex-points.

It will be observed by reference to Fig. 3 that the channel *a* is of such depth that the thickness of the adjacent part *a′* is considerably reduced, thus enabling the wire to tear through the same without necessitating any great effort.

The comparative cheapness of the improved mailing-tube admits of its being thrown away after being opened and the contents removed.

I do not desire to be understood as limiting myself to the precise details and arrangement of parts shown and described, but reserve the right to all modifications within the scope of my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mailing-tube comprising an inner cylinder and outer closely-embracing shell the latter having end recesses, and the cylinder containing a longitudinal channel with V-shaped notches at each end, a rupturing wire or strand in said channel and having folded terminal portions lying within said notches and the shell-recesses, and a paper guard-strip on the inner surface of said cylinder covering said channel and wire, and having extended portions folded outwardly and pasted so as to cover the shell-recesses, the V-shaped notches and contained terminal portions of the wire or strand.

2. A mailing-tube comprising an inner cylinder of paper-board and an outer closely-embracing shell of weaker material, said shell having end recesses with enlargements of circular form and the cylinder containing a longitudinal channel extending through its whole length, and terminating in a V-shaped notch at each end, a rupturing wire or strand in said channel and having looped terminal portions folded to lie within said V-shaped notches and said recesses, and a paper guard-strip on the inner surface of said cylinder covering said channel and wire and having extended portions folded outwardly and pasted so as to cover the said V-shaped notches, shell-recesses and looped terminal portions of the wire or strand.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 6th day of January, 1904.

FRANK WILSON BETTIS.

Witnesses:
GEO. E. SWANSON,
PERCY ANDERSON.