Aug. 9, 1932. D. J. MacMILLAN 1,870,258

PNEUMATIC DISPATCH CARRIER

Filed Oct. 31, 1929 2 Sheets-Sheet 1

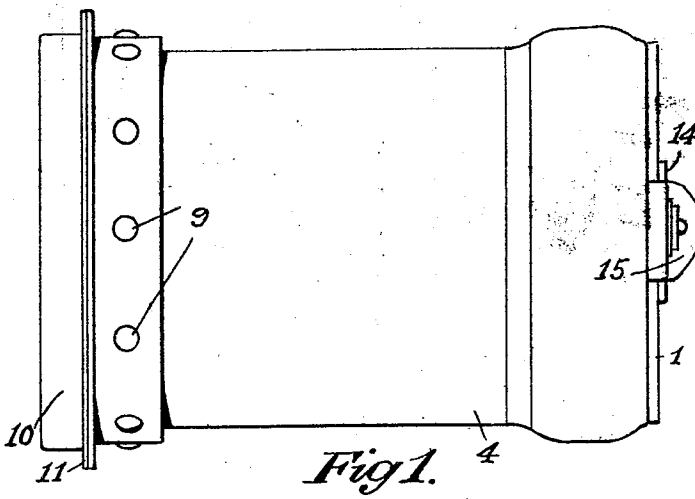


Fig.1.

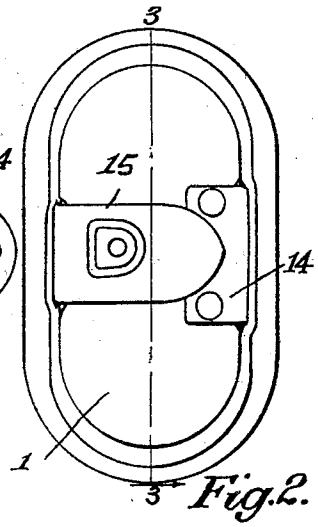


Fig.2.

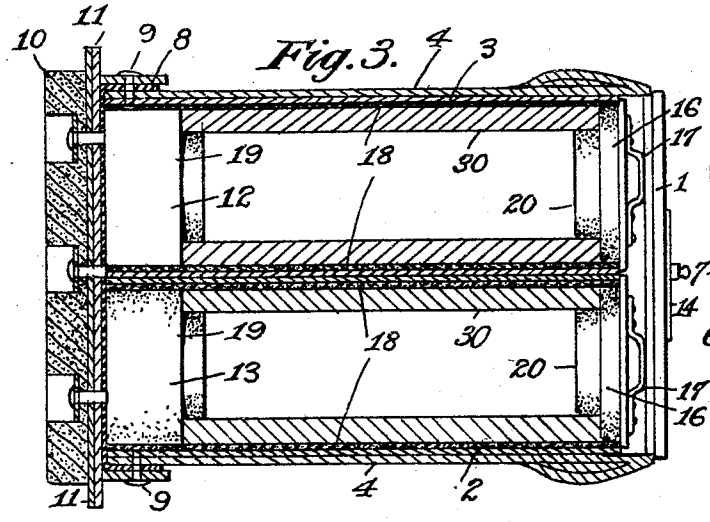


Fig.3.

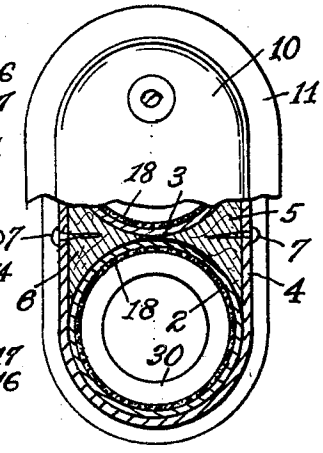


Fig.4.

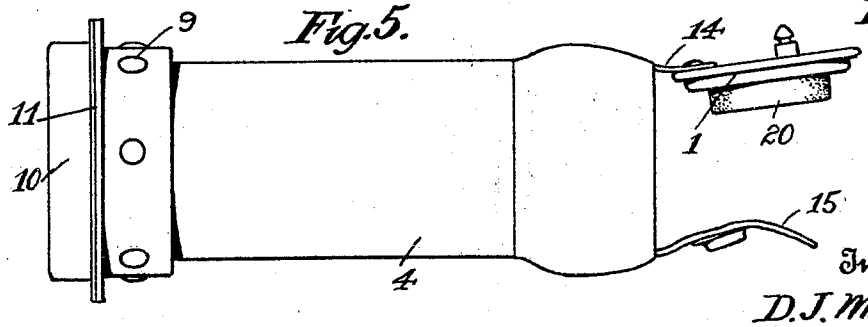


Fig.5.

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PNEUMATIC DISPATCH CARRIER

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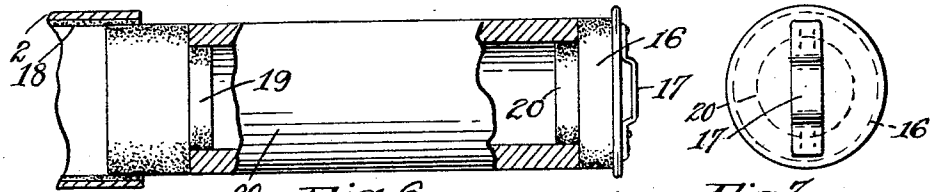


Fig. 6.

Fig. 7.

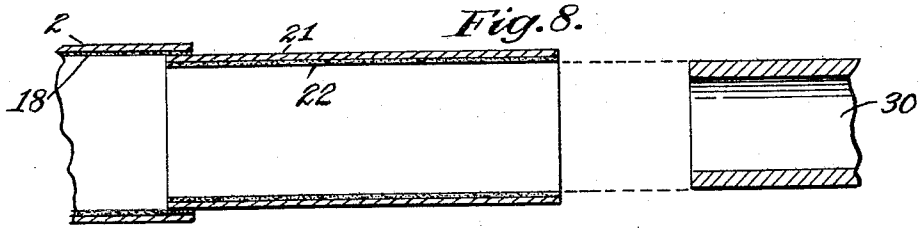


Fig. 8.

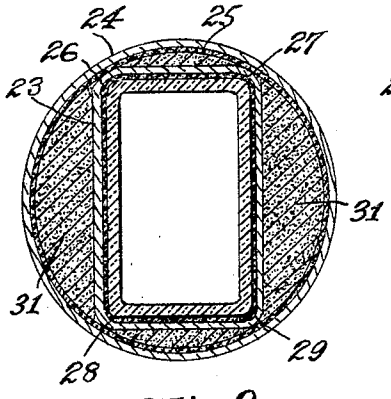


Fig. 9.

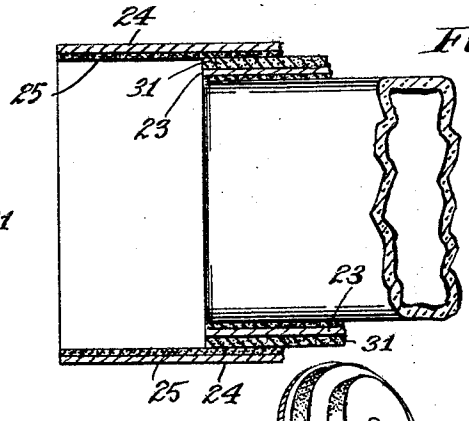


Fig. 10.

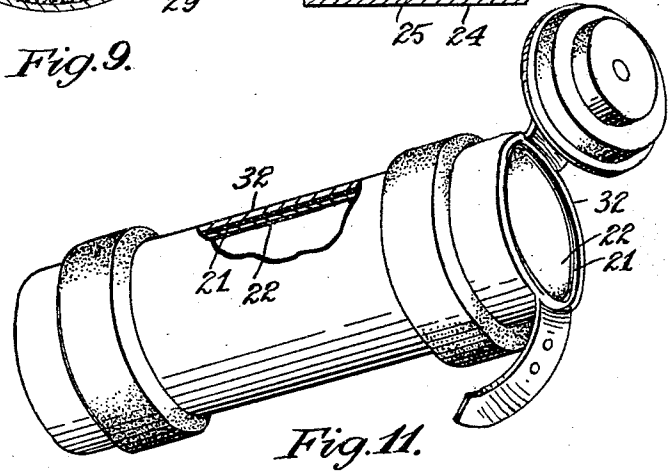


Fig. 11.

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UNITED STATES PATENT OFFICE

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PNEUMATIC DISPATCH CARRIER

Application filed October 31, 1929. Serial No. 403,723.

This invention relates to the carriers used for conveying small articles such as documents or money, through tubes by forming a current of air through the tubes, sometimes by pressure applied at one end of the tube, and sometimes by exhausting the air at one end of the tube.

The main object of the present invention is to provide a carrier that will have several compartments to contain a plurality of articles.

A further object of the invention is to provide such a structure that will be composed of several inner tubes surrounded by an outer tube, with suitable means for securing these members rigidly together.

Another object is to provide such a device with a removable liner, in the nature of a tube, that may be a cylinder, or may have an irregular inner shape to accommodate articles of flat form such as bottles.

Another object is to provide such a structure with means to engage the articles of tubular form, on the inner end wall of the article, where the article is smaller than the containing tube, to prevent the article moving around in the carrier.

In the accompanying drawings showing embodiments of my invention;

Fig. 1 is a side elevation of the carrier.

Fig. 2 is an end view.

Fig. 3 is a cross section on the line 3—3 of Fig. 2.

Fig. 4 is an end view, partly in section.

Fig. 5 is an edge elevation.

Figs. 6 and 7 show a single tube with holding plugs on each end.

Fig. 8 shows a filler tube for articles smaller than the carrier tube.

Figs. 9 and 10 show a holder for a flat article.

Fig. 11 shows a single carrier.

The arrangement shown comprises a pair of inner tubes 2 and 3 placed parallel and adjacent, and an outer tube 4 that surrounds the inner tubes and which engages the outer half portion of the inner tubes and is of a flattened form on two sides. The inner tubes are preferably of rigid material such as fiber or metal; and the outer tube is preferably of a softer material such as leather. A filler piece, 5 and 6, of substantially triangular form, is placed betwen the inner wall of the outer tube on each flat side, and the outer walls of the inner tubes at their adjacent portions, which filler piece may be shaped to entirely fill such spaces. These four members are suitably secured together, as by glue, and screws 7 may be passed through the leather into the filler piece, that may be of wood.

At one end of the carrier it is closed permanently by suitable means such as a cup-shaped member 8 that surrounds the outer member at this end and is suitably secured as by rivets 9. A suitable buffer wall 10 of felt is secured to the outer end of this cup member, with felt washers 11 if desired. The inner end of each inner tube contains a disc 12, 13, of soft material such as felt, to act as a cushion for the articles.

At the opposite end of the carrier a suitable hinged closure is provided, that may be a piece of leather 1, with a strap hinge piece 14, and a locking piece 15 on the opposite side to engage the closure and secure it in closed position. This closure will cover the entire end of the outer tube.

If desired a separate removable closure may be provided also for each inner tube, as shown a cap 16 with a handle 17 is inserted in the open end of each inner tube, the handles engaging the closures 13 to hold them in position.

One of the particular purposes of the present invention is to transport the record cylinders of phonographs, that are of a standard size when made, and hence each of the inner tubes is provided with a lining 18 of soft material like felt. However, as these cylinders are used they are shaved and the outer diameter reduces so that it will not snugly fit the inner tube, but could move around and possibly break or become damaged. To avoid this trouble I provide at the inner end of each inner tube, a central boss or plug, 19, of a size to snugly fit the inner wall of these phonograph cylinders 30. At the other end of the inner tube a similar plug is provided; as shown, a plug 20, of felt or the like is secured on the inner wall of each tube cap 16.

By this means the records are supported at both ends and when of reduced size and not filling the inner tubes will be rigidly supported at each end.

Carriers of this character with double tubes, or single carriers such as indicated in Fig. 11, may be provided with a removable liner tube in the form of a cylinder 21, that is preferably provided with a soft lining 22 of felt or the like (see Fig. 8). These could be provided of different thicknesses of the same outside diameter, to accommodate different size records or other articles.

It is frequently desired to convey articles of irregular form, that is, not cylindrical, such as a flat bottle as frequently used for medicines, and for this purpose a liner tube, either removable or not, is provided and inserted in the inner tube. As shown a tube 23, preferably of fiber or rigid material, fits into the tube 24, and is provided with a soft liner 25. This carrier tube will engage the inner wall of the carrier on the four corners 26, 27, 28, 29, and may have suitable filling material at 31 where it is spaced from the carrier tube. It is to be understood that this inner supporting tube can be placed in each of the two inner tubes 2 and 3 of the double carrier, or can be placed inside of the single carrier 32 shown in Fig. 11. In either arrangement the boss of soft material may be used at the ends to prevent movement of the article.

It will be understood that I have provided a simple and inexpensive structure consisting of merely two inner tubes of rigid material, and an outer tube of leather or the like, easily secured together. The plugs will prevent certain articles from shaking around in the tubes. And articles of different size can be readily accommodated by the liner tube of either regular or irregular form.

What I claim is:

1. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for the tubes at the other end to secure the contents of the inner tubes.

2. In a pneumatic dispatch carrier, a pair of tubes of rigid material arranged adjacent and parallel, a tube of flexible material such as leather surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for the other tube at the other end to secure the contents of the inner tubes.

3. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, a closure for the tubes at the other end to secure the contents of the inner tubes, and a soft liner for the inner tubes.

4. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for the tubes at the other end to secure the contents of the inner tubes, the outer tube engaging the outer half portion of each inner tube.

5. In a pneumatic dispatch carrier, a pair of tubes of rigid material arranged adjacent and parallel, a tube of flexible material such as leather surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for the other tube at the other end to secure the contents of the inner tubes, the outer tube engaging the outer half portion of each inner tube.

6. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, a closure for the tubes at the other end to secure the contents of the inner tubes, and a filler piece of substantially triangular form in section secured between the inner wall of the outer tube and the outer wall of each inner tube.

7. In a pneumatic dispatch carrier, a pair of tubes of rigid material arranged adjacent and parallel, a tube of flexible material such as leather surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for the other tube at the other end to secure the contents of the inner tubes, and a filler piece of substantially triangular form in section secured between the inner wall of the outer tube and the outer wall of each inner tube.

8. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for each inner tube.

9. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, and a closure for each inner tube, provided with a central boss of soft material adapted to engage the inner end wall of a tubular article contained in the tube to hold it away from the inner wall of the tube.

10. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, a closure for each inner tube, provided with a central boss of soft material adapted to engage the inner end wall of a tubular article contained in the tube to hold it away from the inner wall of the tube, and a similar boss at the other end of each inner tube to center the article at that end.

11. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tubes surrounding the side of the said tubes, one end of the outer tube being closed, a

closure for the tubes at the other end, to secure the contents of the inner tubes, and a removable liner tube for each inner tube.

12. In a pneumatic dispatch carrier, a pair of tubes arranged adjacent and parallel, a tube surrounding the sides of the said tubes, one end of the outer tube being closed, a closure for the tubes at the other end, to secure the contents of the inner tubes, and a removable liner tube for each inner tube, of rigid material provided with a soft lining.

13. In a pneumatic dispatch carrier of tubular form, a removable liner tube provided with a soft lining.

14. In a pneumatic dispatch carrier of tubular form, a removable liner tube of rigid material provided with a soft lining.

15. In a pneumatic dispatch carrier of tubular form, a removable liner tube of rigid material provided with a soft lining, and which said liner tube is of reduced width on two inner opposite sides to have a somewhat oval section to hold articles of flattened form.

16. In a pneumatic dispatch carrier of tubular form, a removable liner tube of reduced width on two inner opposite sides to have a somewhat oval section to hold articles of flattened form.

Signed at New York city, N. Y. on October 29, 1929.

DANIEL J. MacMILLAN.