

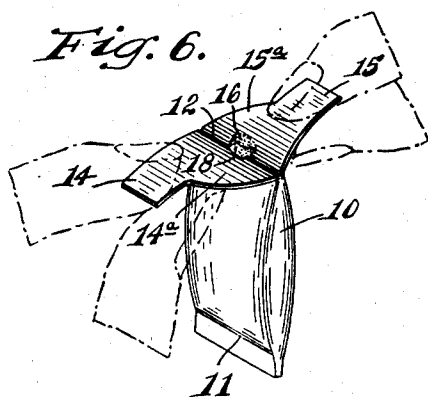
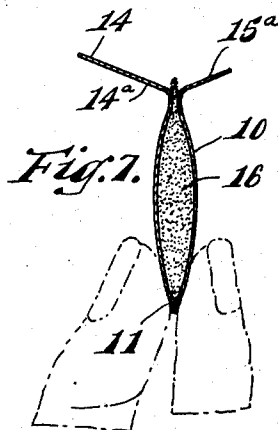
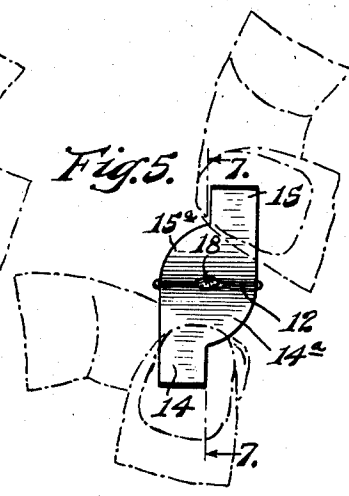
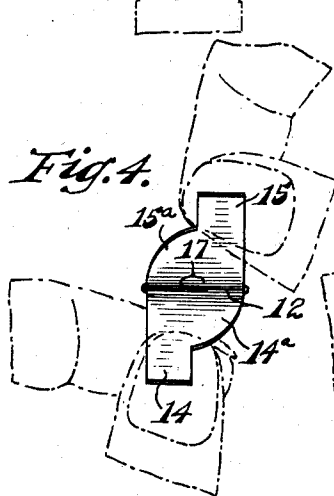
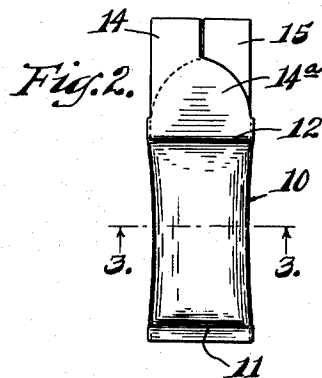
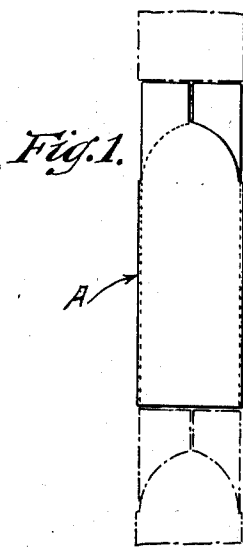
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2,552,870

SEALED TUBE WITH FINGER-ENGAGING OPENING TABS

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UNITED STATES PATENT OFFICE

2,552,870

SEALED TUBE WITH FINGER-ENGAGING
OPENING TABS

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3 Claims. (Cl. 222-541)

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The present invention is directed to an improved container, formed of flexible plastic material, adapted to be produced in various sizes, for packaging various materials such as medicinal preparations in bulk, capsulated or tablet form, oils, flavoring, paints, foods, toothpaste, shaving cream, and numerous other materials. The container embodying the present invention may be employed either for a single use, or may be employed in a manner so as to serve to contain various materials from which a small quantity of material is dispensed at different times. More particularly, the container of the present invention is constructed and arranged so that, at least initially, the contents thereof are totally enclosed and hermetically sealed therein.

One of the objects of this invention is to provide a novel container, formed from a section of tubular synthetic, resinous material, having both ends of the tubular body sealed to produce a completely hermetically sealed container, and wherein one end is provided with a pair of oppositely disposed laterally offset finger engaging tabs adapted, when pulled in opposite directions, to break the seal at said one end to form a discharge opening.

A further object is to provide an improved container of the character indicated, formed of a section of tubular, synthetic resinous material, which initially is completely hermetically sealed, and which, when once opened, may be suitably and temporarily closed for protecting the remaining contents of the container.

Other objects and advantages will be apparent from the following description taken in connection with the accompanying drawing in which:

Figure 1 is an elevational view of a blank out form of the container as it is produced from a tubular length of flexible plastic material;

Figure 2 is an elevational view of the container embodying the present invention, filled with material;

Figure 3 is a transverse sectional view through the body of the container, taken as indicated at line 3-3 on Figure 2;

Figure 4 is a top view of the container in the process of being opened;

Figure 5 is a top view of the container in open condition to permit discharging of the contents thereof;

Figure 6 is a perspective view of the container in open condition; and

Figure 7 is a vertical sectional view through the container in open position, taken substantially as indicated in line 7-7 of Figure 5.

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The flexible plastic material utilized in carrying out the present invention may be of any conventional type, but preferably is of the type known as synthetic, elastomer, resinous material, possessing the desirable characteristics of being thermo-plastic and thermo-elastic. More particularly, it is preferred to employ materials known as the vinyl type polymers and co-polymers, polyester type of resinous compounds, acrylic resin compounds, polyamide resin compounds or cellulose derivatives. In using materials of the above mentioned group, it is possible to provide the container with a rupturable seal of the general order constituting the subject matter of the invention disclosed in an application for patent filed in the name of Robert P. Scherer, Serial No. 25,913, filed May 8, 1948.

In the aforementioned application, the sealing practice therein disclosed consists in the use of controlled application of heat and pressure for effecting a coalescence of the material, without the application of any coating or use of other material. Moreover, the seal thus formed may include a rupturable area of less tensile strength than other portions of the seal. The use of such a rupturable area, constituting a portion of the seal, is disclosed herein as applied to my novel container construction.

As illustrated diagrammatically in Figure 1 of the drawing, the total container indicated by the reference character A is cut from a length of the tubular stock of material of the above mentioned type. The cutting operation performed upon the tubular stock is produced by any suitable means which does not constitute a part of the present invention, and container bodies are produced in sequence from the tubular stock, and the adjacent blank containers being represented in Figure 1 of the drawings by dot and dash outline.

The container comprises a body indicated at 10 of tubular material, the wall portions of which, at opposite ends, are flattened together and sealed, as indicated at 11 and 12 respectively, preferably, though not necessarily, by the controlled application of heat and pressure. As above indicated, by such sealing action, there is effected a coalescence of the material of the contacting wall portions, and which forms a substantial bond between said wall portions. In the container illustrated in the drawing, the seals 11 and 12 may be formed simultaneously, but preferably one of the seals is first formed, and the body of the container is then filled with material, and the other seal is then formed, so as to completely

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and hermetically enclose the material within the body.

It is to be understood that the seal 12 is at the end of the container adapted to be opened and the flattened wall portions at this end of the container, projecting beyond the sealed area, are formed to constitute finger engaging portions 14 and 15. As may be seen in the drawing, the outer terminal portions of said finger engaging portions 14 and 15 are spaced apart transversely so as to permit their ready and convenient engagement by the fingers for pulling in opposite directions as illustrated in Figures 4, 5 and 6 of the drawing, in the process of breaking the seal 12, to thereby form a discharge opening at said end of the body for convenient removal of the contents from the body.

In forming the seal 12, it is preferred, for certain purposes, such as when the container is adapted to contain plastic mass type of material, such as toothpaste, shaving cream, etc., as indicated at 16 in the drawing, that at least a portion of the length of this seal, and as indicated by the bracketed portion leading from the reference character 17 in Figure 4 of the drawing, intermediate the length of the seal 12, is formed so as to be of less tensile strength than the remaining portion of said seal 12. Thus, said portion 17 of the seal may be readily ruptured by pulling on the finger portions 14 and 15 in opposite directions by the use of fingers as represented in dot and dash outline in the drawing. When the seal portion 17 is ruptured, it forms a discharge opening or mouth, as indicated at 18, through which the material 16 may be discharged by application of finger pressure on the body 10, as indicated in Figure 7 of the drawing.

Each of the finger engaging portions or tabs include laterally extending base portions, as indicated at 14a and 15a, respectively, which overlap the opposite tab portion as clearly seen in Figure 2 of the drawing. For certain purposes, the seal 12 may be dispensed with and reliance may be made upon the formation of a substantial closure for said upper end of the container by adhesion of the overlapping areas 14a and 15a of the flattened wall portions with the opposite finger engaging portions. Such adhesion will result when material having tacky characteristics is applied to one or both of the overlapping areas 14a and 15a. A temporary, readily openable closure is thus formed for the upper end of the body of the container, which is entirely satisfactory for certain uses. Moreover, such a constructional feature has the further advantage, when the seal 12 is also employed, so that once the seal 12 is ruptured and a portion of the contents of the body of the container is dispensed, said finger engaging portions may be adhesively connected together to form a temporary closure for the open end of the body of the container to protect the remaining contents therein for future or further use.

Although I have herein shown and described a preferred embodiment of my invention, mani-

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festly it is capable of modification without departing from the spirit and scope thereof. I do not, therefore, wish to be understood as limiting this invention to the precise form herein disclosed, except as I may be so limited by the appended claims.

I claim as my invention:

1. A container of the character described, comprising a body formed of a tubular section of synthetic resinous material, the wall portions at one end of said tubular body being flattened, overlapped and seal together over an area extending transversely across said container to completely close said end of the body, the flattened wall portions, beyond the sealed area, being formed to constitute a pair of finger tabs, disposed in opposed relation, the terminal portions of said finger tabs being spaced transversely, in the direction of extent of said seal, and adapted when pulled in opposite directions to cause breaking of said seal to form a discharge opening.

2. A tab tube container comprising a body formed of a section of flexible, tubular moisture resistant material, having the wall portions at opposite ends flattened, overlapped and sealed together over an area extending transversely across said container to hermetically seal the contents in said body, the flattened wall portions at one end of said body, beyond the adjacent sealed area, being formed to constitute a pair of finger engaging tabs, disposed in opposed relation, said finger tabs being formed with their terminal portions transversely spaced apart, and adapted when pulled in opposite directions to break the seal at said one end to form a discharge opening.

3. A container of the character described, comprising a body formed of a tubular section of flexible, synthetic, resinous material, having the wall portions at opposite ends flattened, overlapped and sealed together over an area extending transversely across said container to hermetically seal the contents in said body, and causing said body to assume a flattened oval shape in cross-section, the flattened wall portions at one end of the body, beyond the adjacent sealed area, being formed to provide a pair of opposed laterally offset finger engaging tabs, adapted when pulled in opposite directions to rupture the seal at said one end of the body to afford access to the contents therein.

JOHN OTTO SCHERER.

REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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2,397,051	Scherer	Mar. 19, 1946

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Number	Country	Date
128 of 1897	Great Britain	Feb. 13, 1897