

Jan. 22, 1924.

1,481,339

F. W. BARRON

PACKAGE

Filed April 3, 1920

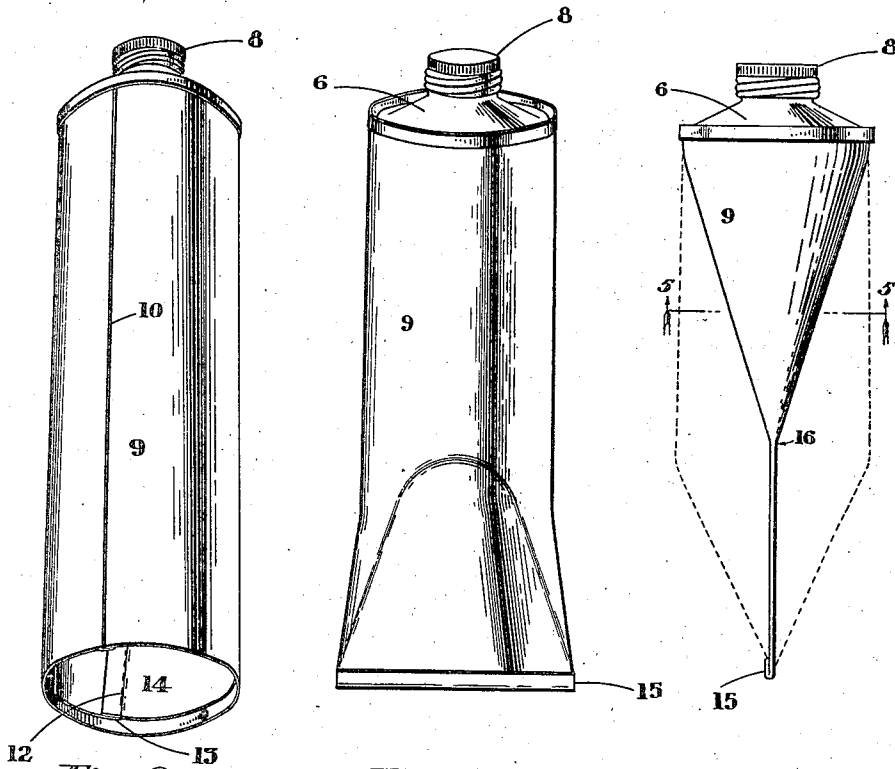


Fig. 2.

Fig. 1.

Fig. 3.

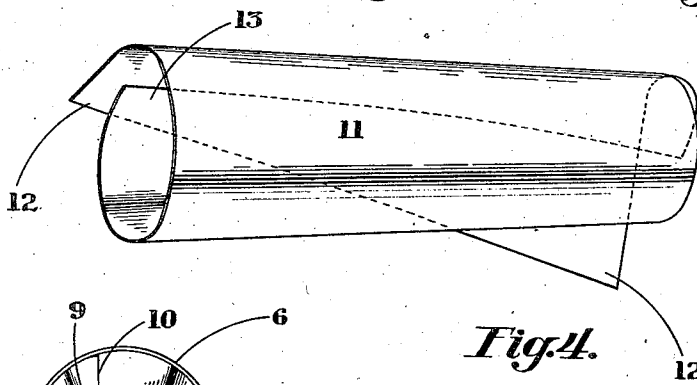


Fig. 4.

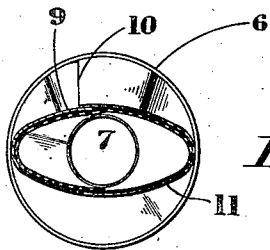


Fig. 5.

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FRANK WILLIAM BARRON, OF MONTREAL, QUEBEC, CANADA.

PACKAGE.

Application filed April 3, 1920. Serial No. 371,107.

To all whom it may concern:

Be it known that I, FRANK WILLIAM BARRON, a subject of the King of Great Britain, and residing in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented a new and useful Package, of which the following is the specification.

This invention relates to the art of packages, and to collapsible containers generally, such as are used as containers for lubricant, paint, printer's ink, or other materials of viscous consistency, as described in the present specification and shown in the accompanying drawings.

The invention consists of the novel features pointed out broadly and specifically in the claims for novelty following a description containing an explanation in detail of an acceptable form of the invention.

To fully explain the advantages of my invention I shall refer briefly to the construction and adaptability of collapsible containers in conventional use. Containers such as are employed for holding tooth paste, or analogous toilet preparations of a viscous consistency, are usually constructed of a soft ductile metal such as tin-foil, and have proven satisfactory in many ways for this purpose, as their proportions are small and the cost of production is sufficiently moderate when produced in large quantities. Furthermore, the consistency of the materials contained therein is usually such that little pressure is required to exude the same, and resultant fracturing thereof is seldom experienced.

However, containers of such construction are not adapted for use in vending lubricant, paint, printer's ink, and other materials of a relative consistency in marketable quantities, as the cost of production of such is prohibitive incidental to the amount of material required for each container, and the inability of said material to withstand the considerable strain imposed thereon incidental to the great force frequently required to discharge the contents.

The applicant, desirous of obtaining an adequate collapsible container for vending lubricants therein; ensuing a very exhaustive search of the prior art, and a comprehensive acquisition of knowledge in the method and cost of production, found it incumbent to provide such a container, an acceptable form

of which includes a collapsible container formed of a tapered casing made of coated sheet iron, or any inexpensive by-product of sheet metal of a proper gauge having sufficient rigidity, and having a head-casing provided with a cap, mounted upon the smaller extremity thereof for discharge purposes, and having associated therewith an adjustable impervious fibre liner which accommodates itself to the contour of said casing and prevents expulsion of the contents thereof through any fractures or perforations incident to the discharging operation. The advantages derived from such a construction are many, dependent upon the specific use to which it may be adapted, but a comprehensive elucidation of each is deemed inappropriate for the purpose of this disclosure. Therefore a brief dissertation on the applicability of the invention to the lubricating art is considered sufficient to point out the objects and desirability thereof.

For the purpose of explanation, the applicant will refer to the method usually employed in lubricating tractors and farm machinery. For this purpose, grease-guns of well-known types are used, the efficiency of which is not to be herein discussed, but the lubricant with which said grease-guns are charged is in many cases contained in receptacles which are left open and susceptible to accumulation of dust and grit and other foreign matter, which is frequently discharged into the parts requiring lubrication, and which serve to impair said parts in a very short period of time.

From the viewpoint of the owner of machinery, it is desirable to have the lubricant contained in a container of such a size convenient to handle, and from which the contents may be extruded with considerable force and which may not be easily fractured or perforated; whereby the necessity of a grease-gun may be obliterated, and the possibilities of foreign matter entering the parts requiring lubrication obviated. As before premised, special means for such purposes have been provided by the association of parts, which will now be described in detail on reference to the accompanying drawings, in which:—

Fig. 1 is a perspective view of a collapsible container as it would appear when filled.

Fig. 2 is a similar view showing the lower extremity of the casing open.

Fig. 3 is a side elevation of a collapsible container as it would appear when a quantity of its contents has been discharged.

Fig. 4 is a perspective view of the liner 5 showing the manner of rolling the same for insertion into the casing.

Fig. 5 is a section taken on the plane indicated by the line 5—5 in Fig. 3.

General construction.

A very brief description of the head-casing designated in its entirety by the numeral 6 will suffice, since the particular type of such is for the purpose of this disclosure immaterial to the invention which has a wide range of applicability to various kinds of head-casing.

In the drawing is illustrated what is known as a head-casing, designated by the numeral 6, provided with the usual discharge opening 7, shown in Fig. 5, through a threaded nipple upon which the cap 8 is mounted.

The numeral 9 indicates a tapered metal casing formed from a sheet of coated sheet iron or the equivalent, rolled, and seamed as at 10, to form a frustro-conical shaped casing, to receive the liner shown in Fig. 4, which includes a sheet of impregnated paper 11 or an equivalent sheet of impervious material, which is rolled in such a manner as to form a frustro-conically shaped liner, the edges 12 and 13 of which overlap. The smaller end of said liner is inserted in the open end 14 of the casing 9, and the peculiar shape of said liner effects a very tight binding of the over-lapping edges 12 and 13, to such an extent that the possibility of effluence of the material placed therein, which is of a viscous consistency, is entirely obliterated.

The container is then filled, and is sealed by pressing the lower edges of the casing 9 together and over-lapping the same, as at 15. If desired, the liner may extend to the edge of the casing 9, and when folded therebetween, will serve as a gasket.

General function.

Bearing in mind that the liner 10 may adjust itself transversally and longitudinally within the casing 9 and conform itself to any deformations of the casing incident to rough handling, the function of such will be readily understood. Assuming that the container is filled, as shown in Fig. 1, and it is desired to lubricate a bearing, the cap 8 is unscrewed from the head-casing 7, and the container is connected with the said bearing by a flexible tube or the equivalent. The lubricant contained in the container is then discharged, by pressing the casing together, as shown in Fig. 3. This may be effected by stepping upon the same, or with the use of a squeezing tool. Having discharged the

required amount of lubricant, the tube may be unscrewed therefrom, and the cap positioned on the head-casing.

In Fig. 3 the applicant has shown how the lubricant remains in the upper extremity of the container after a quantity has been discharged. This is brought about by the liner 11 which when pressed together will serve as a gasket at the point indicated by the numeral 16, the peculiar action being effected by the inclined sides 17 and 18 of the container, which substantially converge to the junction of the liner. This is a very desirable feature of the invention as it saves considerable time which would otherwise be required to discharge the contents.

The applicant has employed a container formed of coated sheet iron independently of the liner shown for the purpose elucidated. Such, however, proved inadequate, as in the discharging of the contents of the container the edges thereof become fractured and the contents resultantly egressed there-through. Rough handling of the container by mechanics invariably results in fractures and perforations, and incidentally necessitates the employment of the liner.

In his research, applicant employed a metallic casing and associated therewith a tubular liner formed of a sheet of impregnated material having fixed over-lapping edges. In the discharging of the contents from the container, the same frequently expanded and the liner would fracture, resultant of the great strain imposed thereupon.

In employing a cylindrical casing having a liner rolled from a sheet of impregnated material inserted therein, it was found impossible to maintain an impervious joint between the over-lapping edges of the material, and the contents frequently egressed there-through, and through fractures in the casing.

Ensuing a careful research extending over a period of five years, applicant has found that the construction herein explained fulfills the requirements of a container for the purpose specified, incident to its compact, durable, and inexpensive construction, which was not known prior to this disclosure.

A perusal of the preceding elucidation is deemed sufficient to enable one skilled in the art to readily understand the construction, desirability and applicability of my invention, and appreciate that deviations from such precise formation and association of the different part may be resorted to without forming a departure from the spirit of the invention and the scope of the appended claims.

What I claim is:

1. A collapsible container including a casing having a head-casing and a cap, and an impervious liner within said casing free to adjust itself transversally and longitudinally

nally within said casing, and to deformations in the contour thereof.

2. A collapsible container including a casing having a head-casing and a cap, and an impervious liner formed of a sheet of impregnated material positioned within said casing, said liner being free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof.

3. A collapsible container including a casing having a head-casing and a cap, and an impervious liner formed of a sheet of impregnated material frustro-conically rolled, positioned within said casing, said liner being free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof.

4. A collapsible container including a casing having a head-casing and a cap, and an impervious liner within said casing formed of a sheet of impregnated material frustro-conically rolled and having overlapping edges, said liner being free to adjust itself transversally and longitudinally within said casing and to deformations in the contour thereof.

5. A collapsible container including a tapered metallic casing having a head-casing and a cap, and an impervious liner within said casing free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof.

6. A collapsible container including a tapered metallic casing having a head-casing and a cap, and an impervious liner within said casing formed of a sheet of impregnated material frustro-conically rolled prior to insertion, said liner being free to adjust itself transversally and longitudinally within said casing and to deformations in the contour thereof.

7. A collapsible container including a tapered metallic casing, a head-casing positioned on the smaller end of said tapered

metallic casing, a cap for said head-casing, and an impervious liner within said tapered metallic casing free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof.

8. A collapsible container including a tapered metallic casing, a head-casing positioned on the smaller end of said tapered metallic casing, a cap for said head-casing, and an impervious liner within said tapered metallic casing free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof.

9. A collapsible container including a casing having a head-casing and a cap, and an impervious liner within said casing free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof; said liner serving as a gasket within said casing to prevent return of the contents to the emptied portion of the container after a quantity has been discharged.

10. A collapsible container including a tapered metallic casing formed of a sheet of stiff metal, rolled and overlapped, the overlapping edges being sealed; a head-casing positioned on the smaller end of the said tapered metallic casing, a cap for said head-casing, and an impervious liner formed of a sheet of impregnated material frustro-conically rolled prior to insertion within said casing, said liner being free to adjust itself transversally and longitudinally within said casing, and to deformations in the contour thereof; and to serve as a gasket within said casing to prevent return of the contents to the emptied portion of the container after a quantity has been discharged, substantially as described.

Signed at the city of Montreal, Quebec, Canada, this 25th day of March, 1920.

FRANK WILLIAM BARRON.