

H. B. FRENCH.
 COMMERCIAL PACKAGE FOR EXPLOSIVE VOLATILE LIQUIDS.
 APPLICATION FILED MAY 11, 1912.

1,062,565.

Patented May 20, 1913.

FIG. I.

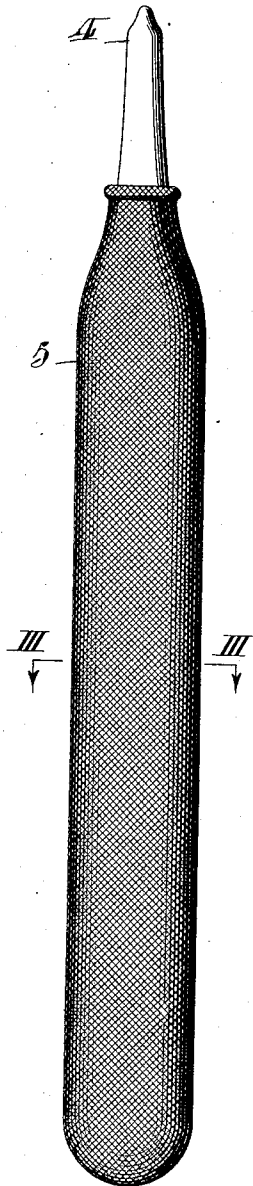


FIG. II.

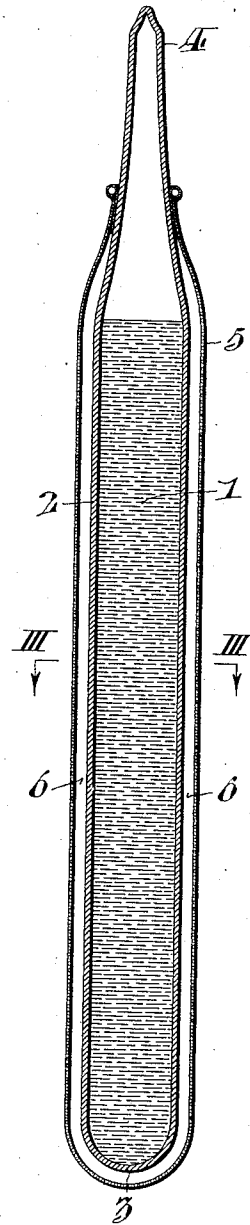
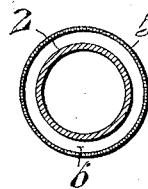


FIG. III.



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HARRY B. FRENCH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SMITH, KLINE & FRENCH CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

COMMERCIAL PACKAGE FOR EXPLOSIVE VOLATILE LIQUIDS.

1,062,565.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed May 11, 1912. Serial No. 696,557.

To all whom it may concern:

Be it known that I, HARRY B. FRENCH, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Commercial Packages for Explosive Volatile Liquids, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a commercial package adapted to be used for the marketing of certain liquids which are both volatile and explosive. For example, concentrated nitrous ether, is a highly volatile liquid, used in pharmacy, which, if kept for a time is liable to suffer decomposition and become explosive, especially if contained in a tight receptacle. But owing to the volatile character of this liquid it is important to put it in hermetically sealed containers.

My invention relates to a receptacle adapted to contain such explosive volatile liquids and in which they may be marketed and used by the purchaser, and which, by reason of its construction, prevents any harm being done by explosion should it occur.

According to my invention the liquid in question, is inclosed in a comparatively thin glass receptacle, more or less tubular in form, and hermetically sealed by drawing out one end, and sealing under a blow pipe. This glass receptacle is itself permanently surrounded by a textile covering of comparatively loose texture, with a free space intervening between the glass receptacle and the covering.

In the accompanying drawings, I have illustrated a package constructed according to my invention, in which—

Figure I, is an elevation, and Fig. II, a longitudinal section of the same, while Fig. III, is a cross section along the line III, III, of the figures.

The explosive and volatile liquid 1, is inserted within the more or less tubular glass receptacle 2. The walls of this receptacle are not very thick, so that bursting may be invited in case of decomposition, before the restrained pressure becomes great. The lower end 3, of the receptacle is preferably spherical. The upper end 4, of the receptacle is drawn out and closed under a blow pipe. In this way, the liquid is hermetically

sealed so as to prevent loss by evaporation; but in case of decomposition, as soon as the pressure becomes great enough, an explosion breaking the glass must occur. To prevent any ill effects from such an explosion, the glass receptacle is permanently surrounded by a textile covering 5. This covering is in the shape of a bag of some loosely woven fabric, such as cheese cloth, the interstices of which are sufficiently large to freely permit the escape of gases without rending the bag. Its open end is fastened tightly around the drawn out end of the receptacle. This covering 5, does not fit the glass receptacle closely, but quite loosely, with provision of an intervening space 6, between the walls of the glass receptacle, and the textile covering; for if fitting tightly over the glass receptacle, the explosion will burst both, whereas by reason of the provision of the intervening space 6, in case the glass receptacle is burst by an explosion, the outer covering 5, maintains its integrity, permitting the explosive gases to pass away freely through its interstices, while at the same time effectually retaining all the pieces and slivers of glass produced by the explosion within itself, so that no harm is done. The drawn out neck or end 4, of the glass receptacle protrudes from the textile covering in order that the receptacle may be opened in the manner usual with a sealed glass tube, to wit, by cutting the surface with a file and breaking off the fragile end.

It is intended that the receptacle which I have thus described shall be that in which the liquid in question is packaged when it is prepared for the market. It is to be used for transportation and for containing the liquid until it is to be utilized by the purchaser. The outer textile covering is not readily removed, and since the receptacle may be opened without its removal, there is no temptation to the purchaser to remove it. In this way the transportation, sale and keeping of the liquid is rendered safe and harmless, because even in case of explosion no harm is done by flying pieces of glass, even though it occur while the receptacle is in the hands of a person who is engaged in breaking the hermetical seal, for the glass cannot escape through the fabric nor cut the hand of the operator.

Having thus described my invention, I claim:—

1. A protecting covering for glass receptacles, adapted to contain explosive volatile liquids, consisting of loosely woven textile fabric surrounding the body portion of said glass receptacle, said covering being of such dimensions as to provide a free interspace between the walls of the glass receptacle and the textile covering.

2. A container for explosive volatile liquids, comprising a tubular glass receptacle having a projecting neck sealed by fusing the glass, and a covering for said glass receptacle, consisting of loosely woven textile

fabric surrounding the body portion of said glass receptacle and having an opening therein through which said neck projects, said covering being of such dimensions as to provide a free interspace between the walls of the body portion of the glass receptacle and the textile covering.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this seventh day of May, 1912.

HARRY B. FRENCH.

Witnesses:

JAMES H. BELL,

E. L. FULLERTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."