No. 845,777. PATENTED MAR. 5, 1907.

J. GROSSMAN.

MILK BOTTLE PROTECTOR.

APPLICATION FILED OCT. 27, 1906.

Fig. 1.

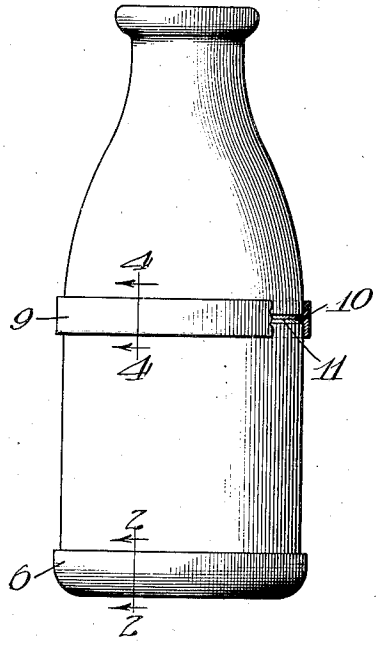


Fig. 4.

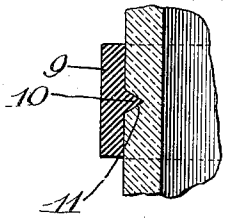


Fig. 2.

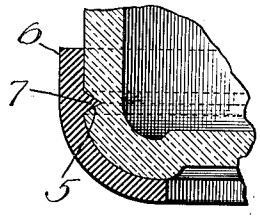
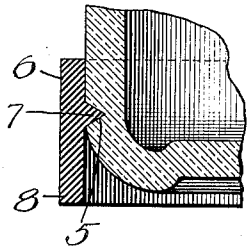


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH GROSSMAN, OF CHICAGO, ILLINOIS.

MILK-BOTTLE PROTECTOR.

No. 845,777. Specification of Letters Patent. Patented March 5, 1907.

Application filed October 27, 1906. Serial No. 340,860.

To all whom it may concern:

Be it known that I, JOSEPH GROSSMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Milk-Bottle Protectors, of which the following is a specification.

My invention relates to holders for milk-bottles and other similar bottles; and the object of the invention is to provide means for protecting such bottles during transportation.

I obtain my objects in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a bottle constructed according to my invention. Fig. 2 is a fragmentary view, in vertical section, on line 2 2 of Fig. 1 and drawn to an increased scale, showing a preferred form of protector at the bottom of the bottle. Fig. 3 is similar to Fig. 2 and shows a modified form of the bottle-protector. Fig. 4 is a fragmentary vertical section taken on line 4 4 of Fig. 1, showing the protector at the upper portion of the bottle.

Similar reference-numerals refer to similar parts throughout the several views.

It will be understood that in the transportation of milk-bottles, for which this invention is primarily adapted, although it may be employed for other bottles similarly used, there is a high percentage of breakage. Bottles, especially when filled, are of considerable weight, and in being delivered and collected, as milk-bottles usually are, there is much danger of the bottles contacting each other with sufficient shock to break them. This is especially true when the bottles are held in cases, as they frequently are, in milk-wagons, for example. My idea is to provide bottles of this class with one or more protectors which will absorb the shock of impact and reduce to a minimum the breakage during transportation and ordinary handling. To this end I provide an annular groove 5 near the bottom of each bottle, and this groove may be V-shaped in cross-section, as shown, or may be U-shaped or of any other suitable cross-section. The protector 6 is composed of elastic material, preferably rubber, containing a greater or less amount of foreign composition. The foreign matter, however, is not present in such quantities as to destroy the elasticity of the protector. Upon the inner surface of the protector is molded an annular ridge 7, adapted to fit within the groove 5, and thereby firmly retain the protector in position upon the bottle.

The protector may be made in different forms. For example, it may, as in Fig. 2, extend partially beneath the bottle in close contact therewith, or it may have cylindrical sides 8, which extend below the bottom of the bottle, as shown in Fig. 3. In either case the protector will prevent other bottles of similar shape from coming directly in contact with the glass and will also prevent it from resting directly upon any extraneous support. In other words, the protector in either form will protect the bottle from objects at the sides and will also serve as a cushion or support.

It is desirable, but not necessary, to provide a protector near the upper portion of the bottle, as shown in Fig. 1. When an upper protector 9 is employed, it is provided with an inwardly-projecting annular ridge 10, adapted to fit within the annular groove 11 in the bottle, which groove is similar to groove 5 at the bottom of the bottle.

Bottles which best adapt themselves to this form of protection are the ones whose sides are for a greater or less portion of their height practically cylindrical, as shown in Fig. 1.

By providing a protector at the bottom and also at or near the top of the cylindrical portion of the bottle the latter is amply protected under all circumstances from breakage by reason of contact with exterior objects, whether such objects be other bottles or the sides of the boxes, bases, or other containers wherein the bottles are packed.

Although the precise composition of the protectors is not essential, they are preferably formed of material having enough elasticity to not only absorb the shock of impact, but to be able to be stretched to fit over the bottle and to be snapped into place with the projecting ridge fitting into the receiving-groove.

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

1. The combination of a bottle having a groove therein, and a protector of resilient material having a projection on its inner surface adapted to fit into said groove for retaining the protector in position upon the bottle.

2. In combination, a bottle having an an-

nular groove near the bottom thereof, an annular protector of resilient material adapted to surround the bottle at the groove therein and having a projection adapted to enter said groove, said protector extending below the bottom of the bottle, for the purpose described.

3. In combination, a bottle having approximately cylindrical sides, and having annular grooves at points near the bottom and top of its cylindrical portion, and protectors of resilient material, said protectors having annular ridges on their inner surfaces for entering the grooves in the bottle, substantially in the manner and for the purpose specified.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH GROSSMAN.

Witnesses:
MARTIN CONNOR,
RANSOM E. WALKER.