B. L. WEIL.

BOTTLE CAP.

APPLICATION FILED APR. 8, 1908.

967,593. Patented Aug. 16, 1910.

Fig. 1.

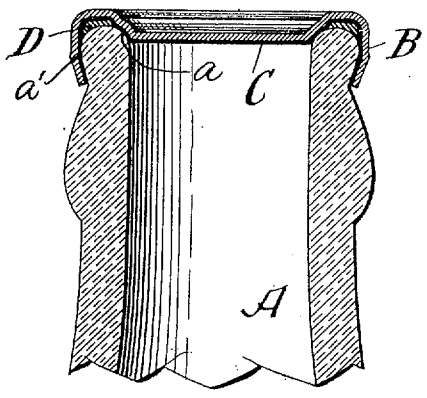
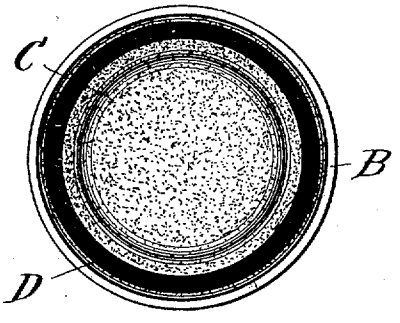


Fig. 2.



WITNESSES:

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BENJAMIN L. WEIL, OF NEW YORK, N. Y.

BOTTLE-CAP.

967,593. Specification of Letters Patent. **Patented Aug. 16, 1910.**

Application filed April 8, 1908. Serial No. 425,809.

To all whom it may concern:

Be it known that I, BENJAMIN L. WEIL, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Bottle-Caps, of which the following is a specification.

My invention relates to caps for closing bottles, jars and the like and has for its object to provide such caps with a protective coating which not only prevents any injurious action of liquids or gases on the material of the cap, but assists in securing a tight sealing of the bottle or other receptacle.

One of the many forms in which my invention may be carried out is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of a bottle with my improved cap applied thereto, and Fig. 2 is an inverted or bottom view of the cap, prior to its application.

The shape of the cap may be any of the usual or approved ones and my invention relates particularly to coating the interior of the cap with a protective substance of particular properties.

The drawings show a bottle A, over the mouth of which is fitted the cap B, made of aluminum or other suitable material, and according to my invention the interior of my cap is provided with a coating C. This coating may consist of pitch or other suitable material and should possess the following characteristics: 1st. It should adhere to the cap firmly so that particles of the coating may not scale off and drop into the liquid. 2nd. It should not dissolve in the liquid or in the vapors evolved therefrom. 3rd. It should not be affected by exposure to the temperatures to which the bottle is subjected after the cap is put on, either in the treatment of the liquid, such as pasteurizing, or in shipping, storing or handling before use. 4th. It should be moisture-proof and impervious, that is, it should not allow the liquid or the vapors rising therefrom to reach the material to which the coating is applied; rusting or corroding of the metal on the inside is thus prevented, and the life of the cap increased.

I have shown the invention used in connection with a rubber gasket D, which engages the mouth of the bottle.

The manner of applying the coating to the cap may vary. I may for instance vaporize the pitch or other substance and cause the vapors to be precipitated or deposited on the inner surface of the cap, or I may prepare a solution or emulsion of pitch or other suitable substance in a volatile solvent or vehicle and apply this solution or emulsion to the interior of the cap. When a rubber gasket is employed I prefer to simply place it in position after the coating has been applied, although, if desired, a second coating may be provided after the gasket has been inserted so that the gasket would itself be coated with the pitch or equivalent substance. In either of these cases the rubber will not be in engagement with the cap, but will be separated therefrom by the coating, so that any injurious action of a metal cap on the rubber is prevented. If preferred, the gasket could be inserted before the coating is applied.

Another advantage of my impervious coating employed by me is that it will, to a certain extent, compensate for defects in the material of the cap. Should this material be porous, or have pin holes, which otherwise would allow the contained vapors or gases to escape, the impervious coating, by closing said openings, will preserve a hermetic seal. Furthermore the coating is sufficiently sticky to hold the gasket, thereby making it unnecessary to apply a special adhesive in spots to fasten the rubber as has been done hitherto with metal caps having rubber rings. The coating therefore acts as a protection to the liquid and to the inner surface of the cap, against injurious interaction between the material of the cap and the liquid or vapors rising therefrom; the coating further prevents the entrance of air or moisture from the outside in case of defects; finally the coating also serves as a means for holding the gasket in place.

As illustrated by the drawing, the gasket D engages the bottle mouth between two annular portions *a*, *a'* respectively which are engaged by the coating C. This coating therefore interposes a barrier (in contact with the bottle) both between the inside of the bottle and the gasket, and also between the outside of the bottle and the gasket. The latter is therefore protected against the action of the liquid and of vapors rising therefrom, as well as against the action of the air.

I claim as my invention;

A bottle provided with a sealing cap having a protective coating of sticky material, and a ring-shaped gasket contained in said cap, the said coating being in engagement with the bottle both exteriorly and interiorly of the gasket.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses this seventh day of April, 1908.

BENJAMIN L. WEIL.

Witnesses:

JOHN LOTKA,

JOHN A. KEHLENBECK.