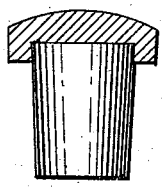
(No Model.)

F. BRIDGE.

STOPPER FOR BOTTLES, &c.

No. 418,549. Patented Dec. 31, 1889.



Attest
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UNITED STATES PATENT OFFICE.

FRANK BRIDGE, OF SOHO SQUARE, COUNTY OF MIDDLESEX, ENGLAND.

STOPPER FOR BOTTLES, &c.

SPECIFICATION forming part of Letters Patent No. 418,549, dated December 31, 1889.

Application filed May 2, 1889. Serial No. 309,388. (No model.) Patented in England June 1, 1886, No. 7,352, and in France May 12, 1887, No. 183,538.

To all whom it may concern:

Be it known that I, FRANK BRIDGE, cork-merchant, a subject of the Queen of Great Britain, residing at 9 Frith Street, Soho Square, in the county of Middlesex, England, have invented certain new and useful Improvements in Stoppers for Bottles and other Hollow Vessels, (for which I have received Letters Patent in England, No. 7,352, dated June 1, 1886, and in France, No. 183,538, dated May 12, 1887;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The invention has for its object the combination of a cork cylinder or other form of stopper with a head-piece or cap, as shown in the accompanying drawings, said head-piece being made of a material not hitherto used for such purpose, which material is cheap, elastic, and is capable of being firmly and securely connected with the cork body. For this purpose I form the head-piece or cap of the material employed in the manufacture of "linerusta Walton," which is capable of being molded into the desired form.

The material I have used and have found to answer well in carrying my invention into effect is prepared from the following ingredients, and in the manner hereinafter stated: I first prepare a cement consisting of oxidized oil, fifteen pounds; kauri gum, twenty pounds; resin, fifteen pounds. The oxidized oil above referred to is preferably prepared in the manner described in the specification of English Letters Patent granted to Frederick Walton, dated January 27, 1860, No. 209, and is similar to that used in the manufacture of linoleum oil-cloth; but I do not confine myself to the said method of producing solidified oils for use, as above stated—as, for instance, the solidified oils produced by long and continuous boiling at a high temperature will answer the purpose. When employing this latter method of solidifying oils, the articles made from composition containing the same will require to be hardened in a chamber heated to from about 100° to 120° Fahrenheit.

The method of combining the above-named materials is as follows: The oil, gum-kauri, and resin are put into a steam-heated pan at a temperature of from 300° to 350° Fahrenheit until, under motion produced from stirrers mounted in the pan, the mass runs down into a cement similar in consistency to an adhesive dough.

In the manufacture of a composition of a buff color for the purposes of my invention I preferably employ the following materials, combined in the proportions and in the manner stated: cement, prepared as above stated, thirty pounds; wood fiber, sixteen pounds; whiting, sixteen pounds; permanent white, dry, eight pounds; paraffine-wax, two pounds; middle chrome, one and one-half pound; orange chrome, three-fourths of a pound. The above-mentioned ingredients are mixed in a dough or roller mixing machine until thoroughly incorporated. The color of the composition may be varied by employing other coloring-matters than those above mentioned. The composition is rolled into sheets of a convenient size and substance. Blanks are cut out of this sheet by the aid of suitable cutters, and such blanks are afterward molded in a screw or other press into the desired form of head-piece or cap.

The construction of presses and molds suitable for the above purpose is well known.

Head-pieces or caps constructed of material of the above or of similar character may be molded in position on the cork body, and thereby securely connected thereto, or they may be separately molded, and when dry or set they may be cemented onto the cork body by means of any suitable cement.

Stoppers formed of cork, provided with head-pieces or caps constructed of materials such as are herein referred to, are completely impermeable and are not liable when driven into a bottle to break the neck thereof by the head-piece or cap coming into contact with the edge of the bottle-neck, as, being somewhat elastic, it does not offer an unyielding or rigid substance to the bottle-neck.

I would here remark that I do not confine myself to the exact proportions stated, as such may be varied without departing from the peculiar character of my invention.

Having fully described my invention, what I

desire to claim and secure by Letters Patent is—

In stoppers for bottles and other hollow vessels, the combination, with a cylindrical or other shaped cork, of a head-piece or cap composed of a cement formed of oxidized oil, kauri gum, and resin, combined with wood fiber, whiting, permanent white, paraffine-wax, and any desired coloring material, substantially as described.

FRANK BRIDGE.

Witnesses:
B. J. B. MILLS,
CLAUDE K. MILLS.