

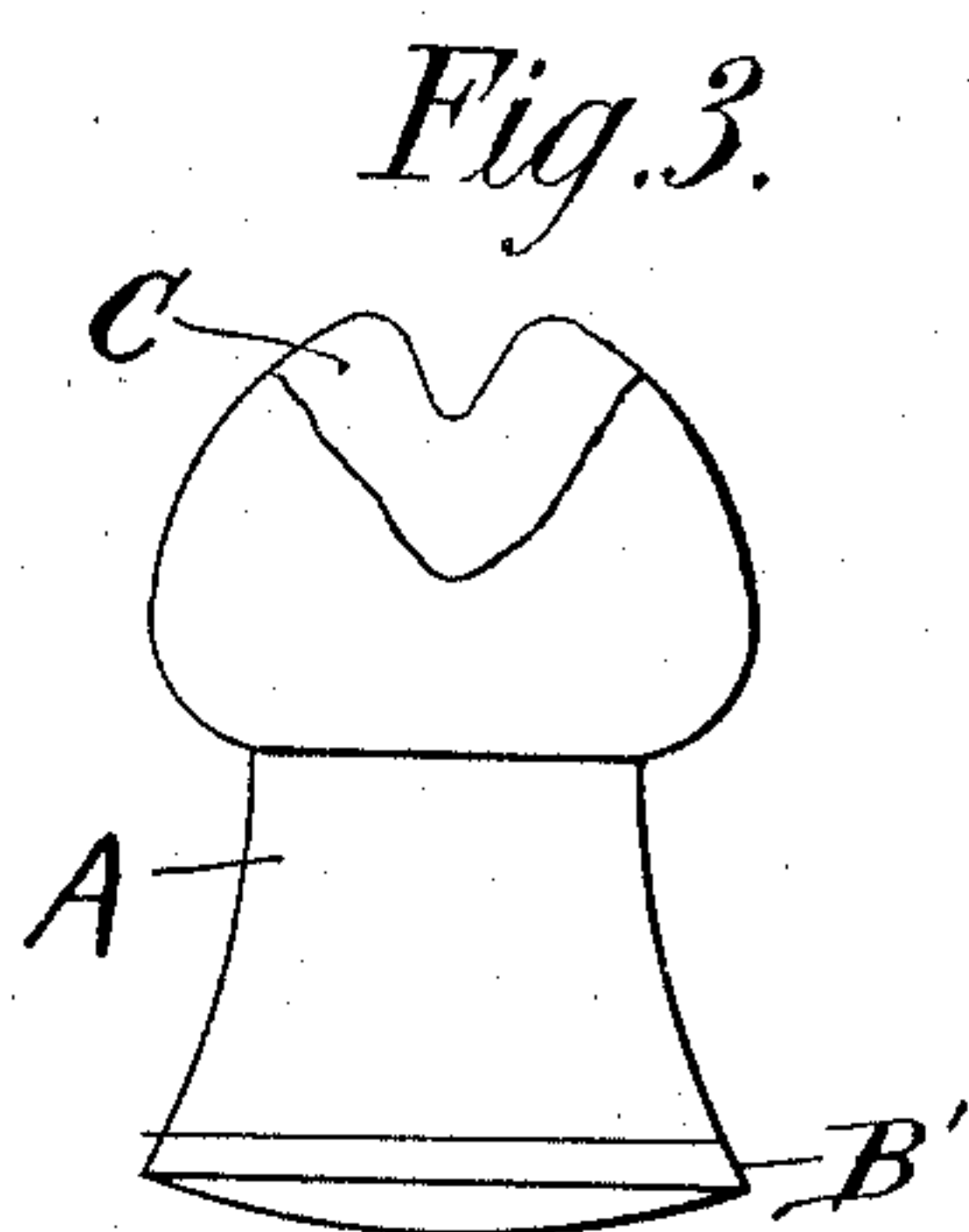
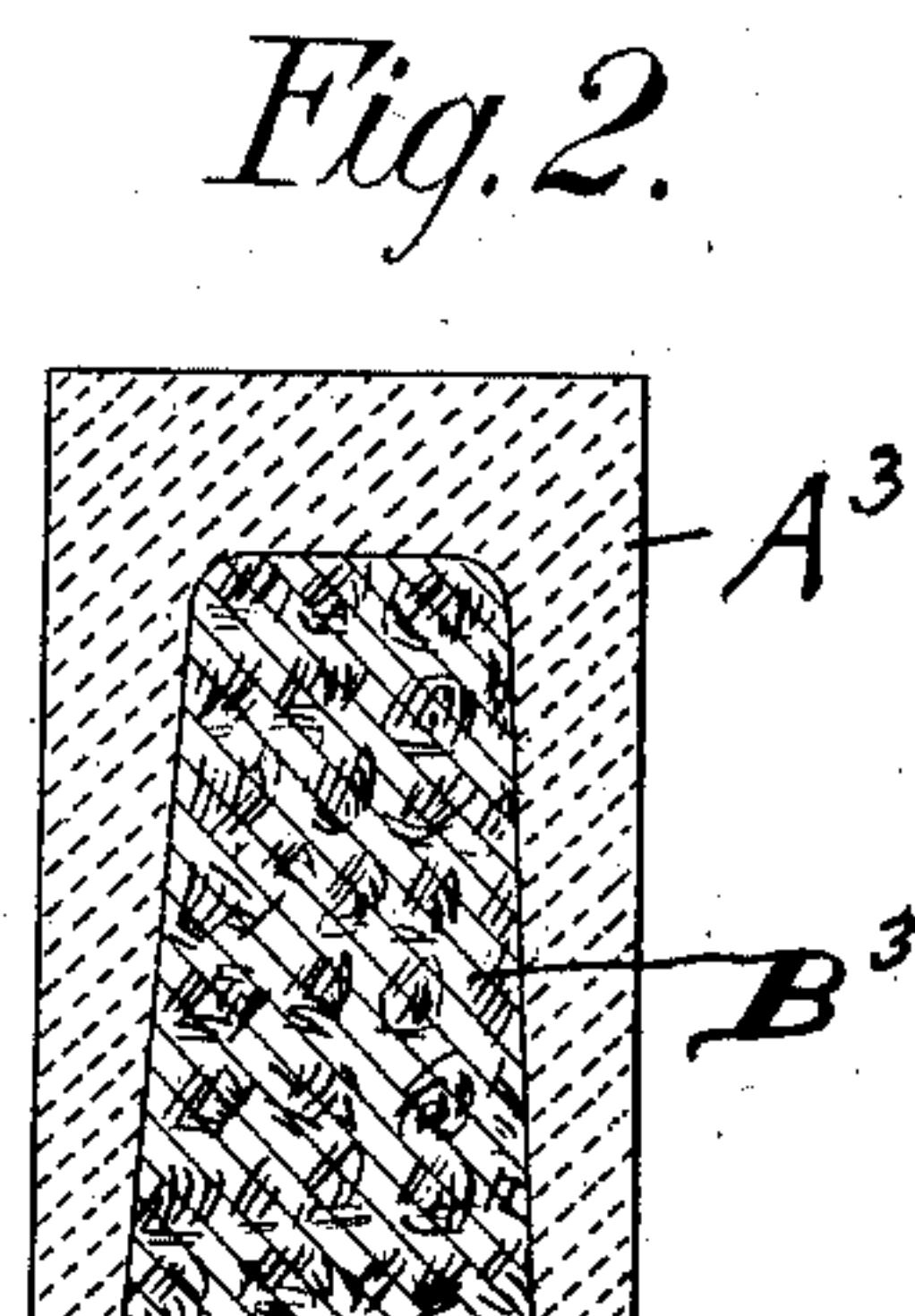
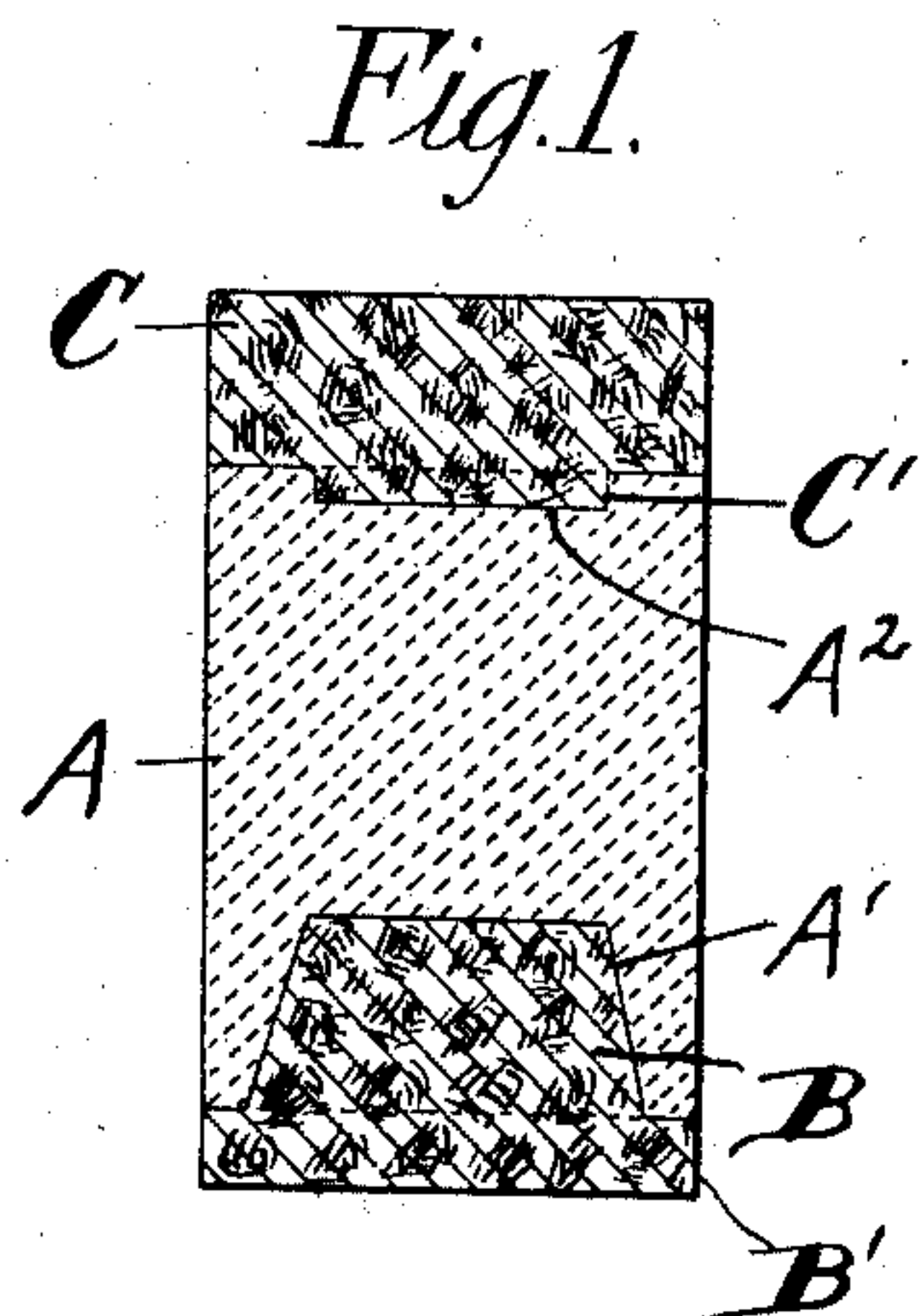
No. 706,634.

Patented Aug. 12, 1902.

A. BLUMER.
STOPPER FOR BOTTLES.

(Application filed June 8, 1900.)

(No Model.)



Witnesses
W. K. Boulder
[Signature]

Inventor
Arthur Blumer
By *[Signature]* W. K. Boulder,
Attorney.

UNITED STATES PATENT OFFICE.

ARTHUR BLUMER, OF LA VARENNE, FRANCE.

STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 706,634, dated August 12, 1902.

Application filed June 8, 1900. Serial No. 19,510. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR BLUMER, a citizen of the Swiss Confederation, residing at La Varenne, St. Hilaire, Seine, France, have invented certain new and useful Improvements in or Relating to Stoppers for Bottles and the Like, (for which application has been made for Letters Patent in Great Britain under No. 7,735, dated April 26, 1900; in France under No. 284,915, dated January 31, 1900, and in Germany under No. L. 26,470, III/64, dated February 28, 1900,) of which the following is a specification.

This invention relates to stoppers for bottles and the like, and has for its object to construct a stopper which shall be both gas and water proof and as such be particularly adapted for use in bottling sparkling wines and the like.

According to this invention the body of the stopper is composed of cork and nitrocellulose made into a homogeneous mass and saturated with paraffin or paraffin and vaseline. This stopper-body is combined with natural cork, so as to form a composite stopper which will have the elasticity of natural cork and be also gas-tight. The composition may be combined with natural cork in various ways. Preferably the latter is in the form of a plug, which is inserted into a correspondingly-shaped hole in the end of the composite stopper-body, the parts being connected together by cementing. The stopper may have a natural-cork plug inserted in one end only, or it may have in addition to the natural-cork plug at one end a natural-cork head or cap applied to the other end.

In the accompanying drawings, Figure 1 is a longitudinal section of a composite stopper constructed in accordance with this invention. Fig. 2 is a similar view of a modification, and Fig. 3 is an elevation of a cork constructed as shown in Fig. 1 after it has been inserted in a bottle and withdrawn.

Like letters indicate like parts throughout the drawings.

In constructing a stopper such as illustrated in Fig. 1 the main body A is composed of nitrocellulose and finely-powdered cork impregnated with paraffin and shaped to the required dimensions. The cylindrical body thus formed has a recess A' formed in one end and a natural-cork plug B inserted there-

in and cemented in position. The plug B is preferably formed conical and is provided with a head or cylindrical portion B', which constitutes an extension of the body A. This end of the stopper is that which is intended to be inserted in the bottle. The composite end of the stopper has applied to it a cap C, formed of natural cork, this cap being formed cylindrical and constituting an extension of the body A. The cap C may be made as a cylindrical disk and cemented or otherwise attached to the body A; but preferably the cap C has formed on its underside a raised part C', which lies within a correspondingly-shaped recess A² in the head of the stopper-body A. After the withdrawal of a stopper thus made from the bottle into which it has been inserted the natural-cork plug B expands, as shown in Fig. 3, the composition body A tending to retain the shape into which it was compressed when the stopper lay in the bottle-neck. The result is that the stopper assumes the form shown in Fig. 3, which resembles the shape of the ordinary stoppers formed entirely of natural cork which are at present in use. The improved stopper, however, owing to the employment of the composition has the advantage of being entirely gas and water proof, which is not the case with stoppers formed entirely of cork.

In the construction illustrated in Fig. 2 the stopper A³ is formed without any natural-cork head C, the plug B³ being carried much farther into the body of the stopper A³. Furthermore, the plug is not provided with the head or flange B'. Thus the stopper when viewed on its cylindrical surface or upper end has the appearance of being formed entirely of one piece.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a stopper for bottles, the combination with a gas and water proof cylindrical body portion formed from a solid piece of material consisting of powdered cork and nitrocellulose and having a longitudinal opening in its inner end, of a plug of natural cork fitted within the opening, the said plug being adapted to exert an outwardly-directed expansive action upon the annular walls of the body portion which is inserted in the neck of the bottle, in the manner and for the purpose described.

2. In a stopper for bottles, the combination with a gas and water proof body portion formed from a solid piece of material consisting of cork and nitrocellulose and provided with a longitudinal opening in its inner end, of a plug of natural cork fitted within the opening, the said plug being adapted to exert an outwardly-directed expansive action upon the annular walls of the body portion which is inserted in the neck of the bottle, and a flange on the plug lies against the face of the body portion at the inner end of the latter, and constituting an extension of said body portion, in the manner and for the purpose set forth.

3. In a stopper for bottles, the combination with a gas and water proof cylindrical body portion formed from a solid piece of material consisting of powdered cork and nitrocellulose and provided with a longitudinal opening in each end, of a plug B of natural cork fitted within one opening, a flange on said

plug, a cap C of natural cork in the other opening, substantially as and for the purpose described.

4. In a stopper for bottles, the combination with a gas and water proof cylindrical body portion formed from a solid piece of material consisting of powdered cork and nitrocellulose, impregnated with paraffin, and provided with a longitudinal opening in each end, a plug of natural cork fitted within one opening, a flange on this plug, a cap of natural cork fitting within the opening in the other end of the body portion, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR BLUMER.

Witnesses:

EDWARD P. MACLEAN,
GEORGE E. LIGHT.