

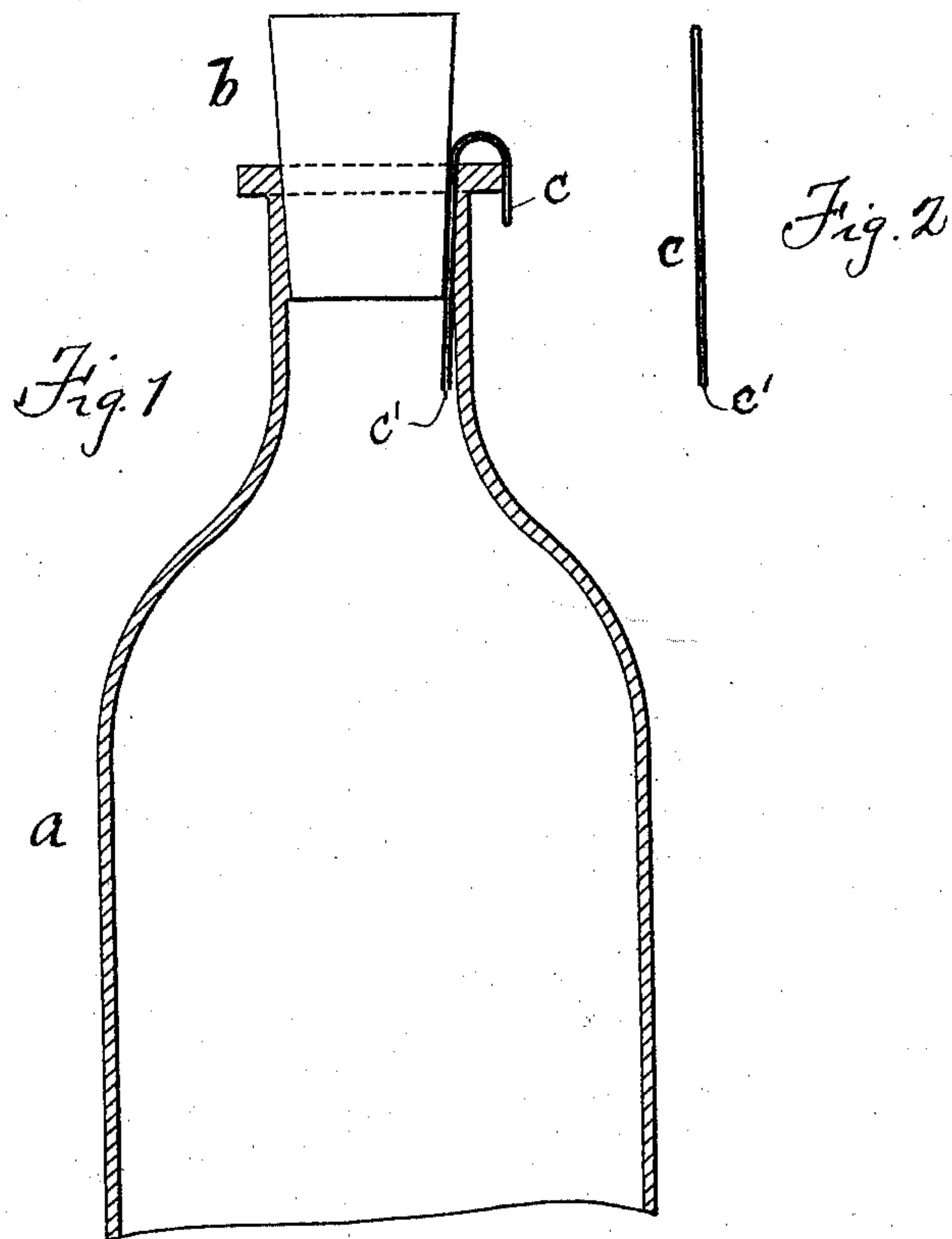
(No Model.)

C. AMEYE.

METHOD OF AND APPARATUS FOR TREATING LIQUIDS.

No. 598,722.

Patented Feb. 8, 1898.



Witnesses:
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UNITED STATES PATENT OFFICE.

CAMILLE AMEYE, OF ISEGHEM, BELGIUM.

METHOD OF AND APPARATUS FOR TREATING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 598,722, dated February 8, 1898.

Application filed July 27, 1897. Serial No. 646,071. (No model.) Patented in Belgium January 20, 1897, No. 125,829; in France January 21, 1897, No. 263,301; in Hungary May 7, 1897, No. 9,721; in Luxemburg July 5, 1897, No. 2,897; in England August 7, 1897, No. 16,091, and in Spain August 20, 1897, No. 21,165.

To all whom it may concern:

Be it known that I, CAMILLE AMEYE, a citizen of the Kingdom of Belgium, residing at Iseghem, Belgium, have invented certain new and useful Improvements in Methods of and Apparatus for Treating Liquids; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings.

I have obtained Letters Patent for this invention in Belgium January 20, 1897, No. 125,829; in France January 21, 1897, No. 263,301; in Hungary May 7, 1897, No. 9,721; in Luxemburg July 5, 1897, No. 2,897; in England August 7, 1897, No. 16,091, and in Spain August 20, 1897, No. 21,165.

A serious inconvenience in the sterilizing of bottled liquids is the heavy internal pressure which the liquid exercises on the cork and glass of the bottle, this pressure being very detrimental to the liquid because of the oxidation thereof and which gives to the liquid a burnt taste. It also happens from the same cause that when the bottles are submitted to a moderate degree of heat serious losses are sustained, notwithstanding that the corks are secured by means of string, by reason of the corks being forced out by the pressure of the liquid and gas, and thus a large quantity of liquid frequently escapes, with the serious result that after the cooling operation the bottle is insufficiently filled to insure the efficient aging of the liquid, while if the cork resists the pressure the bottle bursts and both liquid and bottle are entirely lost.

Now the object of the present invention is to remedy the defects above pointed out.

Referring to the drawings, Figure 1 is a vertical section of a corked bottle having a device adapted to carry out the present invention applied thereto, and Fig. 2 is a separate view of the double-wire conduit.

a represents the bottle, *b* represents the cork, and *c* represents the double wire, and *c'* represents conduit formed thereby.

The conduit *c'* is formed by a length of iron

wire *c*, doubled over in the form of a long staple, as shown more particularly at Fig. 2, and this device is employed in manner as follows: After the filling of the bottle *a* with liquid and during the insertion of the cork *b* the double wire *c*, which at its upper part has previously been bent over into a hooked form, as represented in Fig. 1, is hung on the neck of the bottle *a*, and the cork *b* is then driven in for about one third or half its length, and the length of double wire *c* thus forms a minute conduit *c'* between the bottle-neck and the cork *b* for the purpose hereinafter described.

The upper portion of double wire *c* is so curved as to form an arch above the upper rim of the mouth of the bottle and leaving sufficient clear space above said rim that a hook or other proper tool may be inserted therein for extracting said wire after the cork has been driven, the lower shank, which enters the mouth of the bottle, being approximately straight and smooth, so as to be capable of adapting itself to the interior wall of the neck of the bottle.

When bottles corked in the manner above described are submitted to steam or other heat for sterilizing or pasteurizing purposes, the gases, and especially the carbonic-acid gas, which is often in large proportion, and the air contained in the liquid escape without obstruction by the minute conduit *c'*, formed between the two limbs of the bent wire *c*. As the gas and air escape without obstruction no liquid will be lost from the bottle, and when the operation of sterilizing or pasteurizing is finished and the liquid has become cool the quantity thereof will be substantially the same as when first bottled.

After the heating of the bottle *a* the double wire *c* may be easily withdrawn by the aid of an instrument engaging the hooked end thereof, and in dealing with wine the driving in of the cork is finished by the corking-machine without raising the cork, so that during this operation the atmosphere is entirely excluded from the contents of the bottle. In dealing with beer, however, the cork, when driven in to a depth of a third or half of its length, can be easily raised by the fingers, and the bottle

can then be placed in an aerating-machine in order to introduce into it carbonic-acid gas to replace that which has been driven out during the sterilizing or pasteurizing operation.

5 In order to protect the double iron wire *c* from rust, it is from time to time boiled in the red wine of Bordeaux, and the coloring material of this wine forms with the iron an insoluble tannate of iron, and this tannate
10 prevents the liquid which comes into contact with the wire from being injuriously affected either in taste or in color.

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

1. In apparatus for the sterilizing or pasteurizing of liquids, the combination with a bottle and its cork, of a length of double wire placed between the cork and the bottle so as
20 to form a minute conduit, one of its ends ex-

tending outside of the bottle and the other end forming the lowest portion of said conduit, substantially as specified.

2. In apparatus for the sterilizing or pasteurizing of liquids, the combination with a
25 bottle and its cork, of a staple containing a minute passage placed between the bottle and the cork, one end of said staple extending outside of the bottle and forming a hook in engagement with the inner and with the outer
30 surface of the neck of the bottle, a space being left between said hooked portion and the upper surface of said neck, substantially as specified.

In testimony whereof I affix my signature
35 in presence of two witnesses.

CAMILLE AMEYE.

Witnesses:

HENRI ABILOBE,
EDOUARD LABASQUE.