

No. 654,510.

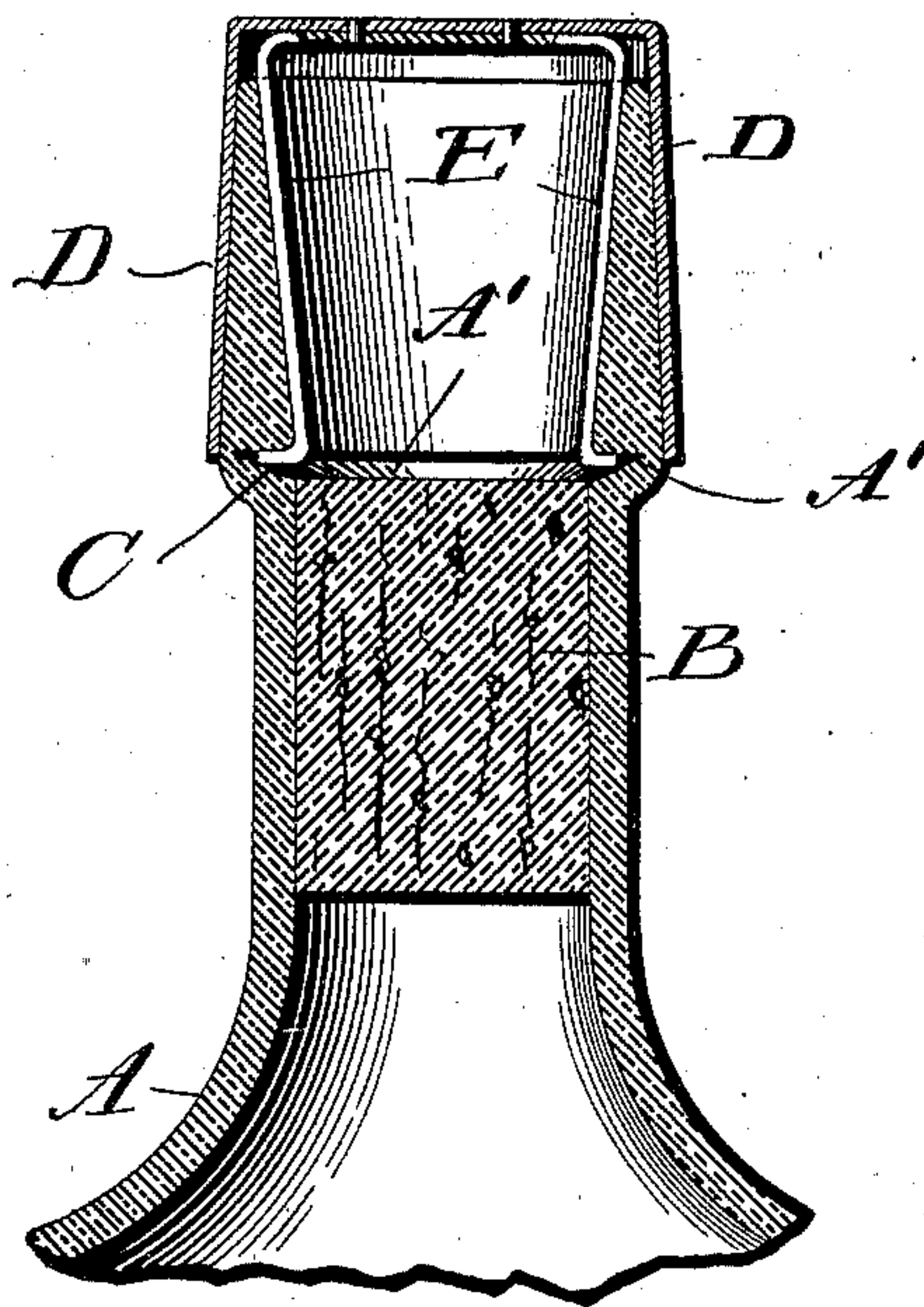
Patented July 24, 1900.

J. A. BONNER.  
NON-REFILLABLE BOTTLE.

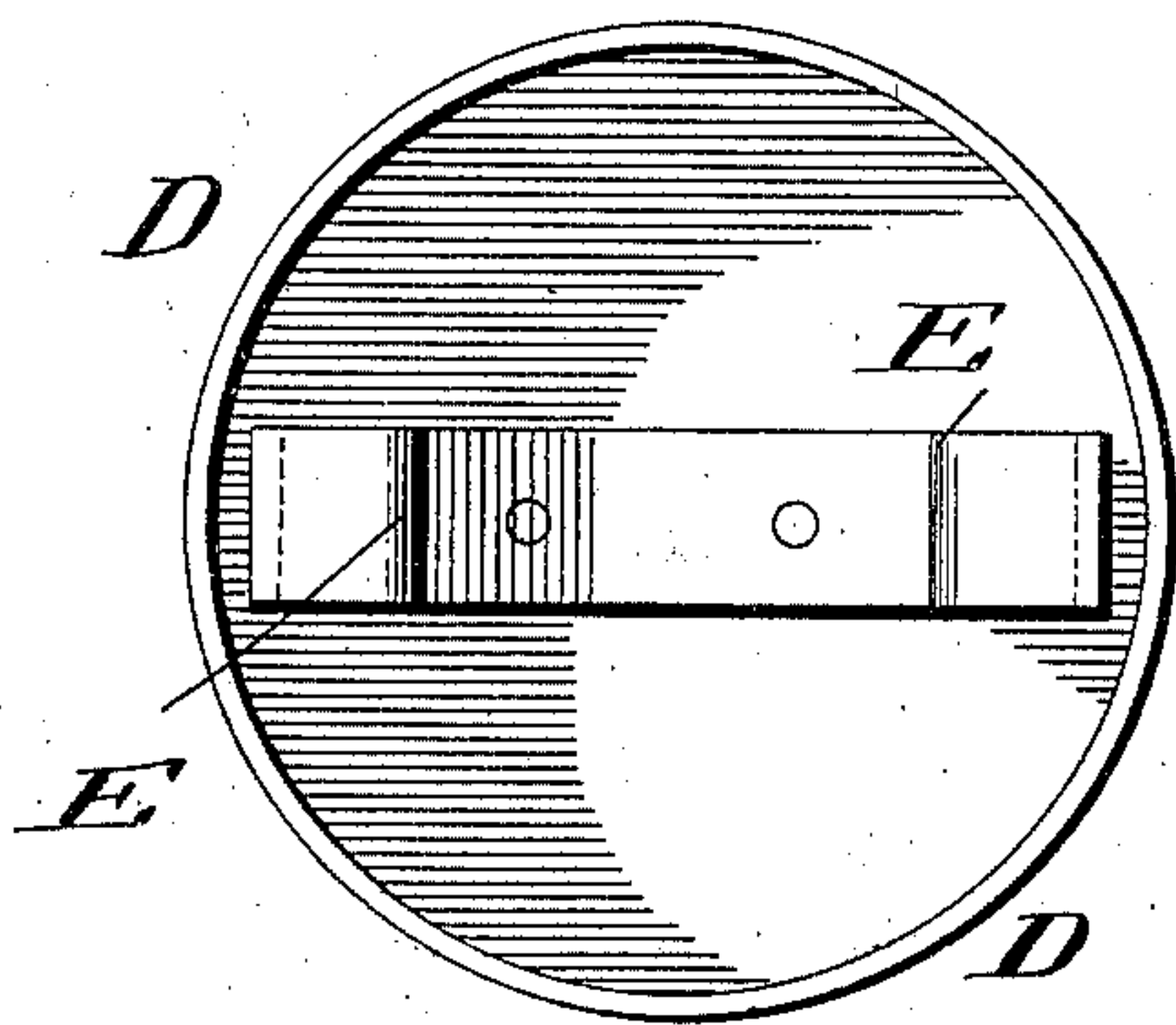
(Application filed Apr. 14, 1900.)

(No Model.)

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES A. BONNER, OF DIRECT, TEXAS.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 654,510, dated July 24, 1900.

Application filed April 14, 1900. Serial No. 12,859. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. BONNER, a citizen of the United States, residing at Direct, in the county of Lamar and State of Texas, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do declare the following to be a full, clear, and exact description of the 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, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in non-refillable bottles, and especially to bottles having frangible necks in which are adapted to be held spring-arms fastened to a cap which fits over the upper end of the neck.

More specifically the present invention consists in a frangible-neck bottle having an annular groove in its inner wall, with the upper portion of the inner wall of the neck above the annular groove tapering slightly outward, and the provision of a cap adapted to fit over the top of the neck and provided with spring-arms which are inclined slightly inward and have angled ends adapted to engage said groove as the cap containing said arms is placed over the neck of the bottle, thus making it impossible to remove the cap without first breaking off a portion of the neck above the groove.

My invention will be hereinafter described in detail and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form part of this application, and in which—

Figure 1 is a vertical central sectional view through the neck of a bottle having an annular groove and a cap held thereto by means of spring-arms; and Fig. 2 is an enlarged detail view of the cap, showing the spring-arms connected thereto.

Reference now being had to the details of the drawings by letter, A designates the bottle, having a neck which is provided at its inner wall with an annular groove A' at any suitable location. Within said neck below the annular groove a cork B is adapted to be inserted before the cap is placed over the top of the neck. The inner wall of said neck

above the groove, as at C, tapers toward the upper end of the neck, and an acute angle is formed between the lower end of said tapering portion of the wall of the neck and the upper wall of said annular groove.

The cap D, which is adapted to fit over the top of the neck and extend down over the groove A' to protect and obscure the latter, has one or more spring-arms E secured near its middle portion to its inner face, and said spring-arms are preferably bent and converge toward each other and are angled at their lower ends. As the cap is placed over the top of the neck and the arms inserted in the bore of the neck as the cap is pushed down to its lowest limit the angled ends of said arms will spring into the annular groove A' and said cap will be securely locked to the neck. In order to remove the cork in the neck, it will be necessary to sever the top of the neck, which may be done by imparting a light tap upon the cap, which will cause the glass to break at the contracted or thin portion of the wall at the apex of said groove, after which the cork B may be removed.

While I have in the accompanying drawings shown a specific manner of securing the entrance to the bottle, this means being in the nature of a cap fitted over the neck of the bottle, I do not desire to limit myself to this particular form of cap or cover, as it is at once evident that other well-known forms of devices adapted to the purpose may be substituted therefor.

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

As an improved article of manufacture, a non-refillable bottle having a neck with an annular groove in its inner wall, the inner wall of the neck above said groove tapering upward and outward, a cap having a flange extending down over the neck to a location opposite said groove, a spring secured near its middle to the inner face of the cap, and having its arms bent within the cap, and the extreme ends of the arms bent at right angles and designed to engage said groove, substantially as shown and described.

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

JAMES A. BONNER.

Witnesses:

C. McDONALD,  
E. C. PORTER.