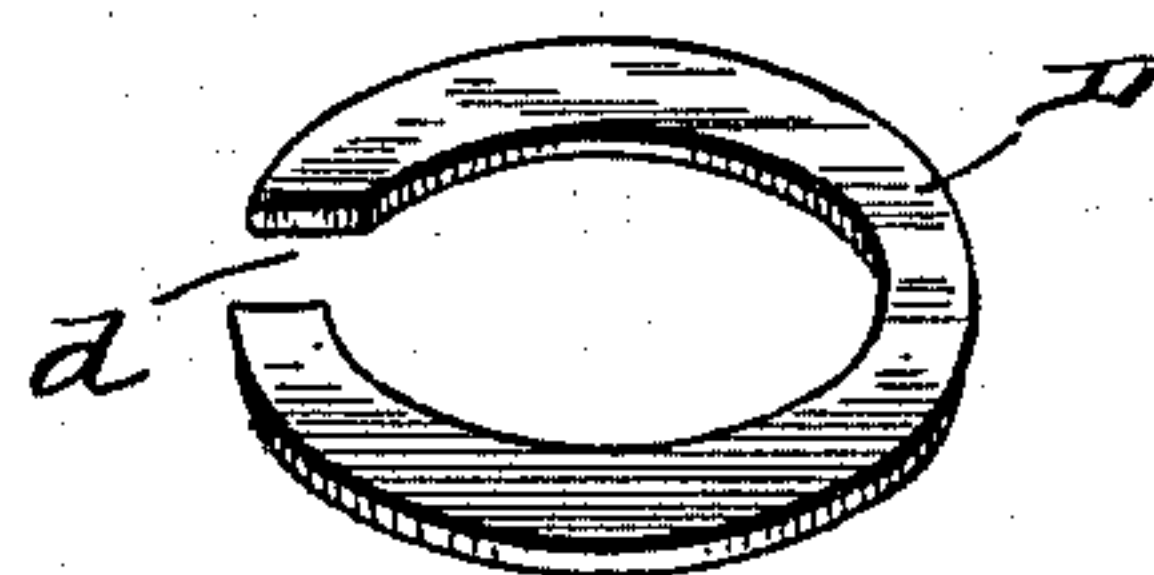
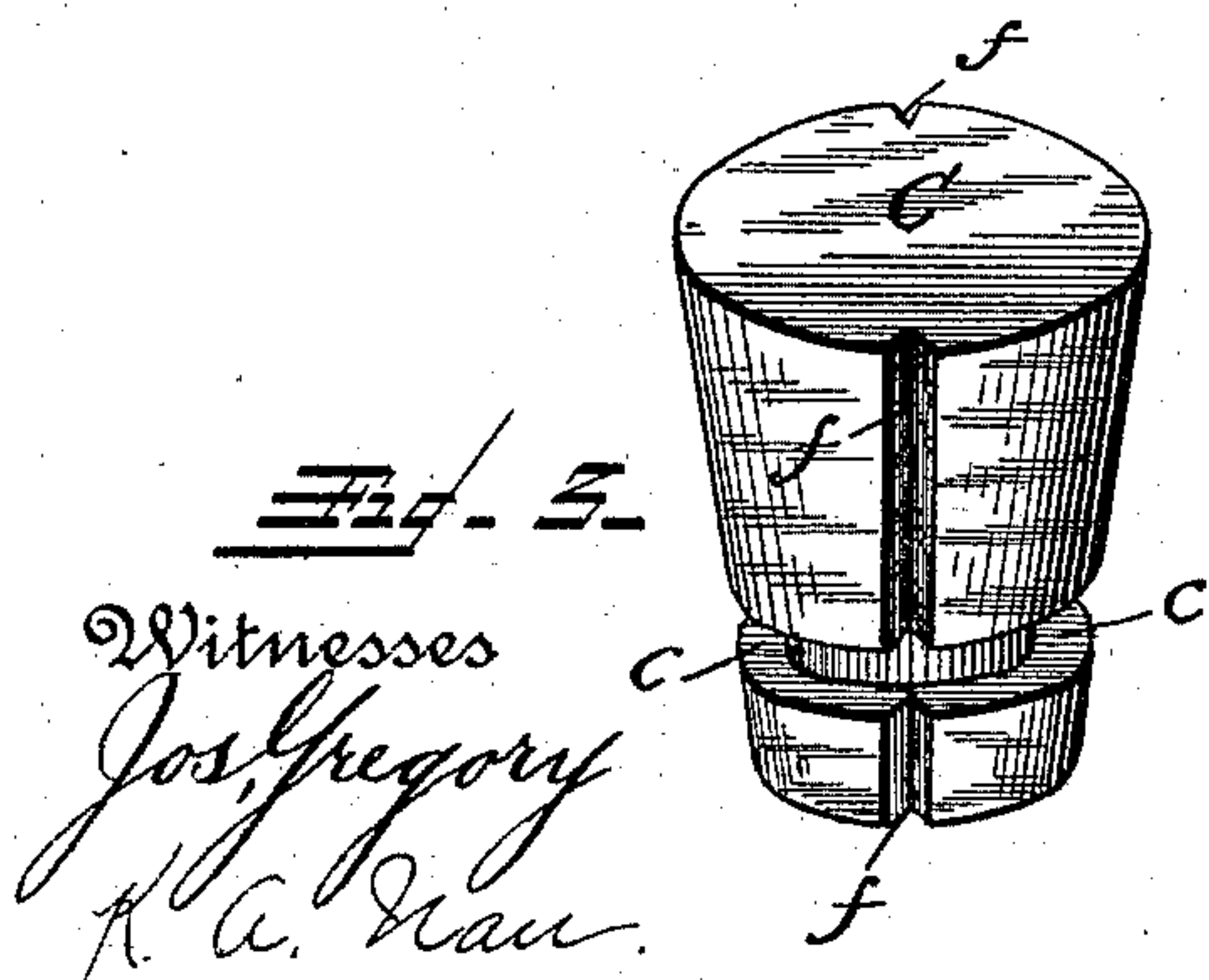
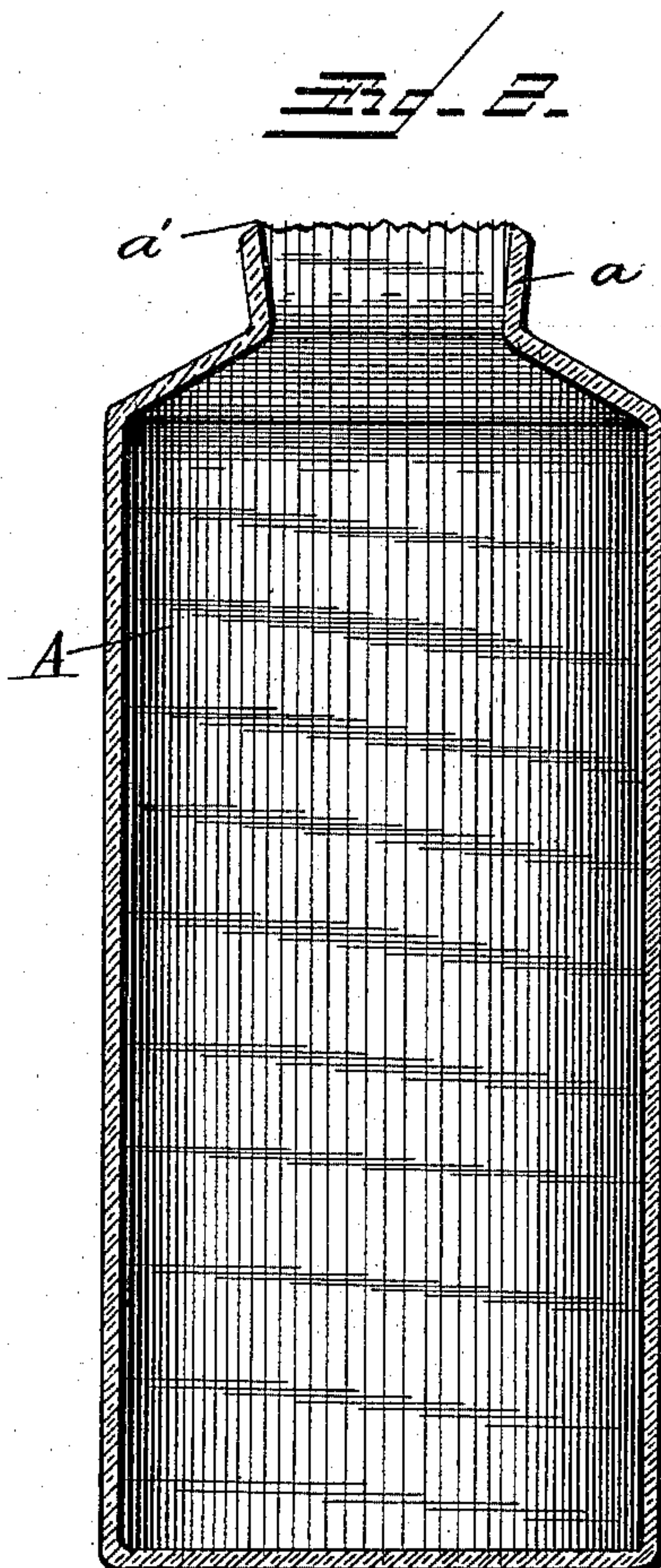
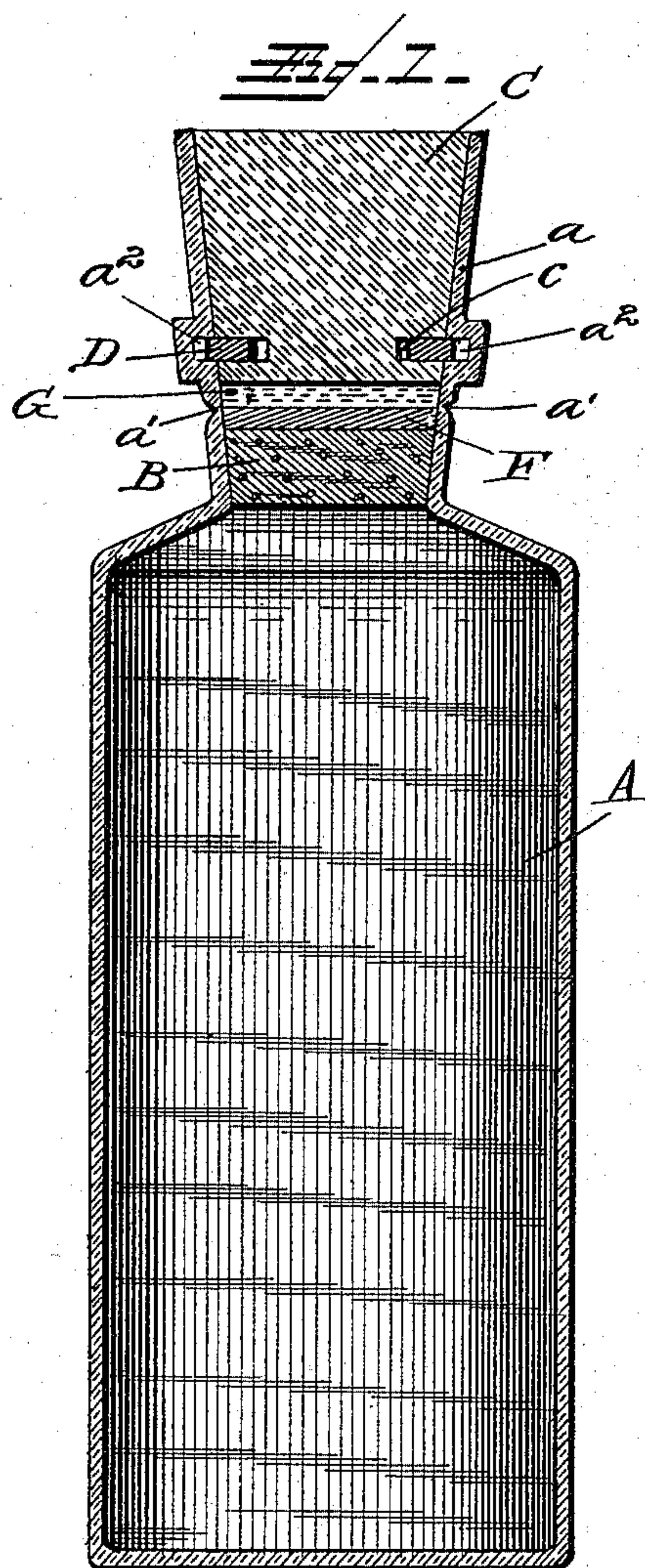


(No Model.)

J. W. WOODRUFF.
NON-REFILLABLE BOTTLE.

No. 573,949.

Patented Dec. 29, 1896.



Inventor
John W. Woodruff
By *John Hedderburn*
his Attorney.

UNITED STATES PATENT OFFICE.

JOHN W. WOODRUFF, OF WISE, WEST VIRGINIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 573,949, dated December 29, 1896.

Application filed January 28, 1896. Serial No. 577,180. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. WOODRUFF, a citizen of the United States, residing at Wise, in the county of Monongalia and State of West Virginia, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby 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.

This invention relates to certain new and useful improvements in bottles, and it has for its objects, among others, to provide a simple and cheap non-refillable bottle which can be readily corked, but which cannot be opened without destroying the appearance and character of the bottle to such an extent as to prevent its reuse. I form the bottle with a neck having a weakened portion where it is adapted to be broken, and an annular groove into which is adapted to be automatically expanded a lock-ring carried by the stopper and adapted to automatically seat itself in said groove as the stopper is applied to the bottle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a vertical section through the bottle with the stopper in place. Fig. 2 is a like view showing the neck broken off. Fig. 3 is a detail of the stopper, and Fig. 4 is a detail of the lock-ring removed.

Like letters of reference indicate like parts in the several views.

Referring now to the details of the drawings by letter, A designates the bottle, having a tapered neck *a*, into the lower portion of which is adapted to be inserted the cork B, by any well-known means, after the bottle has been filled. This neck has a weakened portion *a'*, and above the same an annular groove or recess *a²*.

C is a stopper of glass tapered to fit with-

in the tapered neck and having an annular groove *c* near its lower end, into which is sprung the lock-ring D, of metal, which is split, as shown at *d*, to allow it to readily expand.

In practice the bottle is filled, the cork is inserted, a layer of cement or sealing-wax F is applied over the top of the cork, and then the stopper C is placed in position with the ring D in the annular groove thereof, and with the stopper so braced into position the ring is compressed within its groove but as soon as the same comes opposite the groove or recess *a²* in the neck the ring springs outward and seats itself in said groove and prevents removal of the stopper. The groove *a²* in the neck is of such depth as to prevent the ring springing out against the outer wall of said groove and breaking the glass.

The glass stopper may be provided with one or more small grooves *f*, extending down the sides thereof, into which may be poured hot water to fill the space G between the bottom of the stopper and the sealing-wax and breaking the bottle at the weakened portion *a'*. These grooves are, while large enough to admit of the entrance of water, too small to admit of any tool to unlock the bottle.

Modifications in details may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

Having thus described the invention, what is claimed as new is—

The combination with a bottle having a tapered neck and a weakened portion with an annular groove beyond said weakened portion, of a split spring lock-ring, a glass stopper tapered to fit the neck and having an annular groove and grooves disposed lengthwise of the stopper and intersecting the annular groove and a seal between the stopper and a stopper placed in the lower portion of said neck, all substantially as described.

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

JOHN W. WOODRUFF.

Witnesses:

I. N. ROBINSON,
J. W. SANDERS.