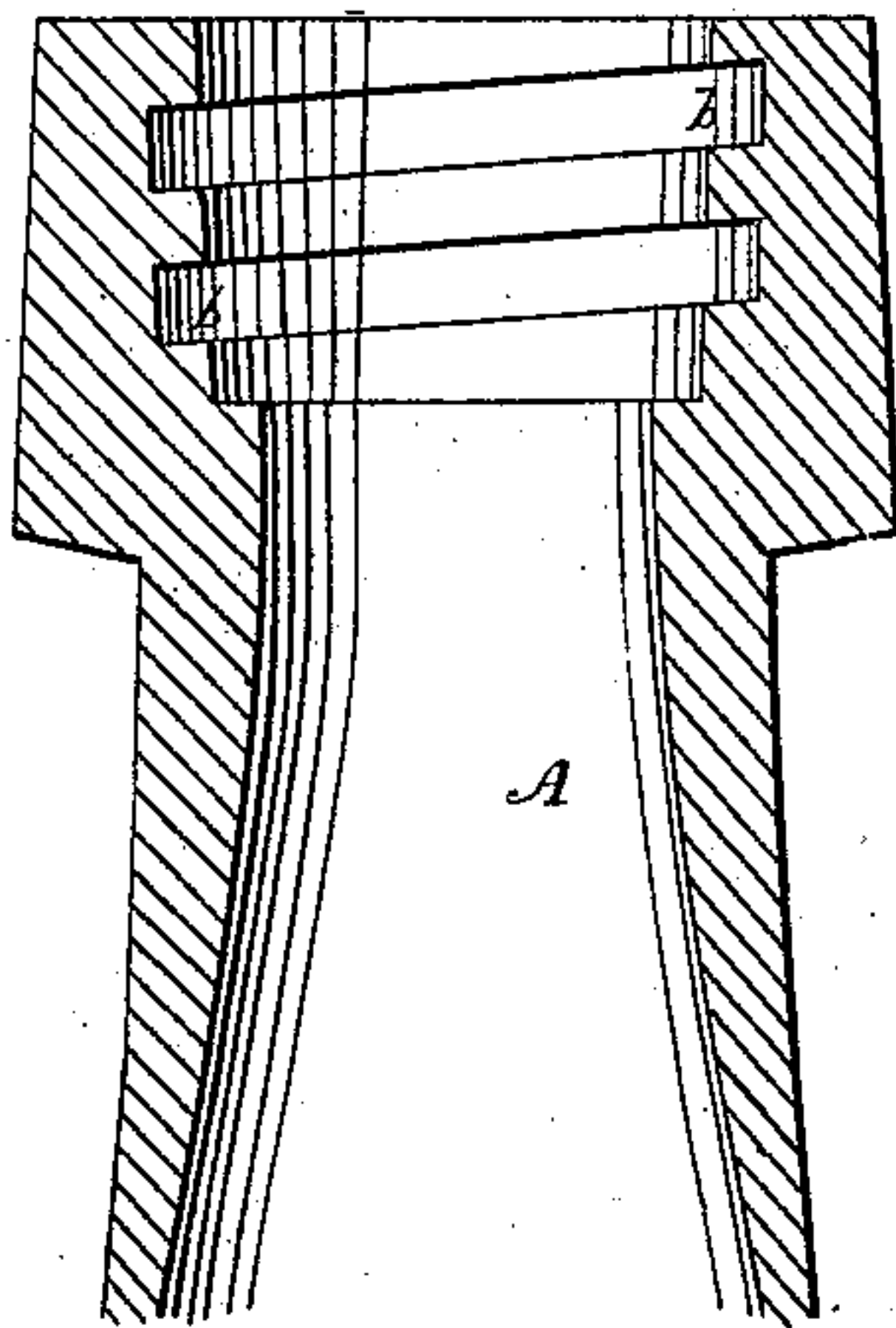


*S. A. Whitney,*  
*Bottle Stopper,*

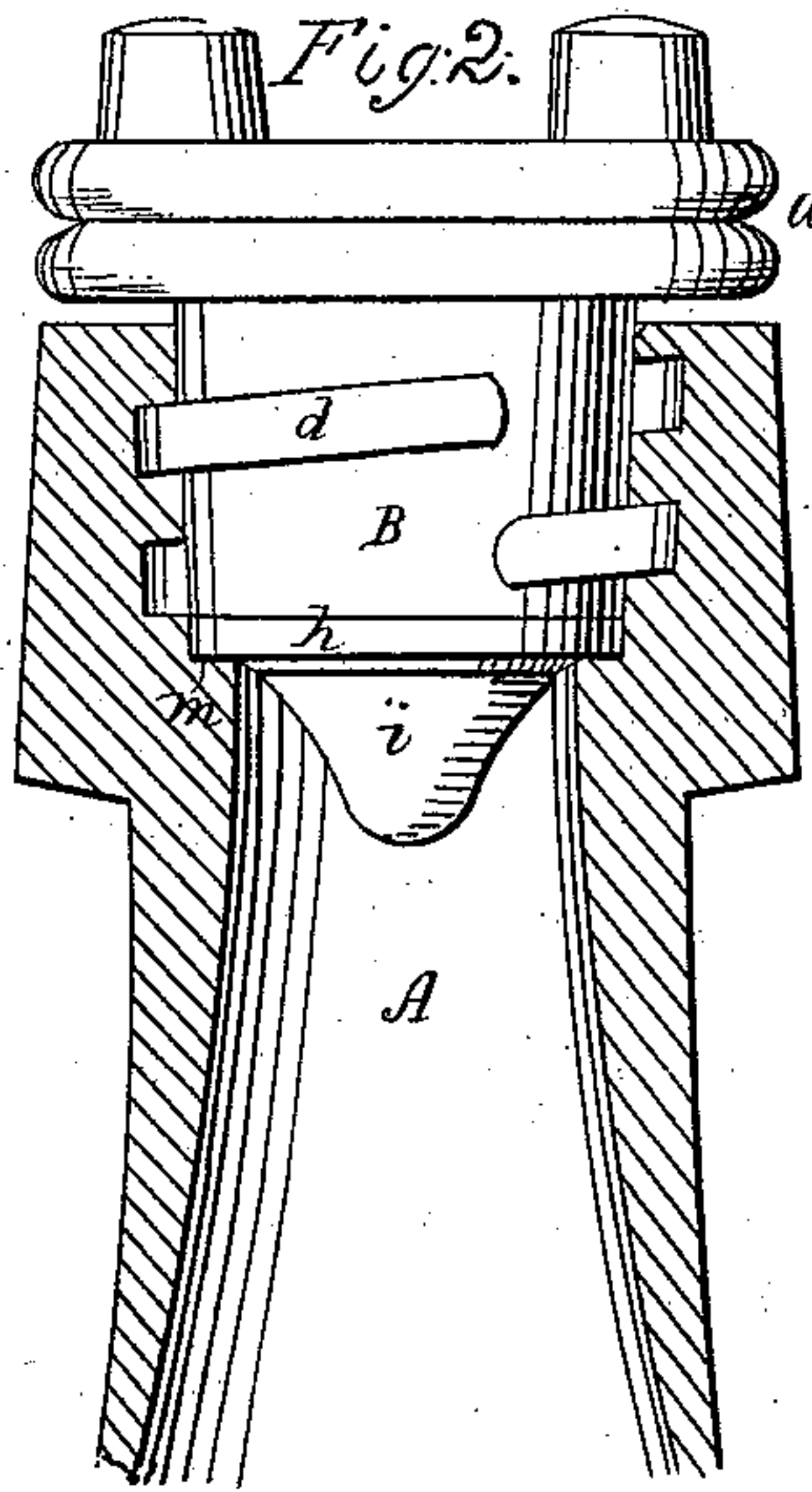
*No 31,046.*

*Patented Jan. 1, 1861.*

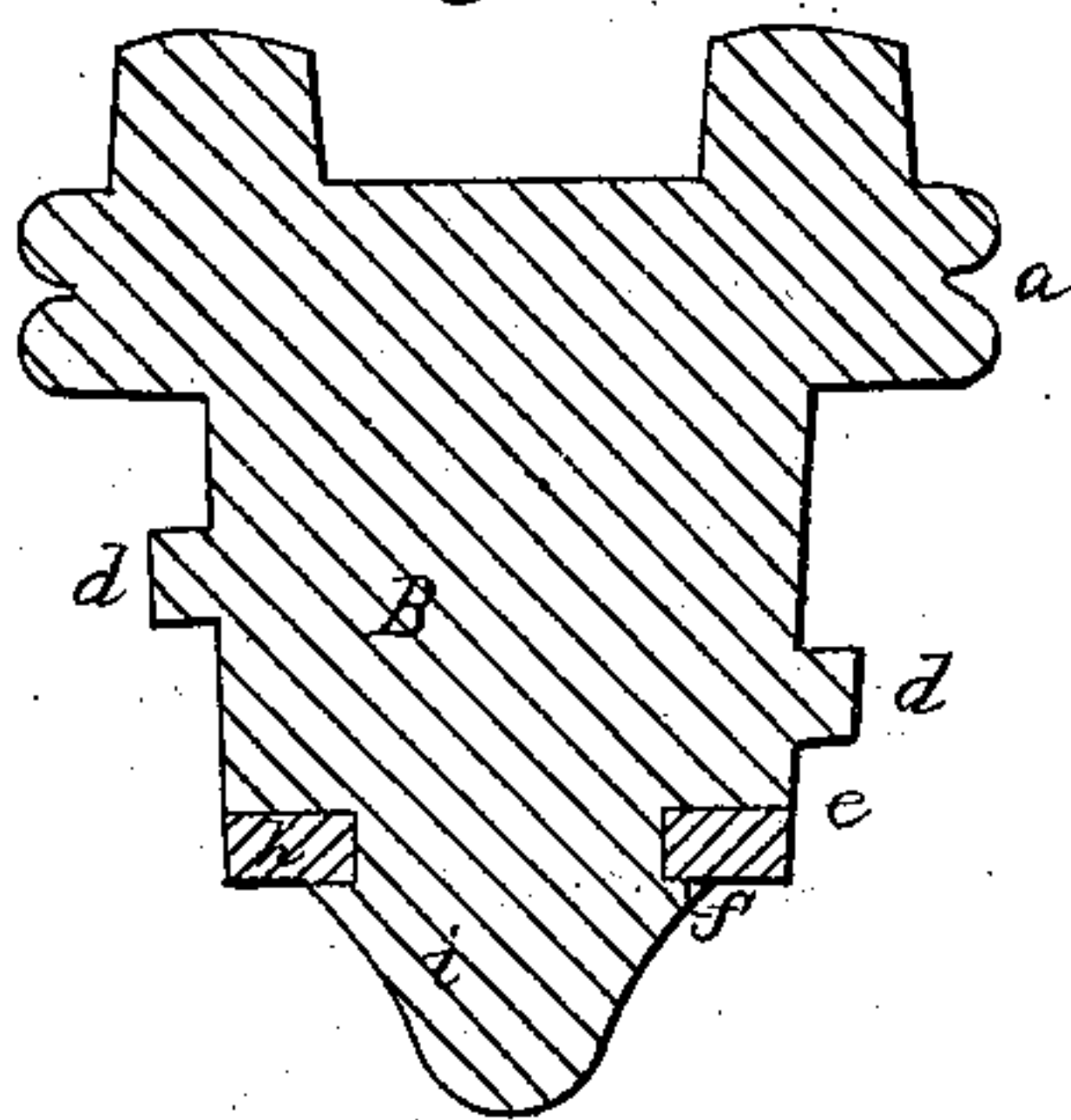
*Fig. 1*



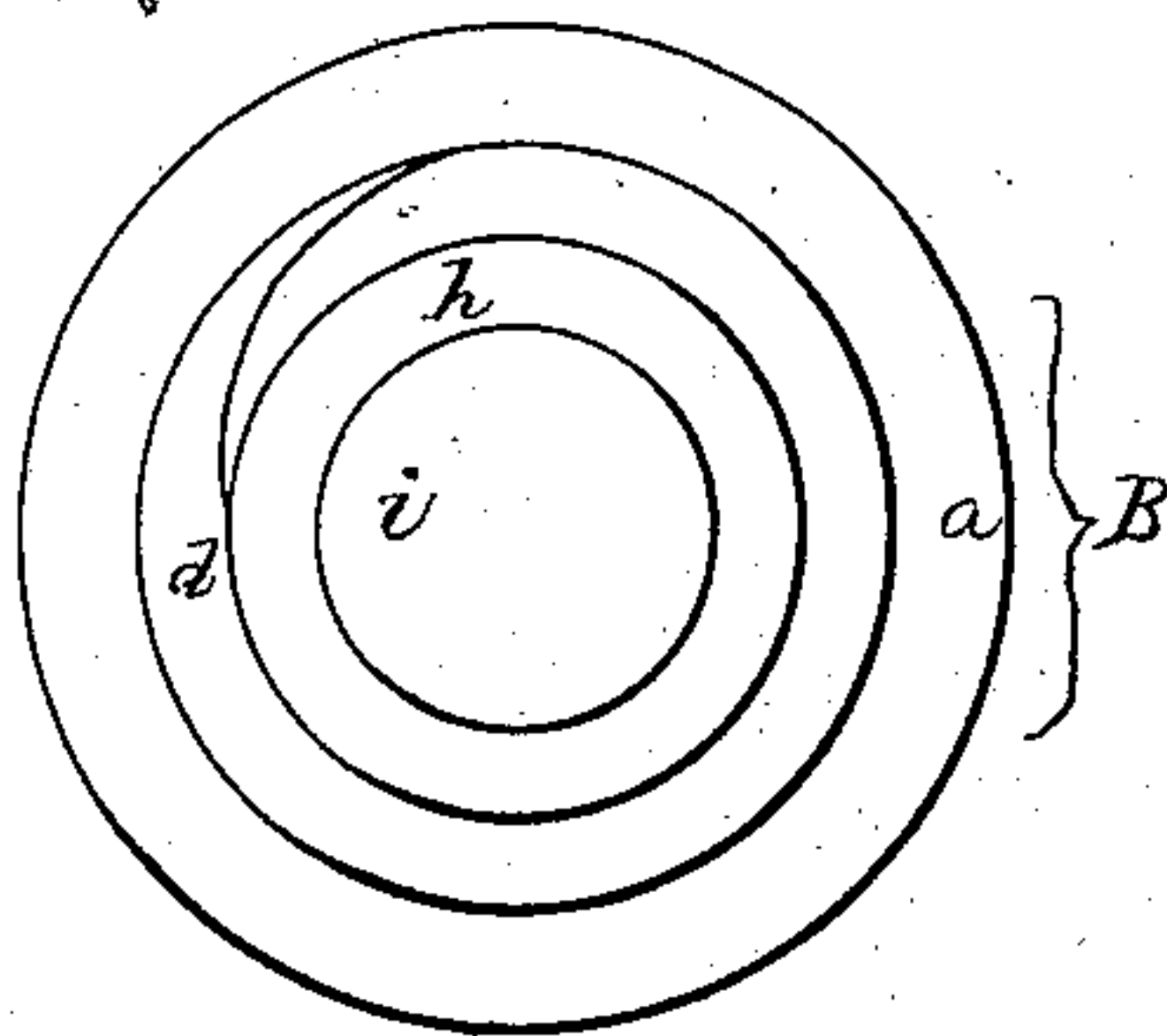
*Fig. 2.*



*Fig. 3*



*Fig. 4*



*Witnesses:*  
*Chas Howson*  
*Charles E Foster*

*Inventor:*  
*Henry Howson*  
*Atty for S. A. Whitney*



# UNITED STATES PATENT OFFICE.

S. A. WHITNEY, OF GLASSBOROUGH, NEW JERSEY.

## IMPROVED GLASS STOPPER FOR BOTTLES.

Specification forming part of Letters Patent No. 31,046, dated January 1, 1861.

*To all whom it may concern:*

Be it known that I, S. A. WHITNEY, of Glassborough, Gloucester county, State of New Jersey, have invented a new and useful Improvement in Glass Stoppers for Bottles, Jars, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a glass stopper having a screw-thread, two shoulders, forming a recess, a cork washer, and a tapering termination, so formed and so arranged as to facilitate the adjustment of the washer to its position within the recess formed by the said shoulders, and the whole being constructed and applied to the neck of a bottle in the manner described hereinafter, and forming a cheap and durable stopper, especially applicable to such bottles as have to be repeatedly refilled, in which case the stopper affords a cheap substitute for ordinary corks.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of the top of a bottle prepared for the reception of my improved stopper; Fig. 2, the same, with the stopper in its place; Fig. 3, a vertical section of the stopper detached from the bottle, and Fig. 4, an inverted plan view of the stopper.

Similar letters refer to similar parts throughout the several views.

A represents the mouth and part of the neck of the bottle, and B the glass stopper. The latter is provided at its upper end with a flange, *a*, which may be serrated or roughened at the edge, so as to afford a hold for the finger and thumb when the stopper has to be removed from or replaced within the neck of the bottle; or in place of this serrated flange the top of the stopper may have projections, or may be otherwise so formed as to receive a suitable wrench. Below the flange *a*, and on the body of the stopper, the thread *d* of a screw is formed, a spiral recess being formed within the neck of the bottle for the reception of this thread.

The stopper is reduced in diameter near its lower end, so as to form two shoulders, *e* and

*f*, in the recess, between which is confined the annular washer *h* of cork, the stopper below the latter having the tapering termination *i*, the duty of which will be described hereinafter.

It will be observed that a shoulder is formed at *m* in the neck of the bottle, and that the washer bears against this shoulder, with which the lower end of the stopper is free from contact. A perfectly tight joint is thus formed by the compression of the washer between the stopper and the shoulder *m*, this compression causing the edge of the washer to bear hard against the inside of the neck.

The stopper is formed by pressing or casting the molten or plastic glass in molds of the desired shape, the process being the same as that employed in casting other glass articles.

The attachment of the annular cork washer to the stopper is effected as follows: The washer is dropped into the mouth of the bottle, and rests on the ledge *m*. The stopper is then inserted into the mouth and screwed slowly down, when its tapering termination *i* will penetrate the opening of the washer and expand it without splitting or cracking the cork, inasmuch as it is confined laterally within the bottle's neck. After the shoulder *f* has passed through the washer, the latter will contract and take its place in the recess between the two shoulders, so that on the removal of the stopper the washer will be found to adhere so closely to its place that it cannot be readily removed without being cut or broken.

Although the above-described stopper is applicable to a variety of bottles and jars, it is especially well adapted to and has been more especially designed for use in connection with mineral-water bottles, and such as contain effervescing wines, malt liquors, &c., the corks used in this class of bottles, if not lost, being generally so mutilated as to be unfit for second use when the bottles are refilled.

As the washer *h* is carried by and, in fact, forms a part of the stopper, the latter may be used over and over again as the bottle requires to be refilled. Although my improved stopper, therefore, may in the first instance be more costly than ordinary corks, it is in the end a cheap substitute for the same.

It will be evident that the above-described stopper may be made of earthenware for application to earthenware bottles.

I do not desire to claim, broadly, the application of a screw-stopper, with a washer at the end, to the neck of a bottle, inasmuch as metal screws, with washers riveted to the end, have been used in connection with faucets; but

I claim as my invention and as a new article of manufacture—

The glass stopper B, its screw-thread *d*, shoulders *e* and *f*, cork washer *h*, and tapering termination *i*, the latter being so formed and so arranged in respect to the two shoulders as to facilitate the adjustment of the

washer to and confinement within the recess between the said shoulders, in the manner described, and the whole being constructed and adapted to the neck of the bottle and its shoulder *m*, as set forth.

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

S. A. WHITNEY.

Witnesses:

HENRY HOWSON,  
CHARLES E. FOSTER.