

No. 827,106.

PATENTED JULY 31, 1906.

S. MATHIEU.
BOTTLE SEAL.

APPLICATION FILED APR. 20, 1906.

Fig. 1.

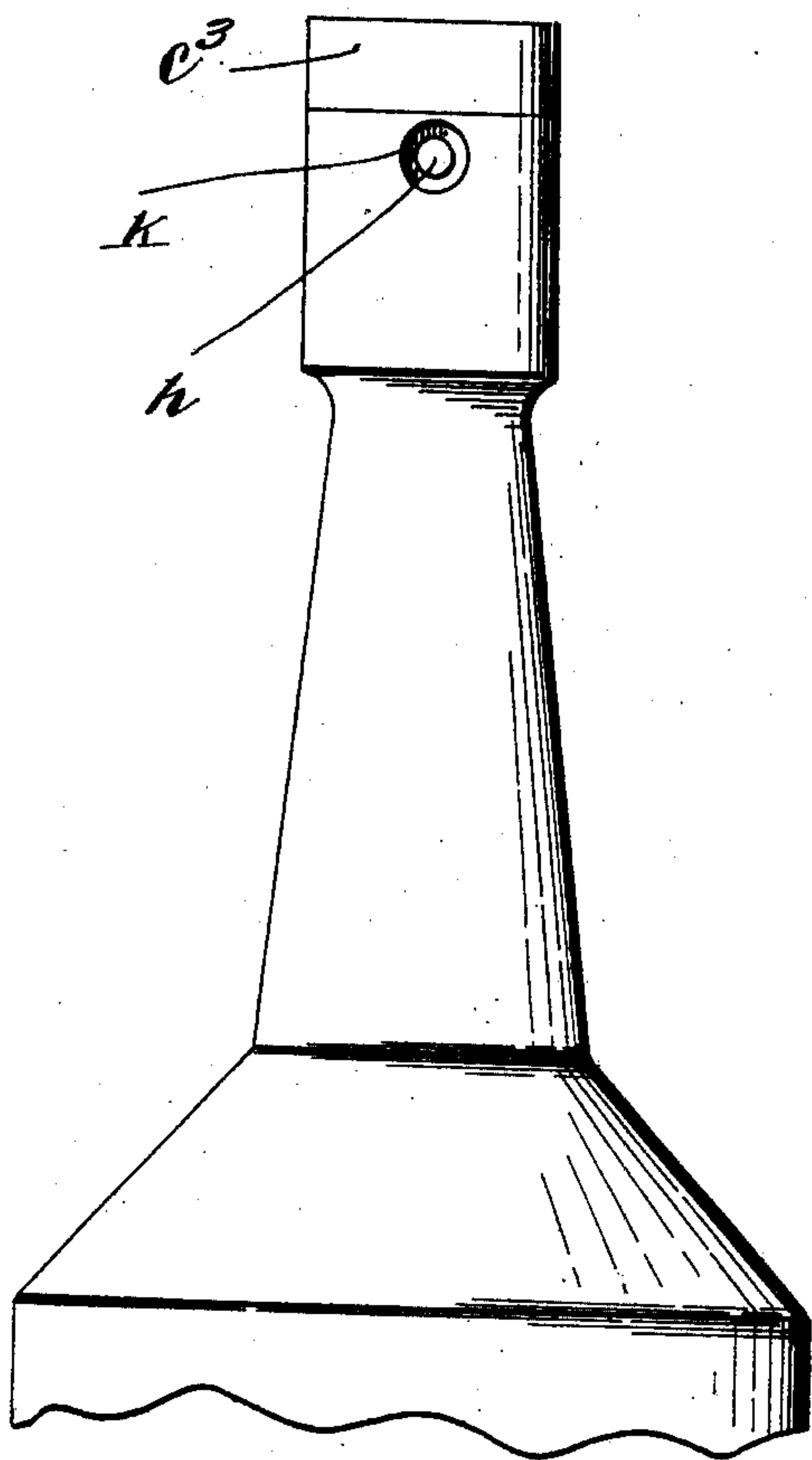


Fig. 2.

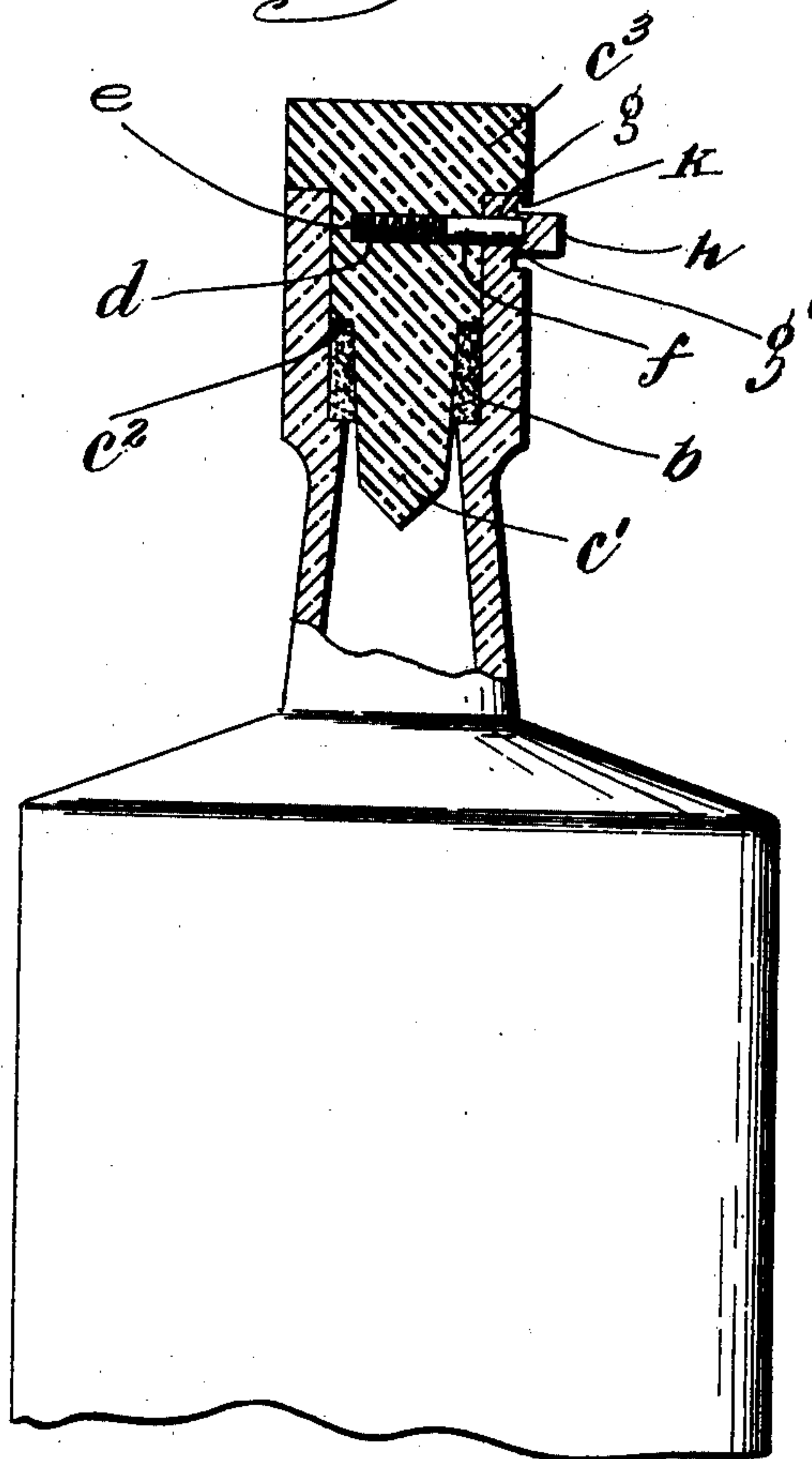


Fig. 3.

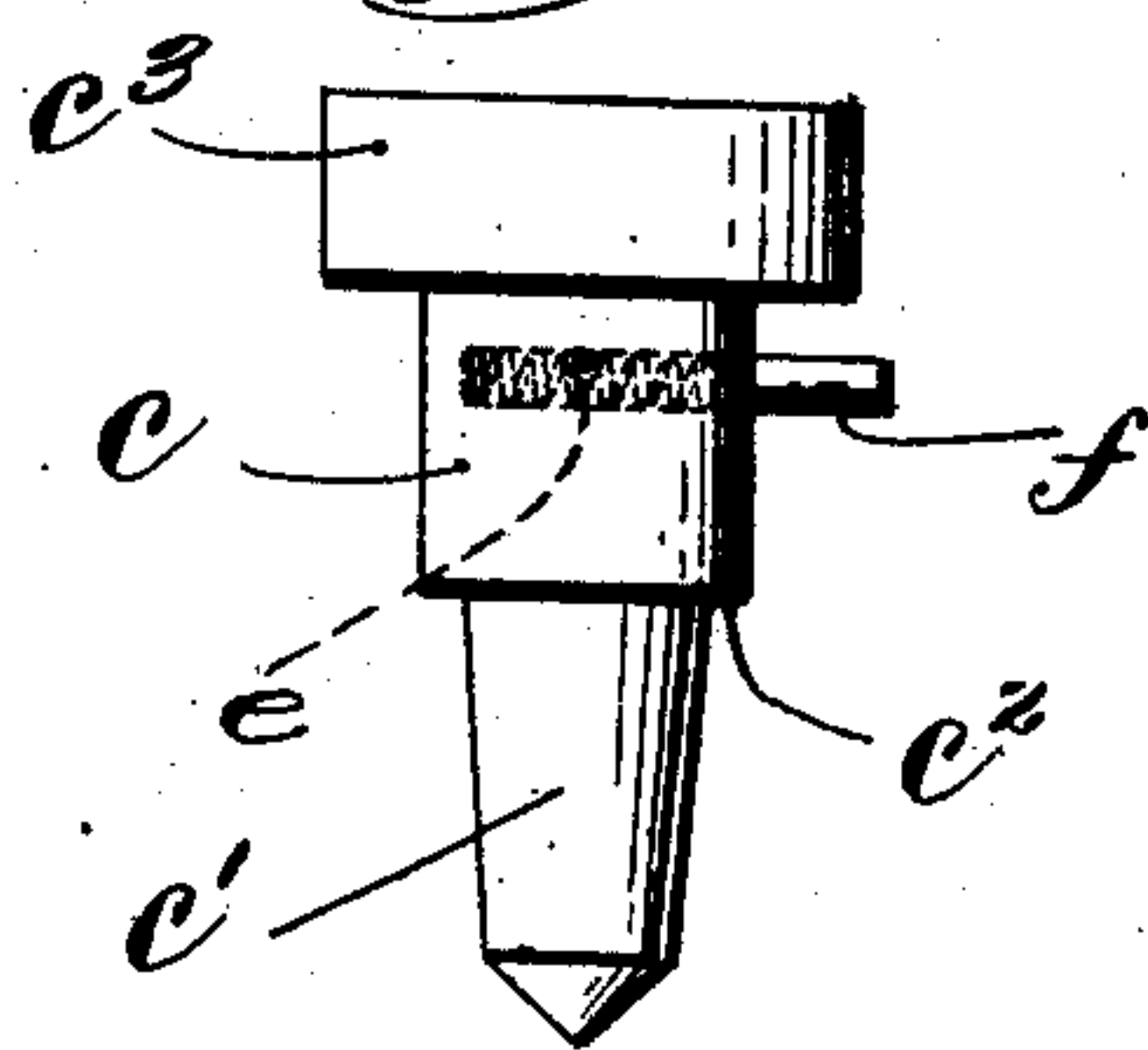
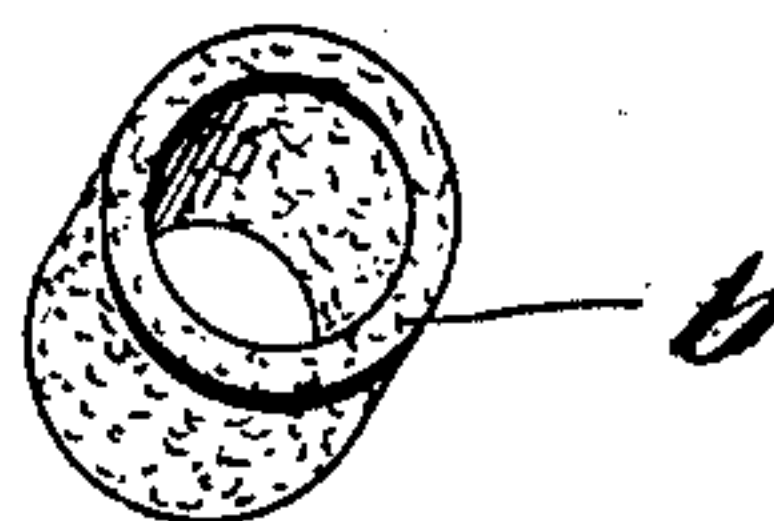


Fig. 4.



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BOTTLE-SEAL.

No. 827,106.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed April 20, 1906. Serial No. 312,884.

To all whom it may concern:

Be it known that I, STANISLAS MATHIEU, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Bottle-Seal, of which the following is a specification.

My invention relates to a device for sealing bottles, jars, and other receptacles in such a manner that they cannot be unsealed except by mutilating them to such a degree that the fact of their having been unsealed will be readily observable and cannot be concealed.

It has heretofore been proposed to provide bottles with a plunger forced outwardly from the neck of the bottle into a cap extending over the neck; but this device, although exhibiting a principle theoretically of value, necessitates the use of an additional element.

It is the principal object of my invention to secure all the good results of such constructions without the use of the additional element and by such simple and inexpensive means that the device will have a wide range of utility and to guard against the presence of projecting broken edges.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a side elevation of a receptacle provided with a seal which comes within the scope of my invention. Fig. 2 is a central sectional view of another receptacle provided with the same seal. Fig. 3 is a side elevation of the stopper and plunger shown in Fig. 2. Fig. 4 is a perspective view of the packing or cork which I have indicated in Fig. 2.

In the form which I have illustrated the neck of the bottle or other receptacle is provided with a shoulder *a*, on which rests a cylindrical cork or packing *b*.

The stopper *c*, which is intended to enter the neck, is provided with a reduced portion *c'* and a shoulder *c''*, adapted to fit the packing *b*. The stopper is also provided with a head *c'''*, which when the stopper is in proper position extends over the top of the mouth of the bottle and covers the same.

While I have described a particular form of cork, neck, and packing, I wish it to be distinctly understood that my invention is applicable to many other forms of these elements, and, in fact, can be used practically with all types of receptacle-closures in which the stopper passes into the neck of the receptacle. Extending part way through the stop-

per is a cavity *d*. In this cavity is mounted a spring *e* and a plunger *f*.

Extending outwardly from the inner surface of the neck of the bottle is a radial cavity *g*. This cavity is provided at some point accessible from the outside with a thin wall, preferably of the material of which the receptacle is formed, and designated by the character *g'*. This cavity is of sufficient depth to receive the end of the plunger *f* and is intended to hold it when the stopper is in position, as shown in Fig. 2.

When it is desired to remove the stopper, the thin wall is fractured by knocking off a projection *h*, extending beyond the thin wall, which affords means whereby the thin wall may be readily broken. It is also provided with a circular cavity *k*, so that when the thin wall is broken the projecting sharp points will lie within the outer surface of the bottle-neck and not be in a position to injure persons using the bottle. This avoids one of the great disadvantages of certain bottle-seals which have been proposed.

The manner of inserting the stopper after the bottle is filled with liquid for the first time is very simple.

The plunger, as shown in Fig. 2, is placed in position with the spring inside the cavity and is pressed inwardly by any desired means until the stopper can be inserted into the neck of the bottle. Then the stopper is turned until the plunger enters the cavity *g*, and, obviously, the bottle is sealed and cannot be opened unless the seal is broken.

While I have illustrated and described one form in which I at present prefer to embody my invention, I am aware that many modifications may be made within the scope of the invention as expressed in the claims.

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

1. The combination of a receptacle having a neck provided with a depression in its inner surface extending substantially to the outer surface of the neck, and having a thick wall at the end of the depression and a thin wall surrounding the end of the depression, the outer surface of the neck being provided with an annular circular groove or cavity surrounding the depression, and a stopper having a spring-pressed plunger adapted to enter said depression.

2. A receptacle having a neck provided

with an interior radial depression, the end of
said depression being surrounded by a thin
fragile wall and by an annular groove de-
pressed inwardly from the outer surface of
5 the neck to permit the outer wall of the de-
pression to be broken along a line within the
outer surface of the bottle-neck.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

STANISLAS MATHIEU.

Witnesses:

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