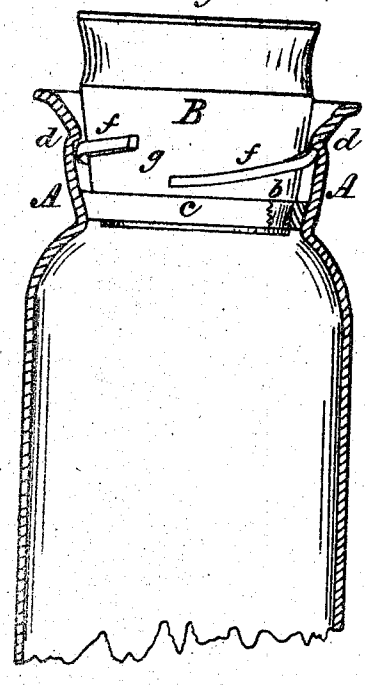
# A. D. Mc Master.

## Fruit-Jar.

No. 75639 Patented Mar. 17, 1868

Fig. 1



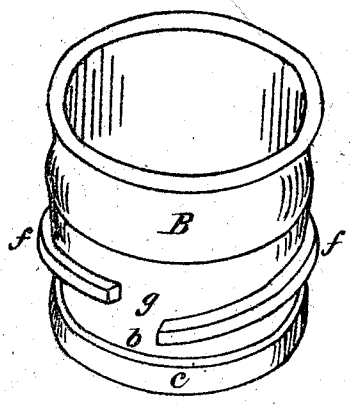




Fig. 2.

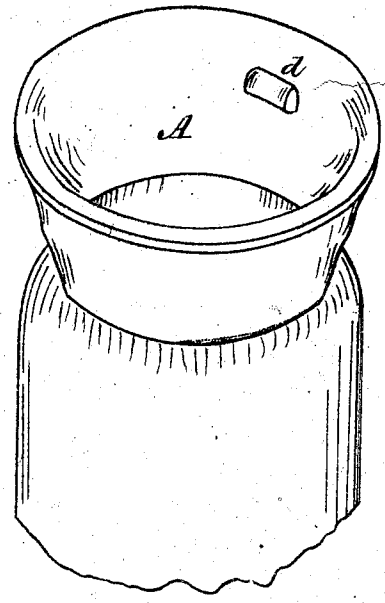
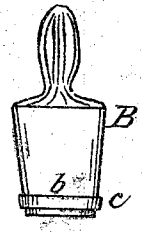



Fig. 3




Witnesses
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Inventor
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# United States Patent Office.

A. D. McMASTER, OF ROCHESTER, NEW YORK.

*Letters Patent No.* 75,639, *dated March* 17, 1868.

## IMPROVED FRUIT-JAR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. D. McMASTER, of Rochester, in the county of Monroe, and State of New York, have invented a certain new and useful Improvement in Sealing Fruit-Jars and other bottles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a section of the jar and an elevation of the stopper.

Figure 2, a perspective view of the same parts.

Figure 3, a modified form of the stopper.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in the combination, with a shouldered stopper and a jar-neck without a shoulder, of spiral inclines on said stopper and lugs within said jar-neck, so relatively situated and arranged that, when the stopper is in place, it cannot be withdrawn, but has a free and unrestrained motion downward, as hereinafter set forth, the construction also allowing the free insertion of a knife-blade or other sharp-pointed instrument between the jar-neck and stopper.

As represented in the drawings, A is the neck of the jar or bottle, and B the stopper fitting therein. The neck of the jar is made tapering, and has no shoulder for the packing to strike down upon, as in most other jars. The stopper, which is preferably made of glass, and cast hollow, has a shoulder, *b*, at its lower end, against which rests the packing-ring *c*. If desired, there may also be a small bead under the packing, to prevent it from slipping off.

A plain stopper, without a shoulder, has before been employed in connection with a jar with a shoulder, as shown in Patent No. 40,415. A shouldered stopper has also been employed in connection with a shouldered jar, as shown in Patents Nos. 41,392 and 41,532. I claim neither of these forms.

The novelty in my case consists in the employment of a shouldered stopper, with a tapering-mouthed jar with no shoulder. By this arrangement I attain the following advantages:

The shoulder on the stopper holds the packing-ring square in place as it passes down the tapered neck, and retains it in the best position to pack properly. Where the ring simply rests loosely around the stopper, as in the first patent before recited, it is liable to slip up and become inclined or uneven as it is pressed down, and not pack tightly. Furthermore, I provide a straight passage down between the packing-ring and the neck of the bottle, for the insertion of a knife-blade or sharp-pointed instrument, for the egress of steam in sealing fruit, or for ingress of air in opening. Where a shoulder is situated in the neck, or in both the neck and stopper, the passage is so indirect that such instrument cannot be easily inserted. This is of the utmost importance, for it is the only practicable method in which a stopper and jar can be properly adapted. The employment of a shoulder in the neck of the jar also limits the motion downward of the stopper, while in my case I am enabled, by dispensing with said shoulder, and employing the taper of the mouth of the jar, to allow the stopper to be forced down as a screw independently, and also to tighten, as a wedge, closer as it goes down. To retain the packing in position, as the stopper is thus forced down, requires the shoulder on the stopper, as before described. This combination of the plain-tapered neck and the shouldered stopper is therefore essential.

In the neck of the jar or bottle are blown two lugs or bearings, *d d*, as clearly shown. On the periphery of the stopper are also formed spiral inclines, *f f*, which, however, extend only part way around, and have a space, *g*, between, for the insertion of the sharp-pointed knife or other instrument, as before described, and for the passage of the stopper up and down past the lugs.

When the spiral inclines are inserted under the lugs, the stopper is turned so as to press it downward, and at the extent of turning-motion the inclines become entirely clear from the lugs below, so that the stopper can press down without restraint. It is evident that the lugs and spiral inclines might be reversed, or changed in position from the one to the other principal part, with a similar result.

By this means I am enabled to use a glass stopper inside the jar-neck, and at the same time retain it in place against the upward pressure of the steam, and also free it from all restraint in its downward motion.

I am aware that screw-caps over the top or outside of the jar-neck have been employed, but they are not

the equivalent of this arrangement. In such case the heated top of the jar expands to a greater extent than the cold cover, and the parts are liable to break. In my device the jar can expand from the stopper without danger of breakage, but still the stopper will be held from rising by the inclines and lugs. In the old jars the screw holds the cap in a fixed position against both upward and downward pressure. In my case there is no restraint to the downward pressure, and therefore the stopper can adjust itself to place in the mouth as the jar cools.

I do not claim broadly the employment of a stopper, packing the inside of the neck of the jar, nor do I claim broadly screw-threads or inclines for connecting a stopper or cover with a jar; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The cylindrical stopper B, having its lower end annularly recessed and abruptly shouldered, and provided with an elastic gasket, *e*, in combination with an unshouldered but tapering-necked jar, provided with projections *d d*, arranged with reference to the inclined lugs *f f* of the stopper, substantially in the manner and for the purposes set forth.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

A. D. McMASTER.

Witnesses:

L. M. NEWTON,

R. F. OSGOOD.