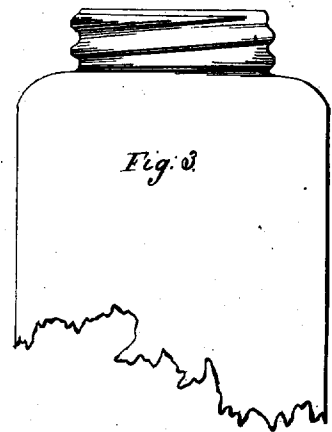
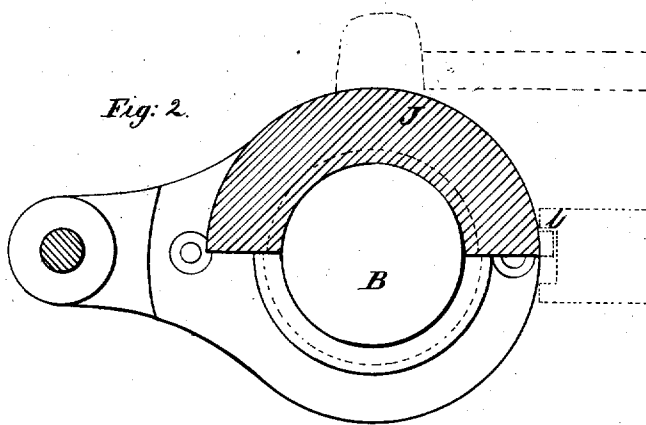
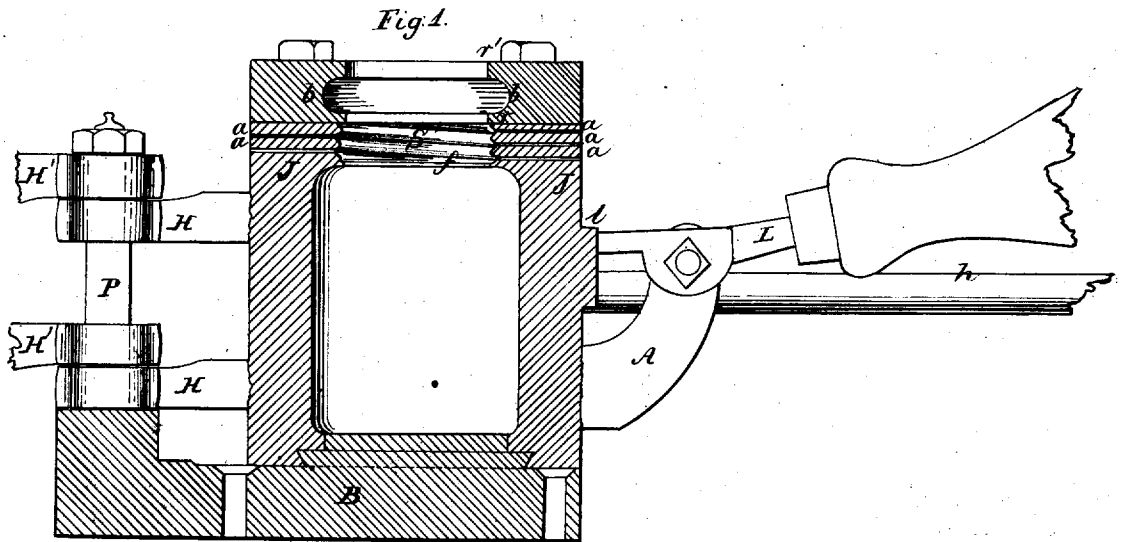


*J. L. Mason.*  
*Moulds for blowing Bottles.*  
 No 22,129. Patented Nov. 23. 1858.



Witnesses:  
*M. P. N. Fitzherald*  
*J. C. Murray*

Inventor:  
*John L. Mason*

# UNITED STATES PATENT OFFICE.

JOHN L. MASON, OF NEW YORK, N. Y.

## MOLD FOR MAKING BOTTLES.

Specification forming part of Letters Patent No. 22,129, dated November 23, 1858; Reissued February 8, 1876, Nos. 6,903 and 6,904.

*To all whom it may concern:*

Be it known that I, JOHN L. MASON, of the city, county, and State of New York, have invented new and useful Improvements in Molds for Blowing Bottles, Jars, &c., by which a screw-thread is produced on the neck of the jar or bottle, of a peculiar character and which disposes the refuse portion of glass adhering to the top of the bottle-neck on leaving the mold, so that it will preserve the neck of the bottle or jar in perfect form when handling while hot and can be removed afterward without injury to the neck; and I further declare that the following is a full and correct description of my improvements, reference being had to the accompanying drawings, making a part hereof, in which—

Figure 1 is a vertical cross section of the mold, and Fig. 2 is a horizontal view of the bed and one of the jaws of the mold.

The mold proper is composed of a bed and two equal jaws which can be opened and closed tight, at pleasure, leaving an opening at the neck only. The bed is shown in form at B, and one of the jaws at *j*, the other jaw being entirely similar. The bed has at its center a circular elevation around which the lower part of the jaws fit perfectly, as shown in the drawings; so that when the jaws are closed, a tight receptacle is formed with the elevated part of the bed as its bottom and the interior of the jaws as its sides, the whole having the reverse form of the bottle or jar to be blown, with a rim or flanch extending inward marked *f* at the bottom of the neck, a female screw *s* immediately above, and another rim marked *r* immediately above the female screw. A swell which I call a "blow-over" is immediately above this, and immediately above the "blow-over" another rim, extending inward. The rim or flanches mentioned should all extend inward toward the center of the mold-neck the same distance as the helix of the female screw. The helix of this thread should be rather dull on the face, but the bottoms of the grooves between the threads should be rather sharp. The rims or flanches should all be perpendicular to the length of the mold. From the bottoms of the screw grooves there are small grooves extending to the outside of the mold for the circulation of air. The groove of the screw, near the ends thereof where they approach

the rims should be made more shallow until they are lost and filled up by the rims. The bed and jaws of the mold should be made thick, to retain the heat.

*h* is the handle of one of the jaws by which it is opened and closed, the other jaw has a similar handle.

H, H, are the hinge arms of the jaw, and corresponding hinge arms are provided for the other jaw, which are shown broken off and thrown back at H', H'.

P, is the hinge pin on which the arms turn when the jaws are opened or closed.

L, is a lever latch which embraces the lips *l*, of the jaws for holding them together and A is the fulcrum of the latch. I am not aware that there is novelty in the lower part, or the exterior of the mold. The improvements which I claim are in the upper part thereof.

It is easily perceived, that if the screw thread on the neck of the jar should extend to the shoulder thereof, that the shoulder would prevent a screw cap from being screwed down tight and also that the lower end of the thread would interfere with a washer of India rubber used for making the cap air tight on the neck, and it is equally obvious that if the screw thread on the neck of the jar should extend entirely to the top thereof, in grinding the top off square the thread would be split and shivered, presenting sharp edges and points which would cut and injure the cap and be constantly liable to break. To obviate these inconveniences I place the rims or flanches *f*, and *r*, at the shoulder and also immediately above the screw thread to cut off the thread to produce in the neck of the jar a groove between the screw and the shoulder, of the depth of the thread, and at the top to produce a termination of the neck higher than the thread. The neck produced by the combined influence of the rims and screw thread is substantially such as represented in Fig. 3, the thread cut off and terminated at top and bottom by the rims *r*, and *f*, obviating the evils mentioned.

I have said that the bottoms of the grooves between the threads of the neck should be sharp. In blowing, sharp grooves are not filled, and the thread on a glass screw should not be sharp, but round. If the bottoms of the grooves are round, the glass pressed in by blowing will in some places go to the bot-

tom of the groove, in which case the air will be put in, and will prevent its being forced to the bottom in others, thus spoiling the thread. But if the bottom of the groove  
 5 be sharp, the glass cannot be forced by blowing down to it, the thread will be round in its section, and thus there will be a small space beyond the glass to allow the air to pass out to the grooves cut in the mold for  
 10 its escape, thus producing a uniform thread, and as the glass cools the air can return to prevent distortion of the screw.

The effect of the swell or "blowover" is obvious, the increased diameter will cause the glass to be very thin as it is blown, and this in the first place will enable it to be easily broken off, so as not to impair the upper end of the neck, and this with the rim above it serve to preserve the neck proper  
 20 of the bottle from distortion in handling before it is cool. The bottle or jar as is well known by glass blowers, is taken out of the mold before it is cold. This is done by the use of a rod which is run into the bottle or  
 25 jar, and its outer end is supported by the neck of the bottle in the ordinary way, as the glass is still plastic, the neck will often be slightly distorted so far as its roundness is concerned by its weight resting against  
 30 the interior of the neck of the bottle or jar. This would prevent the cap from being air or water-tight and although it would be of no importance in bottles and jars generally, it would destroy the value of those which  
 35 are required to be air-tight. Those blown in my mold are not subject to this inconvenience. The rod by which the jar is taken out of the mold is supported by the outer rim produced by the mold, and any yielding  
 40 which would occur, would take place in this outer rim, or in the thin part produced by the swell or "blow-over," and would leave the screw neck in its perfect form. These are the advantages of my invention, with  
 45 others which it is not necessary here to mention.

What I claim in the above as my inven-

tion and desire to secure by Letters Patent, is—

1. The combination of the screw thread 50 with the rim *f*, and also its combination with the rim *r*, for the purposes herein set forth.

2. I also claim the combination of the grooves in the female screw of the mold with 55 the air passages through the mold for the purposes set forth.

3. I also claim the "blowover" in combination with the molds for the necks of bottles as described. 60

4. I also claim a flanch above the "blowover" as described for the purposes set forth.

JOHN L. MASON.

Witnesses:

W. P. N. FITZGERALD,  
 J. M. MURRAY. 65

*To the Commissioner of Patents:* 70

Your petitioner JOHN L. MASON of New York city in the county and State of New York, represents that he is the patentee and owner of Letters Patent granted November 23d 1858 for "Molds for Blowing Bottles &c." (Number 22129); that he has reason to believe that, through, inadvertence, accident, or mistake, the specification and claims of said Letters Patent are too broad, including that of which said patentee was not the first inventor. Your petitioner, therefore, hereby enters his disclaimer to that part of the claim in said specification which is in the following words to wit: 80

"I also claim the "blow over" in combination with the molds for the necks of bottles as described; 85

I also claim a flanch above the "blow over" as described for the purposes set forth."

JOHN L. MASON.

Witness:

WM. C. McINTIRE.