

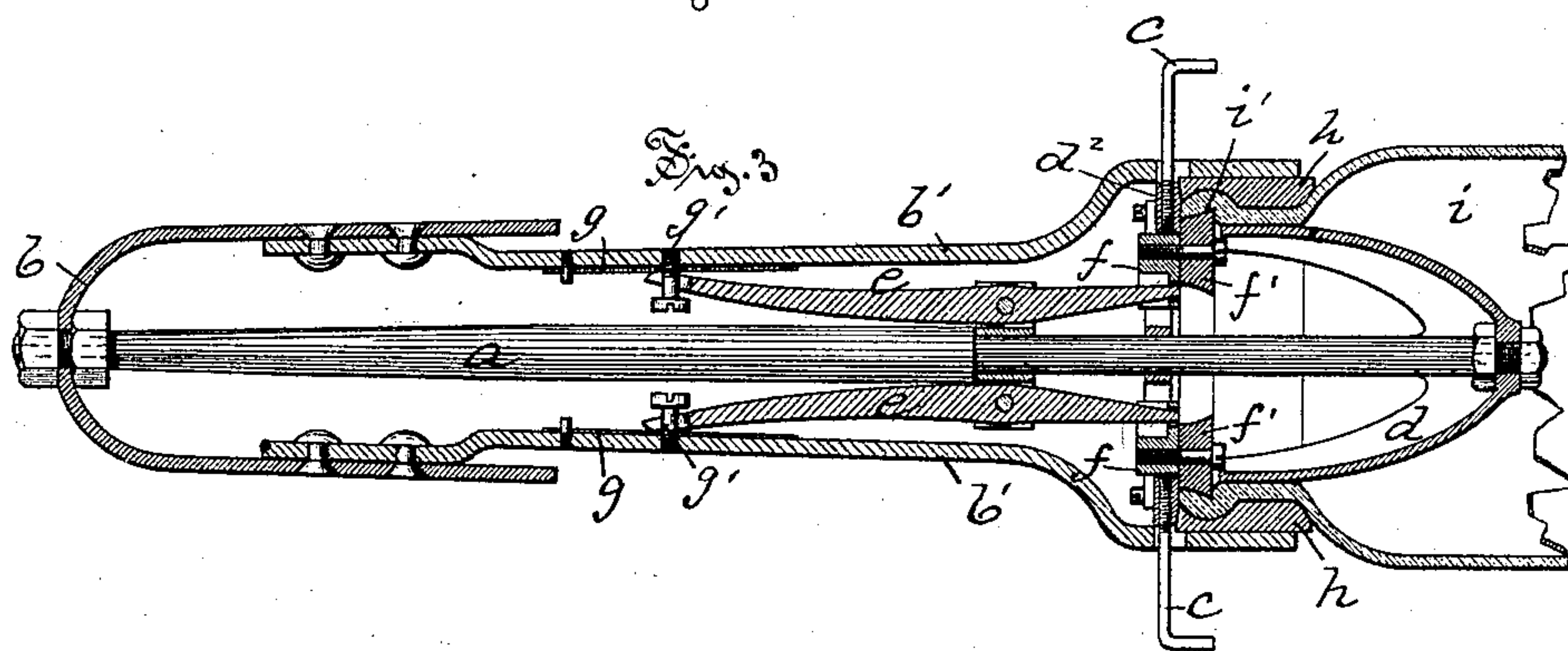
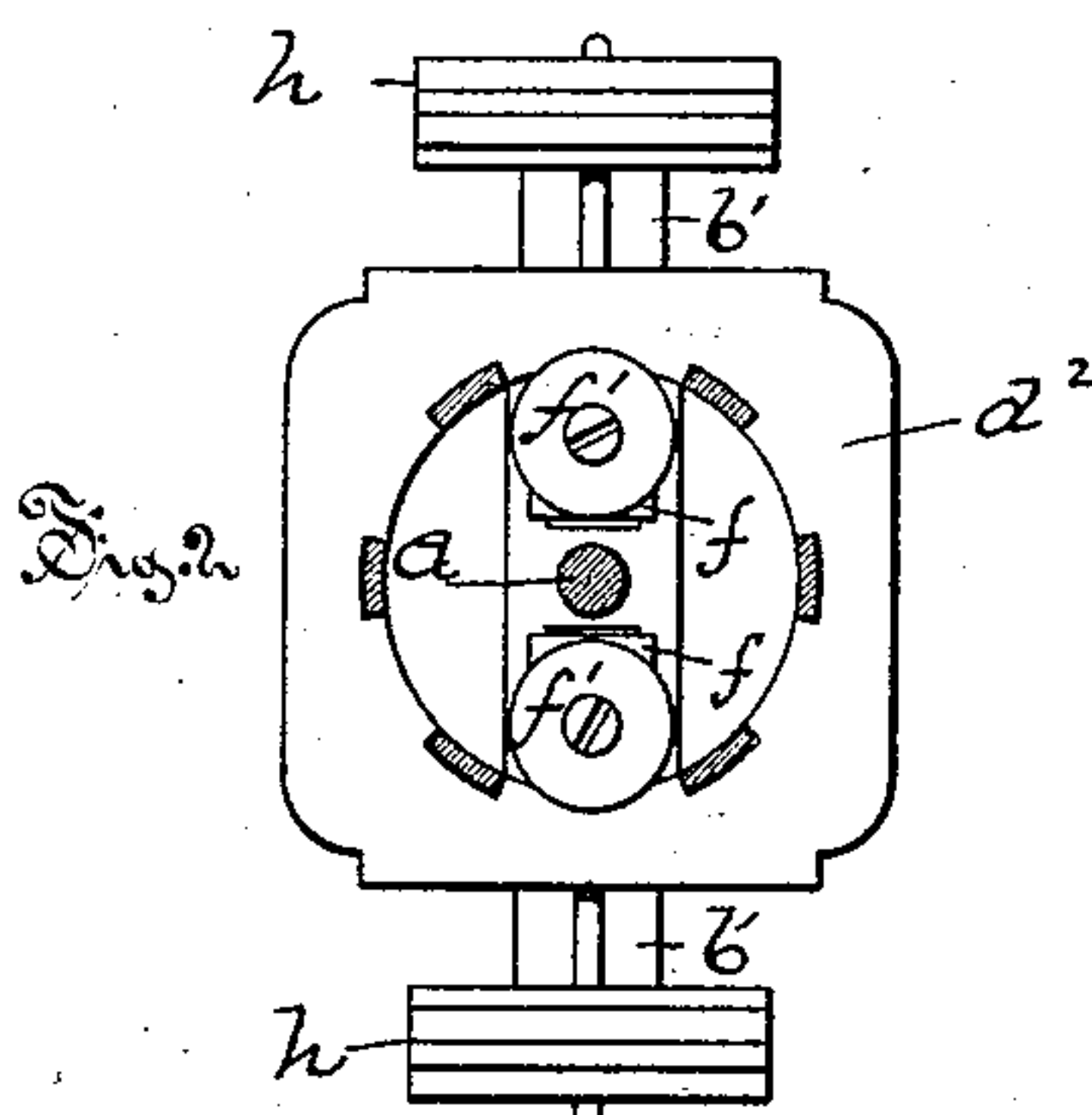
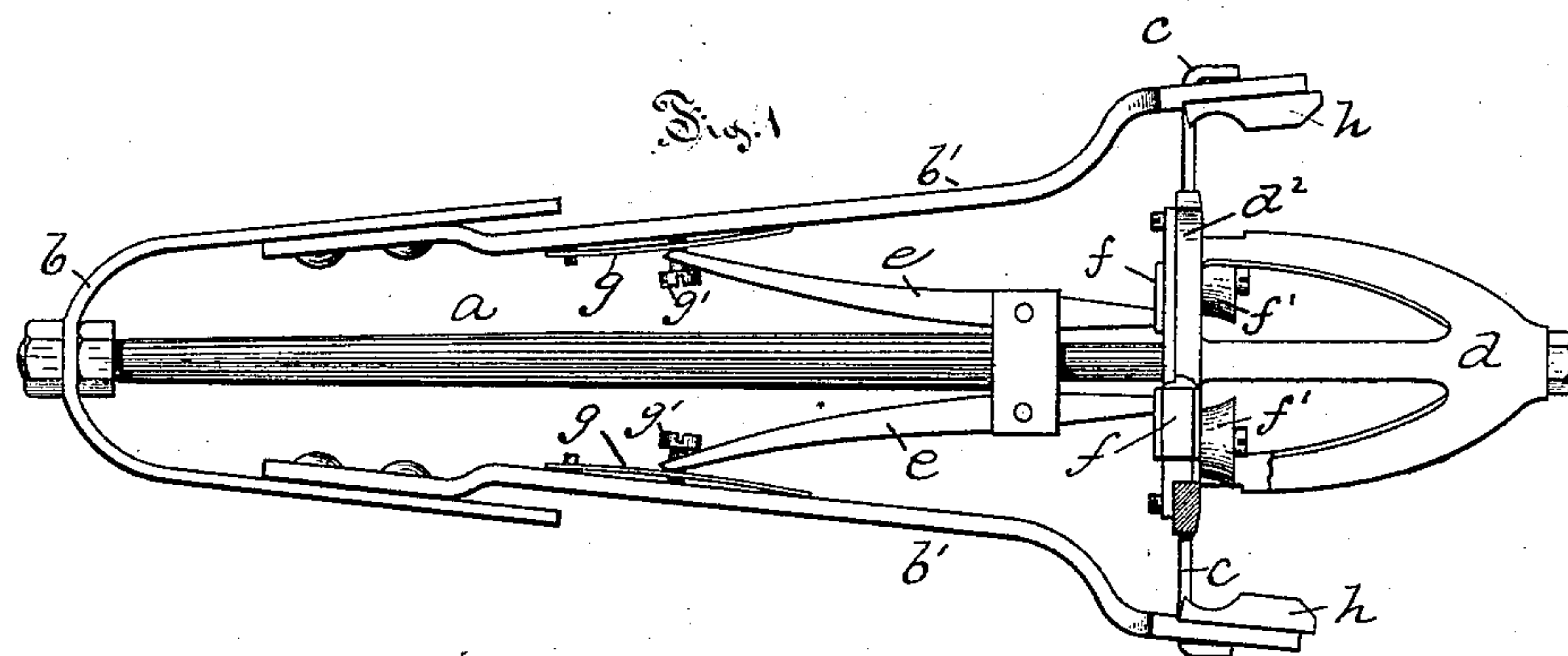
(No Model.)

F. D. TAYLOR.

TOOL FOR FINISHING GLASS JARS.

No. 345,194.

Patented July 6, 1886.



Witnesses:

W. M. Sporkman.

A. P. Williams.

Inventor:

Frederick D. Taylor.

By Simonds & Burdett,  
Attys



# UNITED STATES PATENT OFFICE.

FREDERICK D. TAYLOR, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE  
HARTFORD-FRUIT JAR COMPANY, OF SAME PLACE.

## TOOL FOR FINISHING GLASS JARS.

SPECIFICATION forming part of Letters Patent No. 345,194, dated July 6, 1886.

Application filed July 6, 1885. Serial No. 170,676. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK D. TAYLOR, of Hartford, in the county of Hartford and State of Connecticut, have invented certain  
5 new and useful Improvements in Tools for Finishing Glass Jars, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a plan view of my device in its  
10 open position. Fig. 2 is a top view of the head of the tool with parts cut away to show details of construction. Fig. 3 is a view in central longitudinal section of the tool, showing it closed and in use in finishing a jar, a  
15 part of which is also shown in section.

The object of my improvements is to provide a tool for grooving and finishing the necks of jars or bottles made of glass or the like materials, which are plastic when in a heated or  
20 unfinished state, more perfectly than any tool now in use; and to this end my invention consists in a tool having spring-jaws with inward-turned faces for forming the outside of the neck of a jar, and wheels or like devices for  
25 grooving, which are moved outward in straight lines at substantially right angles to the axis of the jar, and in the peculiar means for operating the several parts, as more particularly hereinafter described.

In the accompanying drawings, the letter *a* denotes the central stem of my improved tool; *b*, the U-shaped spring that tends normally to spring the arms *b'* outward, or apart from each other, and which is fastened at the center of  
35 the bend to one end of the stem, as by clamping it between the nuts, as shown. These arms *b'* are of substantially equal length, and they terminate in jaws that move on the guide-rods *c*, which are fast to and project  
40 from the tool-head *d*, that is secured to the outer end of the stem. The levers *e* are pivotally supported on opposite sides of the stem below the tool-head and in the plane of the arms *b'*. The outer and shorter arm of each  
45 lever takes into a socket in the sliding block *f*, and the longer arm of each lever rests against a spring, *g*, that is attached to and presses outward from the inner side of the arm *b'*. The end of each of the longer arms  
50 of the levers *e* is forked and straddles the stud *g'*, which has an enlarged head that limits the

play of this end of the lever between it and the spring *g*.

Within the base *d'* of the frame-like head *d* of the tool are ways that support the sliding  
55 blocks *f*, which move in the plane of the arm *b'* and bear the grooving-tools *f'*, that are protruded a limited distance beyond the surface of the tool-head near the base by pressure upon the side arms that bring them nearer  
60 together, and the opening of these arms, by the reaction of the spring *b*, acts upon the levers and causes the blocks and grooving-tools to withdraw within the head. These grooving-tools are preferably rolls, with their pe-  
65 ripheries shaped to form the desired groove, and are thrown out to their full extent by a slight closing movement of the arms *b'*, the jaws on which bear removable formers *h*, that are used to shape the outside of the neck of  
70 the jar.

By means of the curved taper or acorn shape of the tool-head the end of the glass bulb of which the jar is made is opened out to the desired size while the glass is in a heated and  
75 plastic state, and the base *d'* of the head forms a gage or stop that defines the distance of the groove *i* in the jar *i* below the outer edge or mouth of the jar.

By the use of prior tools for forming and  
80 grooving jars in the process of finishing two grooves are apt to be formed, and an irregular depth of the groove and thickness of glass at the mouth are also produced; but by means of my improvements as embodied in the above-  
85 described tool the faults are completely remedied and perfect and duplicate work insured in the successive jars formed and finished by its use.

I am aware that it is not new to make tools  
90 for finishing glass jars that have outward-springing arms bearing formers and levers operated by the arms, the levers bearing grooving-tools, such being shown in patents to E. Bennett, No. 55,988, J. D. Willoughby, No. 95  
29,739, and T. Hipwell, No. 153,338, and such devices I do not broadly claim.

I claim as my invention—

1. In a tool for finishing glass jars and the like, in combination, the outward-springing  
100 arms bearing formers, the levers located between and operated by the arms, the springs

between the arms and levers thrusting the levers from the arms, the reciprocating grooving-tools operated by the levers, and the tool-head, all substantially as described.

5 2. In a tool for finishing glass jars and the like, the tool-head, the spring-actuated arms bearing formers, the levers located between and operated by the arms, and the reciprocating grooving-tools moving at substantially  
10 right angles to the axis of the tool, all substantially as described.

3. In combination, in a jar-finishing tool,

the stem *a*, the spring-actuated arms *b'*, the guide-rods *c*, that limit the outward play of the arms, the levers *e*, pivotally supported 15 on the stem between the arms, the spring *g* and studs *g'*, that determine the play of the levers, the tool-head *d*, and the reciprocating grooving-tools *f'*, moved by the levers, all substantially as described.

FREDERICK D. TAYLOR.

Witnesses:

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