

No. 690,119.

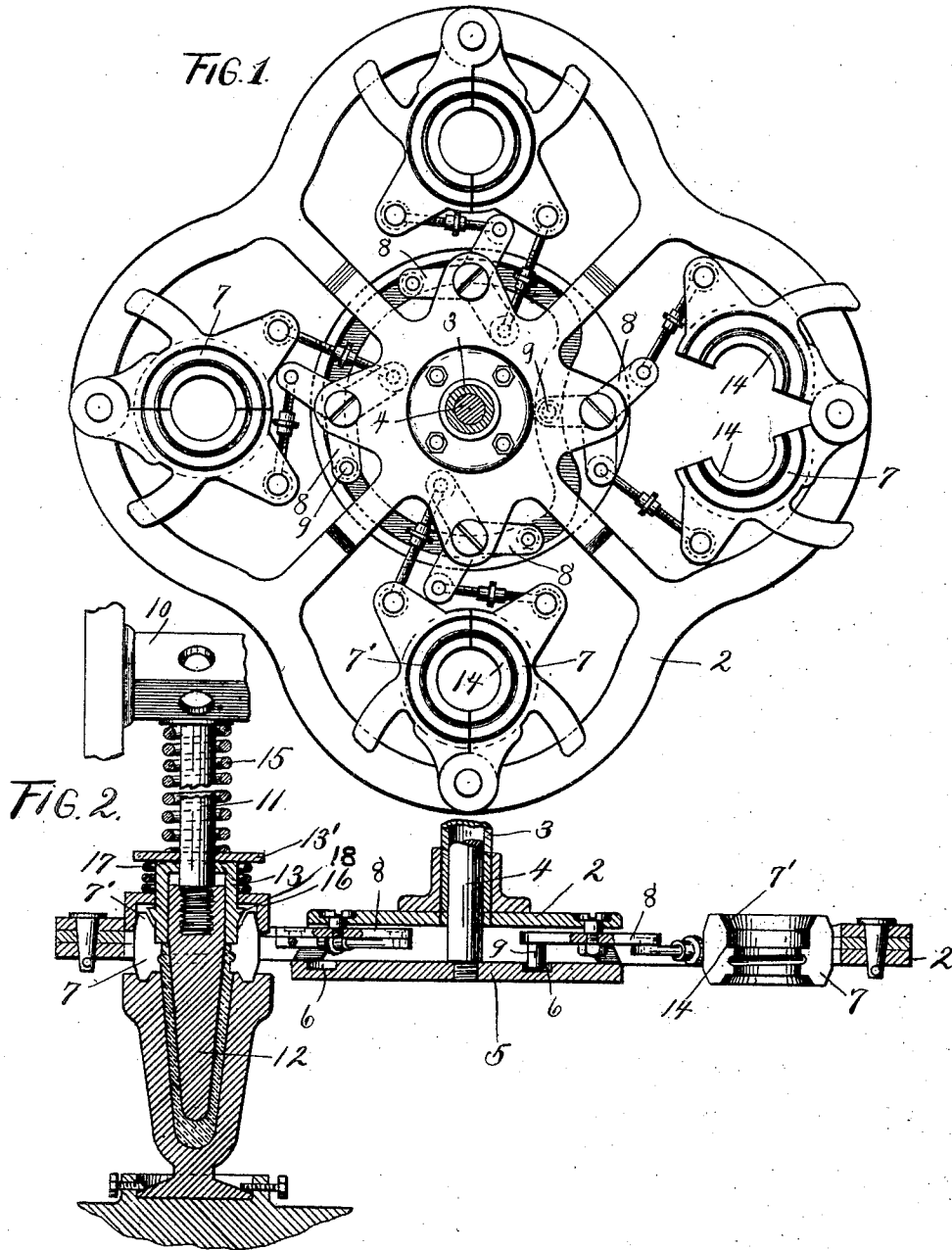
Patented Dec. 31, 1901.

F. O'NEILL.

MACHINE FOR MANUFACTURING GLASSWARE.

(Application filed Apr. 15, 1901.)

(No Model.)



WITNESSES.

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UNITED STATES PATENT OFFICE.

FRANK O'NEILL, OF KINGSVILLE, CANADA.

MACHINE FOR MANUFACTURING GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 690,119, dated December 31, 1901.

Application filed April 15, 1901. Serial No. 55,850. (No model.)

To all whom it may concern:

Be it known that I, FRANK O'NEILL, a citizen of the United States, residing at Kingsville, Ontario, Canada, have invented certain new and useful Improvements in Machines for Manufacturing Glassware, of which the following is a specification, reference being had therein to the accompanying drawings.

In the patent granted to me May 14, 1901, No. 674,248, the sectional neck molds or rings are dependent entirely on their actuating-levers for holding them closed during the pressing operation. When a plunger is forced through a neck-mold and into the main press-mold, considerable radial pressure is necessarily exerted on the neck-mold, and while the sections thereof may be so firmly held as to yield thereto and separate only very slightly, yet the least separation produces a fin or seam on the threaded neck, which is objectionable.

The object of the present invention is to provide improved means for clamping together the sections of the neck-mold and positively hold them against even the slightest separation during the pressing operation, thereby effectually avoiding the formation of the objectionable seam-mark or fin.

The invention consists in the novel structural features of construction of parts hereinafter fully described and claimed and illustrated by the accompanying drawings, wherein—

Figure 1 is a plan view of the neck-mold carrier with the molds constructed in accordance with my improvement. Fig. 2 is a vertical sectional view of the same in connection with a press-mold and a pressing-plunger, showing the relation of the parts during the pressing operation.

I have illustrated only those portions of the machine shown and described in my above-recited patent which have immediate relation to the present improvement, the construction and operation of other portions of the machine being exactly the same as in said patent.

Referring to the drawings, 2 represents the neck-mold carrier secured to the lower extremity of tubular shaft 3, while to the inner shaft 4 is secured plate 5, formed with cam-groove 6.

7 represents the sectional neck molds or

rings, which are opened and closed by the triangular levers 8, the latter having depending pins 9, which operate in groove 6. The neck-molds are slightly deeper than in the before-recited patent, and their upper ends are tapered upwardly, as shown at 7'.

10 is the plunger-shaft, 11 the stem projecting therefrom, and 12 the plunger. Loosely embracing the upper portion of the plunger and closely fitting the same is the follower 13, which during the pressing operation bears on the seat or offset 14 in the interior of neck-mold 7. A coiled spring 15 incloses stem 11, and interposed between the outer or lower extremity of this spring and follower 13 is the enlarged washer 13'.

16 is an outwardly or downwardly disposed cap, which is movable longitudinally on the upper or inner portion of follower 13, the coiled spring 17, interposed between washer 13' and the cap, holding the latter normally extended against the annular lug 18, projecting from the outer face of follower 13.

When the plunger enters the molds for the pressing operation, follower 13 is forced to seat 14, being held thereto by the contracted spring 15. At the same time cap 16 passes down over the upper tapered portion 7' of the neck-mold and receding slightly against the pressure of spring 17. Thus during the pressing operation the mold-sections are so bound together that it is absolutely impossible for them to spring apart or open even to the slightest extent. The holding device being carried entirely by the plunger is positioned immediately preceding the pressing operation and is removed when the plunger is withdrawn. The result is a perfectly-finished neck without seam-marks or fins.

I do not restrict my invention to use in connection with neck-molds, as obviously it may be used with equal facility and advantage on other sectional molds for holding them tightly closed.

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

1. The combination of a sectional mold, a pressing-plunger, a normally-projected backwardly-yielding follower on the plunger adapted to enter the mold, and a normally-projected backwardly-yielding mold-embrac-

ing cap mounted on and carried by the follower, substantially as shown and described.

2. The combination of a sectional mold, a pressing-plunger, a follower movable longitudinally on the plunger and adapted to enter the mold, a spring for holding the follower normally extended, a stop on the outer face of the follower, a cap movable on the follower and adapted to embrace the mold and hold it tightly closed, and a spring for holding the cap normally projected against the stop, substantially as shown and described.

3. The combination of a sectional mold, a pressing-plunger, a follower movable longitudinally on the plunger, washer 13' movable

on the plunger and bearing on the follower and larger than the latter, spring 15 embracing the plunger-stem and bearing on said washer, mold-embracing cap 16 mounted on the follower and having limited outward movement thereon, and spring 17 embracing the follower and interposed between the said cap and washer, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK O'NEILL.

Witnesses:

J. W. KING,
W. A. SMITH.