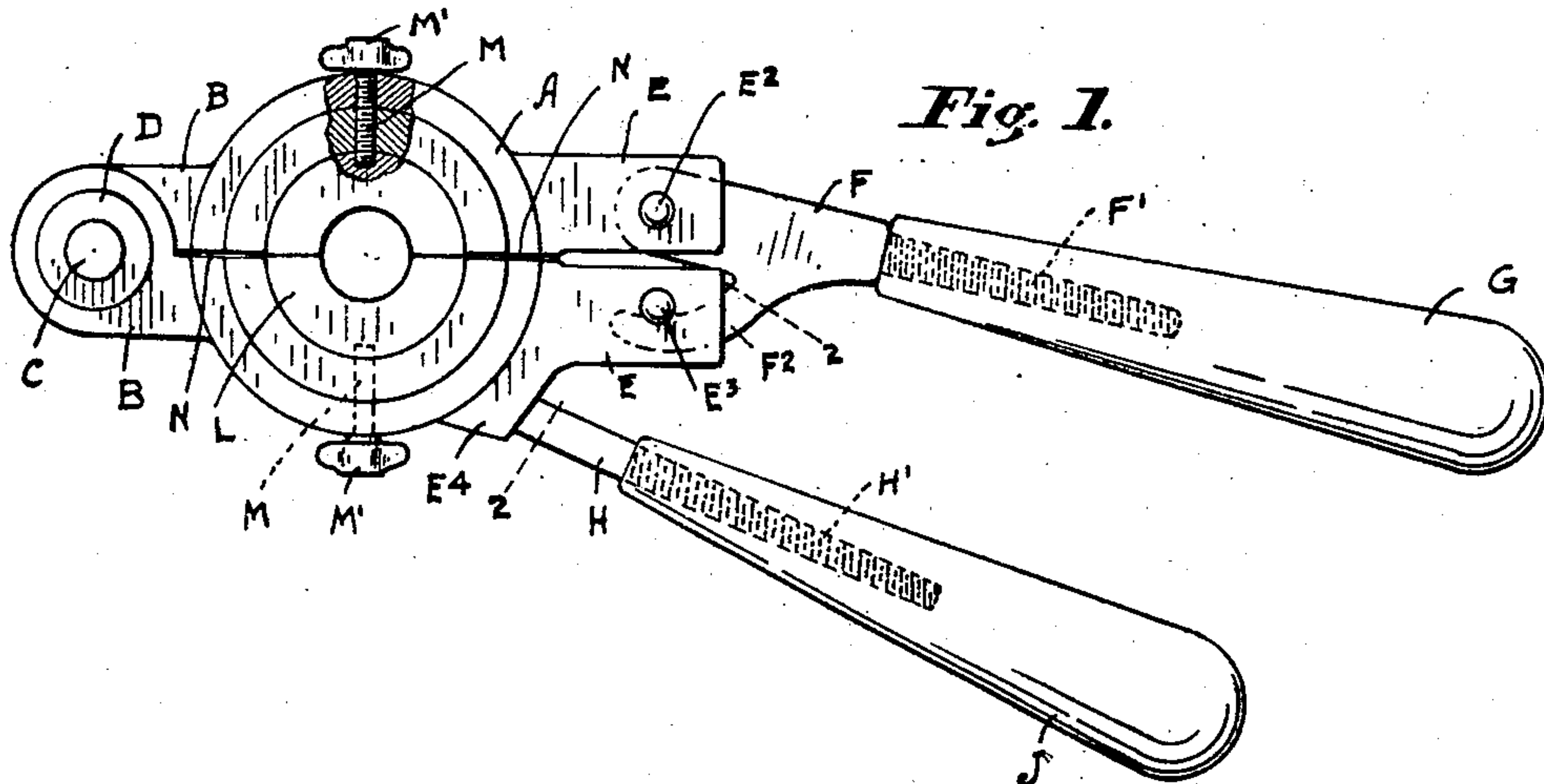


T. J. HOLDEN.  
DIE HOLDER FOR GLASS MAKING MACHINERY.  
APPLICATION FILED MAY 8, 1909.

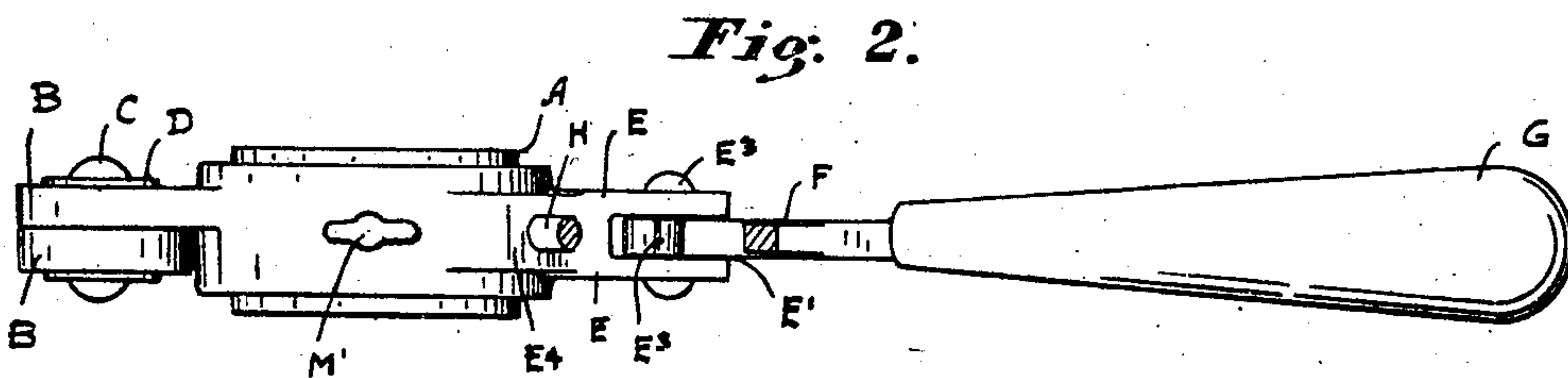
969,280.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

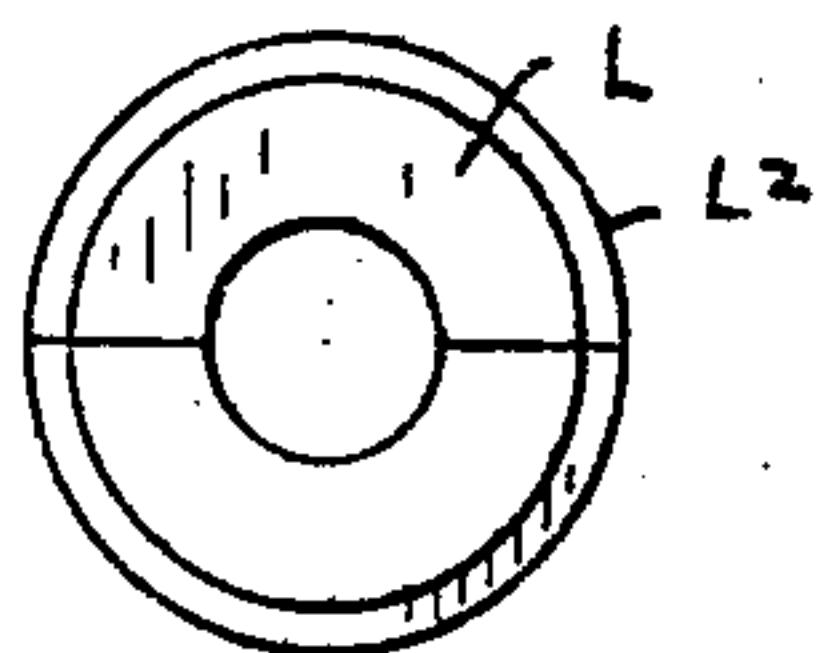


*Fig. 1.*

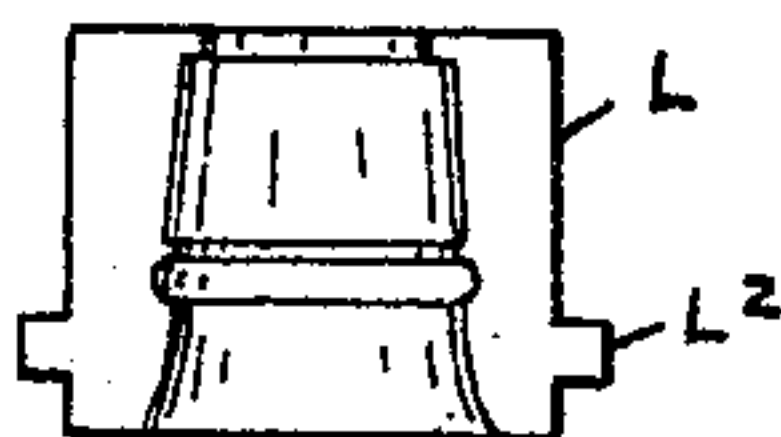


*Fig. 2.*

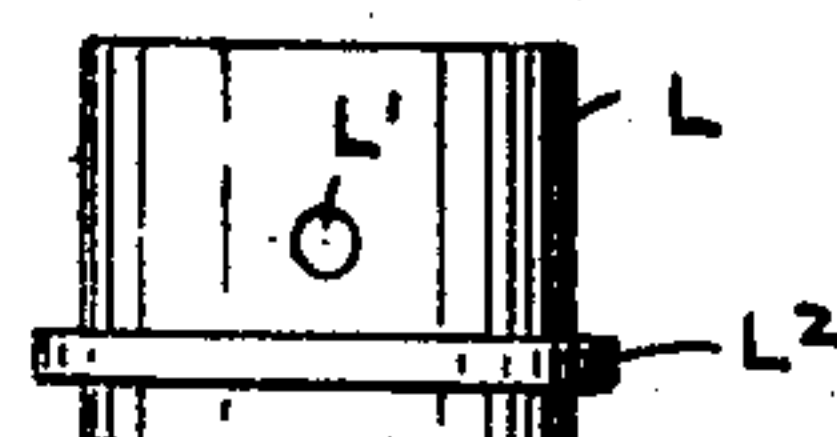
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



WITNESSES:  
*John W. Ryan*  
*Exel L. Lister*

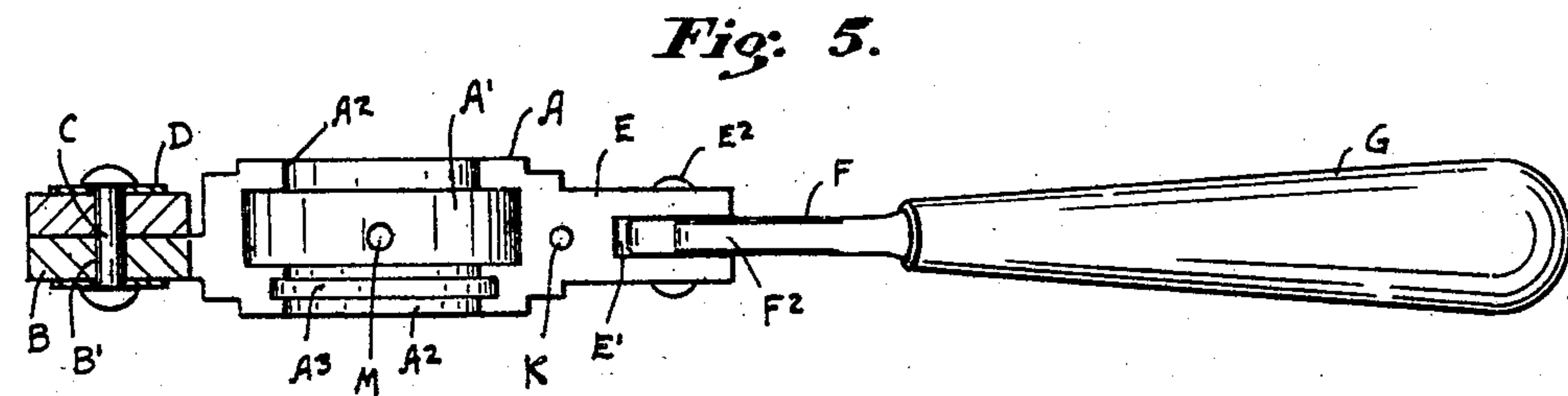
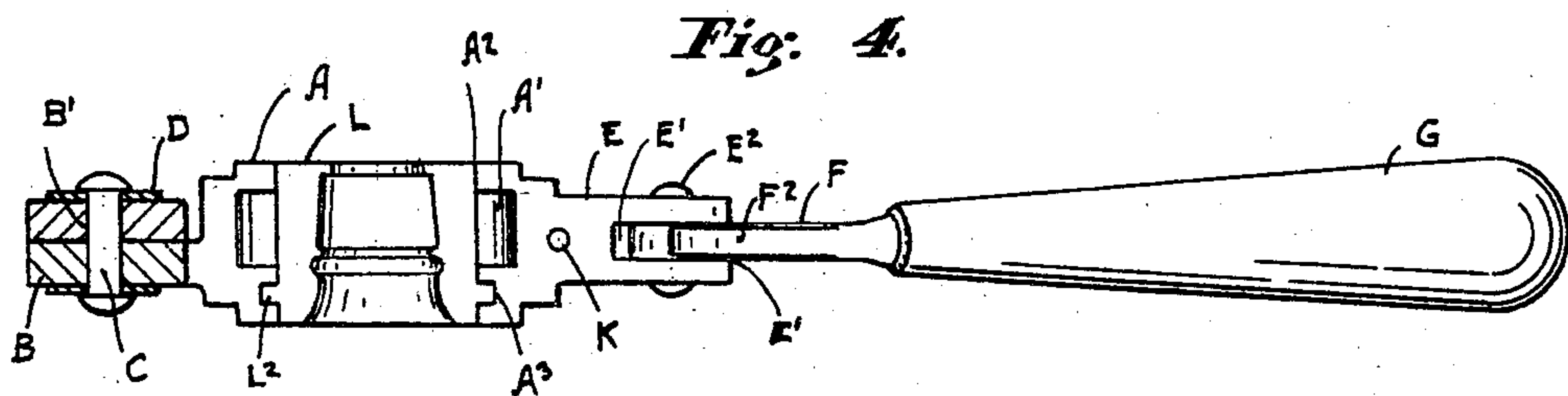
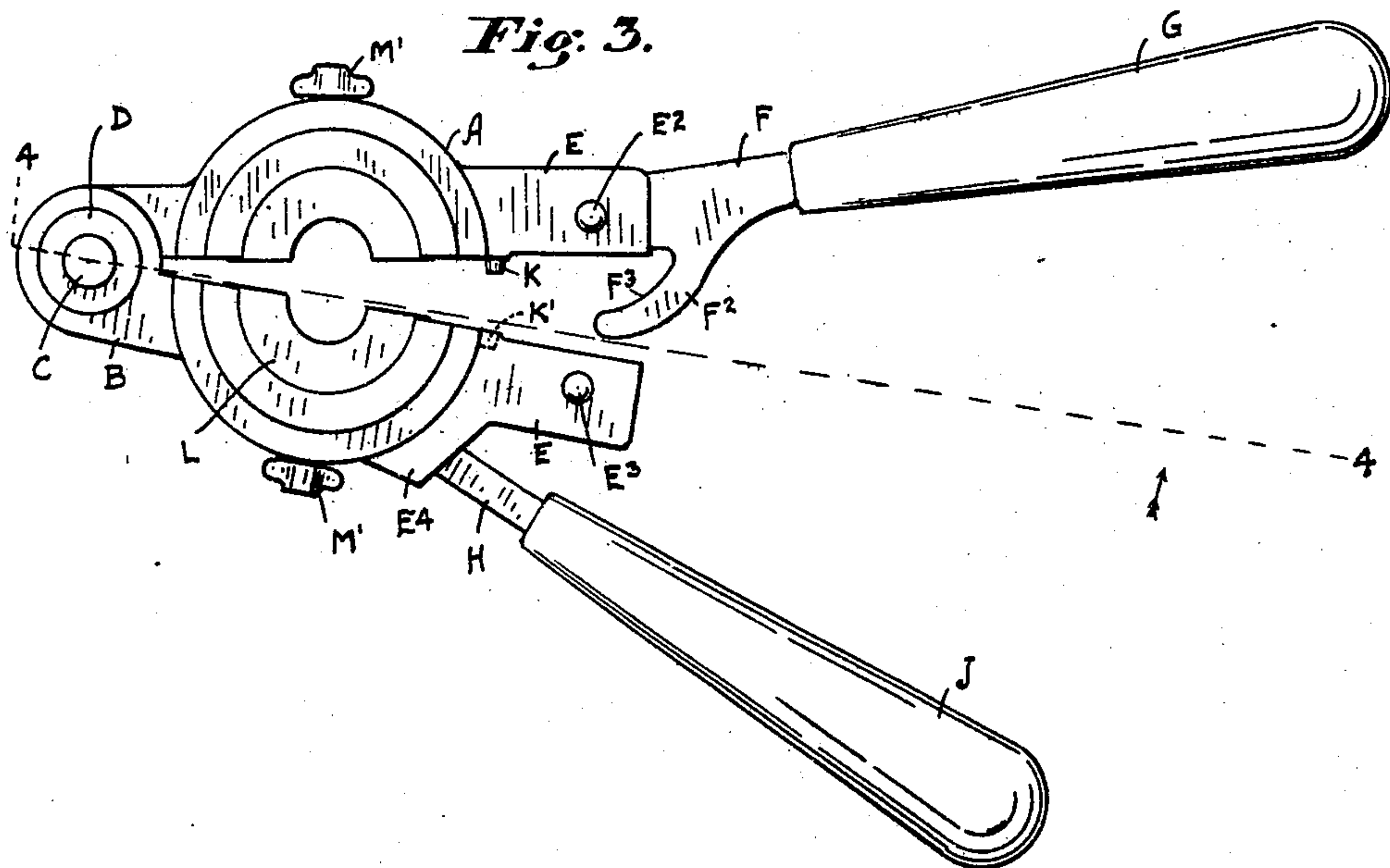
INVENTOR  
THOMAS J. HOLDEN,  
BY  
*Thomas L. Ryan*  
ATTORNEY

T. J. HOLDEN.  
DIE HOLDER FOR GLASS MAKING MACHINERY.  
APPLICATION FILED MAY 3, 1909.

969,280.

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2 SHEETS—SHEET 2.





# UNITED STATES PATENT OFFICE.

THOMAS J. HOLDEN, OF MUNCIE, INDIANA.

DIE-HOLDER FOR GLASS-MAKING MACHINERY.

969,280.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed May 3, 1909. Serial No. 493,532.

*To all whom it may concern:*

Be it known that I, THOMAS J. HOLDEN, a citizen of the United States, and a resident of the city of Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Die-Holder for Glass-Making Machinery, of which invention the following is a specification.

This invention has reference to holders for molds or dies for necks of articles made of glass, such as bottles, jars and the like.

The main object of my invention is to provide a device of the kind referred to which will be easy of manipulation and accurate and certain of operation.

Further objects are to provide a device of this character which will be simple and economical of construction and which will be durable.

To these ends my invention consists of and the objects of my invention are accomplished by the construction, combination and arrangement of parts illustrated in the accompanying drawings, described in this specification and defined in the appended claim.

In the drawings Figure 1 is a plan view of my improved die holder. Fig. 2 is a side view of the same as shown in Fig. 1, the handle J and the finger F<sup>2</sup> being broken away on the dotted lines 2 shown in Fig. 1. Fig. 3 is a plan view of the die holder in open position. Fig. 4 is a transverse sectional view taken on the line 4—4, and as seen in the direction indicated by the arrow as shown in Fig. 3. Fig. 5 is a view similar to Fig. 4 the die having been removed. Fig. 6 is a view of the die removed; Fig. 7 is a front view and Fig. 8 is a side view of a half section of the die as shown in Fig. 4 and Fig. 6.

Similar characters of reference refer to corresponding parts throughout the several views.

My improved die holder is of the separable type and the body portion thereof consists of the complemental half-rings A. Formed integral with each of these half-rings are the heads B which will correctly register with each other. Each of the heads has a center bore B<sup>1</sup> in which the pin C freely resides. On the outer side of each head is provided a washer D. The ends of the pin C are riveted down on the said washers so that the heads B will be held into close but removable contact with each other

as shown. On the side of each half-ring and opposite its head B is provided the arm E. Each of these arms has the transverse slot E<sup>1</sup> of the suitable width and depth as shown. On the pin E<sup>2</sup>, that is secured in the arm E of the right half-ring A is loosely retained the shank F having the screw-end F<sup>1</sup> upon which screw end is secured the handle G.

E<sup>3</sup> designates a pin secured in the position as shown in the arm E of the left half-ring. Screwed into rigid position in the base portion E<sup>4</sup> of the arm E of the left half-ring is the shank H having the screw end H<sup>1</sup> upon which is screwed the handle J. The shank F has the finger F<sup>2</sup> having the curvilinear inner face F<sup>3</sup>. The curvature of this inner face F<sup>3</sup> is such that when the half rings are brought toward each other and into engagement with the die to be hereinafter described, and the handles G and J are drawn toward each other the inner-face F<sup>3</sup> will engage the pin E<sup>3</sup> and the half sections of the die will be wedged into metal to metal engagement with each other. The finger F<sup>2</sup> will hold tightly its engagement with the pin E<sup>3</sup> and the half-rings will not be separated except by a force applied to the handle G.

K designates a stud provided on the face of one of the half rings and which is adapted to register with the recess K<sup>1</sup> provided in the face of the other half-ring. By the accurate registration of this stud in the recess any tendency of the half rings to transverse displacement is overcome. These half rings are intended to be made of malleable iron and the center portion is so formed as to have the annular cavity A<sup>1</sup> whereby the weight of the half rings is reduced to a minimum and without impairment of their strength. The only machine work necessary on my improved die holder is the machining of the bore A<sup>2</sup> and the annular groove A<sup>3</sup>.

Adapted to fit exactly the bore of the half-rings is the die. This die is composed of similar half sections L. Each of these half sections is held removably in position in the half-ring by the screw M having the thumb-head M<sup>7</sup>. This screw M is passed through a threaded hole therefor in the wall of the half ring as shown in Fig. 1, and when screwed into the threaded hole in the external face of the half section of the die will retain the said half section securely in



position. The form of each of the half-rings is such that the clearance N is provided, so that when the half rings are drawn toward each other by the engagement of the  
5 finger F<sup>2</sup> with the pin E<sup>3</sup> there will be a metal to metal engagement of the faces of the half sections of the die. The external face of each of the die half sections has the tongue L<sup>1</sup> which will fit snugly in the recess  
10 A<sup>3</sup> of the half rings. It is obvious that the internal face of the die may be of any desired design.

I am aware that molds for the necks of bottles and the like have heretofore been  
15 devised and composed of a ring that is separable the interior of said ring being machined and finished into the form desired for the article to be molded, but I am not aware that any mold has ever before been  
20 made consisting of separable members adapted to retain removably the die or mold.

The advantages accomplished by my invention are obvious, the holder constructed and adapted as shown requires very little  
25 machine work in its construction and when the handle G is in the closed position the half rings will have been drawn into and will retain close and tenacious engagement with the die. The die may be easily secured  
30 in position and as easily removed, and when the half rings are drawn into close engage-

ment with the die a metal to metal engagement will be obtained and transverse movement of one half section of the die with reference to the other half section will be effectually prevented. 35

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

A combination die and holder consisting of a pair of complementary half rings each  
40 having a head B, a divided die carried by the said half rings a pin C to pivotally connect said heads together, an arm E formed integral with each half ring and being slotted and having a pin therein, a handle G  
45 having the shank F pivotally secured to the pin of one of the arms, and having the finger F<sup>2</sup> adapted to engage the pin of the arm of the other half ring, there being such curvature of the face of the finger F<sup>2</sup> that when  
50 the handle G is moved, the half rings will be drawn together, a handle J secured to the other half ring, retaining screws to hold the half sections of said divided die in position, substantially as described. 55

In testimony whereof I sign my name to this specification in the presence of two subscribing witnesses.

THOMAS J. HOLDEN.

Witnesses:

THOMAS L. RYAN,  
ETHEL L. LISTER.