

No. 692,038.

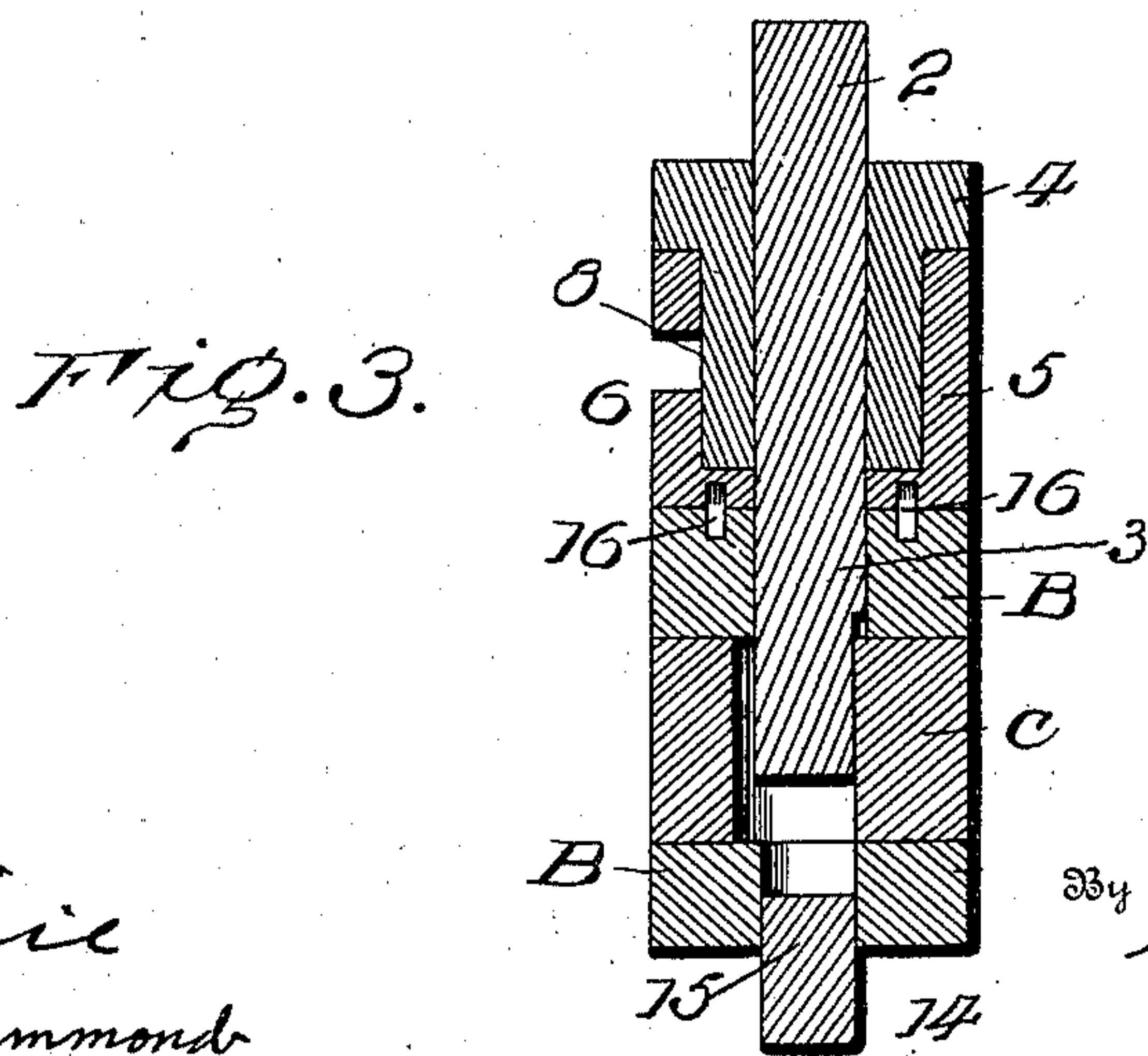
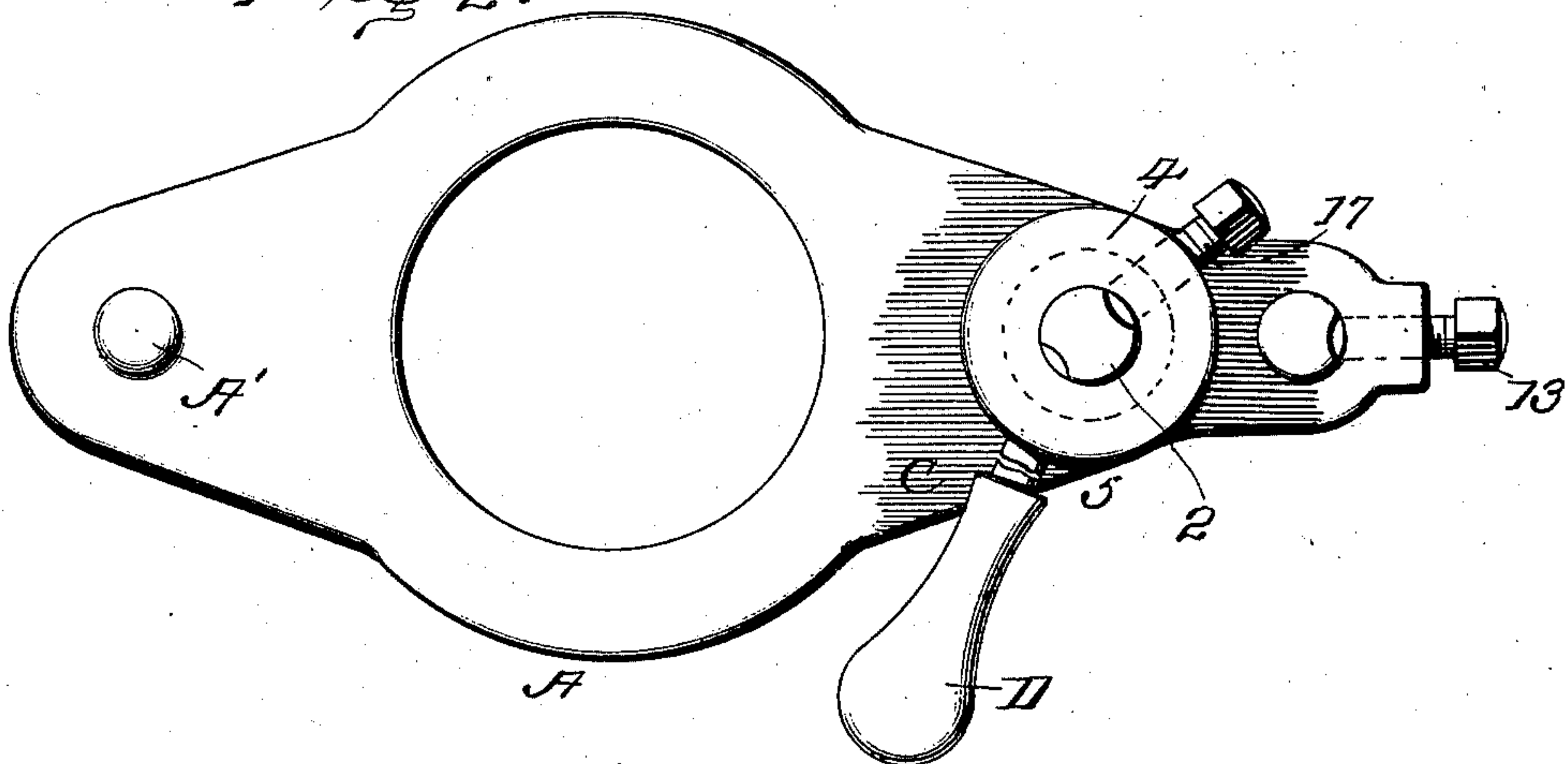
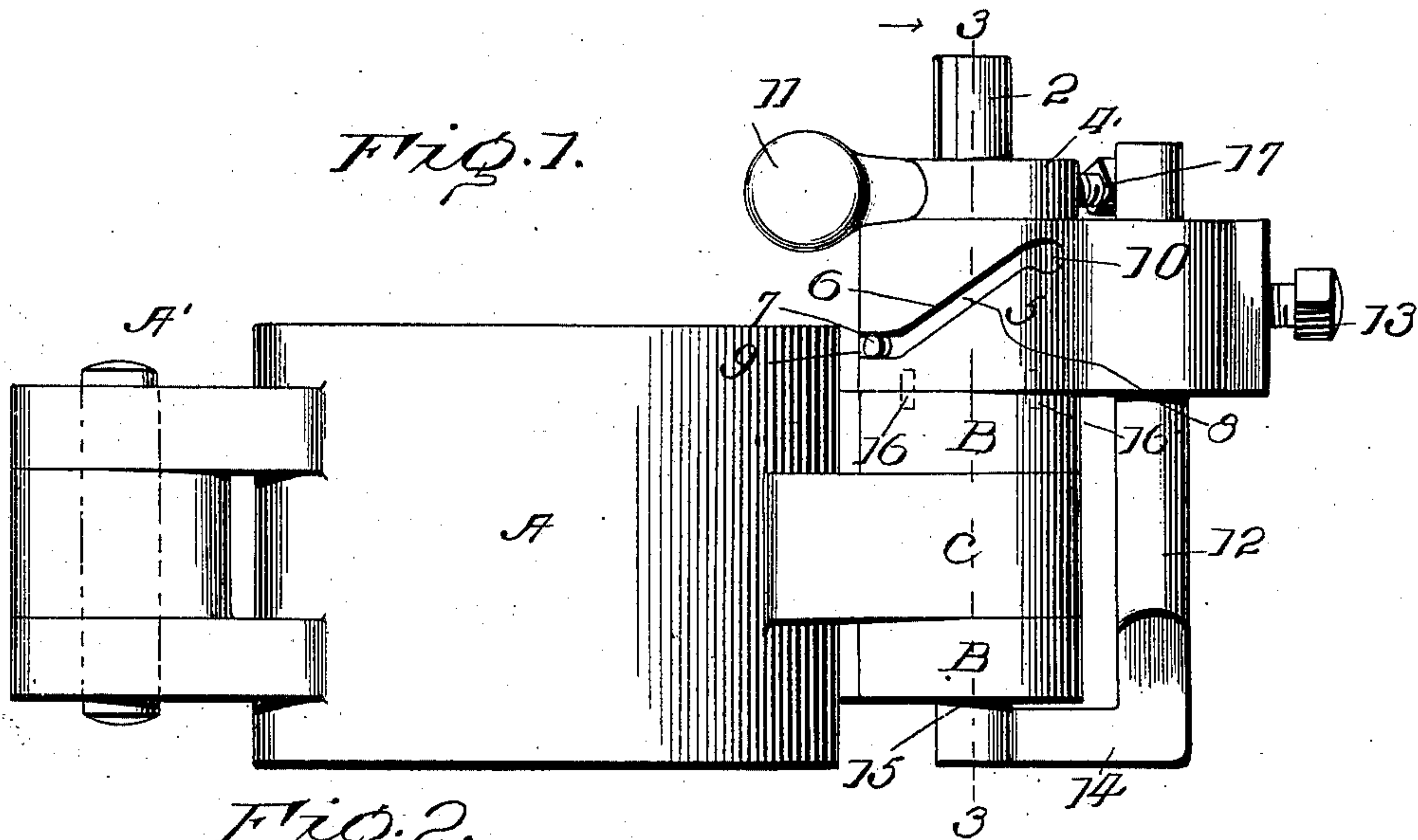
Patented Jan. 28, 1902.

A. STRUB.

LOCKING DEVICE FOR GLASS MOLDS.

(Application filed June 6, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

ALBERT STRUB, OF BEAVERFALLS, PENNSYLVANIA.

## LOCKING DEVICE FOR GLASS-MOLDS.

SPECIFICATION forming part of Letters Patent No. 692,038, dated January 28, 1902.

Application filed June 6, 1901. Serial No. 63,425. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT STRUB, a citizen of the United States, residing at Beaverfalls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Locking Devices for Glass-Molds, of which the following is a specification, reference being had therein to the accompanying drawings.

10 In the operation of glass-molds, which are usually divided vertically into two parts hinged together, so as to permit them to be separated that the mold may be opened and the article removed, it is customary to employ a key or locking device for tightly closing the two parts of the mold together and holding them in this relation during the time the molten glass is being inserted into the mold-chamber and fashioned or shaped therein. It is a practical necessity that this key or locking device should be so constructed and arranged as to permit the rapid locking and unlocking of the mold; and my present invention has for its object to produce a glass-mold-locking device which is capable of very rapid manipulation and operates to securely hold the parts of the mold together.

It also has for its object to produce a mold lock or key which may be used in connection with molds of different sizes, being adjustable, as will be hereinafter pointed out, to suit the requirements of use to which it may be put in connection with different kinds and sizes of molds.

35 In the accompanying drawings, Figure 1 is a side view of a mold lock or clamp embodying my improvements and shown as applied to a glass-mold of ordinary construction. Fig. 2 is a top plan view. Fig. 3 is a vertical section taken on the line 3 3 of Fig. 1.

In the drawings, A A represent the two parts of a glass-mold, which are hinged together at A'. The parts carry, respectively, the interfitting perforated lugs B B C.

45 The mold represented is of the simplest construction; but it should be understood that my invention is adapted to be used in connection with glass-molds of a wide variety of kinds, shapes, and sizes.

50 2 represents the key or eccentric pin for locking the two parts of the mold together, it

being adapted to pass through the apertures in the lugs B and C of the mold. The key is provided with a cam or eccentric portion 3, as is common in this class of devices, which 55 upon coming into engagement with the inner walls of the aperture of the lug C operates to force the parts of the mold closely together with a cam or wedging action. The key 2 is mounted in a centrally-disposed aperture in 60 the carrier 4, which in turn is seated in a socket or aperture in a bracket or support 5. The portion of the bracket or support 5 which constitutes the wall of the socket in which is mounted the carrier 4 is provided with a slot 65 6, with which engages a pin or projection 7, carried by the key-carrier 4. This slot 6 is preferably formed with an inclined portion 8, a lower horizontal portion 9 of considerable length, and a short upper horizontal portion 70 or seat 10. The carrier 4, in which is mounted the key, is free both to rotate and to slide longitudinally within the socket or recess formed therefor in the bracket or holder 5, and it is provided with a handle 11, by which 75 it is manipulated.

The bracket or support 5 is mounted upon a standard or arm 12, to which it is secured by means of a set-screw 13. The lower portion 14 of the standard or arm 12 is arranged 80 at right angles to the main upright portion thereof, and the end of this portion is bent upward or disposed parallel to the main part 12, as indicated at 15.

The locking device is applied to the mold 85 as follows: The short vertically-disposed portion 15 of the standard or stem is inserted into the aperture or perforation in the lower lug B of one of the sections of the mold. The bracket or holder 5 is then vertically adjusted upon the rod or stem 12 until it rests upon the upper face of the upper lug B, with its aperture or recess, in which is inserted the key-carrier 4, directly in line with the apertures in the lugs B B. The parts of 95 the mold-locking device being thus adjusted are secured together by the set-screw 13. In order to prevent any accidental or undesirable lateral movement of the bracket or holder 5 relative to the lug B, upon which 100 it rests, I employ dowel-pins 16, which fit into sockets in the parts 5 and B. After the



adjustment just described has been effected the carrier 4 is turned so as to bring the stud or pin 7 into the lower horizontal portion 9 of the slot 6. The key 2 is then longitudinally  
 5 adjusted within its carrier 4, so that the eccentric portion thereof will be in position to properly engage with the lug C, and after it is thus adjusted it is secured in position by means of a set-screw 17. The parts having  
 10 been thus adjusted are in condition for use. When the mold is unlocked, the carrier is so moved as to cause the pin 7 to occupy the upper seat portion 10 of the slot, where it will be securely held. The parts of the mold may  
 15 be then opened or closed by hand in the usual way. After the parts of the mold have been closed by hand and it is desired to lock them the carrier 4 is turned by means of the handle 11 so as to bring the pin 7 into the  
 20 inclined portion 8 of the slot, and as the pin travels therein the carrier and the key are moved longitudinally downward, carrying the eccentric portion 3 of the key into the aperture of the lug C. The parts have been  
 25 so adjusted that when the pin or projection 7 reaches the lower horizontal portion 9 of the slot the eccentric portion of the key has fully entered the recess in the lug C. A further movement of the handle 11 results in  
 30 a simple rotation of the carrier and the key, bringing the eccentric portion of the latter into operation to tightly force together and lock the two parts of the mold. A reverse movement of the handle causes an unlocking  
 35 of the mold.

It will be seen that by means of the device which I have just described it is never necessary to withdraw the key from the parts in which it is supported, that the key is always  
 40 in position for instant use, and that it is positively moved first in a longitudinal direction to cause the eccentric cam portion thereof to come into proper position for use and then rotated to cause the cam or eccentric  
 45 to exert a wedging action to force the parts of the mold together and to lock them.

It will be seen that my lock or clamping device is adjustable and may be fitted to molds of many different sizes and shapes. If the  
 50 lugs of the mold are thicker than the lugs represented in the drawings, it is only necessary to adjust the holder or bracket 5 to a higher position upon the stem or rod 12 and to adjust the key within its carrier so that  
 55 when the projection or pin 7 is in the part 9 of the slot the cam or eccentric portion 3 of the key will be in position to operatively engage with the lug C.

By means of this invention it is possible to  
 60 largely reduce the number of locking or clamping means required in a large establishment, as a single lock or clamp may be applied to many different molds.

It will be seen that after the key or eccentric pin 2 has been secured to its carrier by the set-screw 17 they become, in effect and operation, an integral structure, and from this

it is apparent that except for the adjustment of the key these parts might be formed together as one piece, a construction which under some circumstances might be found desirable. It is also evident that after the support or holder 5, in which the key is mounted, has been properly secured in place it becomes practically a part of one of the mold-sections, from which it is evident that certain features of my invention are applicable to a construction in which the holder or support for the key and its carrier might be integral with one section of the mold.

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

1. The combination with a glass-mold, of a key for locking and holding the mold-sections together, means for supporting and holding the key, means for directing the movements of the key, and means for adjusting the key relative to the parts which support and hold it, substantially as set forth.

2. The combination with a glass-mold having two sections hinged together, of a key for locking and holding the parts of the mold together, means for supporting and holding the key, means arranged to impart to the key a movement in the direction of its length to bring it into locking position, and the means for connecting the key supporting and holding parts with one section of the mold, the last said means being arranged parallel with the axis of the hinge of the mold, substantially as set forth.

3. The combination with a glass-mold having two sections hinged together, of a key or pin for locking the mold-sections in closed relations, the said key being parallel with the axis of the hinge of the mold, a support in which the key is mounted, means which impart to the key both longitudinal and rotary movements in order to bring it into locking relations and means for uniting the key-support with one section of the mold, having parts which are parallel to the axis of the hinge and engage with the said mold-section, substantially as set forth.

4. The combination with a glass-mold having hinged parts, of a key or eccentric pin for locking the parts of the mold, a holder or support in which the key is arranged, and inter-engaging parts between the key and holder comprising a slot and a projection adapted to move therein, the slot being formed with an inclined portion, a lower horizontal portion and an upper rest or seat, substantially as set forth.

5. The combination with a glass-mold having hinged parts, of a key for uniting and holding the parts together, a support or holder in which the key is mounted, means for securing the said holder to one part of the mold, and means for adjusting the said holder so as to fit molds of different sizes and constructions, substantially as set forth.

6. The combination with a mold having two



parts hinged together, one of the parts being formed with the lugs, B, B, of a key for locking the parts of the molds, a holder in which the key is mounted, and means for uniting the said holder with the lugs B, B, substantially as set forth.

7. The combination with a glass-mold having hinged parts, one of the parts being provided with the lugs B, B, of a key for locking the parts together, a holder in which the key is mounted arranged to be connected to one of the lugs, and a stem or support for the holder arranged to engage with the other lug B, the holder in which the key is mounted being adjustable upon the said stem or support, substantially as set forth.

8. The combination with a glass-mold having hinged parts, of a key for locking the parts in closed relation, a carrier for the key, a support in which the carrier is movable, and means for directing the movements of the carrier to bring the key into locking position, substantially as set forth.

9. The combination with a glass-mold having hinged parts, of a key for locking the parts in closed relations, a carrier in which the key is mounted, means for adjusting the key longitudinally relative to the carrier, and a support or holder in which the carrier is mounted, substantially as set forth.

10. The combination with a glass-mold having hinged parts, of a key for locking the parts, a carrier in which the key is mounted, means for adjusting the key longitudinally within its carrier, a support or holder in which the carrier is mounted and in which it is movable to bring the key into locking position, and means for securing the said support or holder

to one of the parts of the mold, substantially as set forth.

11. The combination with a glass-mold having hinged parts, one of which is provided with lugs B, B, of a key for locking the parts, a carrier in which the key is mounted, a support or holder in which the carrier is mounted and wherein it is longitudinally movable, arranged to be connected with one of the lugs B, means for adjusting the key longitudinally relative to its carrier, a standard arranged to engage with the other lug B, and upon which the said holder or support is supported, and means for securing the said holder or support to the standard in the different positions to which it may be adjusted.

12. The combination with a glass-mold formed of two parts hinged to each other, one part having the lugs B, B, and the other part the lug C, of the standard 12 adapted to engage with one of the lugs B, a support or holder adjustable upon the standard 12 and adapted to engage with the other lug B, the said support being provided with a slot 6, a carrier 8 mounted in the support or holder 5 and provided with a projection 7 adapted to enter the said slot 6, a key or eccentric pin 2 supported by the said carrier and arranged to engage with the lug C of the mold, and means for adjusting the key relative to its carrier and securing it after adjustment, substantially as set forth.

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

ALBERT STRUB.

Witnesses:

J. W. WALTERS,  
JOS. C. ROUZER.