

No. 653,140.

Patented July 3, 1900.

E. S. HART.

LOCK FOR SECTIONAL GLASS MOLDS.

(Application filed Aug. 12, 1899.)

(No Model.)

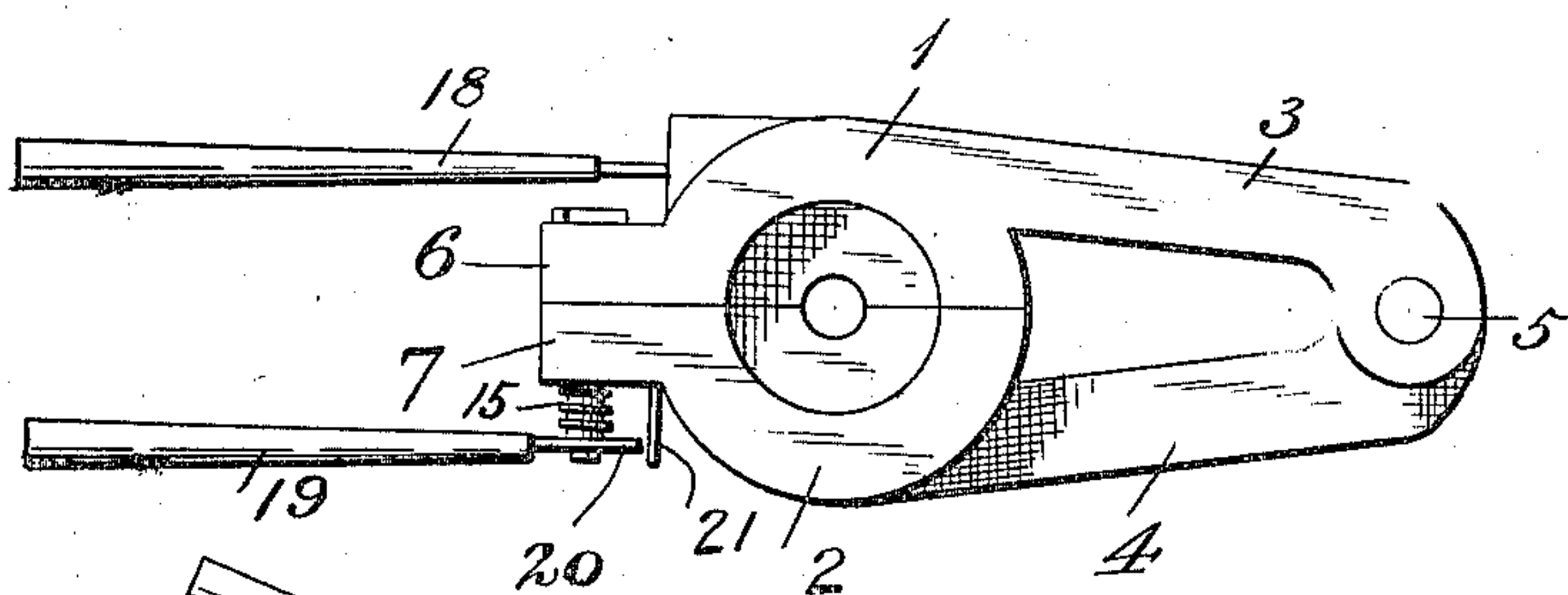


Fig. 1.

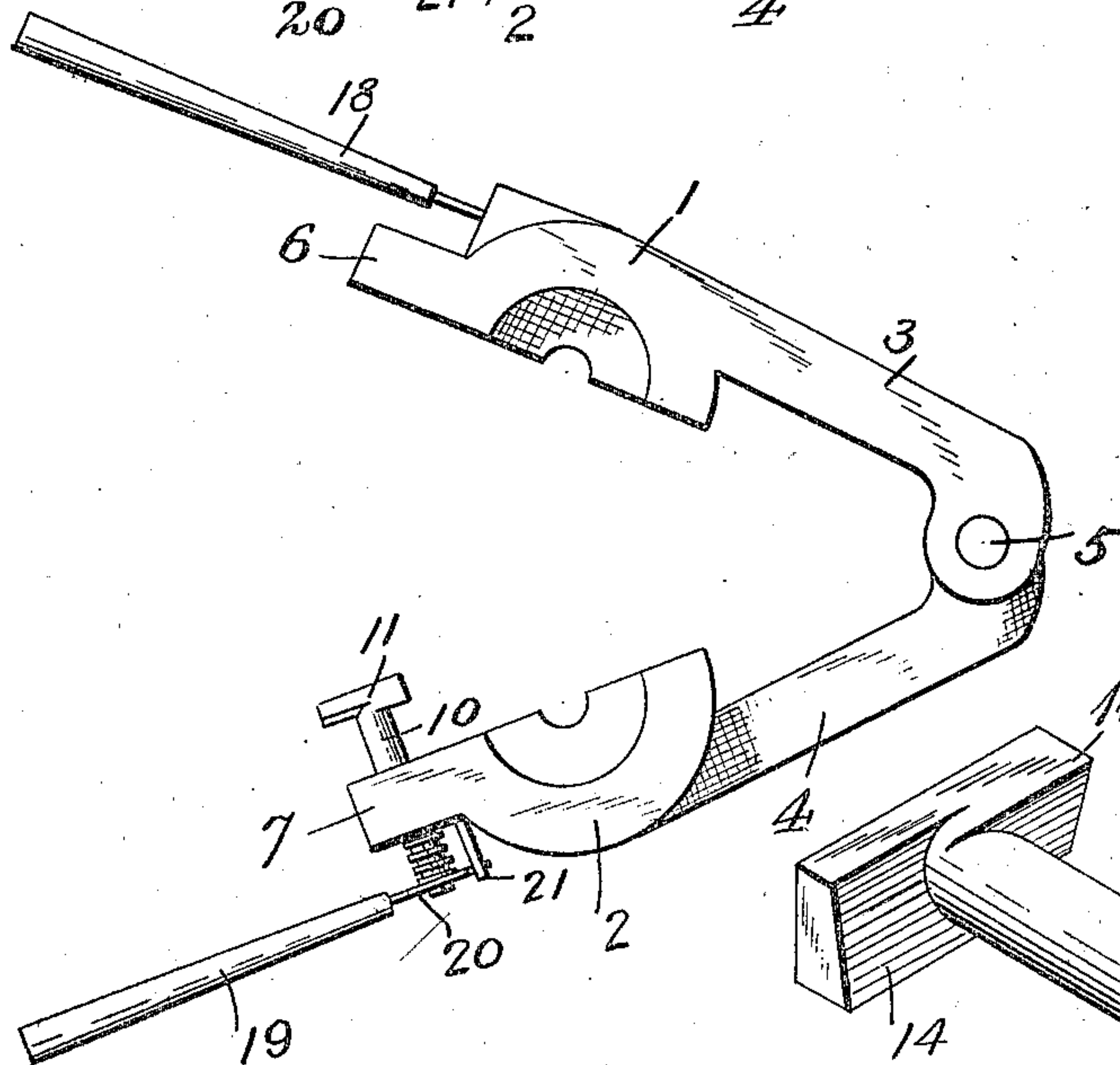


Fig. 2.

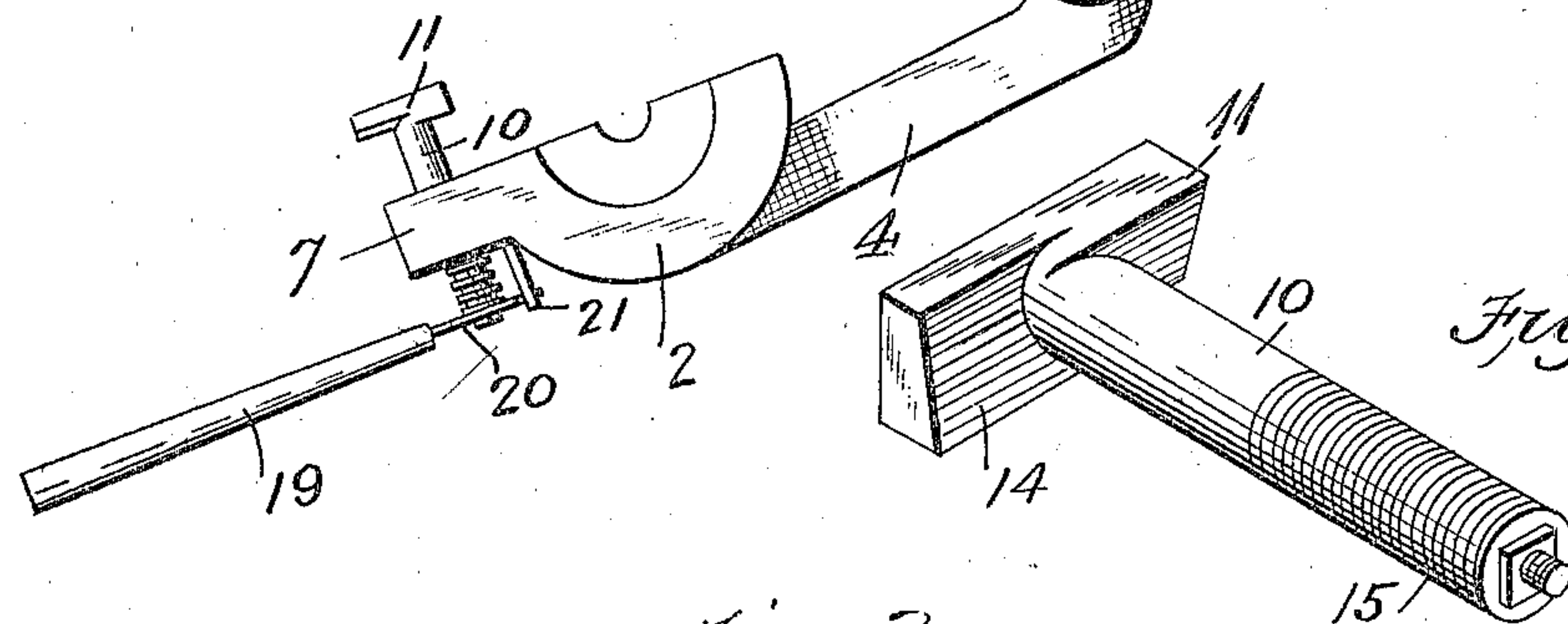


Fig. 4.

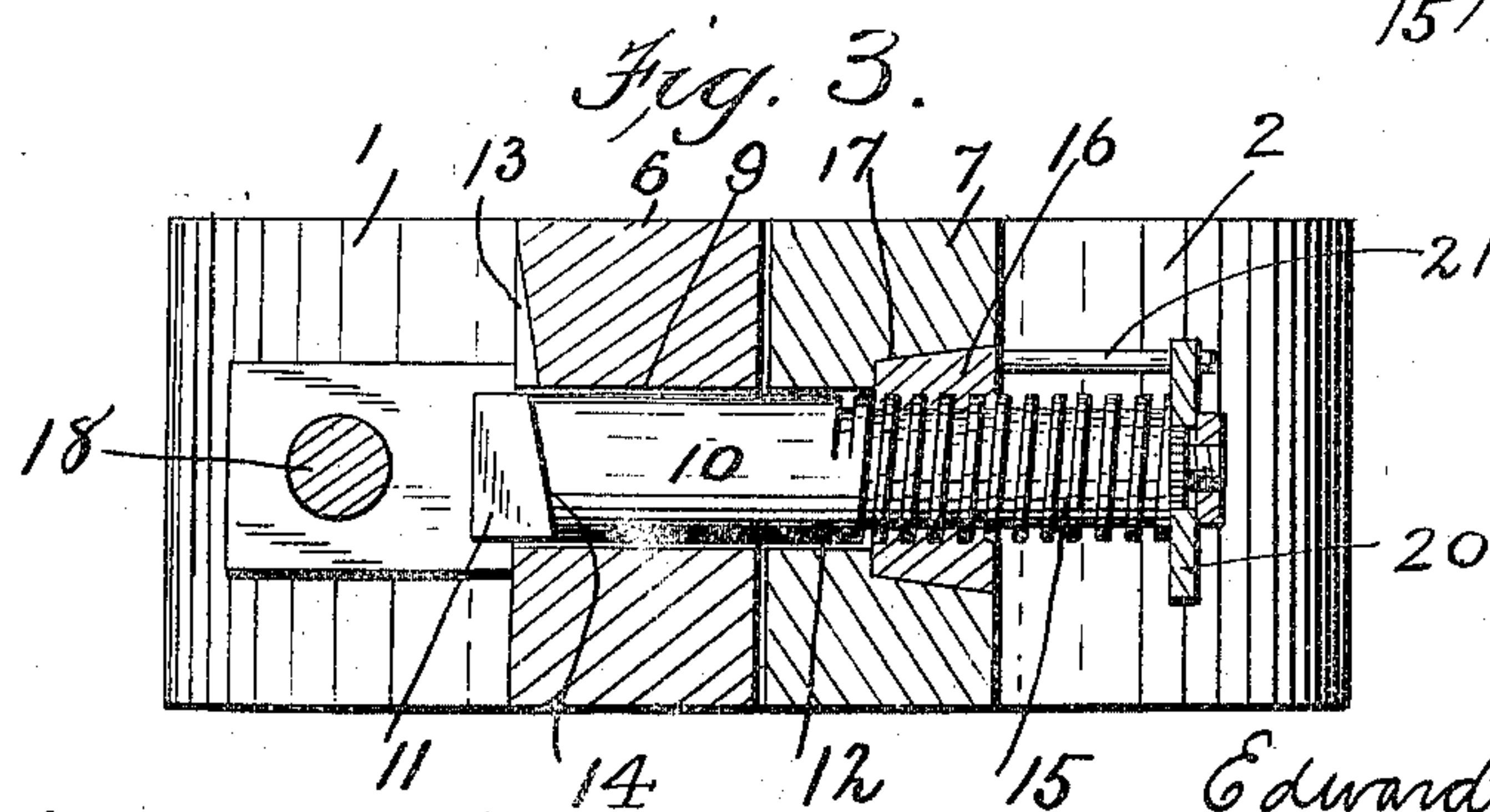


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD S. HART, OF DUNKIRK, INDIANA, ASSIGNOR OF THREE-FOURTHS
TO MATTHEW H. HART AND CHARLES F. BIRCH, SR., OF SAME PLACE,
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LOCK FOR SECTIONAL GLASS-MOLDS.

SPECIFICATION forming part of Letters Patent No. 653,140, dated July 3, 1900.

Application filed August 12, 1899. Serial No. 726,973. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. HART, a citizen of the United States, residing at Dunkirk, in the county of Jay and State of Indiana, have
5 invented certain new and useful Improvements in Locks for Sectional Glass-Molds; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art
10 to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 This invention has particular reference to improvements in that type of locks for sectional molds used in the manufacture of glass-ware in which the two sections of the molds are locked by an axially-movable bolt carried
20 by one section and having a beveled head which passes through an opening in the other section while the mold is being opened and closed and when the mold is closed is turned to bring its beveled portion into engagement
25 with a correspondingly-beveled portion of said other section, thus locking the two sections together.

The objects of the invention are to increase the rapidity and efficiency with which the
30 two sections are locked when they have been brought into relative positions to be locked and to accomplish this very important result by simple, inexpensive, and durable means.

To this end the invention consists in a locking-bolt carried by one section and having a
35 beveled head to engage a correspondingly-beveled part of the other section and characterized by the fact that it simultaneously moves both axially and longitudinally in its bearing, thus subjecting the mold-sections to
40 a double closing action simultaneously produced and resulting in a most rapid and efficient locking of the sections together; and the invention further consists in the details of
45 construction by which the locking-bolt is caused simultaneously to move both axially and longitudinally in its bearing to effect said rapid and efficient locking of the sections together, substantially as described, and particularly pointed out in the subjoined claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a plan view of a sectional mold provided with my improved locking means therefor, the sections being shown as locked together. Fig. 2 is a similar
55 view showing the sections fully open. Fig. 3 is a front view, partly in section, with the mold closed, but not locked; and Fig. 4 is a detail perspective view of the locking-bolt.

The same numerals of reference designate
60 the same parts in the several figures.

1 and 2 designate the two sections of a mold, having arms 3 and 4 extending rearward therefrom and hinged together at their rear ends 5 and also having projections or plates 6 and
65 7, which latter are formed to constitute parts of the locking means for the sections. The projection 6 has an opening or open-ended slot 9, formed to permit the head 11 of a locking bolt or rod 10 to pass freely through it
70 while the two sections of the mold are being moved to and from each other. Said locking-bolt is carried by the projection 7 and is mounted in an opening 12, formed in said projection, in such manner as to permit it to
75 have both axial and longitudinal movement in said opening. One face of the projection 6 is beveled, as shown at 13 in Fig. 3, and one face of the bolt-head 11 is correspondingly
80 beveled, as shown at 14, so that during the axial movement of the bolt in its bearing the two sections of the mold will be wedged together into a close engagement each with the other, in which action of closing the sections together the bolt is materially assisted by its
85 longitudinal movement in its bearing. When thus closed, the parts are locked efficiently against accidental movement by friction, as will be seen.

In order that the action of wedging or locking the sections together may be accomplished
90 with maximum rapidity, it is necessary that the axial and longitudinal movements of the bolt in its bearing be simultaneous. The best means for attaining this desirable end consist of threads 15, formed on the end of the
95 bolt 10 and engaged with a nut 16, fixed in an opening 17, formed in the projection 7. It will be evident that the threads which are to be engaged by the threaded end of the bolt
100

may be formed directly in the projection 7; but it is preferred to form them in a nut, as described, as it is deemed desirable that the engaging threaded surfaces be of hardened steel, so as best to resist wear. The bearing-surfaces 13 and 14 of the projection 6 and head 11 also are preferably formed of hardened steel.

Mold-section 1 is provided with a handle 18, fixed to it in any suitable manner, and a handle 19 is also provided for the mold-section 2. These handles are grasped by the operator for closing and opening the mold, and the handle 19 is further used for adjusting the locking-bolt in its bearing. It is therefore attached to the end of said bolt, as shown. It has a rearward projection 20, which is designed to engage a pin or other suitable stop or guide 21, which extends laterally from the mold-section 2. The location of the pin 21 is such that when the projection 20 is engaged with it the head 11 of the bolt 10 will be held in position to pass freely through the opening 9 in the projection 6, so as to not interfere with the opening and closing of the mold.

From the above description of the construction of my invention the operation thereof will readily be understood to be as follows: Assuming that the mold is open, as shown in Fig. 2, and that the operator desires to close and lock it, he grasps the handles 18 and 19 in his two hands and moves the sections toward each other and into the position shown in Fig. 3, the head 11 of the bolt being held in position to pass freely through the opening in the projection 6 during this movement by the engagement of projection 20 with pin 21. When the parts have been thus closed, the handle 19 is given an upward turn, which causes the inclined surface 14 of the bolt to engage the inclined surface 13 of the projection 6, and thus draw the two parts of the mold closer together, and at the same time the bolt 10 will by virtue of its threaded connection move longitudinally in its bearing, and thus further draw and lock the mold-sections together. As the actions of the inclined surfaces and threads are simultaneous, the two parts of the mold will be very quickly closed

together and securely locked. It will be apparent that the mold-sections are unlocked and the mold opened by a reversal of the movements above specified.

Having thus described the invention, what I believe to be new and desire to secure by Letters Patent, and what I therefore claim, is—

1. The combination with the two sections of a glass-mold, each of said sections having a projection and one of said projections having an opening and a beveled outer surface, of an axially-movable locking-bolt carried by the other section and having a beveled head to engage said beveled surface, means for causing said head to pass freely through said opening while the mold is being opened and closed, and means by which the axial movement of the bolt also causes it simultaneously to move longitudinally in its bearing, substantially as described, whereby the locking of the sections is effected by two movements simultaneously produced, for the purposes specified.

2. The combination with the two sections of a glass-mold, each of said sections having a projection and one of said projections having an opening and a beveled outer surface, and the other of said projections having a threaded bearing, of a locking-bolt having a threaded portion to engage said bearing, a beveled head attached to one end of said bolt, to engage the beveled surface of the other projection, a lever attached to the other end of said bolt and extending beyond the same, and a stop to engage the extended end of the lever and hold said beveled head in position to pass freely through the opening in the other projection, said parts coacting to effect simultaneously two closing actions of the bolt upon the sections, substantially as described and for the purposes specified.

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

EDWARD S. HART.

Witnesses:

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