

No. 685,363.

Patented Oct. 29, 1901.

E. L. WEED.
AUTOMATIC LOCKING HOOK.

(Application filed May 27, 1901.)

(No Model.)

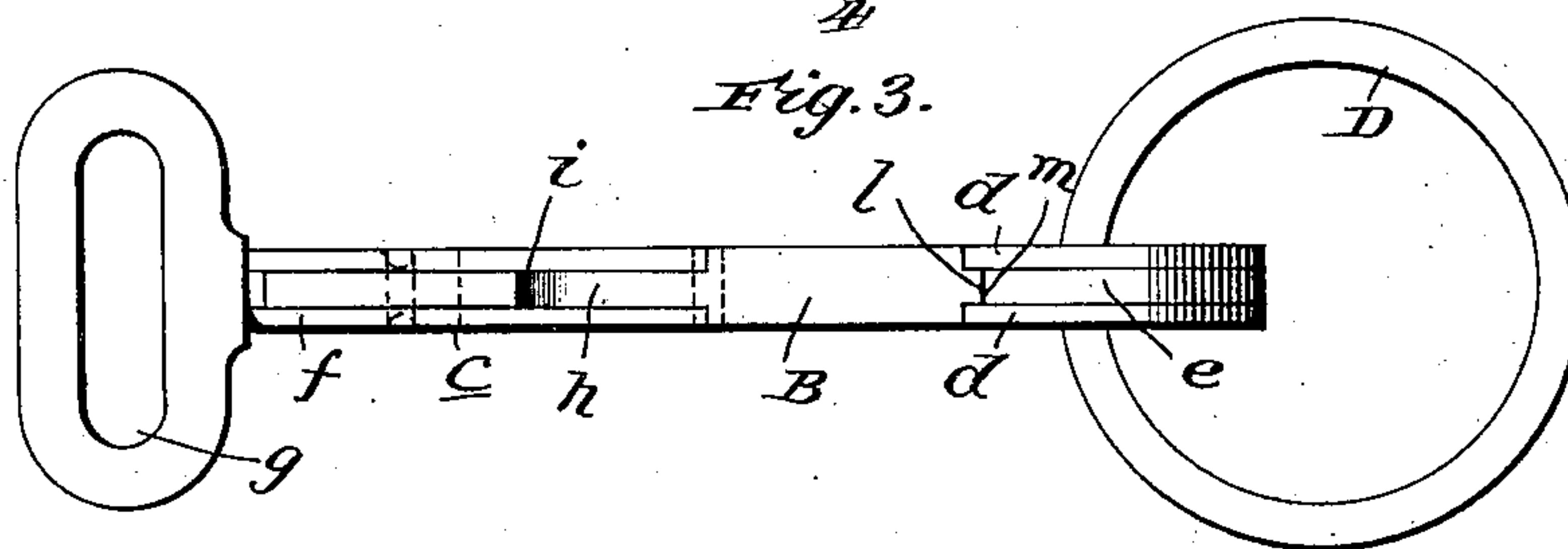
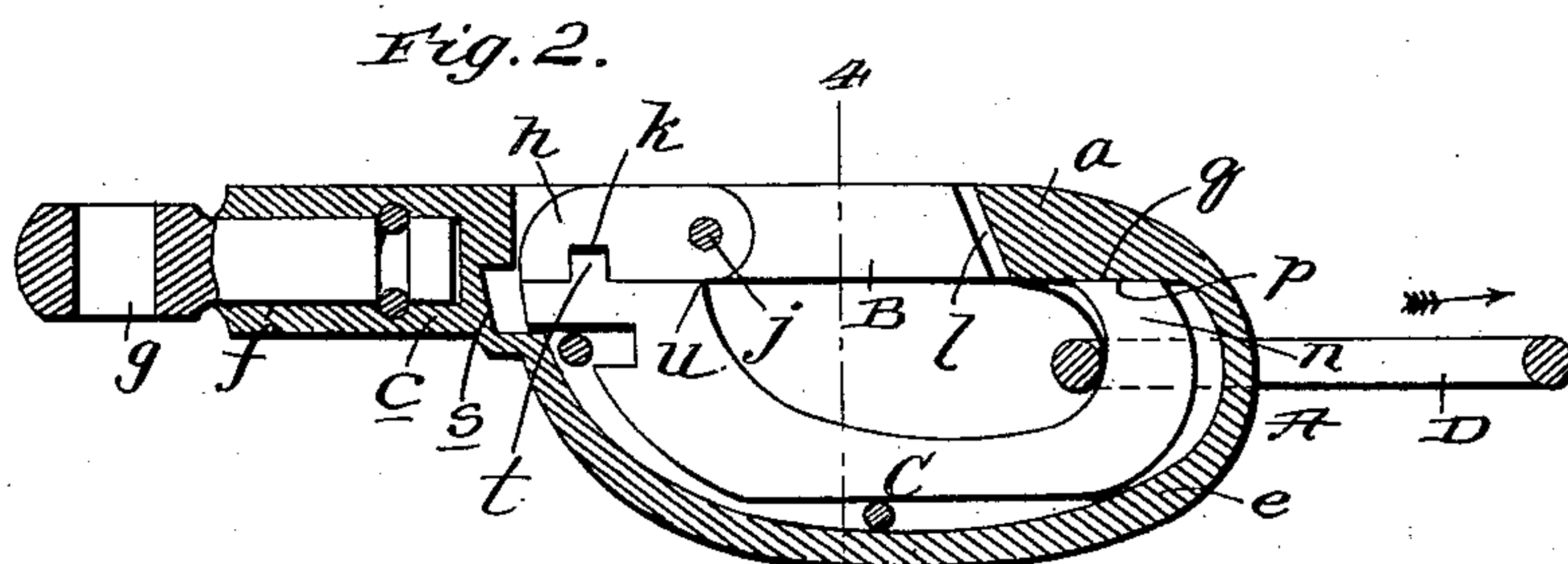
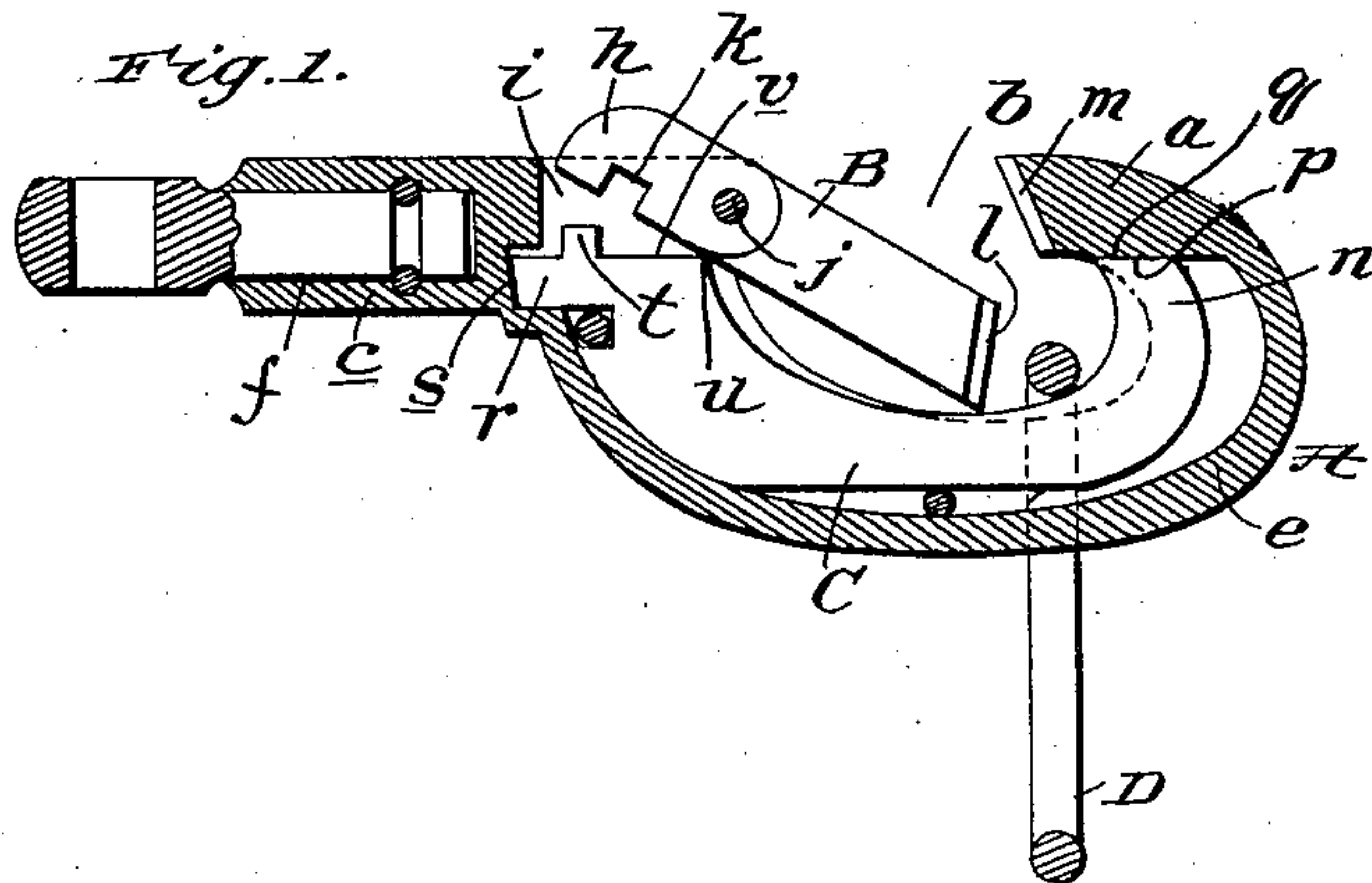


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ELISHA L. WEED, OF BAKER CITY, OREGON, ASSIGNOR OF ONE-HALF TO
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AUTOMATIC LOCKING-HOOK.

SPECIFICATION forming part of Letters Patent No. 685,363, dated October 29, 1901.

Application filed May 27, 1901. Serial No. 62,123. (No model.)

To all whom it may concern:

Be it known that I, ELISHA L. WEED, a citizen of the United States, residing at Baker City, in the county of Baker and State of Oregon, have invented new and useful Improvements in Automatic Locking-Hooks, of which the following is a specification.

My invention relates to improvements in automatic locking-hooks—i.e., hooks in which draft or pull exerted on the bent end operates to close and keep closed the throat; and it consists in a certain peculiar construction, the novelty, utility, and advantages of which will be fully understood from the following description and claims, when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of my improved hook with the working parts in the position they occupy when the throat is open. Fig. 2 is a similar view of the hook with the working parts in the positions they are caused to assume when draft is imposed on the bent end of the hook. Fig. 3 is a plan view of the hook as it appears when closed, and Fig. 4 is a transverse section taken in the plane indicated by the broken line 4 4 of Fig. 2.

In the said drawings similar letters of reference designate corresponding parts in all the several views, referring to which—

A is the body of my improved hook, which is preferably of the shape shown and has a bent end *a*, a throat *b*, and a shank *c*, as shown. It is made of brass or other suitable metal or material and in the preferred embodiment of the invention is formed of two side plates *d* and a strip *e*, interposed between and connected by rivets or other means to the side plates. The strip *e* serves to hold the side plates apart, so as to afford a play-space between the same for the working parts presently described, and it also serves to form the shank *c*. Said shank might be provided with an integral loop or eye for the connection of a strap or the like; but I prefer for obvious reasons to connect it in a swiveled manner to the stem *f* of a loop or eye *g*, as illustrated in the drawings.

B is a latch-lever which has for its purpose to close the throat *b* of the body, and C is a rectilinearly-movable locking-bar which is

adapted to be moved by the draft or pull exerted on the hook and transmit such movement to the lever B, so as to close and keep closed the throat of the body, and thereby preclude casual disconnection of the ring D or similar device from the hook. The lever B has a tongue or reduced portion *h*, which is let into a kerf or recess *i* of the body and pivotally connected thereto by a transverse rivet *j* or other suitable means. The said lever also has a notch *k* in the under side of its tongue *h* and is provided on its beveled free end with a tongue *l*, designed when the hook is closed to take into a complementary groove *m* in the end of the body, this to hold the free end of the latch-lever against casual lateral movement and contribute to the reliability of the hook. The rectilinearly-movable bar C is arranged in the hollow body A and is of the shape illustrated—that is to say, it has a forward bent end *n*, which is designed for the engagement of the ring D and is provided with the square edge *p*, in engagement with the corresponding interior surface *q* of the body, and a rearward projection *r*, which is arranged in a recess *s* at the rear of the body and bears on the lower wall thereof. On its rearward projection *r* said bar is provided with an upwardly-extending stud *t*, which when the hook is closed, as shown in Fig. 2, is adapted to enter the notch *k* in the lever, and thereby preclude rearward movement of the bar and casual opening of the hook until after the lever B is swung down into the position shown in Fig. 1.

In the practice of my invention when it is desired to open the hook the lever B is rocked by hand from the position shown in Fig. 2 into the position shown in Fig. 1, so as to disengage its rear arm from the stud *t* on bar C and move said bar rearwardly. From this it follows that when a ring or the like is placed in the hook and pulled in the direction indicated by arrow in Fig. 2 the bar C will be drawn in the same direction, and its corner *u*, acting against the lower edge of the lever, will rock said lever, so as to carry the tongue *l* on the forward end thereof into the groove *m* and the notch *k* in the rear arm thereof into engagement with the stud *t* on the bar; also, that so long as the bar is subjected to draft in the direction stated its

square edge *v*, engaging the inner edge of the lever, will hold said lever in its closed position, making it essential that the bar C be relieved of draft before the hook can be
 5 opened and the ring or the like removed therefrom. The coacting stud *t* and notch *k* tend to prevent casual movement of the bar C when the same is relieved of draft, and consequently lessen the liability of the hook being
 10 opened casually opened when relieved of draft.

It will be appreciated from the foregoing that my improved hook is simple and inexpensive in construction and at the same time strong and durable; also, that it embodies no
 15 parts that are likely to get out of order after a short period of use. It will further be appreciated that the hook is reliable in operation and is calculated to prevent casual disconnection of a ring or the like when the
 20 ring is subject to draft and also when it is relieved from draft, which latter is an important desideratum.

I have entered into a detailed description of the construction and relative arrangement
 25 of parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such
 30 specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claims.

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

1. In a hook, the combination of a body, a latch-lever pivotally connected to the body and adapted to close the throat thereof, and
 40 a rectilinearly-movable bar arranged in the body and having a portion for the engagement of a ring or the like, and also having a square surface to engage a corresponding surface of the latch-lever.

2. In a hook, the combination of a body, a latch-lever pivotally connected at an intermediate point of its length to the body and adapted to close the throat thereof, a rectilinearly-movable bar arranged in the body
 50 and having a portion for the engagement of a ring or the like, and also having a square surface to engage a corresponding surface of the latch-lever, and coacting means on the bar

and rear arm of the lever whereby the bar is held against casual rearward movement when
 55 engaged with the lever.

3. In a hook, the combination of a body having a bend at one end and also having a throat, a latch-lever pivotally connected at an intermediate point of its length to the
 60 body, and having a notch or recess in the inner edge of its rear arm, a rectilinearly-movable bar arranged in the body and having a bend at its forward end for the engagement of a ring or the like, and also having a square
 65 surface to engage a corresponding surface of the latch-lever, and a stud to enter the notch of said lever.

4. In a hook, the combination of a body having a bend at its forward end, a throat, and a recess in rear of the throat, a latch-lever pivotally connected at an intermediate point of its length to the body in rear of the throat thereof, and having a notch in its rear
 75 arm, a rectilinearly-movable bar arranged in the body and having a bend at its forward end, and also having a square surface to engage a corresponding surface of the latch-lever, and a rear projection movable in the recess of the body in rear of the throat and provided with a stud to enter the notch of the
 80 latch-lever.

5. In a hook, the combination of a body having a bend at its forward end, and also having a throat, a lever pivotally connected to
 85 the body and adapted to close the throat thereof, and a slidable bar movable in the body and adapted in its forward position to hold the lever against opening.

6. In a hook, the combination of a body
 90 having a bend at its forward end and a throat, a lever pivotally connected to the body and adapted to close the throat thereof, a slidable bar arranged in the body and adapted in its forward position to hold the lever against
 95 opening, and coacting means on the lever and bar whereby the latter is held against rearward movement by the former.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.
 100

ELISHA L. WEED.

Witnesses:

ISAAC L. MOORE,
 IRA B. STURGES.