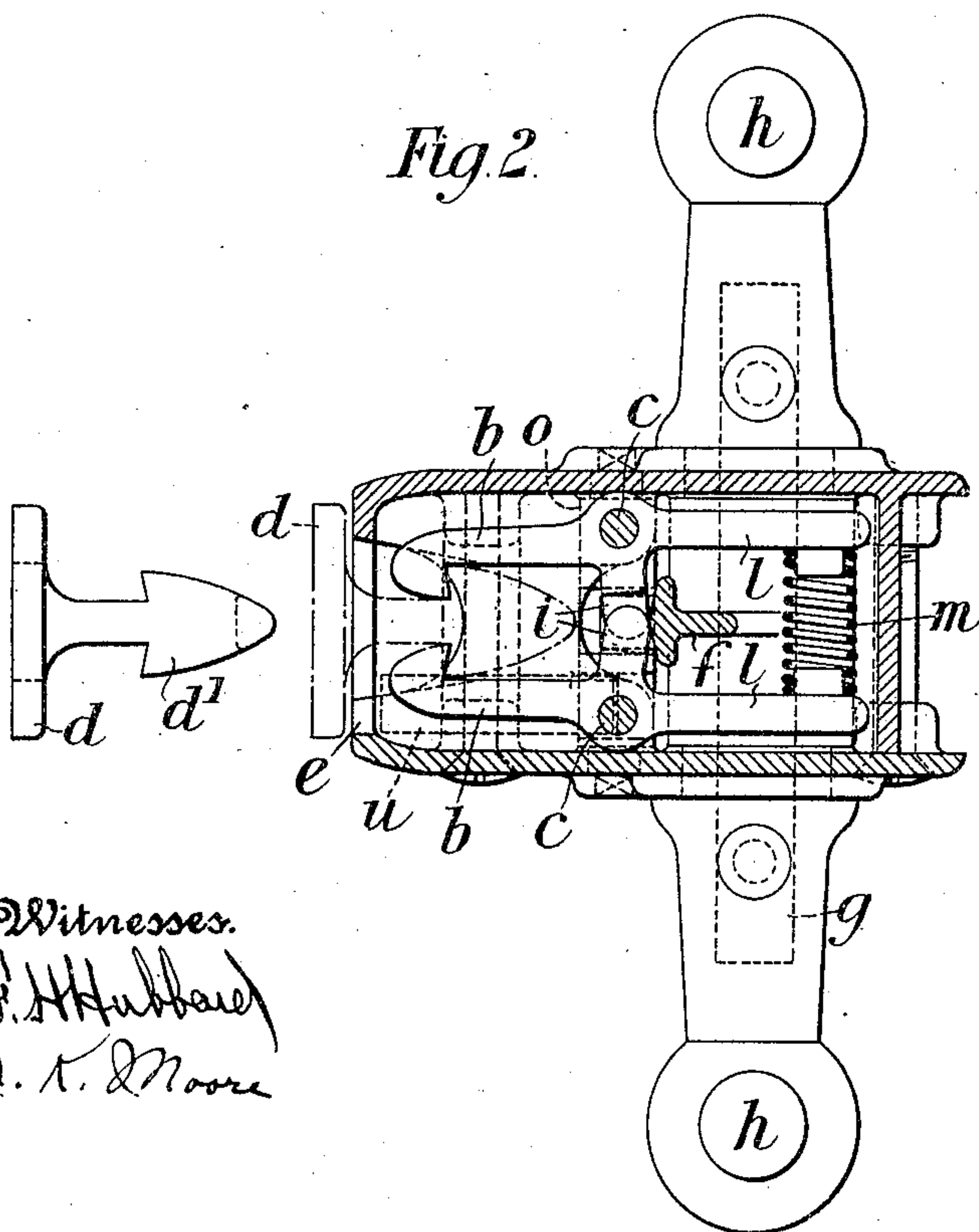
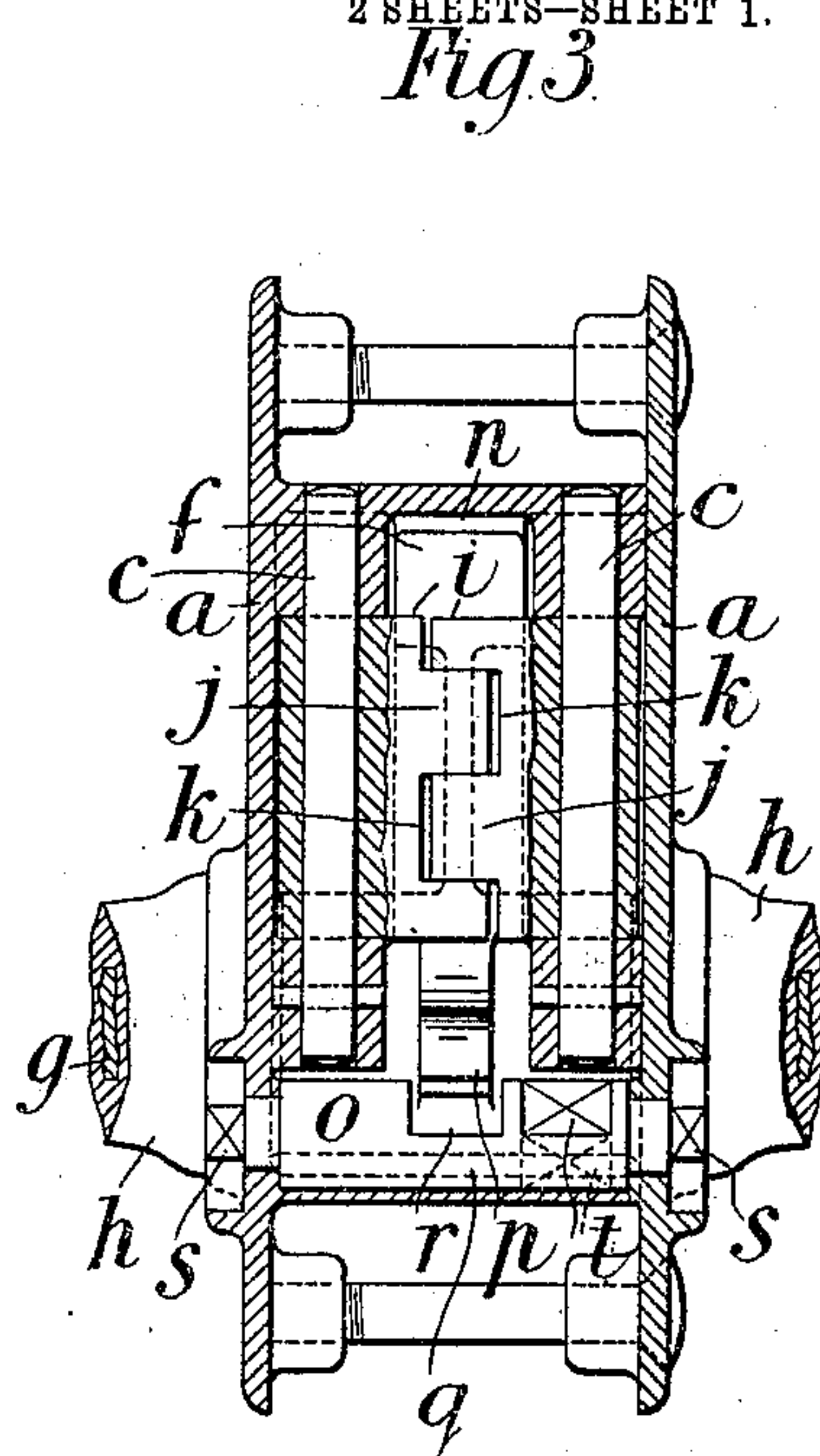
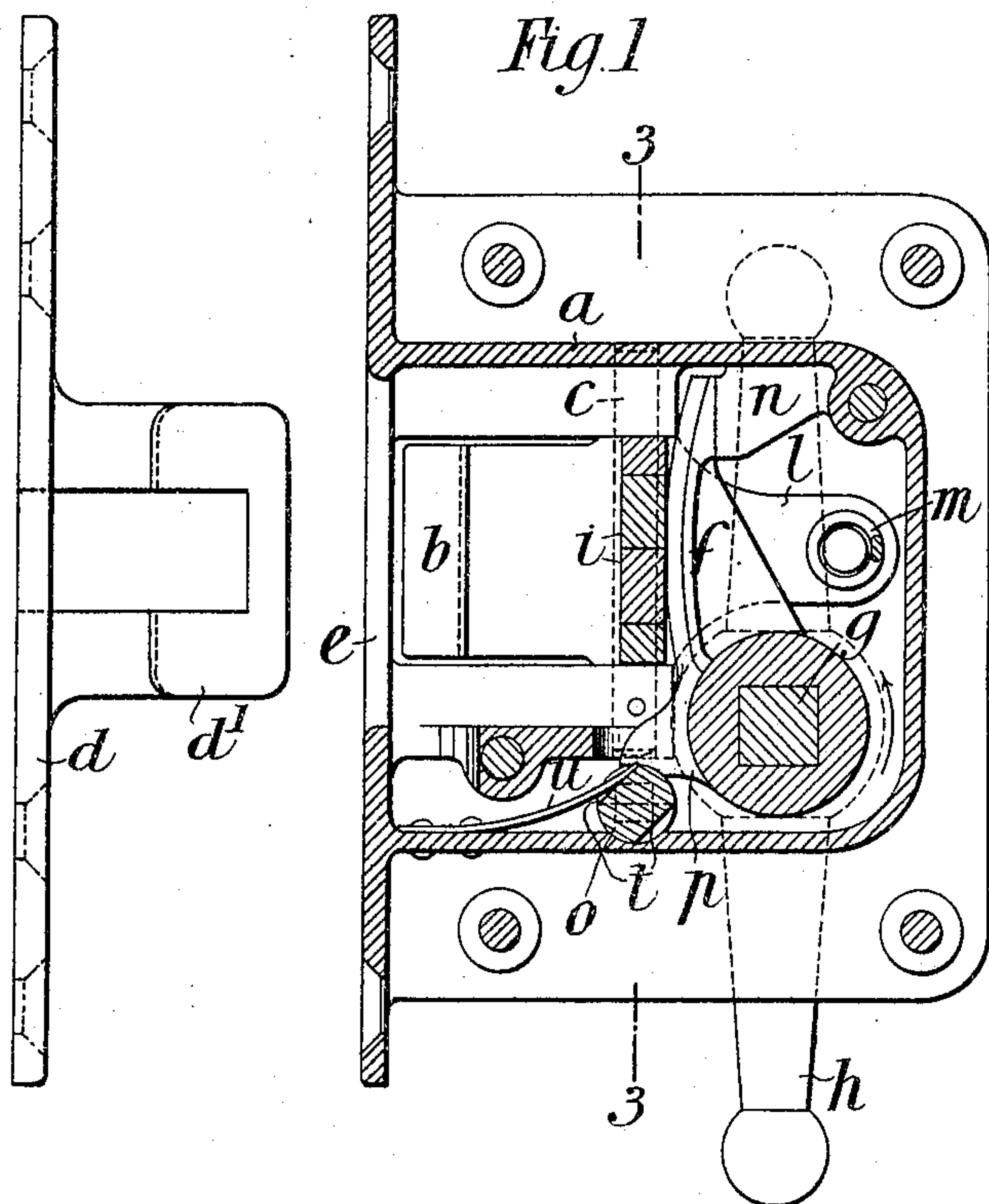


F. D. WARD.
LOCK.

APPLICATION FILED JULY 25, 1904.

2 SHEETS—SHEET 1.



Witnesses.
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No. 789,775.

PATENTED MAY 16, 1905.

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2 SHEETS—SHEET 2.

Fig. 4.

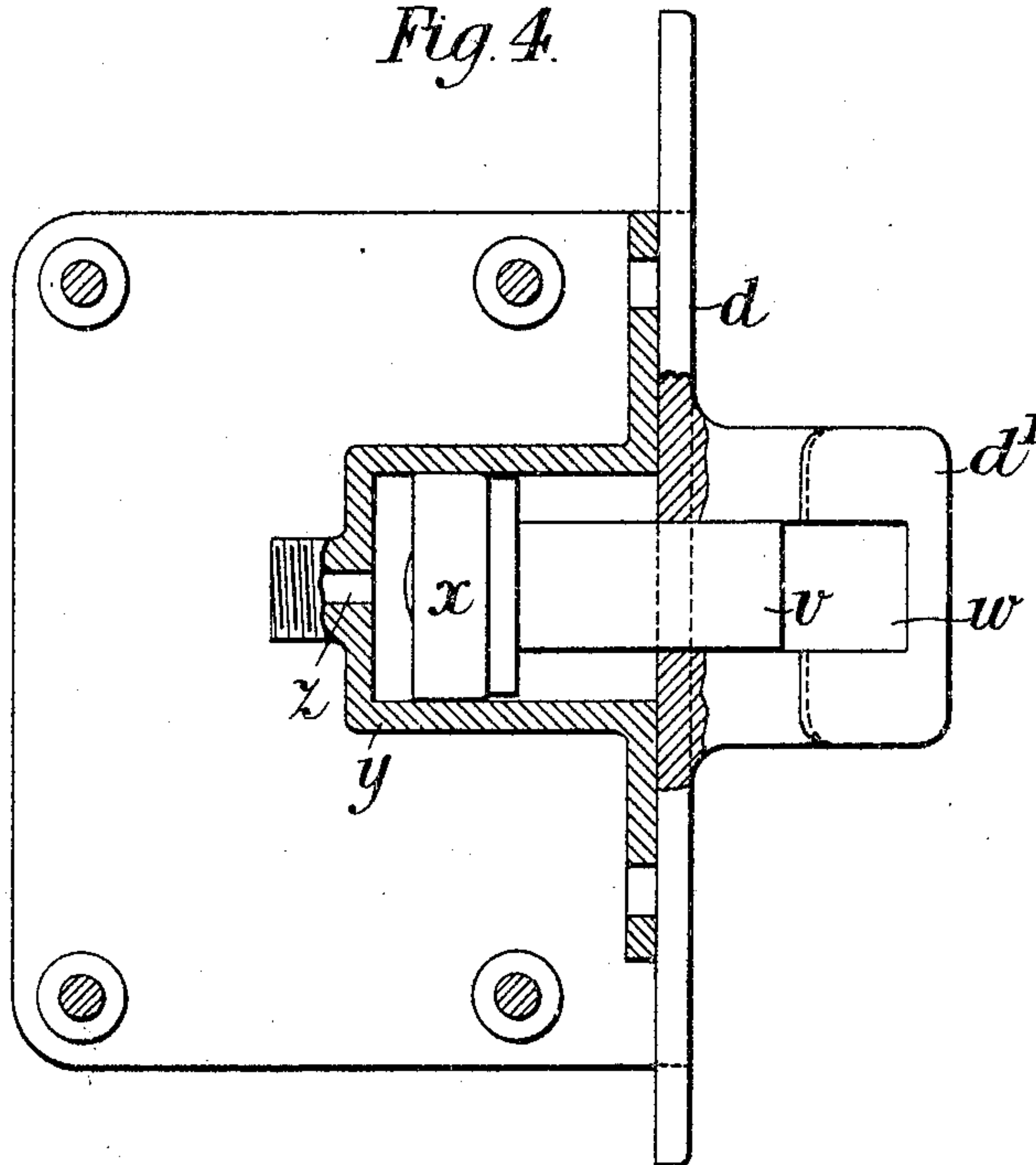
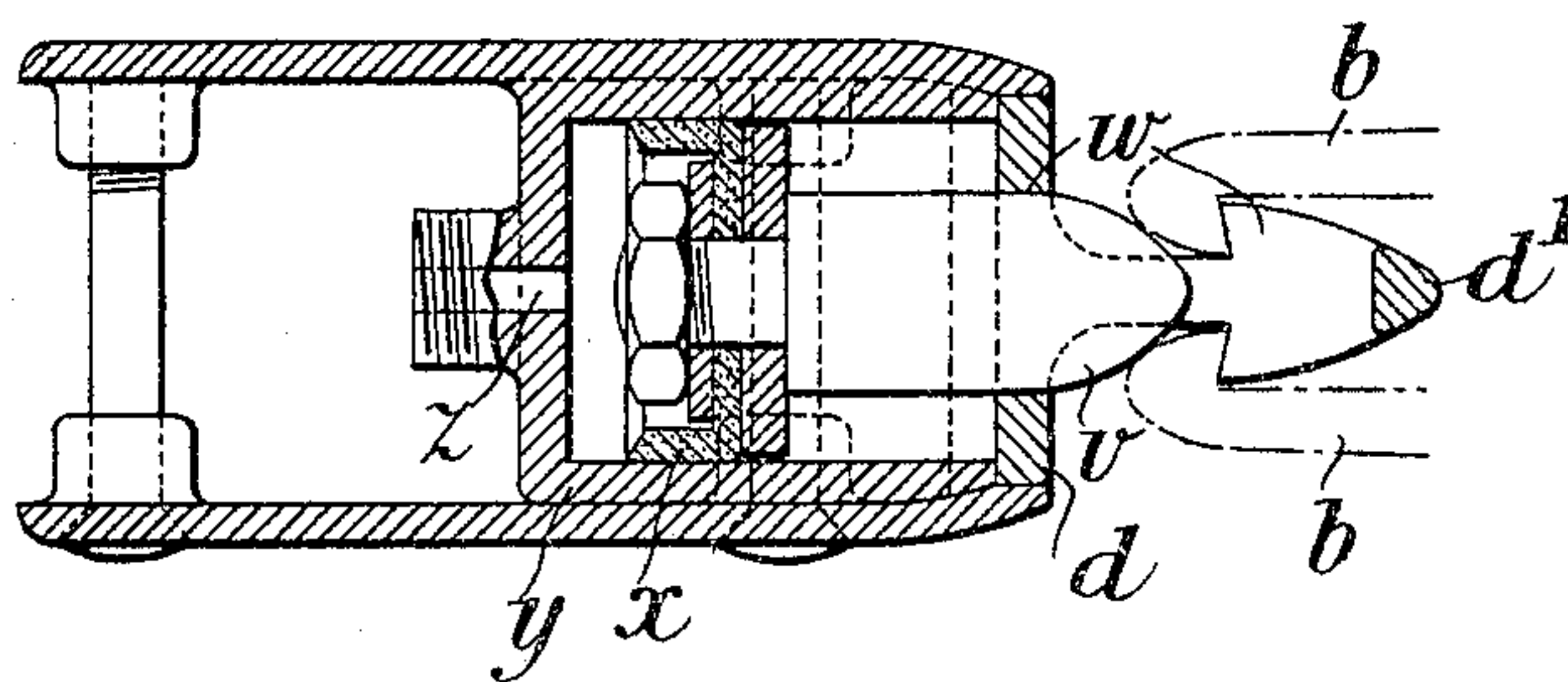


Fig 5.



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UNITED STATES PATENT OFFICE.

FRANK DIETRICH WARD, OF HANWELL, ENGLAND, ASSIGNOR OF ONE-HALF TO HENRY PERCY BRADFORD, OF LONDON, ENGLAND.

LOCK.

SPECIFICATION forming part of Letters Patent No. 789,775, dated May 16, 1905.

Application filed July 25, 1904. Serial No. 218,103.

To all whom it may concern:

Be it known that I, FRANK DIETRICH WARD, a subject of the King of Great Britain, residing at 7 Holly Park Terrace, Church Road, Hanwell, in the county of Middlesex, England, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to locks more particularly designed for use in connection with sliding doors, and has for its object the production of a lock in which the striking-plate or the like is more positively engaged therewith than in locks as heretofore constructed and which in addition to the usual handle or handles for unlocking it can be provided with an independent device for unlocking designed to be worked at a distance from the lock.

According to the invention the lock proper is provided with hooks oppositely arranged and relatively movable, and the striking-plate is in the form of a double-barbed wedge projection designed to pass between the hooks and engage therewith.

In a suitable arrangement for carrying out the invention the hooks in the lock are pivoted and provided with arms against which bears a tumbler or arm on the handle-spindle, means being provided, such as a spring, between the extensions on the hooks which tends to move the hooks toward each other. By this arrangement the tumbler can be moved by the handle or handles to disengage the hooks from the striking-plate. To prevent the hooks from being disengaged from the striking-plate by the handles, a notched spindle is advantageously employed for locking the tumbler. For disengaging the hooks from the striking-plate at a distance from the lock a wedge-shaped bolt is advantageously employed, located in a recess in the barbed projection of the striking-plate, and which can be operated by compressed air or by other suitable means.

To enable the invention to be fully understood, I will describe it by reference to the accompanying drawings, in which—

Figure 1 is a sectional elevation of a lock and striking-plate constructed according to

the invention. Fig. 2 is a sectional plan of the same. Fig. 3 is a section on the line 3 3, Fig. 1. Fig. 4 is a sectional elevation showing the striking-plate and the device for operating the lock at a distance. Fig. 5 is a sectional plan of the same.

a, Figs. 1 to 3, is the lock-case, and *b b* are the two hooks pivoted therein on pins *c c*.

d is the striking-plate, having the double-barbed wedge projection *d'*, designed to pass through a hole *e* in the case *a* and engage the hooks *b b*, as indicated by the dotted lines in Fig. 2.

f is the tumbler on the spindle *g* of the lock-handles *h h*, and *i i* are the arms on the hooks *b b* and which are arranged approximately at right angles to the said hooks, so that the tumbler *f* can bear against them, as shown. The arms *i i* are advantageously formed with projections *j* and notches *k*, the projections of one arm engaging the notches of the other, as shown in Fig. 3.

l l are the extensions on the hooks *b b*, and *m* is the spring arranged between them and tending to move the said hooks toward each other.

By the described arrangement it will be seen that if the spindle *g* be turned in the direction of the arrow, Fig. 1, the tumbler *f* will move the arms *i i* and cause the hooks *b b* to move out of engagement with the barbs of the striking-plate *d*, so that the door carrying the lock proper can be moved away from the door or door-frame carrying the striking-plate.

n is a stop to limit the backward movement of the tumbler.

o is the notched spindle, and *p* is a projection on the tumbler *f*, which projection when bearing upon the solid portion *q* of the said spindle prevents the tumbler being operated by the handles, and so maintains the door locked.

r is the notch in the spindle, which when in the position shown clearly in Fig. 3 enables the tumbler *f* to be moved to separate the hooks *b b*, the projection *p* moving down into the said notch.

s s are squared portions on the ends of the

spindle *o*, so that it can be turned by a suitable key, and *t t* are flats on the spindle, and *u* a spring designed to bear on one flat or the other when in either the locked or unlocked position.

v, Figs. 4 and 5, is the wedge-shaped bolt, designed to be operated at a distance from the lock to separate the hooks *b b* and disengage them from the striking-plate, *w* being the recess in the said plate in which the bolt is located and works. As shown in the drawings, the said bolt is represented as being attached to a piston *x*, working in a cylinder *y*. By supplying compressed air through the inlet *z* the piston *x* and bolt *v* will be moved so that the latter (assuming the striking-plate *d* and hooks *b b* are in engagement, as indicated in Fig. 5) will force the said hooks apart.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a lock the combination of oppositely-pivoted hooks, a striking-plate in the form of a double-barbed projection designed to pass between and engage the two hooks and a wedge-shaped bolt carried by the striking-plate and designed to be operated to pass between the hooks and separate them from the barbed projection of the striking-plate, substantially as described.

2. In a lock, the combination of oppositely-pivoted hooks, a striking-plate in the form of a double-barbed projection designed to pass between and engage the two hooks and a wedge-shaped bolt carried by the striking-plate and designed to be operated to pass between the hooks and separate them from the barbed projection of the striking-plate, a piston connected to said bolt, a cylinder engaging

said piston and means for supplying fluid under pressure to said piston for operating said bolt, substantially as described.

3. In a lock, the combination of oppositely-pivoted hooks, a striking-plate in the form of a double-barbed projection designed to pass between and engage the two hooks and a wedge-shaped bolt carried by the striking-plate and designed to be operated to pass between the hooks and separate them from the barbed projection of the striking-plate, a lock-handle spindle mounted in said lock and provided with a tumbler for operating said pivoted hooks to release said projection whereby said projection may be released by means of said lock-handle spindle or by means of said bolt, substantially as described.

4. In a lock, the combination of oppositely-pivoted hooks, a striking-plate in the form of a double-barbed projection designed to pass between and engage the two hooks and a wedge-shaped bolt carried by the striking-plate and designed to be operated to pass between the hooks and separate them from the barbed projection of the striking-plate, a piston connected to said bolt, a cylinder engaging said piston and means for supplying fluid under pressure to said piston for operating said bolt, a lock-handle spindle mounted in said lock and provided with a tumbler for operating said pivoted hooks to release said projection, whereby said projection may be released by said lock-handle spindle or by said piston and bolt from a distance, substantially as described.

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Witnesses:

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C. G. REDFERN.