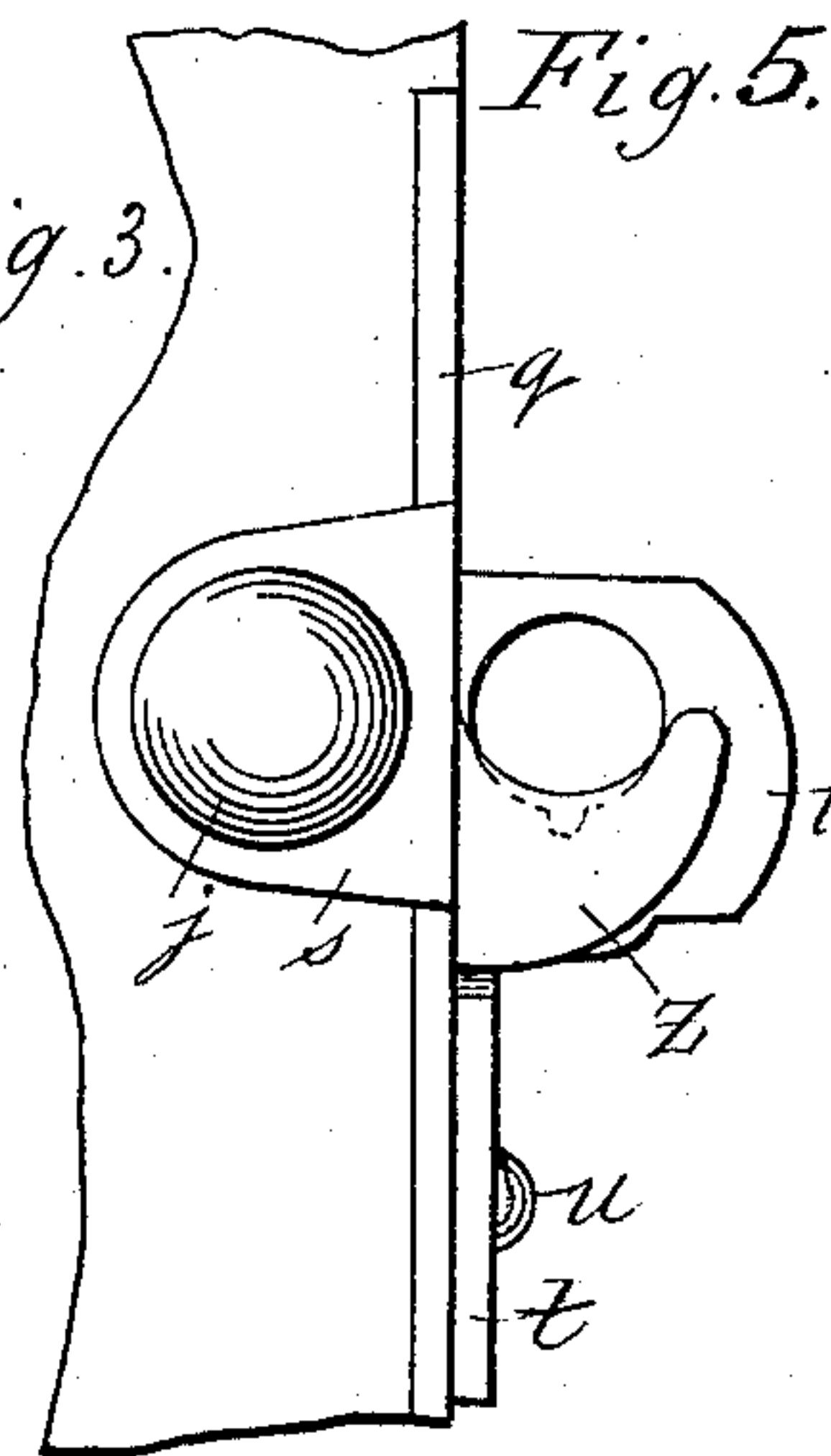
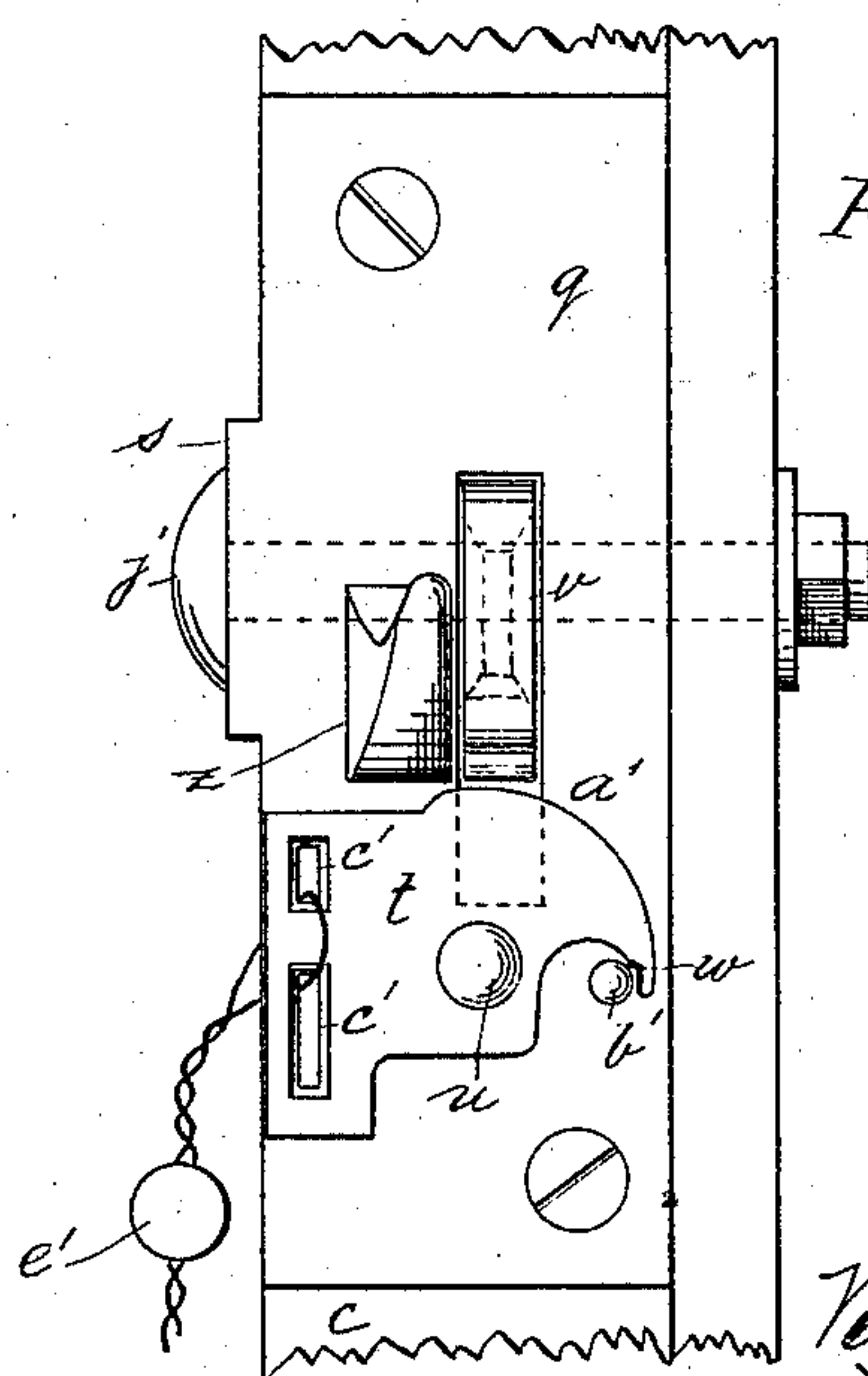
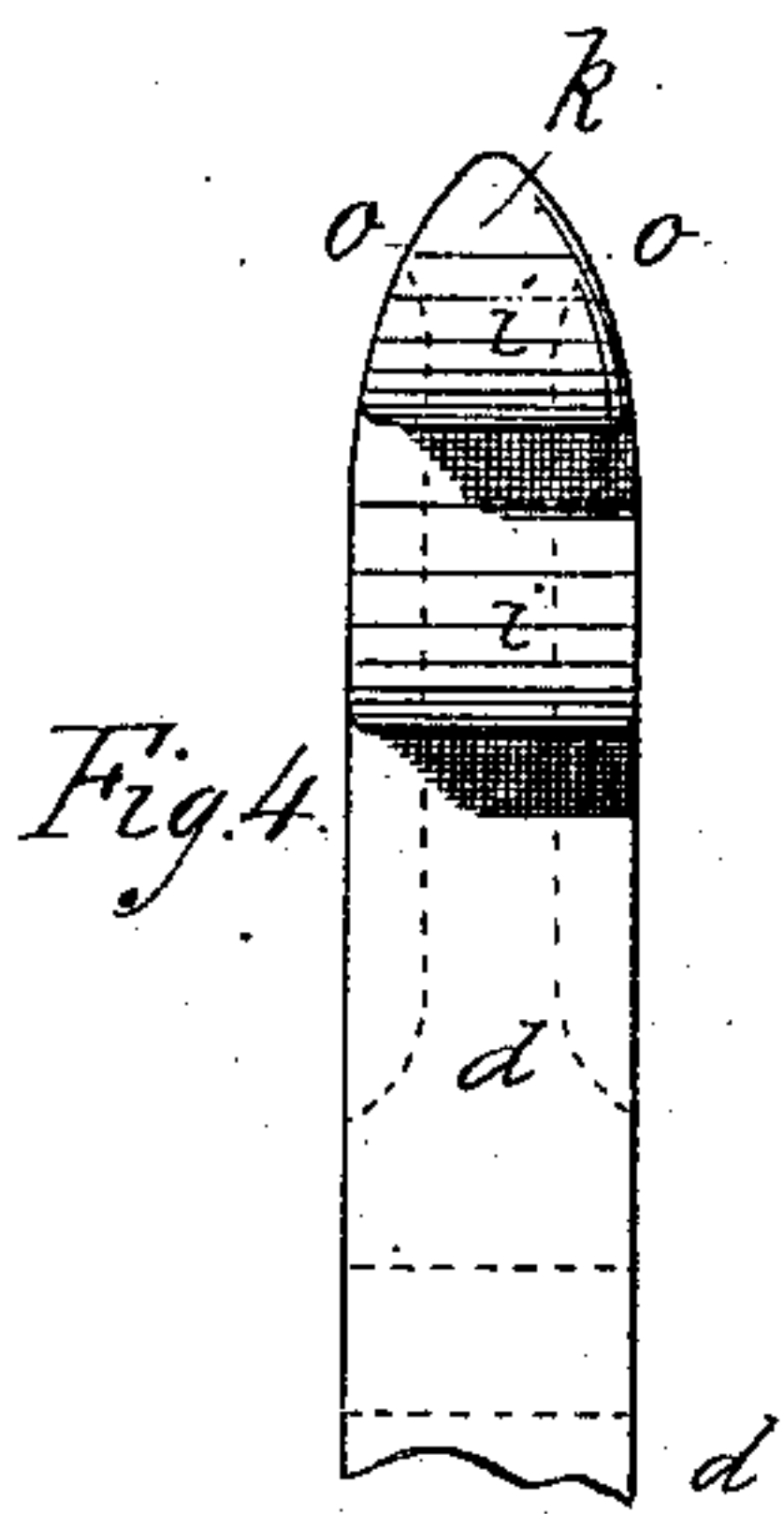
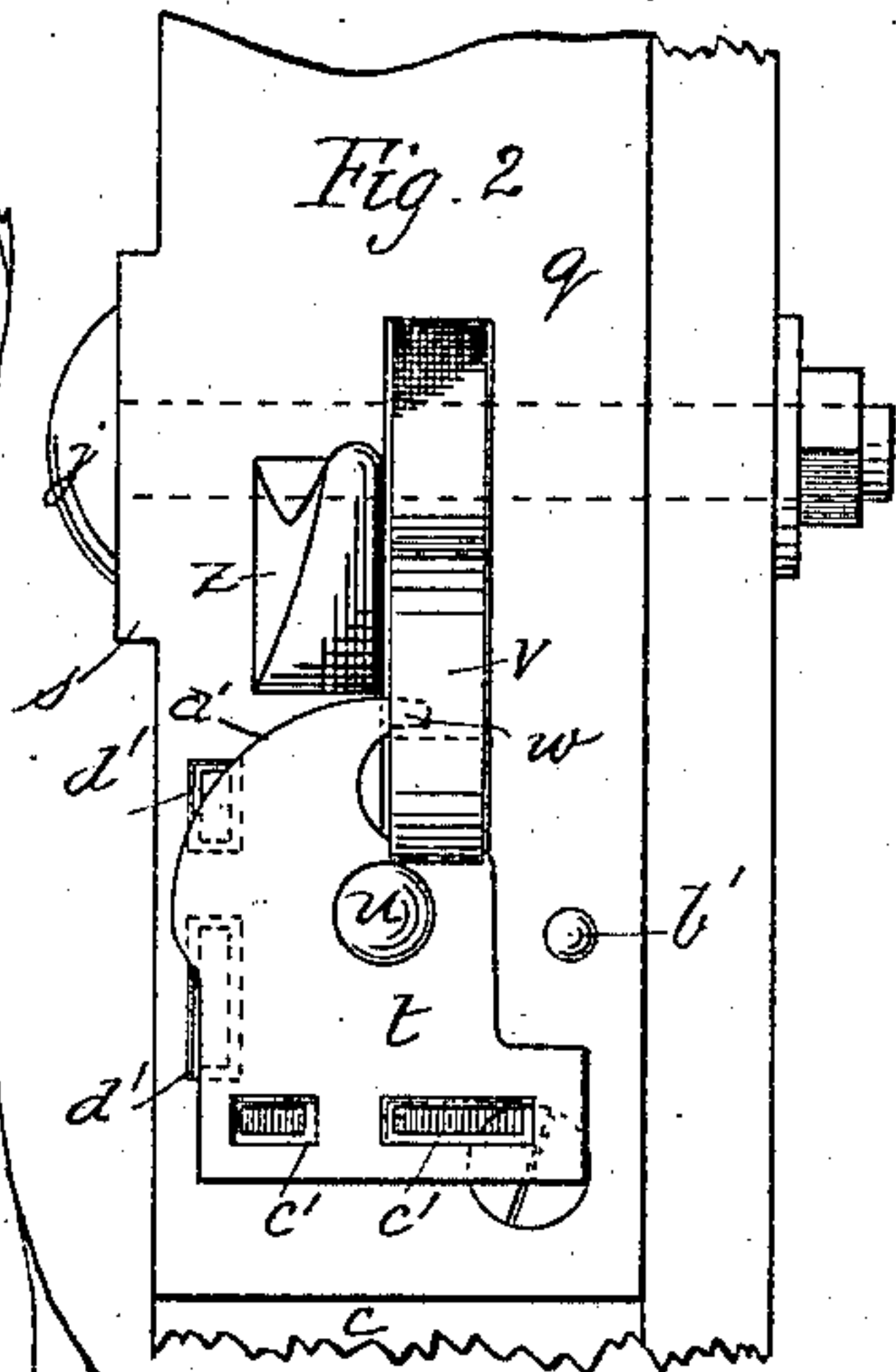
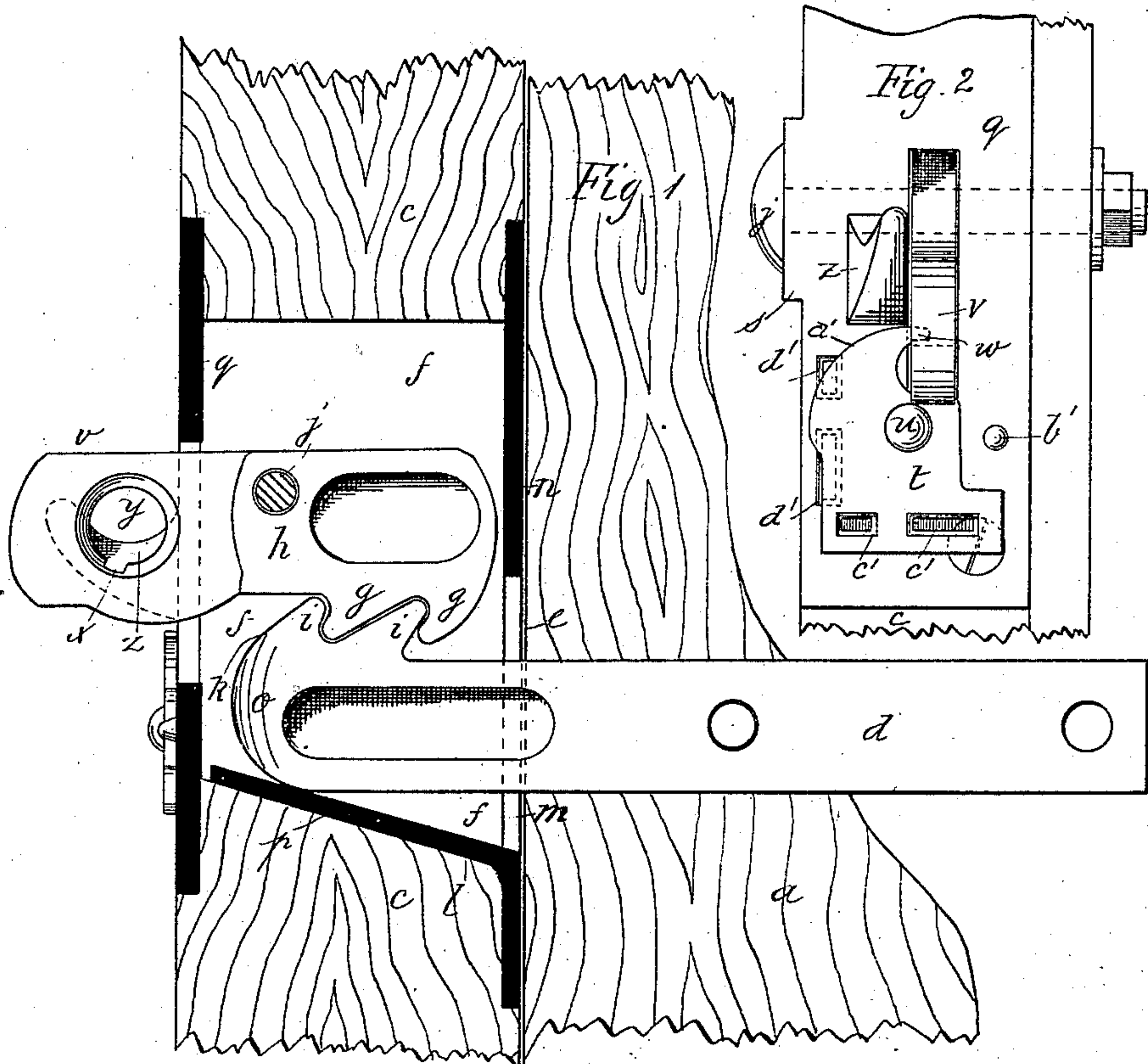


(Model.)

V. A. KREPPPS.
SEAL LOCK FOR CAR DOORS.

No. 290,690.

Patented Dec. 25, 1883.



WITNESSES:

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VIRGIL A. KREPPS, OF NEW YORK, N. Y.

SEAL-LOCK FOR CAR-DOORS.

SPECIFICATION forming part of Letters Patent No. 290,690, dated December 25, 1883.

Application filed February 24, 1883. (Model.)

To all whom it may concern:

Be it known that I, VIRGIL A. KREPPS, a citizen of the United States, and residing at New York city, in the county and State of New York, have invented new and useful Improvements in Car-Door Locks, of which the following is a specification.

This invention consists of improvements in the lock for car-doors, and applicable to other sliding doors, described in the application No. 74,381, filed by me for a patent, and now pending in the Patent Office, and which consists, essentially, of a notched bolt rigidly attached to the door, to slide into a lock-case in the door-jamb, containing a catch which gravitates into the notches in the bolt, with a horn-shaped extension from the back of the lock-case, to which the stem of the catch is secured by a padlock, the present improvements being designed to facilitate the proper entry of the bolt into the lock-case when the door settles or warps or springs so as to shift the bolt from the right position; also, to facilitate the placing of the pivot-bolt of the lock-catch rightly, and to provide more substantial means of keeping it in position in use; also, to improve the means of applying the seal, and of holding the catch up out of the bolt while sliding the door back to open it, all as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is an inside elevation of the lock-case in the plane of the bolt and the catch, the door being locked. Fig. 2 is an elevation of the lock, showing the contrivance for holding up the catch to free the bolt while the door is being opened. Fig. 3 is an elevation showing the contrivance for applying the seal, and Fig. 4 is a plan of a portion of the bolt. Fig. 5 is a partial side view.

The door *a*, which slides along the ways to and from the jamb-cleat *c* of the door-frame, has a hook-headed bolt, *d*, bolted to the inside flush with the surface and extending from the edge *e* suitably for projecting into the space *f* within the lock-case for engaging with the hooks *g* of the gravity-catch *h* by its hooks *i*, the catch being arranged on the pivot-bolt *j* suitably for being raised by the beveled corner *k* of the bolt. In this kind of lock it is desirable to employ two hooks on the bolt and catch, so that when it may be desired to se-

cure the door without entirely closing it, for ventilating the car, it can be accomplished by engaging the first hook of the bolt with the first hook of the catch, the arrangement being such that when the door is entirely shut both hooks of the bolt and catch will be engaged.

It will be seen that in such arrangement of double hooks it is very essential that the bolt shall not be allowed to drop below the one line or horizontal plane in which it must lie to enable both hooks to engage alike. Moreover, the catch must not fall below a certain line or plane in engaging with the bolt, otherwise the slack may become so great between the shank, which extends back out of the lock-case to be secured for locking it, and the device to which said shank is secured that it may be unhooked without breaking the lock; yet in this kind of sliding door it is difficult, if not practically impossible, to effectually guard against the sagging of the door, so that in a short time the bolt will fall below its proper level.

The present improvements for facilitating the proper entry of the bolt-head into the lock-case when the door sags or springs consists of the sloping wall *l*, in this form of lock ascending from the bottom of the slot *m* in the front plate, *n*, through which the bolt enters the lock-case, the said wall being arranged in suitable relation to the catch *h* to raise the bolt and the door, so as to be secured by the catch.

For correcting the lateral divergence of the bolt by the warping or springing of the door or the door-frame sideways, it may be constructed with the tapered sides *o* on its front end, which enables the point to enter the slot *m*, and thereby insure the entry of the bolt when a square end would fail to enter.

For a substantial wearing-surface to the incline *l*, I construct the front plate, *n*, with a tongue-flange, *p*, to fit on the bottom shoulder of the space cut in the cleat *c* for the lock-case.

For insuring the proper location of the pivot-bolt *j* with relation to the catch and the bolt, and so as to cause the hooks to mesh rightly and secure the bolt without slack when the door is closed, and also for the better protection of the bolt against shifting out of place by the shocks to which it is subject, and by the swelling and shrinking of the wood, I make the

back plate, *q*, for closing the space *f*, where-
 in the catch and bolt interlock, with a pivot-
 hole flange, *s*, extending along the front side of
 the cleat *c* of the door-frame, and having a hole
 5 for the bolt located in the right position, and
 being a guide by which to bore the hole through
 the cleat after the plate *q* has been attached,
 thus making certain of having the hole exactly
 in the right place. The plate *q*, thus provided
 10 with the pivot-hole flange, being fitted to the
 cleat *c*, with its upper end on a level with the
 upper end of plate *n*, insures the location of
 the pivot-bolt for the catch the right distance
 above the incline *p* for the bolt to be properly
 15 engaged with the catch, the bolt being in con-
 tact with said incline, as when the door has
 sagged and the bolt has been forced up the in-
 cline and the door raised thereby.

For holding up the catch after it has been
 20 raised to release the bolt, to enable the attend-
 ant to use both hands for shoving back and
 opening the door, which often binds hard and
 cannot be opened with one hand while the other
 holds the catch, I now propose to employ a
 25 catch-plate, *t*, pivoted at *u* to plate *q* under the
 shank *v* of the hook-catch *h*, and having a hook-
 point, *w*, that swings into the notch *x* in the hole
y, wherein the hasp of the padlock is placed to
 lock the catch over the horn *z*, attached to plate
 30 *q* for that purpose, the said hook-plate *t* to be
 shifted up into the position represented in Fig.
 2 when the catch is to be held up by it, and I
 propose to employ this plate for fastening the
 catch, when locked with the bolt, by making it
 35 in the curved shape and proper dimensions at
a' to rise up to the under side of the shank of
 the latch by swinging the point *w* down on the
 stop-stud *b'*, and providing it with one or more
 slots or holes, *c'*, and making corresponding
 40 holes or slots, *d'*, in the plate *q*, with which the
 holes *c'* will coincide when the seal *e'* is to be
 applied.

The stud-pin *b'* and the pivot *u* hold the plate
t effectually against pressing it down to allow
 the shank of the catch to be pressed down, and 45
 the curve *a'* makes it necessary to turn the plate
 farther than the seal will allow for retaining
 the catch that way, so that the seal wire or
 strip must be entirely cut off before the lock 50
 can be opened. Wire or thin strips of metal
 may be used for the seals, as preferred.

What I claim, and desire to secure by Let-
 ters Patent, is—

1. In a lock consisting of the hook-bolt *d*,
 rigidly attached to the door, and hook-catch 55
h, pivoted to the lock-case and located over
 the bolt, the inclined wall *l* of the bottom of
 the lock-space *f*, in combination with the bolt
 and the catch, and being arranged in the rela-
 tion to them whereby the bolt will be guided 60
 up to the catch when the door sags, substan-
 tially as described.

2. The back plate, *q*, having the pivot-bolt
 flange *s*, in combination with the catch *h* and
 bolt *d*, substantially as described. 65

3. The plate *t*, having hook-point *w*, and be-
 ing pivoted to plate *q*, and with relation to
 shank *v* of the lock-catch to engage it by notch
x of hole *y*, to hold the catch while opening
 the door, substantially as described. 70

4. The plate *t*, having hook-point *w*, curved
 portion *a'*, and a hole or holes, *c'*, in combina-
 tion with the shank of catch *h* and with plate
q, having stud *b'* and holes *d'*, for securing the
 lock by the seal, substantially as described. 75

In witness whereof I have hereunto signed
 my name in the presence of two subscribing
 witnesses.

VIRGIL A. KREPPS.

Witnesses:

EUGENE Y. ELIOT,
 W. J. MORGAN.