

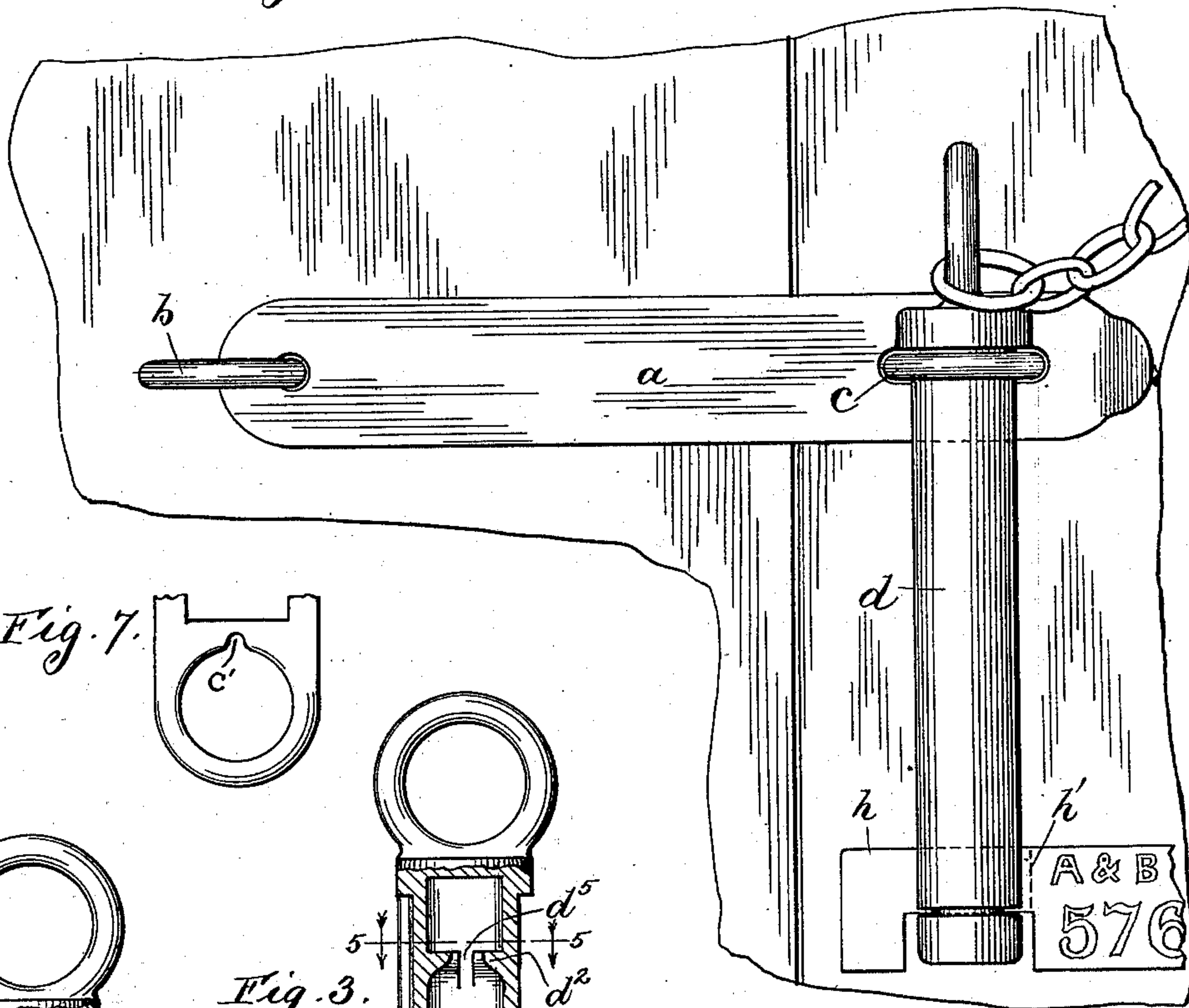
(No Model.)

G. S. TIFFANY.  
SEAL BOLT.

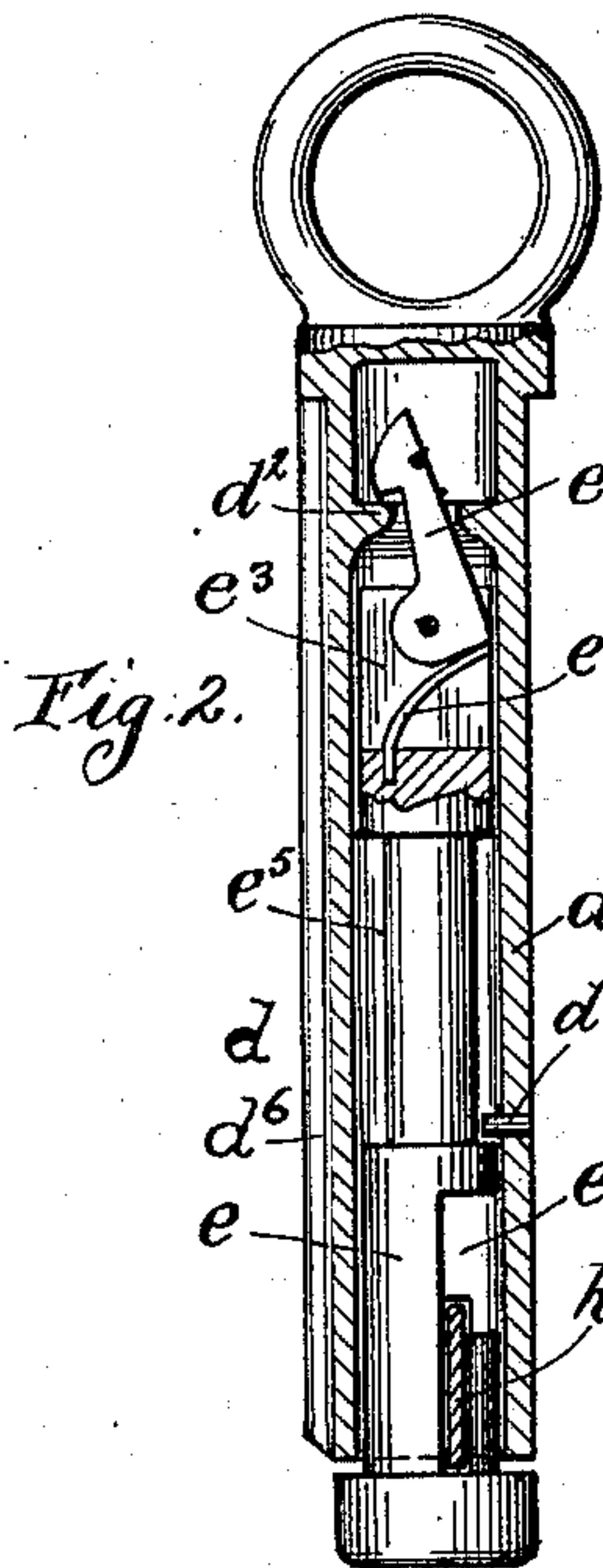
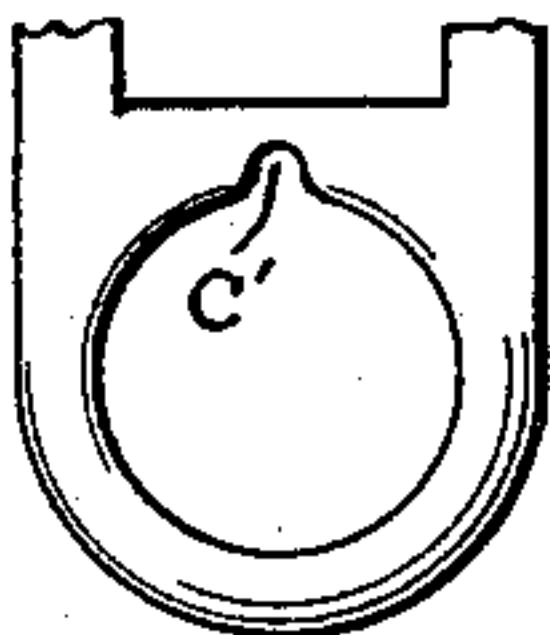
No. 578,786.

Patented Mar. 16, 1897.

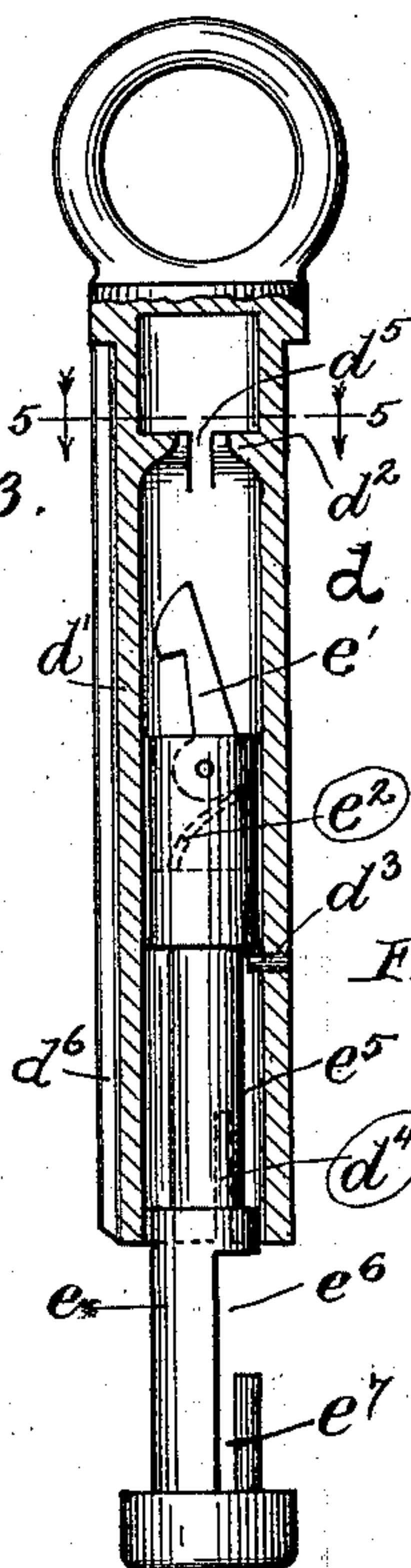
*Fig. 1.*



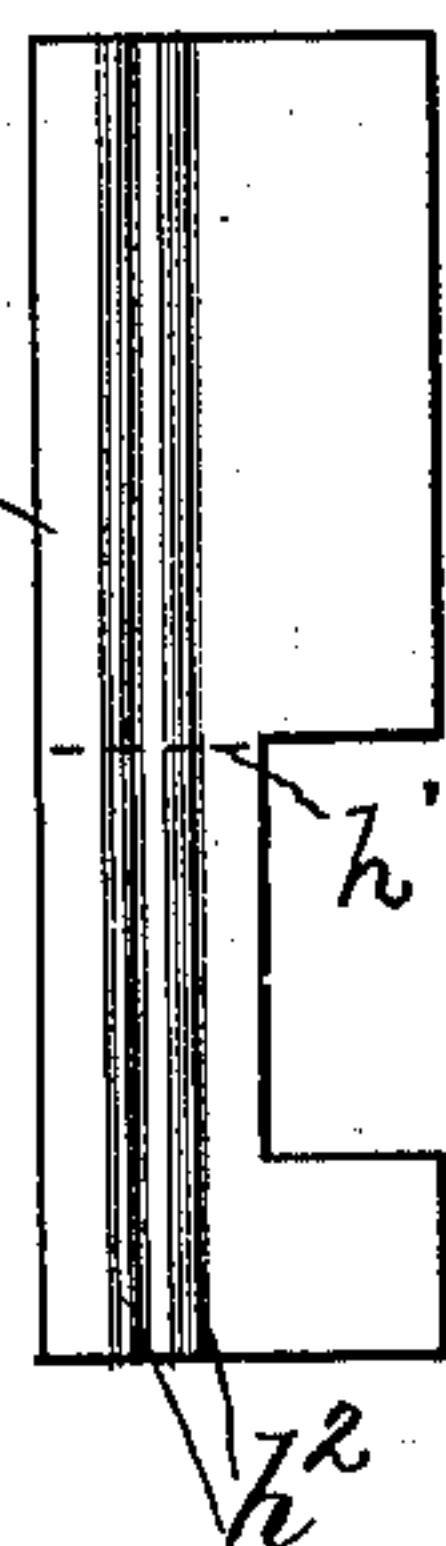
*Fig. 7.*



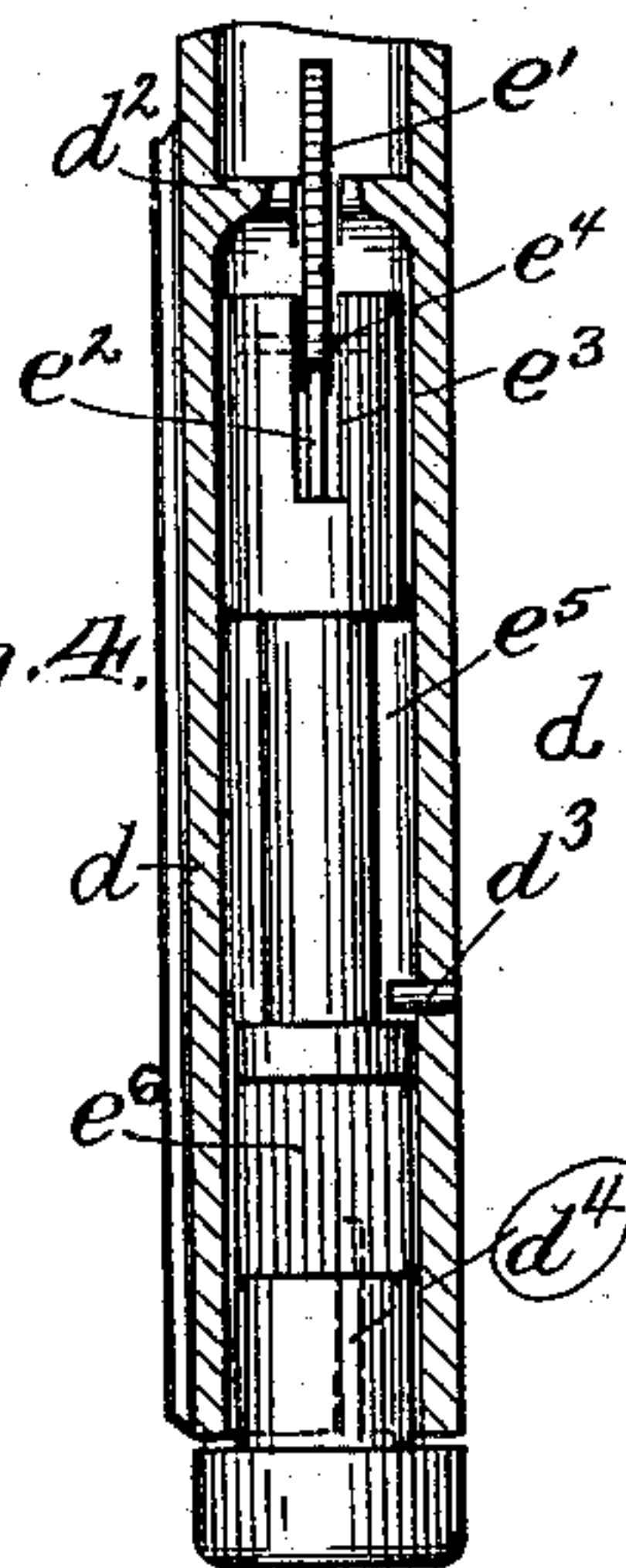
*Fig. 3.*



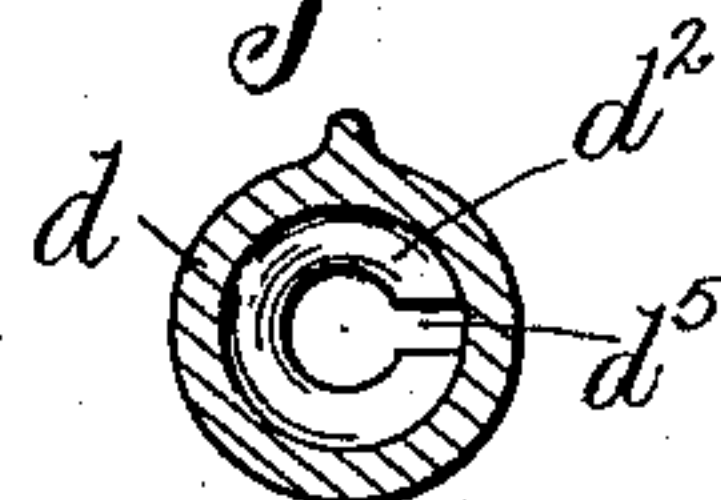
*Fig. 8.*



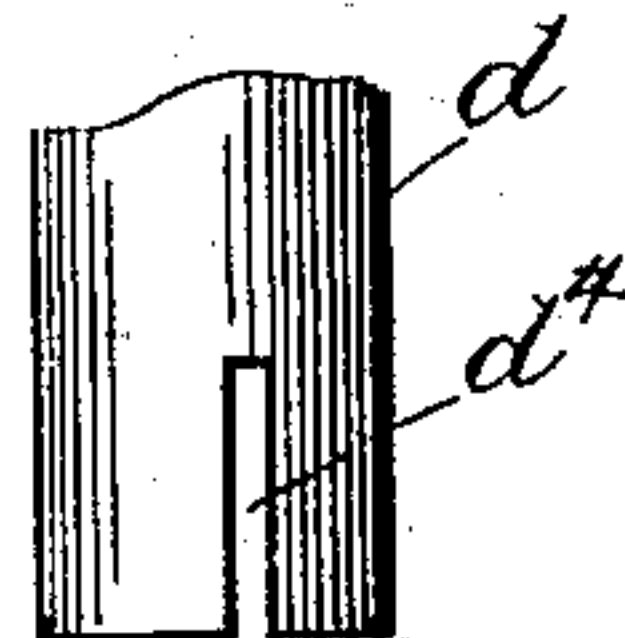
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Witnesses:

W. J. Jacker  
Edward E. Pion.

Inventor:

George S. Tiffany  
By W. Clyde Jones.  
Atty.



# UNITED STATES PATENT OFFICE.

GEORGE S. TIFFANY, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
THOMAS S. WHEELWRIGHT, OF HIGHLAND PARK, ILLINOIS.

## SEAL-BOLT.

SPECIFICATION forming part of Letters Patent No. 578,786, dated March 16, 1897.

Application filed April 10, 1896. Serial No. 586,904. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE S. TIFFANY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Car-Seal Locks, (Case No. 2,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to car-seal locks, its object being to provide a pin for car locks or fasteners in which the seal may be readily locked and in a manner to prevent the withdrawal of the pin without first breaking and removing the seal. In car-fasteners as usually employed a hasp is pivoted to the door and adapted to be placed over a staple provided upon the door-frame, a pin being provided which is passed through the staple to prevent the removal of the hasp. The withdrawal of the pin is prevented by a seal, in the form of a strip of tin or sheet metal, which is passed through an eye or slot in the end of the pin, the ends of the strip being secured together by a soft-metal rivet, which passes through holes provided in the ends of the strip, the ends or heads of the rivet being pressed against the faces of the sheet-metal strip, a special tool being employed for pressing the rivet into form.

It is the object of the present invention to provide a form of lock whereby a seal requiring a special tool in its application to the fastener may be dispensed with, and, furthermore, to employ as many of the parts of the fasteners at present upon the cars as possible. In accordance with the present invention all of the parts of the present fasteners except the pins may be employed, the ordinary pin being replaced by a pin having a separable head or plunger, between which and the body of the pin the seal is locked in such a manner that the removal of the pin from the staple is prevented by the presence of the seal, the removal of the seal from the pin being prevented without first breaking the same. The seal is preferably in the form of a small piece of sheet metal, which is inserted into a slot in

the end of the body of the pin, after which the head or plunger is moved into position and automatically locked therein by a spring-catch, the head or plunger thus locking the seal in the pin. When it is desired to remove the pin from the staple to unlock the car, the seal is broken and removed from the pin, thus freeing the plunger and permitting a partial rotation thereof, which results in the disengagement of the spring-catch, permitting the withdrawal of the plunger. By this construction the seal is locked in position by a simple movement of the parts of the pin and without the employment of any tool, and the seal is locked in position in a manner to effectually prevent the removal of the pin without first breaking and removing the seal. Furthermore, the lock of the present invention may be readily and at small cost applied to the existing fasteners by the substitution of the pin of the present invention for the usual solid pins.

I am aware that it has heretofore been proposed to secure the seal to the fastener through the agency of a detachable pin or plunger, but in such constructions a casting carrying the socket is mounted upon the car, within which socket the pin passes, whereas, in accordance with the present invention, the seal-lock is wholly within the pin, which comprises a shell or body within which fits a plunger or head, between which and the body the seal is locked.

The lock of the present invention may be utilized by substituting the pin herein for the ordinary pins in use, while the employment of the lock above referred to necessitates the discarding of all of the parts of the fasteners now in use and the complete reëquipment of the cars.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a view of a hasp-and-staple lock provided with the pin of my invention. Fig. 2 is a sectional view of the pin, showing the plunger in its innermost or locked position. Fig. 3 is a similar sectional view showing the plunger withdrawn. Fig. 4 is a sectional view on a plane at right angles to that of Fig. 2.



Fig. 5 is a sectional view of the pin on line 5-5, Fig. 3. Fig. 6 is a view of the end portion of the body of the pin. Fig. 7 is a view of the staple I employ in one form of my invention.

Fig. 8 is a view of a modified form of seal.

Like letters refer to like parts in the several figures.

The hasp *a* is secured at one end to a staple *b* and is provided at the opposite end with a slot, through which passes the staple *c*. The pin *d* passes through the staple *c*, thus locking the hasp in position. The body *d'* of the pin is in the form of a shell or hollow tube carrying upon the interior a shelf or lug *d<sup>2</sup>*, which preferably extends around the interior of the tube and is provided with a slot *d<sup>5</sup>* on one side. The plunger *e* moves within the bore of the shell and carries upon the end a pivoted dog *e'*, which when the plunger is thrust in engages the lug *d<sup>2</sup>* and locks the plunger within the shell. A short spring *e<sup>2</sup>* presses against the end of the dog *e'* to yieldingly press the same into engagement with the lug. The dog *e'* is pivoted within a slot *e<sup>4</sup>*, provided in the end of the plunger, a journal-pin passing through the end of the plunger and the dog.

A peripheral channel *e<sup>5</sup>* is provided around the plunger, and a pin *d<sup>3</sup>* projects into said channel to limit the movement of the plunger. Near the outer end of the plunger is provided a transverse channel *e<sup>6</sup>*, which when the plunger is withdrawn lies wholly beyond the end of the shell, through which channel the sheet-metal seal *h* may be passed to the slot *e<sup>7</sup>*. When the plunger is thrust in, the seal resting within the slot *e<sup>7</sup>* passes into the slot *d<sup>4</sup>* in the end of the shell *d*, and, the dog engaging the lug, the plunger is thus locked within the slots *e<sup>7</sup>* and *d<sup>4</sup>* of the plunger and the shell, respectively, and the rotation of the plunger is prevented without the previous breaking and removal of the seal.

When it is desired to remove the pin, the seal may be broken along the weakened line *h'* and the seal withdrawn from the pin, after which the pin may be withdrawn from the staple. When it is desired to insert a new seal, the plunger may be given a partial rotation to permit the passage of the dog *e'* through the slot *d<sup>5</sup>* and thus disengage the spring-catch, after which the plunger may be withdrawn for the insertion of a new seal.

As a further precaution against tampering with the lock I preferably provide a longitudinal ridge or web *d<sup>6</sup>* upon one side of the pin, and provide in the staple a recess *c'*, Fig. 7, in which the ridge *d<sup>6</sup>* is adapted to fit, the recess being so located that the ridge upon the pin will lie upon the back of the pin when in position, that is, upon the side toward the side of the car. The longitudinal slot *d<sup>4</sup>* is preferably situated to one side of the center, as is likewise the slot *e<sup>7</sup>* in the plunger, so that when the seal is in place the plunger will fit into the shell in one position only and will

not fit if the plunger be rotated through a half-revolution. The slots are so situated that the dog engages the lug at a point in the plane of the ridge. The dog thus rests against the rear wall of the shell and tampering therewith is prevented.

The seal is preferably made in the form illustrated, in which the ends possess greater width than the middle portion, to thereby prevent the endwise withdrawal of the seal through the slot. While I preferably employ this form of seal, other shapes may be employed. In order to prevent the bending of the seal about the pin to permit the withdrawal of the pin and seal through the eye of the staple, one or more corrugations *h<sup>2</sup>*, preferably longitudinal, are provided. In practice the pins are fitted to the staples, so that the pin closely engages the walls of the eye of the staple.

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

1. In a car-seal lock, the combination with a hasp and a staple, of a pin containing the seal-lock and comprising a shell provided with a shoulder or lateral extension at one end and open at the opposite end, a plunger extending into the open end of said shell, a catch for locking said plunger in said shell when thrust in except when the plunger is rotated, transverse slots provided at the open end of said shell and a transverse slot in the plunger registering with the slots in said shell when the plunger is thrust in, a flat seal fitting in said slots and provided with extensions on opposite sides of the shell to prevent the withdrawal of the seal, the shank of said pin passing through the eye of the staple and resting with the shoulder on one side of the staple and the locked seal on the other side, substantially as described, and for purpose set forth.

2. In a car-seal lock, the combination with a staple and a hasp, of a pin for insertion through said staple and provided with transverse slots within which a flat or sheet-like seal is clamped, the ends of the seal thus extending beyond the pin to prevent the withdrawal thereof through the staple, said pin being provided with a longitudinal ridge fitting in a slot extending from the eye of the staple and preventing the rotation of the pin or the wrapping of the ends of the seal about the pin, whereby the withdrawal of the pin before the seal is removed is prevented, substantially as described.

3. The combination with the staple *c*, of a hasp *a* fitting over the same, a pin containing the seal-lock and comprising the shell *d* provided at the upper end with a shoulder or lateral extension and provided in the end with the transverse slots *d<sup>4</sup>*, the plunger *e* extending into said shell and provided with the transverse slot registering with the slots *d<sup>4</sup>* when the plunger is thrust in, said plunger



being provided with a peripheral channel  $e^5$ ,  
a pin or projection on the shell extending into  
said peripheral channel to limit the movement  
of the plunger, and a catch for locking said  
5 plunger within the shell when thrust in ex-  
cept when the plunger is rotated, substan-  
tially as described.

In witness whereof I hereunto subscribe my  
name this 4th day of April, A. D. 1896.

GEORGE S. TIFFANY.

Witnesses:

W. CLYDE JONES,  
EDWARD E. PION.