

(No Model.)

W. MOSLEY.
PADLOCK.

No. 426,734.

Patented Apr. 29, 1890.

Fig: 1.

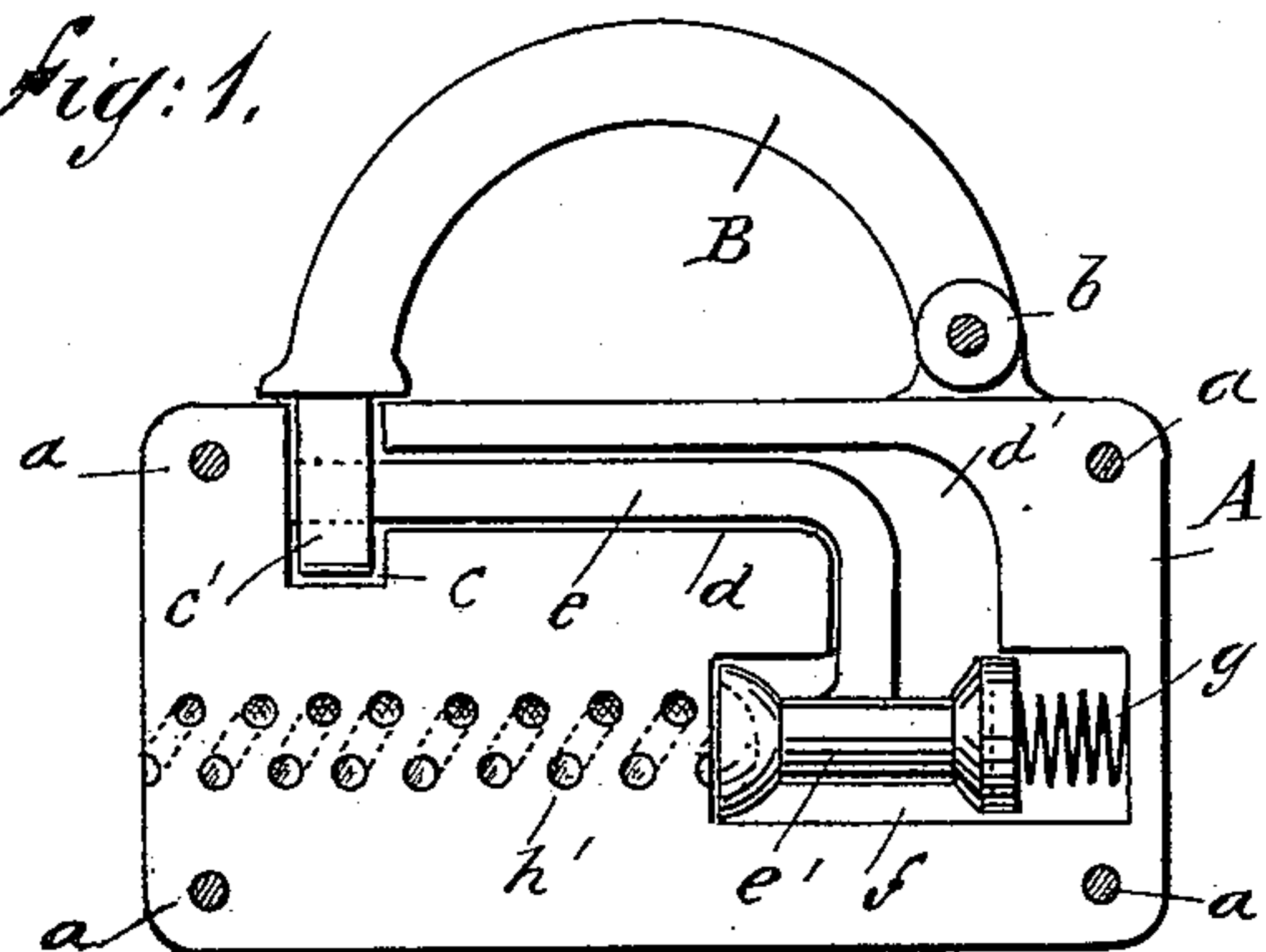


Fig: 2.

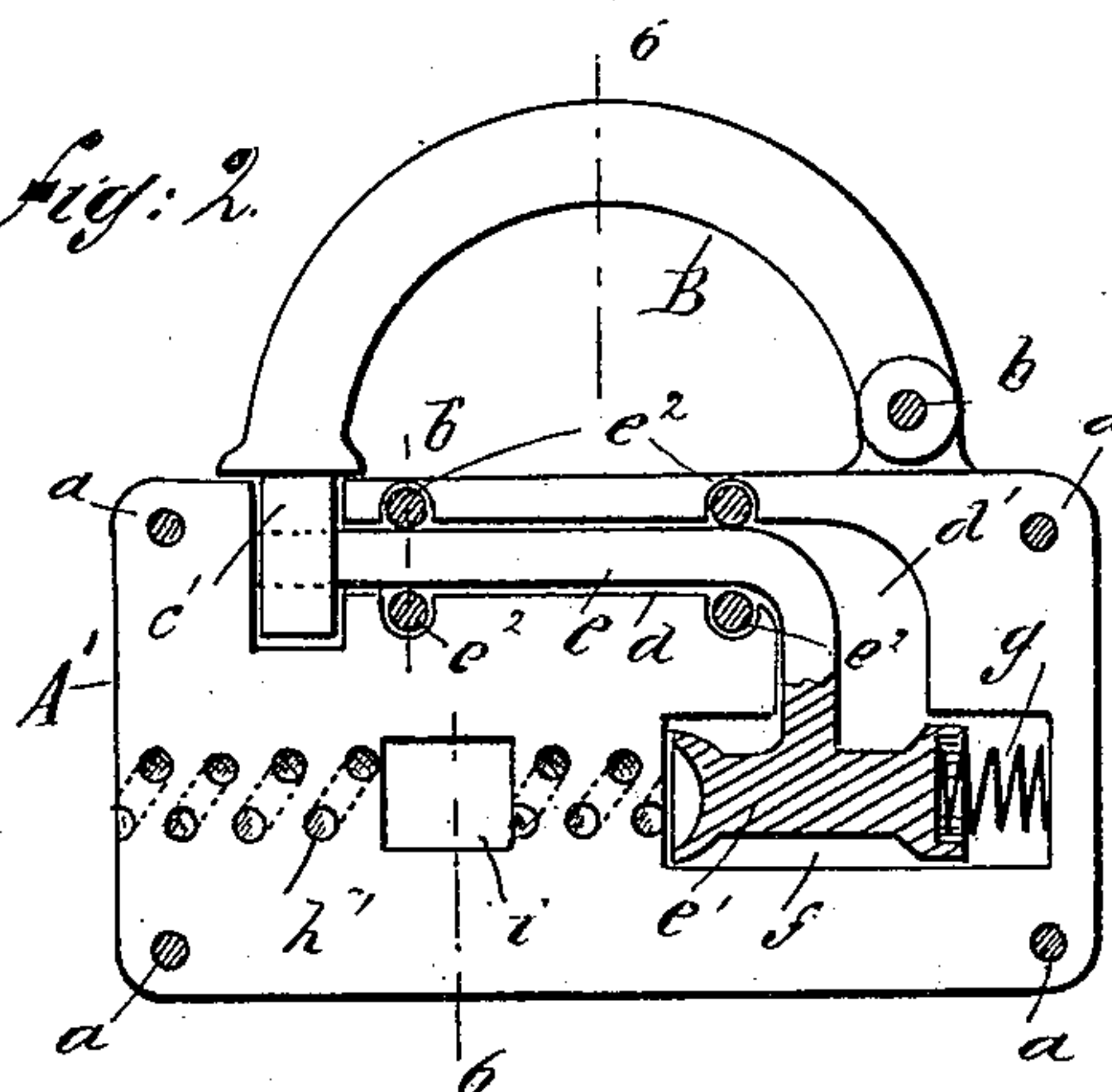


Fig: 3.

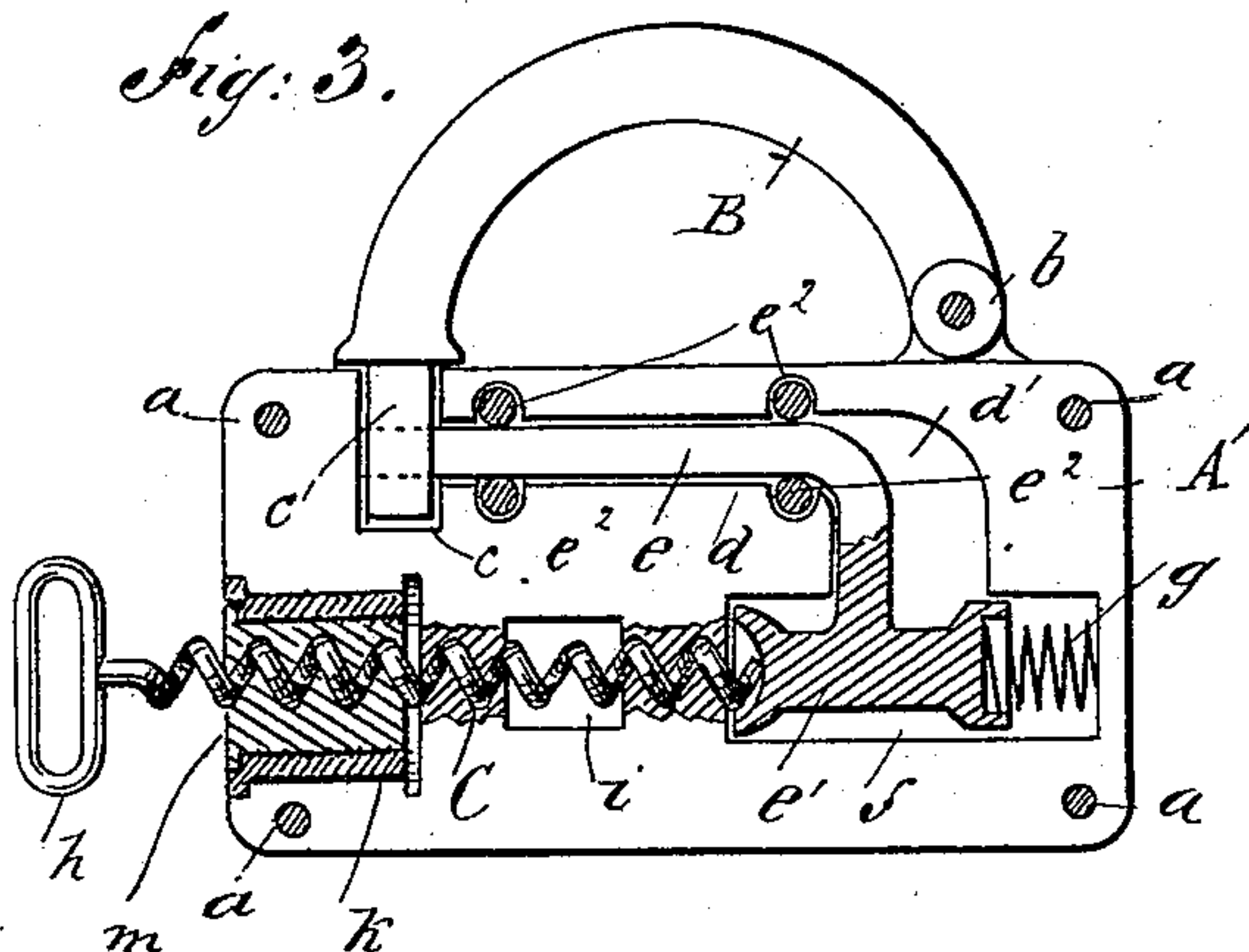


Fig: 4.

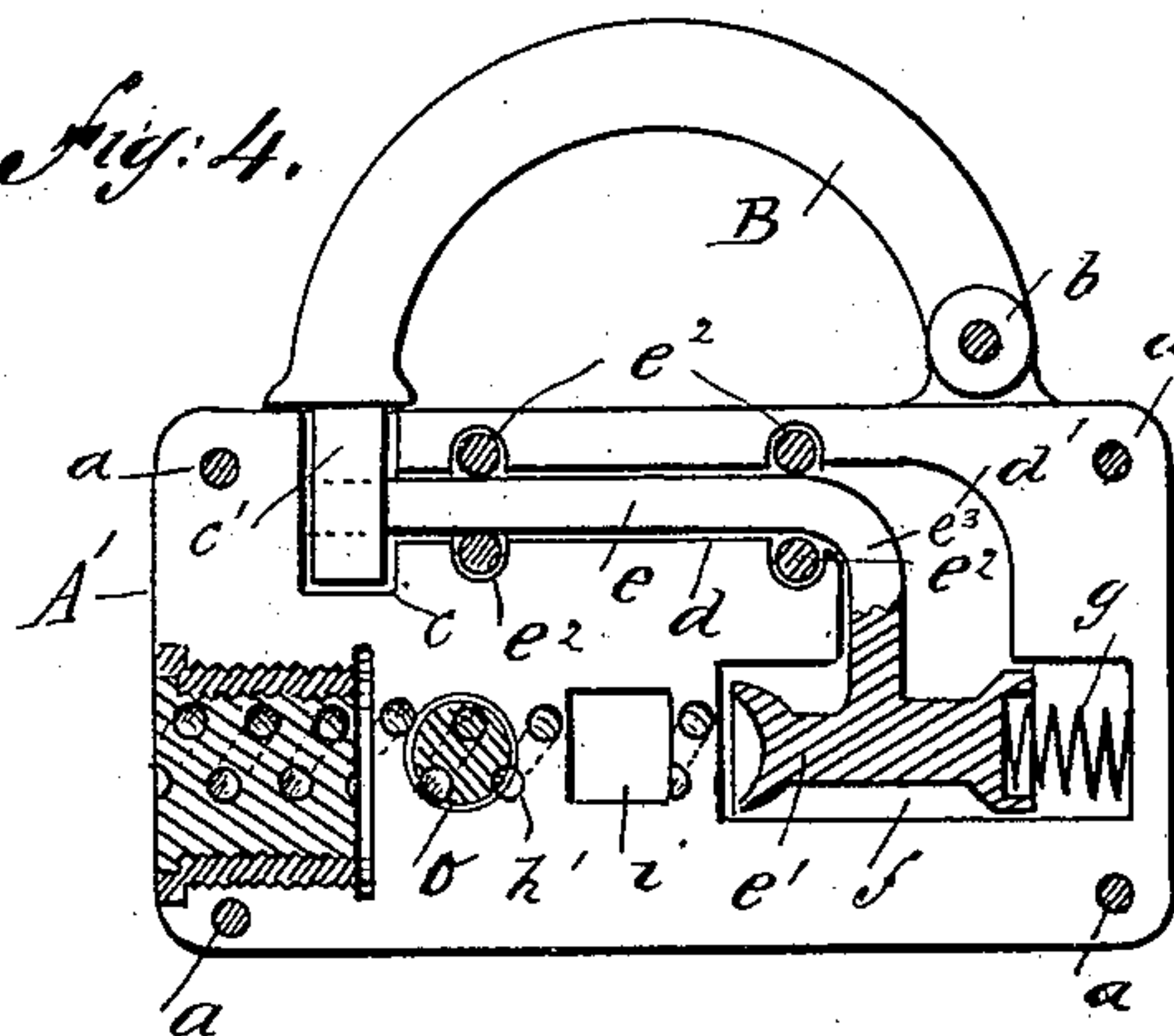


Fig: 5.

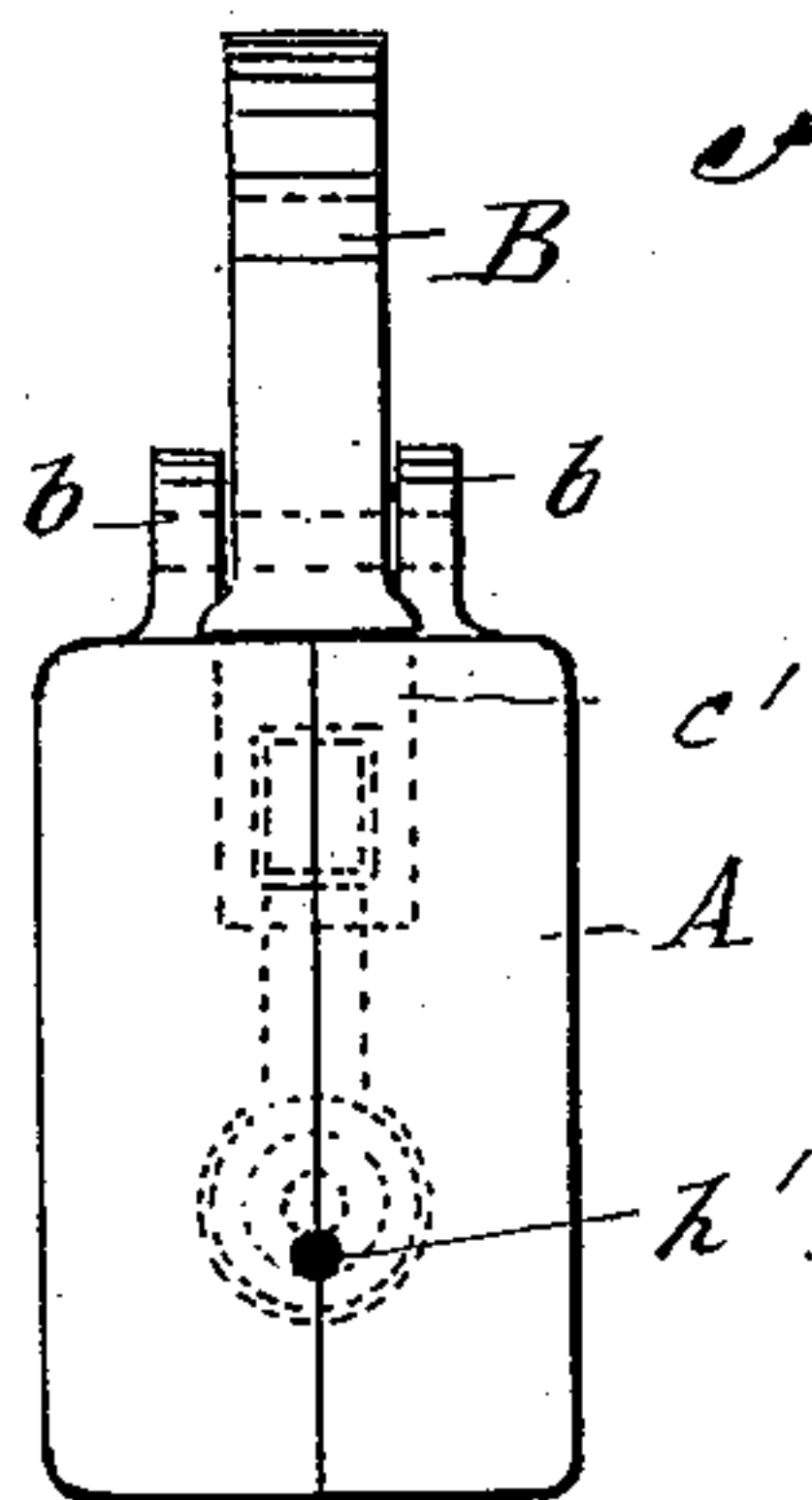


Fig: 6.

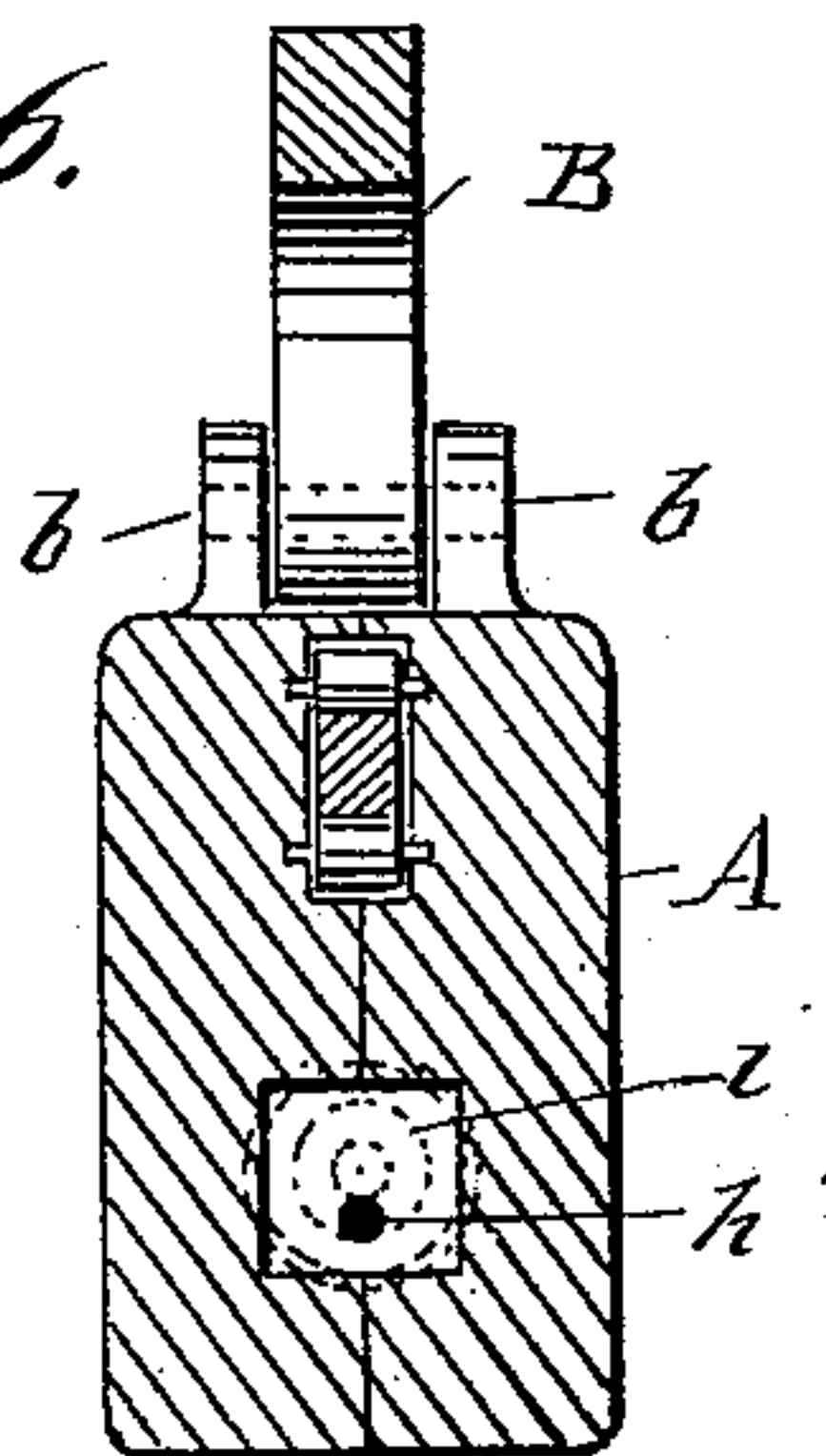
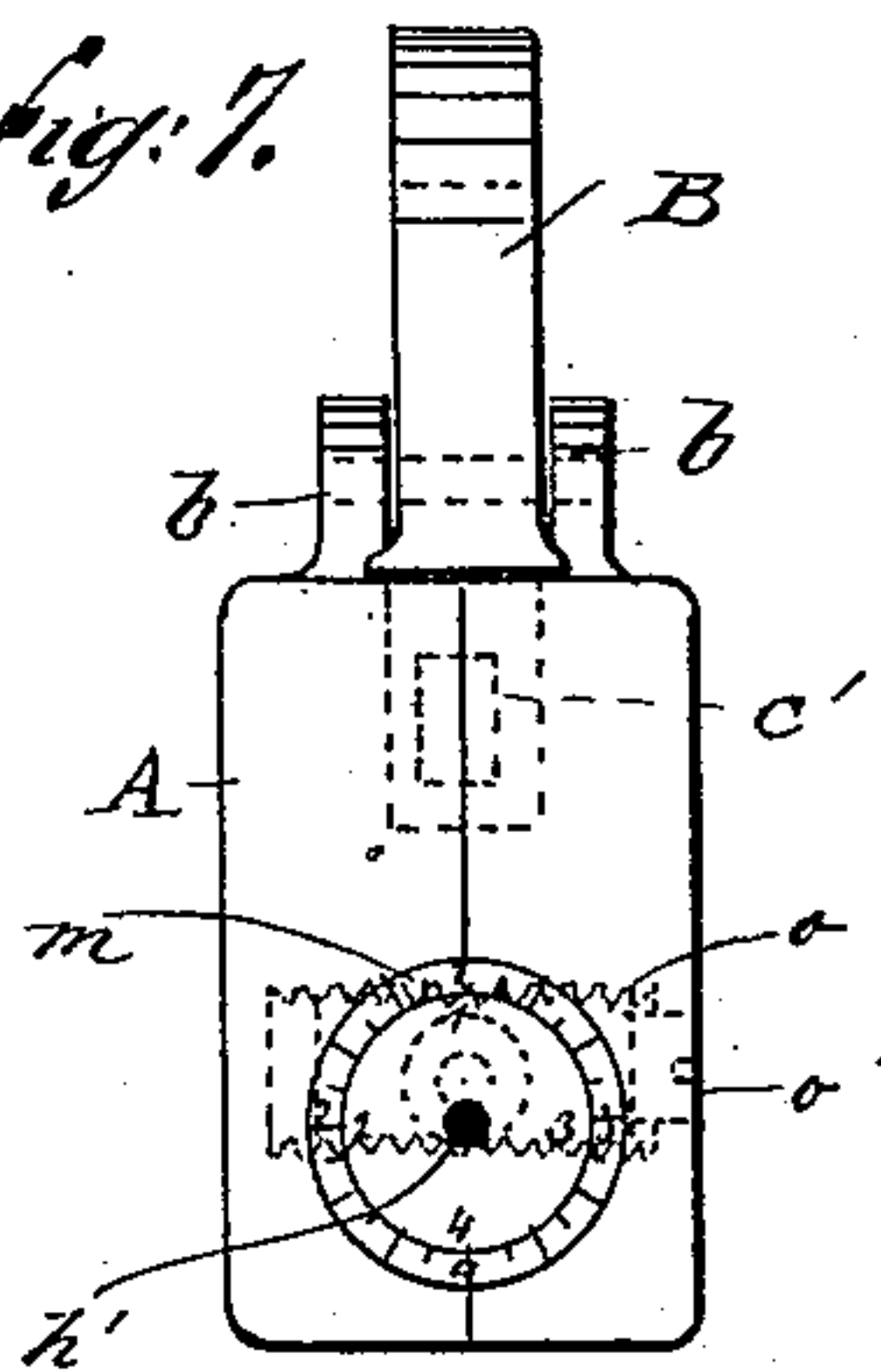


Fig: 7.



WITNESSES:

Chas. Nida.
C. Sedgwick

INVENTOR:

W. Mosley
BY Munn & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

WOODSON MOSLEY, OF TOLEDO, ARKANSAS.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 426,734, dated April 29, 1890.

Application filed March 1, 1890. Serial No. 342,238. (No model.)

To all whom it may concern:

Be it known that I, WOODSON MOSLEY, of Toledo, in the county of Cleveland and State of Arkansas, have invented a new and useful Improved Padlock and Key for the Same, of which the following is a full, clear, and exact description.

This invention relates to improvements in padlocks, and has for its object to produce a cheap and secure lock of the type named and provide a novel form of key therefor.

To this end my invention consists in certain features of construction and combination of parts, which will be hereinafter described, and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents one form of the lock, which, for convenience of construction, is longitudinally divided on a center line transversely considered, one half-section being shown with the connecting-rivets in section, other parts being shown in full form. Fig. 2 is a view of one-half of the lock longitudinally divided, the interior mechanism being partly in section, the body of the lock being slightly changed in construction. Fig. 3 is a side elevation of a half-section of the lock through its transverse center, exposing interior parts that are increased in number, and a key shown in position. Fig. 4 is a side elevation of a half-section of the lock through its transverse center, showing additional internal parts that are designed to render the lock more secure. Fig. 5 is a front end elevation of the lock body or case with the shackle or bolt in closed position, internal parts being shown in dotted lines. Fig. 6 represents a transverse section of the device shown in Fig. 2, taken on the line 6 6 in said figure; and Fig. 7 is a front end elevation of the lock represented in Fig. 4.

A' represents one-half of the lock-case, which is cast into form, these equal sections being secured together, as shown, preferably by rivets *a* at the corners. The case will, for convenience, be designated by letter A. At the rear of the case A the usual parallel ears *b* are projected from the top of the case, to which is pivoted the curved shackle-bolt B,

which when closed enters a socket-orifice *c* at the front of the case, there being a circumferential rib made on the shackle-body to limit its insertion within the socket *c*, the shackle end *c'* being transversely perforated to align with a longitudinal channel *d*, formed oppositely in each half-section of the case A, which together afford an elongated recess for reception of the bolt *e*, that may slide and interlock with the perforation in the shackle end *c'*. The recess *d* is curved downwardly and widened at *d'* to provide for the movement of the downwardly-curved portion *e³* of the bolt, and at *f* is extended forward and rearward a suitable distance to afford a cavity for the integral head *e'* of the sliding bolt *e*, this bolt-cavity being preferably made circular in cross-section and the bolt-head adapted to fit loosely in it. The rear end of the bolt-head *e'* is cupped to receive the impinging end of a spiral spring *g*, which holds the bolt in locked adjustment, the front end of the head being engaged by a key C of peculiar form, as shown in Fig. 3.

The same form of key C is used in all the modifications of the lock shown, and consists of a wire rod, preferably cylindrical, that is coiled to produce a spiral body for the key, which terminates in a handle-bow *h*, the length of the coil being sufficient to permit the key to be inserted in a spiral passage *h'*, formed in the lock-body so as to align axially with the bolt-head *e'*. The key when inserted and turned in the proper direction, traversing the spiral passage *h'*, abuts upon the cupped end of the bolt-head, forcing it back and releasing the shackle B.

In Fig. 2 the general construction shown in Fig. 1 is utilized; but to reduce friction on the bolt *e* transverse rollers *e²* are located in recesses properly spaced, which recesses intersect the recess *d*, thus permitting the rollers to have revoluble contact with the opposite sides of the bolt *e* and support it to slide without contact upon the recess-walls.

At a proper point between the front end of the lock-case and the bolt-head *e'* a preferably rectangular cavity *i* is formed, which divides the spiral passage *h'* into two divisions of length, the "pitch" or twist of said passage being adapted to receive the spiral coils of the key C, which may be inserted without

impediment. By providing the cavity *i*, as shown, tampering with a piece of wire is prevented, as a wire of sufficient flexibility to be introduced through the first section of the spiral passage *h'* will not retain its form when in the cavity, and therefore by deviation from a correct spiral is caused to abut against the rear wall of the cavity *i* and is prevented from entering the rear section of the key-passage *h'* when inserted to open the lock.

The key C, being of correct twist or pitch and made of unyielding material, will, when introduced and revolved, enter the coil-passage in the rear, and after traversing the same impinge upon the bolt-head, thereby releasing the hasp B.

In Fig. 3 the front face of the lock case or body is provided with a circular recess of suitable depth, into which the sleeve *k* is rev- olubly secured by any suitable means, and in said sleeve a solid cylinder *m* is inserted and retained free to rotate, said cylinder being provided with a spiral key-passage, the axis of which is eccentric to the axis of the cylinder. The axial center of the cylinder *m* is in the same vertical plane with the axis of the bolt-head *e'*, but below it, horizontally considered, so that the spiral key-passage *h'*, which axially coincides with the bolt-head, will align the cylinder *m* at one side of the center of the same.

On the outer surface of the cylinder and exposed end of the sleeve *k* graduations may be produced, as shown in Fig. 7, these being aligned at some known figure or indicating-mark on each, with an indicating-mark on the case, (which may be the junction-line of the case-sections,) when the spiral passage in the cylinder *m* is properly located to allow the key C to be freely inserted and unlock the bolt *e*, it being evident that a slight deviation from a correct adjustment of the cylinder and sleeve will prevent the complete introduction of the key.

In Fig. 4 the features shown in Fig. 3 are supplemented by the provision of a screw-plug *o*, which is threaded on its peripheral surface to enter a transverse tapped orifice located between the rear end of the cylinder *m* and the rectangular cavity *i*, said plug being secured from removal by a reduction of its body at the exposed end *o'*, but allowed to move longitudinally a short distance when revolved.

The sleeve *k* and cylinder *m* in Fig. 4 are threaded, so that they may be adjusted rev- olubly and longitudinally, the graduations on their exposed ends furnishing means to ac- curately adjust them and cause the spiral pas- sage in the cylinder to assume a proper rela- tive position with regard to the similar key- passage in the body of the lock for the intro- duction of the key C.

The spiral key-passage *h'* is continuous through the plug *o* when it is in a certain known and marked position, which mark may be concealed among other marks made on the

end of the plug, so that its correct aligning position will be readily obtained by an opera- tor knowing the proper adjustment. This feature adds security to the lock by prevent- ing an improper use of a wire or key not exactly correct by a movement of the plug after the lock is fastened. The plug *o* is of further advantage in that it will prevent the separation of the halves of the lock case or body until the bolt is withdrawn from the shackle and the shackle removed from the lock-case entirely.

If the lock case or body is cast from steel or brass, it will be as strong as such a device can be produced at moderate cost, and from its construction affords means for prevention of picking or opening the shackle by any other tool than the key for it.

It is feasible to slightly change the twist of the spiral key and its mating passage in the lock-body for each lock, so that there will be no great number of keys of the same pattern made, which will prove an additional advan- tage secured by this form of lock and key.

Having thus described my invention, what I claim as new, and desire to secure by Let- ters Patent, is—

1. The combination, with a case having a spiral key-passage, a hinged shackle, and a sliding bolt, of a revoluble cylinder having a spiral key-passage, the axis of which is eccen- tric, substantially as set forth.

2. The combination, with a case which is longitudinally divided, and means to secure the half-sections together, of a hinged shackle and a sliding bolt, a revoluble sleeve, and a cylinder loosely secured in the sleeve having a spiral key-passage in it which may form a continuation of a similar key-passage in the lock-case, substantially as set forth.

3. The combination, with a case, a hinged shackle, and a sliding bolt supported on roll- ers, of a threaded sleeve inserted in the lock- case, a cylinder having threaded engagement with the sleeve, the cylinder having a spiral key-passage which may be adjusted to form a continuation of a similar passage in the lock-case and be moved to prevent the in- sertion of the key, and a spiral key, substan- tially as set forth.

4. The combination, with a lock-case adapted to receive a bent sliding bolt, a shackle, and a sliding bolt which is bent at its rear end and provided with a bolt-head that is par- allel to the bolt-body above it, the case hav- ing a spiral longitudinal key-passage opposite the bolt-head and an intersecting cavity, of a threaded sleeve in the case, a threaded cyl- inder in the sleeve having a spiral key-pas- sage which may form a direct extension of a similar passage in the body of the case, and a spiral key, substantially as set forth.

5. The combination, with a lock-case which is longitudinally divided, means to hold the half-sections together, a shackle, a sliding bolt, and a spiral spring to push the bolt for- ward and normally retain it thus adjusted, of

a spiral key which engages a mating passage in the lock-case and throws the bolt to unlock it when the key is revolved in its passage, substantially as set forth.

5 6. The combination, with a case, a shackle hinged thereto, a bent sliding bolt, and a spring which engages the bolt-head to lock the bolt in the hasp, of a threaded sleeve, a threaded cylinder which engages the sleeve
10 and has a spiral key-passage through it end-

wise, which may form a continuation of a similar passage in the lock-case, that has a cavity in it which intersects the spiral key-passage, a transverse screw-plug spirally perforated across its body, and a spiral key, substantially as set forth. 15

WOODSON MOSLEY.

Witnesses:

J. J. MAY,

G. A. J. MAY.