

No. 609,224.

S. BOWEN.

Patented Aug. 16, 1898.

LOCK.

(Application filed Sept. 13, 1897.)

(No Model.)

Fig. 1

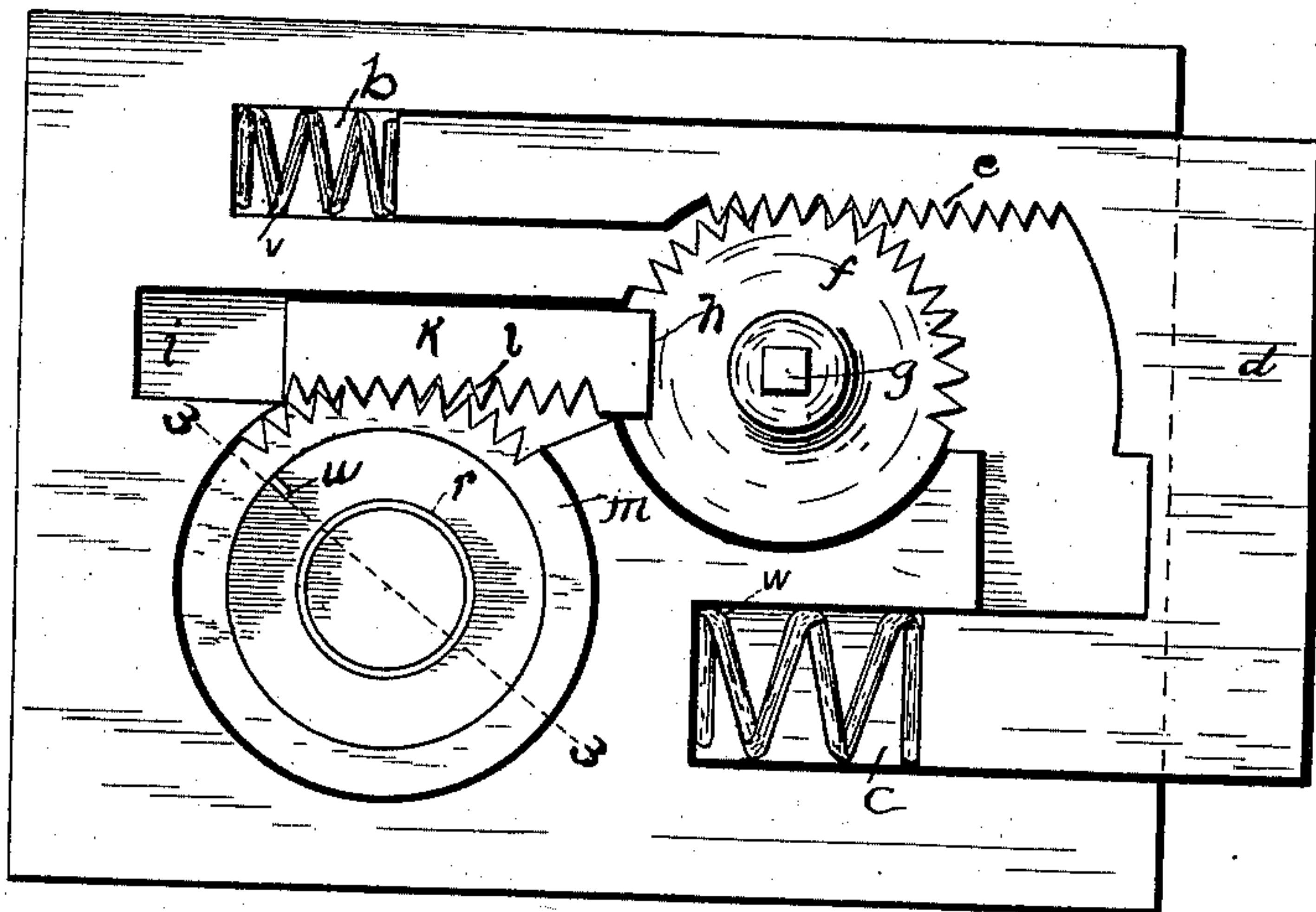
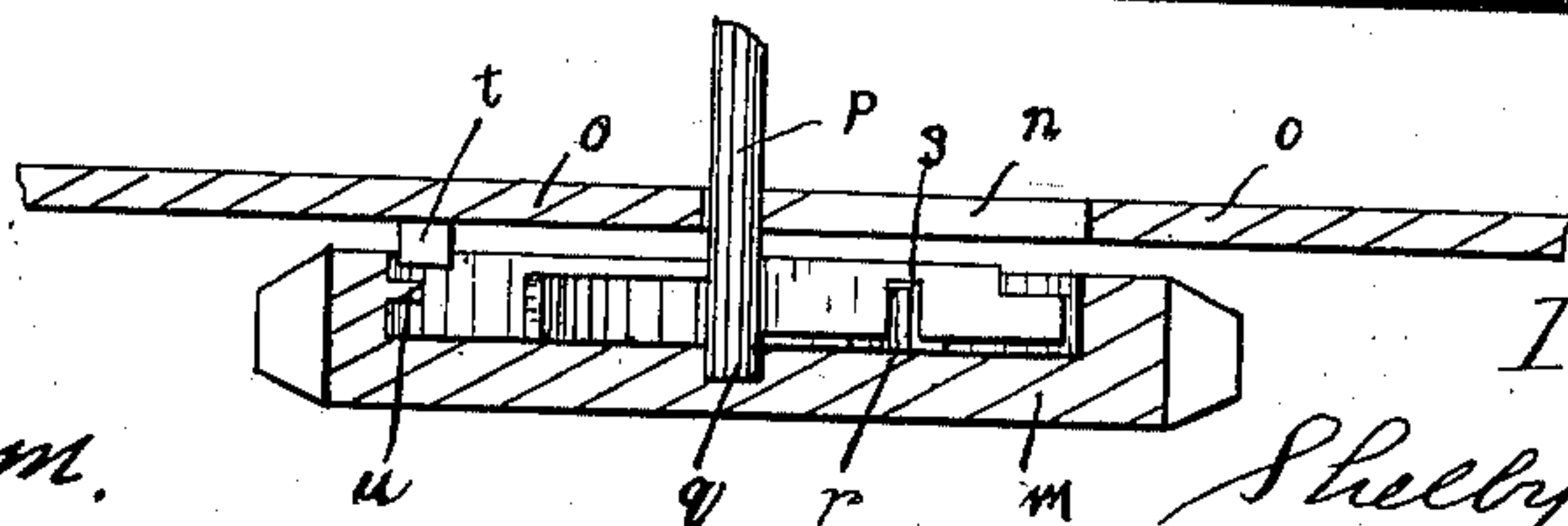
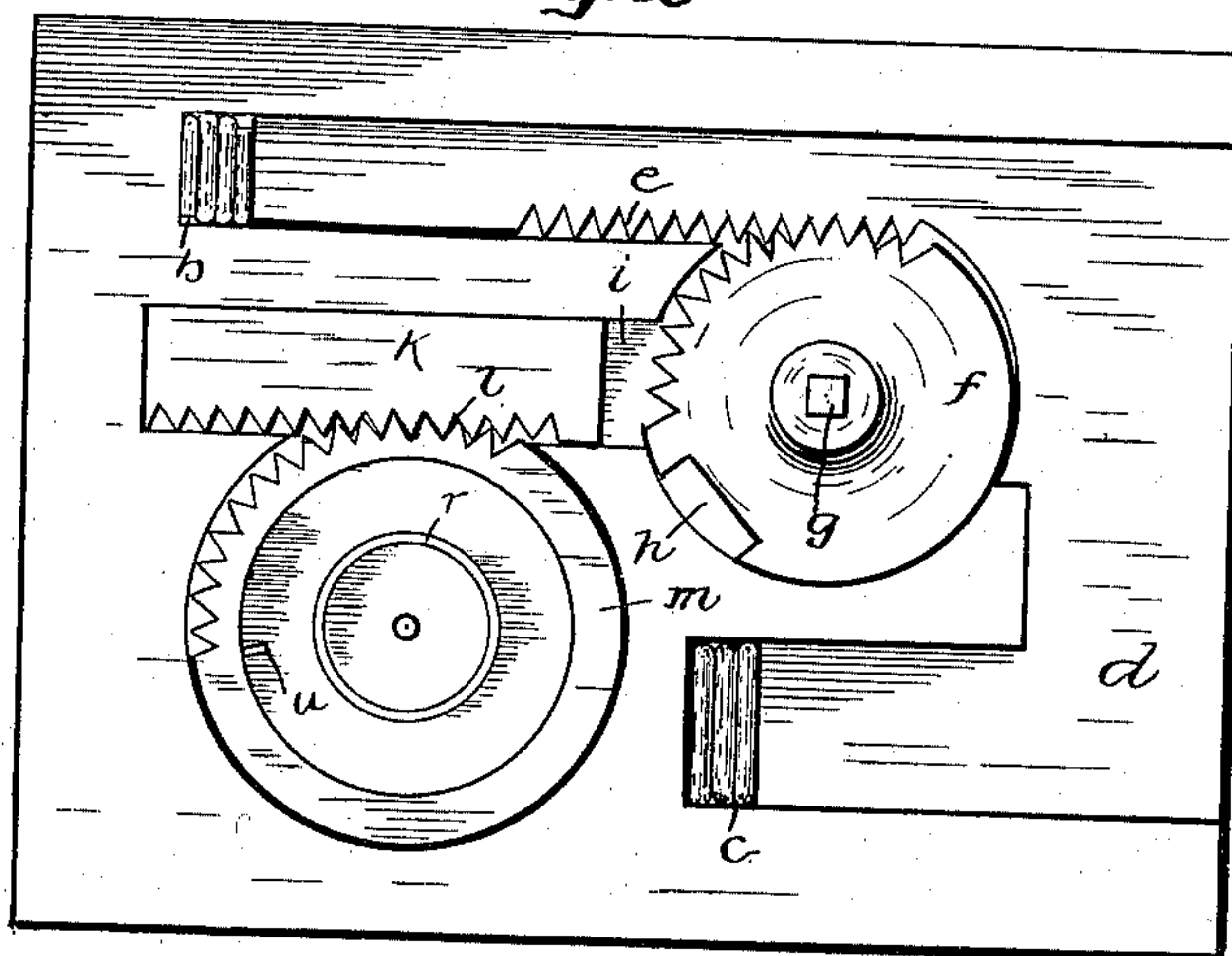


Fig. 2



Witness

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Fig. 3

UNITED STATES PATENT OFFICE.

SHELBY BOWEN, OF POPPA, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO
STEPHEN HERALD AND J. T. VINSON.

LOCK.

SPECIFICATION forming part of Letters Patent No. 609,224, dated August 16, 1898.

Application filed September 13, 1897. Serial No. 661,475. (No model.)

To all whom it may concern:

Be it known that I, SHELBY BOWEN, a citizen of the United States, residing at Poppa, in the county of Wayne, State of West Virginia, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to locks in general, and more particularly to door-locks in which a single bolt is employed both as the knob-bolt and key-bolt, a suitable locking mechanism being employed to hold said bolt distended when desired.

The object of my invention is to not only provide a simple and effective device of this nature, but one that will be cheap to manufacture.

In the drawings forming a portion of this specification and in which like letters of reference indicate similar parts in the several views, Figure 1 is a plan view showing the elements of my device when the bolt is locked; and Fig. 2 is a view similar to Fig. 1, showing the bolt unlocked and withdrawn. Fig. 3 is a section on line 3 3 of Fig. 1, showing the particular construction of the keyed gear and top of the lock-casing.

Referring now to the drawings, in constructing a device in accordance with my invention I construct a casing by casting or stamping, comprising a body portion *a*, having in one face formed a series of slots and recesses for purposes as will be presently explained.

Arranged to slide in longitudinal slots *b* and *c* are the legs of a U-shaped bolt *d*, the inner side of one of said legs being provided with a rack *e*, adapted to engage a pinion *f*, pivotally arranged in a suitable depression in the casing. Centrally of this pinion *f* is passed the usual knob-shaft *g*, provided with the usual knob.

The pinion *f* is provided at one edge with a depression *h*, which said depression when the bolt *d* is in an extended position is in alignment with a slot *i* in the casing, in which slot is arranged a slidable bolt *k*, provided with a rack *l* at one edge and adapted to enter the said depression *h* under the influence of a pinion *m* in engagement with the said rack. This pinion is adapted to be revolved through

the medium of a key passed through a suitable opening *n* in the top *o* of the casing, said key *p* being provided with a foot *q*, arranged to enter a central depression in the pinion. This pinion is provided upon its upper recessed face with a ring *r*, adapted to enter a slot *s* in the key, while depending from the top of the casing *o* is a lug *t*, which in connection with the said ring necessitates a peculiar form of key.

In the path of the extremity of the key and arranged on the inner wall of the depression of the pinion *m* is a projection *u*, so that when the key is revolved it may thus engage this projection and actuate the pinion to shoot the bolt *k* into the depression *h* in the pinion *f*, locking the latter and preventing withdrawal of the bolt *d*.

In order to hold the bolt *d* normally extended, springs *v* and *w* may be arranged between the rear ends of the legs of the bolt and the adjacent extremities of their respective slot, as shown.

It will be readily understood that I may vary the particular arrangement and construction herein shown and that I may use any desired form of key without departing in any way from the spirit of my invention.

Having thus described my invention, what I claim is—

A lock comprising a base-plate provided with recesses corresponding to and to receive and form bearings for the operating portions of the lock, said operating portions comprising a bolt provided with rearwardly-projecting tongues, one of said tongues being adapted to play in its recess to form a guide, the other being provided with a rack to engage a pinion, a supplementary bolt adapted to enter a recess in the pinion, a second pinion in engagement with a rack on the supplementary bolt, said second pinion having a recess adapted to receive a key and being provided with a projection in the path of the key whereby the pinion may be revolved when the key is operated, and springs for placing the whole in a normally-locked position.

In testimony whereof I affix my signature in presence of two witnesses.

SHELBY BOWEN.

Witnesses:

J. W. ANDERSON,
STEPHEN HERALD.