

(Model.)

C. PEASE.  
Padlock.

No. 229,332.

Patented June 29, 1880.

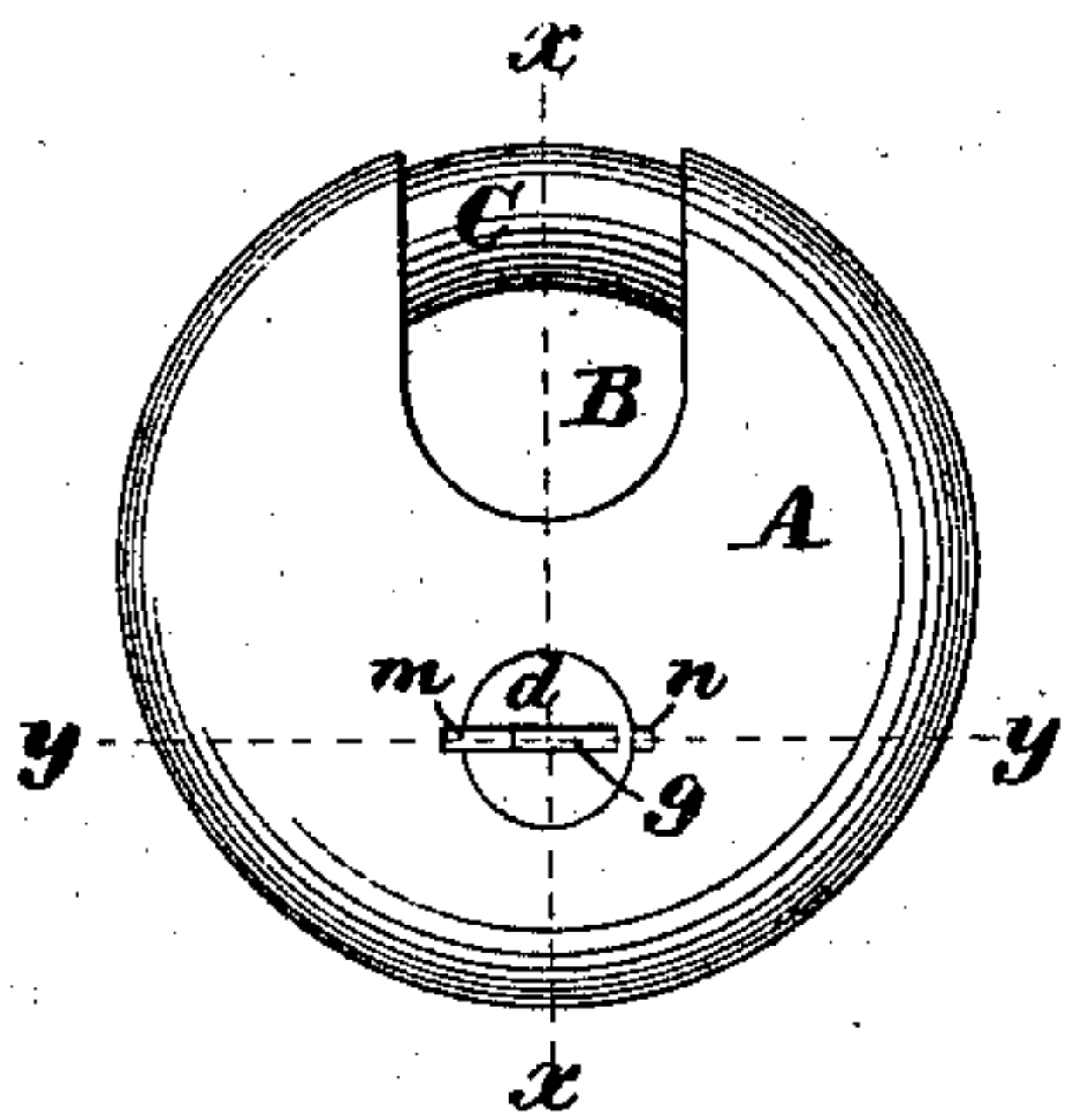


Fig. 2.

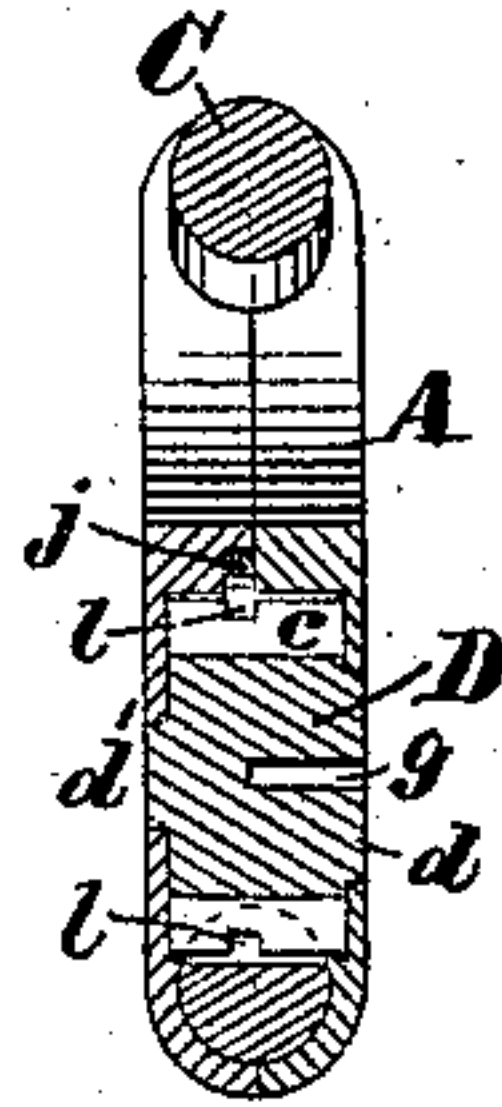


Fig. 3.

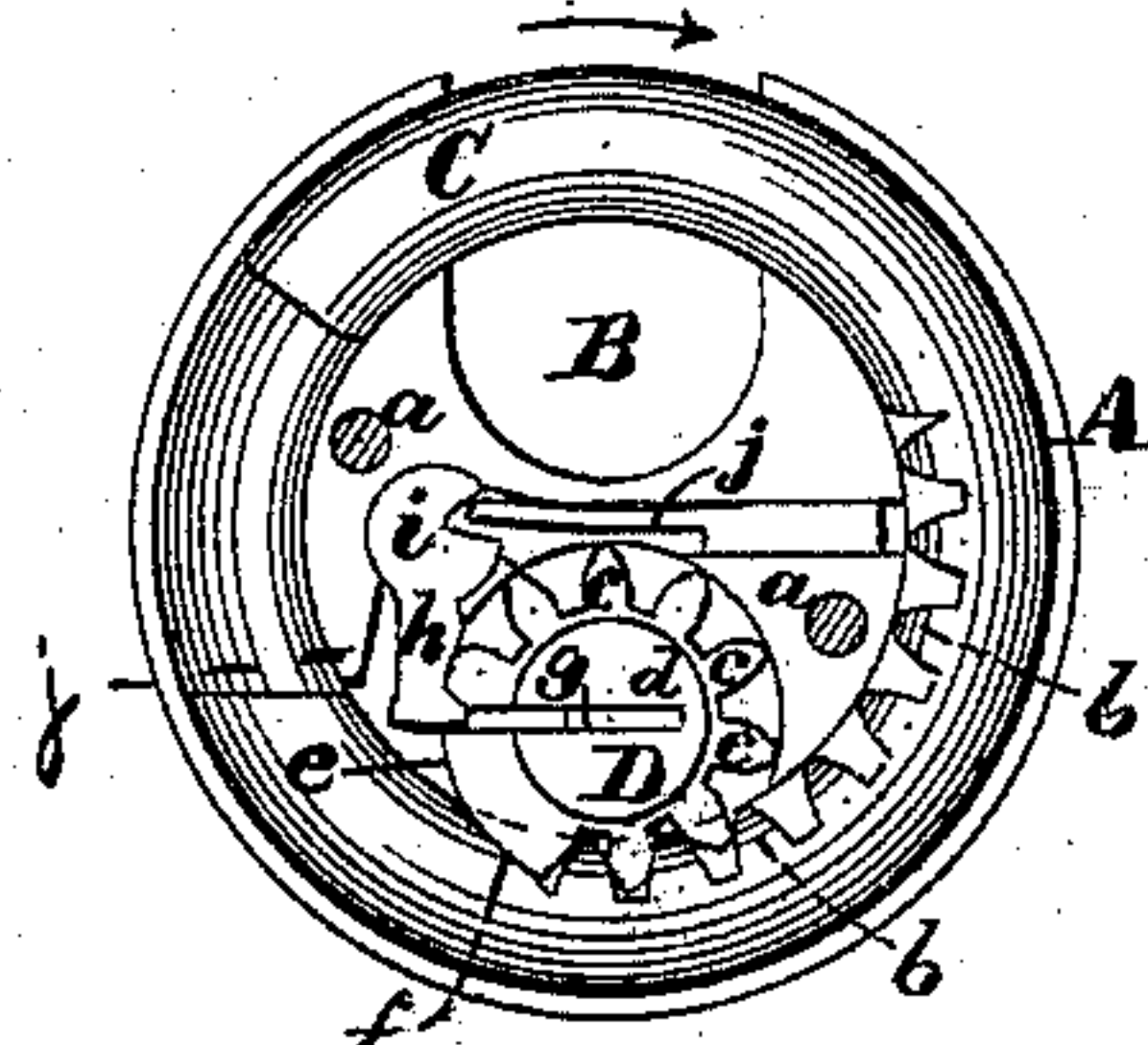


Fig. 5.



Fig. 1.

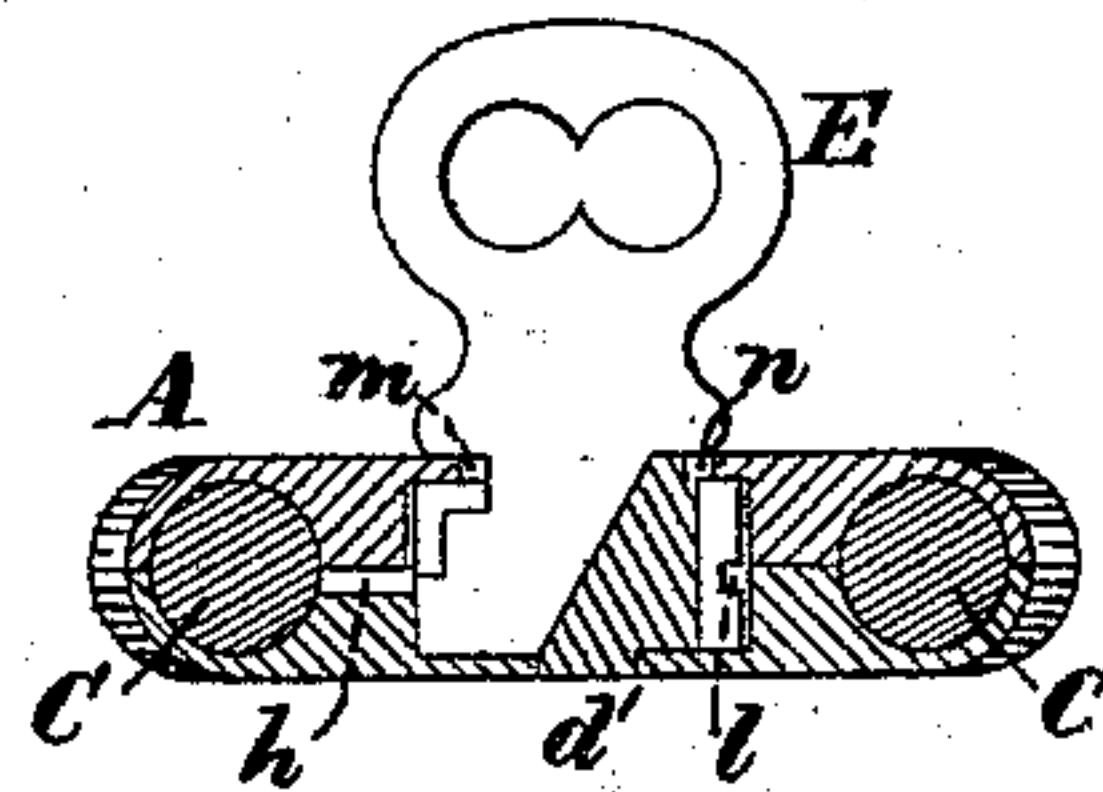


Fig. 4.

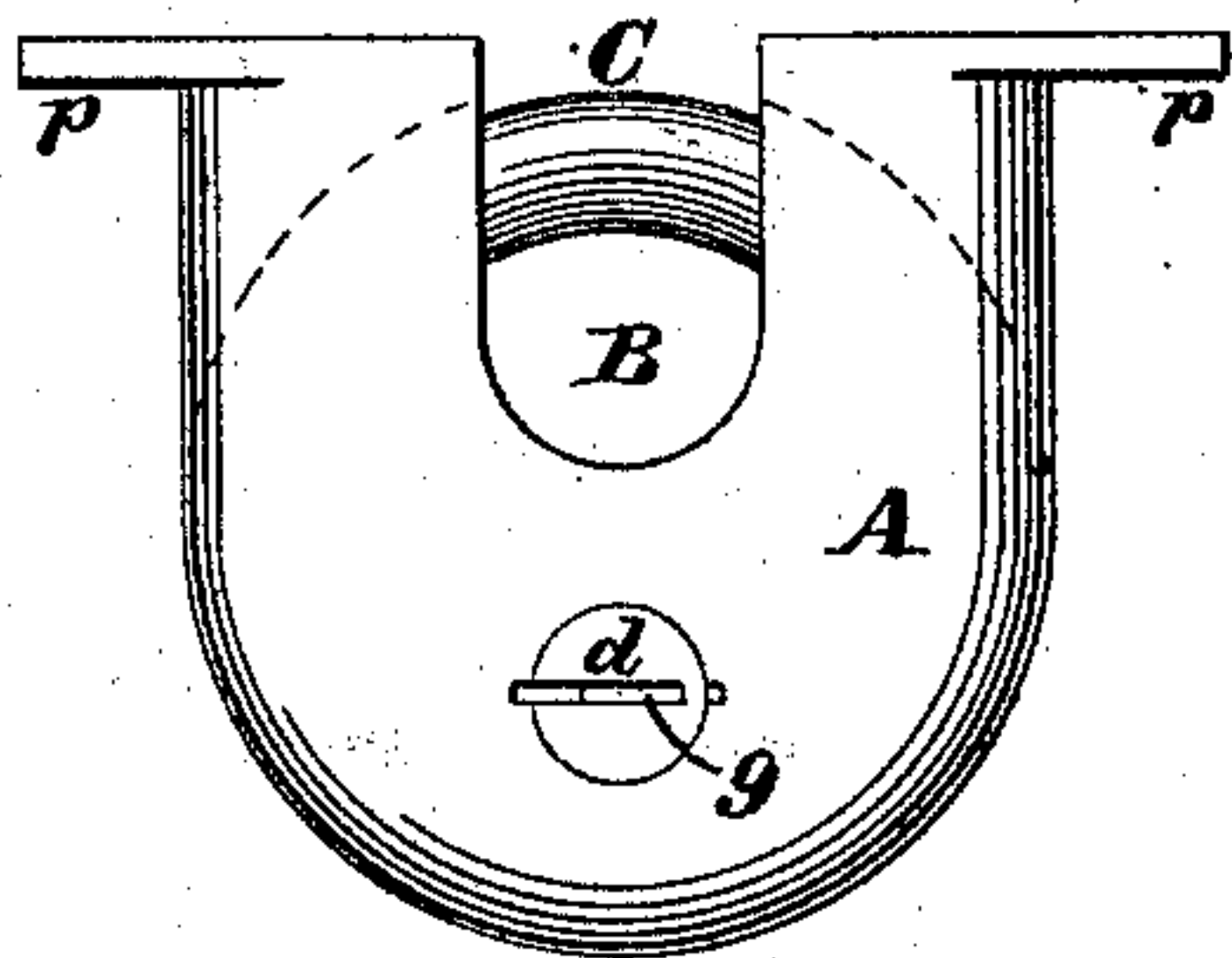


Fig. 9.

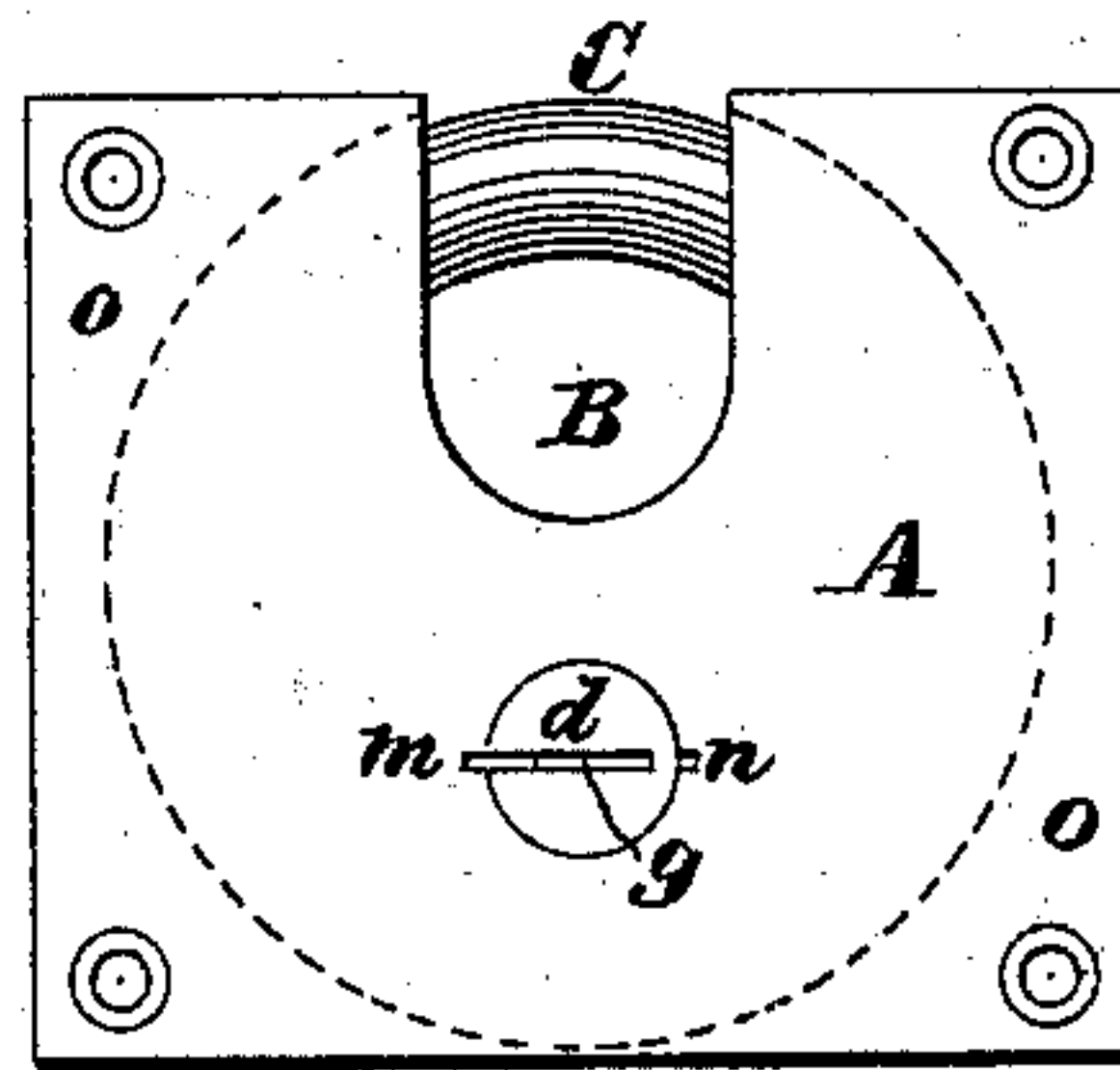


Fig. 7.



Fig. 8.

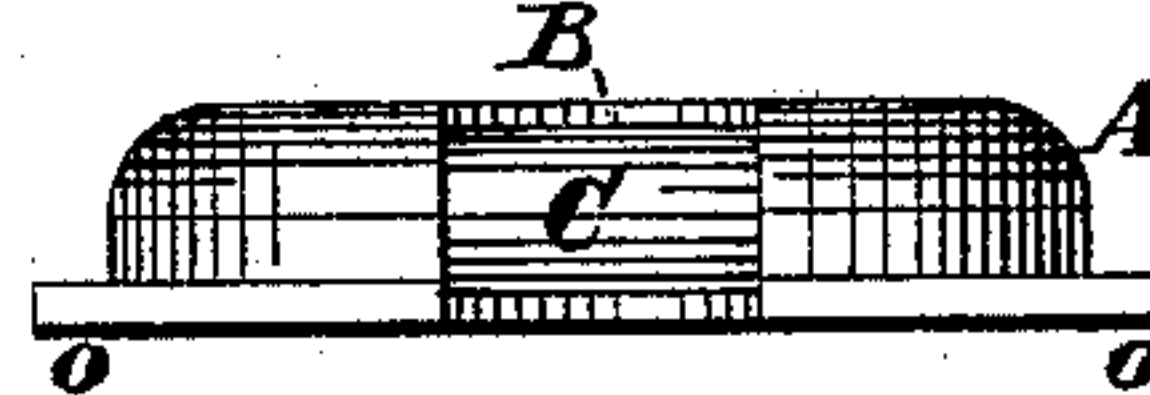


Fig. 6.

Witnesses:

E. A. Hemmenway.  
Walter C. Lombard.

Inventor:

Charles Pease  
by N. C. Lombard  
Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES PEASE, OF LYNN, MASSACHUSETTS.

## PADLOCK.

SPECIFICATION forming part of Letters Patent No. 229,332, dated June 29, 1880.

Application filed April 30, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES PEASE, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Locks, of which the following, taken in connection with the accompanying drawings, is a specification.

My present invention has for its object the production of a lock mechanism adapted to be used as a padlock, trunk-lock, or as a mortise-lock for sliding doors, and other uses, that shall be cheap and simple in construction and effective in operation; and it consists, first, in a segmental sliding bolt having formed in its inner edge or periphery a series of teeth, in combination with a suitable casing inclosing said bolt and forming a bearing therefor, in which it may be moved in the arc of a circle, and a pinion provided with teeth around a portion of its periphery, which engage with the teeth of said segmental bolt to move it endwise, and a surface without teeth, which engages with a peculiar notch in said segmental bolt, to serve as a stop to limit the movement of said bolt, said pinion also being provided with suitable means of attaching a key for the purpose of moving said bolt to lock or unlock it by rotating said pinion.

It further consists in the combination of a toothed segmental bolt, a toothed pinion provided with a thin slot cut through one side thereof to receive a key for revolving it, and a spring-actuated pawl adapted to engage with said slot when the bolt has been moved to the extreme of its throw in one direction, to prevent it being moved back without the key.

It further consists in the combination, with the segmental toothed bolt and its inclosing-casing, of a toothed pinion provided with a key-slit cut obliquely through it from end to end and opening through its periphery upon one side, a spring-actuated pawl adapted to engage with said slot to lock the bolt, and a key having an oblique edge which engages with the oblique side of the slit in said pinion when the key is inserted endwise therein, in such a manner that the act of forcing the key endwise into the lock will cause a lateral movement of the key to take place, by which the pawl will be disengaged from the slit, thus releasing the bolt so that it may be moved back.

Figure 1 of the drawings is a plan of a padlock embodying my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a section on line *xx* on Fig. 2. Fig. 4 is a section on line *yy* on Fig. 2, looking upward; and Fig. 5 is an elevation of the same with the front plate of the casing removed. Figs. 6 and 7 are respectively a plan and front elevation of a lock adapted to be used as an outside trunk-lock, and Figs. 8 and 9 are respectively a plan and a front elevation of a mortise-lock having the same interior construction as shown in Figs. 3, 4, and 5.

A is the casing, made in two parts, secured together by the screws *a a*, each part having cut through it the slot B, to permit the insertion of the staple with which the bolt is to engage. Each of the parts of the casing A also has formed in its innerface a segmental groove semicircular in cross-section, which, when the two parts are secured together, forms a bearing for the segmental bolt C, which has cut in its inner edge a series of gear-teeth, *b*, as shown in Fig. 5.

D is a pinion provided with teeth *c* around about two-thirds of its periphery, and provided at each end with a journal, *d* or *d'*, which extends through the casing A, as shown in Fig. 3. About one-third of the circumference (more or less) of the pinion D, which has no teeth cut therein is turned concentric with its axis, and of the same radius as the ends of the teeth *c*, thus forming a smooth curved surface, *e*, which engages with a correspondingly-curved surface, *f*, on the inner side of the bolt C, to limit its endwise movement when locked, and at the same time prevent a rotation of the pinion beyond the point where the key E can be withdrawn.

The pinion D has cut longitudinally through one side thereof the slit *g*, to receive the key E, by which it is revolved, said slit *g* cutting through the surface *e*, and extending at one end of the pinion nearly across the journal *d*, while at the opposite end of the pinion it extends only to the periphery of the journal *d'* without cutting into it, so that the bottom of said slit extends obliquely from end to end of said pinion, as shown in Fig. 4.

When the pinion D has been rotated so as to move the bolt C across the slot B in the



casing A and the key is removed, the toe of the pawl *h* engages with the slit *g*, to lock said pinion, and through it the bolt C, and prevent a backward movement or withdrawal of the same till the key is again inserted in the slit *g*, when the inclined side of the key and the oblique bottom of said slit cause the key to be moved laterally toward the pawl *h* and force it out of said slit, when the pinion may be turned about its axis to move the bolt C in the direction indicated by the arrow.

The pawl *h* is pivoted at *i* in a recess formed in one side of the casing A, and is acted upon by the spring *j*, to force it into engagement with the slit *g*, in an obvious manner.

To prevent the pawl *h* from engaging with the teeth *c* after the key has partially rotated the pinion D and the surface *e* has passed the toe of the pawl, a groove or notch, *l*, is cut circumferentially across the ends of said teeth, as shown in Fig. 4.

The front part of the casing A has cut through it two notches, *m* and *n*, upon opposite sides of the journal *d* of the pinion, which alternately coincide with the slit *g* in the pinion, as said pinion is rotated to one or the other extreme of its motion, and serve to permit the insertion and withdrawal of the key.

In the modification shown in Figs. 6 and 7 the front part of the casing A is provided with a thin rectangular flange, *o*, by which it may be secured to the exterior of a trunk or other article, and in Figs. 8 and 9 a modification is

shown in which the front part of the casing is provided with the flanges *p p*, by which the lock is adapted to be used as a mortise-lock in an obvious manner.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of the casing A, the segmental bolt C, provided with the teeth *b* and the surface *f*, and the pinion D, provided with the teeth *c*, the surface *e*, and means of applying a key thereto to rotate the same, substantially as described.

2. The combination of the segmental bolt C, provided with the teeth *b*, the pinion D, provided with the teeth *c* and the slit *g*, the spring-actuated pawl *h*, arranged to engage with said slit to lock the bolt, and a key adapted to disengage said pawl and rotate the pinion, substantially as described.

3. The combination of the segmental toothed bolt C, its inclosing-casing A, the toothed pinion D, provided with oblique key-slit *g*, the spring-actuated pawl *h*, and the key E, provided with an inclined side adapted to engage with the oblique side of the slit *g* and with the pawl *h* to retract it, substantially as described.

Executed at Boston, Massachusetts, this 20th of April, A. D. 1880.

CHARLES PEASE.

Witnesses:

E. A. HEMMENWAY,  
F. W. BEALE.