

(Model.)

H. WAGNER.
Permutation Padlock.

No. 233,581.

Patented Oct. 19, 1880.

Fig. 1.

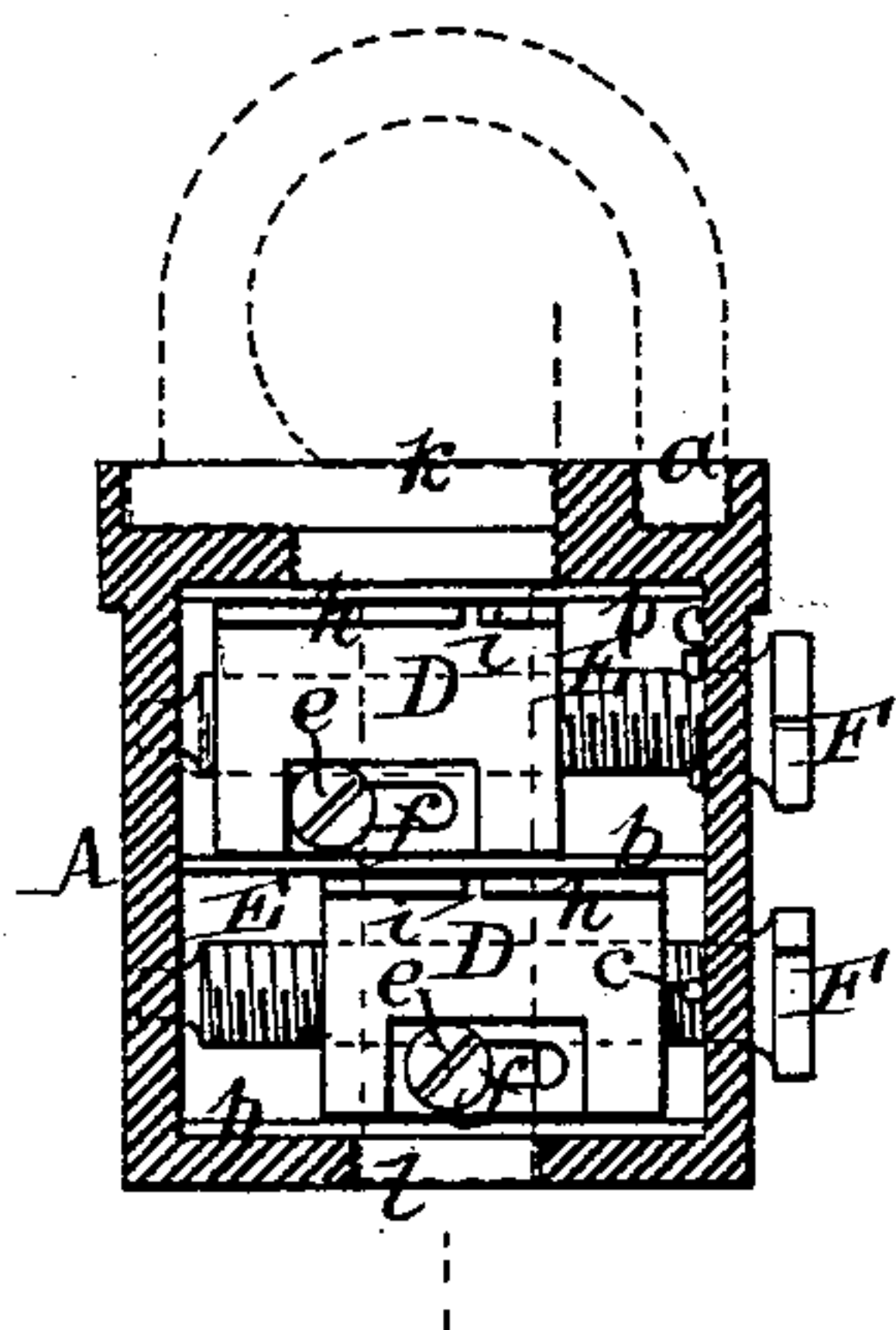


Fig. 2.

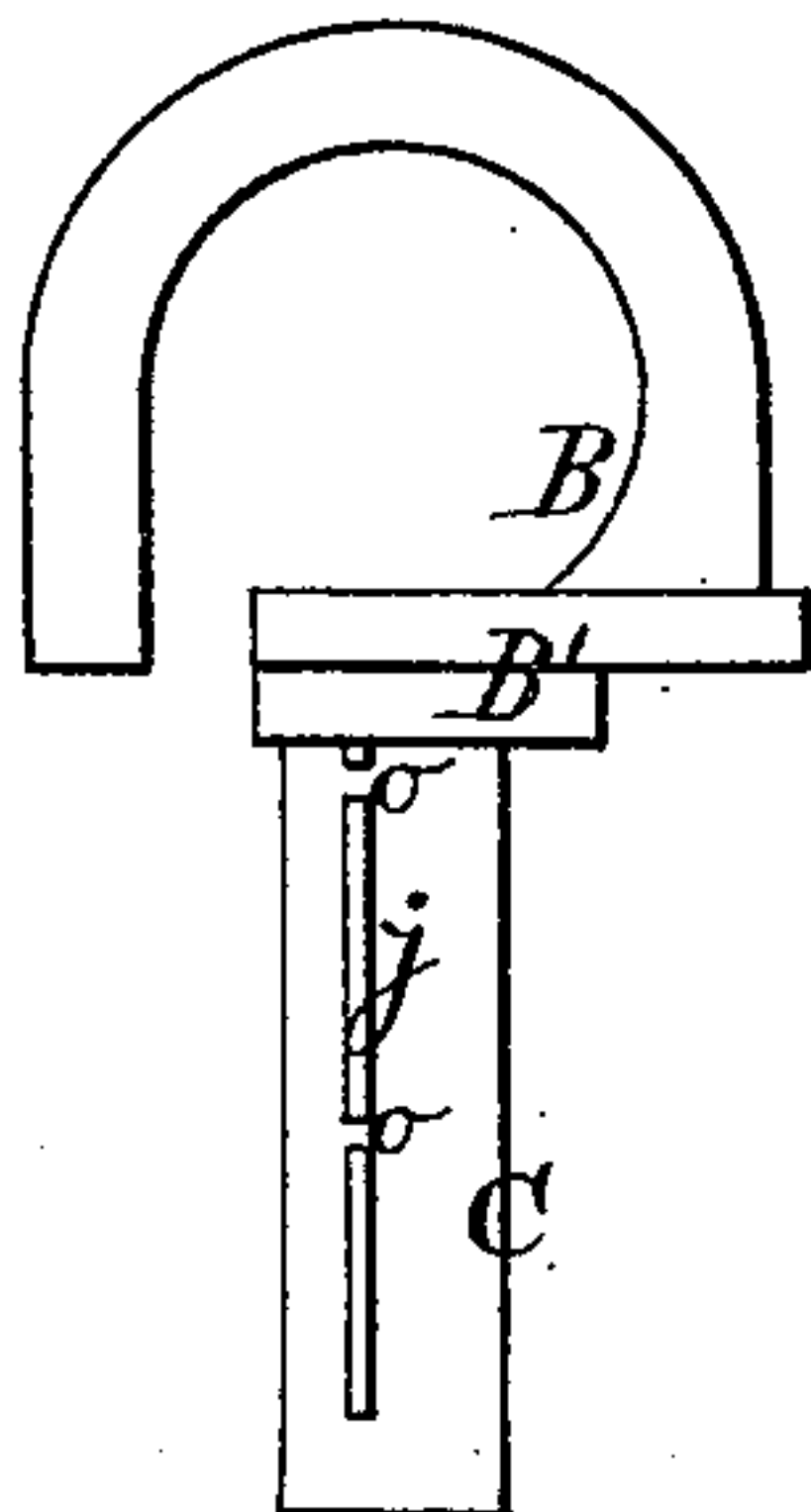


Fig. 3.

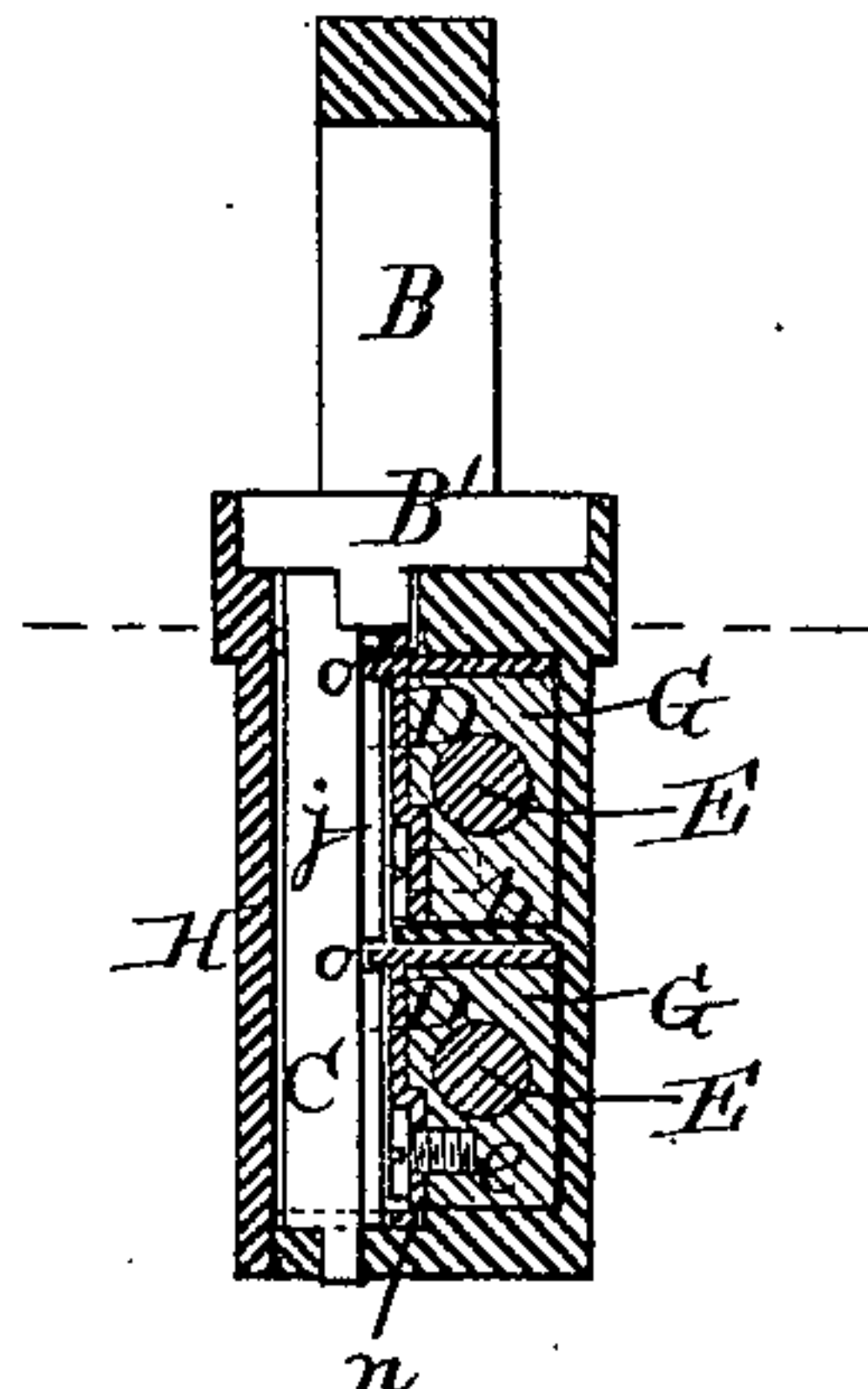


Fig. 4.

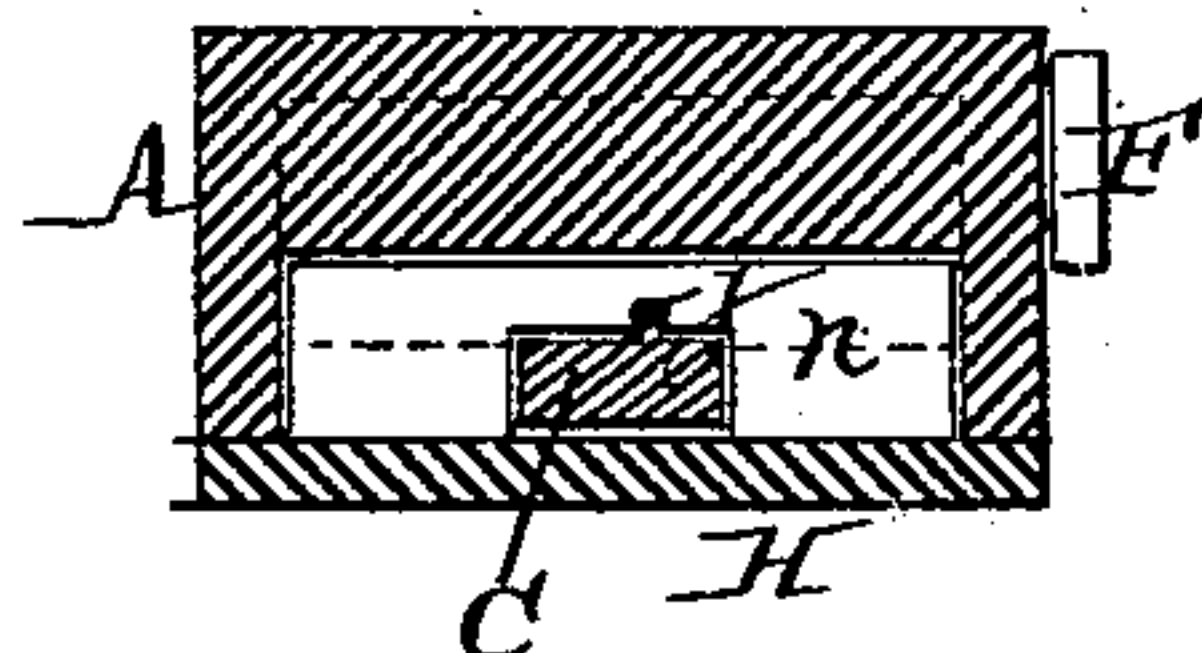
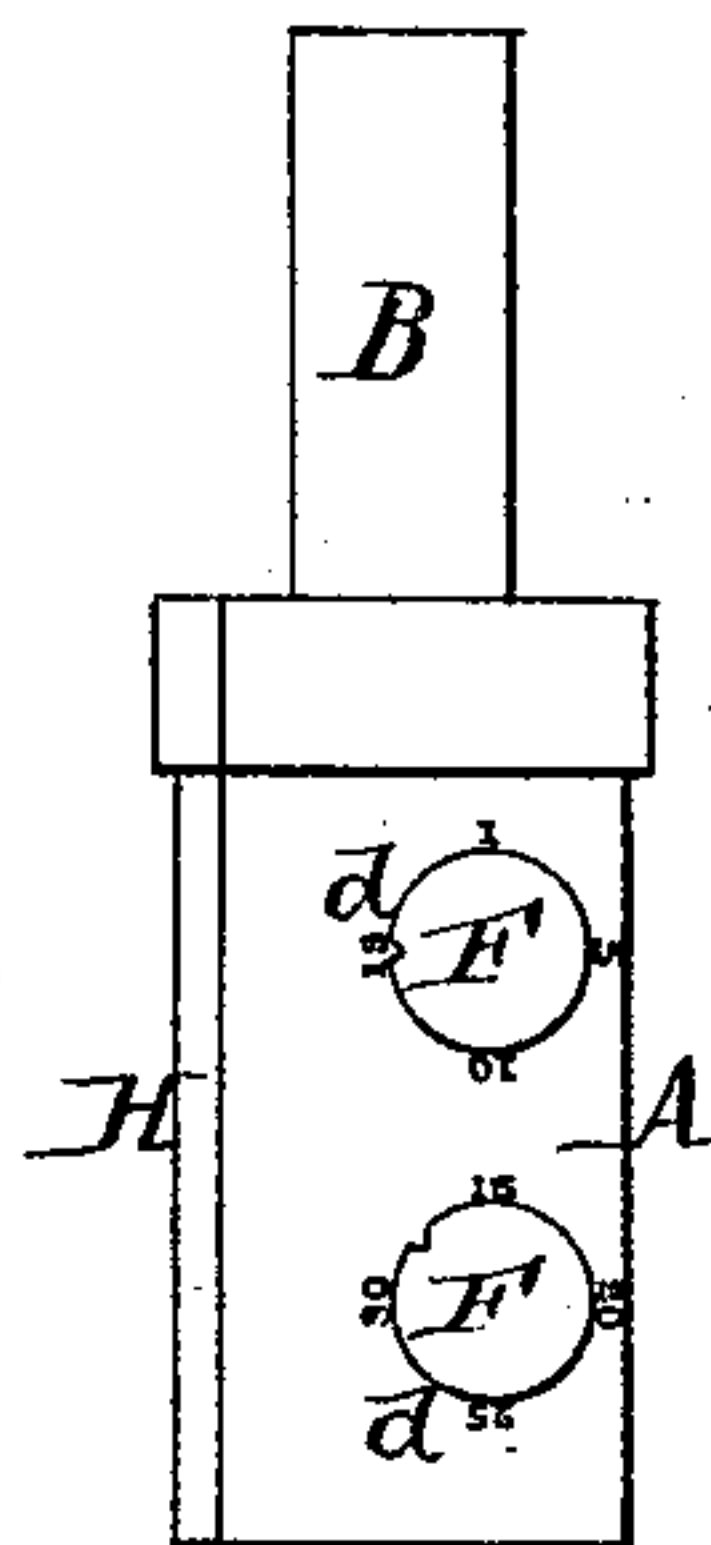


Fig. 5.



Witnesses
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HERMANN WAGNER, OF ELIZABETH, NEW JERSEY.

PERMUTATION-PADLOCK.

SPECIFICATION forming part of Letters Patent No. 233,581, dated October 19, 1880.

Application filed March 17, 1880. (Model.)

To all whom it may concern:

Be it known that I, HERMANN WAGNER, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented new and useful Improvements in Combination-Padlocks, of which the following is a specification.

The object of this invention is to produce a safe or perfect combination-padlock, less complicated than those hitherto used, and one comparatively inexpensive; and it consists in a shackle having an elongated tongue, sliding tumblers, one or more, having screw-nuts for engagement with the tongue, screw-spindles extending through the lock-case for operating the nuts carrying the sliding tumblers, and knobs attached to the screw-spindles co-operating with scales arranged on the lock-case to indicate the order or positions of the sliding tumblers, so that the sliding tumblers may be readily set to permit the introduction or removal of the tongue by turning the screw-spindles in accordance with the combination for which the tumblers are set.

The sliding tumblers are constructed with nuts for engagement with the screw-spindles, and are adjustable thereon, so that the combination to which the tumblers are set may be changed at pleasure.

It also consists in certain novel combinations of parts hereinafter fully described, and pointed out in the claims.

This invention is illustrated in the accompanying drawings, in which Figure 1 is a sectional view of the lock when the shackle is removed. Fig. 2 shows the shackle in side view. Fig. 3 is a longitudinal section of the lock. Fig. 4 is a cross-section thereof. Fig. 5 is a side view of the same.

Similar letters indicate corresponding parts.

The letter A designates the lock-case; B, the shackle, and C the elongated tongue of the shackle. This tongue C projects from a head, B', which is secured to one arm of the shackle, the other arm thereof being free and being arranged to enter a socket, a, in the top of the lock-case.

The letter D designates the sliding tumblers, in this example two in number. The direction of movement of these tumblers is at right an-

gles to the tongue C, and they are fitted between guides b in the lock-case.

E designates the screw-spindles for operating the sliding tumblers D. These spindles extend through the lock-case A at one end, but are held against longitudinal displacement by a pin, c.

To the projecting ends of the screw-spindles E are attached knobs F, and adjacent to these knobs, on the side of the lock-case A, are arranged scales d.

The sliding tumblers D are set to permit the introduction or removal of the tongue C by a certain combination of figures or letters on the scales d, the knobs F being provided with suitable indicating marks or notches to co-operate with the scales. Each of the sliding tumblers D is constructed with a nut, G, for connection with its spindle E, the nuts being fitted on the spindles and the tumblers being attached thereto by set-screws e passing through slots f in the tumblers. The slots f, jointly with the set-screws e, render the tumblers D adjustable, and hence the same can be readily arranged for different combinations.

In order to adapt the sliding tumblers D for engagement with the tongue C they are provided with rails h, each having a notch, i, while the tongue is provided with a rail, j, having notches o, one to each rail of the tumblers. The tongue-rail j extends at right angles to the tumbler-rails h, and the notches o of the tongue-rail are so arranged that when the tongue is shot said notches o are opposite to the tumbler-rails h. When the tongue C is to be shot or introduced into the lock the tumblers D are arranged in such order that the notches i of their rails are brought in line with each other and with the tongue-rail j, as indicated in Fig. 1, while, if after the introduction of the tongue said notches i are brought out of line, the tumbler-rails h enter the notches o of the tongue-rail, and it follows that the tongue is locked.

The lock-case A has a suitable opening, k, in its top to admit the tongue C, and it also has a mortise, l, at the bottom to receive the end of the tongue, the latter being of suitable length to enter this mortise when it is shot.

The face-plate H of the lock-case is loose or

detached from the body thereof, and is provided with clips *n* projecting into the case. These clips may be cast with or secured to the face-plate *H*, and they are so shaped and arranged that if the face-plate is in its place on the lock-case when the tongue *C* is shot, the latter passes through the clips. In other words, the clips *n* receive and embrace the tongue *C*, so that the latter is the medium for confining the face-plate, and its removal by surreptitious means is prevented.

If desired the tongue *C* may be duplicated.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a padlock, the combination of a shackle having an elongated tongue, sliding tumblers having screw-nuts for engagement with the tongue, screw-spindles extending through the lock-case for operating the sliding nuts carrying the tumblers, and knobs attached to the screw-spindles, co-operating with scales arranged on the lock-case to indicate the positions of the sliding tumblers, the whole constructed and adapted to operate substantially as herein shown and described.

2. In a padlock, the combination of a shackle having an elongated tongue, sliding tumblers (one or more) for engagement with the tongue, constructed with the nuts *G*, and adjustable

thereon, and screw-spindles engaging the nuts of the tumblers, the whole constructed and adapted to operate substantially as herein shown and described.

3. In a padlock, the combination of sliding tumblers having the notched rails *h*, and the shackle constructed with an elongated tongue having the notched rail *j*, extending at right angles to the tumbler-rails, the whole constructed and adapted to operate substantially as herein shown and described.

4. In a padlock, the combination of a shackle having an elongated tongue, and sliding tumblers for engagement with the tongue, a lock-case having an opening to admit the tongue and mortise to receive the end thereof, and a face-plate to the lock-case, having inwardly-projecting clips arranged to receive and embrace the tongue when the latter is shot, the whole constructed and adapted to operate substantially as herein shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

HERMANN WAGNER. [L. S.]

Witnesses:

J. HERMANN WAHLERS,
E. F. KASTENHUBER.