



# United States Patent Office.

THEODOR HAHN, OF NEW YORK, N. Y.

Letters Patent No. 105,197, dated July 12, 1870; antedated June 30, 1870.

## IMPROVEMENT IN COMBINED LATCH AND LOCK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, THEODOR HAHN, of the city, county, and State of New York, have invented a new and useful Improvement in Latch-Locks; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a face view of the locking-mechanism when the bolt is in position to act as a latch.

Figure 2 is a similar view of the same when the bolt is in its locking position.

Similar letters indicate corresponding parts.

This invention relates to a lock, the latch-bolt of which is connected to a weight instead of a spring, and so combined with an elbow-lever and nut that the same is made to slide back by the action of the nut, while it can be thrown out to its locking position by the action of the key, and consists in the combination of an elbow-lever with the sliding bolt, the nut and tumbler of a lock, and with a weight, said elbow-lever being provided with a recess and slot, so as to produce the desired effect.

In the drawing—

The letter A designates the case which incloses the working parts of my lock.

B is the latch-bolt, which slides back and forth in a mortise in the face-plate of the case, being guided by a stud, *a*, which catches in a slot, *b*, in its shank.

Said latch-bolt connects with the nut O by means of an elbow-lever, D, which has its fulcrum on a pin, *c*, and acts on a pin, *d*, secured in the shank of the latch-bolt.

The pin *c* is fastened in the side plate of the case A, and it works in a slot, *e*, provided with a semicircular recess, *f*, while the pin *d* works in a slot, *g*, in the elbow-lever.

When the latch-bolt is in the position shown in fig. 1 of the drawing, the elbow-lever D is suspended by a lip, *h*, projecting from the tumbler E, and, by these means, the semicircular recess *f* in said elbow-lever is pressed up against the pin *c*.

The tumbler E has its fulcrum on a pivot, *i*, secured in the side plate of the case, and it is subjected to the

action of a weight, F, which occupies the lower part of the case A, and may be made to swing at one end on a pivot, *j*, while its opposite end bears on the tumbler, as shown in the drawing, or it may be connected to the case A and to the tumbler in any desired manner.

By the action of the weight F the tumbler is caused to press against the end of the elbow-lever, and thereby an outward pressure is exerted on the latch-bolt, against which the same is retained by a pin or stump, *k*, secured in its shank and bearing against one side of a lug, *l*, of the tumbler.

When the nut O is turned in either direction, the horizontal arm of the elbow-lever is turned up and the latch-bolt is thrown back, the weight F being raised by the action of the vertical arm of the elbow-lever on the tumbler, so that, as soon as the pressure on the nut O ceases, the latch-bolt is carried forward to the position shown in fig. 1 by the action of the weight.

When the tumbler is raised by the action of the key, the lip *h* is withdrawn from under the elbow-lever, allowing the same to drop down, so as to disengage the recess *f* from the pin *c*, and, as the key is turned, it throws the latch-bolt out to the position shown in fig. 2, the elbow-lever D being made to slide in the slot *e*, and, as the tumbler is allowed to drop, after the key has been turned, the lug *l* catches behind the stump *k* and retains the bolt in its locking position.

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

1. The elbow-lever D, in combination with the sliding bolt B, nut O, tumbler E, and weight F, all constructed and operating substantially as described.

2. The recess *f* and slot *e*, in the elbow-lever D, in combination with the lip *h* of the tumbler, and with the weight and bolt, constructed and operating substantially as set forth.

This specification signed by me this 29th day of November, 1869.

THEODOR HAHN.

Witnesses:

WM. IMHAEUSER,  
W. HAUFF.