

A. E. SPOONER.
GRAVITY DOOR LOCK.
APPLICATION FILED APR. 4, 1912.

1,047,847.

Patented Dec. 17, 1912.

Fig. 4

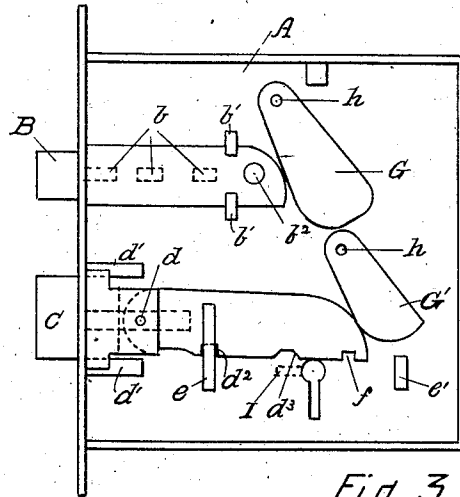
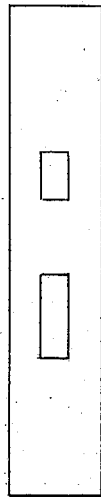


Fig. 3

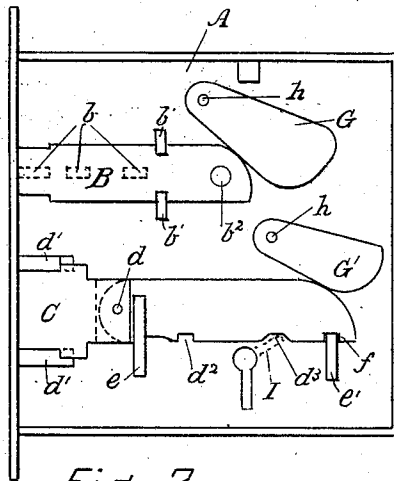


Fig. 2

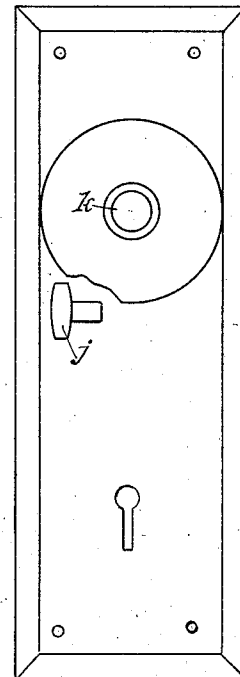


Fig. 1

Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT E. SPOONER, OF RENFREW, ONTARIO, CANADA.

GRAVITY DOOR-LOCK.

1,047,847.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed April 4, 1912. Serial No. 688,518.

To all whom it may concern:

Be it known that I, ALBERT EDWARD SPOONER, a subject of the King of Great Britain, residing at Renfrew, in the county of Renfrew, Province of Ontario, Canada, have invented certain new and useful Improvements in Gravity Door-Locks, of which the following is a specification.

My invention relates to improvements in gravity door-locks as described in the present specification and illustrated by the accompanying drawings that form part of the same.

The invention consists essentially in the combination with lock-bolts of a plurality of pivotally arranged weights whereby the latch-bolt is operated by one weight in combination with a suitable thumb-slide, and the lock-bolt is operated by the other weight in combination with the lock key.

The objects of my invention are to provide a new, simple and inexpensive door-lock, without any complicated parts to wear or get out of order and one that will at the same time be thoroughly practical and efficient.

A further object is to provide a lock of this class with a stationary knob or handle, the latch-bolt being shot inwardly by means of a small thumb-slide arranged beneath the stationary knobs on each side of the door.

With these and other objects in view reference is had to the accompanying drawings in which like letters of reference indicate corresponding parts in each figure, and in which—

Figure 1 is a view of the outside of the lock fitted on a door showing the stationary knob with parts broken away for thumb-slide. Fig. 2 is an inside section of my lock showing the bolts in an inoperative position. Fig. 3 is a similar view showing the bolts in an operative position. Fig. 4 is a vertical detail of the face plate.

In the drawings, A is the lock casing as a whole of any suitable size, material or form.

B is the latch-bolt mounted on suitable bearings b , and provided with guides b' and having therein at the inner end a suitable aperture b^2 adapted to receive the spindle of a thumb-slide.

C is the lock-bolt formed with a pivoted joint at d and provided with suitable guides d' , the said joint d allowing movement of the rear portion of lock-bolt C in a vertical plane when engaged by the key to disengage

the notches and studs d^2 and e and f and e' respectively, for the purpose hereinafter set forth.

d^2 is a notch in the lower side of C adapted to engage with the perpendicular stud e , d^3 and f are further notches in the lock-bolt C adapted to engage with the key I and the stud e' respectively.

G—G' are suitable weights pivotally secured on the inside of the casing A at h , adapted to bear against the semi-circular ends of the lock-bolts B and C respectively. The weight G being adapted to press against the semi-circular end of the latch-bolt B to force said bolt outwardly, and the weight G' adapted to press upon the lock-bolt C, to keep same in position.

The operator for the latch-bolt shown as j , consists of a spindle fitting in the aperture b^2 of the bolt B and adapted to project on each side of the door beneath the stationary knob or handle k provided with suitable head-pieces or tops, for the thumb.

From the foregoing it will be apparent that when the key I is inserted and turned it will engage with the notch d^3 raising the bolt C out of the notch f and in combination with the weight G', force said lock-bolt C outwardly, until it engages the stud e by means of the notch d^2 , thus securely locking the door. The latch-bolt B is forced continuously outward by the weight G and when desired to be operated inwardly is so directed by means of the thumb-slide j fitting in the aperture b^2 .

It will thus be seen that while being thoroughly effective and practical the lock is simplicity itself, besides being most inexpensive to manufacture and having no parts liable to get out of order.

While the foregoing is but a preferred form of my device I desire it understood that changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my claim; hence I do not wish to limit myself strictly to the construction herein set forth.

What I claim for my invention is:—

In locks, a casing, a lock-bolt slidably mounted in said casing and having a joint near its front end allowing its rear portion to move in a vertical plane, and guides for its forward part, the rear portion of said bolt being provided with two notches in its lower edge and having the upper part of

its rear end rounded, in combination with
two lugs secured in said casing to engage
said notches respectively, one engaging one
notch in one extreme position of the bolt
5 and the other the other notch in the other
extreme position of the bolt, means for dis-
engaging said notches and lugs and recip-
rocating said bolt and a pivoted weight hav-
ing a rounded face bearing on the rounded
10 part of the rear end of said bolt to force the
said notches and lugs into tight engagement

when in either of the above positions and to
aid in the outward movement of said bolt.

In witness whereof I have hereunto
signed my name in the presence of two sub- 15
scribing witnesses at the city of Ottawa,
Canada, this 21st day of March 1912.

ALBERT E. SPOONER.

Witnesses:

W. T. CUFFE-QUIN,
THOMAS GREEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
