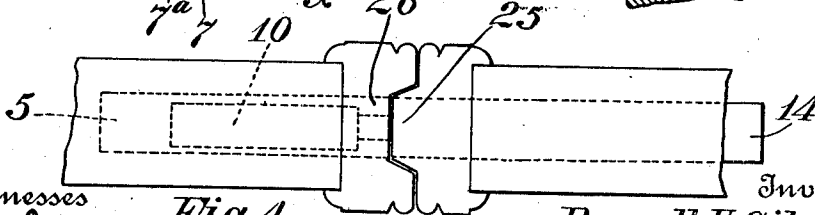
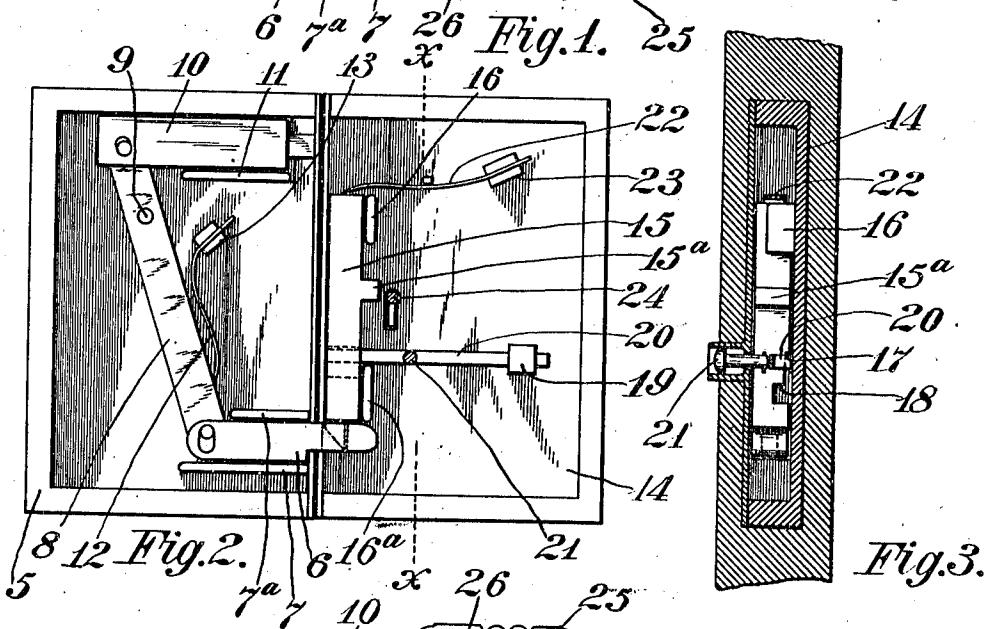
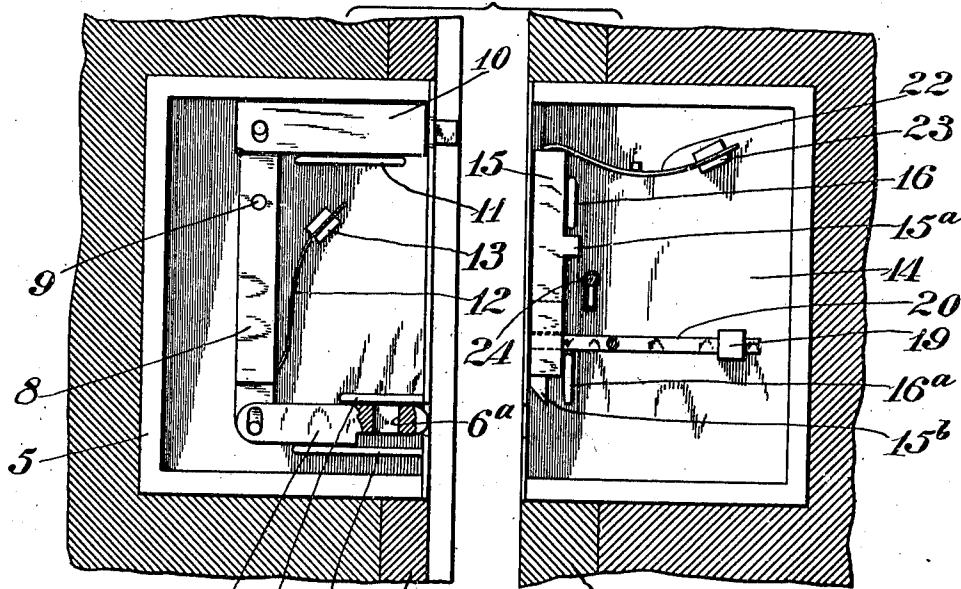


R. U. GIBSON.
SLIDING DOOR LOCK.
APPLICATION FILED OCT. 4, 1912.

1,048,678.

Patented Dec. 31, 1912.



Witnesses
Benj. Ginkel
Gertrude Lowry.

Fig. 4.

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UNITED STATES PATENT OFFICE.

RUSSELL U. GIBSON, OF COLUMBUS, OHIO.

SLIDING-DOOR LOCK.

1,048,678.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed October 4, 1912. Serial No. 723,839.

To all whom it may concern:

Be it known that I, RUSSELL U. GIBSON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Sliding-Door Locks, of which the following is a specification.

The object of this invention is an improved construction of a sliding door lock whereby the number of projecting visible parts is reduced to a minimum.

The invention is embodied in the construction herein shown and described, the features of novelty being pointed out in the claims.

In the accompanying drawings—Figure 1 is a vertical sectional view of fractions of the two members of a sliding door with the interiors of two cases of the lock exposed, parts being in section to illustrate details, the door members being in open or separated position. Fig. 2 shows the parts of the lock closed together and the bolt latched. Fig. 3 is a vertical section on the line $x-x$ Fig. 2 looking to the left. Fig. 4 is a view of the upper ends of the meeting edges of the door.

The device comprises two cases, one for each member of the sliding door one case containing the bolt and its controlling parts, and the other case the latch for the bolt and its controlling parts.

In the views 5 designates the bolt case and 6 the bolt therein. The bolt 6 is supported to slide horizontally in the lower end of its case between suitable guides 7, 7^a. The bolt 6 is actuated by means of the long arm of a lever 8 pivoted at 9. The short arm of the lever 8 has connected to it a plunger 10 that slides horizontally between the upper wall of the case and a guide 11. The free end of the bolt 6 works through a hole in the lower end of the face plate of the bolt case and the free end of the plunger 10 works through a hole in the upper end of said case but a spring 12 secured at 13 on the bolt case presses on the long arm of the lever 8 tending normally to hold the free end of the plunger projected through the face plate and the bolt withdrawn from locking position. The free or locking end of the bolt 6 is provided with a hole 6^a to receive the engaging end of the latch bolt hereinafter described. The connection of the lever 8 with the bolt and plunger can be of the ordinary pin and slot construction, as

shown, to permit the bolt and plunger to move in right lines.

14 designates the case for the latch bolt and its controlling parts.

15 designates the latch bolt which is mounted to slide vertically between the face plate of the case and suitable guides 16, 16^a. At its rear side the latch bolt 15 is cut out or recessed at different depths to form two shoulders 17 and 18 and secured at 19 on the latch bolt case is a horizontally standing spring 20 adapted to engage either of said shoulders. When the spring 19 is released and the latch bolt is raised the spring 20 engages the shoulder 18 and holds the latch bolt out of bolt-engaging position, as seen at the right hand side of Fig. 1. When the spring 20 is depressed, as by a push button 21, the latch bolt 6 is liberated for projection into engagement with the bolt, as seen in Fig. 2. The spring 20, however, by engaging the shoulder 17 limits the downward projection of the latch bolt when the bolt 6 is not in position to receive it. The latch is normally pressed downward by a spring 22 fixed in a stud 23 on the latch bolt case. The latch bolt has a lateral projection 15^a to be acted on by a key 24 to raise that bolt when it is desired to separate the door members. It will be observed, therefore, that the latch bolt can be left normally raised and released by the push button 21 in which condition the doors can be closed without locking and the locking effected when desired by pressing the push button. Or the latch bolt can be left normally down in which condition the doors are automatically locked when closed. In the closing of the face plate of the latch bolt case against or toward the face plate of the bolt case the push pin 10 is pressed inward and the bolt projected. The bolt engaging end 15^b of the latch bolt is beveled so that if the latch bolt is down it is first pushed up to admit the bolt 6.

As shown in Fig. 4 the closing edges of the door members can be furnished with male and female astragals 25 and 26 respectively so that when the bolt case is put into that member of the door containing the female astragal the projecting plunger, and the projecting bolt (if it be as it can be, made so as to project somewhat) are kept hidden from view.

What I claim is:

1. A sliding door lock comprising a case

containing a horizontally sliding bolt, and
a bolt projecting plunger with means be-
tween the plunger and bolt for normally
holding the plunger projected and the bolt
5 withdrawn from locking position, combined
with a cooperating case containing a con-
cealed latch bolt, and means for projecting
said latch bolt into engagement with the
bolt when one case is brought against the
10 other.

2. A sliding door lock comprising a case
containing a horizontally sliding bolt, and a
bolt projecting plunger with means be-
tween the plunger and bolt for normally
15 holding the plunger projected and the bolt
withdrawn from locking position, combined
with a cooperating case containing a verti-
cally sliding concealed latch bolt, and means
for projecting said latch bolt into engage-

ment with the bolt when one case is brought 20
against the other.

3. A sliding door lock comprising a case
containing a horizontally sliding bolt, and
a bolt projecting plunger with means between
the plunger and bolt for normally holding 25
the plunger projected and the bolt with-
drawn from locking position, combined with
a cooperating case containing a concealed
latch bolt, digitally controlled means for
holding said latch bolt normally out of 30
latching position and means for projecting
said latch bolt into engagement with the bolt
when one case is brought against the other.

RUSSELL U. GIBSON.

Witnesses:

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