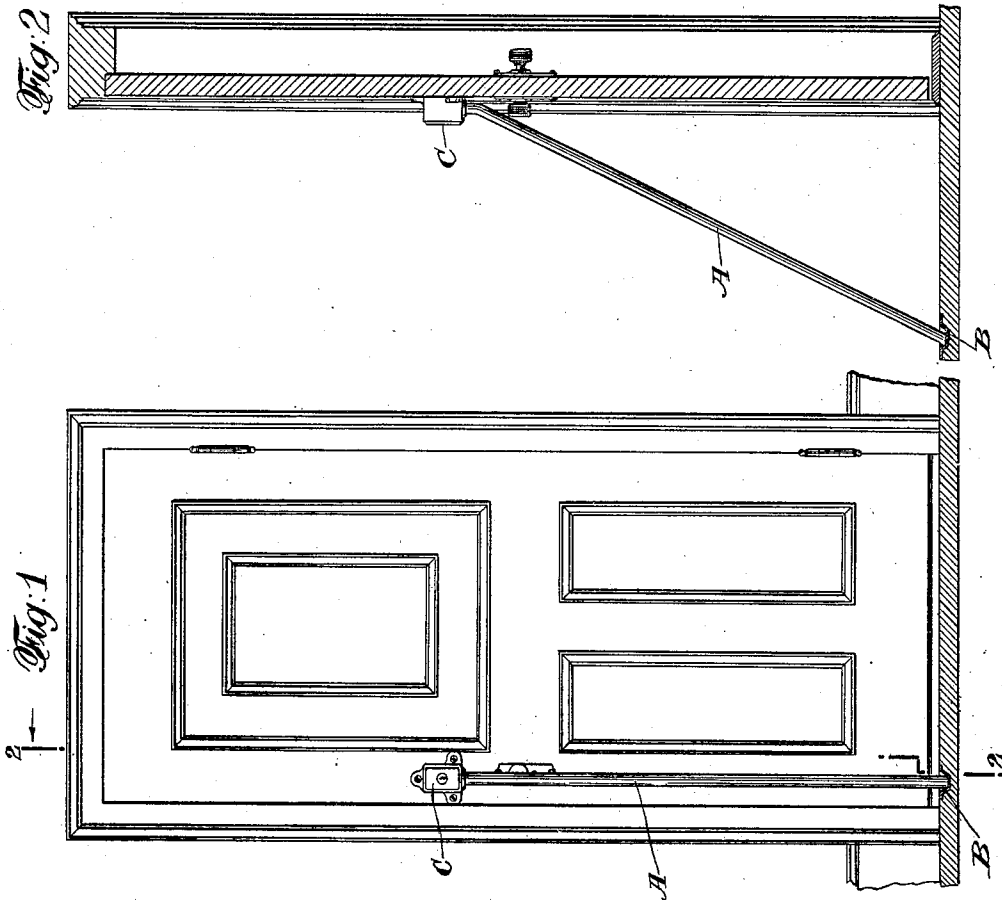


977,183.

E. R. FUCHS.
DOOR SECURING DEVICE.
APPLICATION FILED JUNE 30, 1909.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

James Johnson
W. H. Hayes

INVENTOR

Emiel R. Fuchs

BY *John K. Nolan*

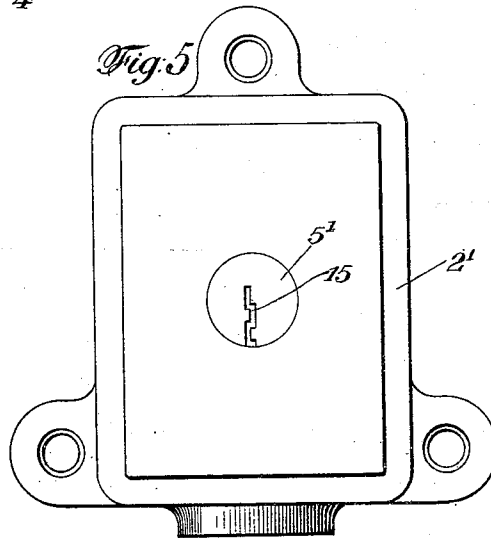
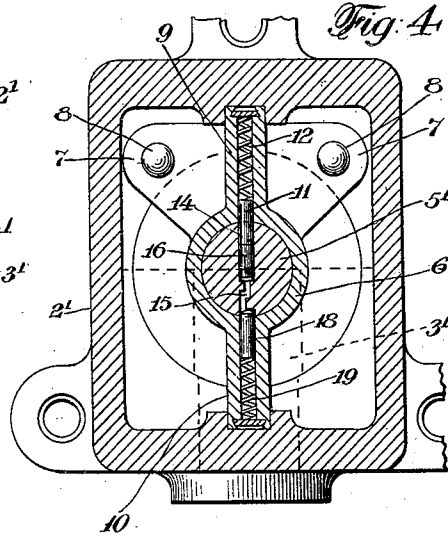
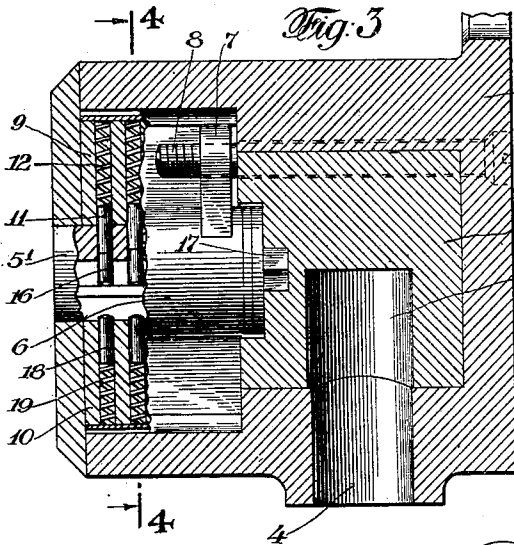
ATTORNEY

E. R. FUCHS.
DOOR SECURING DEVICE.
APPLICATION FILED JUNE 30, 1909.

977,183.

Patented Nov. 29, 1910.

2 SHEETS-SHEET 2.



WITNESSES:

Anne Johnson
W. H. Hayes

INVENTOR

Emiel R. Fuchs

BY *John T. Bean*

ATTORNEY

UNITED STATES PATENT OFFICE.

EMIEL R. FUCHS, OF NEW YORK, N. Y.

DOOR-SECURING DEVICE.

977,183.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed June 30, 1909. Serial No. 505,115.

To all whom it may concern:

Be it known that I, EMIEL R. FUCHS, a citizen of the United States, and resident of the city, county, and State of New York, have invented certain new and useful Improvements in Door-Securing Devices, of which the following is a specification.

This invention has reference, more especially, to a type of door-securing devices wherein a brace bar is disposed diagonally between abutments on the door and floor respectively, and wherein are provided key-actuated means through the agency of which locking engagement between the door abutment and the upper end of the bar can be readily effected. In an application for Letters Patent, Serial No. 505,114, filed June 30, 1909, I have described such a door-securing device wherein the door abutment comprises a reciprocable bolt-like member, which is controllable from the exterior of the door in a manner to move the said abutment into and from locking engagement with the upper end of the bar.

The present invention concerns another species or modification of the said door-securing device, and includes a door-abutment construction which is adapted to be controlled by key-actuating means from the interior of the room.

In the form of embodiment of my invention herein illustrated, I employ a rotary abutment device for the upper end of the bar, which device, by proper manipulation of the key, may be set and secured in either locking or unlocking position; and also various minor features of construction, all of which will be hereinafter particularly described and claimed.

In the drawings—Figure 1 is an interior elevation of a door equipped with securing devices embodying my invention. Fig. 2 is a vertical section, as on the line 2—2 of Fig. 1, showing the key-controlled securing device. Fig. 3 is a sectional elevation, enlarged, of the key-controlled abutment with its actuating devices. Fig. 4 is a vertical section, as on the line 4—4 of Fig. 3. Fig. 5 is a front elevation of the key-controlled abutment.

A represents the brace bar; B a socket member affixed to the floor to constitute an abutment for the lower end of the bar, and C a key-actuated abutment device fastened on the inner side of the door and adapted to receive and lock in place the upper end of the

bar. The device C, in the particular form herein illustrated, comprises a cylindrical head 1 mounted to rotate in a casing 2' which is permanently secured to the door, said head being provided with a radial socket 3' which, by rotation of the head, may be moved into and out of registry with an aperture 4 in the bottom of the casing. When the socket is in registry with the aperture, the upper end of the bar is adapted to be inserted in the aperture and raised sufficiently into the socket to permit the lower end of the bar to be applied to the abutment socket B in the floor, whereupon the bar slightly drops to bring its upper end below the socket 3', and permit the head 1 to be turned in a manner to close the upper end of the aperture 4 and thus afford a rigid abutment for the contiguous end of the bar. If the head be again turned to bring the socket 3' into registry with the aperture, the bar can be readily removed therefrom.

My invention in one aspect thereof contemplates the employment of a key-actuated device for rotating the head to locking and unlocking position, and thereby securing it in each position to which it may be set. This device, in the form herein shown, comprises a cylinder 5', of the Yale type of lock, mounted to rotate in a barrel 6 which is arranged within the casing 2' in front of the head 1. The barrel is provided with tapped lugs 7 by means of which it is secured to the inner end of the casing by screws 8. It is also provided with oppositely-disposed ribs 9, 10, which are applied to grooves in the top and bottom respectively of the casing. Fitted to vertical apertures in the upper rib 9 are the usual series of plungers 11 which are normally pressed by confined springs 12 into radial sockets 14 formed in the cylinder 5' in communication with the key-way 15 therein, thus locking the cylinder in place. In each of these sockets between the plunger and the key-way is a stem 16 with which the ridges of the key engage, when inserted in the key-way, so as to press the stem sufficiently outwardly to free the opposing plunger 11 from the socket 14 and thereby permit the free rotation of the cylinder by and with the key in the usual manner.

On the inner end of the lock cylinder is an axial projection 17, preferably polygonal in form, which is entered in a corresponding socket in the opposing end of the head, whereby the latter is, in effect, an integral

part of the head and is controlled thereby. The socket 3' in the head is diametrically opposite to the plunger sockets 14, and hence when the former is in register with the aperture 4, the head is locked in position, and can only be unlocked and turned by the proper use of the key.

In order to provide for the locking of the abutment head when it is turned to close the upper end of the aperture, I provide the lower rib 10 with a series of radially-movable plungers 18 corresponding with the sockets 14 in the cylinder. These plungers 18 are normally pressed against the periphery of the cylinder by confined springs 19, and hence when the cylinder is turned a half rotation the sockets 14 are in registry with and are engaged by the plungers 18, thereby again locking the cylinder in position, and requiring the use of the key to unlock the same.

From the foregoing it will be seen that during each complete rotation of the lock cylinder 5 the upper and lower plungers are caused to register with the sockets of the cylinder in alternate succession, thereby locking the cylinder at the limit of each half rotation thereof and requiring the application of the key to effect the locking and unlocking of the bar.

I claim—

1. Door-securing means comprising a bar, and floor and door abutments for the respective ends thereof, the door abutment comprising a rotary member, a casing in which said member is mounted, and key-operated means for bodily turning said member into and out of locking engagement with the upper end of the bar.

2. Door-securing means comprising a bar, and floor and door abutments for the respective ends thereof, the door abutment comprising a rotary member having a radial socket, a casing within which said member is mounted, said casing having an aperture for the reception of the upper end of the bar, and key-operated means for actuating said member to move its socket into and out of alinement with the upper end of the bar.

3. Door-securing means comprising a bar, and floor and door abutments for the respective ends thereof, the door abutment comprising a rotary member having a radial socket, a casing within which said member is mounted, said casing having an aperture for the reception of the upper end of the bar, key-operated means for actuating said member to move its socket into and out of alinement with the upper end of the bar, and for locking said member in each position to which it may be set.

4. In a door-securing means, the combination with a casing adapted to be secured to a door, of a rotary bar-locking member in said casing, a key-actuated mechanism comprising a cylinder provided with peripheral sockets and with a key-way, said cylinder being connected with the locking member, a barrel for said cylinder, and two diametrically opposed sets of plungers adapted to register at intervals with the said sockets.

Signed at New York in the county of New York and State of New York, this 25th day of June A. D. 1909.

EMIEL R. FUCHS.

Witnesses:

JAMES LORD.

JOHN R. NOLAN.