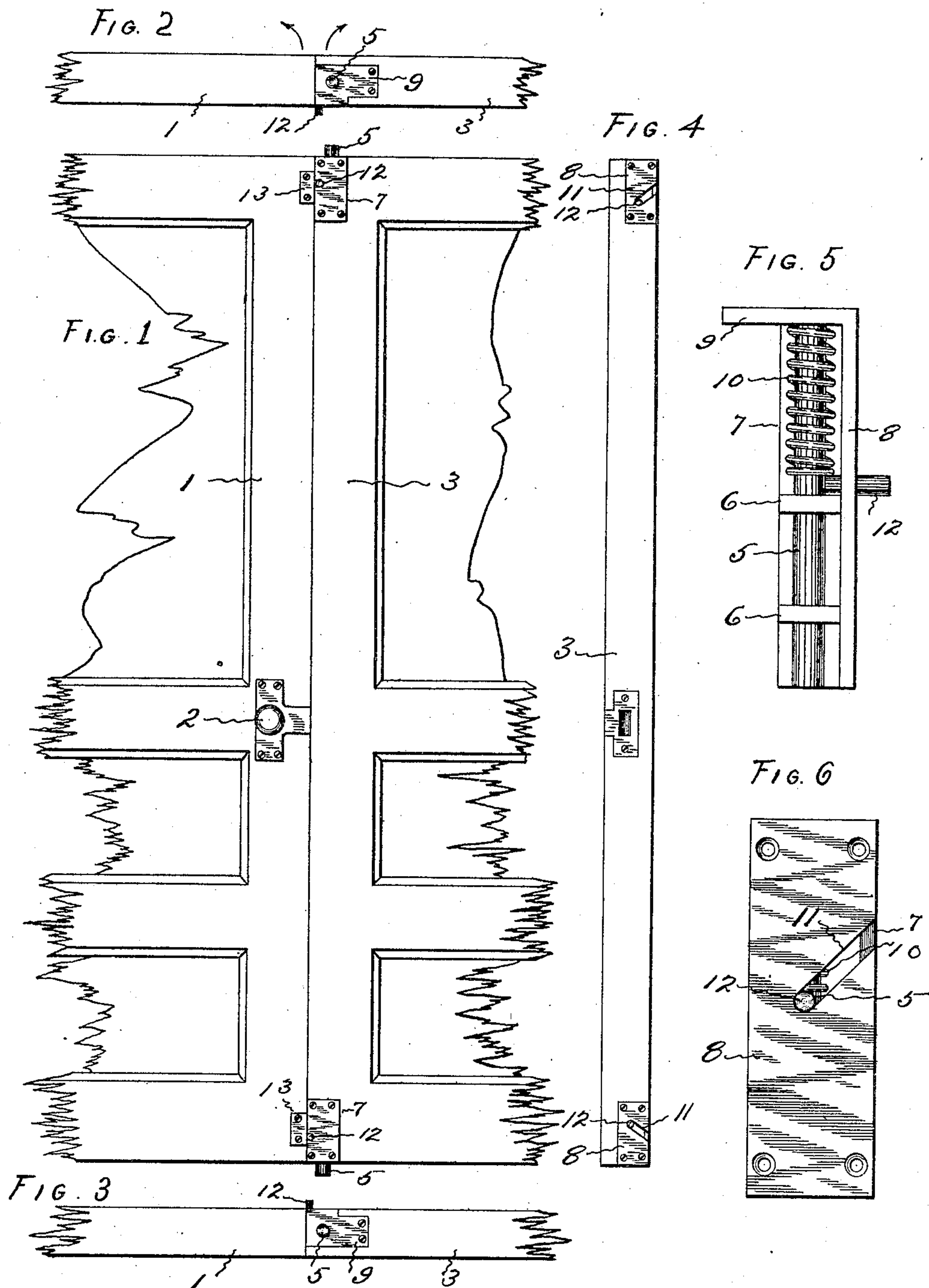


L. M. MOCHAU.  
 AUTOMATIC DOOR FASTENER.  
 APPLICATION FILED JUNE 1, 1909.

946,764.

Patented Jan. 18, 1910.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

LARS MORRIS MOCHAU, OF BURNSIDE, CONNECTICUT.

## AUTOMATIC DOOR-FASTENER.

946,764.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed June 1, 1909. Serial No. 499,486.

*To all whom it may concern:*

Be it known that I, LARS MORRIS MOCHAU, a citizen of the United States, residing at Burnside, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Automatic Door-Fasteners, of which the following is a specification.

It is very desirable, and in fact in many places at the present time, it is required that the doors of theaters, schools, public assembly halls and buildings open outward, and that such doors be fastened closed by means which can be instantly released so that the doors may be quickly thrown open in order to provide ample exit in case of fire or panic.

This invention relates to a fastening means for double doors which are used in such places, which is so constructed that it will automatically release the bolted door when the ordinary knob latch of the complementary door is turned and that latch is free to open.

The object of the invention is to provide a very simple form of fastener all of the parts of which can be easily applied to the stile of the door to be bolted, in such manner that when the latch door is closed, the bolt is automatically forced outward into the lintel or sill, and when the latch door is opened, the bolt is automatically withdrawn and leaves the bolt door free to swing open.

Figure 1 of the accompanying drawings shows a front view of the meeting stiles of two doors provided with fastening means which embodies this invention. Fig. 2 shows a view of the top edge of the same. Fig. 3 shows a view of the bottom edge of the same. Fig. 4 shows a view of the meeting edge of the stile of the door bearing the automatically acting bolts. Fig. 5 shows an inside side view, on larger scale, of one of the fasteners, and Fig. 6 shows an edge view of the fastener.

In the views the section, 1, represents the door that is provided with the ordinary knob latch 2. The section, 3, represents the complementary door which is ordinarily bolted at the top and bottom when closed. The latch of the door 1 engages the latch plate of the door 3 and holds the door 1 closed.

The stile of the door 3 is provided with a bolt 5 at the top and at the bottom. Each of these bolts, in the form of fastener

illustrated, is loosely supported by guides 6 in a frame formed of a face plate 7, an edge plate 8 and an end plate 9. A spiral spring 10 is arranged on the bolt to normally draw its end within this frame. Projecting laterally from each bolt through an inclined slot 11 in the edge plate of the frame is a stud 12.

The frames carrying these spring retracted bolts are set in the upper and lower ends of the stile of the door to be bolted, adjacent to its meeting edge, in such manner that under normal conditions the studs project into the path of the meeting edge of the stile of the other door, which stile is desirably provided with plates 13 at its edge in position to engage the studs. When the latch door is drawn closed, the plates on the edge of its stile engage the studs that project from the bolts through the inclined slots. As these studs are pushed out of the way by the edge of the door being closed, they are caused by the inclined walls of the slots to move in such manner that the bolts are forced outwardly against the pressure of the springs, the upper bolt being forced upwardly into the usual bolt socket in the lintel, and the lower bolt being forced downwardly into the usual bolt socket in the sill. As long as the latch door is closed, the stile of that door retains the studs with the bolts projecting in this manner and securely fastening the doors. When the latch door is opened, by turning the knob and withdrawing the latch, and swinging it away from the bolted door, the studs are released. When the studs are thus released, the springs draw the bolts inwardly, leaving the door bearing the bolts free to swing open. The doors may be provided with one of these fasteners at the top or one at the bottom, but preferably with fasteners at both top and bottom, as illustrated in the drawings.

The invention claimed is:

The combination with a door stile, of a fastener having a frame with an inclined slot, a bolt supported by said frame and sliding and rotating therein, a spring arranged to normally draw the bolt into the door stile, and a stud fixed to and projecting from the bolt transversely through the inclined slot and beyond the edge of the stile.

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