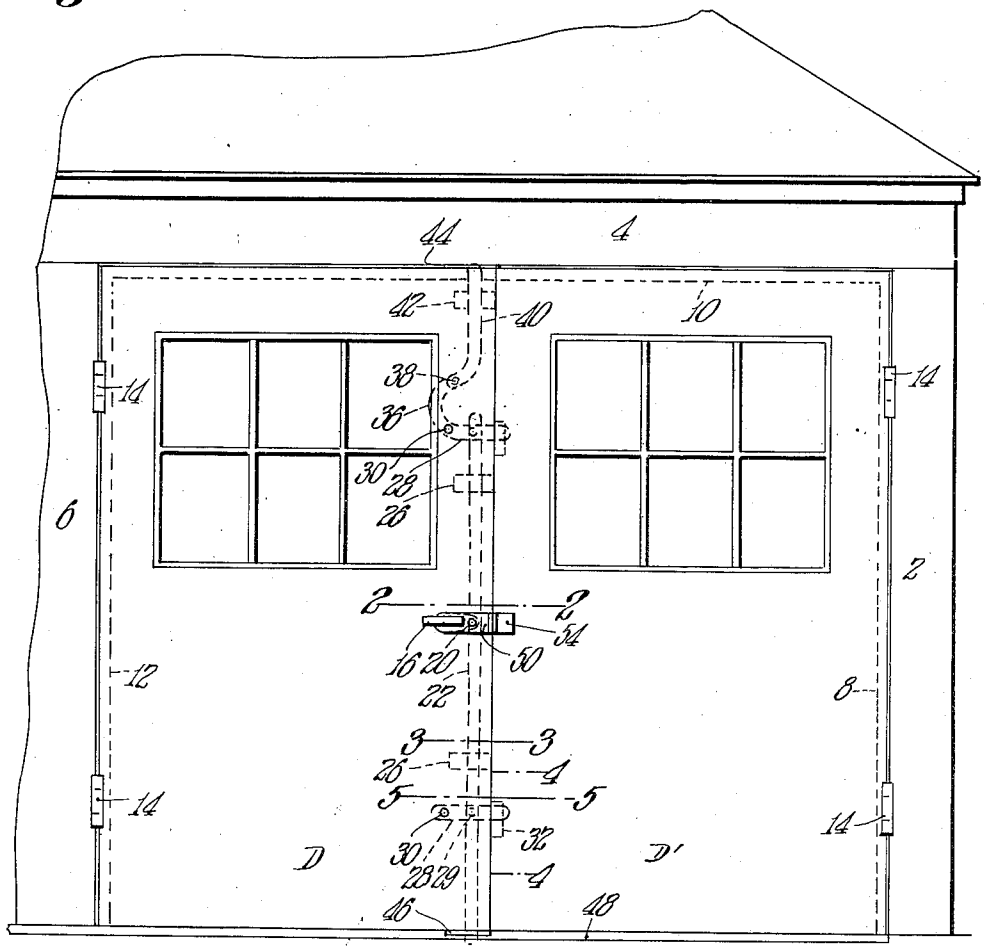
Nov. 22, 1938. J. REIS 2,137,654

DOOR FASTENING MEANS

Filed Jan. 25, 1938

Fig. 1.



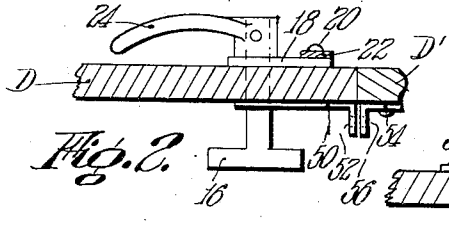


Fig. 2.

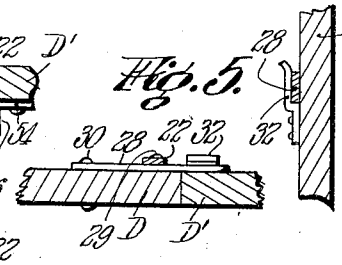


Fig. 5.

Fig. 4.

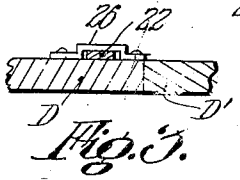


Fig. 3.

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Patented Nov. 22, 1938

2,137,654

UNITED STATES PATENT OFFICE

2,137,654

DOOR FASTENING MEANS

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Application January 25, 1938, Serial No. 186,825

3 Claims. (Cl. 292—5)

This invention relates to improvements in door-fastening means.

The principal objects of the invention are directed to the provision of means for fastening a pair of swinging doors in closed relation.

In connection with garages or the like it is customary to apply a pair of swinging doors which are relatively large and heavy and difficulty is experienced in holding them in closed relation.

According to this invention I provide a novel means for securing such a pair of doors in closed relation which operates proficiently for the locking of the doors one to the other and door frame which is simple in form and easy to operate.

Various changes and modifications may be made in the form of the invention without departing from the spirit and scope thereof and the novel features and advantages thereof will be hereinafter observed from the following description of the preferred form of the invention with reference to the drawing wherein:

Fig. 1 is an elevational view of a pair of swinging doors having the locking mechanism of the invention associated therewith;

Figs. 2 and 3 are sectional plan views on the line 2—2 and 3—3 respectively of Fig. 1;

Fig. 4 is an elevational sectional view on the line 4—4 of Fig. 1; and

Fig. 5 is a sectional plan view on the line 5—5 of Fig. 1.

Referring now to the drawing in detail, the invention will be more fully described.

In the drawing 2, 4 and 6 represent frame members around a door opening. Stops 8, 10 and 12 are for a pair of doors D and D' to abut against when in closed relation as shown. There are hinges 14 to facilitate swinging of the doors. An operating handle 16 on the outer side of the door D carries a lever 18 which is pivoted at 20 to a vertically slidable bar 22.

There is a handle 24 inside the door to facilitate the manipulating of the lock mechanism from the inside. Guide members 26 are provided for the bar 22 to facilitate the up and down sliding movements thereof. Transverse locking members 28 are provided which are pivoted to doors D at 30 and their ends are so arranged as to engage behind brackets 32 bearing the door D'.

An extending portion 36 of the upper member 28 is pivoted at 38 to the lower end of a bar 40 which is slidable vertically in a guide 42 associated with door D.

Upper and lower plates 44 and 46 are secured to the upper frame 4 and a lower sill 48, which plates are slotted to receive the ends of bar members 22 and 40.

The parts are shown in Fig. 1 in a locked position and to unlock the doors it is necessary to rotate operating member 16 counterclockwise. This motion throws bar 22 upwardly and pulls bar 40 downwardly concurrently. As this occurs the ends of bars 22 and 40 are withdrawn from the recesses of plates 44 and 46, and the outer ends of members 28 are moved upwardly and beyond the end of members 32. The doors thereby are now ready to be swung outwardly to an open position.

It will be observed that the mechanism is constructed and arranged in such a way that the doors D and D' are not only locked together but are locked to the frame and sill adjacent to the doors. The mechanism locks the doors, securing them against opening in such a way that they are held against warping which is a very common occurrence.

A bar member 50 is associated with the operating lever 16 on the door D. This member is provided with an opening 52 and rests adjacent to a similar bar member 54 secured to door D'. Bar member 54 is also provided with an opening 56 so that openings 52 and 54 are adjacent each other locked with a padlock or the like in a locked position, when in their closed relation.

While I have described the invention in great detail and with respect to a preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. The combination with a frame having a door opening and a door hinged thereto at its outer edge for swinging between open and closed positions of a means for securing said door in said closed position comprising, an operating member pivoted to the door, a lower bar member slidable vertically relative to the door and having its lower end normally in engagement with a lower part of said frame, a pivotal connection between said operating member and said lower bar member, an upper bar member slidable vertically relative to said door and having its upper end normally in engagement with the upper part of said frame, a single link member having a transverse part pivoted to said lower bar member and a curved part pivoted at its upper end to the lower end portion of said upper bar member, and a pivotal connection between

an intermediate portion of the link member and the door, all adapted and arranged whereby movement of said operating member on its pivot causes upward movement of said lower bar member and actuates said link member to move said upper bar member downwardly.

2. The combination with a frame having a door opening and a pair of doors hinged thereto for swinging between an open and a normally closed position of a means for securing said doors in said normal position comprising, an operating member pivoted to one of said doors and having a lever part normally overlying the other door, a lower bar member slidable vertically relative to said one door and having its lower end normally in engagement with a lower part of said frame, a pivotal connection between said operating member and said lower bar member, an upper bar member slidable vertically relative to said one door and having its upper end normally in engagement with an upper part of said frame, and a single curved link member having one end portion normally in engagement with said other door and a part intermediate its ends pivoted to said door and its other end portion pivoted to the lower end portion of said upper bar member, all adapted and arranged whereby movement of said operating member on its pivot causes said lower bar member and said lever part to move from their said normal positions so as to actuate said curved link member and move said upper bar member downwardly from its said normal position.

3. The combination with a frame having a door opening and a door hinged thereto at its outer edge for swinging between an open and a normally closed position of a means for securing said door in said normal position comprising, an operating member pivoted to the door, a lower bar member slidable vertically relative to the door and having its lower end normally in engagement with a lower part of said frame, a pivotal connection between said operating member and said lower bar member, an upper bar member slidable vertically relative to said door and having its upper end normally in engagement with the upper part of said frame, the lower end portion of said upper bar member curving outwardly towards said outer edge of the door, a single link member having a transverse part pivoted to said lower bar member and a curved part pivoted at its upper end to said curved end portion of the upper bar member, and a pivotal connection between an intermediate portion of the link member and the door, all adapted and arranged whereby movement of said operating member on its pivot causes upward movement of said lower bar member and actuates said link member to move said upper bar member downwardly.

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