To all whom it may concern:

Be it known that I, FRIEDRICH W. BECKER, a citizen of the United States, residing at New Athens, in the county of 5 St. Clair and State of Illinois, have invented certain new and useful improvements in Fastening Means for Doors and the like; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in means for fastening doors or the like in any one of a number of adjusted positions.

In constructing my device, I employ a segmental rack for attachment to the door frame, a spring retracted latch for attachment to the door and adapted to cooperate with said rack, a lever adapted to be pivoted to the door, and an elastic connection between the latch and the lever for projecting the former into engagement with said rack.

25 To the above end, the primary object of the invention is to provide a device of the character described provided with a flexible connection between the latch and the operating means therefor, thereby allowing the latter to be operated to project the former, whether said latch be located opposite a notch of the rack or opposite one of the teeth thereof.

A secondary object of the invention is to proportion the parts in such a manner as to cause said elastic connection to retain the operating lever in contact with a stop to move past dead center to project the latch.

With these and other objects in view, the invention resides in certain novel features of construction and combination herein described and claimed as shown in the drawings wherein:

Figure 1 is a perspective view of a portion of a door and its frame showing the application of my invention thereto, the latch being projected; and Fig. 2 is a front elevation of the latch with the front of the casing removed.

In the accompanying drawings, I have shown a portion of a door D which is hingedly connected as at E to a door frame F. These parts may be constructed in any suitable manner and form no part of the present invention.

Having one of its ends formed into an attaching foot 1, secured to the upper crossbar of the frame F, is a segmental rack 2, the intermediate portion of said rack being provided with a pair of inwardly converging attaching arms 3 and 3', the arm 3 being provided with an attaching foot 4 which is likewise secured to a suitable portion of the frame. It may here be stated that the positioning of the rack 2 is such as to cause the same to lie concentric with the hinges H. Pivoted to the upper edge of the door D is a latch 5, the same being here shown in substantially the form of a bell crank lever which is pivotally supported within a suitable casing 6, a coil spring 7, attached to said latch and having its opposite end fixed, being employed for the purpose of normally retracting the active arm 8 of said latch, said arm lying beneath the rack 2 and in position to be forced into any one of the notches 9 formed in the lower edge thereof. Spaced toward the free edge of the door, from the free end of the latch 5, is a guide roller 10, while directly beneath the roller 10 and disposed adjacent the knob K of the door, is an operating lever 11 which is pivoted to said door at 12 and provided with a suitable operating knob or handle 13 at its free end. Attached to the knob 13 or to any suitable part of the lever 11, is a flexible operating element 14, here shown in the form of a flexible wire, said element passing over the guide pulley 10 and being connected to the free end 15 of the latch 5, by a coil spring 16.

By this construction and arrangement of parts, it will be seen that should the door be opened to such an extent as to position the arm 8 of the latch 5, intermediate two of the notches 9, the lever 11 could be operated to equal advantage as if said arm 8 were directly beneath one of said notches, this being due to the fact that the yielding connection 16 is provided, this connection allowing said operating lever 11 to swing around its pivot 12 and into contact with the stop 17, said stop being so positioned as to allow said lever to move past dead center in which position it is retained by the tension of the spring 16. When now the door is moved in either direction, the tension of said spring, being greater than the tension of the spring 7, will rock the latch 5 around its pivot and will project the arm 8 into one of the notches 9, thereby securely retaining the door in adjusted
position, but it will be seen that movement of the lever 11 in the opposite direction, will relieve all tension from the spring 16 and will allow the spring 7 to again retract the latch 5.

I have described my invention as employed in connection with a door and door frame. It will be evident that it could be used to equal advantage with any support having an opening and a hinged opening therefor.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a support having an opening, and a closure for said opening hinged to said support, of a segmental rack secured to the support adjacent one end of the closure, a normally retracted latch carried by the closure, means for projecting said latch into engagement with the rack, and an elastic connection between said means and said latch.

2. The combination with a support having an opening, and a closure for said opening hinged to said support, of a segmental rack secured to the support adjacent one end of the closure, a normally retracted latch carried by the closure, a lever pivoted to the closure, an elastic connection between said lever to the latch, and a stop for limiting the movement of said lever when swung past dead center to project said latch into engagement with the rack.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRIEDRICH WILLIAM BECKER.

Witnesses:

OSCAR HENDRICKS,
E. H. SLIEPER.