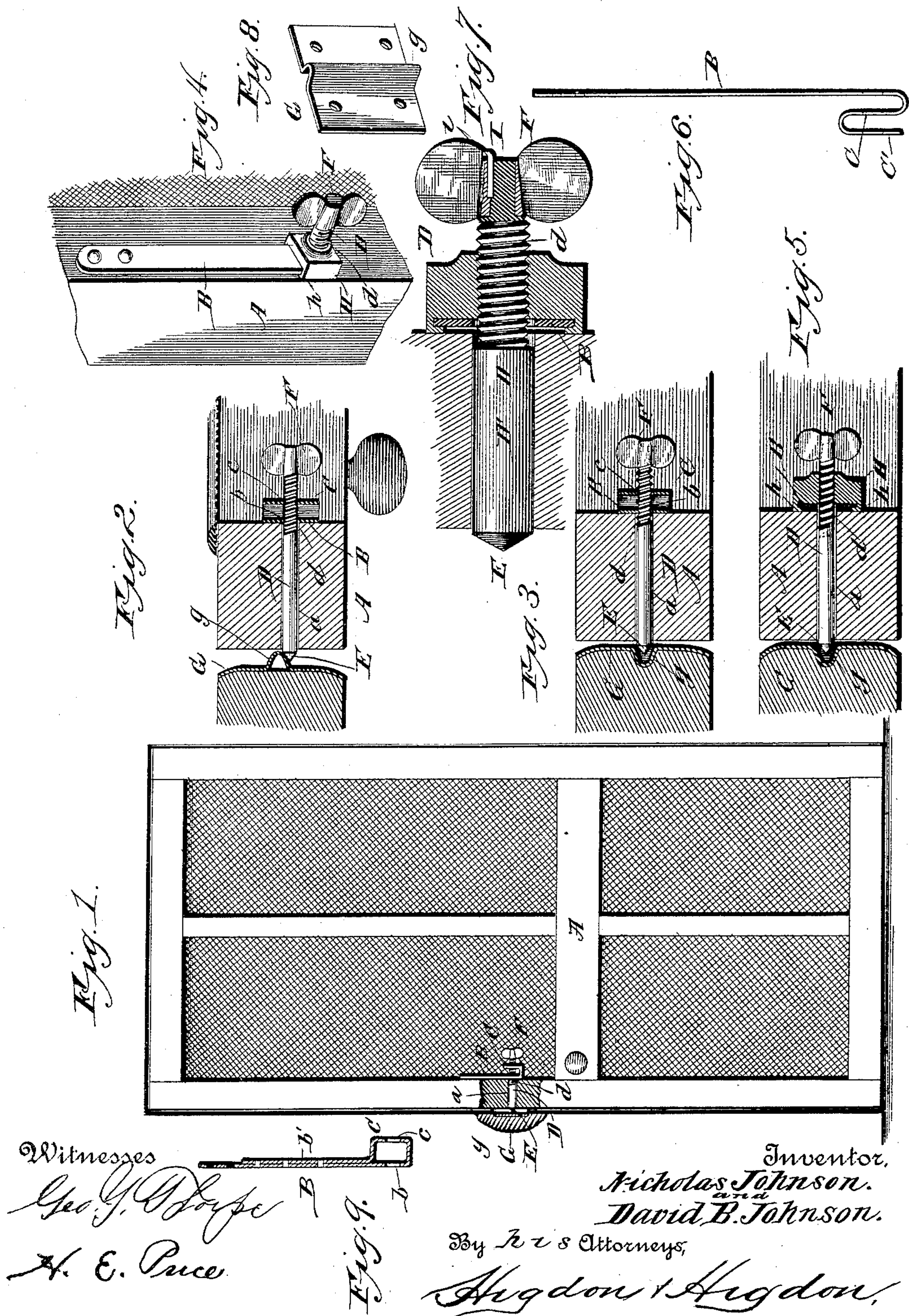


(No Model.)

N. & D. B. JOHNSON.
LATCH.

No. 450,939.

Patented Apr. 21, 1891.



Witnesses

Geo. J. Dwyer
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Fig. 9.

By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

NICHOLAS JOHNSON AND DAVID B. JOHNSON, OF MERRIAM, KANSAS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 450,939, dated April 21, 1891.

Application filed August 26, 1890. Serial No. 363,073. (No model.)

To all whom it may concern:

Be it known that we, NICHOLAS JOHNSON and DAVID B. JOHNSON, of Merriam, Johnson county, Kansas, have invented certain new and useful Improvements in Adjustable Latch for Screen-Doors and Gates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to an improvement in adjustable latches for screen-doors, gates, &c.; and it consists in the novel construction and arrangement of its parts, as will be hereinafter specified and claimed.

Our object is to provide a gate or door latch cheap and durable of construction and simple and effective in operation.

Referring to the drawings, which illustrate this invention, Figure 1 is a view of the inner face of a screen-door, showing our preferred form of latch construction. Fig. 2 is a horizontal section on line *x x* of Fig. 1. Fig. 3 is a similar view of the latch, showing the construction with a latch-plate which allows the door or gate to swing to one side or the other. Fig. 4 is a detail perspective view showing a different form of spring-latch. Fig. 5 is a horizontal section showing the same applied to a swinging gate or door. Fig. 6 is a different form of latch-spring. Fig. 7 is a view showing a different form of bolt. Fig. 8 is a detail perspective view of the latch-plate. Fig. 9 is another modified form of the latch-spring.

Similar letters refer to similar parts in all the figures, in which—

A represents a screen-door or gate having secured in suitable position the latch-spring B, having the lower end turned up at C, the body portion and the turned-up portion being provided with the openings *b* and *c* in alignment with each other and the horizontal passage-way *a* in the door or gate A. The adjustable bolt D, provided with the screw-threads *d* and adapted to operate in the openings *b* and *c* of the spring-latch, passes through the perforation or passage *a* and is beveled on its free end at E. The rear end of said bolt is provided with thumb-head F, by which it is operated. Secured in the door-jamb or gate-post opposite the bolt D is the plate G, constructed as shown in Fig. 8, and which,

when applied to the door-jamb or gate-post, may have the projection *g* thereon either projecting forward from the jamb or post, or the plate may be inverted and the projection recessed in the jamb or post, accordingly as the door is swung to only one side or both, as shown in Figs. 1, 2, 3, and 5, respectively.

In Figs. 4 and 5 we show the spring B, having on its lower end the nut H, secured by means of flanges *h h*, bent around the spring and securing it thereon. The nut is provided with the interior screw-threads, in which the adjusting-bolt operates.

In Fig. 6 we show another form of latch-spring B, bent at its lower end to form the portions C and C', parallel with the body of the spring, through which aligned bearings are made for the passage and operation of the screw-bolt D, thus affording additional strength to the said latch-spring.

In Fig. 7 we show a modified form of adjusting-bolt D, to be adapted, preferably, to heavy doors and gates, having the forward cylindrical end D' made considerably larger in cross-section than the screw-threaded portion *d* and the inner end to allow a slighter bevel, if required, and having the thumb-portion F removably secured on the inner end by means of the key I, provided with the flange or shoulder *i* on its outer end, by which means the key and thumb portion may be removed from engagement with the end of the bolt.

In Fig. 9 we show the latch-spring B bent to form the opposite vertical portion C, thence bent inward and upward, and has its end riveted or otherwise secured to the spring portion B, thus doubling and therefore increasing the strength of said spring.

In operation the door or gate provided with our improved latch being closed the beveled point E of the bolt striking against the projection of the plate is forced rearward until the said projection is past, when the spring to which the bolt is secured causes the said bolt to advance, and the door or gate is latched. A slight pressure from the inside or pull from the outside of the door is sufficient to cause the bolt to recede and the door to be opened. The power required to open the door from the outer or inner side of the house may be regulated by operating the adjusting-bolt by means of the thumb portion thereof. The

door or gate being closed may be locked when desired by advancing the point of the adjusting-bolt until the bevel is beyond engagement with the projection or recess, accordingly as the plate is used for a single or double action door or gate, and is therefore prevented from opening until the adjusting-bolt is operated in the reverse direction, causing the point to recede.

10 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

15 1. The combination of a door or gate and the frame thereof, an adjustable bolt D, a locking or latch plate secured to the frame or gate-post, and the spring-plate B for holding said bolt and locking-plate in contact with each other, substantially as described.

20 2. In an adjustable latch, the combination, with locking or latch plate, of a screw-bolt beveled at its forward end, operating in the opening in the body, and the upturned portion of the spring-plate B, substantially as described.

25 3. In an adjustable latch, the spring-plate having the upturned end, the bolt screw-threaded to engage and operate in aligned openings in said plate and portion C, said bolt having the beveled forward end and having ears or thumb projections on its rear end by which it may be turned, substantially as and for the purpose set forth.

30 4. The spring-plate, the screw-threaded nut secured on the end thereof, having the ears or flanges bent around the said spring-plate, and the bolt engaging the said screw-threads of the nut, substantially as described.

5. The spring-plate bent to form the por-

tions C and C' parallel with the main or body portion thereof and provided with aligned openings therethrough, and an adjustable bolt resting in said openings, substantially as described.

6. The spring-plate bent to form the parallel portions B and C, provided with the aligned openings for the passage and engagement of the bolt, and the upturned end b', secured against the vertical spring portion, in combination with an adjustable bolt resting in said openings, substantially as and for the purpose set forth.

7. The bolt D, having the enlargement D', beveled end, screw-threaded portion, the key I, having the shoulder i thereon, and the removable thumb portion E, substantially as described.

8. A combined bolt and latch for doors and the like, consisting of a spring adapted to be secured to the door, and a bolt held by said spring and adapted for adjustment, whereby the length of the operative portion thereof may be varied, for the purpose specified.

9. In a combined bolt and latch, a spring adapted to be secured to a door or the like, a bolt adjustably secured to said spring, and a thumb-piece secured to the bolt and adapted to be removed therefrom when the bolt has been fastened, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

NICHOLAS JOHNSON.
DAVID B. JOHNSON.

Witnesses:

GEO. Y. THORPE,
H. E. PRICE.