

No. 633,979.

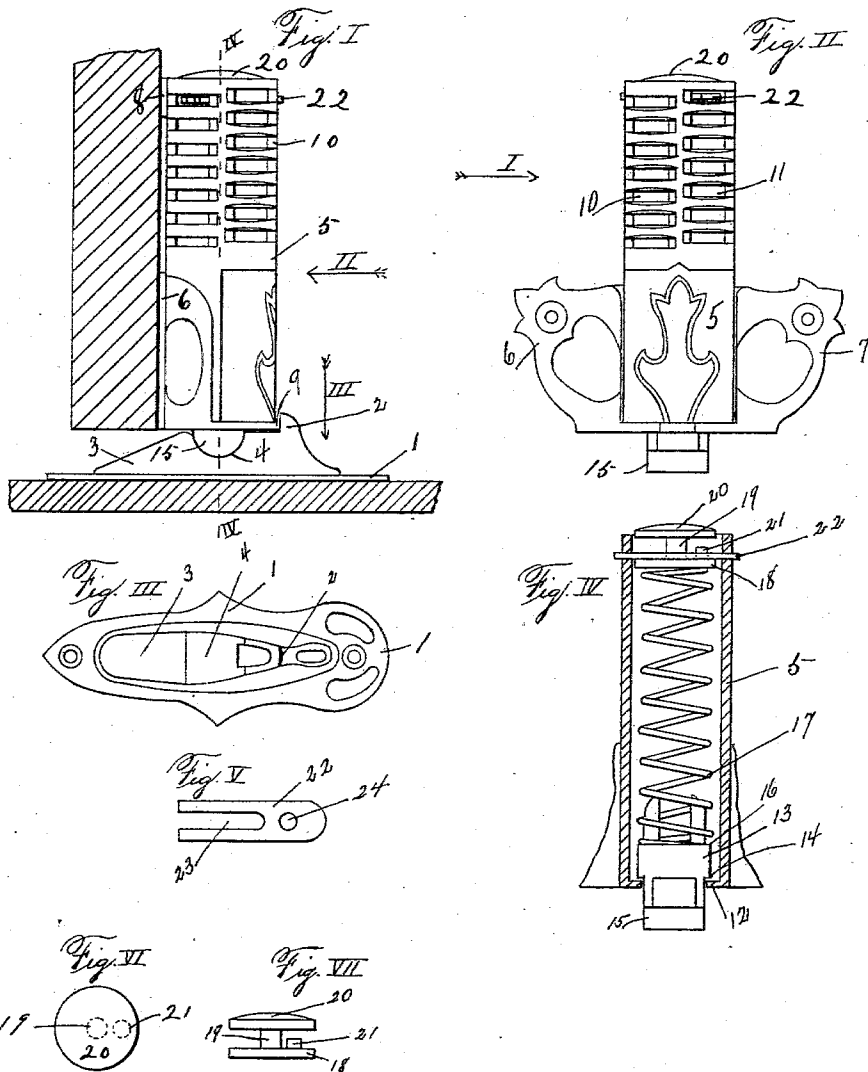
Patented Sept. 26, 1899.

W. V. BLÉHA.

DOOR STOP.

(Application filed Mar. 1, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM V. BLÉHA, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS TO
CHARLES E. HANNAUER AND CHARLES E. SEEGER, OF SAME PLACE.

DOOR-STOP.

SPECIFICATION forming part of Letters Patent No. 633,979, dated September 26, 1899.

Application filed March 1, 1899. Serial No. 707,360. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM V. BLÉHA, a citizen of the United States, residing in the city of St. Louis, State of Missouri, have invented an Improvement in Door-Stops, of

Figure I is a section of a door and floor drawn for the purpose of showing my improved door-stop in operation, said view showing the door-stop in side elevation, as seen looking in the direction indicated by the arrow I in Fig. II. Fig. II is a front elevation of a portion of the door-stop which is attached to the door, as seen looking in the direction indicated by the arrow II in Fig. I. Fig. III is a plan of a portion of the door-stop which is attached to the floor, as seen looking in the direction indicated by the arrow III in Fig. I. Fig. IV is a section on the line IV IV in Fig. I. Fig. V is a plan of the spring-keeper. Fig. VI is a plan of the spring-follower. Fig. VII is a side elevation of the follower shown in Fig. VI.

My object is to construct a door-stop in which the tension of the spring is utilized to check the door and relieve the jar which would otherwise take place in coming in contact with the fixed stop, the tension of the spring being adjustable and said spring being removable.

My invention consists of a stop designed to be rigidly secured to the floor, an inclined plane in front of the stop, a retaining-groove for a round-nosed sliding bolt between said inclined plane and the stop, a casing adapted to be attached to the door in position to engage said stop, a round-nosed sliding bolt operating in said casing in position to engage said inclined plane, a spring in said casing and operating to press said bolt downwardly, a follower in said casing above said spring, and a keeper inserted through said casing and engaging said follower, there being a series of openings in said casing for said keeper, as required to provide means of raising and lowering the follower and thereby adjusting the tension of the spring.

Referring to the drawings in detail, the plate 1 is adapted to be secured to the floor by means of screws, and a stop 2 extends upwardly from said plate. The inclined plane 3

extends upwardly from the plate 1 in front of the stop 2, and the retaining-groove 4 is formed between the inclined plane 3 and the stop 2. The casing 5 has ears 6 and 7 extending laterally from its lower end, and said ears are secured to the floor by means of screws. The casing is in the form of the barrel or cylinder, and the lug 8 extends backwardly from its upper end and rests against the door. The lug 9 at the lower end in front of the casing is in position to engage the stop 2. A series of keeper-openings 10 is formed through the upper part of the casing at an angle of forty-five degrees relative to the door, and a similar series of keeper-openings 11 is formed through the casing at right angles to the first-mentioned openings. The openings 10 are mismatched relative to the openings 11—in other words, the metal bars between the openings 10 are on a line with the openings 11. The flange 12 partly closes the lower end of the casing and forms a shoulder. The sliding bolt 13 operates in the casing and has a shoulder 14, which engages the flange 12, thus holding the round nose 15 of the bolt to project below the end of the casing. The shoulder 16 is formed upon the sliding bolt and serves as a seat for the expansion-coil spring 17. The follower 18 is placed in the upper end of the casing against the spring. The post 19 extends upwardly from the center of the follower and the button 20 is fixed upon the upper end of the post. The pin 21 extends upwardly from the follower 18 beside and a short distance from the post 19. The keeper 22 has a slot 23 formed from one of its ends to receive the post 19 and a circular opening 24 to receive the pin 21.

The spring is placed in the casing, then the follower 18 is placed against the spring and pressed downwardly into the casing, and then the keeper is inserted through one of the keeper-openings against the lower face of the button 20, and the post 19 enters the slot 23. Then the button is released and the tension of the spring forces the follower upwardly against the keeper, and the pin 21 enters the opening 24 and holds the keeper in its position. When the door swings open, the round nose 15 of the sliding bolt engages the inclined plane 3 and the spring yields against

the upward pressure of the bolt until the bolt slides over the inclined plane and engages in the retaining-groove. Then the tension of the spring will hold the bolt in the retaining-groove and hold the door open, the lug 9 strikes the stop 2 and prevents the door from swinging beyond the stop, the tension of the spring striking the inclined plane lessens the impact against the stop, and when it is desired to close the door the yielding of the spring will allow the bolt to slide out of the retaining-groove. The tension of the spring is adjusted by removing the keeper 22 and changing the position of the follower 18.

It is obvious that while the keeper may be readily removed by pressing the button 20 downwardly to withdraw the pin 21 from the opening 24 it is impossible for the keeper to come out by jarring or accident.

I claim—

1. A device of the class described consisting of a stop an inclined plane in front of the stop; a retaining-groove between the inclined plane and the stop for the round-nosed sliding bolt; a casing to engage the stop; a round-nosed sliding bolt operating in the casing to engage the inclined plane; a spring pressing said bolt downwardly and means of adjusting the tension of the spring, substantially as specified.

2. In a device of the class described, the casing 5 having the keeper-openings 10 and 11, the flange 12 partly closing the lower end of

the casing and forming a shoulder; the sliding bolt 13 and having a shoulder 14 to engage the flange 12 and having the round nose 15 projecting below the end of the casing; the expansion-coil 17 mounted in the casing and pressing the sliding bolt downwardly; the follower 18 mounted in the upper end of the casing against the spring; the post 19 extending upwardly from the center of the follower; the button 20 fixed upon the upper end of the post; the pin 21 extending upwardly from the follower beside the post 19; the keeper 22 having a slot 23 inserted through a pair of the keeper-openings with the post 19 in the slot 23 and having the circular opening 24 to receive the pin 21, substantially as specified.

3. In a device of the class described, a cylindrical casing; a sliding bolt operating in said casing; an expansion-coil spring in said casing and pressing said bolt downwardly; the follower 18 in the upper end of said casing against the spring; the post 19 extending upwardly from the center of the follower; the button 20 upon the upper end of the post; the pin 21 extending upwardly from the follower beside the post; the keeper 22 inserted through the casing and having a slot to receive the post 19 and a circular opening to receive the pin 21, substantially as specified.

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Witnesses:

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