

No. 643,850.

G. H. ROGERS.

Patented Feb. 20, 1900.

DOOR STOP.

(Application filed May 18, 1899.)

(No Model.)

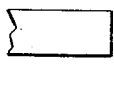
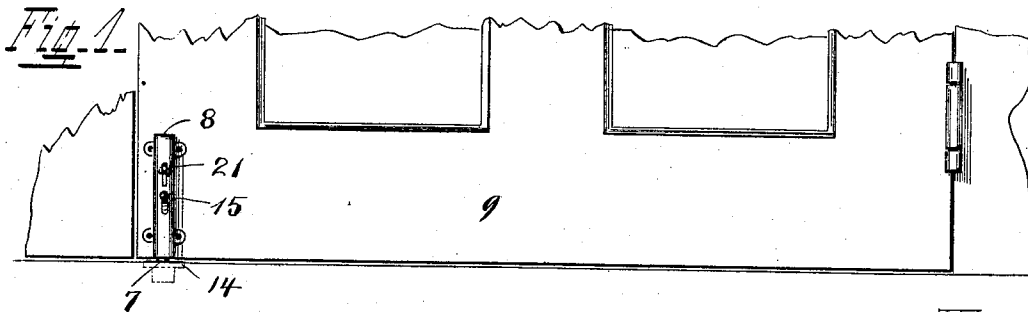


Fig. 2.

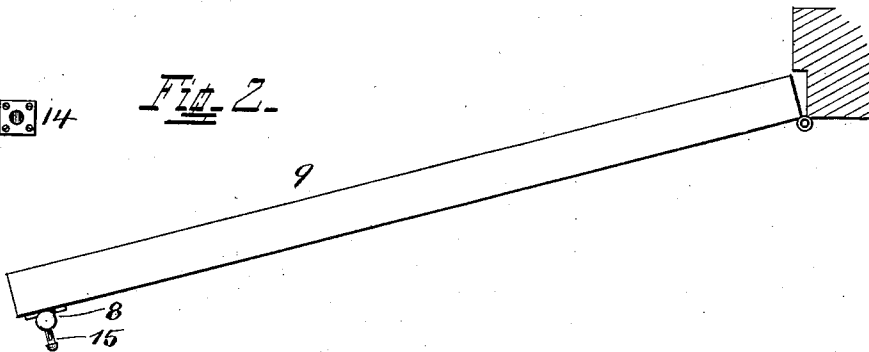


Fig. 3.

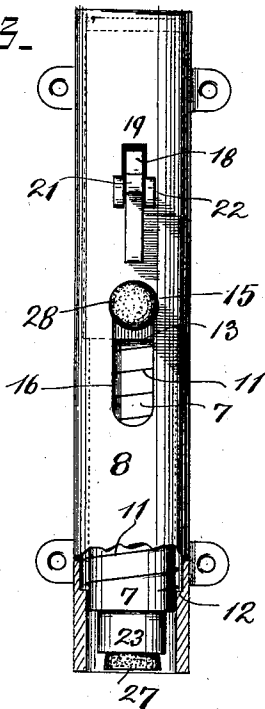


Fig. 4.

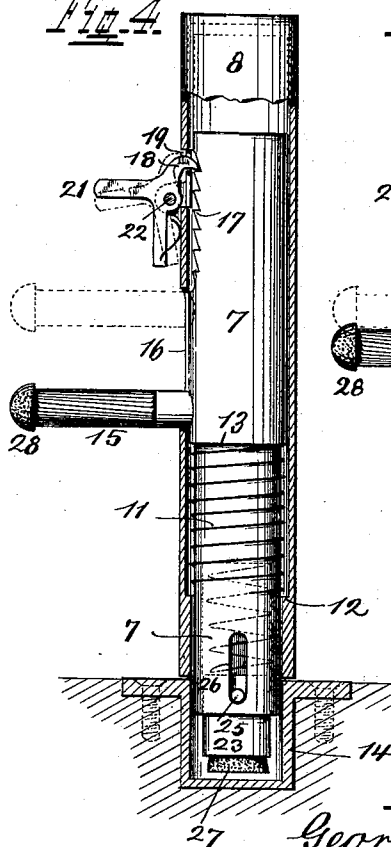
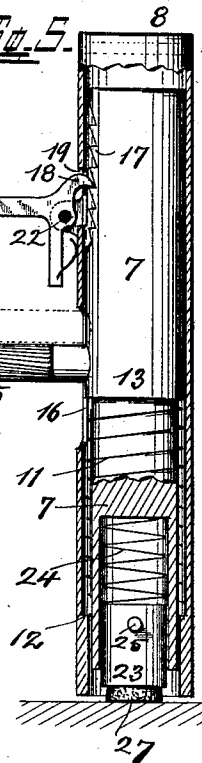


Fig. 5.



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DOOR-STOP.

SPECIFICATION forming part of Letters Patent No. 643,850, dated February 20, 1900.

Application filed May 18, 1899. Serial No. 717,340. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. ROGERS, a citizen of the United States, and a resident of Birmingham, Jefferson county, State of Alabama, have invented a certain new and useful Door-Stop; and I do declare that the following is a clear, full, 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, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to a door-stop in shape of a bolt which may be used in two ways, which are, first, as a means to positively lock the door in a specific position—as, for instance, when closed—and, second, to merely hold the same at any point between extreme positions—as, for instance, when it is desired to hold the door partly open.

The invention consists of certain features and details of construction whereby a bolt is caused to operate in the manner above set forth.

In the following specification and particularly pointed out in the claims at the end thereof is found a full description of my invention, together with its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in elevation the lower part of a door closed and with my device in position and used to lock the door in its closed position. Fig. 2, in a top view of Fig. 1, shows my device as used for holding the door in a partly-open position. Fig. 3, in an elevation, partly in section, shows the device detached and in its normal condition. Fig. 4, in a similar view, taken at right angles to the preceding one, shows the device as used to lock the door in its closed position. Fig. 5, in a view similar to the preceding one, shows the device as used to hold the door in a partly-open condition. The last three figures are shown on an enlarged scale.

Numerals 7 indicates the bolt, contained in a housing 8, which latter is connected in an upright position to the lower part of a door 9, as shown in Fig. 1. The bolt is normally held elevated and with its lower end inside of housing 8 by means of a spring 11, encircling

the former and confined between two shoulders, of which one, 12, is formed within the interior of the housing and the other, 13, is formed on bolt 7. This last shoulder is obtained by simply increasing the diameter of the upper part of the bolt, as shown, such increase being preferably to a size to completely fill the housing.

14 is a socket secured in a position to be capable of receiving the lower end of the bolt when the door is in a certain position in which it is intended to lock the same—as, for instance, when entirely closed. (See Figs. 1 and 4.) To bring about such engagement, bolt 7 is depressed, for which purpose an arm 15 is provided, projecting outwardly from the latter and through a slot 16 in the housing. Since such depression is against the expansive action of spring 11, it becomes necessary to hold the bolt in such depressed position, for which purpose ratchet-teeth 17 are provided on the latter, and a spring-actuated pawl 18 is supported on the housing through an opening 19, in which it engages said teeth. When it is desired to unlock the bolt to permit opening of the door, the former is released from the engagement with pawl 18, whereupon spring 11 by expanding to its normal position lifts the bolt out of socket 14. For so disengaging the pawl the latter is provided with an outwardly-projecting arm 21, pivoted like the pawl at 22, and which arm is depressed, thereby raising pawl 18 out of the teeth. The operation of this device is rendered very convenient by reason of these projecting arms 15 and 21, which may be manipulated by the foot, arm 21 requiring only a light touch, thus obviating the necessity of stooping down. The outer surface of arm 15 is roughened by serrations or knurling, which enables the foot to obtain a securer hold.

The door may also be held by frictional contact and pressure merely at any point, as shown in Fig. 2 and which is between extreme positions—that is, between the entirely-open one and one completely closed, in which latter the door may also be positively locked, as before described. This is obtained by having the lower end of the bolt yieldable and causing it, by means of spring-pressure, to impinge against the floor. For such purpose

the lower part of bolt 7 is hollow and contains a short supplementary bolt 23, with a spring 24 behind or above and pressing it normally outwardly. It is held in place by a pin or screw 25, working in a slot 26. The operation and manipulation of the device when to be used in this manner are the same as before described. If it be desired to hold the door partly open, the same is swung first to the desired angle—for instance, as shown in Fig. 2—after which bolt 7 is depressed, as before described, by stepping on arm 15. This movement carries or tends to carry the supplementary bolt 23 against the floor, causing as soon as the former comes in contact with the latter a compression of spring 24, the outward pressure of which is sufficient to hold the door in position. (See Fig. 5.) It is released by pressing on arm 21, the same as before, whereupon spring 11 carries bolt 7, with its yieldable end up, into housing 8. Excepting, however, the presence of any unevenness in the floor at the particular point where the bolt is to engage the same to hold the door bolt 23 will not move down at all, or at least very little, and the only movement which occurs is by bolt 7. Its downward movement, however, causes the requisite compression of spring 24, with the desired effect of exerting pressure against the floor, as shown in Fig. 5. To obtain a better contact and also to prevent scratching of the floor, the outer end of bolt 23 is tipped off with a rubber foot 27. The outer end of arm 15 is also provided with a rubber tip 28 and made sufficiently long so as to serve at the same time as a buffer to prevent injury to the wall by the door-knob or other projecting parts of the door in case this latter is entirely thrown open. In this capacity it takes the place of devices now generally secured to the wall or base-board.

Having described my invention, I claim as new—

1. In a door-stop, to hold a door at any point between its extreme positions, the combination of a housing, a bolt adjustably fitted therein, having an independent spring-

pressed end, a spring to hold the bolt normally elevated, an arm for depressing it projecting therefrom in a direction at right angles to the door and reaching through a slot in the housing its end provided with a rubber tip acting as a buffer and means to detachably hold the bolt when depressed.

2. In a door-stop to lock a door, or to hold it at any point between extreme positions, the combination of a cylindrical housing, a bolt movably fitted therein and having an independent spring - pressed end, an internal shoulder in the lower part of the bore of the housing, an external shoulder near the upper end of the bolt, a spring encircling this latter and confined between the two shoulders mentioned and having a normal tendency to hold the bolt elevated, ratchet-teeth provided in the side of the bolt and a pawl adapted to engage them, being pivotally mounted on the outside of the housing, a slot provided in this latter through which the pawl reaches the teeth, an outwardly-extending arm to manipulate this pawl and another arm for depressing the bolt, being attached thereto and projecting laterally through a slot in the housing.

3. In a door-stop to lock a door or to hold it at any point between extreme positions, the combination of a cylindrical housing, a bolt the lower part of which is hollow movably fitted therein, an internal shoulder in the lower part of the bore of the housing, an external shoulder near the upper end of the bolt, a spring encircling this latter and confined between the two shoulders mentioned and having a normal tendency to hold the bolt elevated, means to depress this latter and means to detachably hold it so, a supplementary bolt contained in the hollow part of the bolt mentioned and a spring behind it pressing it normally outwardly.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GEORGE H. ROGERS.

Witnesses:

L. J. HALEY, Jr.,
A. L. PEACE.