J. H. & W. C. TATE.
AUTOMATIC DOOR LATCH.
APPLICATION FILED MAY 8, 1912.

1,084,830.

Patented Jan. 20, 1914.

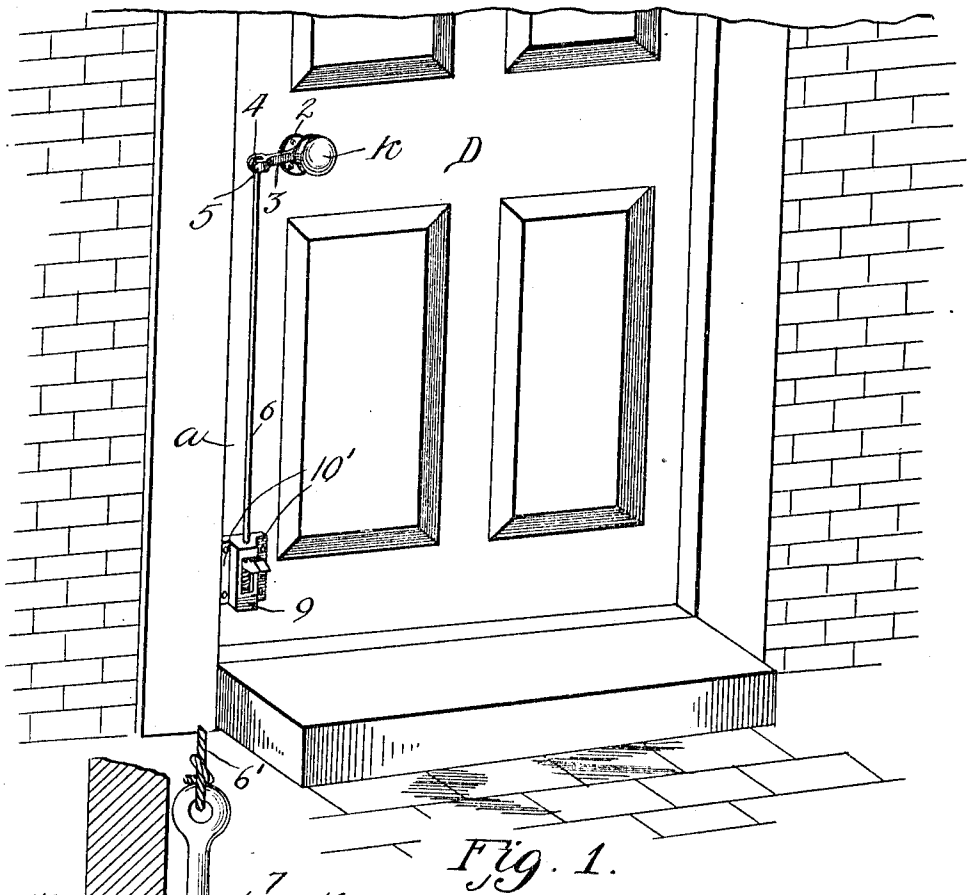



Fig. 1.

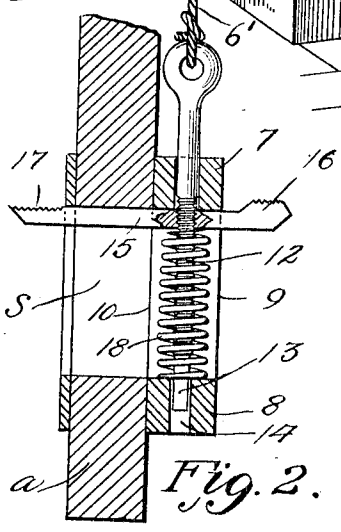



Fig. 2.

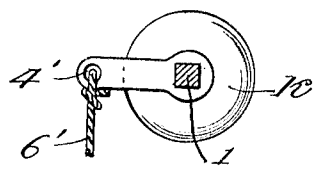



Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC DOOR-LATCH.

1,084,830. Specification of Letters Patent. Patented Jan. 20, 1914.

Application filed May 8, 1912. Serial No. 695,965.

*To all whom it may concern:*

Be it known that we, JOSEPH H. TATE and WILFONG C. TATE, citizens of the United States, and residing, respectively, at Marion, in the county of McDowell and State of North Carolina, and Waverly, in the county of Sussex and State of Virginia, have invented certain new and useful Improvements in Automatic Door-Latches, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to certain new and useful improvements in door attachments so constructed that the knob can be actuated by foot, enabling a person having both hands engaged to open a door, and a further object of our invention is to provide a foot operated door opening mechanism of a simple and inexpensive nature and of a compact and durable construction arranged so that the same may be readily attached to the spindle of any door knob with ease accuracy and despatch.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and finally pointed out in the appended claim, it being further understood that changes in the specific structure shown and described may be made within the scope of the claim without departing from the spirit of the invention.

In the accompanying drawings forming a part of this specification and in which like numerals of reference indicate similar parts in the several views: Figure 1, shows a broken portion of a door equipped with a knob actuating mechanism constructed according to our invention. Fig. 2, shows a modification. Fig. 3, shows an enlarged detached detail of the spindle lever.

In our present invention we provide a door knob attachment to be attached to the knobs of doors in hospitals, nurseries and living rooms, enabling a person carrying a tray of dishes, or a child or having both hands otherwise engaged, readily opening the door in operating a simple foot lever.

In the drawings the letter D, designates a suitable door, and *a*, the lock-stile of the same. As shown the door has the knob *k*, which is held upon a spindle 1, shown in Fig. 3, in the usual manner. To the spindle 1, we secure a crank 3, having a square opening to receive the spindle. This crank is secured between the knobs and the spindle plate 2, shown in Fig. 1.

The outer end of the crank 3, may be bifurcated or forked as shown in Fig. 4, and provided with a suitable bolt 5, or the same may merely have an opening 4′, as shown in Fig. 3. Where a rod 6, is used we prefer to use the bifurcated crank and where a pliable connection 6′, is used as shown in Fig. 3, it is not necessary to fork the end of this lever.

The lower portion of the lock-stile *a*, is provided with a slot *s*, indicated in Fig. 2, and to one side of the door we secure a casing. This casing may be of cast material as shown in Fig. 2, or the same may be made of sheet metal. In either instance the casing includes an apertured top 7, an apertured bottom 8, an outer portion 9, and a base portion 10. The outer and base portions of the casing having oppositely spaced slots while extending from the base portion are the securing flanges 10′, clearly shown in Fig. 1.

Reciprocating within the top 7, and the bottom 8, is an operating rod 6. This rod has its lower end threaded as shown in Fig. 2, to receive the foot lever or treadle 15, and having a suitably threaded opening so that the operating rod 6, can be screwed into the opening of the foot lever and interposed between the foot lever or treadle 15, and the bottom 8, is a suitable coil spring 18. This foot lever 15, as shown in Fig. 2, is of such a length that one end 17, extends through the slot *s*, within the door while the opposite end 16, is held in front of the casing. As shown in Fig. 2, the upper surfaces of this lever 15, are serrated.

The crank 3, is so connected that when the door is locked the crank extends horizontally. To open the door the knobs must be turned to throw the crank 3, downward. Under this construction in order to actuate the knobs to enable the door being readily opened it is simply necessary for the operator to depress the foot lever 15. This can be done from either side of the door.

While we have shown the attachment secured to an outer door it is of course understood that the same can be equally well attached to an inner swinging door.

In Fig. 3 we show a modification in which we use a pliable connection 6′, in place of a rod. Where the pliable connection is used,

the device can be neatly packed in a small box.

In the modification shown in Fig. 2, we employ an eye-bolt 12, which is slidably held within the apertured top and bottom and which is connected by means of the pliable member 6′, to the crank. In many instances it will be found an advantage to use the eye-bolt and pliable connection.

Having thus described our said invention, what we claim as new and desire to secure by United States Letters Patent is:

The combination with a door having a lock secured thereto and an opening within the bottom below said lock, of a spindle projecting from said lock, a crank secured to said spindle, a casing having oppositely positioned slots and top and bottom apertures said casing secured adjacent to said door opening, a rod threaded at its lower end reciprocating within said top and bottom apertures and having its upper end pivotally secured to said crank, a treadle screwing upon said rod extending through said slots and door opening, and a spring upon the lower threaded end of said rod and working against said housing, all arranged as and in the manner shown.

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

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**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**