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[54] **DOOR SECURER**
1 Claim, 5 Drawing Figs.

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[56]

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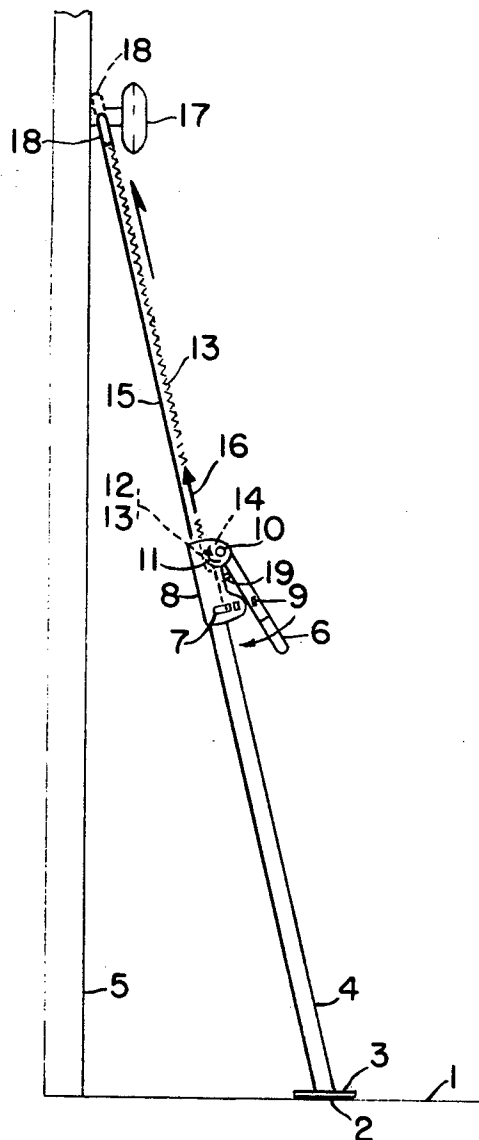
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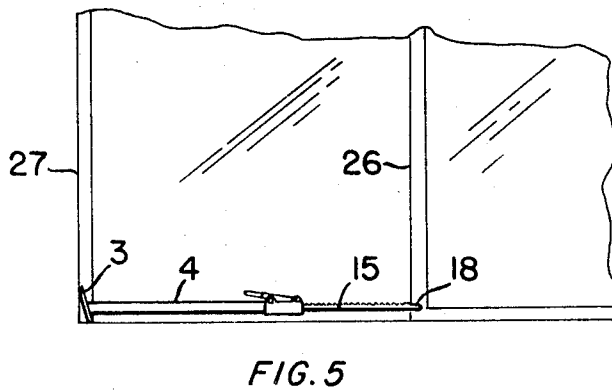
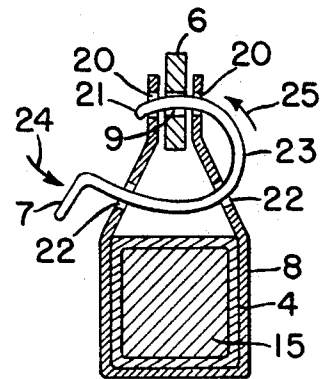
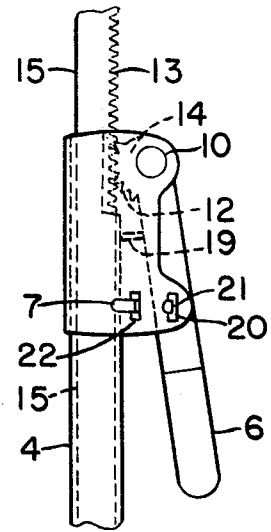
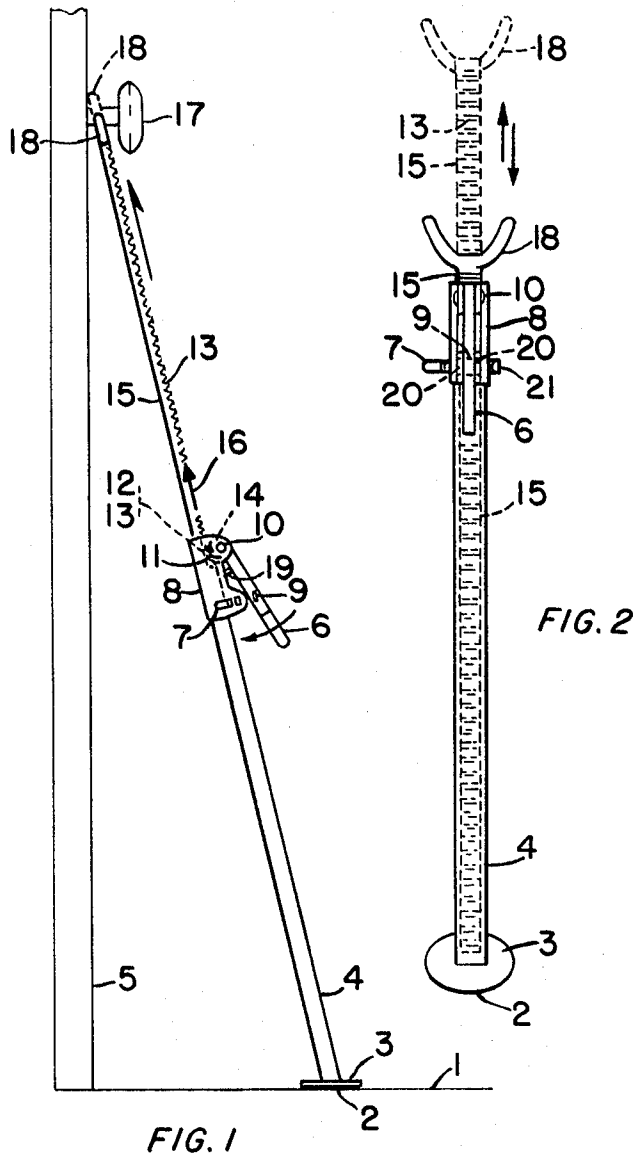
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ABSTRACT: A device with telescoping and locking parts for retaining a door or window in a closed position.





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DOOR SECURER**BACKGROUND OF INVENTION****1. Field of the Invention**

This invention relates means for keeping intruders from coming into rooms. As is well known, conventional locking of doors and windows is not always satisfactory. Hotel and motel room keys may be beyond the control of responsible persons. Therefore, doors or windows may be forced open unless adequately secured by supplemental locking means on the inside of the room.

2. Description of Prior Art

Earlier inventors have tried, unsuccessfully, to apply proping apparatus to doors. All have shortcomings. Some would mar or scratch hardwood floors. Others would slip. None teach a simple, self-adjusting method of insuring proper bracing and retention of position.

SUMMARY OF INVENTION

My improved device features telescoping rods for manual intension, at an angle, between the room floor and door knob. When so extended, manual force on a lever arm is applied whereby the rods are forced an additional short distance for firm placement. While so positioned, a novel pin is rotated slightly, thusly locking the parts in position.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side elevation of the device in use on a door.

FIG. 2 is a front elevation thereof.

FIG. 3 is a detail of the locking and expansion portions of the invention.

FIG. 4 is a cross-sectional view through the body of the device showing the locking system applied.

FIG. 5 is a perspective view showing the device in use on horizontally sliding doors.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to the drawing forming a part hereof wherein like numerals represent like parts throughout, the numeral 4 represents one of preferably telescoping rods. Item 4 is hollow and is preferably square in cross section. It houses a solid rod 15 which is slidably mounted therein. I choose steel as a suitable construction material.

Integral with one end of rod 4 is nonskid foot 3. Foot 3 may be a flat disc as illustrated. The surface thereof forms the optimum proping angle with rod 4. This assists in the correct placement of the foot on the floor. Also, it permits the desired maximum floor contact. The foot is provided with substance 2, such as rubber, at the base thereof for maximum resistance to slippage on the conventional floor 1.

Inner extendable rod 15 has a U-shaped abutting surface 18 suitable for engaging the spindle of the conventional door

knob 17 of door 5. Along one surface thereof are a series of identical teeth 13 for the hereinafter described rack and pinion action. Attention is now directed to the end of rod 4 opposite that of foot 3. As can best be seen in FIG. 3, a channel member 8, with two convergent sides surrounding three sides of rod 4, serves as a mounting frame. Through parallel ears thereof is shaft or pin 10 upon which a pinion 14 moves. Pinion 14 is preferably provided with teeth on the perimeter of a quarter section 12 of a gear wheel. In unison therewith is handle 6 for rotating the section.

For convenient storage or carrying in a suitcase, item 15 may be fully telescoped into item 4. To position for use, rod 15 is manually withdrawn in the direction of arrow 15 until the device fits snugly between the door knob spindle and floor.

Thereupon, the operator merely moves handle 6 in the direction of the arrow of FIG. 1. This causes rack and pinion action as the gear wheel section rotates in the direction of arrow 11. The meshing of the described teeth extends rod 15 about one-half inch in the direction of arrow 16. A boss 19 protruding from the underside of the handle serves as a stop as it contacts the rod. Such arrangement adapts the device for use on all types of floors, whether carpeted or not. The unique rack, pinion and lever combination ideally act to make a tight wedge fit. The device is foolproof. It works on horizontal windows as well as sliding doors and windows.

In FIG. 5 the foot is placed against stationary frame 27 and the device holds sliding frame 26.

My featured locking pin 23 and its slidable operation in dual sets of slots 22 and 20 complete my invention. The locking pin is preferably of a sickle-shaped configuration. See FIG. 4 of the illustration. By a one-handed operation handle 6 is aligned substantially parallel to the rods, whereupon the fingers of the operator move pin handle 7 in the direction of arrow 24. This causes tang end 21 to pass through slot 9 of handle 6 and slots 20 of the frame as item 23 rotates slightly in the direction of arrow 25. Force on the door will not move the handle. It is held, under tension, by the pin through its midsection.

I claim:

1. In combination:

- a. a plurality of telescoping rods suitable for forming a prop between floor and door, and,
- b. a foot formed at the base of the outer rod structure to resist slipping by means other than penetrating the floor, and,
- c. an abutting surface at one end of the inner rod, structured to engage a door knob spindle, and
- d. a mounting frame provided at one end of the outer rod, and,
- e. a levered pinion and rack means mounted on the mounting frame for forcibly extending the rods, and
- f. a locking means comprising a sickle-shaped pin which is rotatably mounted in slots on the mounting frame and levered pinion for retaining the rods in an adjustable extended position.