Oct. 14, 1924. 1,511,368

W. ROBERTS

DOOR HOLDER

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Fig. 1.

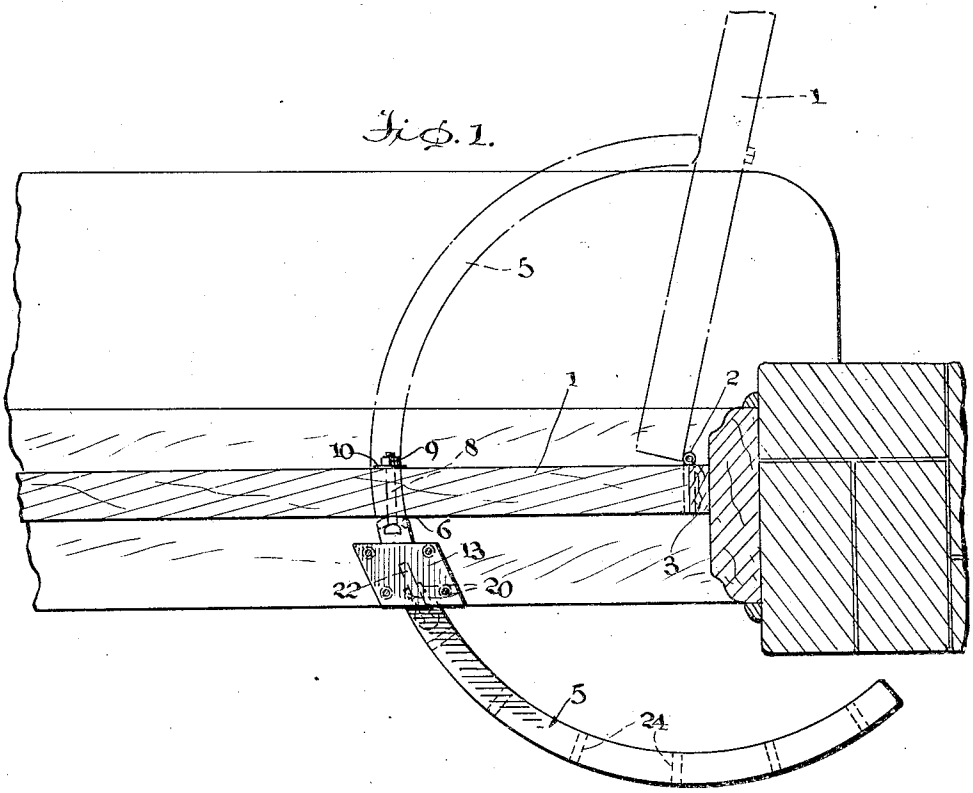
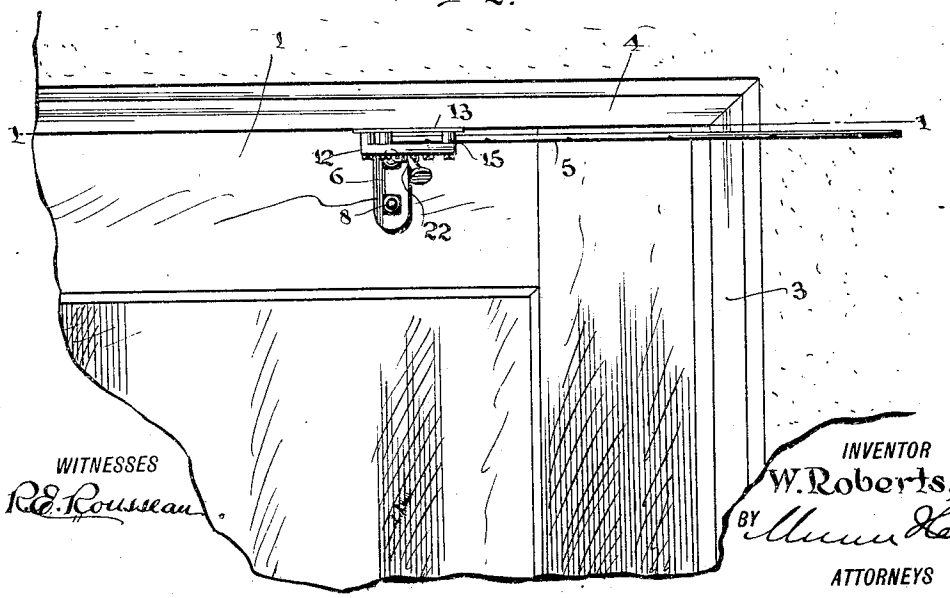


Fig. 2.



WITNESSES

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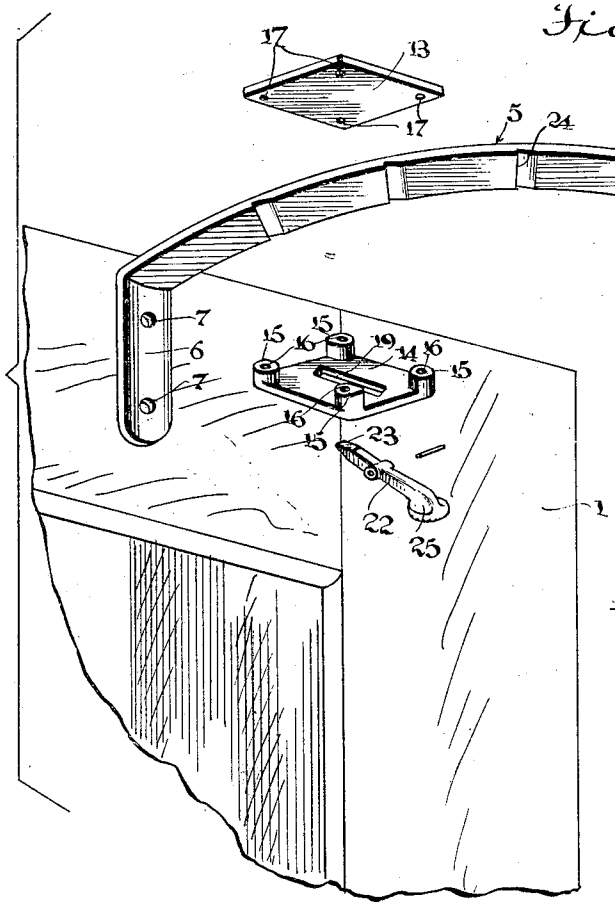
Fig. 3.



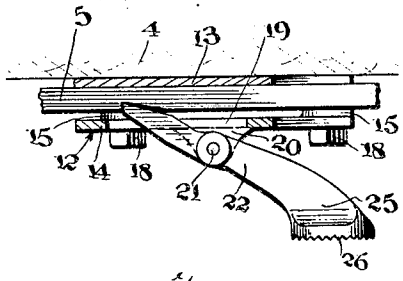


Fig. 4.

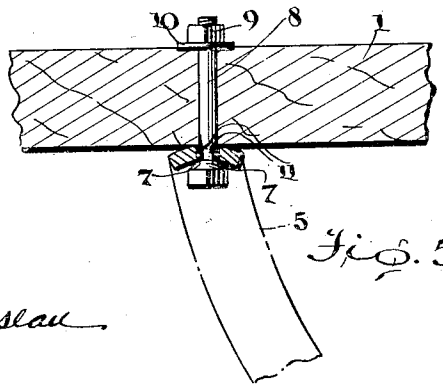


Fig. 5.

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Patented Oct. 14, 1924. 1,511,368

UNITED STATES PATENT OFFICE.

WILLIAM ROBERTS, OF SPRINGFIELD, OHIO.

DOOR HOLDER.

Application filed March 14, 1923. Serial No. 625,073.

To all whom it may concern:

Be it known that I, WILLIAM ROBERTS, a citizen of the United States, and a resident of Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Door Holders, of which the following is a specification.

My invention relates to improvements in door holders, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a door holder of novel and simple construction which affords facilities for holding a door open at any desired angle to the frame to which attached.

A further object of my invention is to provide a device of the character described which is adapted to be operatively applied to a door and frame construction without any departure from the conventional being required in the latter, and which is thoroughly practical commercially.

Other objects and advantages will be apparent from the following description, and the novel features of the invention will be particularly outlined in the appended claim.

My invention is illustrated in the accompanying drawings, forming a part of this application, in which:—

Fig. 1 is a horizontal sectional view taken along the line 1—1 of Fig. 2,

Fig. 2 is a fragmentary side elevation of a door and a frame construction, showing a practical embodiment of the invention operatively applied thereto,

Fig. 3 is a group view, showing in perspective the separate elements of the embodiment of the invention illustrated in the preceding views, together with a fragmentary portion of a door,

Fig. 4 is a vertical longitudinal section through a fragmentary portion of the device and through an adjacent portion of a supporting frame, and

Fig. 5 is a section through a fragmentary portion of a door and through the adjacent portion of the device applied thereto.

Referring now to the drawings, in which like reference numerals designate like parts throughout the several views, the numeral 1 designates a door which is hingedly attached along one side edge, as at 2, to a vertical member 3 which constitutes a part of a door frame including an upper horizontal member or lintel 4. The parts described so far are of ordinary construction, the door 1 being supported in the manner described to swing outwardly from the full line position illustrated in Fig. 1, to the dotted line position of the same view.

In carrying out my invention, I provide a member 5 in the form of a substantially flat bar curved uniformly throughout its length so that the inner and outer side walls thereof coincide with arcs of concentric circles. The bar member 5 is provided at one end with an integral right angular portion 6 which is curved from the longitudinal median line thereof toward its side edges so that the outer face thereof is substantially arcuate in cross sectional contour and the longitudinal median portion thereof extends beyond the plane of the side edges 2 thereof at the juncture of the latter with the bar 5, as best seen in Fig. 5.

The portion 6 of the bar 5 constitutes the means for attaching the latter to the door 1 and to this end is provided with bolt-receiving openings 7 which are formed through the attaching portion 6 at spaced apart points located approximately equi-distant from the side edges of the attaching portion. Bolts 8 or like fastening elements are projected through the openings 7 and through the door 1 and are threadedly engaged at their ends by nuts 9 clamping washers 10 against the side of the door opposite that contacted by the attaching portion 6, whereby the body portion of the bar 5 will be supported upon the door to lie in a horizontal plane. It is to be observed at this point that the portions of the bolts 9 extending through the openings 7 are cut away slightly at opposite sides thereof, as indicated at 11—11 in Fig. 5 so that slight lateral oscillation of the body portion of the bar 5 is possible in respect to the axes of the bolts 8.

In practice, the bar 5 is attached to the inner side of the door adjacent to the upper end of the latter and at a predetermined distance from the side edge of the door which is hingedly attached to the door frame, which distance is preferably the same as the radius about which an arc coinciding with the inner wall of the body portion of the bar 5 is struck. A guide and carrier frame indicated generally at 12 in Fig. 4, is attached to the lintel 4 of the door frame in position to engage the body por-

tion of the bar 5 at all times irrespective of the extent of opening movement of the door, as will be understood from the following. The guide and carrier frame 12 preferably comprises a bearing plate 13 which has the form of a parallelogram, and a second plate or flat body 14 which coincides in contour with the plate 13 and is adapted to be spaced from the latter by integral lugs 15 which are preferably formed at the corners of the plate 14 to extend laterally of one face thereof.

The body or plate 14 is provided with openings extending through the lugs 15 axially of the latter, as indicated at 16, which openings respectively register with corresponding openings 17 of the plate 13, whereby the plates 14 and 13 will be connected together and held in spaced relation and both plates will be held against movement relatively to each other and to the lintel 4 when bolts 18 are projected through the registering openings from the outer side of the plate 14 and are engaged at their ends with the lintel 4 in any suitable known manner.

With the organization described, the body portion of the bar 5 is permitted to slide freely between the spaced apart plates 14 and 13 and between the pairs of spacing lugs 15 at opposite ends of the plate 14 although no appreciable lateral movement of the body portion of the bar 5 relatively to the guide frame including the plates 13 and 14, as described, is permitted.

The plate 14 has a longitudinal slot or elongated opening 19 therethrough extending longitudinally thereof and from the outer face of the plate 14 at opposite sides of the slot 19 extend integral lugs or ear portions 20—20, between which is intermediately pivoted at 21 a latch member 22 having a portion thereof adapted to move through the slot 19 into engagement with the proximate side of the body portion of the bar 5. The end portion of the pivoted latch member 22 which is movable through the slot 19, is tapered and fashioned to provide a relatively sharp edge 23 which is designed to engage angular notches 24 provided in the proximate side or face of the body portion of the bar 5 at intervals along the length thereof in such manner as to permit movement of the body portion of the bar 5 in one direction relatively to the guide frame and to releasably hold the body portion of the bar 5 against movement in the opposite direction relatively to the guide frame. The notches 24 include a substantially straight side and an inclined side. These notches are arranged in the body portion of the bar 5 in the embodiment of the invention illustrated, so that the door 1 is permitted to swing freely toward open position, the end portion 23 of the pivoted latch 22 riding over the inclined sides of the spaced notches, but the door is releasably held against movement toward closed position upon the engagement of the pivoted latch member 22 with any one of the notches 24. The end portion of the latch member 22 remote from the bar engaging portion 23 is enlarged, as indicated at 25, so that the heavier end portion 25 will be actuated by gravity to swing downwardly and thus hold the end portion 23 continuously in contact with the body portion of the bar 5. The end of the portion 25 may be serrated as indicated at 26, or otherwise fashioned to frictionally engage the hand or an implement moved against the end portion 25 for the purpose of forcing the latter upwardly to effect the release of the body portion of the bar 5 when it is desired to move the door 1 from an open position to closed position.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. It will be apparent that a door of a door and frame construction equipped with my invention can be positively held in open position at any one of a plurality of angular relations to the frame. The device is applied to the inner side of a door and frame construction and at the upper end of the latter, so that it offers no obstruction to operation of a door in the usual manner and at the same time is protected from injury which might be occasioned either accidentally or through intent. Another important feature arises from the fact that no strain is occasioned on the device when the door to which applied is moved to open position through the exercise of excessive force, or is closed in a like manner when the body portion of the bar 5 is disengaged by the latch member. The device is therefore not liable to get out of order easily and will last a long time in the service for which intended.

Obviously, my invention is susceptible of embodiment in forms other than that described herein and illustrated in the accompanying drawings, and I therefore consider as my own, all modifications and adaptations of the form herein shown as fairly fall within the spirit of the invention and the scope of the appended claim.

I claim:—

A device of the character described comprising a holding bar having a curved longitudinal body and an attaching portion at one end of the body, said attaching portion extending at right angles to the plane of the body, being arcuately curved in cross sectional contour and being provided with spaced bolt receiving openings located along the longitudinal median line thereof, bolts extending through a door and through said bolt receiving openings of the attaching portion to attach said holding bar to the

door, the convexly curved face of the attaching portion being approximate to the door and the portions of the bolts engaging the bolt receiving openings of the attaching portion being relatively reduced, permitting slight oscillatory movement of the holding bar, a guide frame adapted to be attached to a stationary support adjacent to the door and in which the body of the holding bar is slidable, and means carried by the guide frame for adjustably engaging the body of the holding bar at desired points along the length of the latter to releasably hold the door against swinging movement in one direction.

WILLIAM ROBERTS.