

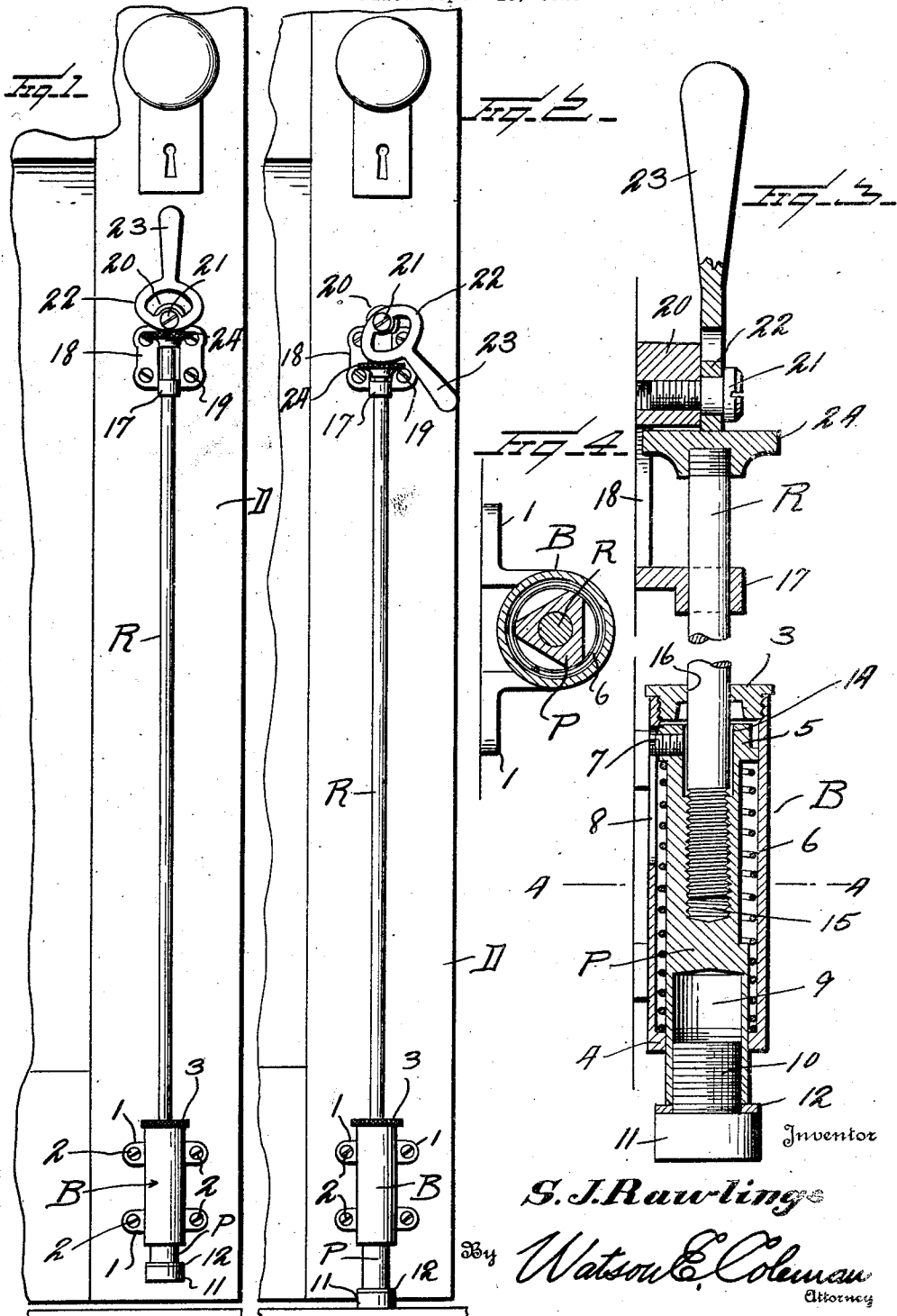
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DOOR HOLDER

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DOOR HOLDER.

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This invention relates to certain improvements in door holders and it is primarily an object of the invention to provide a device of this kind wherein its operation is under control of a cam handle, said handle upon movement in either direction providing means for adjusting the holder to working position.

Another object of the invention is to provide a device of this kind which is manually operated and thereby eliminating the necessity of using the foot as is now generally done.

An additional object of the invention is to provide a device of this kind comprising a plunger adapted to be slidably supported by a door for movement toward or from a floor or kindred surface together with means constantly maintaining the plunger at the limit of its upward movement and wherein manual means are provided coacting with the upper portion of the plunger for moving said plunger into working engagement with the floor or kindred surface.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved door holder whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view in elevation illustrating a holder constructed in accordance with an embodiment of my invention in applied position and in release;

Figure 2 is a view similar to Figure 1 showing the device in set position;

Figure 3 is a view partly in longitudinal section and partly in elevation of the device as herein disclosed;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 3.

As disclosed in the accompanying drawings, B denotes a barrel of requisite dimensions and provided adjacent to its opposite ends with the laterally directed feet 1 whereby said barrel may be secured in

desired position to the lower portion of a door D, said barrel being vertically disposed. The means of attachment coacting with each of the feet 1 is preferably a screw 2.

The upper end of the applied barrel B is open but closed by the cap 3 preferably threaded therein while the lower end of the barrel B is defined by an inwardly disposed flange 4 providing a restricted opening in the lower end of said barrel through which a plunger P is snugly directed. The inner or inserted end portion of the plunger P is provided with a head or enlargement 5 having close contact with the inner surface of the peripheral wall of the barrel B whereby the plunger has requisite endwise movement without undue lateral movement or rattling.

Interposed between the head or enlargement 5 and the flange 4 and arranged within the barrel B is an expansible member 6, herein disclosed as a coil spring, encircling the inserted portion of the plunger P, said member or spring 6 operating to constantly urge the plunger P upwardly or inwardly of the barrel B. Engaged with the enlargement or head 5 is a headless bolt 7 having its outer portion riding within a longitudinally disposed slot 8 provided in the wall of the barrel B whereby the plunger is held against rotation independently of the barrel.

The lower or outer end portion of the plunger P is provided with an axially disposed recess or pocket 9 in which is telescopically received the shank 10 of a pad 11 of rubber or similar material which is adapted to have direct contact with a floor or other surface, a washer 12 being interposed between the pad 11 and the adjacent end of the plunger P. This pad 11 provides effective means to prevent marring of the floor or kindred surface when the locking device is in working engagement therewith.

The inner or inserted end portion of the plunger P is also provided with an axially disposed recess or bore 14 the lower or inner portion of which being slightly reduced with its wall threaded, as at 15. Extending within the recess 14 is an end portion of a rod R having threaded engagement within the reduced portion 15, said rod being also disposed through a central opening 16 in the cap 3.

The rod R is of desired length and has its outer or upper end portion freely disposed through a bearing 17 carried by the lower portion of the plate 18 attached to the door D at a desired point above the barrel B, such attachment being preferably through the medium of the screws 19. The plate 18 at a point above and spaced from the bearing 17 is provided with an outstanding head 20 with which is pivotally connected by the bolt 21 a cam 22. This cam 22 is elliptical in form and the pivotal connection 21 is midway of the ends of the cam but outwardly offset with respect to its center. The cam 22 at a point transversely opposed to its pivotal connection 21 is provided with the outstanding operating handle 23. When the handle 23 is vertically disposed as illustrated in Figures 1 and 3, the lower central portion of the cam 22 extends slightly below the lower base of the head or block 20 and has contact with the cap 24 threaded upon the adjacent upper end of the rod R.

In practice, my improved holding device is positioned about three inches inwardly of the outer vertical edge of the door so that the liability of clothing becoming torn thereby is substantially eliminated.

Normally, the plunger P is in its uppermost or raised position as illustrated in Figure 1 and when it is desired to hold a door in desired open position it is only necessary that the handle 23 be swung in either direction, such movement causing the cam 22 to force the rod R and plunger P downwardly into desired contact with the floor or other surface. When the longitudinal axis of the cam 22 passes beyond the vertical, the pressure of the cap 24 thereon will hold or lock the handle 23 in its downward position and thereby maintain the pad 11 in desired working engagement with the floor or kindred surface. When it is desired to release the device, the handle 23 is moved upwardly until the longitudinal axis of the cam 22 passes beyond the vertical whereupon the tension of the spring 6 as imposed upon the plunger P will cause the plunger automatically to be moved to the limit of its upward movement and to return the handle 23 to its normal position as illustrated in Figure 1.

By having the rod R in threaded engage-

ment with the plunger P it will be readily understood that the rod R, upon requisite turning thereof, may be readily adjusted with respect to the cam 22 in order to assure the most effective contact of the plunger P or more particularly the pad 11 thereof with the floor or kindred surface.

It is to be particularly noted that normally the plunger P is urged upwardly. This is of particular advantage as it assures at all times that the plunger P will not drop into contact with the floor and especially if a pull should be imposed upon the door with the holder in working position and the pad 11 pulled from the plunger.

By having the cam 22 effective upon swinging movement in either direction, it will be readily understood that a single fixture may be employed with equal facility in connection with a door moving either to the right or to the left.

From the foregoing description it is thought to be obvious that a door holder constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

In combination with a door, a holder therefor comprising a barrel secured to the lower portion of the door, a plate secured to the door above the barrel and provided with an outstanding bearing, a plunger extending within the barrel through the lower end thereof, means for constantly urging the plunger inwardly of the barrel, a rod engaged with the plunger and slidably disposed through the bearing of the plate, a double acting cam pivotally supported by the plate above the rod constantly in contact therewith, and an operating handle for the cam.

In testimony whereof I hereunto affix my signature.

SAMUEL JOSEPH RAWLINGS.