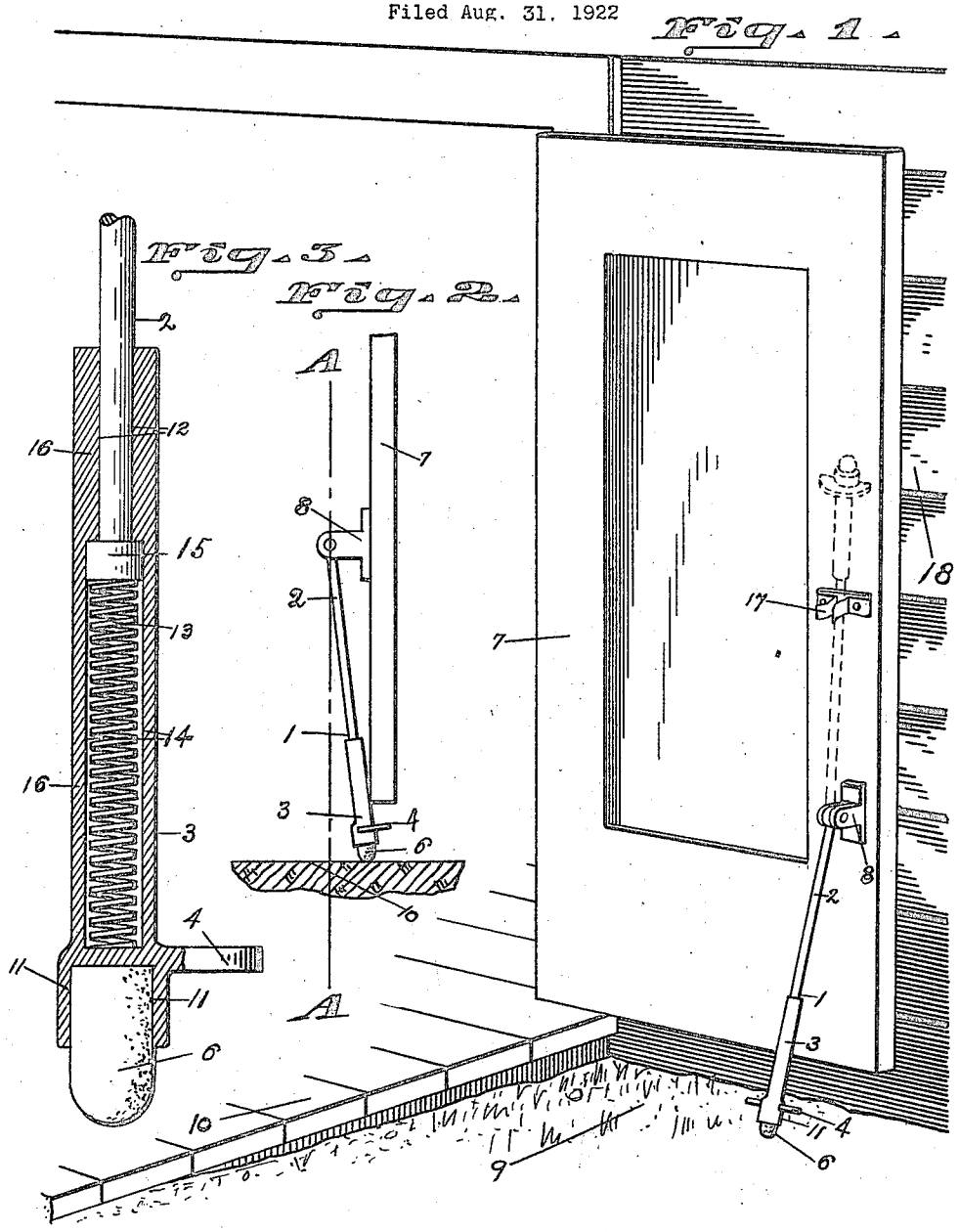
Jan. 1, 1924 1,479,029

W. DIXON

DOOR HOLDER

Filed Aug. 31, 1922

Fig. 1.



INVENTOR:

William Dixon.

Patented Jan. 1, 1924. 1,479,029

UNITED STATES PATENT OFFICE.

WILLIAM DIXON, OF OKLAHOMA, OKLAHOMA.

DOOR HOLDER.

Application filed August 31, 1922. Serial No. 585,499.

To all whom it may concern:

Be it known that I, WILLIAM DIXON, a citizen of the United States, and a resident of Oklahoma city, in the county of Oklahoma and State of Oklahoma, have invented certain Improvements in Door Holders, of which the following is a specification, reference being had to the accompanying drawings.

The object of the invention is to provide a cheap, simple and convenient device for holding open doors.

Figure 1 of the drawings is a fragmental perspective showing the open door of a garage and showing the improved holding device in use holding the door open.

Figure 2 is a fragmental elevation of the door with the holding device in different position, the view being taken in the direction of the plane of the door.

Figure 3 is an enlarged sectional view of the lower portion of the holding device, taken in the same direction as Figure 2.

Like characters of reference designate like parts in all the figures.

In carrying out the object stated, a straight bracing rod 1 is provided integrally including 2 and 3, and has one of its ends 2 pivoted to a bearing 8 which is in turn secured rigidly to the door 7.

The axis or pivotal connection of the rod 1 and bearing 8 is horizontal and parallel with the door 7, so that the pivotal movement of said rod is in a vertical plane at right angles to the door.

When the door 7 is swung toward the open position shown in Figure 1, the rod 1 is drawn along with its lower end 3 in dragging contact with the floor over which the door is swung, for example over the surface of the drive-way floor 10, or over the ground 9.

With the rod 1 in the dragging position shown, any movement of it towards closed position, however slight, causes the lower end of the rod to frictionally engage the floor 10, or the ground 9, thereby preventing further closing movement of the door.

The line of length or thrust of the rod 1 should be nearly enough at right angles to the floor 10 or ground 9 to have the lower end of said rod positively engage said floor or ground by frictional engagement upon movement of the door toward closed position; and said lower end of the rod may be provided with a rubber toe 6 to increase its frictional engagement.

In attaching the toe 6, the lower end of the rod 1 may be provided with a cup 11 in which the toe is tightly inserted.

For the purposes later shown, the lower portion of the rod 3 including integrally 11, is in the form of a tubular sleeve 16 which telescopically engages the upper portion 2 of said rod 1.

The upper portion 2 of the rod 1 fits slidably, or so as to slide, in the reduced bore 12 of the sleeve 16 and has its lower end formed into an enlargement which slidably fits in the enlarged portion 14 of said bore.

A compression spring 13 in the enlarged bore or portion 14 which is an extension of bore 12 acts against the enlarged end 3 of the portion 2 and yieldably holds rod 1 at maximum length, and the lengthening movement of the rod is positively limited by abutment of the enlargement 3 with the shoulder 15 in said bore.

When the door 7 is opened into contact with some fixed stop, for example the wall 18 of the building shown, said stop and the bracing rod 1 hold said door against movement; but when it is desired to hold the door at an intermediate position in its full swing some means must be provided to oppose opening movement of the door.

By having the rod 1 yieldable to compressing force, the door 7 may be swung in opening direction to a point a little in advance of the point at which it is to be held and then forcibly swung back towards closed position, thereby forcing a shortening movement of the rod in opposition to its spring 13 and bringing the lower edge of the door into abutment with the lower end of said rod in the position shown in Figure 2.

In swinging the door 7 to the position shown in Figure 2, a dead-center line A—A, parallel with the vertical axis or hinge of the door, moves to and past the point at which the lower end or toe 6 of the rod 1 contacts the floor or ground, so that the lengthening force of said rod under action of its spring 13 yieldably holds said door in abutment with said rod.

The bearing 8 to which the rod 1 is pivoted should extend outward from the door 7 enough to allow the dead-center line A—A to move a considerable distance past the toe 6 of said rod in the position shown in Figure

2 and thereby afford said rod sufficient advantage in holding the door in contact with itself.

The lower or sleeve portion 16 of the rod 3 may be provided with a suitable foot 4 to keep it from penetrating too deeply into the ground, preferably in the form of a semi-circular washer so as to permit the rod 1 to be elevated and easily clamped into the clip 17, and to prevent the making of the clip 17 larger.

A spring holding clip 17 may be fixed to the door 7 above the bearing 8, and when the rod 1 is not needed for holding the door it may be swung upward and held by said clip.

A chain or other flexible connection may have one of its ends attached to an upper part of the door 7 and its opposite end to the rod 1, for convenience in lifting said rod up to the holding clip 17.

The following is claimed:—

In combination with a door, a bracing rod pivoted to the door and adapted to be dragged along the surface of a floor or ground by the door, the lower or free end of the rod being adapted to frictionally engage the floor or ground to hold the door against movement in one direction, the rod being adapted to yield resiliently to lineal compression, the point of pivotal connection of the rod being out-set from the door to allow a vertical dead-center line passing through the point of pivotal connection of the rod to be moved past the lower or floor-contacting, or ground-contacting end of the rod when the door is forcibly moved in opposition to the bracing force of the rod.

Witness my hand this 25th day of August, 1922.

WILLIAM DIXON.