I. W. HERYFORD.

COMBINED SCREEN AND STORM DOOR STRUCTURE.

APPLICATION FILED JAN. 20, 1914.

1,100,564. Patented June 16, 1914.

2 SHEETS—SHEET 1.

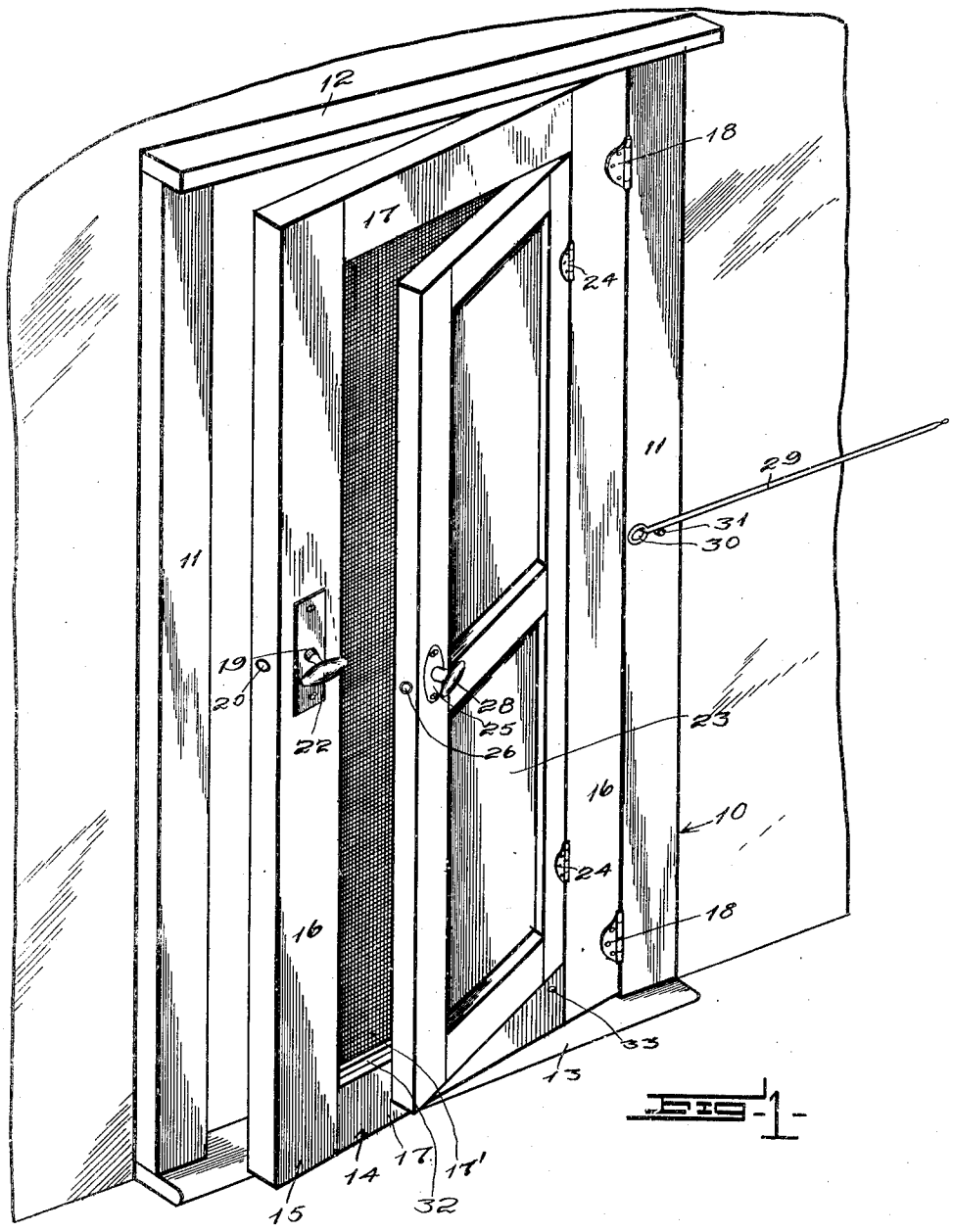

Fig. 1.

Witnesses

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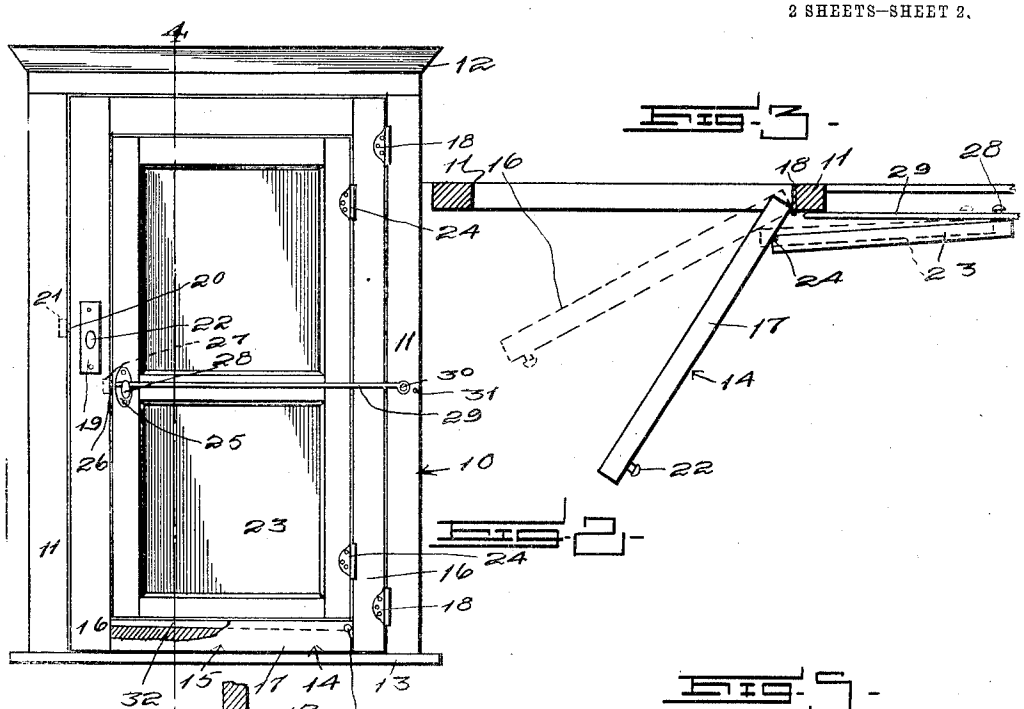
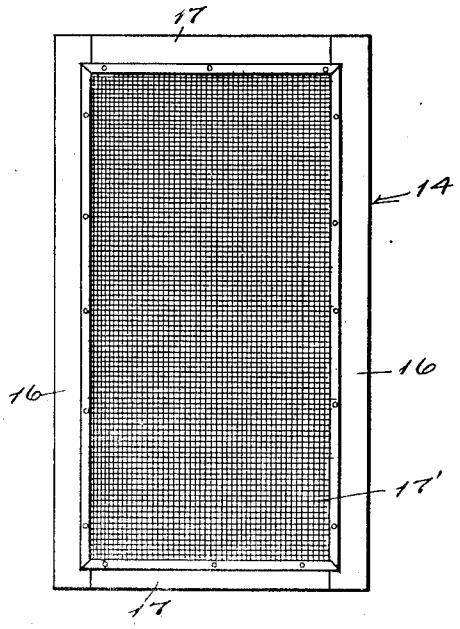


Fig. 3.

Fig. 2.

Fig. 5.



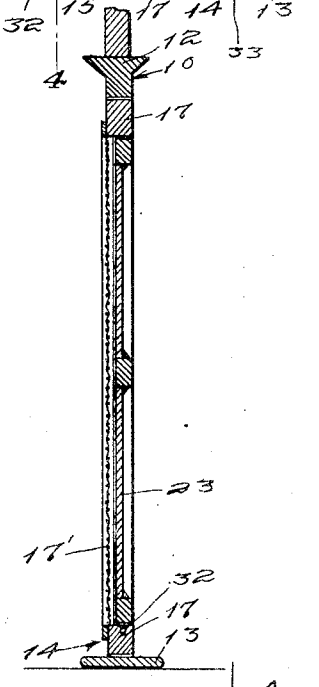


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

ISAAC W. HERYFORD, OF BRANSON, MISSOURI.

COMBINED SCREEN AND STORM DOOR STRUCTURE.

1,100,564. Specification of Letters Patent. Patented June 16, 1914.

Application filed January 20, 1914. Serial No. 813,156.

To all whom it may concern:

Be it known that I, ISAAC W. HERYFORD, a citizen of the United States, residing at Branson, in the county of Taney and State of Missouri, have invented certain new and useful Improvement in a Combined Screen and Storm Door Structure, of which the following is a specification.

My invention relates to a combined screen and storm door structure, and has particular reference to means of this character adapted to be readily converted into a screen door structure or storm door structure.

An important object of the invention is to provide means of the above mentioned character, which are simple in construction, inexpensive to manufacture, strong, durable, convenient in use, and attractive in appearance.

A further object of the invention is to provide means of the above mentioned character, embodying a screen door having a storm door or panel hinged thereto, there being means to retain the storm door panel in its outer position and allowing the same to partake of reciprocatory movements while remaining in the outer position, as the screen door is moved toward or away from its closed position.

A further object of the invention is to provide novel and simple means for preventing the rain from entering the house, by passing between the lower portions of the screen door and storm door panel, such rain being conducted to the exterior of the house.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a perspective view of a combined screen and storm door structure embodying my invention, Fig. 2 is a side elevation of the same, Fig. 3 is a plan view thereof illustrating the manner in which the storm door panel partakes of reciprocatory movements while in its outermost position, during the swinging movement of the screen door, Fig. 4 is a longitudinal sectional view taken on line 4—4 of Fig. 2, and, Fig. 5 is an elevation of the inner side of the screen door.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 10 designates a door frame, comprising vertical beams 11, connected by transverse strips 12 and 13, as shown. Mounted to swing within this door frame is an outer screen door 14, preferably embodying a frame 15, formed of vertical or longitudinal strips 16, connected by transverse strips 17. This screen door also includes a section of screening material 17′, secured to the frame 15, in any well known or preferred manner. The screen door 14 has one of the longitudinal strips 16 thereof connected with the adjacent longitudinal or vertical beam 11 of the door frame 10 by means of hinges 18, of any well known or preferred type. It is thus seen that the screen door may be horizontally swung into and out of the door frame 10.

The screen door 14 is adapted to be held in its closed or inner position by means of a preferably exteriorly arranged lock 19, including a reciprocatory bolt 20, adapted for movement into and out of a recess 21, formed in the vertical or longitudinal beam 11. This bolt 20 is reciprocated by a knob or handle 22, as is obvious.

Mounted to be horizontally swung into and out of the frame 15 of the screen door is a storm door or imperforate panel 23, hinged to one longitudinal strip 16 of the screen door, as shown at 24. This storm door panel is preferably held in its closed or inner position, within the screen door frame 15, by means of a lock 25, embodying a reciprocatory bolt 26, adapted for movement into and out of a socket 27 formed in one of the longitudinal strips 16. The reciprocatory bolt 26 is operated by a knob 28, adapted to be vertically arranged, when the bolt 26 is in the outer or locking position, as best illustrated in Fig. 2.

Means are provided to maintain the storm door or imperforate panel 23 in the outer position, while the screen door is in use as a screen door, such means being so constructed that it permits the storm door being reciprocated, while in the outer position, whereby it will move with the screen door during the swinging movements thereof, without perceptibly interfering with such swinging movements. Such means preferably includes a normally horizontally arranged suitably stiff rod 29, having one end thereof pivoted to the longitudinal or vertical beam 11 adjacent to the hinges 24, as shown at 30, whereby the retaining rod is free to be

swung in a substantially vertical plane, to assume inner and outer substantially horizontal positions, but cannot partake of perceptibly horizontal swinging movements in either direction, when in its inner or outer positions. The rod 29 is preferably sufficiently long to extend across the entire width of the storm door or panel 23, and to engage within or behind the knob 28, when the storm door is in its closed position, as best illustrated in Fig. 3. As clearly shown in Fig. 2, when the screen door is closed and the storm door is opened, the knob 28 may be moved to the vertical position, for slidable engagement with the rod 29, which now extends outwardly and laterally for a substantial distance beyond the storm door, whereby the slidable engagement between the knob 28 and rod 29 will be maintained as the screen door is swung outwardly or inwardly and the storm door maintained in the open position.

In order to prevent rain from entering the house or dwelling by passing between the lower end of the storm door, and the lower transverse strip 17 of the frame 15, I provide said lower transverse strip upon its upper longitudinal edge with a groove 32, which is inclined longitudinally in one direction, with its lower outlet end in communication with an outwardly discharging transverse board 33. It is thus seen that any rain which might pass between these parts will be collected in this groove and conducted to the exterior of the building.

In the use of the apparatus, when it is desired to employ the same as a screen door, the storm door 23 is moved to the outer position, and the knob 28 placed in its locked slidable engagement with the rod 29, which has now been swung to the outer horizontal position and is supported in such position by the pin 31. It is thus seen that the screen door may be swung in either direction, with the result that the storm door will remain open, and will be reciprocated while in such position. When it is desired to convert the apparatus into a storm door structure, the storm door is moved to the closed position, the knob 28 being previously disengaged from the rod 29, such storm door being held in the closed position by manipulation of the lock 25. When it is desired to retain the apparatus closed, the same being used as a storm door structure, the rod 29 may be swung to the inner horizontal position, with its free end engaging behind or with the knob 28, as more clearly shown in Fig. 2.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having described my invention, I claim:—

In a combined screen and storm door structure, in combination, a main outer frame, a screen door hinged to the main outer frame to be swung into and out of the same, means to lock the screen door to the main outer frame in the closed position, a storm door hinged to the screen door near the hinges thereof and adapted to be swung into and out of the same, a lock connected with the free edge of the storm door and adapted to detachably hold the storm door in the closed position and embodying an outwardly extending shank carrying an enlarged head, a substantially straight rod arranged permanently substantially parallel with the main outer frame to lie flat with respect thereto, means pivotally connecting the outer end of the rod with the main outer frame near the hinges secured thereto whereby the rod may be swung in a substantially vertical plane to occupy a position extending across the storm door to rest upon the shank of the storm door lock behind the enlarged head, and means for supporting the rod in a substantially horizontal position when swung away from the storm door, the head carried by the shank of the storm door lock being adapted to be manipulated whereby it may be made to fit behind the rod when the rod is occupying its outer horizontal position, thus retaining the storm door in the open position while the screen door is closed or is moved toward or away from its closed position.

In testimony whereof I affix my signature in presence of two witnesses.

ISAAC W. HERYFORD.

Witnesses:
W. H. CROWDER,
A. U. BLANSIT.