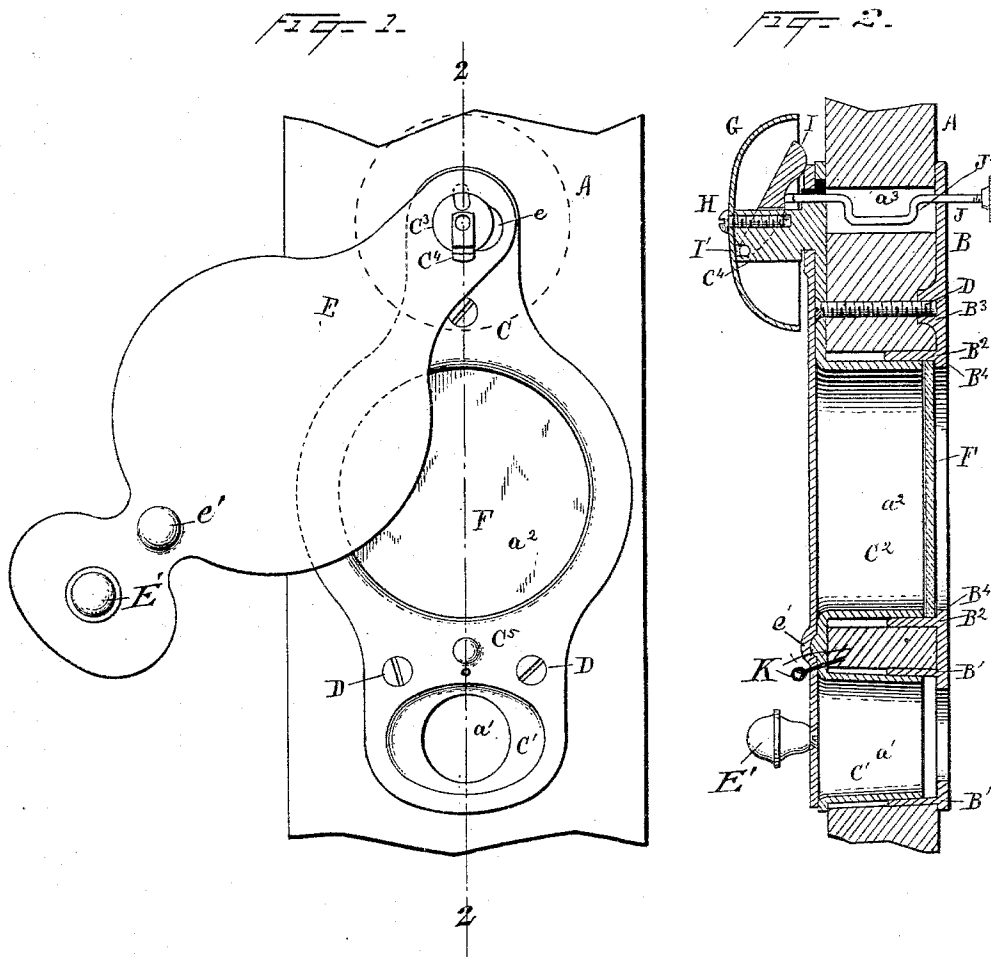


(No Model.)

W. E. JONES.
SUBD00R.

No. 593,160.

Patented Nov. 2, 1897.



Witnesses
Morris A. Clark.
J. B. Clautier

Inventor
W. E. Jones
By his Attorney
Thomas D. Sisson

UNITED STATES PATENT OFFICE.

WHITFIELD E. JONES, OF BROOKLYN, NEW YORK.

SUBDOOR.

SPECIFICATION forming part of Letters Patent No. 593,160, dated November 2, 1897.

Application filed November 18, 1896. Renewed October 8, 1897. Serial No. 654,579. (No model.)

To all whom it may concern:

Be it known that I, WHITFIELD E. JONES, a citizen of the United States, residing in Brooklyn, Kings county, in the State of New York, have invented a certain new and useful Improvement in Subdoors, of which the following is a specification.

I use the term "subdoor" to mean a small door within and subordinate to the main door, such as are often used in the doors of secret societies.

My invention is adapted to apply on the doors of dwelling-houses, and generally where it may be desirable to look and talk through a door without opening it. I provide for attaining these ends, while guarding against possible intrusion, with great perfection. I combine also therewith a bell and provisions for striking to serve as a door-bell.

The improvement lies in the features of importance set forth below and specifically recited in the claims.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is an elevation showing a portion of the inner face of a door with my invention applied. In this view the subdoor is partially open and the bell is only indicated by a dotted circle. The center on which the slide or plate swings is coincident with that of the bell. Fig. 2 is a central vertical section of Fig. 1, the omitted features being present.

Similar letters of reference indicate corresponding parts in both the figures.

A is a portion of the stile of a door, of thick substantial wood, having three holes bored or otherwise produced therein, arranged in a vertical line, the lowermost, a' , being for conversation, the central and largest one, a^2 , being for sight, and the upper, a , which may be quite small, serving for a mechanical connection to ring the bell. These holes must be produced by boring or other suitable means in preparing the door to receive the metallic parts.

B is the outer plate, of cast-iron, nickel-plated, or of other suitable material, fitted on the outer or front face of the door-stile A and

provided with lips B' B^3 , which extend into the holes a' a^2 and match firmly to the peripheries thereof.

C is the inner plate, which may be of the same material as the outer plate, and is fitted on the inner face of the door A and correspondingly provided with lips C' C^2 , which extend into the holes a' a^2 . The lips in the inner plate C are so much smaller than the corresponding lips in the outer plate B that they may enter telescopically within the latter. I prefer to have them fit tolerably close, but it is not necessary that they shall constitute a tight joint. Near the top of the plate C is a boss C^3 , which constitutes a center for the swinging plate, to be presently described, and also a support for the bell and its hammer and operating-rod.

F is a disk of glass introduced in the device in the act of putting it together, so that it is held between the inner edge of the lip C^2 and an adjacent internal flange B^4 on the plate B. If the door is much thicker, a packing of metal wire or putty or other convenient material may be introduced to keep the glass in position with reasonable tightness.

I can secure the plates B and C upon their respective faces of the door by separate screws engaging in the wood, arranging, of course, so that the screw-holes and screws, one shall be sufficiently out of coincidence with the screw-holes in the other to allow the screws to extend nearly through the wood without meeting each other; but I prefer a construction which avoids the presentation of any screw-heads on the outer face as a greater safeguard against the burglarious removal of my device.

D are screws inserted from the inner face of the door and extending loosely through the back plate C and tapped into the bosses B^3 , provided on the front plate in coinciding positions, the bosses being properly let into the wood A, as will be obvious.

By virtue of the telescopic construction the same plates B and C, with their respective lips B' and B^3 and C' and C^2 properly matching together and lapping more or less one upon the other, may apply on doors A of varying thicknesses, all that is necessary be-

ing the substitution of longer or shorter screws D and a longer or shorter push-pin to operate the bell, as will presently appear.

E is the swinging plate, which closes the device under ordinary conditions. It lies adjacent to the inner plate C and turns on the boss C³ as a center, being properly formed to close both the small aperture a' and the larger aperture a² when it is in its ordinary position. A slight projection C⁵ on the face of the plate or casting C extends a little into the path of this swinging plate and is engaged in a recess e', provided therein when the swinging plate is in the closed position. The base of an arm C⁴, cast integral with the boss and plate, overhangs or extends beyond the periphery of the boss C³ on the lower side, and the shoulder thus formed presses against the adjacent portion of the face of the swinging plate E and holds this plate in close contact with the plate C. There is sufficient elasticity to the plate E to allow it to be drawn away by pulling on the knob E' to disengage it from the projection C⁵. The hole in the plate E, which engages with the boss C³, may be mainly circular and of a sufficient diameter to turn easily upon such boss, but I provide a recess at one side, as indicated by e', which is sufficiently large to allow this swinging plate to be shipped on and taken off by turning it in the proper position to allow this recess to coincide with the overhanging part C⁴.

G is the bell, confined either firmly or it may be with a little looseness on the front of the arm C⁴ by a screw H. A hammer I, formed as shown, turns on an axis I' in its lower end, which is received in a notch c⁴ in the front of the arm C⁴. Its gravity inclines it away from the bell, as shown.

J is a loosely-fitted pin which is operated by thrusting endwise in the manner of electric buttons. It fits easily in a hole b³ in the plate B and in the hole c³ in the boss C³. This pin is not straight, but is formed with offsets J', which lie between the bearings formed by these plates, this being accommodated by simply boring a hole in the wood sufficiently larger than those holes. In applying the parts together this pin J is inserted in the wood in the proper position before the knob J² is screwed on. Then the plates B and C being successively applied the plates engage this pin, so that it is retained by the offsets, but is free to move axially to the extent of a quarter of an inch, more or less. Now the knob is applied, and on thrusting on the knob with a finger the bell will be struck. The offset should be so set that it will serve as a stop to limit the forward motion of the pin just before the hammer strikes the bell.

To provide for easily accommodating my device to doors of different thicknesses, I propose to furnish with it screws D of several different lengths and to either provide several pins J correspondingly varying in length or, to attain practically the same end, provide a

single pin J of a length sufficient for the thickest door and notch a considerable length of the forward portion to facilitate the cutting off or filing off to the varying lengths required. 70

A small pin K, set in a hole in the inner plate and extending nearly through the wood of the door A, may be inserted and removed at will, and when in place secures the swinging plate E against being worked aside by any party operating from the outside. The face of such plate being smooth only a slight frictional force can be applied by any unauthorized party, and the pin K thus used holds the plate central and the subdoor closed so long as such pin is allowed to remain in position. 80

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The sizes of the apertures a' a² and of the corresponding lips on the plates B and C may be varied within wide limits. The extent of the offset in the push-pin J J' may be varied. The apertures and the lips matching therein may be rectangular instead of circular or oval. 85

In the use of the invention in the large way I propose to supply plates B and C having several different depths of their respective lips B' B² and C' C². The lips of any size will allow considerable variation in the thickness of the doors; but I propose to make several sizes, each adapted for a certain range—one for the thinnest, another for medium thickness, and a third for the thickest doors in ordinary use. There should be fastening-screws and push-pins of a length adapted to accommodate the thickest of these several grades, allowing them to be shortened as required by the mechanic in setting my device in a door. 100

The push-pin may have an oblong head. The hole in the rear plate C is shown of sufficient length to accommodate it. Such head by engaging with the adjacent surface of the arm C⁴ will hold the push-pin against turning when the knob is being screwed on and off. 110

I claim as my invention—

1. In a subdoor, the outer or front plate B, and inner plate C having the registering apertures presenting an opening, plate-fastening means; in combination with a bell carried by the inner plate, a hammer therefor, and hammer-actuating means extending through the outer plate to be operable at the front, substantially as herein specified. 115

2. In a subdoor, the outer or front plate B and inner plate C having the registering apertures presenting an opening, a glass panel guarding said opening, plate-fastening means; in combination with a plate movable on the inner plate to cover the opening and a bell also on said inner plate, a hammer for the bell and actuating means extending through the outer plate to be operable at the front, substantially as herein specified. 120

3. In a subdoor, the outer or front plate B, and inner plate C, having the registering 130

pairs of apertures presenting two openings, a glass panel guarding one of said openings, and a plate E movable on the inner plate to cover both openings and having a spring engagement with said inner plate to be positively held in position, in combination with means for fastening said plates to bring their apertures coincident substantially as herein specified.

4. In a subdoor, the outer or front plate B, and inner plate C, having the registering pairs of apertures presenting two openings, a glass panel guarding one of said openings, a plate E, movable on the inner plate to cover both openings, means for fastening said plates to bring their apertures coincident; in combination with an audible alarm operable from the front plate substantially as herein specified.

5. In a subdoor, the outer or front plate B, and inner plate C, having the registering pairs of apertures presenting two openings the front plate having the lip B', and shouldered lip B², while the inner plate has the lips C', C² sliding within the other lips, a glass panel held between the shouldered lip B² and the lip C², and a movable plate E on the inner plate to cover both openings, means for fastening both plates to bring their apertures coincident, in combination with an alarm operable from the front plate, substantially as herein specified.

6. In a subdoor, the outer or front plate B, and inner plate C, having the registering pairs of apertures presenting two openings, the plate C, having an inner rear boss C³, a glass panel guarding one of said openings, a plate E pivotally hung on the boss to cover both openings, means for fastening said plates, in combination with a bell also mounted on the boss and a hammer therefor together with hammer-operating means extending to and operable at the front plate, substantially as herein specified.

7. In a subdoor, the outer or front plate B

having apertures guarded by lips B' and B², in combination with the inner or rear plate C having coinciding apertures and lips C' and C², matching telescopically within the others, the glass F guarding one of such apertures, the swinging plate E arranged to cover both apertures by a single movement, said plate being held in the closed position by a catch comprising a projection C⁵ on the one part engaging in the recess e' on the other part, adapted to be liberated by the elastic yielding of one of the parts, and the arm C⁴, a bell supported thereby and a hammer pivoted thereon; said arm C⁴ confining or locking the swinging plate E adapted to serve substantially as herein specified.

8. The main door A apertured as described, in combination with subdoor-plates B, C, correspondingly apertured and lipped and with the swinging plate E locked on the rear plate by the arm C⁴ and with the bell C and hammer I, the latter operated by a push-pin and gravity and with provisions as the offsets J' for locking the push-pin in the said plates to prevent withdrawal but with liberty for the proper movements, all substantially as herein specified.

9. In a subdoor, the outer or front plate B and inner plate C, having the registering pairs of apertures presenting two openings, a glass panel guarding one of said openings, and a plate E movable on the inner plate to cover both openings, and having a recess e' to coöperate with the projection C⁵ on the inner plate to constitute a lock, in combination with means for fastening said plates to bring their apertures coincident, substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

WHITFIELD E. JONES.

Witnesses:

J. B. CLANTICE,
M. F. BOYLE.