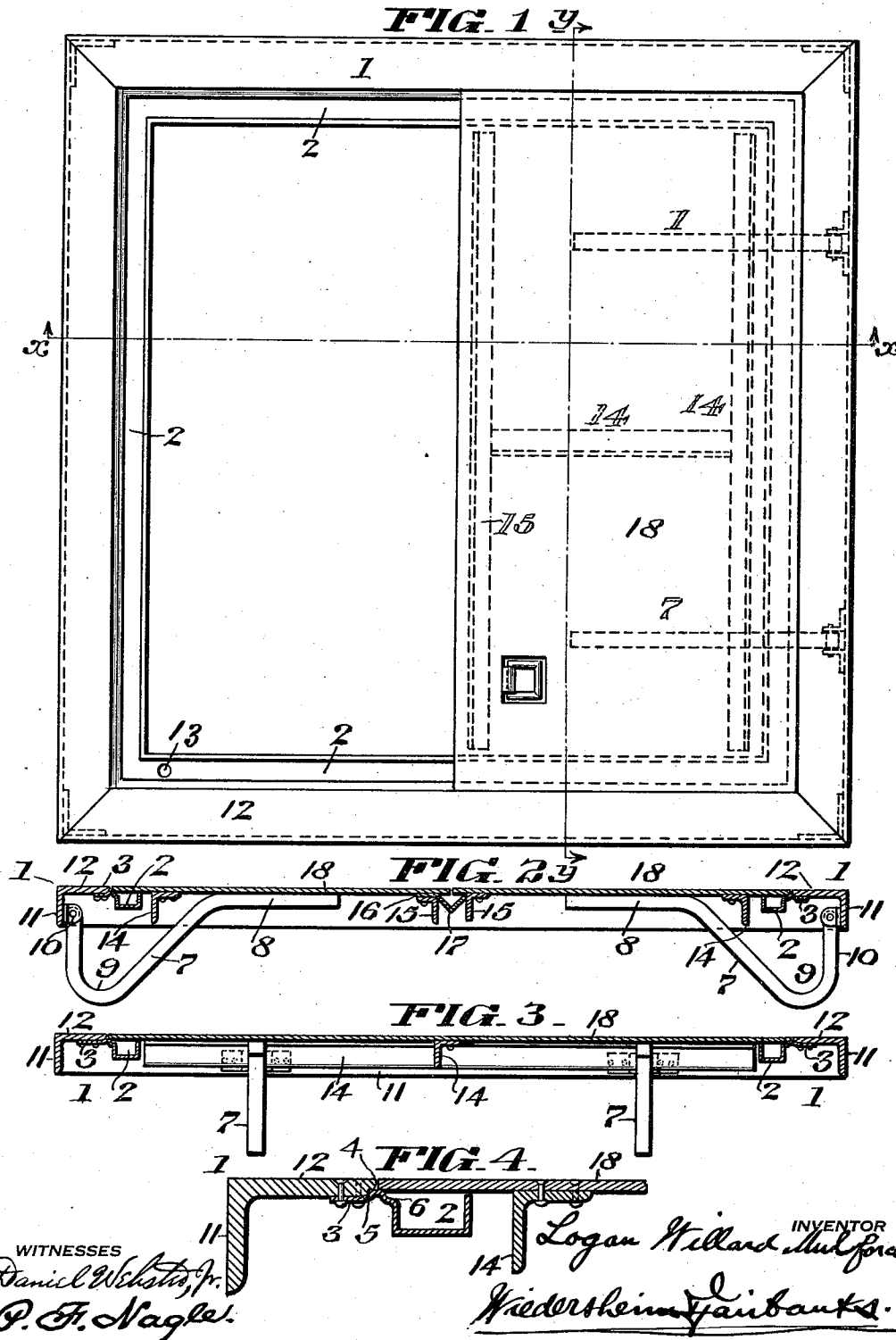


L. W. MULFORD.
SIDEWALK DOOR.
APPLICATION FILED SEPT. 1, 1911.

1,015,579.

Patented Jan. 23, 1912.



UNITED STATES PATENT OFFICE.

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SIDEWALK-DOOR.

1,015,579.

Specification of Letters Patent.

Patented Jan. 23, 1912.

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To all whom it may concern:

Be it known that I, LOGAN W. MULFORD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Sidewalk-Door, of which the following is a specification.

My invention consists of an improved sidewalk door which lies flush with the sidewalk when closed.

It further consists of such door provided with means for collecting and carrying off whatever water may leak through the joints of the door.

It further consists of means in a double door of this character whereby water entering at the meeting edges of the doors will be collected and carried off.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

The annexed drawings and the following description set forth in detail, one mechanical form embodying the invention; such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

Figure 1 represents a plan view of a sidewalk door frame with one door in place and closed and one door removed. Fig. 2 represents a section on the line $x-x$ in Fig. 1. Fig. 3 represents a section on the line $y-y$ in Fig. 1. Fig. 4 represents an enlarged section of the door frame and a portion of a door.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, the reference numeral 1 indicates a rectangular metallic door-frame L-shaped in cross-section, which in practice is set around the door-opening in the sidewalk with its upper face flush with the surface of the same. Gutters, 2, rectangular in cross-section, are secured to the under sides of the inner edges of said frame by outwardly bent flanges, 3, extending from the upper edges of their outer sides, and said flanges are beaded or corrugated to form beads, 4, one side of which conforms to the rounded edge, 5, of the horizontal flange of the door-frame while the edge of the door rests upon the crest of the bead, as seen in Fig. 4. The flanges are furthermore concavely beaded or corrugated, at 6, to form

inclined surfaces conducting whatever leaks through the joints into the gutters. Hinge brackets, 7, have inwardly extending straight portions, 8, which are secured to the under sides of the door leaves, 18, and extend beneath and nearly across the same to act as reinforcements for the same. The inner portions, 9, of the brackets are bent at an acute angle, and are pivoted at their ends between ears, 10, upon the inner face of the downwardly projecting flange, 11, of the door-frame, so that the door-leaves may be swung upward and outward and the angularly bent brackets may clear and span the horizontal flanges, 12, of the door-frame. On account of their being bent at an acute angle, the hinge-brackets form inclined braces for the door-leaves when they are in their closed and opened positions, bracing the door-leaves under the weight of passing persons or objects placed upon them, and likewise bracing the open leaves when resting with their hinge-edges upon the surface of the frame or sidewalk. The rectangular gutters have suitable drainage through an opening, 13, in the gutter and suitable pipe-connection from the same.

The door-leaves are braced at their edges and middles by L-bars, 14 and 15, and the L-bar 15 at the free edge of one leaf secures a lateral flange, 16, of a triangular gutter, 17, so that said gutter will span the space between the meeting edges of the closed leaves and receive any water passing through such space and carry it to the rectangular gutters. The edges of the door-leaves rest upon the beads at the outer sides of the gutters, but said edges are not seated in the door-frame nor make tight joints, the gutters taking care of leakage at the joints.

I am fully aware that flush sidewalk doors have been designed in which a seat is formed around the inner edge of the door frame, and upon which the door is seated and forms a tight joint by a rib fitting into a packing in a groove in the seat. My door is not intended to be seated upon the gutters, but to rest upon the beads, and the gutters will receive and discharge whatever leaks through the joints. Owing to traffic over doors of this character, the joints between the door and the seats and packings soon become leaky, and my gutters will take care of any leakage at the edges of the door. By

having the angularly bent hinge-brackets hinged near the hinge edges of the leaves, the latter will swing freely upward and outward without lifting such leaf upward at the hinge-edge as well as at the free edge, whereby ease of manipulation of the door is attained.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a sidewalk door, a door-frame angular shaped in cross-section, gutters secured by laterally extending flanges to the under sides of the inwardly extending horizontal flanges of the frame and having beads at the upper edges of their outer sides, and a door hinged to the frame and resting upon said beads when closed.

2. In a sidewalk door, a frame 1 of angular shaped cross-section and having the edge 5 of its horizontal flange rounded, gutters 2 of rectangular cross-section and formed with concave portions 6 and beads 4 and flanges 3 secured to the under sides of the horizontal flanges 12, and a door 18 hinged to the frame and resting upon the beads.

3. In a sidewalk door, a frame 1 of L-shaped cross-section and having the edge 5 of its horizontal flange rounded, gutters 2 of rectangular cross-section and formed with

concave portions 6 and beads 4 and flanges 3 secured to the under sides of the horizontal flanges 12, a door 18 fitted to have its edges rest upon the beads, and hinge-brackets 7 having straight portions 8 secured to the under side of the door and acutely bent portions 9 hinged beneath the horizontal flanges of the frame.

4. In a sidewalk door, a door frame, a door, and hinge-brackets having straight portions secured to the under side of the door and portions bent at an acute angle and having their ends pivoted at the under side of the frame to form inclined braces for the door, said bent portions spanning the door-frame when the door is opened.

5. In a sidewalk door, a door frame, a door, and hinge-brackets having straight portions secured to the under side of the door to extend nearly across the same and portions bent at an acute angle and having their ends pivoted at the under side of the frame to form inclined braces for the door, said bent portions spanning the door-frame when the door is opened.

LOGAN WILLARD MULFORD.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."