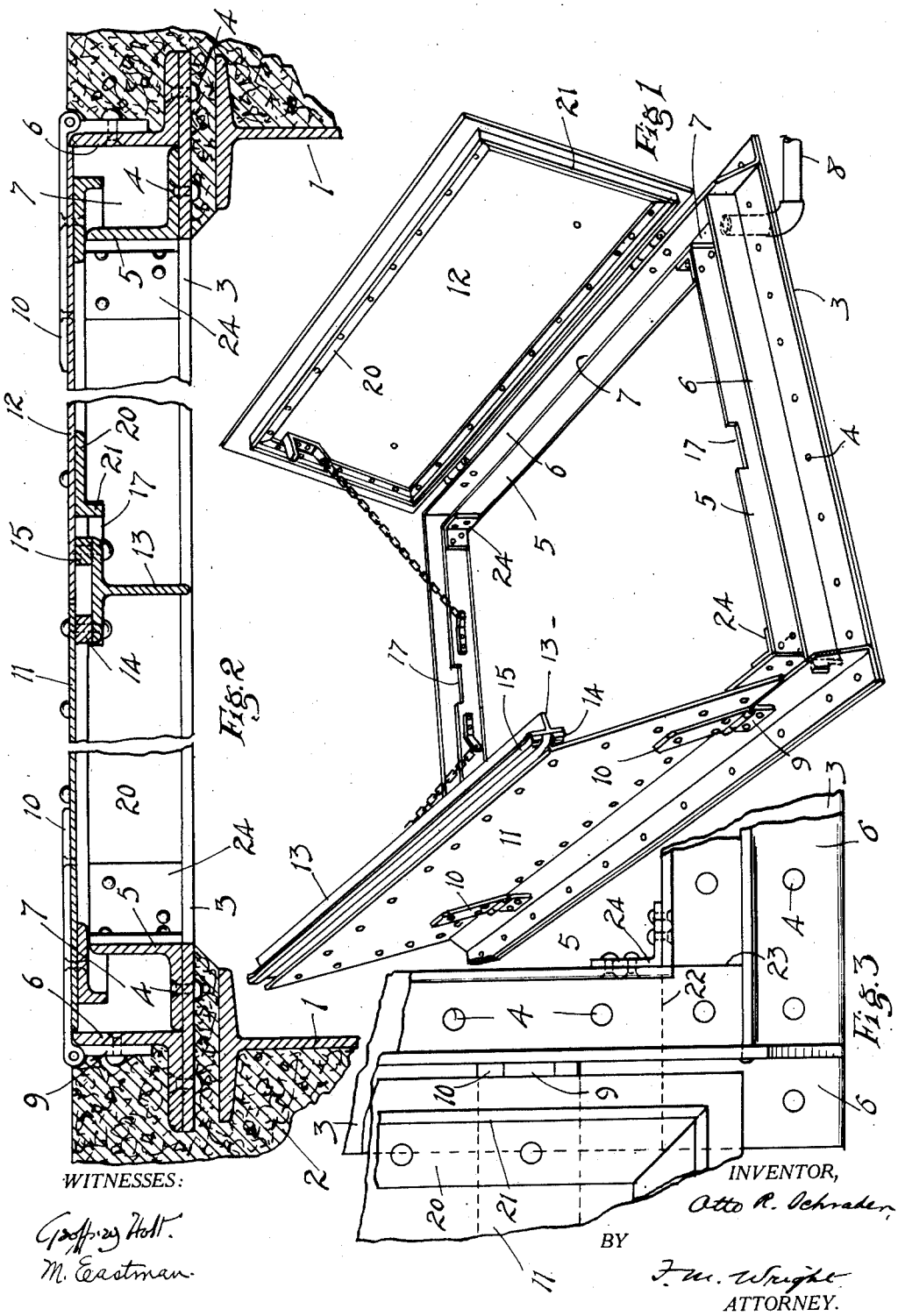
No. 879,200. PATENTED FEB. 18, 1908.

O. R. SCHRADER.

SIDEWALK DOOR.

APPLICATION FILED NOV. 15, 1907.



WITNESSES:

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SIDEWALK-DOOR.

No. 879,200. Specification of Letters Patent Patented Feb. 18, 1908.

Application filed November 15, 1907. Serial No. 402,264.

To all whom it may concern:

Be it known that I, OTTO R. SCHRADER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Sidewalk-Doors, of which the following is a specification.

This invention relates to improvements in sidewalk doors, and the object of the invention is to provide a door for closing sidewalk openings, which will be simple and inexpensive in construction, durable in use, and effectively prevent leakage of water from the sidewalks to the basement or vault underneath.

In the accompanying drawing, Figure 1 is a perspective view of an open sidewalk door embodying my improvements; Fig. 2 is an enlarged longitudinal section of the door, closed; Fig. 3 is a still more enlarged plan view of a corner of the door.

Referring to the drawing, 1 indicates the I-beams of the sidewalk, and 2 the concrete sidewalk itself. Upon the concrete, immediately over two I-beams are supported plates 3, which are arranged in a rectangular form, and form the lower portion or base of the frame of the door. Upon each plate are secured by rivets 4 the horizontal members of inner and outer angle irons 5, 6, the vertical members of the outer angle irons being higher than those of the inner. Said inner and outer angle irons thus form a trough 7, rectangular in form, extending around the opening in the sidewalk, and from one corner of said trough 7 extends a discharge pipe 8 for carrying off water draining into said trough 7. To the vertical members of the outer angle irons are riveted the fixed straps 9 of hinges 10, the movable straps of which are secured to the members 11, 12, of the door proper. The free edge of the member 11 of the door has secured to its underside a T-bar 13, a spacing strip 14 being interposed between the inner edge of the cross member of the T-bar and the free edge of the door, and a spacing strip 15 is also secured to the outer edge of the cross member of the T-bar, upon which spacing strip the free edge of the other door member 12 can rest when the door is closed. There is thereby formed a channel or trough 16 to receive any water passing between the free edges of the door members when closed. The vertical members of the inner angle irons at the sides have recesses 17 cut therein to receive the ends of the horizontal portion of the T-bar, so that the trough formed thereby discharges water therefrom into the rectangular trough 7 formed between the inner and outer angle irons of the frame of the door.

In prior constructions of frames for sidewalk doors, the arrangement of the parts forming this rectangular trough has been such that it was difficult, if not impossible, to completely surround the rectangular trough with concrete, owing to the difficulty of tamping in the concrete around the trough, by reason of the horizontal members of the frame extending outwards from the upper portion of the trough. On this account it has been the practice to completely surround the trough with concrete only at the upper portion of the trough, leaving an unfilled space all around the lower portion of the trough. With my construction such difficulty does not occur as the outwardly extending portions of the frame extend from the lower portion of the trough, so that it is quite easy to tamp the concrete completely around the frame and to completely inclose the same with concrete.

In the former constructions, improved by my invention, on account of there having been left, an empty space all around the trough at the lower portion thereof, there resulted a collection of water at such points outside of the trough, causing the rusting of the metal in contact therewith, and the gradual deterioration of the frame of the door and of the concrete so that eventually there results a considerable leakage of water into the basement or vault.

With my present construction, the trough can be so thoroughly inclosed with concrete that there is no vacant space whatever around the frame, and the latter, being completely protected from the action of the elements will last for an indefinite time.

Upon the under surface of the door member 12, near its edges are secured angle irons 20, which form a rectangular frame following the outline of the edge of the door member, and thus strengthening said door member, and the horizontal portion 21 of the angle iron, near the hinged edge of the door member 12, rests upon the upper edge of the inner angle iron of the door frame, while the vertical member of the angle iron extends downwards about midway of the trough 7, and thus forms a shield to prevent water passing from the opening between the hinged edge of

the door and the outer member of the trough over the upper edge of the inner member of said trough. In like manner, the other member 11 of the door has a similar angle iron 21 secured to the under side thereof near its hinged edge.

As shown in Fig. 3, the inner end and outer angle irons, which are laid upon the plates 3, are extended to overlap said plates at the corners, that is, a plate at one side of the door frame is extended, as shown in dotted lines at 22 to a point in line with the outer edge of the plate at the adjacent side; the inner angle iron of the latter side is then extended over the joint 22, as shown at 23, to abut against the end of the inner angle iron of the first side, and similarly for the outer angle irons. In this way the joints of the angle irons are placed as far as possible from those of the base plates 3. The inner angle irons are secured together at the corners by angle pieces 24.

The novel feature of this invention is the construction of the parts of the frame so as to form a rectangular trough to catch water passing the edges of the doors, while at the same time permitting the concrete to be easily and effectively placed around said frame so as to completely fill the space around the same.

I claim:—

1. A frame for sidewalk doors comprising plates arranged in a plane to form a rectangular frame, and inner and outer angle irons resting on, and secured to, said plates, the horizontal member of each angle iron extending outwards from the vertical member thereof, and the horizontal member of the inner angle iron terminating in close contact with the vertical member of the outer angle iron, substantially as described.

2. In a frame for side walk doors, the combination of plates arranged in the same plane to form a rectangular frame, and inner and outer angle irons for each side of the frame, the horizontal member of the inner angle iron extending outward from the vertical member and secured to the base plate to form with the vertical member of the outer angle iron a trough, and the horizontal member of the outer angle iron resting on and being secured to the base plate, to form upwardly opening corners, or angular spaces around the frame, arranged to be readily filled with concrete to the level of the vertical members of the outer angle irons, substantially as described.

3. In a frame for sidewalk doors, the combination of base plates arranged in the same plane to form a rectangular frame, and inner and outer angle irons for each side frame, the horizontal members of the angle irons resting on the base plate and being secured thereto and directed outwards from the vertical members, and the horizontal members of the angle irons being extended at the corner of the frame over the joints between the base plates, substantially as described.

4. In sidewalk doors, the combination of a frame having a trough or channel beneath the edges of the doors, and doors hinged thereto, each having an angle iron secured on the under side thereof adjacent to the hinged side of the door, the horizontal member of said iron resting upon the inner side of the trough and the vertical member depending into said trough, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OTTO R. SCHRADER.

Witnesses:
FRANCIS M. WRIGHT,
D. B. RICHARDS.