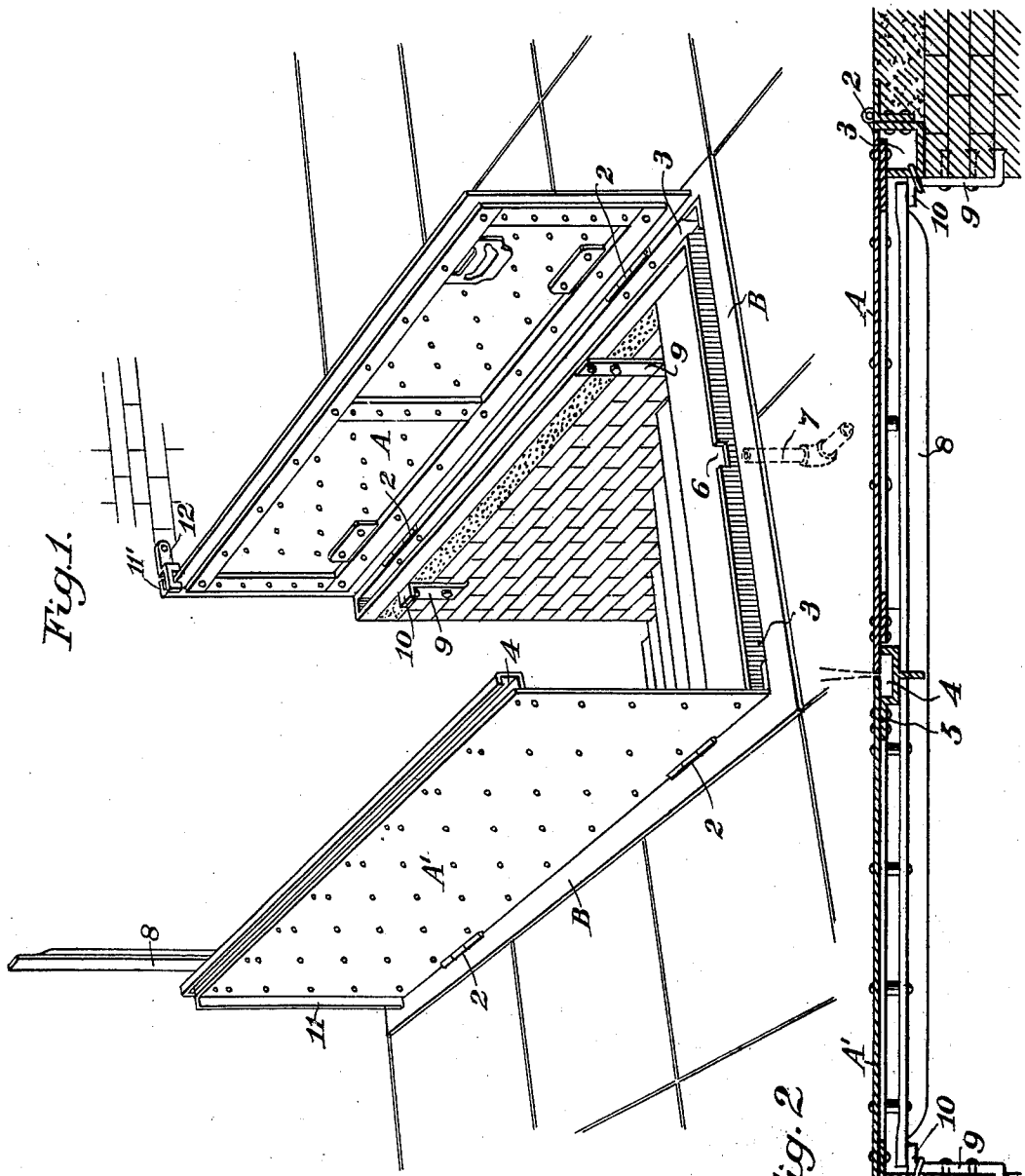
No. 699,468. Patented May 6, 1902.

P. H. JACKSON.

SIDEWALK TRAP DOOR.

(Application filed Dec. 23, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

PETER H. JACKSON, OF SAN FRANCISCO, CALIFORNIA.

SIDEWALK TRAP-DOOR.

SPECIFICATION forming part of Letters Patent No. 699,468, dated May 6, 1902.

Application filed December 23, 1901. Serial No. 86,988. (No model.)

To all whom it may concern:

Be it known that I, PETER H. JACKSON, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Sidewalk Trap-Doors; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to entrances to basements from the sidewalk by means of stairs or the like which lead from the sidewalk down to the basement and where a covering to the entrance is required, this covering consisting, essentially, of doors hinged and closable over the opening.

My invention consists in a means for supporting the rear ends of the doors by a bar carried by and movable with one of the doors, a support for the free end of said bar when the doors are closed, and a support for the meeting edges of the doors, means for preventing the entrance of water into the stairway through the joints between the doors and between their hinged edges and the framework thereof and conducting away water which may enter through said joints and a similar protection at the back of the doors. In this class of doors closing stairways which enter the basement from the sidewalk it is necessary to leave sufficient head-room at the rear of the opening adjacent to the building to allow persons to pass. Therefore no fixed support can be employed at this point; but if the doors are entirely unsupported they will sag and become depressed and get out of shape.

It is the object of my invention to provide a convenient support carried by one of the doors, so that it cannot be lost, and in such a manner that when the doors are closed this support will always be in position, and when the doors are opened the support is removed from its place by the act of opening the doors.

In the accompanying drawings, Figure 1 is a perspective view of my invention, showing the trap-doors open. Fig. 2 is an enlarged cross-sectional view showing the doors closed.

As shown in the drawings, the doors are made in two leaves or folds A and A'. These doors are hinged, as shown at 2, to a frame B about flush with the sidewalk, so that when closed the edges will meet approximately central along the space. The outer edges of these doors may be conveniently supported.

3 is a metal trough set within the framework of the hatchway, extending upon the sides and across the outer end and in such manner that when the doors are closed the joint at the hinged edges is at the upper outer edge of the trough, and the edges of the doors themselves rest upon the inner edge of the trough, which thus forms a support and relieves the hinges of strain. The portion of the trough extending across the outer end of the hatchway in like manner serves to support the outer ends of the doors when they are closed.

Fixed to the edge of the door A' is a trough 4, which has a flange 5, by which it is firmly bolted along the edge of the door, and the opposite edge of the trough projects so that when the door A is closed down to meet the door A' the edge of the door A will meet that of A' approximately over the middle of the trough 4. The door A is thus supported over its whole length upon the edge of this trough, and both doors are sufficiently supported along the central line. This trough is so disposed that when the doors are closed it fits into a notch 6, made in the transverse part of the trough 3, and thus any water which may pass through the space between the meeting edges of the doors will be discharged by this trough into the trough 3, and as these doors have a slight grade or declination from the building outwardly water will be conducted to the transverse part of the trough 3, through which it escapes by means of a conductor 7, connecting with the trough, and passes away under the sidewalk to the sewer or any desired point of discharge.

In order to support the inner ends of the doors A and A', I have shown a bar 8, which is bolted to the door A', which is first closed, and this bar has sufficient length projecting beyond the edge of that door to extend across the hatchway-opening when the door is closed.

The trough 3 is preferably fixed in place by means of anchor-straps 9, fixed in the masonry of the hatchway, and those at the inner ends have their upper ends bent outwardly, as shown at 10, thus forming supports so that when the doors are closed the free end of the bar 8 will rest upon the support 10 on the op-

posite side of the hatchway-opening while the end adjacent to the hinged side of the door, to which the bar or bearer is fixed, will rest upon the support 10. Thus when the door is closed the inner ends rest upon a sufficiently strong bearer to prevent any sagging, and this bearer is in turn supported by the lugs or shoulders of the anchor or clamps 9, which extend down and are firmly fixed in the masonry.

It will be understood that if the bearer 8 is firmly bolted along the inner edge of the door A′, which will also have an upturned flange, as shown at 11, it will have a sufficient stiffness and supporting strength so that the supporting-lug 10 at that side of the hatchway may, if desired, be omitted without materially weakening the support which is given to the doors.

The doors may be retained in position when opened by latches, as at 12, which are adapted to drop over the edges of the doors and prevent their opening too far or closing when not desired. The anchors 9 also serve an important function in preventing the frame of the hatchway from rolling and becoming loosened in the cement in which it may be set by reason of small obstructions getting beneath the hinges or by dropping the doors or other rough usage, which would thus cause leaks outside of the frame as well as between it and the doors.

The upturned flange 11 is important, because it prevents rain from blowing in and it deflects the water forward, so that no trough or gutter is necessary at that point.

It will be understood that the stop 10, upon which the ends of the bearer rests, may be independent of the anchors and may be located at any suitable points.

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

1. Sidewalk-doors, substantially horizontally disposed, a frame extending on two sides and across the front of the hatchway-opening to the sides of which doors are hinged, said doors closable together, and a bearer rigidly secured to the underlapping door and projecting beyond the free edge of the same and capable of extending across the rear open ends of the said frame, and a support for the outer or free end of said rigid bar.

2. Sidewalk-doors closable to meet together, a framework set in the sidewalk to the sides of which the longitudinal edges of the doors are hinged, said framework extending across the outer or front side of the hatchway and being open at the inner or rear ends, a bearer bolted immovably to the underlapping leaf of the doors and projecting beyond the edge so as to extend across the full width of the hatchway and supports upon which the ends of the bearer rest when the doors are closed.

3. The combination with a sidewalk hatchway-opening of a frame set therein and surrounding three sides of the opening and anchors fixed to said frame extending downward within the hatchway and fixed to the sides thereof whereby the frame is prevented from being loosened, doors hinged to the sides of the frame and closable together, a bearer carried by one of said doors having a length sufficient to extend across the rear open space between the ends of the frame and stops at the ends upon which the bearer rests.

4. A hatchway-opening having a frame surrounding three sides and open at the rear, doors hinged to the sides of the frame closable together, a combined trough and bearer extending beneath the hinged edges of the doors and across the front forming a support for the door when closed, and a combined trough and bearer which is bolted along the free edge of the underlapping leaf of the doors; in combination with flanges upturned around the rear edges of the doors where they meet the building-front, said flanges preventing the entrance of water and obviating a gutter at this point.

5. A hatchway having a framework extending on two sides and the front and unconnected at the rear, doors hinged to the sides of said framework closable together, said doors having their inner ends formed with an upturned flange, a bar or bearer bolted across the inner end of the underlapping door extending beyond the outer edge, a support upon the opposite side of the hatchway upon which said free end rests when the door is closed and upon which bearer the inner end of the other leaf of the door rests when closed.

In witness whereof I have hereunto set my hand.

PETER H. JACKSON.

Witnesses:
S. H. NOURSE,
JESSIE C. BRODIE.