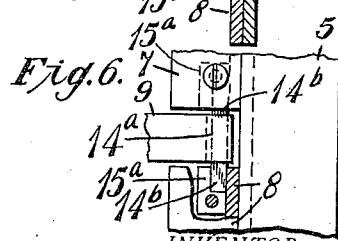
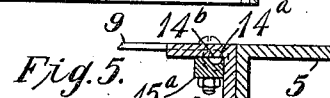
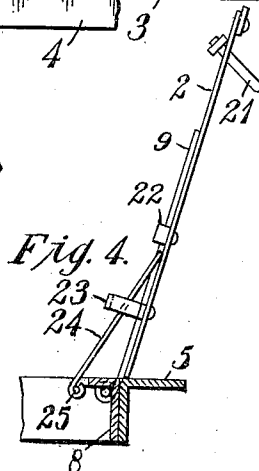
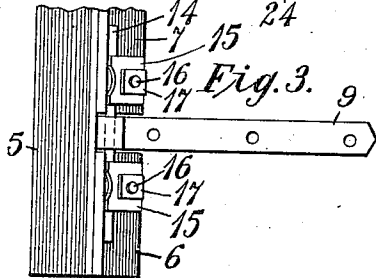
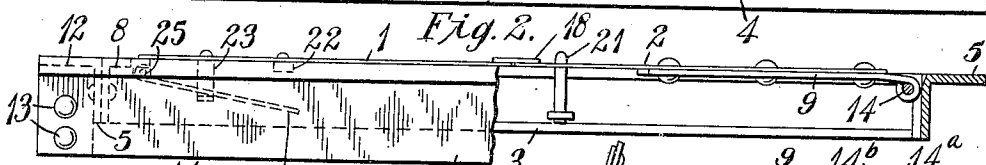
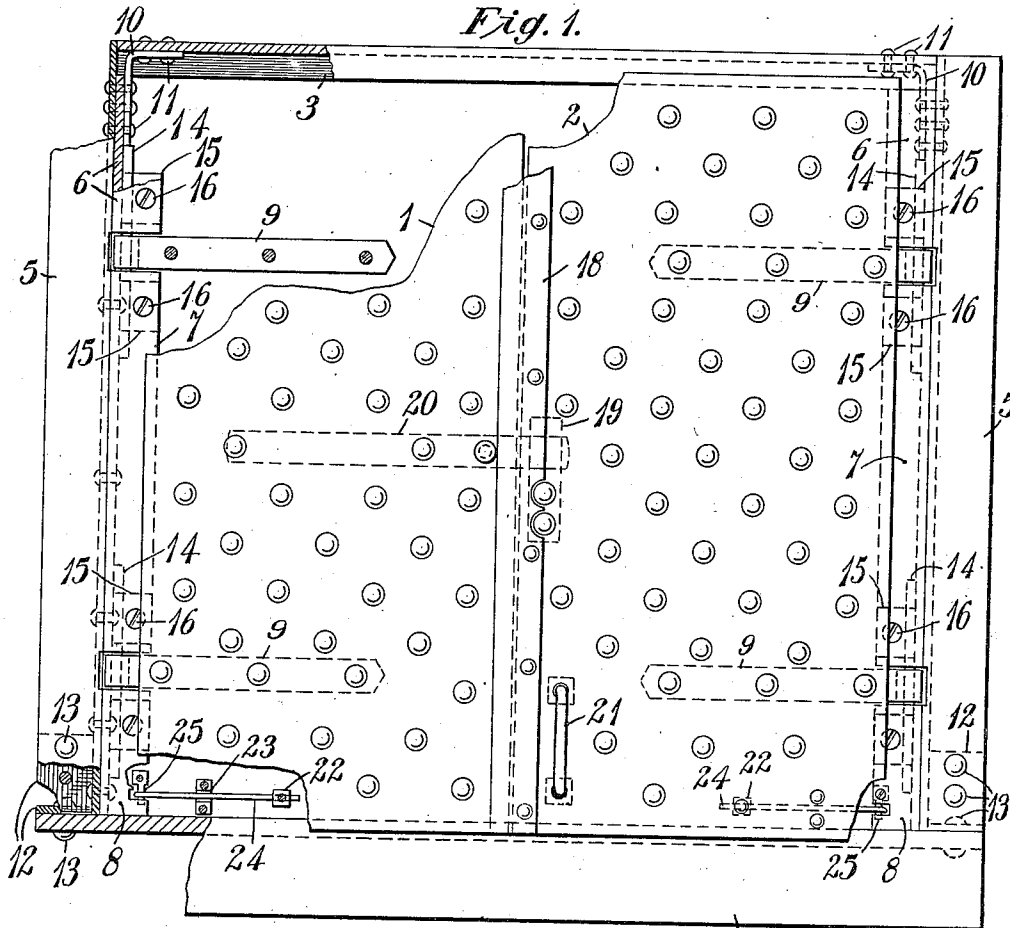


K. O. MUEHLBERG.
CELLAR OR LIKE DOOR.
APPLICATION FILED APR. 22, 1911.

1,050,981.

Patented Jan. 21, 1913.



WITNESSES:

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UNITED STATES PATENT OFFICE.

KARL O. MUEHLBERG, OF CARRICK, PENNSYLVANIA.

CELLAR OR LIKE DOOR.

1,050,981.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed April 22, 1911. Serial No. 622,807.

To all whom it may concern:

Be it known that I, KARL O. MUEHLBERG, a resident of Carrick, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cellar or Like Doors, of which the following is a specification.

My invention relates to doors and their supporting frames and it has for one of its objects to provide a door or a pair of doors for closing bulkheads and sidewalk openings that shall be hinged to a frame by simple, inexpensive, readily assembled and advantageously located devices.

Another object of my invention is to provide a structure that shall be free from external obstructions pertaining to the hinging and fastening devices.

A further object of my invention is to provide a simple and effective means for automatically latching a door of the above-mentioned character in the position it assumes when open.

In the accompanying drawing Figure 1 is a plan view of a door frame and a pair of doors mounted therein, parts being broken away and in section; Fig. 2 is a view, partially in end elevation and partially in section, of the frame and doors shown in Fig. 1; Fig. 3 is a detail view of the underside of one of the door hinges and the portion of the frame with which it is directly associated; Fig. 4 is a detail view of a portion of the door frame, one of the doors and the devices for latching the door in open position; Figs. 5 and 6 are detail views of a modified form of hinge pintle and clamp.

The door frame that I have here shown as utilized in connection with a pair of doors 1 and 2 for closing a bulkhead or sidewalk opening comprises an end channel bar 3, an end angle bar 4 and two side members each of which consists of an outer angle bar 5 and a plurality of spaced inner angle bars 6, 7 and 8, three of these bars being shown in order to provide deep spaces for the ends of two hinge members 9 that are riveted to the inner face of each door. The bars 5 and 6 of each side member are fastened to the end member 3 by means of an angle piece 10 and rivets 11, and each of the side members is fastened to the end member 4 by means of an angle piece 12 and rivets 13.

The outer ends of the hinge members 9 project beyond the edge of the door to

which they are riveted and are bent inwardly and backwardly upon themselves to form circular openings to receive pintles 14. As shown in Figs. 1 and 3, the pintles 14 span the respective spaces between the inner bars of the side members and are securely clamped in the angles of said bars by means of rectangular washers 15, screw-head bolts 16 and nuts 17. As shown in Figs. 5 and 6, the ends of each pintle 14^a are cut away to provide flat surfaces 14^b to fit against the upper inner faces of the adjacent inner angle bars, and clamping blocks 15^a, provided with recesses for the half-round ends of the pintles, are bolted to the angle bars.

It will be observed that the arrangement of parts for clamping or anchoring the hinge pintles in place permits of easy and expeditious removal of the same when it is desired to renew or repair the pintles or the door. By merely loosening the nuts 17 the pintles may be removed end-wise from the loops of the hinge members and from between the inner angle members of the door and the clamping means.

It will be understood that a single pintle, instead of a plurality of pintles, may be utilized for each door if desired, and that the terms employed in the claims are to be construed with this understanding.

A plate 18 is riveted to the outer face of the door 2 adjacent to its inner edge to overlap the door 1 and thus cover the space between the doors when they are closed. A short bar or strip 19 is riveted to the inner face of the door 2 adjacent to its inner edge to be engaged by a latch bar 20 that is pivotally mounted upon the inner face of the door 1. The door 2 is also provided with an extensible handle 21, by means of which it may be opened.

It will be noted that the hinges are located entirely beneath the outer surface of the frame and that, when the doors are open, their outer edges rest upon the outer faces of the angle bars. In order to automatically latch the doors in their open positions, I provide the inner face of each of them with a stop block 22 and with a guide loop or stirrup 23 with which coöperates a rod 24 having a pivotal support 25 within a shallow recess in the edge of the angle bar 8. The stirrup 23 has an opening of sufficient size to permit considerable lateral movement of the latch rod 24, so that the free

end of the rod may be moved outwardly to clear the stop block 22 when it is desired to close the door and will automatically drop into the position shown in Fig. 4 of the drawing when the door is opened.

The outer members or flanges of the angle bars 6, 7 and 8 cooperate with the bolts 16 and their washers and nuts, or with such other pintle-fastening devices as may be employed, and also protect the pintles and fastening devices from displacement or injury by the contact of heavy merchandise that may be moved through the doorway. The outer members or flanges of the angle bars 8 also serve to protect the rods 24 and their pivotal supports from injury or displacement by such merchandise since the latter are fastened to the under sides of the flanges and the notches or recesses receive the bars, when the doors are open, in such manner that none of the movable parts project inwardly beyond the edges of the flanges.

The structure that I have shown and described will preferably be made of steel or malleable iron parts but it will be understood that my invention is not limited to such materials or to any specific form or arrangement of parts, except as may be definitely set forth in the appended claims.

What I claim is:

1. The combination with a frame having a side member comprising a plurality of inner alined angle members spaced apart and rigidly secured together, a door having hinge members on the inner face thereof, said hinge members being arranged opposite to the spaces between the angle members, cooperating hinge pintles in the inner angle members and opposite said spaces, clamping members connected to said inner angle members and arranged to anchor said pintles in place, the hinge members on the doors being bent outwardly into the spaces between the inner angle members and arranged to project therethrough when the door is opened, said clamping means being open opposite to the ends of the pintles to permit endwise removal thereof.

2. The combination with a frame having a side member comprising an outer angle bar

and a plurality of inner alined angle bars secured thereto, said angle bars being spaced apart longitudinally, of a door having hinge members on its inner face, cooperating hinge pintles seated in the angles of the inner angle members opposite the spaces therebetween, the hinge members on the door being bent downwardly into the spaces between said inner angle bars, clamping members engaging the sides of the pintles for anchoring them in the end portions of the inner angle members and spanning the spaces therebetween, said anchors being so constructed and arranged as to permit endwise removal of the pintles from the hinges and clamping members.

3. The combination with a frame having a side member comprising spaced inner angle members, a door having hinge members on the inner face thereof, said hinge members being arranged opposite to the spaces between the angle members and being bent outwardly into said spaces and arranged to project therethrough when the door is opened, cooperating hinge pintles seated in the inner angle members and opposite said spaces and extending through said hinge members, and independently removable clamping members connected to said inner angle members and arranged to anchor said pintles in place, said clamping members each engaging one end portion of one of said hinge pintles.

4. The combination with a frame having a side member, a door having hinge members on the inner face thereof, cooperating hinge pintles seated in said side member opposite to said hinge members and extending therethrough, and separately removable clamping members connected to said side member and arranged to anchor said pintles in place, said clamping members each engaging one end portion of one of said hinge pintles.

In testimony whereof, I have hereunto set my hand.

KARL O. MUEHLBERG.

Witnesses:

W. C. LYON,
MARY E. CAHOON.