

UNITED STATES PATENT OFFICE.

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FIREPROOF CONSTRUCTION FOR BUILDINGS.

No. 844,944.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed October 9, 1906. Serial No. 338,103.

To all whom it may concern:

Be it known that I, JACOB JACOBS, a citizen of the United States, and a resident of Akron, in the county of Summit and State of Ohio, have invented a new and Improved Fireproof Construction for Buildings, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide an economic and effective fireproof construction for fire doors, shutters, and partitions, which construction combines lightness with strength and durability and is readily adaptable to any manner of building.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a door constructed in accordance with my invention. Fig. 2 is a longitudinal section taken practically on the line 2 2 of Fig. 1. Fig. 3 is a transverse section taken practically on the line 3 3 of Fig. 1, and Fig. 4 is a section through a portion of a partition or wall constructed in accordance with my invention and a section through a portion of a support therefor.

The structure is made, preferably, of light sheet metal—steel, for example—and the frame of said structure consists of side channel-bars 10 and top channel-bars 11 and a channel-bar 12, together with front panels 13 and corresponding rear panels 13^a, which panels are in the form of plates. The panels extend over the channel-irons, forming the sides, top, and bottom of the frame, the inner edge portions of said channel-irons at their outer faces being depressed, as illustrated at 14, rendering the outer side faces of the panels 13 and 13^a flush with the corresponding portions of the channel-irons in order to shed water and prevent the lodgment of material at such points.

Wherever two panels engage, said panels overlap, and one of the panels is provided with an inwardly-offset pocket 15 to receive the edge of the abutting panel, as is clearly shown in Fig. 2, and the inner edge portions of the channel-irons are braced and strengthened by metal strips 16, secured to their in-

ner faces. The entire structure is strengthened by means of hollow spool-braces 17, that extend from the inner face of a panel 13 to the corresponding face of an opposing panel 13^a, as is illustrated in Figs. 2 and 3, and the bores of said spool-braces 17 are threaded to receive screws 18, the heads of which are countersunk in the said panels 13 and 13^a, the screws being entered into the spool-braces from the outside of the structure. These spool-braces may be in any desired number and are preferably arranged in rows. Said spool-braces likewise extend between those portions of opposing panels which bear upon the channel-irons of the frame, and at such points the screws 18 are passed through the channel-irons and their strengthening plates or strips 16, as well as through the panels.

In order to further strengthen the structure, brace-plates 19 are employed, which lie in engagement with the inner faces of the panels, where their edges are brought together, as is particularly shown in Fig. 2, which brace-plates 19 lie between the ends of the spool-braces at such points and the inner faces of the panels.

A door, shutter, or partition may be economically yet firmly constructed in such manner as has been described, and still the structure can be exceedingly light.

In Fig. 4 I have shown the structure applied as a wall or partition, and in such construction panels 20 and 21 are employed, the abutting edges of the said panels being brought together in a manner to render their outer faces flush—that is, by producing an inwardly-extending pocket at the upper edge, for example, of one panel adapted to receive the lower edge of the panel above—and at such points the panels are braced by plates 21^a. Spool-braces 22 are secured to the panels 20 and 21 by means of screws 23, countersunk in said panels, and said spool-braces are secured to uprights 25 or other forms of supports by means of other screws 24, the inner ends of the spool-braces being so formed as to provide bearings for the heads of the said screws 24, as is illustrated in the said Fig. 4.

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

1. A fireproof structure, comprising a series of panels, one panel being adapted to receive the upper or opposing panel in a man-

ner to provide a flush outer face for all of the panels, a support, and spool-braces secured to the panels at their points of connection and to the said support.

5 2. A fireproof structure, comprising a series of panels, one panel being adapted to receive the upper or opposing panel in a manner to provide a flush outer face for all of the panels, a support, spool-braces secured to
10 the panels at their points of connection and to the said support, and strengthening-plates located at the back of the panels where they connect, the fastening devices for the spools passing through the panels being likewise
15 carried through said strengthening-plates.

3. A fireproof structure, consisting of a frame of channel-iron, panels flushly engaging with the outer faces of the channel-irons, said panels being at the front and the back of
20 said irons, tubular braces interposed between the panels, in engagement with their inner faces, and fastening devices passed through the panels and secured to said braces.

4. In a fireproof construction for doors, shutters and partitions, a frame of channel-iron having depressions formed in its outer
25 faces at its inner edges, plates constituting panels forming the front and the rear of the structure, which plates are flushly set in the depressed portions of the channel-irons, the
30 outer faces of the plates being flush, spool-braces engaging with the inner faces of opposing plates, and bolts passed through said plates and into the said spool-braces.

35 5. In a fireproof construction for doors, shutters and partitions, the combination with a frame constructed of channel-irons, which channel-irons have depressions formed in their outer faces at their inner edges, and
40 plates constituting the front and the back of the structure, which plates are received in the

depressions in the said channel-irons, the upper edge of one plate being inwardly offset to flushly receive the lower edge of an opposing plate, and strengthening-plates at the
45 junction of the front and back plates, of spool-braces located in series between opposing plates, engaging the inner faces thereof, and bolts passed through the said front and back plates and through the strengthening-
50 plates and into the said spool-braces.

6. In a fireproof construction for doors, shutters and partitions, the combination with a frame constructed of channel-irons, which channel-irons have depressions formed
55 in their outer faces at their inner edges strengthening-plates located at the inner faces of the channel-irons at their depressed portions, plates constituting front and back
60 panels for the structure, which plates lie in the depressed portions of the frame, one plate being provided with an inward depression to receive the engaging edge of the next plate, whereby to provide a flush front and
65 back surface for the structure, and strengthening-plates located at the inner sides of the panel-plates where said panel-plates connect, of series of spool-braces extending from the front to the back of the structure, said
70 spool-braces being interiorly threaded at their end portions, and bolts passed through the panel-plates into said spool-braces, sundry of which bolts also serve to hold in place the aforesaid strengthening-plates.

In testimony whereof I have signed my
75 name to this specification in the presence of two subscribing witnesses.

JACOB JACOBS.

Witnesses:

JOHN F. JOSEPH,
PHIL. G. WAGNER.