Sept. 7, 1926. 1,599,064

J. B. PIATT

WALL CONSTRUCTION

Filed March 22, 1926 2 Sheets-Sheet 1

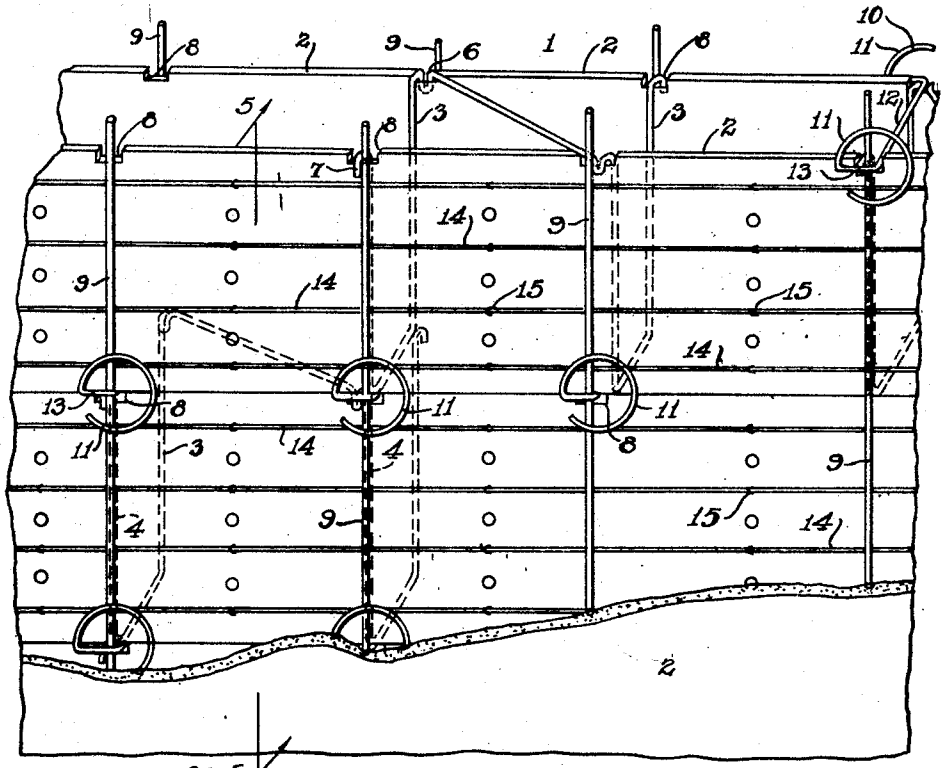


Fig. 1.

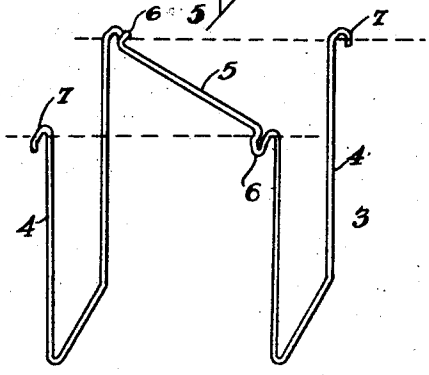


Fig. 2.

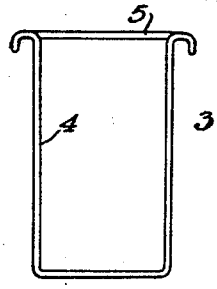


Fig. 3.

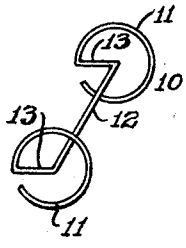


Fig. 4.

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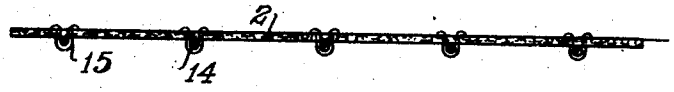


Fig. 5.

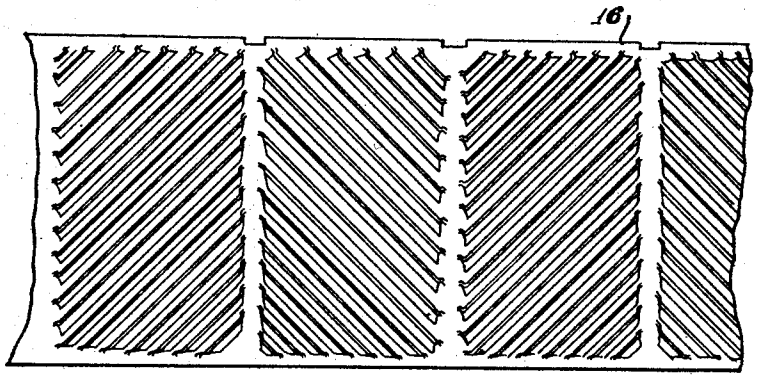


Fig. 6.

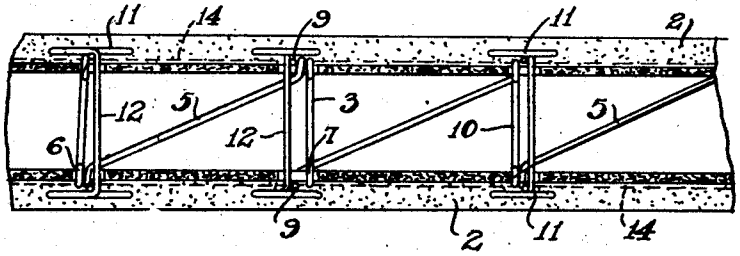


Fig. 7.

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Patented Sept. 7, 1926. 1,599,064

UNITED STATES PATENT OFFICE.

JESSE B. PIATT, OF NEW LEBANON, OHIO.

WALL CONSTRUCTION.

Application filed March 22, 1926. Serial No. 96,515.

This invention relates to new and useful improvements in wall constructions.

It is the principal object of my invention to provide a durable, fire-resisting, double-wall construction which is strongly reinforced by spacing and tying frames to leave an air chamber between its sides.

It is another object of my invention to provide such a double-wall construction in which each side serves as a re-enforced base for the concrete.

Other important and incidental objects will be brought out in the following specification and particularly set forth in the subjoined claims.

In the accompanying drawings illustrating my invention, Figure 1 is a perspective view of a double-wall construction, showing my method of re-enforcing the same to leave an air space between its sides. Figure 2 is a perspective view of the hooked spacing frame. Figure 3 is an end view of the same. Figure 4 is a perspective view of one of my cross ties. Figure 5 is a cross sectional view taken through my double-wall construction on the line 5—5 of Figure 1. Figure 6 is a partial side view of a metal base for the concrete. And Figure 7 is a plan view of my assembled wall construction.

Referring to the accompanying drawings for a detailed description of the forms of embodiment of my invention illustrated therein, the numeral 1 designates a double-wall construction having sides 2, 2 preferably constructed of perforated card board.

For the purpose of reinforcing the wall construction 1 to leave an air space between its sides 2, 2, I employ the following means. As spacing means between the sides 2, 2, I provide a metal frame 3 which is preferably constructed of a steel wire that is bent to the form shown in Figures 2 and 3. This wire is so bent as to form two parallel U-shaped ends 4, 4 which are joined at their obliquely opposite tops by a diagonal, integral portion 5. At the points of connection of the ends of the latter with the U-shaped ends 4, 4 of the frame, the wire is formed to provide hook portions 6, 6. The free ends of the U-shaped parts 4, 4 of the frame 3 also terminate in hook portions 7, 7. (See Figures 2 and 3.)

The spacing frame 3 just described is inserted between the sides 2, 2 of the double-wall construction 1, with the hook portions 6 and 7 of said frame resting in notches 8 formed to receive them in the top edges thereof. (See Figures 1 and 7.)

As will be seen from Figure 1, the side walls 2, 2 of the double-wall 1 are made of superimposed sections in pairs, and between the sections of each pair my spacing frames 3 are hooked. There may be any number of these side sections, depending upon the height of the wall.

Projecting from the bottom to the top of each sectional side 2 of the wall 1, along the outer surfaces of said sides and opposite their notches 8, are vertical rods 9. These rods are held firmly in place against their respective sides 2 of the wall by the following means.

These means preferably comprise cross ties 10 of which one is shown in detail in Figure 4. As will be seen from this figure, each cross tie 10 preferably comprises a steel wire that is bent to provide two split, parallel end-ring portions 11, 11 that are connected by an axial central part 12. The latter terminates at each end in a radial part 13 from whose outer end the wire is bent to form a split ring portion 11.

The cross ties 10 just described are applied to the sectional sides 2, 2 of the wall 1 by inserting the axial part 10 of each in two oppositely disposed notches 8, 8 in said wall sections, with the ring portions 11, 11 of said cross ties sprung against the outer surfaces of the wall sides to hold the radial ends 13 of said ties firmly against the rods 9 as shown in Figure 1. It is thus seen that these cross ties 10 co-operate with the vertical rods 9 in serving as reinforcing means for the wall sides 2, 2 in preventing them from spreading apart to leave an adequate air space between them to insulate the inner side from moisture and sound.

The spacing frames 3, the cross ties 10 and the vertical rods 9 also act together to provide a strong re-enforcement for the entire double-wall unit. (See Figures 1 and 7.) Each sectional side 2 of the wall, when so reinforced, acts as a base to receive concrete mortar.

In Figure 1 I have shown the sides 2, 2 of the wall as being made of cardboard to act as a base for the concrete mortar. Projecting lengthwise of these cardboard sheets are wires 14 that are securely fastened to these sheets by metal clips 15. These wires 14 act as a re-enforcement for the cardboard sheets until the concrete is applied, and after

that they reinforce the concrete which is pressed around them.

In Figure 6 I have shown a side 2 of the wall 1 as being constructed of metal such as steel sheets 16.

I do not wish to be limited to the details of construction and arrangement herein shown and described, and any changes or modifications may be made therein within the scope of the subjoined claims.

Having described my invention, I claim:—

1. A wall construction comprising two sides, open spacing frames insertible between said sides to leave an air space intermediate them, vertical members along the outer surfaces of said sides, and cross ties having ends adapted to engage said members to hold them firmly against said sides for the purpose specified.

2. A wall construction comprising two sides, spacing frames insertable between said sides to leave an air space intermediate them, vertical rods along the outer surfaces of said sides, and cross ties having ends adapted to engage said rods to hold them firmly against said sides for the purpose specified.

3. A wall construction comprising two sides formed with oppositely disposed notches in the tops thereof, vertical rods projecting along the outer surfaces of said sides past said notches, cross ties resting in said notches and having spring ends projecting along the outer surfaces of said sides over said vertical rods to firmly hold them against said sides for the purpose specified.

4. A wall construction comprising two sides formed with oppositely disposed notches in the tops thereof, vertical rods projecting along the outer surfaces of said sides past said notches, cross ties resting in said notches and terminating in right-angled portions beyond them, and split ring ends on said right-angled portions to project over and hold the vertical rods firmly against said sides for the purpose specified.

5. A wall construction comprising two sides, cross ties for preventing said sides from spreading apart, and open spacing frames insertable between said sides, each spacing frame comprising a wire bent to provide two parallel U-shaped ends, the obliquely disposed tops of which being connected by a diagonal portion.

6. A wall construction comprising two sides, cross ties for preventing said sides from spreading apart, said sides provided with opposite-disposed recesses in their top edges, and spacing frames insertable between said sides, each spacing frame comprising a wire bent to provide two parallel U-shaped ends, the obliquely-disposed top portions of which are connected by a diagonal part, the connected top portions and the free top portions of said U-shaped ends of the frame being bent to hook shape to rest in said recesses to support the spacing frames between said sides.

7. A wall construction comprising two sides made of cardboard, open spacing and anti-spreading frames applied to said sides, and longitudinal wires secured along the outer surfaces of said cardboard sides to cooperate with the spacing and anti-spreading frames in reinforcing said sides as bases to receive concrete mortar.

In witness whereof I have hereunto set my hand this 19th day of March, 1926.

JESSE B. PIATT.