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M. J. TRACY

1,920,490

WALL CONSTRUCTION

Filed Nov. 19, 1931

Fig. 1--

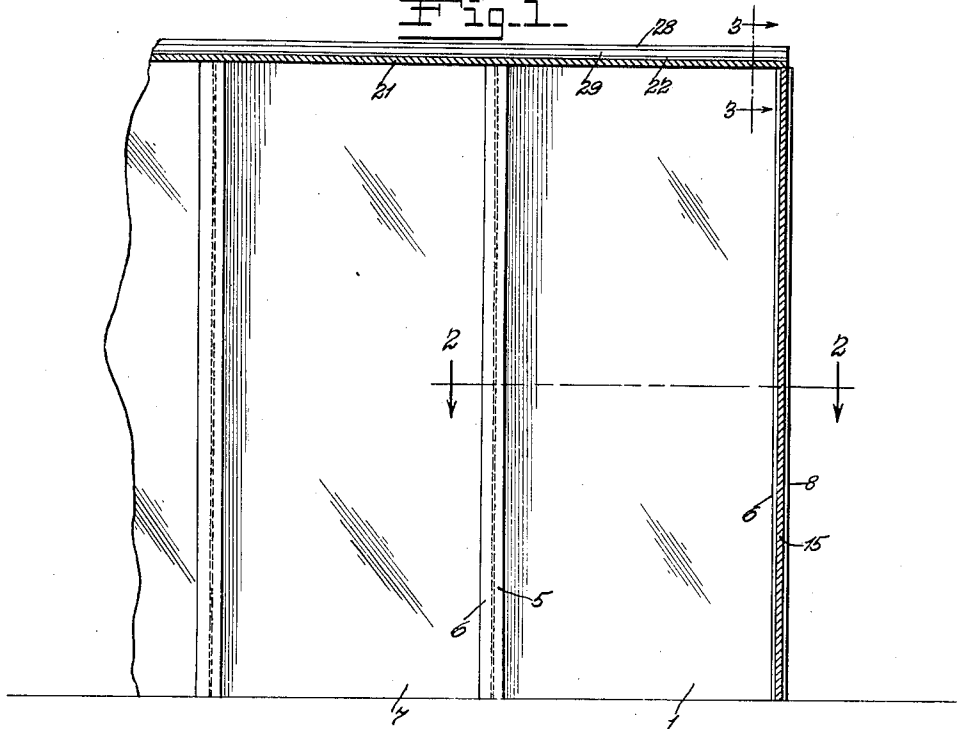


Fig. 2--

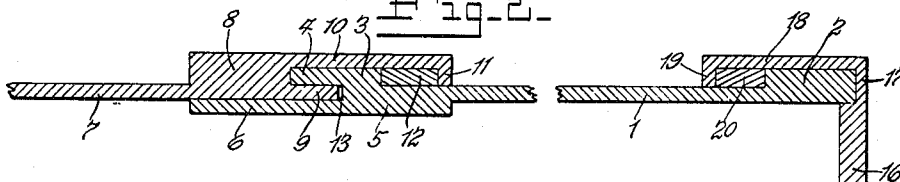
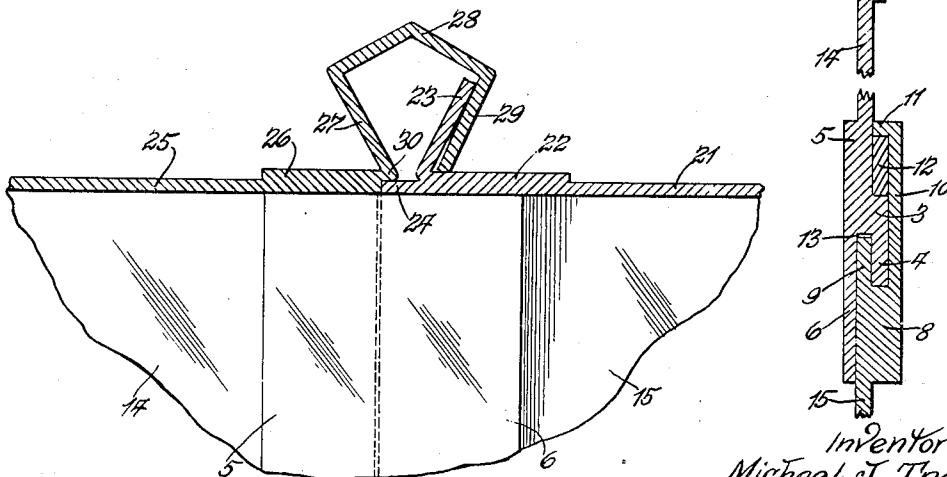


Fig. 3--



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UNITED STATES PATENT OFFICE

1,920,490

WALL CONSTRUCTION

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Application November 19, 1931. Serial No. 576,056

8 Claims. (Cl. 189—34)

This invention relates to wall construction.

An object of the invention is to provide an improved wall construction comprising a series of metallic plates having novel interlocking means along their adjacent edges including a thickened portion in rigid connection with one of the plates covering and concealing the joint formed by the edges of the plates.

Another object of the invention is to provide an improved interlocking connection comprising overlapping portions on the edges of the plates forming the wall and a member engageable with said overlapping portions to hold them together in rigid relationship in a manner to conceal and prevent access to the joint.

Other objects will appear from the following description, reference being made to the accompanying drawing, in which—

Fig. 1 is a view showing in elevation one of the walls and, in section, the ceiling and another wall.

Fig. 2 is an enlarged cross-sectional view on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1.

The wall comprises a metallic plate 1 having on one side along one vertical edge thereof a thickened portion 2 and, on the same side and along the opposite vertical edge thereof, a thickened portion 3 from which a flange 4 extends, the inner surface of the flange 4 being approximately in alinement with the outer surface of the plate 1. The plate 1 also has on its inner side a thickened portion 5 provided with a flange 6 extending therefrom parallel with and spaced from the flange 4 a distance approximately equal to the thickness of an adjacent plate 7.

The adjacent plate 7 is provided with a thickened portion 8 spaced from the edge that is adjacent to the plate 1, leaving an extension 9 of said plate 7 extending into the space between the flanges 4 and 6. A flange 10 extends from the thickened portion 8 parallel with the marginal portion 9 of the plate 7 and spaced therefrom a distance approximately equal to the thickness of the flange 4. The flange 10 projects considerably beyond the thickened portion 3 and has an inwardly extended marginal flange 11 extending toward and preferably engaging the outer surface of the wall 1. A locking member 12 is mounted in the space between the wall 1 and the flange 10 with its edges engaging the edge of the thickened portion 3 and the flange 11, thus securely holding the plates 1 and 7 in a relationship in which parts thereof are in edgewise abutting contact and in

which the thickened portion and its flange 6 constitute a batten covering and concealing and preventing access to the joint 13 between the vertical edges of said plates.

An adjacent plate 14 is adapted to be interlocked with the plate 1 to form the corner of a room and to be interlocked with another plate 15 by joint-forming means similar to the joint-forming means described, whereby the plates 1 and 7 are rigidly connected. Since the parts uniting the plates 14 and 15 are the same as the parts uniting the plates 1 and 7, the same reference characters are applied to like parts.

The marginal portion of the plate 14 that is toward the plate 1 is formed with a thickened portion 16 on its outer side having an elongation 17 spaced from the inner surface of the plate 14 a distance approximately equal to the thickness of said plate 14 so as to permit the thickened portion 2 of the plate 1 to extend across the edge of the plate 14 and into abutting contact with the inner surface of the extension 17. The extension 17 is provided with a laterally extended portion 18 spaced from the end of the plate 14 a distance approximately equal to the combined thickness of the plate 1 and the thickened portion 2 thereof, so as to seat against the outer surface of the thickened portion 2 when the plates are assembled in the relationship shown in Fig. 2 of the drawing.

The angular portion 18 has along its margin a laterally extended flange 19 spaced from the inner edge of the thickened portion 2 a sufficient distance to receive a locking member 20. This locking member 20 abuts against the edge of the thickened portion 2 and against the flange 19, thus securely locking together the plates 1 and 14 at the corner.

The ceiling for the room provided by this wall construction comprises a metallic plate 21 having on its upper side a thickened portion 22 integral with a resilient flange 23 inclining upwardly and inwardly from the adjacent edge of the plate 21 and spaced therefrom a distance sufficient to leave an unthickened portion 24 along the margin of the plate 21. The cooperating ceiling plate 25 is formed on its upper side with a thickened portion 26 in integral connection with a locking member for resiliently engaging the locking member 23. This locking member comprises an upwardly extended resilient portion 27 having an angular extension 28 along its upper edge formed with a downwardly extended resilient flange 29 designed and arranged to engage with the resilient member 23 and lock the

plates 21 and 25 in rigid engagement with each other. The parts 23 and 29 may be engaged with each other by raising the opposite edge of the plate 25 and passing the member 23 between the parts 27 and 29 and then lowering the plate 25 to alinement with the plate 21, causing the edge of the marginal portion 24 to abut against the edge of the plate 25 below the shoulder 30. The parts 23 and 29 are strongly resilient and should be sprung somewhat in the operation of arranging the plates in the manner described, so as to hold the plates 21 and 25 in edgewise abutting engagement to provide a substantially invisible joint through which it is impossible to pass tools or cutting devices in any way to cut the locking members.

The ceiling plates may be attached to the vertical wall plates in any appropriate manner, and I contemplate the use of fastening or attaching means wherever the same may be needed.

All of the plates may be made and constructed of tool-proof metal such as tool-proof steel, so that it is substantially impossible to break or cut through the walls. Walls constructed in this manner are sufficiently strong and durable and are sufficiently ornamental, or are capable of ornamentation, for various purposes. Accordingly, the wall construction is as well adapted for use in institutions in which the inmates are confined as for use in providing ornamental walls in other places.

The construction and arrangement may be widely varied within the scope of equivalent limits without departure from the nature and principle of the invention. I do not restrict myself in any unessential particulars, but what I claim and desire to secure by Letters Patent is:—

1. A wall comprising upright edgewise aligned adjacent metallic plates, interlocking extensions on said plates holding said plates from lateral displacement in either direction, and a locking device cooperating with said extensions and holding said plates from edgewise displacement.

2. A wall comprising upright edgewise aligned adjacent metallic plates, each having recesses and extensions engaging corresponding recesses in the adjacent plate and holding said plates from lateral displacement in either direction, an offset batten member rigid with one of said plates covering and preventing access to the joint between the plates, and a locking device holding said plates rigidly in proper relationship.

3. A wall comprising two upright edgewise aligned adjacent plates, an extension from one of said plates forming a recess at the margin of said plate, an extension from the other plate extend-

ing into said recess and holding said plates from lateral displacement in either direction, and a locking device cooperating with said extensions and locking said plates from edgewise displacement from said relationship.

4. A wall comprising two upright edgewise adjacent plates, an extension from one of said plates forming a recess at the margin of said plate, an extension from the other plate extending into said recess, said extensions that engage in said recesses holding said plates from lateral displacement in either direction, a locking device cooperating with said extensions and locking said plates from longitudinal displacement, and a batten member in connection with one of said plates covering and preventing access to the joint at the edges of said plates.

5. A wall comprising two upright plates arranged in angular relationship, an angular extension from one of said plates extending along the outer side of the adjacent plate, and a key device mounted between and cooperating with said extension and said adjacent plate to hold said plates in angular relationship.

6. A wall comprising two upright metallic plates arranged in angular relationship in which the end of one plate abuts against the side of the other plate, an angular portion rigid with said one plate extending across the end and along the outer side of the other plate, means forming shoulders on said angular extension and said other plate respectively, and a locking member between said shoulders.

7. A wall comprising two upright metallic plates arranged in angular relationship in which the end of one plate abuts against the side of the other plate, an angular portion rigid with said one plate extending across the end and along the outer side of the other plate, means forming shoulders on said angular extension and said other plate respectively, a locking member between said shoulders, and interlocking means on the opposite edge of each of said plates for engagement with other plates.

8. A wall comprising two upright metallic plates, batten forming means rigid with and offset from one of said plates and overlapping the marginal portion of the other plate, angular interlocking extensions rigid with the marginal portions of said plates on the sides opposite from said batten forming means and holding said plates from lateral movement in either direction, and a locking device cooperating with said extensions and holding said plates in rigid relationship.

MICHAEL J. TRACY.