Aug. 3, 1948. R. E. DAVIS ET AL 2,446,323

LOCK JOINT PANEL CONSTRUCTION

Filed July 20, 1945

Fig. 1.

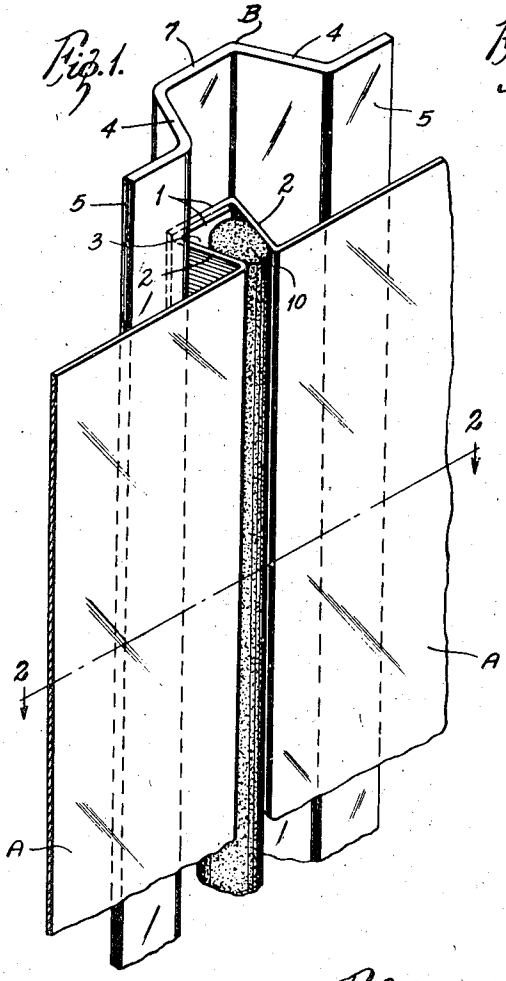


Fig. 4.

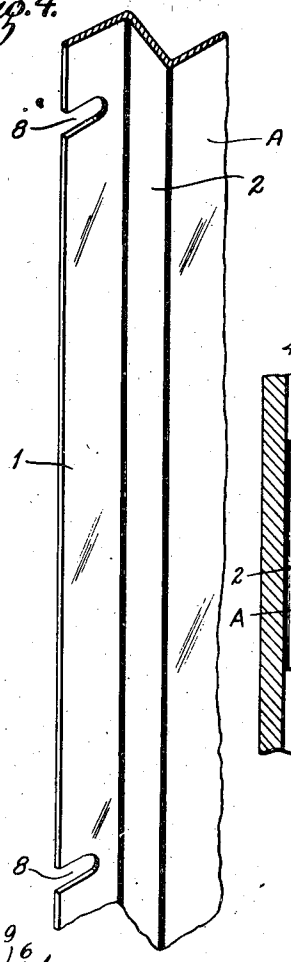


Fig. 5.

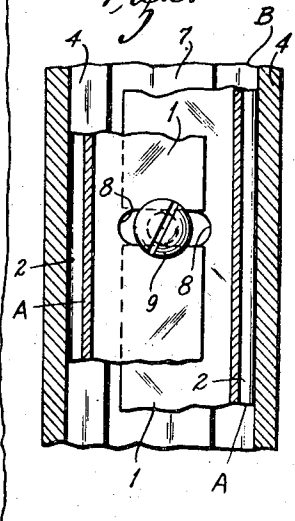


Fig. 2.

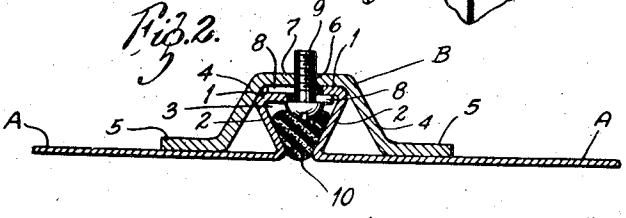


Fig. 3.

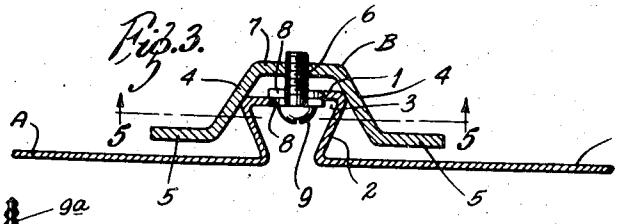
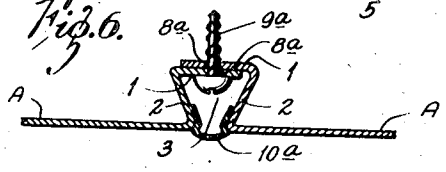


Fig. 6.



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2,446,323

LOCK-JOINT PANEL CONSTRUCTION

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Application July 20, 1945, Serial No. 606,240

2 Claims. (Cl. 189—86)

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This invention relates to lock-joint sheathing constructions of the kind wherein the covering sheets or panels have their adjacent margins interlocked and rigidly secured together and to a supporting or reinforcing member. The present invention has for its principal objects to devise a simple and economical, strong and durable lock-joint panel construction of the above type that will provide for the easy mounting and dismounting of the panels and that will include quick attachable and detachable means for sealing the joints between adjacent panels and for concealing the fasteners therefor. The invention consists in the lock-joint panel construction and in the parts and combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a fragmentary perspective view of a lock-joint panel construction embodying our invention,

Fig. 2 is a cross-sectional view on the line 2—2 in Fig. 1,

Fig. 3 is a view similar to Fig. 2 showing the cover panels before they are fully seated against the supporting member,

Fig. 4 is a fragmentary perspective view of the marginally flanged portion of one of said panels,

Fig. 5 is an enlarged fragmentary longitudinal section on the line 5—5 in Fig. 3; and

Fig. 6 is a view similar to Fig. 2 illustrating a modified form of the invention.

Our lock-joint panel construction preferably comprises a plurality of sheet metal cover panels A and a metal supporting or reinforcing member B for the adjacent margins of said panels. The panels A have their adjacent margins offset rearwardly, as at 1, and overlapped; and the connecting webs 2 between the flush body portions of said panels and their overlapped offset margins are disposed at inwardly diverging angles to provide an undercut longitudinal groove 3 therebetween.

The supporting or reinforcing member B is preferably made of channel shape with outwardly diverging or flaring side walls 4 that terminate in outstanding lateral side flanges 5. The channel B has a series of longitudinally spaced screw holes 6 through the bottom or web portion 7 thereof; and the rearwardly offset margins 1 of each of the panels A has a series of similarly spaced notches 8 formed therein that extend crosswise thereof.

The panels A are arranged side by side with

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their adjacent rearwardly offset marginal portions 1 disposed in overlapped relation within the channel B and with the notches 8 of the overlapped marginal portions opposite the screw holes 6 in the bottom of said channel. Fastening screws 9 are then inserted into the undercut groove 3 formed by the adjacent marginal portions of the panels A and extended through registering notches 8 in the overlapped marginal portions 1 of said panels and threaded through the screw holes in web 7 of the channel B. A screw driver is then inserted into the groove 3 and the screws 9 tightened to clamp the body portions of the panels A against the outstanding side flanges 5 of the channel B and to clamp the overlapped margins of said panels together and against the bottom 7 of said channel. During this operation of clamping the overlapped margins 1 of the panels A against the bottom of the channel B, the corners formed by said margins and the oblique angled webs 2 of said panels ride on the opposing faces of said webs thereby drawing said panels together in a sidewise direction.

The undercut groove 3 formed between the connected side marginal portions of adjacent panels is closed by a sealing or filler strip 10 preferably of rubber. The rubber sealing strip 10 is initially of circular cross-section and is inserted in the groove 3 by stretching the strip endwise to reduce its diameter so that the strip may be inserted sidewise into said groove. The tension on the strip is then relieved, thus permitting the strip to expand and substantially fill the groove 3 and cover the heads of the fastening screws 9 therein.

The hereinbefore described lock-panel construction has several important advantages. It is simple and inexpensive; it permits the panels to be quickly and easily rigidly secured together and to the supporting member; it also provides neat and attractive means for sealing the joint between adjacent panels and for concealing the fastening screws therefor; and it also permits the panels to be readily detached from the supporting member. Side play of the panels is prevented by the inclined side walls of the supporting member which function as cam surfaces for drawing the panels together sidewise.

The above joint is particularly adapted for use in securing porcelain outside panels to refrigerators from the outside, the porcelain panels operating as structural members, instead of mere decorative or covering sheets, thereby dispensing with the outside casing heretofore required for supporting the panels.

In the modified lock-joint panel construction

shown in Fig. 4, the supporting channel B is dispensed with and the overlapped portions 1 of the panels A have registering holes 8a therein adapted to receive self-tapping screws 9a. The self-supporting joint construction of Fig. 6 is also shown provided with a resilient channel-shaped sealing and covering strip 10a of sheet metal adapted to snap into place in the groove 3 formed by the cooperating marginal portions of adjacent panels.

What we claim is:

1. A lock-joint panel construction comprising a supporting channel with outstanding side marginal flanges at the edges of its side walls, panels seated against the outside faces of said flanges and having their adjacent marginal portions offset rearwardly and overlapped to form an outwardly opening groove, said overlapped marginal portions being disposed within said channel, fasteners securing said overlapped portions together and to the bottom of said channel and having heads seated in the bottom of said groove, and a member mounted in said groove for closing the same throughout the length thereof and for covering said heads of said fasteners, the side walls of said channel being disposed at inwardly converging angles so as to force said panels to slide toward one another when said overlapped marginal portions are drawn by said fasteners inwardly into said channel along the inwardly converging side walls thereof.

2. The combination set forth in claim 1 wherein said groove has undercut sides and said groove closing and head covering member comprises a strip of rubber or the like that is initially of substantially circular cross-section and of a diameter greater than the width of the narrowest portion of said groove and is stretched longitudinally to facilitate sidewise entry thereof into said groove and is adapted when the tension thereon is released to expand into engagement with the undercut sides of said groove and substantially fill the same.

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