Oct. 18, 1966 G. G. NESBITT 3,279,620

DISPLAY RACK

Filed Feb. 15, 1965

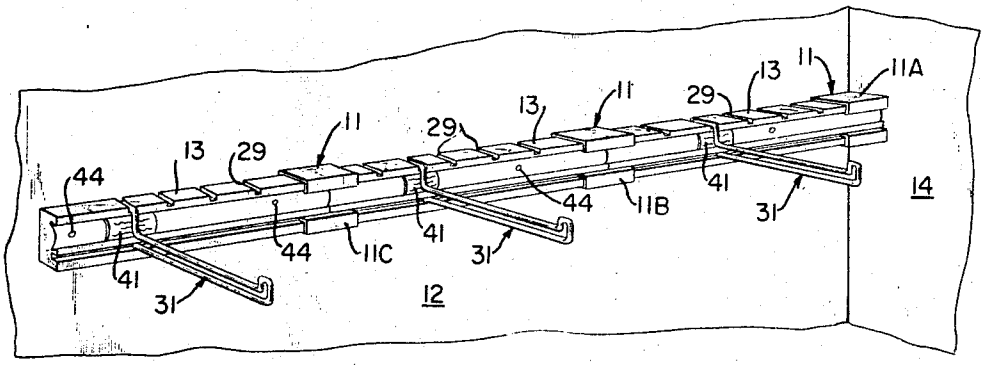


FIG. 1

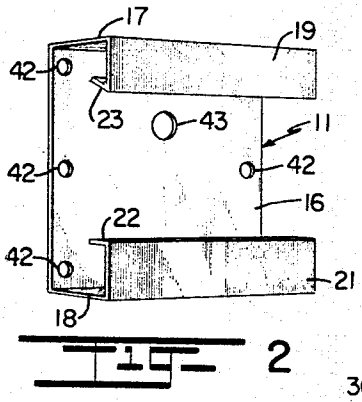


FIG. 2

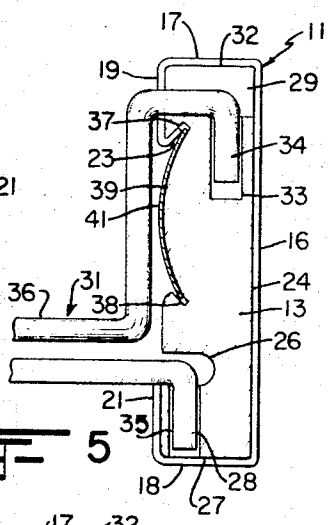


FIG. 5

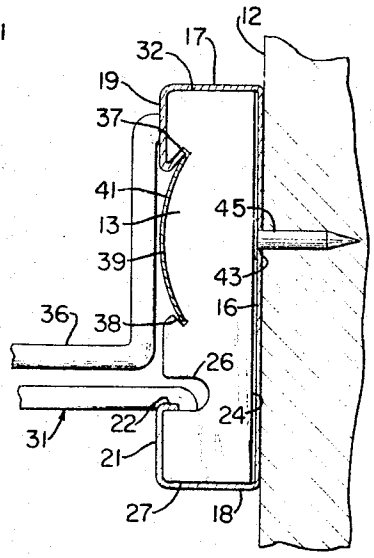


FIG. 3

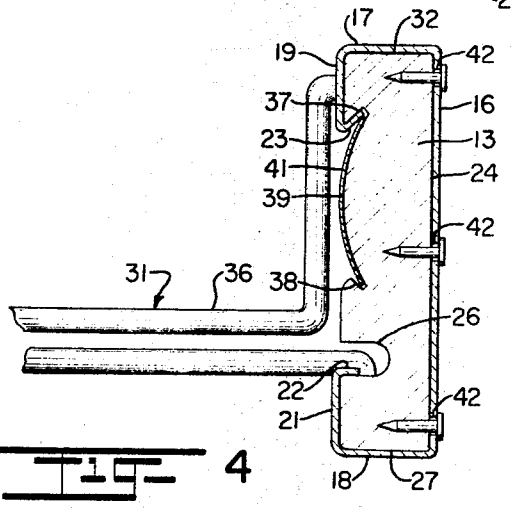


FIG. 4

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DISPLAY RACK

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The present invention relates to a display board mounting system and, particularly, to a mounting clip used with such system to facilitate the installation and support of display materials.

The invention in its present embodiment is directed particularly to the installation and mounting of display racks of a type used in filling stations and service centers for the storage and display of fan belts, water hose and the like.

Since the open display of automotive accessories such as V belts and similar goods not only contributes to the sale of such items but likewise makes it handier to observe and select proper replacement parts, various systems have previously been used for holding such items in ordered arrangement. For the purpose of space conservation it has been determined that it is advisable to provide supports or hooks which will stand out from a wall support so that a plurality of units may be stored on a single hook. Further, it has been noted that some provision must be made for the orderly placement of V belts or other items, even though such items are not of a uniform size or configuration and cannot be placed on evenly spaced fixtures.

Specifically for the support of V belts, manufacturers have settled on a flat or shaped board or channel that may be affixed to a vertical wall with the boards or channels being drilled or punched to receive a plurality of hangers or hooks that will be held outwardly from the wall. This type of support makes it possible to conveniently display the stored items with an economy of space expenditure and makes it possible for the display to be maintained at potential points of sale where the customer is easily reminded of a present or impending requirement.

In recent years the installation of such board or channel display systems, however, has been complicated by the widespread usage of enameled steel panels in the construction of service station walls and partitions. Similarly, many facilities are now being built utilizing tile facings or other surfaces that become disfigured when penetrated. With these surfaces it is now increasingly difficult to mount such display systems at desirable points of view.

Under previous usage it was determined that it was easiest to pack, ship and handle display boards of relatively short length. Accordingly, display boards of approximately 36 inch length have been widely used. When the individual boards of short length are to be applied to hard surface walls, two major obejctions arise. Each separate board must be affixed to the wall and supported thereon; accordingly, each board requires the application of two fasteners. Since a single display may be at least 12 feet long, 8 holes must presently be drilled through a wall surface or facing in order to attach the display boards. The drilling of the holes through a hard facing surface and the application of the fasteners can become a time consuming activity that is quite costly to the supplier due to the time expenditure and also due to the fact that many installations are made by sales personnel who are employed at a relatively high wage rate.

A second and major objection to existing display equipment is voiced by the owners or operators of a service facility who seriously object to the placement of so many holes in a finished wall facing.

These objections are multiplied when it is recognized that the drilling of an opening through an enameled surface or through a faced tile often causes spalling of the facing material which is unsightly if it is later necessary to move the display to a new location. Due to these new objections against the use of a previously satisfactory display system that still incorporates important and worthwhile advantages, the present invention has been derived.

An object of this invention is to provide a mounting clip for display board assemblies which will make it possible to securely join a plurality of display board units each to each in such manner that the number of support fasteners required to hold the assembled units in position on a wall will be substantially reduced.

Another object of the present invention is to provide a mounting clip that is compatible with existing display board configurations and which may be used therewith to join a plurality of such display boards in end to end relationship.

Another object of this invention is to provide a mounting clip which may be attached to abutted display boards to provide a joinder therefor and which further provides means for the easier application of fastener elements for the support of such boards.

A further object of the invention is to provide a mounting clip which may be affixed to wall surfaces and which is adapted to receive and support a plurality of display boards disposed against such wall and in the mounting clips.

Another object of the invention is to provide a mounting clip for display boards which is adapted for reciprocal movement along the length of such boards in such manner as to avoid substantial interference with hanger brackets or hooks disposed on such board.

Further objects and advantages of the present invention will be apparent from the appended description and drawings, in which

FIG. 1 is a perspective elevation illustrating assembly relationships for this invention,

FIG. 2 is a perspective illustration of a mounting clip made in accordance with this invention,

FIG. 3 is a cross-sectional elevation taken along the end of a display board and through said mounting clip and support wall,

FIG. 4 is a cross-sectional elevation taken through the mounting clip and display board at a plane passing through the brad openings of such mounting clip, and

FIG. 5 is a cross-sectional elevation taken adjacent a hanger element supported by said display board.

Briefly stated, the present invention relates to a mounting system for display boards and to the combination of display boards of novel shape and a mounting clip for use therewith whereby a plurality of units may be joined each to each for placement on a wall through use of a reduced number of fasteners. The mounting clip is designed to securely engage elements of the display board so that a substantial portion of any forces that would otherwise tend to separate or bend the display boards at their point of juncture is resisted by such clip. The mounting clip further provides means for securely fastening each of the boards to the clip so that once separate units may subsequently be handled and used as a unitary whole. Structural elements, inclusive of flanges, skirts and lips, are provided on the main web of such mounting clip of design and emplacement to strengthen the clip and to increase the holding power and rigidity of assembled units without interference with the hangers and hooks or display cards normally used in conjunction with such boards.

The general and specific features of an embodiment of this invention will be more clearly understood after reference to the accompanying drawings, in connection with

which the features of the invention are more fully described.

FIGURE 1 is an overall perspective view which illustrates usage of the invention. Here a plurality of mounting clips **11** are shown disposed on a wall **12** in spaced positions to support or hold together a plurality of display boards **13**. An end clip **11A** may be disposed against a side wall **14** and would, in most installations, itself be fastened to the supporting wall **12**. Intermediate clips **11B** and **11C** may similarly be attached to the wall **12** or may only be used to join adjacent display boards **13** together.

Whether used for a fastening support or for joining separate lengths of display boards **13** together, the mounting clips **11** are of configuration and construction as shown in FIGURES 2 through 5. Here it will be noted that clips **11** are substantially of a channel type construction having a web **16**, a top flange **17**, and a bottom flange **18**. For increased strength and support, a portion of the channel shape is boxed or closed in by a top skirt **19** and a bottom skirt **21**. The construction of the clip **11** when formed by a bending brake or by punch press operations includes the provision of a return lip **22** that may be disposed at 90° to the bottom skirt **21** and an angle lip **23** on the top skirt **19**. With this shape and configuration the clip surrounds and securely engages shaped portions of the mounting boards **13**.

The mounting boards, as shown in FIGURES 3, 4 and 5 are of overall rectangular cross-section elongated in a vertical plane so that a flat back **24** of the board **13** may be disposed against the surface of the wall **12** in positions intermediate the mounting clips **11**. The front surface of the board **13** is shaped to provide a longitudinal channel **26** adjacent the bottom edge **27** of the board. This channel is shaped and adapted to receive the lower tang **28** of a hook or hanger **31**. A plurality of notches **29** are cut in the top edge **32** of the boards **13** in positions intersecting drilled openings **33** so that a tang **34** on the top leg **36** of the hanger **31** may be received and held by such notch and opening. A similar hole or opening **35** is drilled through the bottom edge **27** of the board to receive the lower tang **28**. The board itself further provides undercut slots **37** and **38** that are joined by a rounded curve section **39** so that display cards or identification tags **41** may be placed in the slots to be retained therein in positions adjacent the separate hangers **31** to identify the merchandise displayed on such hangers.

As illustrated, the component parts of the clip **11** closely engage and surround the elements of the boards **13**. The return lip **22** is securely engaged against one wall of the longitudinal channel **26**, and the angle lip **23** engages in the slot **37** in a manner such that it is tight against the edge of the slot and doesn't interfere with the potential reception of identification tabs or tags **41** that are to be placed therein.

With proper and cooperative design of the clip elements and boards **13**, forces exerted against one board can be substantially transmitted to an adjacent board by a clip positioned at the point of juncture between such boards. The provision of the top angle lip **23** is of special importance in connection with the load transmitting qualities of the formed clip. While a plurality of display boards **13** may be satisfactorily held together through use of the clips alone, it is advisable where heavier loads are to be supported to provide a positive means for holding the clips and boards in cooperative interengagement. For that reason a plurality of openings **42** are punched in the web **16** of the clips **11** in positions adjacent the lateral edges thereof. In use, brads or small nails may be driven through said openings and into the wood construction of the display boards **13** disposed in such clips. When the brads are used, a substantially rigid joint is obtained that will securely hold adjacent display board units to each other.

This junction and joint is then of sufficient strength so that a plurality of boards may be placed in end to end relationship, as shown in FIGURE 1, to act unitarily for the support of materials disposed on the hangers **31**. Where a unitary support is thus derived through use of a plurality of display boards, the number of wall fasteners that are required can be substantially reduced. Instead of providing two fasteners for each of the separate display boards **13**, it is with this system possible to hold two to four boards and their normal loads in desired display position by the use of only two fasteners for the entire assembly.

To facilitate the placement of the wall fasteners themselves, holes **43** are provided on the central vertical axis of the mounting clips **11**. These holes, which are of larger size than the brad openings **42**, will receive necessary wall fasteners, such as the nail **45** shown in FIGURE 3, or other larger size fastenings suitable for use where hard surfaced walls are being used. The central opening **43**, which is preferably disposed above the horizontal center line for the clips **11**, makes it possible for fasteners to be applied past the end of the display boards **13** and directly into the supporting wall; or, in other instances, the opening **43** can be at an elevation aligned with holes **44** predrilled in the display boards **13**.

The boards **13** can all be moved reciprocally along any of the clips **11**. This reciprocal movement of the boards within the clips facilitates installation of these display racks, and it should be noted that such reciprocal movement is possible without the complete removal of the hangars **31**. Disengagement of the top tang **34** makes it possible for the boards **13** to be moved reciprocally through the mounting clips **11** without disturbing the engagement between the board and the bottom tang **28**.

The mating configuration of the boards **13** and mounting clips **11** and the reciprocal reception made possible thereby greatly facilitates the installation of multiple units along a wall supporting surface. The clips may be disposed on a plurality of boards, and the boards may then be positioned against the wall to adjust the positioning and vertical alignment of the intended assembly. Thereafter, individual boards may be moved slightly so that the mounting holes **43** will be exposed to be marked or drilled. After fastener openings are drilled in the wall in positions corresponding to the selected clips **11**, such clips can be firmly joined to the wall and a single board or a plurality of boards that have been joined together through use of the brad fasteners may then be moved reciprocally into engagement with the attached clips.

In order to facilitate this reciprocal introduction, a working clearance or tolerance must be maintained in the respective dimensions of the mounting clips and boards. With the desired proper sizing, a free end of a board or of a plurality of joined boards can be moved externally across and in front of the face skirts **19** and **21** of a first wall installed clip while the opposite end of the board is being introduced into and through the confines of an adjacent second fastened clip. Once the board end being introduced has been engaged with the second clip it may be moved reciprocally past its intended position, and subsequently the free end can be moved back against the wall for reverse reciprocal movement into its position of engagement in the first supporting clip. Through use of this or a reverse procedure, individual or joined boards can be placed or removed from installed clips. Further, since the clips can be preinstalled separately, it is no longer necessary for both ends of the display boards to be held in place while wall fasteners are applied. In many installations this feature can eliminate a previous requirement for helper personnel.

The resulting convenience and ease of installation materially reduces the amount of labor involved in making an improved and less disfiguring installation. When this economic advantage is coupled or considered together with the potential reduction in the number of required wall fas-

teners, the utility and advantages of the described embodiment of this invention becomes quite apparent.

Further advantages of the present invention will be apparent to others. Accordingly, while one embodiment of the invention has been shown and described, it is intended that the scope of the invention is to be limited only by the claims presented herewith.

I claim:

1. A display rack assembly adapted for emplacement on walls through the convenient use of fastener elements for the presentation of merchandise on forwardly extending hangers and for the reception of merchandise identifying and pricing display cards comprising a plurality of elongated display boards of vertically elongated rectangular cross-section, said boards having a flat back and providing a plurality of cut grooves and slots in the front face thereof with a pair of said slots being disposed at oppositely oriented acute angles for the reception of opposed edges of display cards, a mounting clip of formed channel type structure adapted for the close reciprocal reception of said display boards, said clip being inclusive of a flat web back and top and bottom flanges for mating engagement with the back and the top and bottom edges of said boards, top and bottom skirt elements on said flanges positioned to engage a portion of the front surface of said boards, and a lip member on one of said skirt elements disposed at an acute angle thereto and at a level corresponding to the positioning of one display card receiving cut slot of said display board whereby said lip member is received in said slot in non-interfering position with respect to display cards likewise receivable therein, said web back providing openings therethrough for the reception of fastener elements whereby the mounting clip may be affixed to a wall before reciprocal emplacement of said boards.

2. Structure as set forth in claim 1 wherein said web back provides additional openings for the reception of additional fastener elements, said fasteners being used to join two display boards disposed in end to end relationship to a mounting clip whereby a longer display rack assembly made up of multiple display boards may be obtained and supported on a minimum of wall attached mounting clips.

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