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Bice

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[54] **PLASTIC SHUTTER AND MOUNTING CLAMP THEREFOR**

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[52] **U.S. Cl.** **52/473,** 52/511

[51] **Int. Cl.** **E06b 7/08**

[58] **Field of Search** 52/473, 506, 511, 476, 52/314, 311, 489, 482, 512, 543, 544, 717, 718

[56] **References Cited**

UNITED STATES PATENTS

2,553,686	9/1953	Routt	52/511 X
2,898,258	8/1959	Meier et al.	52/511 X
3,238,686	3/1966	Pomeroy	52/511
3,341,994	9/1967	Olson	52/512 X
3,438,169	4/1969	Tinnerman	52/543 X
3,584,427	6/1971	Johnston	52/473
3,717,955	2/1973	Urbanick	52/309 X
3,727,361	4/1973	Greene	52/473
3,782,051	1/1974	Quinif	52/314 X

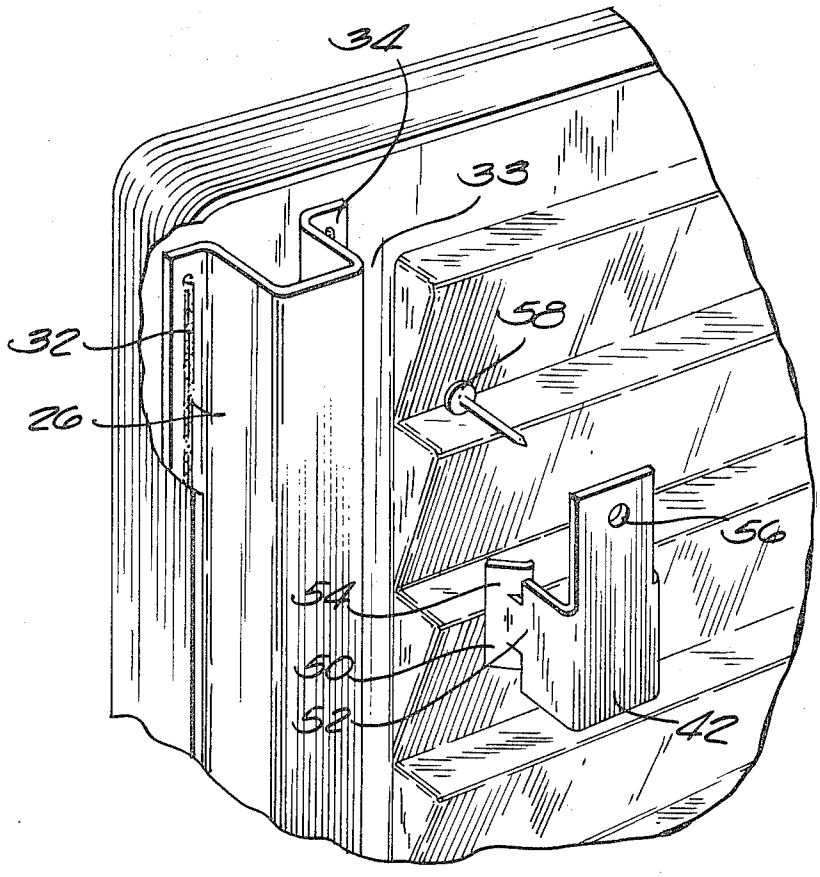
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[57] **ABSTRACT**

Disclosed herein is a shutter construction and mounting clamp therefor with the shutter having elongated vertically oriented channel members which are hat shaped in cross section. The out-turned flanges on the channel members enable the channel members to be sonically welded to the margin of the shutter. The channel members enable the shutter to be fastened to a building wall with screws, mounting clips or panel adhesive. The mounting clamps disclosed herein have a barb construction for receiving and retaining the channel members on the shutters and securely anchoring the shutters to the building wall.

2 Claims, 4 Drawing Figures



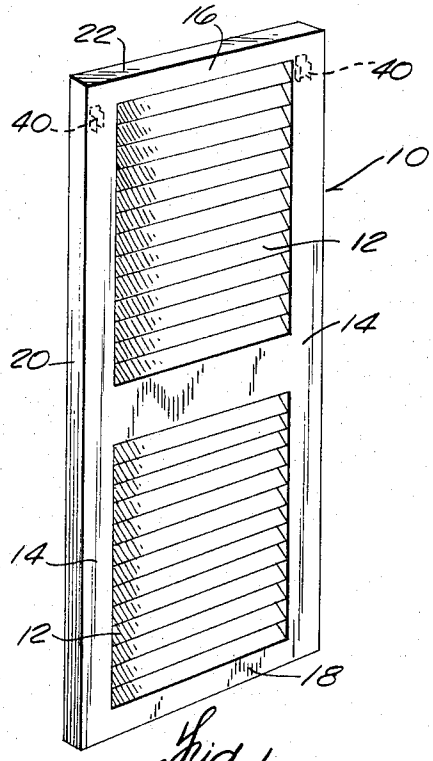


Fig. 1

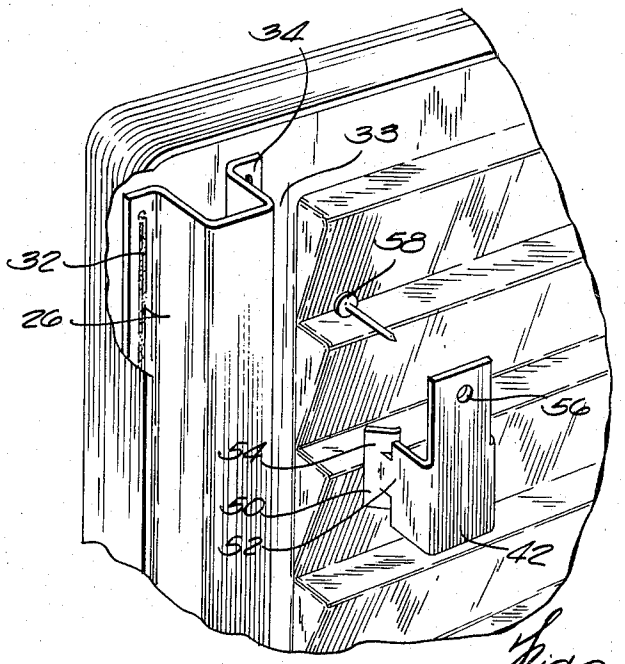
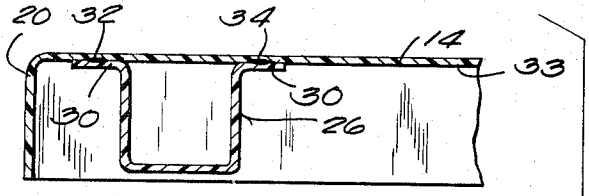


Fig. 2



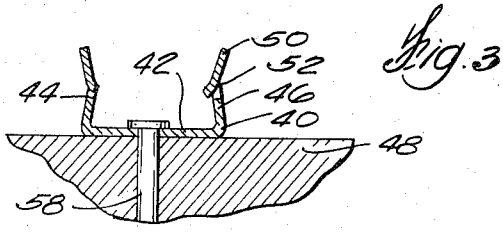


Fig. 3

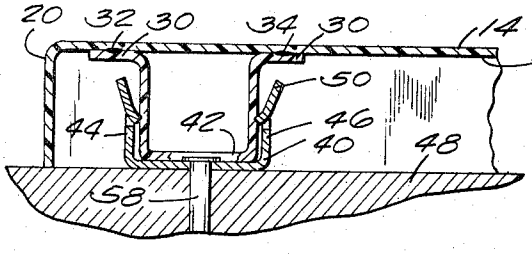


Fig. 4

PLASTIC SHUTTER AND MOUNTING CLAMP THEREFOR

SUMMARY OF INVENTION

The invention relates to a one-piece molded plastic shutter which can include central louvered panel sections which extend to marginal sections that have a peripheral flange. The invention relates to longitudinal channel portions which are hat shaped in cross section with out-turned flanges which are accessible for the purpose of sonically welding the channel members to the marginal shutter sections and provide a unitized assembly of the shutter and channel members. The channel members extend over a substantial portion of the length of the shutter and in addition to rigidifying the shutter, are employed for fastening purposes.

The invention also provides a mounting clamp which has a web with a pair of spaced legs adapted to receive the channel members. The clamps have an aperture so that the clamps can be mounted with a suitable fastener to a building wall prior to the assembly of the shutter on the wall. The legs of the clamp have outwardly diverging terminal portions which are hinged to the leg portions by narrow bands of metal. The terminal portions have inwardly extending barbs which grasp and securely retain the channel members to the clamp.

Further objects, features and advantages of the invention will become apparent from the following disclosure.

DRAWINGS

FIG. **1** is a perspective view of a shutter employing the mounting clips of the invention.

FIG. **2** is a fragmentary enlarged perspective view showing the rear of the shutter of FIG. **1** and showing the mounting channel member and mounting clip.

FIG. **3** is a sectional view of the mounting channel member and mounting clip shown in FIG. **2.**

FIG. **4** is a sectional view showing the shutter assembled to the mounting clip.

DESCRIPTION OF PREFERRED EMBODIMENT

Although the disclosure hereof is detailed and exact to enable those skilled in the art to practice the invention, the physical embodiments herein disclosed merely exemplify the invention which may be embodied in other specific structure. The scope of the invention is defined in the claims appended hereto.

In the drawings, FIG. **1** discloses a shutter generally designated **10** which includes central panels **12** which can be in the form of simulated louvers. The shutter includes vertical marginal sections **14** and horizontal marginal sections **16** and **18.** The marginal sections have flanges **20** and **22** which form a continuous periphery for the shutter. As thus far described, the shutter can be of a one-piece plastic molded construction.

In accordance with the invention, the shutter is provided with elongated mounting channel members **26** which as best shown in FIG. **2** extend for a substantial portion of the vertical extent of the shutter **10.** The channel members **26** are generally rectangular in cross section as shown in FIG. **3** and include out-turned flanges **30** to thus provide a hat-shaped appearance. The out-turned flanges enable the channel members to be sonically welded or otherwise secured at **32** and **34** in longitudinal seams along the flanges to securely unite the channel members **26** to the rear surface **33** of the marginal shutter sections **14.** The channel members **26** serve as a mounting base for screws which can extend through apertures (not shown) in the marginal sections **14,** apertures (not shown) in the webs **42** and into the wall **48.**

Alternatively, the shutter **10** can be fastened to the wall with mounting clamps **40,** each of which includes a web portion **42** (FIG. **2**) and two spaced leg portions **44** and **46** which extend from the web portion **42.** The leg portions **44** and **46** extend outwardly from the building wall **48** as shown in FIG. **3.** The leg portions are spaced to receive the channel member **26.** The channel member **26** is securely retained in the clamp **40** by terminal portions **50** which are hinged to the legs by narrow connecting portions or bands **52** which enable the terminal portions to displace as the channel member **26** is inserted in the clamp. Barb portions **54** extending inwardly from the connecting portions **52** securely anchor the channel in the clamp.

The web portion **42** extends past the leg portions and can be provided with an aperture **56** so that the clamp can be premounted on the building wall **48** with an appropriate fastener **58.**

What is claimed is:

1. A plastic shutter construction comprising a panel section including marginal frame sections having a peripheral flange, elongated mounting channel members fixed to a rear surface of said marginal sections and projecting inwardly from the marginal sections toward the building structure to which the shutter is to be fastened, said channel members having a generally rectangular cross section with outturned flanges secured to the marginal sections of the shutter by sonic weldments between abutting surfaces of said flange and said marginal sections including mounting clamps adapted to engage said channel members, said mounting clamps including a web portion and two upstanding leg portions, terminal portions which diverge outwardly from said leg portions, said terminal portions including barbs which extend inwardly into the gap defined by the leg portions for rigidly grasping and securing said clamp to said channel member, and connecting portions hingedly connecting said terminal portions with said leg portions intermediate the width of the terminal portions, said connecting portions having a width less than the width of said legs and the width of said terminal portions to afford outwad displacement of said terminal portions to admit said channel members.

2. A clamping device for securing a shutter to a building wall comprising a web portion adapted to abut the wall surface and having an aperture for fastening said web portion to the building structure, upstanding leg portions connected to said web and adapted to extend outwardly from the building wall, terminal portions which diverge outwardly from said leg portions to provide a throat for receiving a portion of the shutter and said terminal portions including inwardly projecting barbs adapted to engage and retain the portion of the shutter received between said legs, and connecting portions hingedly connecting said terminal portions with said leg portions intermediate the width of the terminal portions, said connecting portions having a width less than the width of said legs and the width of said terminal portions to afford outward displacement of said terminal portions to admit said channel members.

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