Sept. 20, 1960 K. H. BURGIN 2,953,225

DEMOUNTABLE BUILDING CORNER STRUCTURE

Filed April 14, 1958

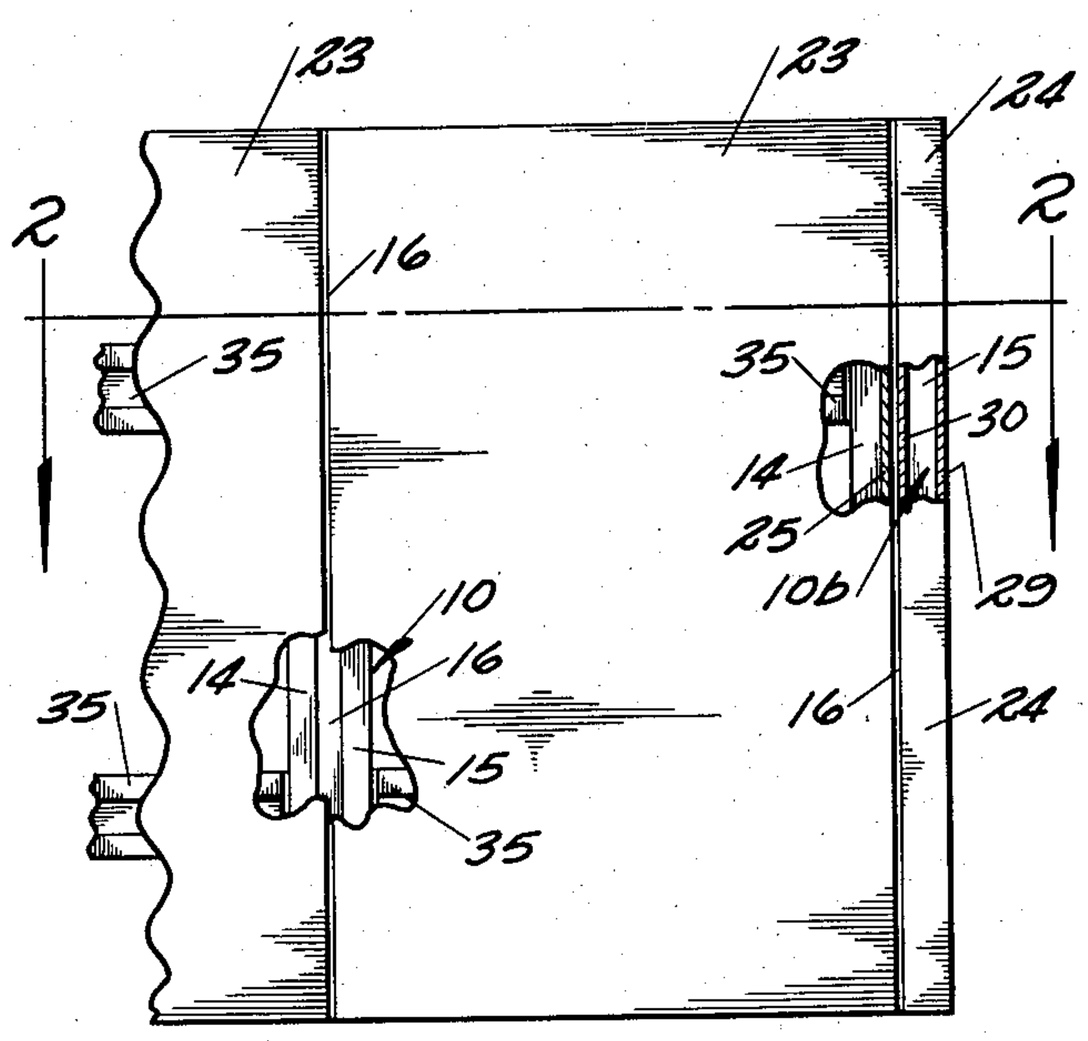

FIG. 1

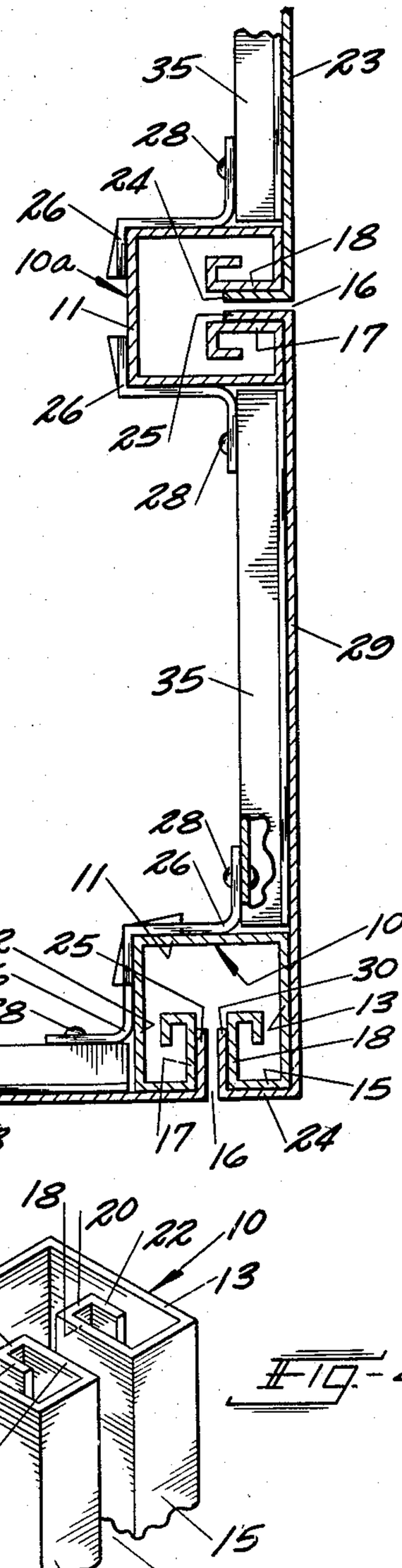

FIG. 2

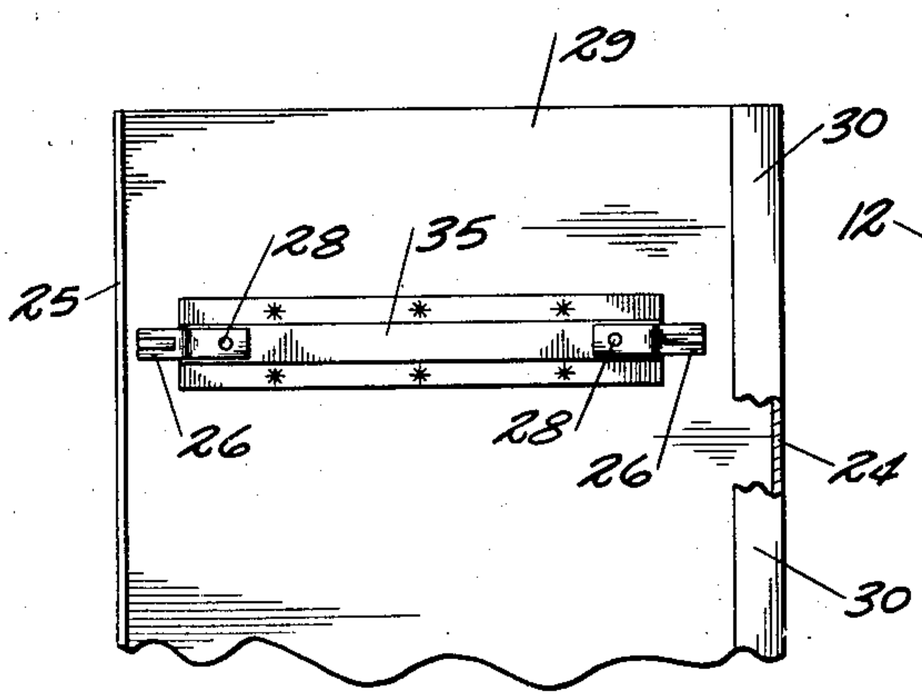

FIG. 3

FIG. 4

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DEMOUNTABLE BUILDING CORNER STRUCTURE

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1 Claim. (Cl. 189—88)

This invention relates to a wall corner construction in a demountable metal building structure, and reference is made to my pending application filed July 26, 1954, Serial No. 445,545, on which Patent No. 2,832,445 is to be issued April 29, 1958.

The building wall is made up out of a number of metal panels having inwardly extending flanges at their vertical marginal edges entering slots in upstanding posts. A corner return panel is provided having a leg turned from one of the marginal flanges to enter the slot at a corner post. That marginal flange lies across a portion of the corner post, and from which flange the panel in general extends at right angles to that flange along a side of the post to have another inturned flange presented in a slot of the next adjacent post on the side or end wall.

A primary purpose of the invention is to provide a rigid, simplified wall construction for continuing an end wall around from a side wall utilizing the same design of posts on both end and side walls, all in a manner which may be readily assembled and disassembled without any metal or machine working on the job.

A further important object of the invention is to provide means for holding the expansion and contraction of the metal side wall panels to a minimum throughout a considerable range of variations at atmospheric temperatures such as the difference in temperatures from night time to temperatures produced when exposed directly to the rays of sunlight. This is particularly advisable when the metal may be aluminum as is desirous for reducing the overall weight of the building structure, although steel may be employed, such as in galvanized or lead-coated sheets.

These and many other objects and advantages of the invention will become apparent to those versed in the art in the following description of one particular form of my invention which is illustrated in the accompanying drawing, in which

Fig. 1 is a fragmentary portion of a side wall in end elevation at the corner of the wall;

Fig. 2 is a view in horizontal section on an enlarged scale on the line 2—2 in Fig. 1;

Fig. 3 is a view in inside elevation and partial section of a wall panel; and

Fig. 4 is a view in top end perspective of a wall post.

A post generally designated by the numeral **10** is formed to be externally rectangular in shape. It is provided with a web side **11** from which extend legs **12** and **13** in parallel, spaced apart relation, Fig. 4, and from the ends removed from the web **11** there extend respectively from the legs **12** and **13** at right angles thereto the planar members **14** and **15** separated by their opposing ends by an entryway **16** therebetween. The opposing end portions of the members **14** and **15** have inwardly extending legs **17** and **18** extending therefrom at right angles to be spaced parallel to and from the legs **12** and **13**. For reinforcing these legs **17** and **18**, there extend at right angles thereto toward the legs **12** and **13** flanges **19** and **20** in turn carrying feet **21** and **22** turning therefrom at right angles to be parallel to and spaced from the insides from the legs **12** and **13**. The entryway **16** provides in effect a slot hereinafter termed a slot **16**.

These posts **10** are set upright in spaced apart vertical positions and in alignment one with the other along a side wall, having the slot **16** turned outwardly toward the outside of the wall.

A plurality of metal panels **23** are formed in like manner to form the outer wall enclosure. Each of these panels **23** consists essentially of a sheet of metal, from the vertical edges of which are turned flanges **24** and **25** extending entirely along the side edges of the panel in each instance. These flanges **24** and **25** are entered in the slots **16** of adjacent posts **10**, these posts **10** being spaced apart so that the flanges **24** and **25** will preferably be in engagement along the opposing faces of the inturned members **17** and **18** of the posts **10**. These sheets of metal **23** are relatively thin, and quite flexible.

A plurality of battens **35** are secured laterally to and across the inside faces of the panels **23**. In the present form, each of the battens **35** is hollow and is secured to the panel **23** by any suitable means such as by welding. Preferably these battens are made out of a good heat conducting metal such as aluminum. These battens serve a number of purposes, one being to radiate heat from the panel **23** so as to prevent undue temperature rise therein, these battens being on the inner sides of the panels **23** and out of direct sunlight, being faced toward the innerside of the building.

An additional purpose of the battens **35** is to provide spacers to carry a latch member **26** at each end, pivotally interconnected with the batten **35** such as is indicated in Fig. 2 where the latch member **26** is rotatable upon a rivet **28** carried by the batten wall. When the panels **23** are positioned to have their flanges **24** and **25** entered into the slot **16** of the respective, adjacent post **10**, the latches **26** are turned around to overlap the web **11** in each instance as indicated in Fig. 2.

In forming the end wall of the structure, posts **10***a* are lined up with the corner post **10***b*, but are turned ninety degrees therefrom to have their slots **16** opening on the end wall side of the structure.

An initial panel **29** is provided on the end wall to extend from the corner post **10***b*. This panel **29** carries the flanges **25** and **24** the same as found in connection with the panel **23**. However the flange **24** is made to be of that width which will permit it to overlap the member **15** of the post **10***b* with the panel **29** in contact with the side leg **13**, and the edge portion of the flange **24** removed from the panel **29** continuing into a leg **30** which normally bears in close proximity with the face of the member **18**. In other words this end portion of the panel **29** hooks around the post **10***b*, lying along the end side thereof, leg **13**, and has the flange portion **30** entering the groove **16**.

The panel **29** has the flange **25** entered into the slot **16** of the post **10***a*, Fig. 2. To install the panel **29**, the panel should be brought up to the corner post **10***b* to enter the leg portion **30** in the slot **16** therein, and then the flange **25** brought around into the post **10***a* slot **16**. The inside face of the panel **29** carries the battens **35** as above described, and in turn carries the latch members **26**, one of them engaging over the side leg **12** of the post **10***b* and the other engaging over the web **11** of the post **10***a*. From the post **10***a* on across the end wall, panels **23** as above described are employed.

While two of the purposes of the battens **35** have been enumerated above, these battens **35** further serve the purpose of confining the lateral expansion and contraction of the panels **23** and **29** rather than permitting those

panels to buckle between adjacent posts and thereby set up an undesirable noise. These battens **35** permit the panels **23** and **29** to expand particularly by their end portions, the battens **35** preferably being made out of the same metal and of the same thickness as that of the panel areas proper, so that the end flanges may travel somewhat in the slot **16**, the slot **16** being sufficiently wide to receive therein the flanges of adjacent panels with a clearance therebetween. This clearance offers no undesirable effect since the posts are hollow and completely closed off from the innerside of the walls, and any moisture entering therein may drain out from the lower ends of the posts.

While I have herein described my invention in the one particular form, it is obvious that structural changes may be employed without departing from the spirit of the invention, and I therefore do not desire to be limited to that precise form beyond the limitations which may be imposed by the following claim.

I claim:

A wall corner construction between side and end walls, one normal to the other, comprising a vertically disposed post having a pair of adjacent wall sides normal to each other and having a single slot entering but one of said sides and extending vertically thereof; a wall panel having an end portion lying against said slot side of the post; a flange extending substantially normally from said end portion and entering said slot; a latch member secured to said panel and engaging over a back side of the post opposite to said slot side and retaining the flange within said slot; a second wall panel normally disposed to the first wall panel and having an end portion lying against the other of said post sides and extending therefrom; a first flange extending at right angles from said second panel end portion over and against said post slot side to said slot; a second flange extending at right angles from the first flange and entering said slot; and a second latch member secured to said second panel abutting said back side and extending around onto a post side opposite from said second panel end portion; said second latch member restraining said second panel against shifting horizontally along said post other side and also restraining the second panel from lateral separation from the post.

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