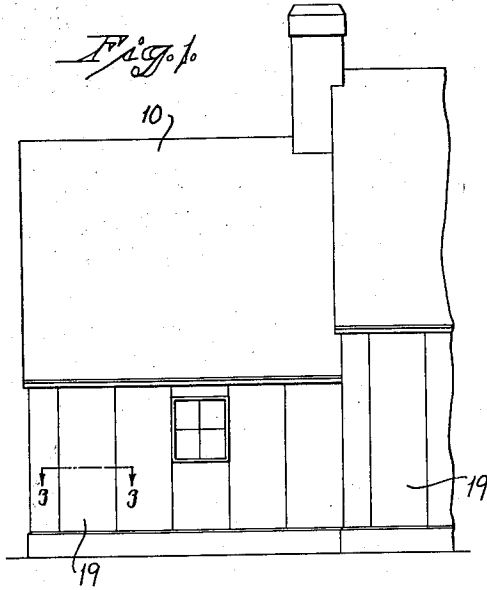
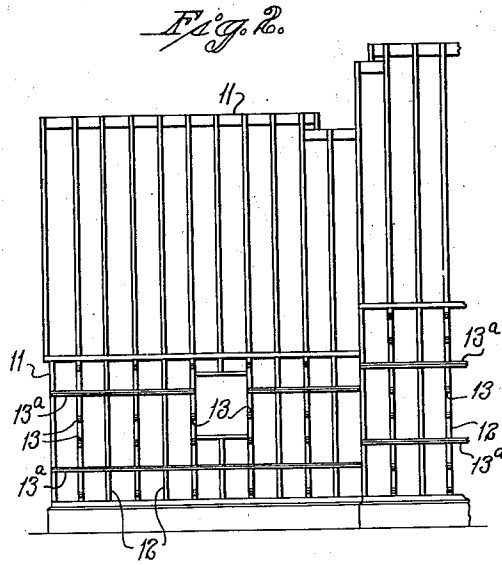
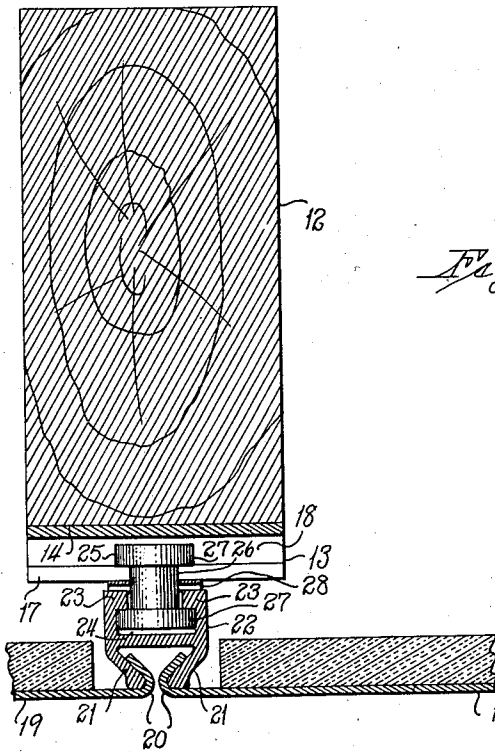
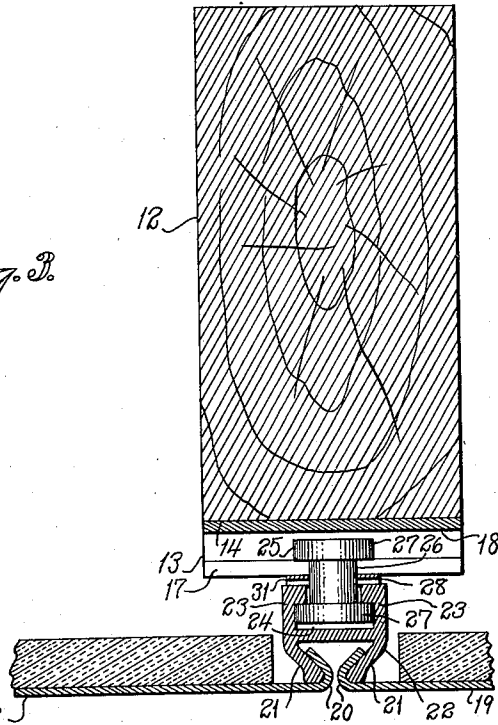


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BUILDING CONSTRUCTION
Filed April 22, 1936

2,066,255

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

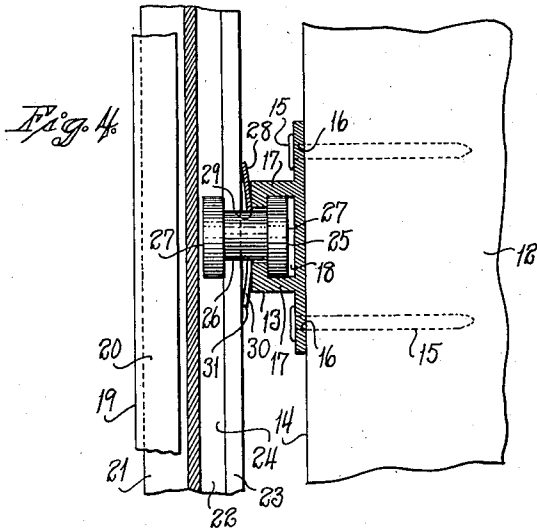
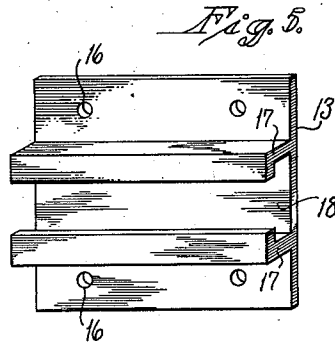
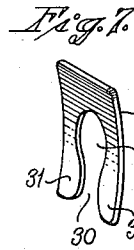
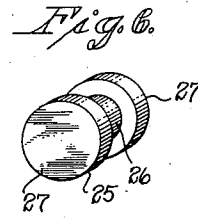
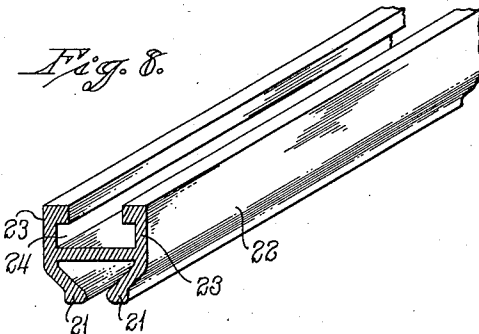


Fig. 9.

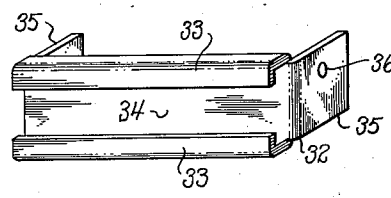
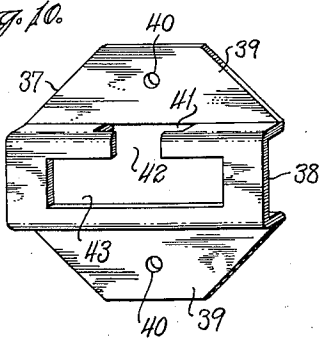


Fig. 10.



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2,066,255

BUILDING CONSTRUCTION

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to Copper Houses, Inc., New York, N. Y., a cor-
poration of Maryland

Application April 22, 1936, Serial No. 75,698

7 Claims. (Cl. 189—88)

This invention relates to improvements in building constructions, and more particularly to building constructions having wall areas of sheet material, preferably of copper, brass or other non-ferrous metal, though other sheet material may be employed if so desired, such, for instance, as stainless steel, etc.

One object of this invention is to provide an improved building construction having provision whereby contraction and expansion of various portions of a building can be taken care of to avoid excessive strains or distortions of portions of a building.

Another object of this invention is to provide an improved building construction formed of simple elements readily manufactured and readily assembled to produce a durable efficient construction.

With the above and other objects in view, this invention includes all improvements over the prior art which are disclosed in this application.

In the accompanying drawings, in which certain ways of carrying out the invention are shown for illustrative purposes:

Fig. 1 is a front elevation illustrating a fragmental portion of a house constructed in accordance with the present invention;

Fig. 2 is a view similar to Fig. 1, but with the outer covering-portions removed to show the supporting-structure or frame-structure with the attaching-bars secured thereto;

Fig. 3 is an enlarged cross-sectional view on line 3—3 of Fig. 1;

Fig. 4 is a cross-sectional view on line 4—4 of Fig. 3;

Fig. 5 is a perspective view of an attaching-bar;

Fig. 6 is a perspective view of an attaching-stud;

Fig. 7 is a perspective view of a spring-washer;

Fig. 8 is a perspective view of a coupling-bar;

Fig. 9 is a perspective view of a modified form of attaching-bar; and

Fig. 10 is a still further modified form of attaching-bar.

In the description and claims, the various parts are identified by specific names for convenience, but they are intended to be as generic in their application as the prior art will permit.

Referring to Figs. 1 to 8 of the drawings, 10 is a fragmental portion of a house having a supporting-structure or frame-structure 11 including a plurality of upstanding supports or supporting-elements 12 which may be of wood or other suitable material. Attaching-bars or at-

taching-plates 13 are secured to the supporting-faces 14 of the supports 12 by any suitable means, such, for example, as the nails 15 engaging through the holes 16 of the attaching-bars 13. Each attaching-bar 13 may be as short as the width of a single support 12 or, if desired, may be of much greater length so as to extend across a number of supports 12, as is illustrated by the attaching-bars 13^a (Fig. 1). Each attaching-bar 13 and 13^a has a pair of horizontal L-shaped flanges 17 forming a T-slot guide-way 18.

The outside of the house preferably has a plurality of upstanding panels 19 of sheet-material, preferably sheet-metal, each having its opposite side-edges preferably bent as at 20, with each two adjacent bent portions 20 of adjacent panels engaged by the pair of opposed flanges 21 of an upstanding coupling-bar 22. Each coupling-bar 22 has a pair of rearwardly-extending L-shaped flanges 23 facing one another and providing a longitudinal or upstanding T-slot guide-way 24. Attaching-studs 25, each having a central shank 26 and heads 27 at its opposite ends, are engaged with a coupling-bar and an attaching-bar, with one head 27 slidably engaging in the horizontal T-slot 18 of an attaching-bar and with its opposite head 27 engaging in an upstanding T-slot 24 of a coupling-bar 22.

A spring-washer 28 has an opening 29 of a size to fit the shank 26 of an attaching-stud 25, and has a narrower opening 30 slightly smaller than the shank 26 so that the spring-washer 28 can be applied in place on the shank 26 only by forcibly springing it in place to slightly spread the fingers 31 of the washer apart while sliding the washer into position, after which the fingers 31 contract sufficiently to hold the washer in place on the shank 26 of a stud 25. The washer 28 is curved, as shown in Figs. 4 and 7, so as to resiliently press the coupling-bar and attaching-bar in directions away from one another to hold the heads 27 of the stud 25 in firm engagement with the L-shaped flanges of the coupling-bar and the attaching-bar.

By the foregoing described construction, with the slots of the coupling-bars being arranged transversely of the slots of the attaching-bars and in parallel planes, any movement due to wind stresses on the house or due to expansion by heat or contraction by cold or swelling by moisture, etc., permits of relative movement in any and all directions in parallel planes between the coupling-bars and the attaching-bars, while at the same time maintaining the parts in snug engagement with the heads 27 of the attaching-

studs by means of the spring-washers 28, thus avoiding rattling or other noise, especially due to winds. The construction also affords a simple, easy method of assembly by slipping the attaching-studs into position in the T-slots of the coupling-bars and attaching-bars, and then pressing the spring-washers into position. The coupling-bars 22 and the attaching-bars 13 and 13^a can be very conveniently and economically made of non-ferrous metal, such, for example, as high-copper metal such as copper, brass or the like, by the extrusion process.

Instead of making attaching-bars or attaching-plates like those indicated by numeral 13, attaching-bars or attaching-plates 32, as in Fig. 9, may be formed up from sheet-metal by providing L-flanges 33 forming a T-slot 34 and, if desired, this construction may have a pair of side-wings 35 provided with holes 36 for securing them to the supports 12.

A still further modified form of attaching-bar or attaching-plate is indicated by the numeral 37 in Fig. 10, and is preferably made of sheet-metal formed up to provide a U-channel construction 38 and a pair of attaching-wings 39 provided with holes 40 to accommodate means for securing the attaching-bars to the supports 12. The channel-portion 38 has cut-out openings 41, 42 and 43. Openings 41 and 42 respectively permit the passage of a head 27 and a shank 26 of an attaching-stud 25 to bring the shank 26 of a stud into the opening 43. The attaching-studs act similarly on all of the forms of attaching-bars or plates shown, in holding the coupling-bars in assembled relation therewith while permitting relative movement thereto.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are therefore to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure having an attaching-face; guide-means extending longitudinally of each of said coupling-bars; guide-means on the attaching-face of said supporting-structure and extending transversely of the coupling-bar guide-means; and attaching-members which interconnect said coupling-bar guide-means and said supporting-structure guide-means and permit the coupling-bars and supporting-structure to respectively relatively move in directions parallel to their respective guide-means and transversely of one another and in general planes approximately parallel to each other.

2. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure having an attaching-face; said coupling-bars being attached to the attaching-face of said supporting-structure by attaching-means which permit the

coupling-bars to move relatively to said supporting-structure in a general plane approximately parallel to the general plane of said attaching-face; and spring-means which resiliently press said coupling-bars and said supporting-structure in directions away from one another.

3. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure having an attaching-face; guide-means extending longitudinally of each of said coupling-bars; attaching-members which interconnect the attaching-face of the supporting-structure and the coupling-bar guide-means and permit the coupling-bars to move relatively to the supporting-structure in a direction approximately parallel to the general plane of said attaching-face; and spring-means which resiliently press said coupling-bars and said supporting-structure in directions away from one another.

4. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure having an attaching-face; guide-means extending longitudinally of each of said coupling-bars; guide-means on the attaching-face of said supporting-structure and extending transversely of the coupling-bar guide-means; attaching-members which interconnect said coupling-bar guide-means and said supporting-structure guide-means and permit the coupling-bars and supporting-structure to respectively relatively move in directions parallel to their respective guide-means and transversely of one another and in general planes approximately parallel to each other; and spring-means which resiliently press said coupling-bars and said supporting-structure in directions away from one another.

5. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure; guide-means extending longitudinally of each of said coupling-bars; attaching-bars secured to said supporting-structure and having guide-means extending transversely of the coupling-bar guide-means; and attaching-studs for attaching the coupling-bars and attaching-bars together; each attaching-stud having a head at each of its opposite ends, the heads of each attaching-stud respectively having slidable engagement with the coupling-bar guide-means and with the attaching-bar guide-means.

6. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure; the coupling-bars having longitudinal guide-slots; attaching-bars secured to said supporting-structure and having guide-slots extending transversely of the coupling-bar guide-slots; and attaching-studs for

attaching the coupling-bars and attaching-bars together; each attaching-stud having a head at each of its opposite ends, the heads of each attaching-stud respectively having slidable engagement with the coupling-bar guide-slot and with the attaching-bar guide-slot.

7. A house or like structure including: a plurality of panels of sheet-material having their opposite side-edges arranged adjacent one another to provide a substantially-continuous surface; coupling-bars, one extending along and coupling each two adjacent edges of sheet-material; supporting-structure; the coupling-bars having longitudinal guide-slots; attaching-bars

secured to said supporting-structure and having guide-slots extending transversely of the coupling-bar guide-slots; attaching-studs for attaching the coupling-bars and attaching-bars together; each attaching-stud having a head at each of its opposite ends, the heads of each attaching-stud respectively having slidable engagement with the coupling-bar guide-slot and with the attaching-bar guide-slot; and a spring-washer on each attaching-stud between a coupling-bar and an attaching-bar to resiliently press said bars in directions away from one another.

M. J. DEMPSEY.