March 26, 1935. E. L. MARTIN 1,995,514

WALL CONSTRUCTION FOR VENTILATED BUILDINGS

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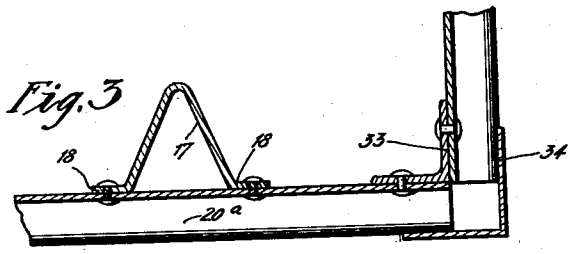


Fig. 3

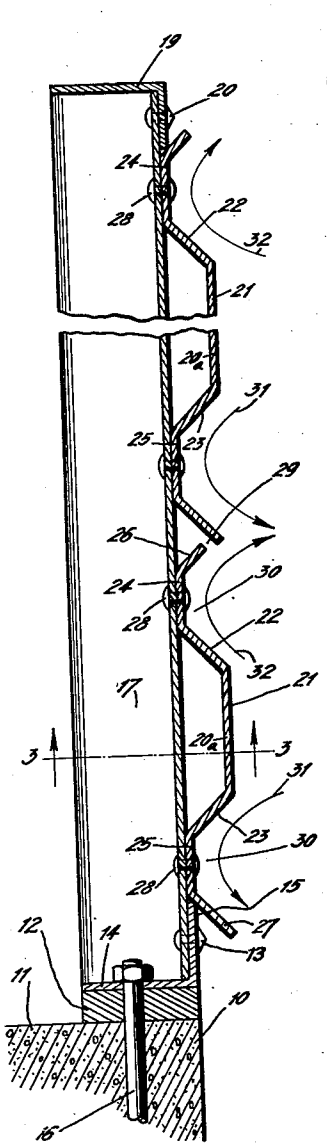


Fig. 2

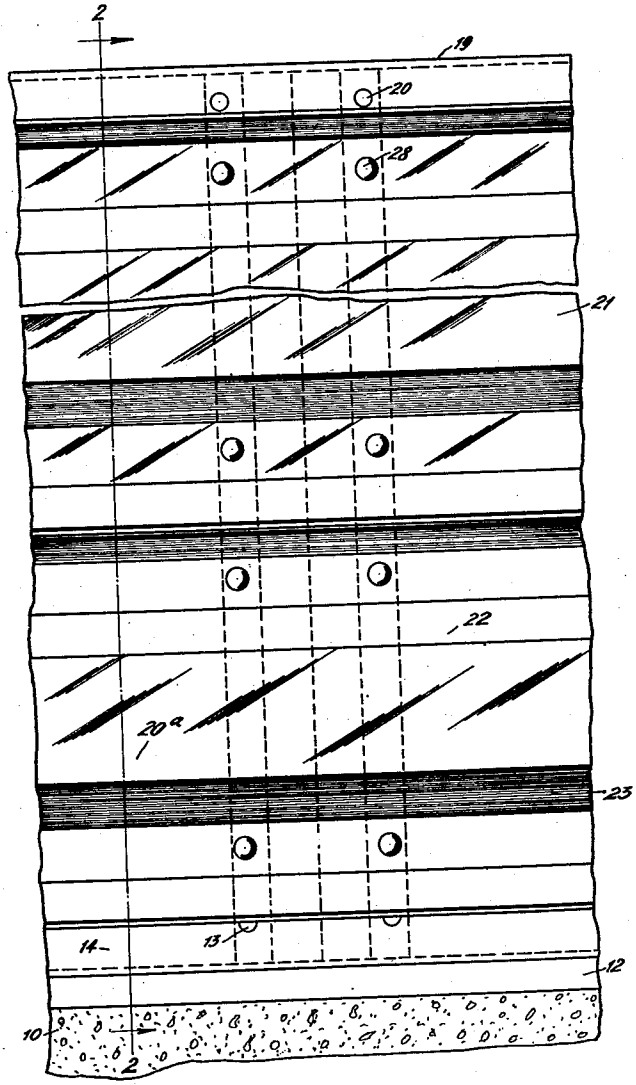


Fig. 1

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WALL CONSTRUCTION FOR VENTILATED BUILDINGS

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3 Claims. (Cl. 189—34)

The object of my invention is to provide a simple, durable and comparatively cheap wall construction for ventilated buildings formed of sheet metal and structural steel.

More specifically it is the object of my invention to provide in a ventilated wall construction improved slabs which are formed of sheet metal and reinforced by longitudinal formations having outwardly inclined flanges, the lower flange of one slab being designed to overlap the upper flange of an adjacent slab with an air space between the adjacent portions of the flanges in such manner that rain or elements of the weather will be prevented from entering the interior of the building through said spaces.

A further object is to provide in a building structure a ventilated wall formed of sheet metal studdings and horizontally arranged sheet metal slats, and between the lower end of the wall and the foundation a waterproofing material of a semi-plastic or yieldable nature wherein the lower end of the wall may be firmly set on the foundation to overcome strains and twisting of the wall structure due to uneven upper surface of the foundation.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a side elevation of a portion of a wall illustrating my invention.

Figure 2 is a vertical detail sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a horizontal sectional view taken on the line 3—3 of Figure 2.

Referring to the accompanying drawing, I have used the reference numeral 10 to indicate a concrete foundation terminating in a floor portion 11. Supported on the upper edge of the foundation is a strip of packing material 12 in which is formed a considerable amount of asphaltum such as used for expansion joints in concrete road work.

Laid on top of the packing strip 12 is an angle iron 13 having a horizontal flange 14 and a vertical flange 15. The said angle iron is secured to the foundation by means of suitable bolts 16 or other anchoring devices.

Carried by the flange 14 is a series of vertically arranged studdings 17 formed of sheet metal folded to have the form of a V in cross section. The edges of the side members of the studdings have laterally extending flanges 18. The lower ends of the flanges 18 are riveted or otherwise secured to the vertical flange 15 of the angle 13. A plate 19 formed of angle iron is placed on top ends of the studdings 17 and having a downwardly extending flange 20 secured to the upper edges of the flanges 18 by means of rivets or other fastening means.

Secured to the flanges 18 of the studdings 17 is a series of sheet metal slats 21, each of which comprises a body portion 20a terminating in inclined portions 22 and 23 bent to an angle of substantially 45° to the body. The edges of the inclined portions 22 and 23 terminate in portions 24 and 25 parallel with the body 20a. The edges of the portion 24 are bent upwardly and outwardly at an angle of substantially 45° to form a flange 26. The edge of the portion 25 is bent downwardly and outwardly to form a flange 27 also at an angle of substantially 45°. The flange 26 is of a width substantially half the width of the flange 27.

The slats 21 are supported on the studdings 17 by means of rivets or other fastening means 28 with the flange 27 of the lower slat overhanging the upper edge of the flange 15 of the angle 13. A second slat is then placed on the studdings above the first slat with the flange 27 overhanging the adjacent flange 26 in the manner clearly illustrated in Figure 2, so that the lower edge of the flange 27 terminates substantially in a plane including the outer surface of the flange 26, and with an air space 29 between said flanges. Any number of these slats may be placed on the studdings until the entire wall surface has been covered.

By constructing the slats as above described, it will be seen that longitudinal depressions 30 are formed in the outer surface of the slats and adjacent to each of its longitudinal edges. This formation greatly stiffens the slat and at the same time provides means for preventing rain or snow from entering the interior of the building.

Furthermore, the longitudinal depressions terminating in the outwardly inclined flanges provides means whereby air currents directed against the outer face of the wall will have a tendency to create outwardly flowing currents at a point near the edges of the flanges, so that in most instances a draft of air will be caused to move outwardly from the building rather than inwardly.

Currents of air striking the wall of the building from above will tend to move in a line indicated by the arrows 31, and be swept over the lower edges of the members 27, while upwardly

inclined currents striking the face of the building will have a tendency to move over the flanges 26 in the manner indicated by the arrows 32. In either event rain would not be driven into the building, which is a very desirable feature in ventilated wall constructions, especially when sheet metal is utilized for forming the slats, inasmuch as the thickness of the sheet metal is thin compared to the ordinary board construction.

It will further be seen that the flanges terminate outside of the portions 24 and 25 a considerable distance so that grain, such as ear corn, when placed in the building will engage the inner surface of the portions 24 and 25, and the inner faces of the members 20 without engaging the ends of the flanges 26 and 27, so that water clinging to the ends of the flanges would not make direct contact with the corn or similar grain.

The corners of the walls may be formed with vertically arranged angles 33 to which the ends of the members 24 and 25 may be secured. A finishing strip 34 may be provided for the outer surface of the corners.

Thus it will be seen that I have provided a rigid and comparatively cheap wall construction particularly adapted for corn cribs and provided with means for ventilating and at the same time prevents elements of the weather from entering the building.

By providing the packing strip 12, the sheet metal wall construction may be set on a comparatively uneven concrete foundation without setting up undesirable strains in the steel structure. The packing also prevents moisture from making contact with the under surface of the angle 13 from the concrete wall. It also protects the metal from destruction due to the alkaline condition of the cement foundation.

I claim as my invention:

1. A sheet metal slat comprising a body portion having its upper and lower edges terminating in oppositely inclined and diverging portions, said inclined portions terminating in portions parallel with the body portion, the edges of the last said portions terminating in oppositely inclined portions substantially perpendicular to the first inclined portion, one of the last said inclined portions being wider than the other.

2. A sheet metal wall construction comprising a series of vertical studdings, a series of horizontally arranged sheet metal slats each comprising a body portion having its upper and lower edges terminating in oppositely inclined and diverging portions, said inclined portions terminating in portions parallel with the body portion, the edges of the last said portions terminating in oppositely inclined portions substantially perpendicular to the first inclined portion, one of the last said inclined portions being wider than the other.

3. A sheet metal slat comprising a body portion having its upper and lower edges terminating in oppositely inclined and diverging portions, said inclined portions terminating in portions parallel with the body portion, the edges of the last said portions terminating in oppositely inclined portions substantially perpendicular to the first inclined portion.

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