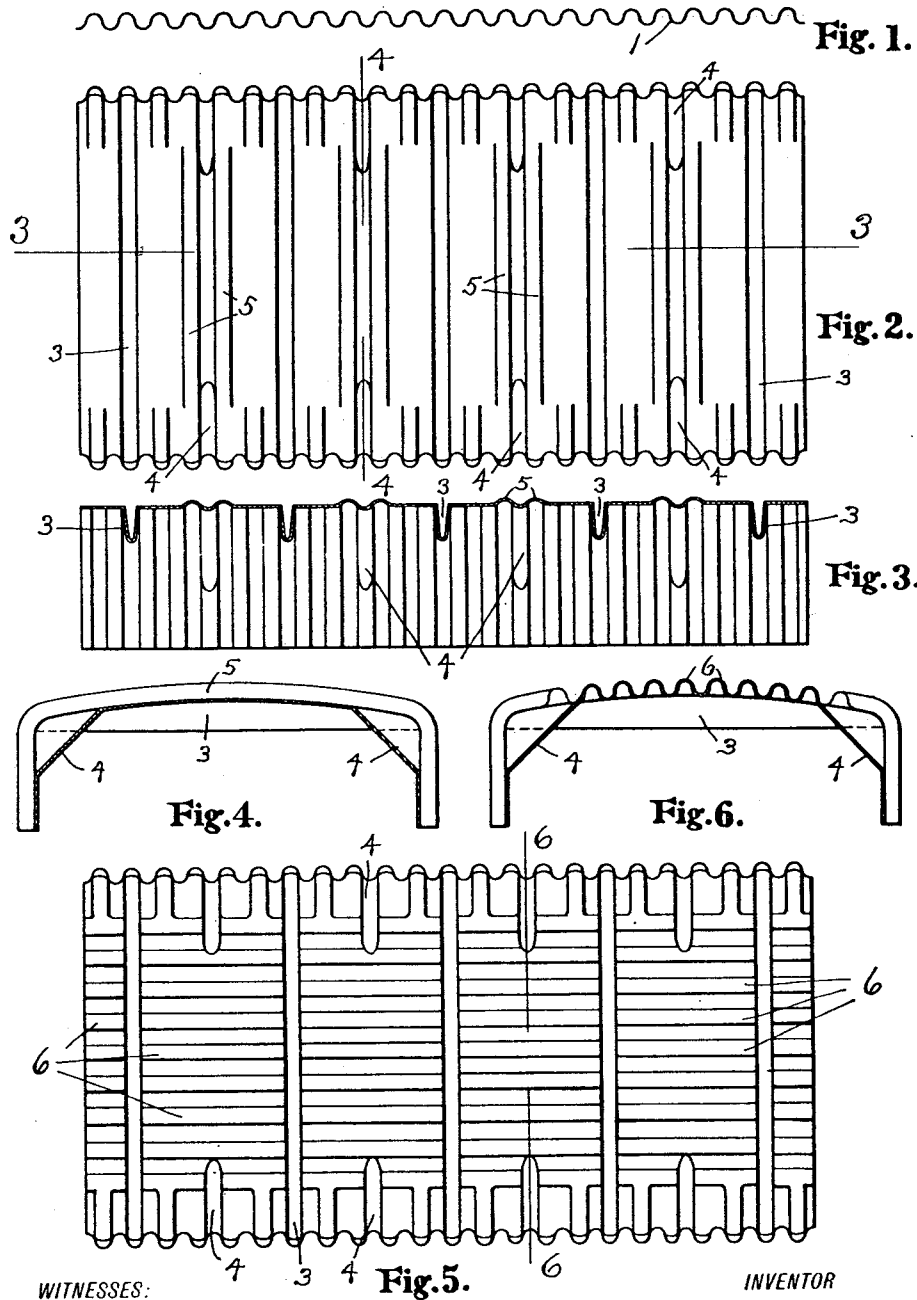


T. H. KANE.
SHEET METAL FORM FOR FLOORS.
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1,065,449.

Patented June 24, 1913.



WITNESSES:

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SHEET-METAL FORM FOR FLOORS.

1,065,449.

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To all whom it may concern:

Be it known that I, THOMAS H. KANE, a citizen of the United States, and a resident of Youngstown, in the county of Mahoning and State of Ohio, have invented a new and useful Sheet-Metal Form for Floors, of which the following is a specification.

This invention relates to means for forming air spaces in concrete slabs, and its object is to provide a sheet metal form, of open box-like shape, which shall be of great stiffness and which can be easily and cheaply constructed.

This invention consists of a novel sheet metal form for concrete slabs having upright sides and a top, the latter reinforced by deep integral ribs, and the corners between the sides and top being reinforced by integral braces, the lower edges of the sides being corrugated.

It also consists of a sheet metal form of this character in which the top is corrugated transversely to the deep ribs.

In the accompanying drawing, Figure 1 is an edge view of a blank from which the form may be made. Fig. 2 is a plan of a form. Figs. 3 and 4 are sections on the lines 3—3 and 4—4 of Fig. 2 respectively. Fig. 5 is a plan of a modified form. Fig. 6 is a vertical section on the line 6—6 of Fig. 5.

Similar reference characters refer to like parts throughout the several views.

These forms may be produced by hand or be pressed from corrugated sheet metal plates 1, by a single stroke of a press, which may be either vertical or horizontal, and may have either the male or the female member movable. The male member is formed with transverse grooves to receive cross bars on the female member, and with grooves across the corners to receive corresponding tongues on the female die.

Large quantities of sheet-metal forms have been manufactured with corrugated tops and sides, and it has been found that under certain conditions, the tops sag down and the desired angles between the tops and sides are not properly retained, resulting in an excessive amount of concrete being used and also resulting in the joists between the forms being of improper cross-section.

In order to prevent the tops from sagging, they may be provided with deep transverse ribs 3, at desirable intervals. The metal to

form these ribs is supplied by the adjacent corrugations being pulled out flat, as shown in Figs. 1 and 2, the other corrugations 5 usually remaining, even if in reduced form. Thus a rib one and one-half inches deep is easily formed in a sheet having semi-cylindrical corrugations spaced one inch apart. The metal between the ribs is preferably arched transversely of the form, as shown in Fig. 4, as the concrete at the middle of the form need not be so thick as at the edges. In addition to the transverse ribs 3, the diagonal braces 4 may be formed by drawing the corrugations of the top and sides down substantially flat at both sides of these braces. These braces are preferably pressed in intermediate the transverse ribs and serve to stiffen the top between the transverse ribs. The lower edges of the sides remain corrugated. In addition to rendering these forms very stiff, and so capable of carrying heavy loads with but little deflection, the grooves produced by pressing in the ribs and braces constitute pockets to receive tongues of concrete and thus key the concrete and the forms together. As all the corrugations remain at the lower edges of the sides, and only a portion of them taper down into substantially flat surfaces at the sides of the braces 4, the supporting power of the sides is scarcely diminished through the forming of the braces. In certain cases, it may be desirable that the metal of the top between the deep ribs 3 be corrugated transversely of these ribs, as shown by the corrugations 6 in Figs. 5 and 6. This will stiffen those portions of the forms, and is accomplished by stretching the metal, usually at the final movement of the press.

I claim:—

1. A sheet metal form for floor construction of open box-like shape, comprising a top and sides integral therewith, said top having a plurality of depending ribs and corrugated sections between the ribs, the corrugations of said sections being of less depth than the ribs.

2. A sheet metal form for floor construction of open box-like shape comprising a top having depending ribs, sides corrugated at their lower edges, and braces integral with and connecting the top and the sides.

3. A sheet metal form for floor construction comprising a corrugated top having deep, downwardly-projecting ribs alternat-

ing with corrugated sections, the ribs extending downward a greater distance than the corrugations, and upright sides integral with the top.

- 5 4. A sheet metal form for floor construction, of open box-like shape comprising an arched top having depending ribs and corrugations between and transverse to the ribs, and corrugated sides.
- 10 5. A sheet metal form for floor construction of open box-like shape comprising a longitudinally corrugated top, sides corrugated at their lower edges, and braces integral with the top and sides connecting
- 15 them.
6. A sheet metal form for floor construction of open box-like shape comprising a top having depending ribs and longitudinal

corrugations between the ribs, sides corrugated at their lower edges, and braces integral with and connecting the top and the sides.

7. A sheet metal form for floor construction comprising a corrugated top having deep, downwardly-projecting transverse ribs alternating with longitudinally corrugated sections, and upright sides integral with the top.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS HENRY KANE.

Witnesses:

H. B. JONES,
F. J. HADDON.