52-577

Aug. 25, 1925. 1,550,810

C. H. JABELONSKY

COMBINED FLOOR AND CEILING UNIT

Filed Dec. 17, 1923 2 Sheets-Sheet 1

Fig. 1.

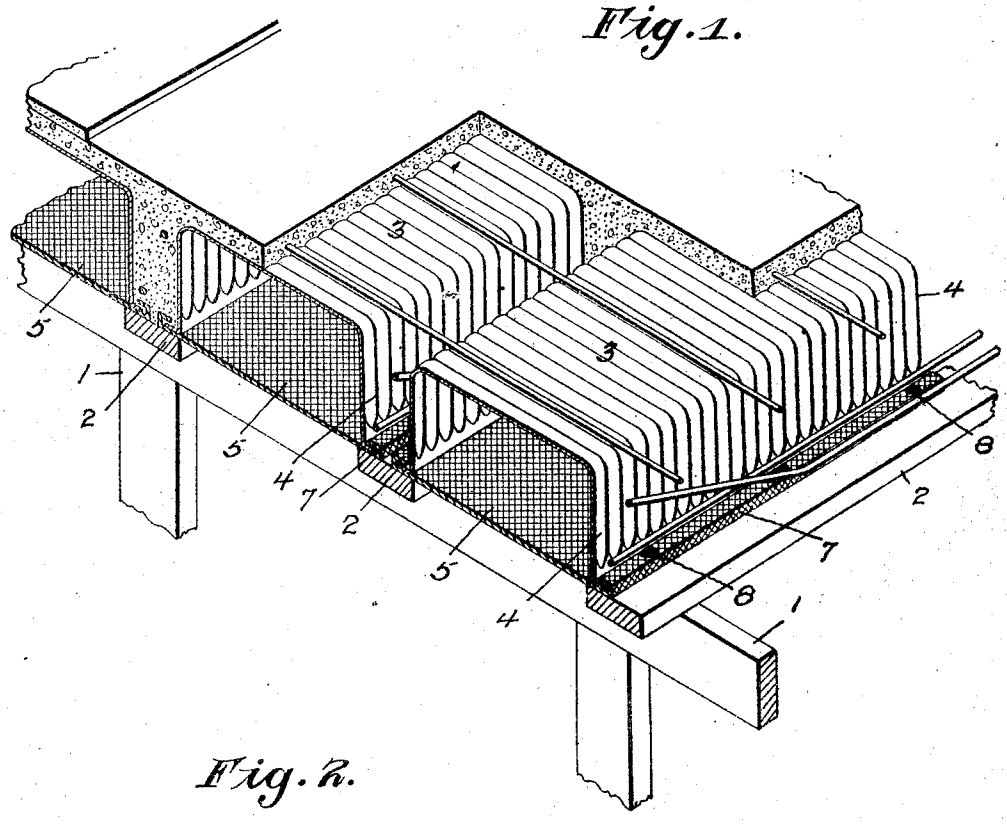
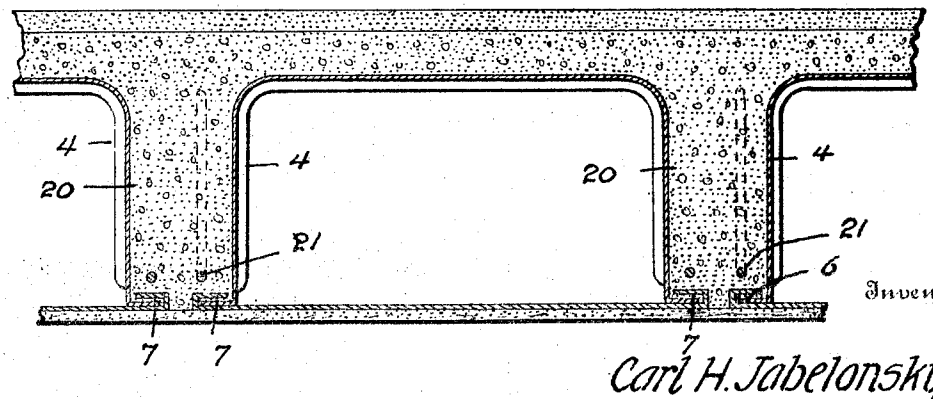


Fig. 2.



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72 MASONRY & CONCRETE STRUCTURES.
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Fig. 3.

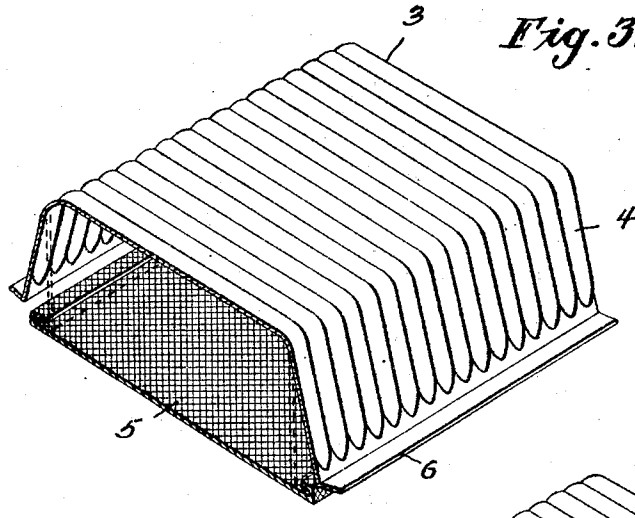


Fig. 4.

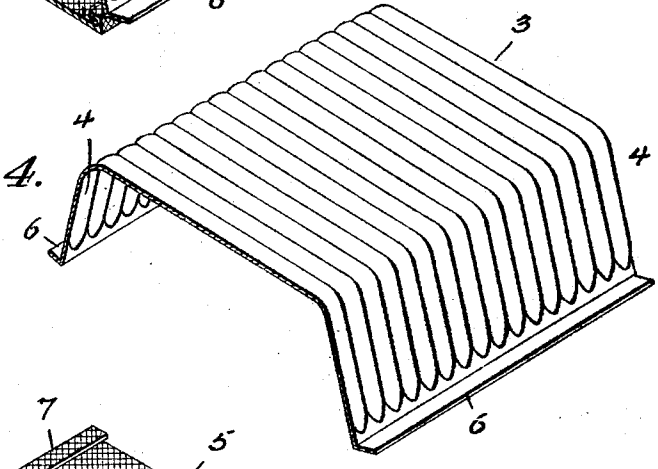
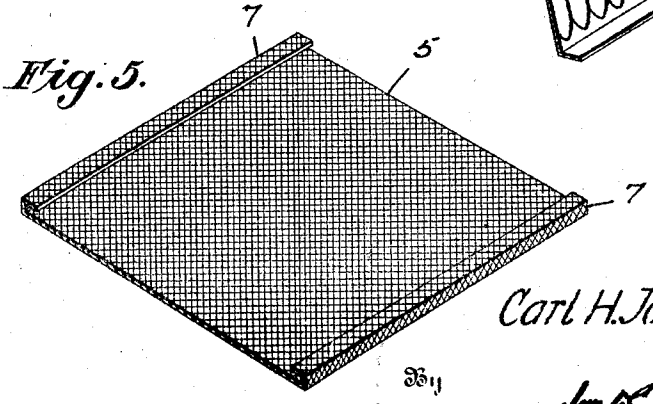


Fig. 5.



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52-577

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UNITED STATES PATENT OFFICE.

CARL H. JABELONSKY, OF THE UNITED STATES ARMY.

COMBINED FLOOR AND CEILING UNIT.

Application filed December 17, 1923. Serial No. 681,261.

To all whom it may concern:

Be it known that I, CARL H. JABELONSKY, captain, Quartermaster Corps, a citizen of the United States, residing at Honolulu, Territory of Hawaii, have invented an Improved Combined Floor and Ceiling Unit, of which the following is a specification.

This invention relates to concrete construction and more particularly to an improved combined floor and ceiling unit, adapted to be permanently embedded in the finished structure.

An object being to provide a simple, durable, and inexpensive construction so arranged as to provide for the easy and accurate setting of the form units.

Another object being to enable quick and convenient handling of the form units by combining or assembling the floor and ceiling members which constitute the form units, prior to their being lifted into place on their support.

A further object being to provide such a construction of both the forms and ceiling members as to enable a permanent connection between these parts during and after the cement and plaster are added.

These and other objects will appear in the following description and be finally pointed out in the claims.

Similar numerals indicate corresponding parts in all the figures of the drawings in which Fig. 1 is a prospective view, partly in section, of a fragment of floor and ceiling showing the manner and progress of the construction in which my improved units may be used.

Fig. 2 is a vertical section of the completed structure.

Fig. 3 is a detail prospective view of one of the metal arch forms with the metal lath member in position to be assembled.

Fig. 4 is a detail prospective of a metal arch form.

Fig. 5 is a detail prospective of the ceiling member.

In concrete floor and ceiling construction two methods may be used, one being to use arch forms temporarily located during the time the cement is placed and sets, after which the form is removed. If a plaster ceiling is to be applied, the ceiling carrying members, usually metal lathing, are then secured in place and the parts plastered.

Another method and the one to which this invention pertains is that in which the forms and ceiling members are made a permanent part of the structure, the forms are placed in position, the cement poured or otherwise added and after the cement sets, the supports are removed and the ceiling plaster then applied, the forms in this method being left in place permanently.

In the second method above referred to, the ceiling members are first positioned on the supporting frame, then the arch members are arranged in place and the cement is added, usually by shoveling or discharging from a chute or dump wagon. In adding the cement in the manner referred to, it tends to flatten out or disturb the turned-up edges of the ceiling members to such an extent that said members are caused to buckle and sag and in some cases are forced from their proper position.

The present invention is intended to prevent all of the above objectionable features in the methods at present in use.

Reference now being had to the drawings by numerals, 1 indicates the temporary staging or frame on which the form units are supported and may be arranged in any preferred manner to provide beams on which the ends of the form units rest and are spaced apart to provide for the formation of the cement beams 20, in which the reinforcing irons 21 are embedded as is usual in such construction (see Fig. 2).

The forms 3 are so shaped as to leave the finished member with its depending sides 4, at an outward inclination slightly greater than the position they are intended to assume when assembled with the ceiling member 5.

The lower ends of the depending side members 4, of the arch forms are bent outwardly as shown at 6, preferably into a horizontal position, which they assume when assembled. The ceiling members may be of any preferred material such as metal lathing, with or without ribs, and double back along their edges as shown at 7, to form a space into which the lower outwardly turned edges 6 of the form is seated.

As stated above, the depending portions 4, of the forms are inclined outwardly slightly more than they are intended to assume when in their assembled or permanent position.

The wall 4, of the forms when in their permanent or normal position in the masonry, are at times slightly inclined inward-

ly, but usually are either vertical or more or less inclined outwardly. Therefore, the forms as originally shaped are always of an appropriate form for nesting and may be shipped economically.

In practice the forms and ceiling members, in proper lengths, as required, are shipped separately to the site where the structure is to be erected. Unskilled labor can then, by simply slightly retracting or bending inwardly the lower ends of the portions 4 of the form; slip its flanges 6 beneath the turned-in edges 7, of the lath sheets, where the outward tendency due to the spring in the walls of the form, will hold said flanges and turned-in portions firmly in engagement.

In the manner above described, a complete unit consisting of a form and ceiling member or ceiling sheet is provided which has been conveniently assembled prior to being lifted into place, said assembling being accomplished in the time that is ordinarily consumed in placing either one of its members with the old method, said improved method being one in which the members will maintain their positions in relation to each other and one in which it will be necessary to move the entire unit to disturb either the form or the ceiling member.

When the unit has been adjusted in place, small securing nails 8, may be driven down through the flanges of the form and ceiling sheet to firmly secure the unit in place, thus preventing any accidental movement of either member of the unit in any direction during the filling in of the cement.

The danger of moving the form on the ceiling sheet while adding the cement which often happens in the old form, is eliminated. The tendency to flatten down the turned-up edges of the ceiling sheets in the old method of securing same in place is counteracted by providing the over-lapping in-turned edges of the lathing or ceiling sheets, which are firmly and permanently locked in place on top of the flange of the form, as the cement is added.

Having fully described my invention what I claim and desire to secure by Letters Patent is:

1. A form unit for continuous floor and ceiling construction, comprising a substantially U-shaped floor and beam form, a ceiling member and means whereby the floor and beam form may be sprung into locked relation with the ceiling member to form a single unit.

2. A form unit for continuous floor and ceiling construction, comprising a substantially U-shaped floor and beam form, a ceiling member, and means at the lower edges of the floor and beam form adapted to be sprung into locked relation with the ceiling member prior to being placed in position for use.

3. A form unit for continuous floor and ceiling construction, comprising a substantially U-shaped floor and beam form having outwardly extending flanges at its lower edges and a ceiling member having inwardly extending flanges adapted to be sprung into locked relation with said outwardly extending flanges, prior to being placed in position for use.

4. A form unit for continuous floor and ceiling construction, comprising a floor and beam form of a substantially inverted U-shaped formation, the depending walls of which extend from the base portion at an angle different to that normally desired, a ceiling member, and means for permanently securing said parts together when said walls are sprung to their desired angle.

5. A form unit for continuous floor and ceiling construction, comprising a substantially inverted U-shaped floor and beam form having depending resilient side walls provided with outwardly extending flanges at their lower edges, said walls being inclined downwardly and outwardly, said inclination to be greater than when required in the masonry, a ceiling member provided with in-turned edges adapted to engage the flanges of the floor and beam form when said side walls are sprung to their desired inclination to lock said form and ceiling member together.

6. A continuous floor and ceiling form unit, adapted to be temporarily supported on a frame, consisting of a floor and beam form, having sides adapted to be sprung inwardly at their lower edges, a ceiling member having inwardly turned edges whereby said floor and beam form and ceiling members may be held in locked relation, when said floor and beam member is sprung into engagement with said ceiling member, and means for further securing said members together and to the frame.

CARL H. JABELONSKY.