Jan. 29, 1946. C. W. GILLIAM 2,393,765

COLLAPSIBLE METAL CORE FOR MOLDING CONCRETE

Filed May 5, 1945 2 Sheets-Sheet 1

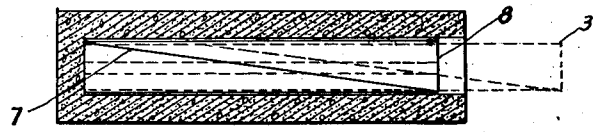


FIG. 3.

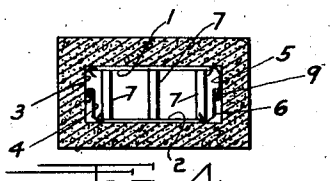


FIG. 4.

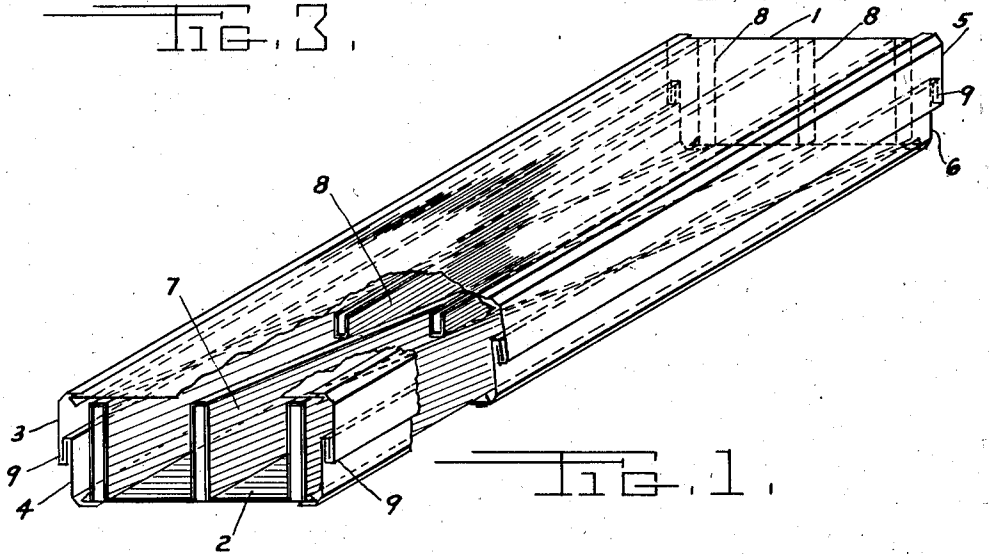


FIG. 1.

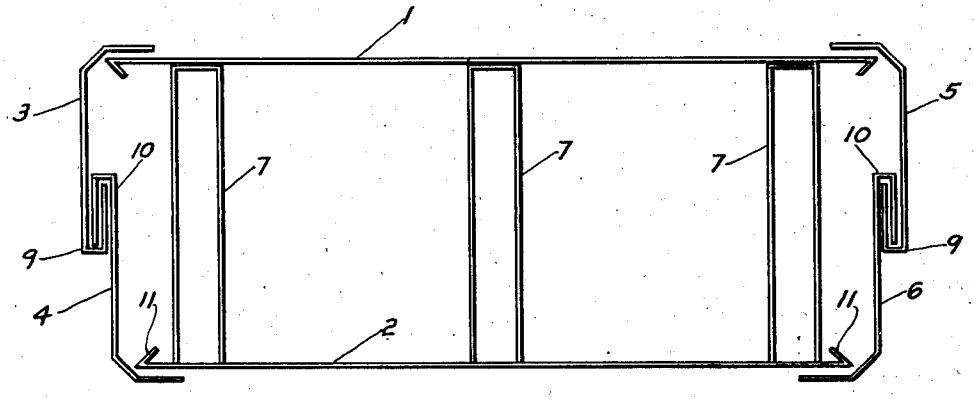


FIG. 2.

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COLLAPSIBLE METAL CORE FOR MOLDING CONCRETE

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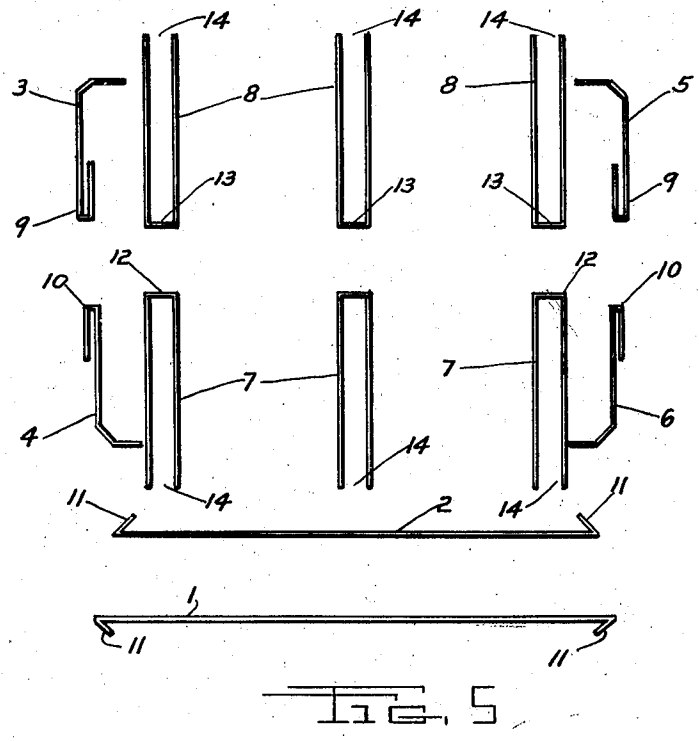


FIG. 5

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Patented Jan. 29, 1946 2,393,765

UNITED STATES PATENT OFFICE

2,393,765

COLLAPSIBLE METAL CORE FOR MOLDING CONCRETE

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Application May 5, 1945, Serial No. 592,195

3 Claims. (Cl. 25—128)

This invention relates to a collapsible metal concrete core, and has for its main object to provide such a core that will be highly efficient to cast hollow spaces in concrete slabs, floors, or walls of any size space desired. The present invention is very simple in construction as compared to complicated devices that have heretofore been made that were not practical for the purpose intended. Other advantages will appear from the description.

The use of hollow concrete for building purposes is on the increase, and a simple efficient collapsible core like the present invention is essential to hold down excessive costs.

By referring to the drawings, part of this application, it will be observed that Fig. 1 is a general isometric view of the assembled core partly cut away; Fig. 2 is an enlarged cross sectional view of the assembled core; Fig. 3 is a longitudinal sectional view of the core in concrete featuring the retaining wedges; Fig. 4 is a cross sectional view of the core in concrete; Fig. 5 is an exploded view of the core.

Similar reference numerals refer to similar parts throughout the several views.

Again referring to the drawings in detail it will be seen that the device comprises two flat plates 1 and 2 with bent inward edges 11 for stiffening the plates. The sides are made in sections 3, 4, 5 and 6 somewhat L shaped with reverting edges 9 and 10 adapted to hook into each other and thus form a joint along the middle of each side of the assembled core. The wedges 7 and 8 are made substantially the length of the main plates with open edges 14 adapted to rest against the main plates when assembled with the closed edges 12 and 13 adapted to fit in pairs against each other to form long tapering wedges. These wedges are similar and any number of pairs may be used in the assembly but the drawings show three pairs.

Figure 5 is an exploded view of parts of the core in their unattached but indicated attached position. To assemble the core for use the ends 4 and 6 of the side parts are placed under the bent edges 11 of the plate 2; then the wedges 7 are laid lengthwise upon the plate 2; then the side sections are connected at the lapping joints 9 and 10; then the companion wedges 8 are placed over the other wedges but not fully face to face; then the top plate 1 is put in place over the assembled wedges and with the top ends 3 and 5 of the side section placed over the bent edges of the top plate; then the wedges are driven tight to hold the assembled core together. Or the core may be assembled in any other convenient manner as determined by the user.

The core is constructed of heavy gauge metal, preferably galvanized iron. But any other suitable material may be used for the purpose.

From the foregoing it will appear that the assembled core is held and locked together by the long V shaped wedges. The wedges not only lock all pieces together but also act as supports for the weight of the concrete. To remove the core the wedges are released by separation and pulled out of the core, then the plates are free to be removed. With the wedges and plates out of the way, the side sections can be removed by loosening their joints and sliding the companion side parts together.

When placing the core into the form for the pouring of concrete it is desirable to either oil or grease the core or cover it with suitable paper so as it can be easily removed from the concrete.

While I have shown and described the preferred embodiment of my invention, I do not wish to limit same to the exact and precise details of structure, but reserve the right to make all modifications and changes so long as I remain within the spirit and scope of the following claims.

Having described my invention I claim:

1. A collapsible metal concrete core comprising, two main plates, two opposite edges on each of said plates bent downward and inward to form a V shape for stiffening said plates, a two piece channel as each side member of said core, each of said channel members having an overlapping portion to form a joint coextensive with said members and centrally located when two of said members are joined, a plurality of gradually tapering wedges positioned between said plates, the flange portions of said channel side members overlapping the V bent edges of said plates, said wedges adapted when driven in tight to press the bent edges of said plates against the inner faces of the edges of the flanges of said channel side members.

2. A device of the character described comprising, two main plates positioned opposite each other, two opposite edges of each plate being bent downward and inward V shaped for stiffening said plates, two pairs of channel shaped members as sides of said core, each of said pairs of said channel shaped members having lapped over edges adapted to hook into each other and form a joint, a plurality of pairs of gradually tapering wedges, each of said pairs of wedges adapted to fit face to face and expand by move-

ment, said pairs of wedges adapted to fit between said plates and press the bent edges of said plates against the flange portions of said channel members.

3. A collapsible metal concrete core of the character described comprising, two main plates of substantially equal size, each of said plates having two of its opposite edges bent downward and inward to form V shaped edges, two pairs of partially L shaped side members coextensive in length with said plates, each of said L shaped members having a bent over and upon itself portion adapted to fit one into the other to form a detachable joint for holding a pair of said side pieces together, said pair when thus joined forming a channel member, the flange portion of each of said pairs adapted to fit over the V shaped edges of said plates and thus form a four wall enclosure; a plurality of pairs of gradually tapering wedges adapted to fit into said enclosure between the said plates thereof, said wedges when driven in tight adapted to press the bent edges of said plates against the inner faces of the flange portions of said side members and thus hold said plates and sides firmly but detachably together.

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