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2,505,342

APPARATUS FOR MOLDING CURVED CONCRETE PANELS

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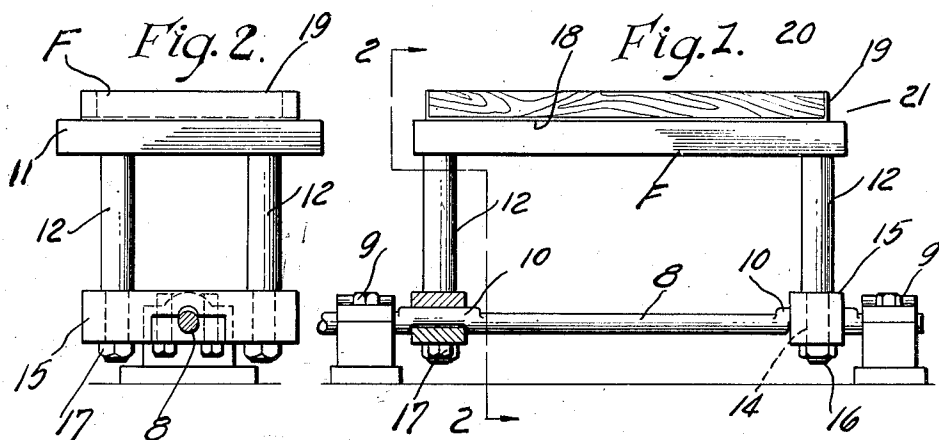
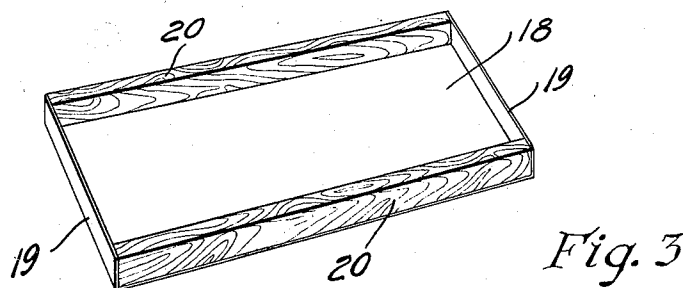
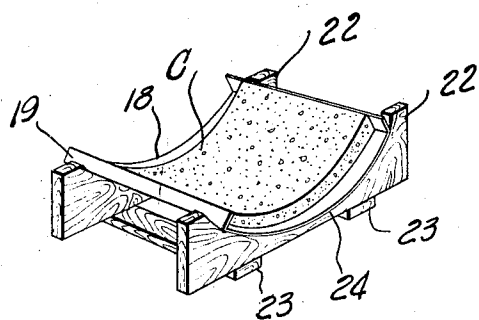


Fig. 4

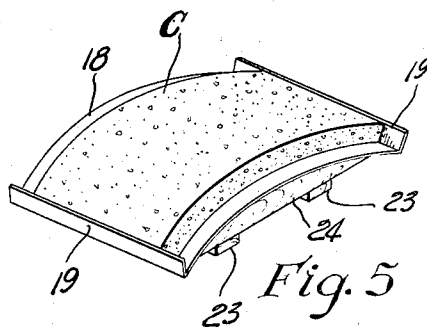


Fig. 5

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APPARATUS FOR MOLDING CURVED
CONCRETE PANELSCecil F. Schaaf, Flint, Mich., assignor to Schaaf
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1 Claim. (Cl. 25—119)

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This invention relates to an apparatus for bending concrete panels to any desired curvature.

One of the prime objects of the invention is to provide a means for molding concrete panels to either convex or concave curvature without breaking, cracking, crumbling the concrete, or otherwise impairing the structural characteristics of the panel.

Another object is to provide a means for molding concrete panels to any desired radius to suit the purpose for which the finished panel is to be utilized.

A further object is to provide a means for molding in which the surface of the panel will be very smooth and even, and which can be handled in exactly the same manner as flat panels of the same size and/or consistency.

A further object is to provide simple, practical and economical means whereby concrete panels may be formed, vibrated, and curved to desired shape.

In building and construction work in general, the use of curved panels is highly advantageous and desirable, because it permits graceful, smoothly rounded corners having a minimum number of mortar joints which in turn reduces the labor and time required for installation.

The above and other objects will appear as the specification progresses, reference being had to the accompanying drawing in which like numerals indicate like parts throughout the several views thereof.

In the drawing:

Fig. 1 is a side-elevational view of a vibrating device showing a mold in place thereon.

Fig. 2 is a part-sectional end-elevational view thereof taken on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of the mold with the side member in place thereon.

Fig. 4 is a perspective view of a panel support showing a concave-shaped concrete panel thereon with the side strips removed.

Fig. 5 is a view similar to Fig. 4 showing a convex-shaped panel.

Referring now more specifically to the drawing in which I have shown one embodiment of my invention. The vibrator can be of any desired design, and in the present instance, I have shown a shaft 8 mounted in spaced-apart bearings 9 as usual, said shaft being formed with spaced-apart offset crank sections 10, and the shaft is driven from any convenient source of power supply (not shown) in any desired manner.

A mold or panel support F is carried on the shaft 8 and comprises a flat table 11 formed with

vertically disposed downwardly extending corner supports 12, the lower ends of which are shouldered and reduced, with the reduced sections extending through openings 14 provided in the transversely disposed cross members 15, the shouldered ends of the corner supports being threaded as at 16 to accommodate nuts 17 as usual.

The panel member 18 is preferably formed of a single sheet of metal, the ends of which are flanged upwardly as at 19 to form sharp, clean end walls, and preferably wood strips 20 are interposed between the end walls and form the side walls of the structure, thus forming a flat mold into which the concrete is placed.

In practice, the green concrete C is placed in the mold formed by the panel 18 and side strips 20, the inner surface of the metal form being first treated with a lubricant, and when the mold has been filled, the upper surface is struck off. This filled mold is then placed in position on the vibrator table 11, or it can be filled on the table, and the mold is then vibrated for a predetermined length of time necessary to eliminate air pockets or voids in the mixture, suitable stops not shown being provided on the table to hold the mold in position.

The green concrete panel thus formed is permitted to set for a predetermined length of time, depending on the moisture in the mixture, after which the mold is placed on a jig J, said jig comprising longitudinally disposed members 22 suitably secured together by transversely disposed braces 23, the upper edges 24 of the members 22 being cut to proper curvature, and when the mold is placed on the jig and the side members 20 are removed, the sheet metal panel 18 will bend to the exact curvature of the jig, the concrete panel C assuming the same curvature.

This panel remains on the jig until it is properly cured for handling, after which the panel is removed for storage or use in a building or other project for which it was designed.

In Fig. 5 of the drawing, I have shown a panel bent to convex shape, however, the method is exactly the same, it is merely necessary to shape the upper face of the jig to correct curvature, and while in the instant application I have shown but a convex and concave shaped panel, it will be readily understood that the panel may be U-shaped or any other desired curvature.

From the foregoing description, it will be obvious that I have perfected a very simple, practical, and economical method and apparatus for forming curved concrete panels and shapes.

What I claim is:

An apparatus of the class described comprising, a flexible metal panel formed with upturned ends, rigid strips forming the side walls of the panel, a jig formed with a curved upper face of predetermined curvature and on which the metal panel is mounted so that it assumes the curvature of the upper face of the jig when the side strips are removed.

CECIL F. SCHAAF. 10

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