

Feb. 27, 1934.

K. E. BEMIS

1,948,486

FORM FOR KNOCKDOWN CONCRETE STRUCTURES

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2 Sheets-Sheet 1

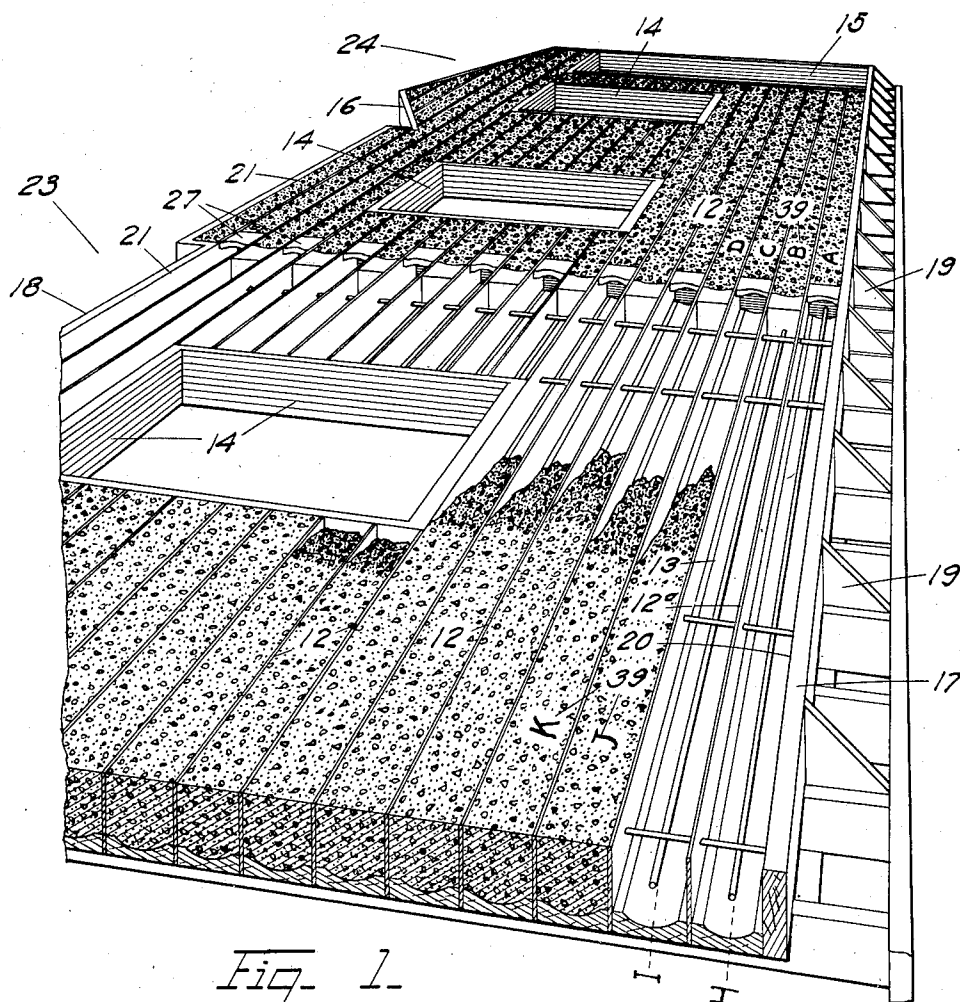


Fig. 1

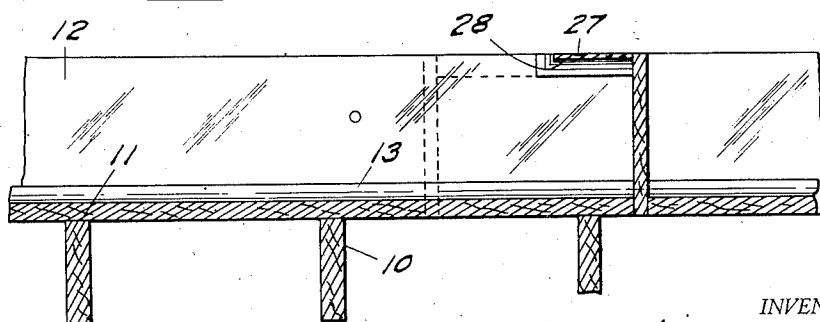


Fig. 2

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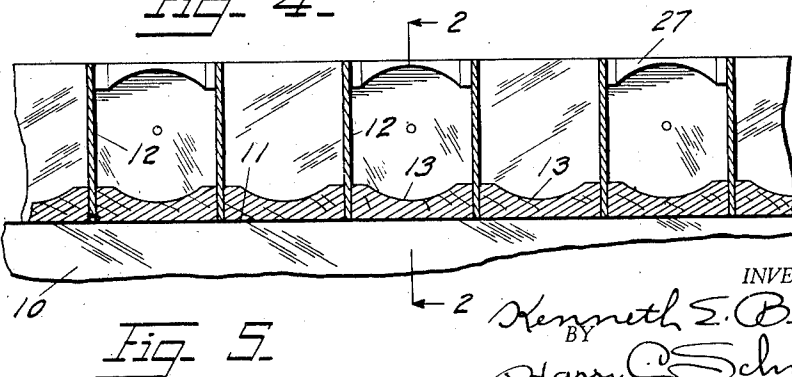
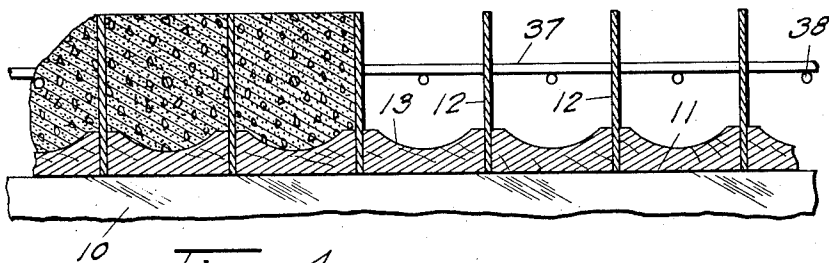
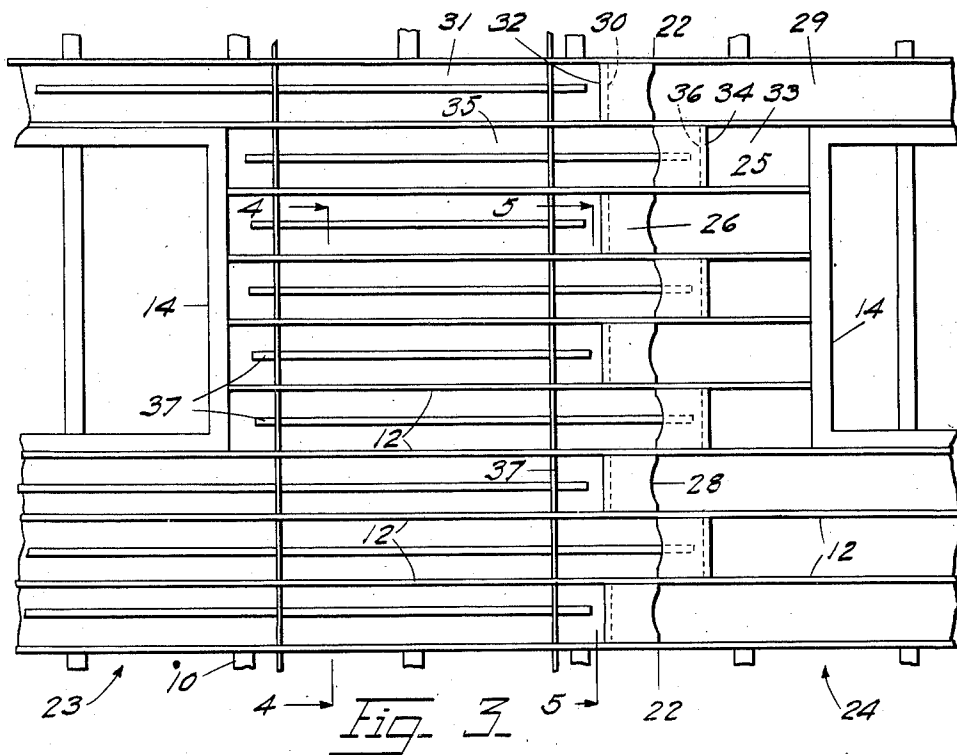
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FORM FOR KNOCKDOWN CONCRETE STRUCTURES

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UNITED STATES PATENT OFFICE

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FORM FOR KNOCKDOWN CONCRETE STRUCTURES

Kenneth E. Bemis, Glendale, Calif.

Application February 27, 1932. Serial No. 595,559

2 Claims. (Cl. 25—121)

This invention is a form for casting knock-down concrete structures and has special reference to temporary structures which in compliance with the usual city ordinances must be fireproof.

The usual temporary fireproof structure is actually built in permanent form, by building up the concrete forms and pouring the concrete in place. When the structure is to be removed, it usually cannot be blasted out due to the proximity of other building structures, therefore must be cut out with drills and chisels, resulting in entire destruction of the structure and heavy expense for removal.

The main object of this invention is to provide a form for casting a knock-down building structure of concrete which is readily assembled and disassembled without any fitting being necessary, and in which the structure can be re-assembled, there being no wreckage or loss in disassembling.

Another object of the invention is to provide a knock-down form for concrete structures which may be arranged and assembled to provide various arrangements of door and window openings and different wall dimensions.

A further object of the invention is to provide a form as outlined which will produce an artistic exterior face on the individual sections of the structure, the preferred form of which is simulative of a log structure.

Other objects and advantages of the invention will become apparent as the following description is read on the drawings forming a part of this specification and in which similar reference characters are used to indicate similar parts throughout the several views and in which

Fig. 1 is a perspective view of the mold or form, for casting two walls of the structure and showing the concrete partly poured.

Fig. 2 is a section taken on line 2—2 of Fig. 5.

Fig. 3 is a fragmentary plan view of the form.

Fig. 4 is an enlarged section taken on line 4—4 of Fig. 3.

Fig. 5 is a section taken on line 5—5 of Fig. 3.

The invention consists of a sub-structure 10, suitably supported so as to provide a plane, horizontal surface 11 on which the form is supported, and of a size suitable, preferably, to form two or more walls of the structure complete.

The form proper consists of the longitudinal partitions 12, which are spaced apart by means of facing forms or matrices 13, which rest on the surface 11, and which have formed in the upper surface a suitable reversed facing form to simu-

late the side of a log, slab, or other design as may be desired for exterior finish, this application being particularly directed to the simulation of a log structure.

Rigid framing is provided for the window openings as shown at 14, door openings 15, gables 16 and the limiting edges, bottom 17 and top 18, which are suitably braced as at 19 to provide even and parallel edges 20 and 21 to respectively rest on the foundation and support the roof.

For the log structure as shown in the drawings, two walls are formed together and overlap substantially on a line 22—22 as indicated in Fig. 3, the over-lapping portions being crossed when erected to form the joint of a right angled corner. The two walls identified each as an entirety, respectively by numerals 23 and 24 are formed with projecting butt ends 25 for wall 23 and 26 for wall 24. These butt ends are formed by inverting a section 27 of the matrix or facing similar to the facing 13 and arcuately forming the inner edge 28 as shown to abut with the face of a projecting log.

As an illustration log 29 actually terminates at point 30 while log 31 terminates at point 32, log 33 terminates at 34 and log 35 terminates at 36. Vertical end partitions 40 are inserted in the forms of suitable thicknesses to which the mold-sections 27 may be attached. The structure is tied together transversely by means of the rods 37, which are covered with graphite grease before pouring the concrete and which are removed after the concrete is set. The holes formed by these rods provide alignment holes for the structure, in which a rod may be inserted at assembly of the structure, which keeps the various sections in place and assures perfect alignment thereof.

The partitions 12 are formed of sheet steel of the thinner gauges, about 16 ga. being suitable, and are provided with apertures to receive the tie rods 37, by which reinforcing rods 38 are supported by means of wire ties or loops.

The entire unit is assembled as shown in Fig. 1 and the concrete is poured, Fig. 1 showing the wall 24 completed and the concrete partly poured in the wall 23. After the concrete is properly set, the tie rods 37 are removed and the cap and plate form members 21 and 17 removed, the logs are marked as indicated at 39, then logs or sections A and H are removed followed by the partition 12*, then sections B and I and following through to the caps.

The sections are then assembled by laying the members A and H together with the base members for the other sides in their respective posi-

- tions, the top surface is grouted with lean grout about equal in thickness to the thickness of the partitions 12, until the entire structure is assembled, after which rods are extended through the walls, through the apertures formed by the tie rods, thus forming a structure which is easily disassembled as the lean grout forms a weak bond which is sufficient to form a substantial structure but easily taken apart.
- It will be noted that variations in construction and arrangement of parts which are consistent with the appended claims may be resorted to without detracting from the spirit or scope of the invention or sacrificing any of the advantages thereof.
- I claim:
1. A mold of the class described, comprising a horizontal base, a plurality of facing matrices supported in parallel upon said base, longitudinal partitions retained in perpendicular relation between said matrices to form mold-spaces therebetween a transverse partition wall interposed in the respective mold-spaces, and in inverted matrix-section overlying said mold-space adjacent each said transverse-wall.
 2. A mold of the class described, comprising a horizontal base, a plurality of facing matrices supported in parallel upon said base, longitudinal partitions positioned between said matrices in vertical relation to form mold-spaces therebetween, transverse partition walls interposed in the mold-spaces in two transverse lines, the alternate said walls being in the same line, and inverted matrix-sections overlying said mold-space connected with the respective wall at one edge and directed towards the adjacent line of walls at its other edges.
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