

**May 31, 1927.**

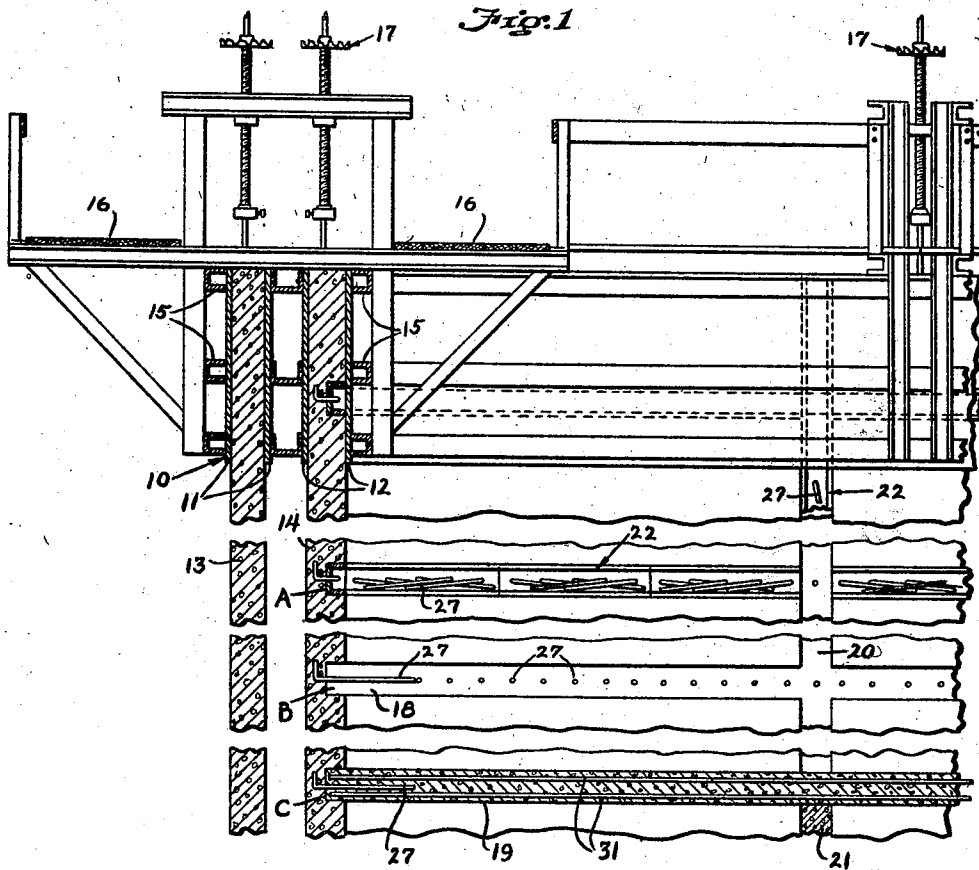
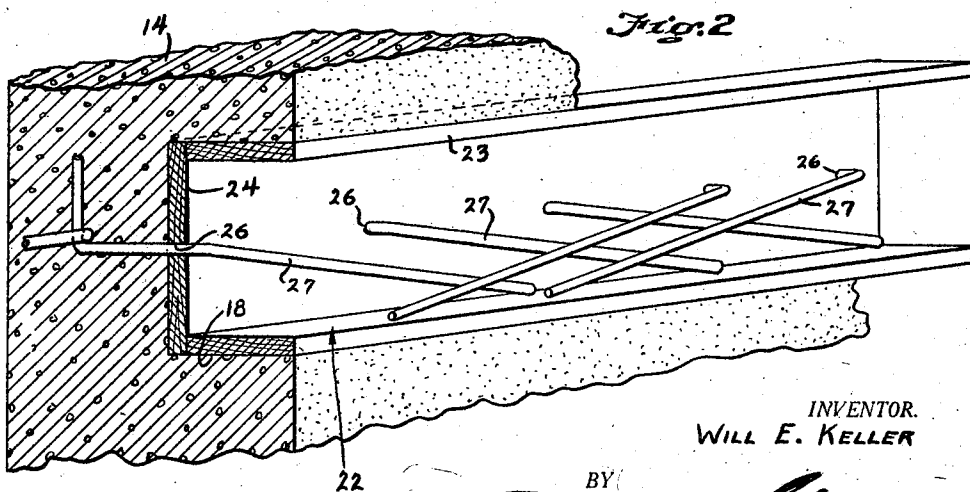
**W. E. KELLER**

**1,630,795**

# MOLD FORM FOR BUILDING STRUCTURES

Filed Sept. 1, 1926

**2 Sheets-Sheet 1**



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MOLD FORM FOR BUILDING STRUCTURES

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2 Sheets-Sheet 2

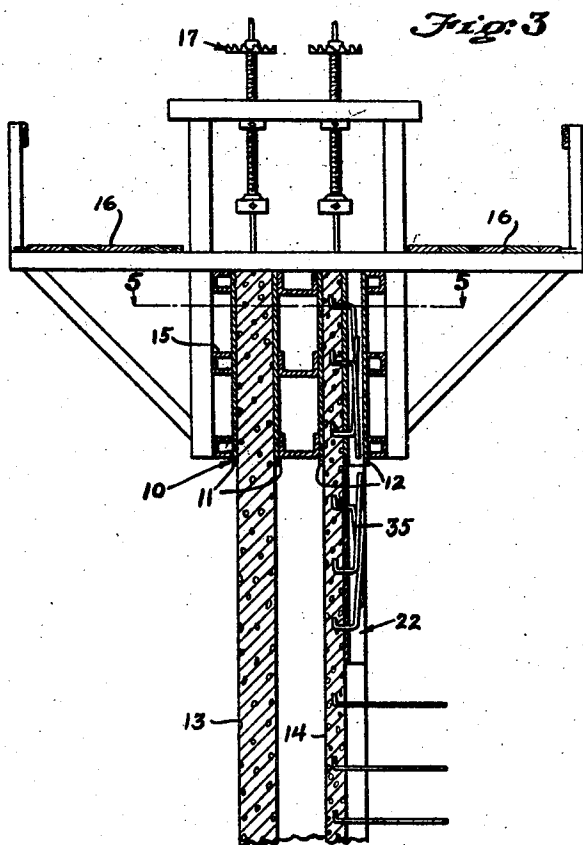
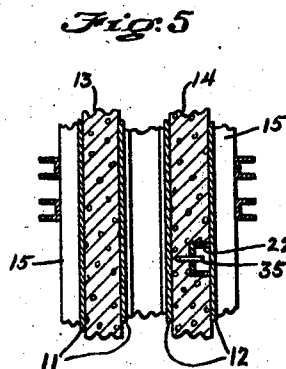


*Fig. 6*

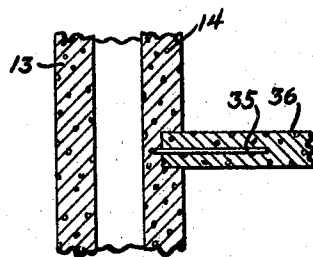
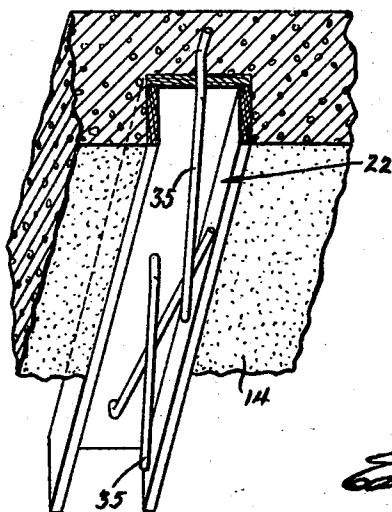


*Fig. 4*



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## UNITED STATES PATENT OFFICE.

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## MOLD FORM FOR BUILDING STRUCTURES.

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This invention relates more specifically to a concrete mold form construction in which the inner faces of the outside walls of a concrete building structure are provided at intervals with recesses having metal attaching rods extending thereinto from the wall structure for the attachment of floor slabs, and vertical partition walls, the recess mold forms and the metal attaching rods being so disposed relative to the outside wall structure that the same will present no interference to the movement of the outside wall slip forms during the pouring of the walls.

In the pouring of the outside walls of a concrete building provision must be made for attaching the floor slabs and vertical wall partitions to the inner faces of the outside walls as the same are poured. When stationary mold forms are employed no difficulty is experienced in forming such recesses, but where movable forms of the "slip" type are employed considerable difficulty has been experienced in forming such recesses, especially as the floor and partition attaching rods must project laterally from the building walls.

By means of the recess mold forms herein-after more particularly described the recesses may be readily formed at the desired intervals in the building walls and the attaching rods are so disposed as to offer no interference to the movable wall mold forms.

An embodiment of the invention is described in the following specification, reference being had to the drawings accompanying the same and forming a part thereof, in which:

Fig. 1 is a vertical detail section of the wall of a concrete building illustrating the various steps in the formation of the floor slab recesses.

Fig. 2 is a detail perspective view of a portion of an outer building wall showing the recess form in position, and the attaching rods bent into place within the form to permit the continuous movement of the wall mold forms.

Fig. 3 is a vertical detail section through a hollow concrete building wall showing the method of forming the vertical partition recesses.

Fig. 4 is a partial perspective view of the vertical recess forms in position in the wall structure with the partition attaching rods bent into the form mold.

Fig. 5 is a partial transverse section

through the hollow wall showing a partition recess form in place therein, taken on line 5—5 of Fig. 3.

Fig. 6 is a similar view with the mold formed removed and the partition poured in position.

Referring to the drawings, the movable "slip" forms 10 are of the same construction as illustrated in the Waugh Patent No. 1,566,135, issued December 15, 1925, entitled Wall bonding device, and as the same forms no part of the present invention no extended description is thought to be necessary to a complete understanding of the present invention.

Referring now more particularly to the drawings, and especially to Figs. 1 and 2, 10 designates a movable mold form for forming a hollow concrete building walls, consisting of a plurality of vertically disposed metal mold walls formed in pairs 11, 12, and spaced apart a suitable distance to form two members 13, 14, of a hollow wall. The outer faces of these mold walls are secured together by suitable channel beams 15 in any preferred manner. The upper ends of the mold walls are provided with the usual runways 16 for the workman, and 17 designates the mechanism for elevating the forms as work of pouring the walls progresses.

As the outside walls are poured, horizontally disposed recesses 18 must be formed for attaching the reinforced concrete floor slabs 19, as well as vertically disposed recesses 20, for attaching the ends of the partition building walls 21. The floor slab recess forms 22 preferably consist of a bottom wall 23 and a top wall 24 joined by a side wall 25. When the hollow walls have reached the height of a story a series of recess forms 22 are disposed upon the surface of the concrete of the inner wall member with the open side of the form disposed outwardly, as shown in Figs. 1 and 2, each of the side walls 24 of the recess forms 22 are provided with a plurality of apertures 26 extending throughout their entire length for the passages therethrough of metal slab attaching rods 27. The inner ends of these rods are bent at an angle for embedment in the concrete, while their outer ends project beyond the side walls 24 of the forms and are bent so as to lie wholly within the form boxes, as clearly shown in Fig. 2 of the drawing. From the above it will be apparent that the attaching rods will offer no inter-

ference to the movement of the wall forms as they are moved upwardly during the concrete pouring operations.

Similar floor slab recesses are formed at each floor level until the building is completed. In Fig. 1 is illustrated the various steps in the formation of the floor slab attaching recesses, the letter —A— indicating the position of the form boxes 22 after the concrete of the walls has been poured therearound, with the outer ends of the metal attaching rods bent into the boxes. The letter —B— shows the form boxes removed in any suitable manner after the concrete has set with the rods straightened out and projecting at right angles to the building wall, the letter —C— illustrates the floor slab 19 after a pouring operation with the attaching rods of the recess embedded therein and with additional rods 31 extending the entire width of the floor slab.

In Figs. 3 to 6 inclusive is illustrated the manner of forming the vertical recesses for the attachment of the concrete building partitions which is exactly similar to the floor slab mold form heretofore described, the only difference being that they are disposed vertically with respect to the outer walls. The metal attaching rods 35 having hooked ends which are embedded in the wall to the rear of the recess, and their outer ends are bent so as to lie within the mold forms, the forms being removed in the same manner as the floor slab forms after the completion of the walls. In Fig. 6 is illustrated a portion of the hollow outside wall with an end partition 36 extending into the recess, and one of the attaching rods extend thereinto.

The floor slab forms as well as the partition wall forms may be made in short lengths to facilitate easy and convenient handling.

By providing form boxes with metal attaching rods mounted therein, and bending their exposed outer ends into the form boxes, it will be clear that the attaching rods will offer no obstruction to the movement of the wall mold forms, and the floor slab and partition wall seats may be economically formed simultaneously with the pouring of the outer mold walls.

What I claim is:

1. In combination with a mold form of the "slip" type for forming vertically disposed concrete building walls, of a mold form carrying a plurality of metal attaching rods adapted to be inserted within the movable "slip" form mold for forming recessed seats in the building walls for the attachment of concrete floor and partitions, the free ends of the attaching rods being disposed and lying within the forms during the wall pouring operations and adapted to be bent outwardly from the form boxes after the walls are poured to form connections for floors slabs and wall partitions.

2. In combination with a concrete mold form of the "slip" type for forming the walls of a building structure, of a mold form for forming horizontally and vertically disposed recesses for the attachment of building floors and partitions adapted for placement within the mold cavity of the slip form during the pouring of the wall, and a plurality of metal attaching rods mounted in a wall of the mold form, the ends of said rods projecting outside of the form adapted to be embedded in the wall structure and their free ends being bent to lie wholly within the mold form, whereby the rods will offer no interference to the operation of the movable slip forms.

3. In combination with a concrete mold form for pouring the walls of a concrete building, of a mold form for forming recesses or depressions in the faces of said building walls during their formation for the attachment of floor slabs and partitions thereto, and means carried by said recess forming mold form for anchoring the floor slabs and partitions to the building wall.

4. A concrete mold form for forming recesses in building walls during their formation comprising a mold form for forming the wall recess, and a plurality of metal attachment rods connected to one of the mold form walls, one of the ends of said rods adapted to be embedded in the wall structure.

In witness that I claim the foregoing I have hereunto subscribed my name this 10th day of August, 1926.

WILL E. KELLER.