Sept. 29, 1925. 1,555,243

L. H. GARLINGHOUSE

FLOOR FORM APPARATUS

Filed April 15, 1920

Fig. 1

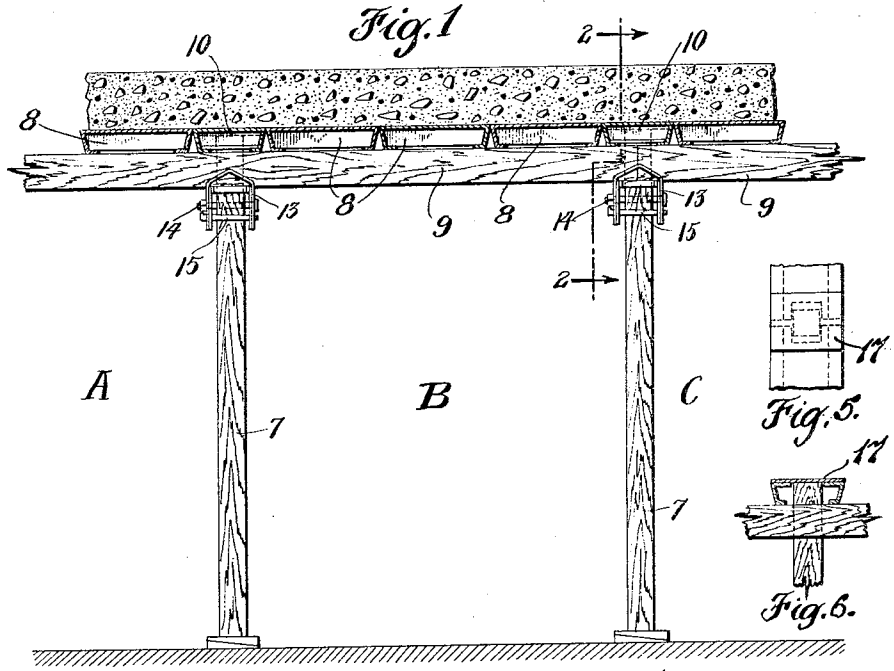


Fig. 5.

Fig. 6.

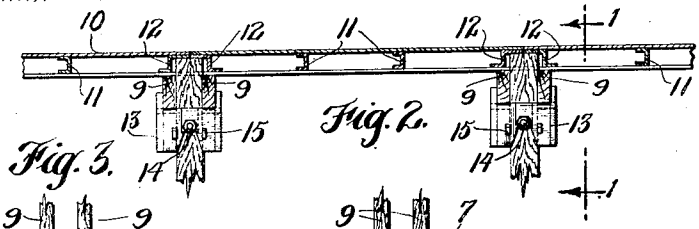


Fig. 2.

Fig. 3.

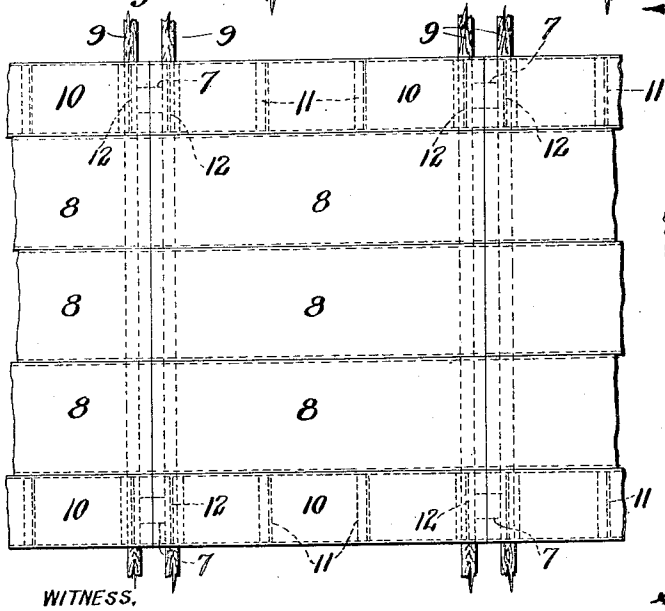
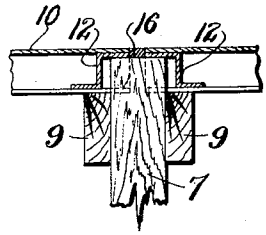


Fig. 4.



WITNESS.

Gustav Genzlinger.

INVENTOR

Leslie H Garlinghouse

BY

Lyon Stead & Lechner

ATTORNEYS

Patented Sept. 29, 1925. 1,555,243

UNITED STATES PATENT OFFICE.

LESLIE HOLMES GARLINGHOUSE, OF ASPINWALL, PENNSYLVANIA, ASSIGNOR TO BLAW-KNOX COMPANY, A CORPORATION OF NEW JERSEY.

FLOOR-FORM APPARATUS.

Application filed April 15, 1920. Serial No. 373,999.

To all whom it may concern:

Be it known that I, LESLIE H. GARLINGHOUSE, a citizen of the United States, residing at Aspinwall, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Floor-Form Apparatus, of which the following is a specification.

This invention relates to floor form apparatus and particularly to form apparatus for constructing flat slab floors.

One of the primary objects of my invention is to simplify the form apparatus and reduce the amount of equipment ordinarily found necessary and the carpenter work incident thereto.

Another object of my invention resides in the provision of an improved form apparatus, so constructed and supported that the filler strips or bridge members bridging the gap between adjacent rows of pans or panels are dispensed with, as are the means ordinarily used to support the same, and certain of the panels themselves used in place thereof, the whole being so arranged as to permit of the taking down of the balance of the forms without interference.

Still another object of my invention resides in the provision of an improved floor form apparatus for the support of which the simplest kind of shoring may be used.

The foregoing, together with such other objects as may hereinafter appear, or are incident to my invention, I obtain by means of a construction which I have illustrated in preferred form in the accompanying drawings, wherein:

Fig. 1 is a fragmentary, sectional view, taken on the line 1—1 of Fig. 2, illustrating one application of my invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a plan view of Fig. 2; Fig. 4 is a sectional view, drawn on an enlarged scale, illustrating a detail of my invention, and Figs. 5 and 6 are fragmentary views illustrating a modification of my invention.

Referring now to the drawings, the reference letter 7 indicates the shores, each of which preferably consists of a single piece of wood without any cross piece or head. The shores are arranged in rows to form the bays A, B, C, etc. The floor slabbing is formed by the panels or similar members 8, which are carried by the ledger members 9, as will hereinafter appear, and by the panel members 10 which are supported directly from the shoring 7.

The panels 8 and 10 may be of any preferred construction and, as shown in the drawings, they are composed of a substantially rectangular sheet metal plate bent into channel like form at the sides and reinforced by cross pieces, such as the channel members 11. The panels 10, however, are of less width than the panels 8; moreover, they have at the ends Z-bar reinforcing cross pieces 12, so disposed as to form stiff end flanges that rest upon the top of the shores in the manner indicated in Figs. 2 and 4. The panels 8 and 10 are ranged continuously edge to edge in rows, and supported directly at their ends.

The ledgers 9, which support the intermediate panels 8, are detachably carried by the brackets 13 which are preferably of the construction illustrated in my copending application, Serial No. 330,343, filed Oct. 13, 1919. For the purposes of this specification, it will suffice to say that each shore is provided with a bolt 14 over which the brackets are hooked and on which they pivot when the wedges 15 are withdrawn. With the wedges 15 in place, the ledgers 9 are supported at a point at which the panels 8 will be flush with the tops of the panels 10. When the wedges 15 are knocked out, the brackets 13 will swing substantially to a position at right angles to that shown in Fig. 2 which makes it possible to take down the ledgers 9 and the panels 8. These portions of the form apparatus may be taken down in any preferred manner, such, for example, as that set forth in the aforesaid copending application. The panels 10 are left in position and form an adequate support for the concrete until the latter sets, but it is possible to take down the panels 8 within a relatively short time after the concrete has been poured. The ledgers may be of any length, depending upon the length of unit desired, and may simply extend between rows of shoring or across several rows. The panels 8 side by side are preferably secured to the respective pairs of ledgers 9, as for example, in the manner shown in copending application Serial No. 330,347, filed Oct. 13, 1919; and a pair of ledgers and the panels carried thereby constitute a form

unit, there being as many units as required to carry out the particular operation in hand.

The operation is as follows: The units are raised and set upon the brackets and jammed against the shores by the wedges 15. The panels 10 are then positioned on the shores, closing the gaps between the sets of panels 8, and completing a substantially unbroken flat, continuous form floor for a section of floor slabbing. A relatively short time after pouring, the units are taken down by knocking out the wedges 15 and lowering the ledges, and they are then shifted and set up at a new point of use, the panels 10 being left in position supporting the concrete until it sets. The work may be thus carried forward progressively with a minimum number of units and with but a small expenditure of time and labor, and with no interference between form parts.

Variations in the width of bays or spans of flooring may be met, within certain limits, by substituting the narrow panels 10 for one or more of the wider panels, this being possible because the former are constructed to be supported on the ledgers as well as on the shores. Furthermore, the panels 10 accommodate themselves to variations in the distance between shores. When the shores are farther apart, a filler, such as the member 16 is used (see Fig. 4).

Heretofore in this art it has been the practice to bridge the gap between the respective sets of panels 8 by means of strips or cover plates of sheet metal wide enough to lap over the ends of the adjacent end panels, and to support such strips it was necessary to provide stringers extending longitudinally of the rows of shoring, from shore to shore, to ensure a support for the strips, particularly when the form units were taken down. This ordinarily involved additional means for supporting such stringers from the shores. By my improvements these stringers are eliminated, for the panels 10 possess sufficient inherent rigidity or stiffness to withstand the load, and they not only thus take the place of the filler strips and their supporting members, but also produce a smoother surface. Unlike the cover plates, moreover, the panels 10 are independent of the panels 8, being supported by their own ends quite independently.

In some instances it may prove desirable to support the panels 10 entirely from the ledgers, which can be done, for example, by shaping the ends of the panels as shown in dotted lines in Fig. 5. A short cover plate 17 is then used to cover over the gaps. This plate will be supported by the shore and, therefore, if desired and the character of the work permits, the panels 10 may be taken down when the other panels are, or shortly thereafter. Thus, the shores are the only parts of which a relatively large stock would be required.

I claim:

1. Form apparatus for molding concrete floors and the like comprising shores arranged substantially in rows, supporting members extending transversely of the rows, a plurality of stiff form sections supported at their ends by said members and forming a substantially continuous floor, unbroken except over the shores, and a plate on the shores for covering the gaps between the form sections which extend between shores.

2. Form apparatus for molding concrete floors and the like comprising rows of stiff panels ranged continuously edge to edge and supported at their ends from common shoring, part independently of the rest.

3. Form apparatus for molding concrete floors and the like comprising rows of stiff panels ranged continuously edge to edge and supported at their ends from common shoring, part of said panels having stiff end flanges for resting directly on the tops of the shores.

4. The combination with shores and form supporting members carried thereby, of a panel member provided at each end with a Z-bar extending transversely of the panel.

In testimony whereof, I have hereunto signed my name.

LESLIE HOLMES GARLINGHOUSE.