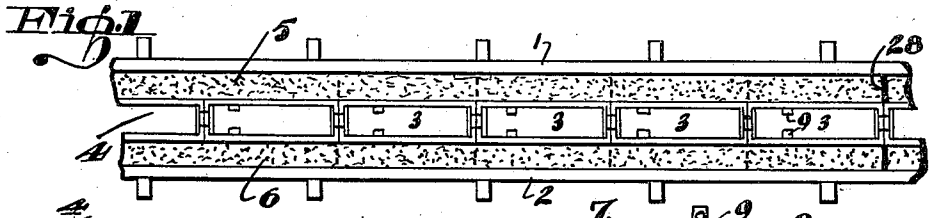
J. C. SHEELEY.

COLLAPSIBLE CONCRETE FORM.

APPLICATION FILED APR. 7, 1920.

1,375,328. Patented Apr. 19, 1921.

Fig. 1



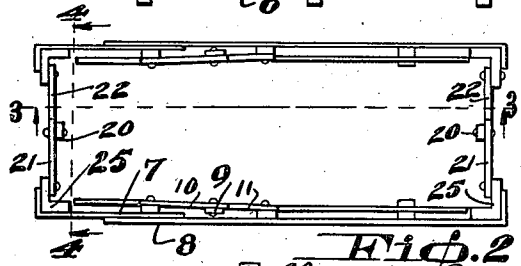


Fig. 2

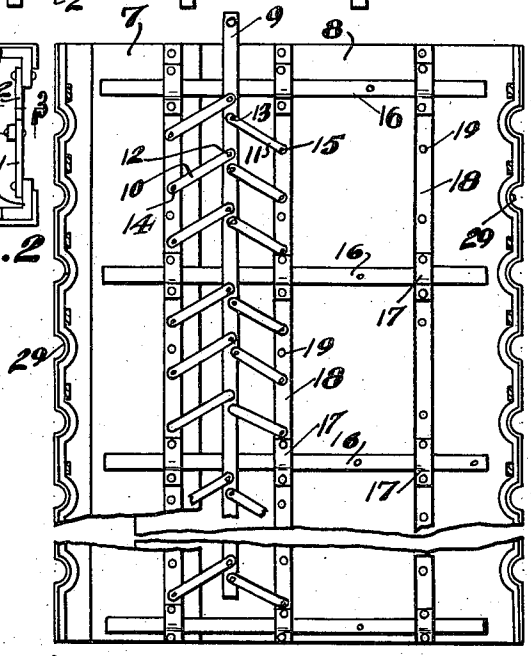


Fig. 3

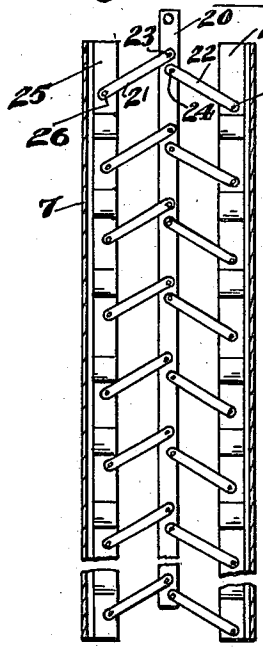


Fig. 4

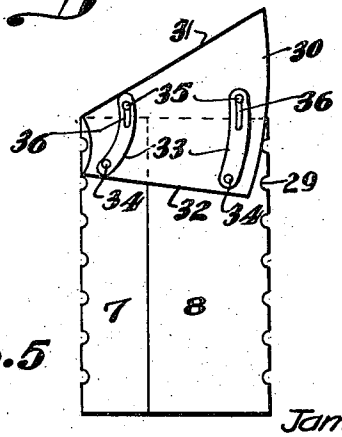


Fig. 5

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JAMES CHARLES SHEELEY, OF PASADENA, CALIFORNIA.

COLLAPSIBLE CONCRETE-FORM.

1,375,328. Specification of Letters Patent. Patented Apr. 19, 1921.

Application filed April 7, 1920. Serial No. 372,035.

To all whom it may concern:

Be it known that I, JAMES CHARLES SHEELEY, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented new and useful Improvements in Collapsible Concrete-Forms, of which the following is a specification.

This invention is a collapsible form for concrete constructions, and has for its object to provide simple but efficient means for collapsing the form so that the latter may be readily removed after the concrete has been poured.

Other objects of the invention will be readily understood from the following description of the accompanying drawings in which;

Figure 1 is a top plan view of a form constructed in accordance with my invention for a double, spaced concrete wall.

Fig. 2 is an enlarged top plan view of one of the units of the form.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2.

Fig. 4 is a transverse section on the line 4—4 of Fig. 2.

Fig. 5 is a side elevation of one of the units of the form having a top extension thereon which is employed when building a wall having a sloping upper edge.

The improved concrete form is illustrated as employed in a double, spaced wall concrete construction, the forms for the outer sides of the said walls being, preferably, the usual built up wooden walls 1 and 2, and the units of my improved form providing the forms for the inner wall of said double, spaced concrete walls.

My improved form, preferably, comprises a series of units 3 positioned in the space 4 to be left between the concrete walls 5 and 6. Each of these units comprises spaced side walls consisting of overlapping wall members 7 and 8. These wall members may be of any suitable dimension and overlap transversely of the length of the side walls of the unit so as to be moved longitudinally relative to one another to adjust the length of the unit.

The means employed for adjusting the lap of the wall members of a side wall of a unit may comprise the following mechanism;

An actuating rod 9 extends transversely of the side wall of the unit along the inner surface of the same, and this actuating rod is connected to the overlapping wall members 7 and 8, as by series of operating rods 10 and 11 pivotally connected to the rod 9 as shown at 12 and 13 and projecting outwardly at opposite sides of the rod 9 and pivotally connected at their outer ends to the respective overlapping wall members as shown at 14 and 15. By this arrangement longitudinal movement of the actuating rod 9 in opposite directions will force the overlapping wall members 7 and 8 away from and toward one another to adjust the lap of said wall members and thereby longitudinally expand and contract the side walls of the units of the concrete form.

Means are provided for guiding the overlapping wall members 7 and 8 relative to one another during longitudinal adjustment of the same, such means, preferably, comprising guide rods 16 extending longitudinally of the side walls of the forms. These guide rods may be supported in brackets 17 formed in suitable strips 18 extending transversely of wall members 7 and 8. The strips 17 form strengthening members for the walls 7 and 8, and in order to form a stronger and more rigid construction the pivotal connnections 14 and 15 are, preferably, provided upon these strengthening strips 18. The strips 18 are, preferably, suitably riveted to the wall members 7 and 8 as shown at 19, and the guide rods 16 may be similarly riveted to one of the wall members, say the wall member 8, as shown at 20, and are slidable through the bearing brackets 17 relative to the other wall member.

The means employed for adjusting the distance between the side walls of a unit of the form may comprise a mechanism similar to that previously described. As an instance of this arrangement an actuating rod 20 extending transversely of the side walls of the form is positioned between the ends of the side walls of a unit of the form, this actuating rod having the operating rods 21 and 22 projecting from opposite sides thereof and pivotally connected to the actuating rod as shown at 23 and 24, the outer ends of said operating rods having pivotal connection with the opposite side walls of the unit of the form. In the preferred construction these outer ends of the operating rods are pivotally connected to corner pieces 25 formed of angle iron and extending transversely of the side walls of the form at the ends of the units thereof, the ends of

the wall members 7 and 8 being, preferably, bent around the outside of said corner pieces and suitably secured thereto. The pivotal connections between the operating rods 21 and 22 and these corner pieces are shown at 26 and 27.

By the construction as thus described it will be seen that a unit of the concrete form may be adjusted in length through the actuating rods 9 on the respective side walls thereof, and the distance between the side walls may also be adjusted through the actuating rods 20, and a series of such units, when placed end to end, will form the inner walls of a form for a double, spaced concrete wall. The concrete having been poured into the form thus provided, and having set, the units 3 may be readily removed by collapsing the same when they will be readily removable from between the walls 5 and 6. The units of the form are collapsed by moving actuating rods 9 and 20 in a direction to contract the length of the side walls of the unit and to reduce the distance between said side walls.

It is usual in a double wall concrete construction to provide tie rods between the two walls, and in order to provide for the proper positioning of such tie rods, represented at 28, the following construction is, preferably, provided:

The ends of the side walls of the units of the form are provided with recesses 29, such recesses being of suitable size and shape so that when two of the units are placed end to end adjacent recesses of the two units will form apertures through which the tie rods 28 will extend and be supported therein. These recesses are, preferably, formed by recessing both the corner pieces 25 at the ends of the side walls of the units of the form, and the inwardly turned ends of the wall members 7 and 8 which are received over said corner pieces.

In forming a construction wherein a sloping roof is to be employed it is desirable that the forms for the side walls of such a construction may permit of building side walls having their upper ends sloping at any desired angle. For this purpose my improved form may be provided with a top extension arranged to form a sloping upper edge upon the walls. This construction is shown in Fig. 5, the top extension being shown as employed with a single unit form, although it will be obvious that such an extension may be also applied to a multiple unit form.

The extension comprises a wall 30 overlapping the upper edge of the side wall of the form and having a sloping upper edge 31. The lapping edge 32 of this extension is provided with means for adjustably mounting the extension upon the side wall, such means, preferably, comprising straps 33 adapted to be removably secured at one end to the side wall as by bolts 34 and having their opposite ends adjustably secured relative to the extension as by bolts 35 upon the extension slidable within slots 36 formed in the straps 33, so that the extension may be adjustably secured relative to said straps by the bolts, by adjusting the position of the extension 30 relative to the side wall of the form. An upper edge of any desired slope may be thus provided on the form.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. In a collapsible form for concrete construction, side walls, toggle means for longitudinally expanding and contracting said side walls, and toggle means for adjusting the distance between said side walls.

2. In a collapsible form for concrete construction, side walls comprising overlapping wall members, toggle means for adjusting the lap of said wall members to longitudinally expand and contract said side walls, corner pieces at the outer ends of said wall members, and toggle means connecting the opposite corner pieces of the opposite side walls for adjusting the distance between said side walls.

3. In a collapsible form for concrete construction, a side wall comprising wall members overlapping transversely of the length of said side wall, an actuating member extending transversely of said side wall, and operating connections between said actuating member and said overlapping wall members arranged so that longitudinal movement of said actuating member will adjust the lap of said wall members to longitudinally expand and contract said side wall.

4. In a collapsible form for concrete construction, side walls comprising overlapping wall members, means for adjusting the lap of said wall members to longitudinally expand and contract said side walls, and means for adjusting the distance between said side walls; said adjusting means comprising actuating members extending transversely of said side walls, said actuating members being positioned respectively on said side walls and having operating connections with the overlapping wall members and between the opposite ends of said side walls and having operating connections therewith, whereby said actuating members are adapted to respectively adjust the length of said side walls and to adjust the distance between the latter by longitudinal movement of said actuating members.

5. In a collapsible form for concrete construction, a side wall comprising overlapping wall members, and means for adjusting the lap of said wall members to longitudinally expand and contract said side wall, the ends of said side wall being recessed to

form apertures adapted to receive tie rods when a plurality of said side walls are placed end to end.

6. In a collapsible form for concrete construction, a side wall comprising overlapping wall members, means for adjusting the lap of said wall members to longitudinally expand and contract said side wall, and a top extension adjustably mounted on said side wall to provide an upper end for said side wall and having an angularly disposed upper edge.

In testimony whereof I have signed my name to this specification.

JAMES CHARLES SHEELEY.