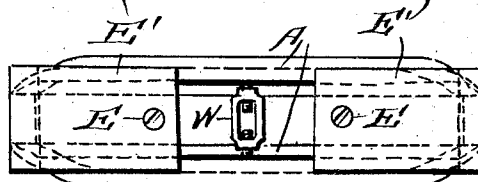
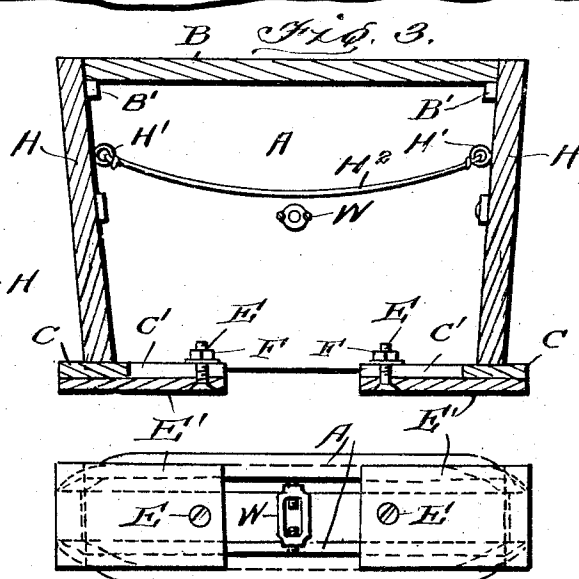
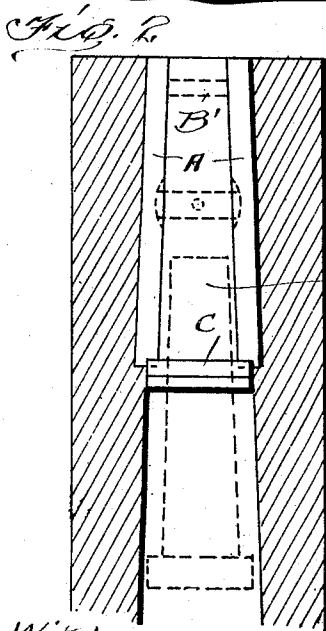
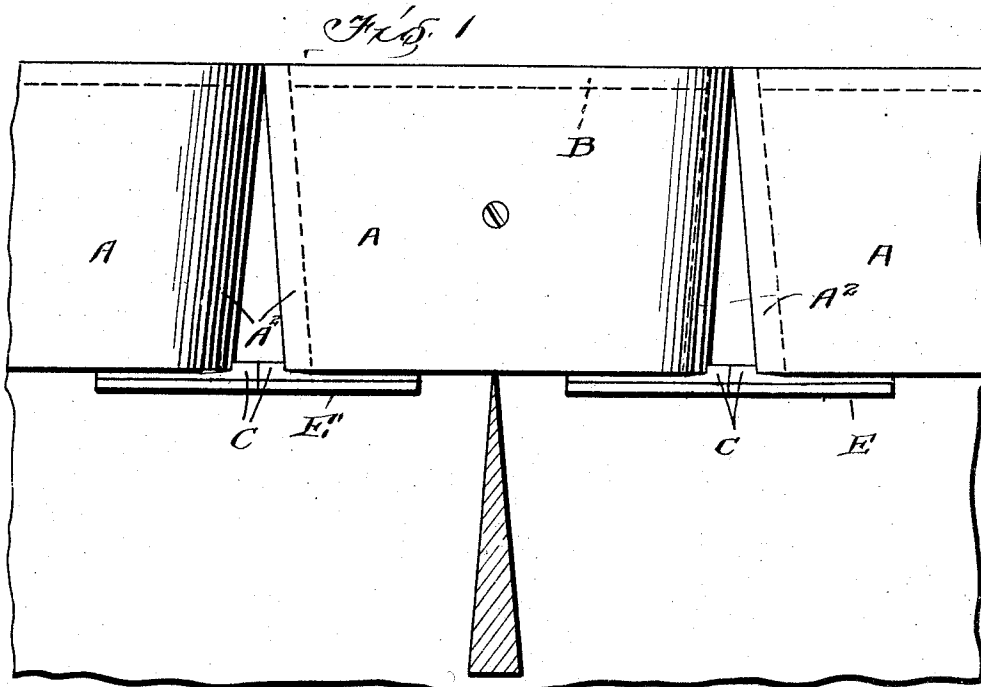


W. T. REDMAN.
 COLLAPSIBLE CORE FOR CONSTRUCTING HOLLOW CONCRETE WALLS.
 APPLICATION FILED DEC. 24, 1910.

994,336.

Patented June 6, 1911.

2 SHEETS—SHEET 1.



Witnesses:-

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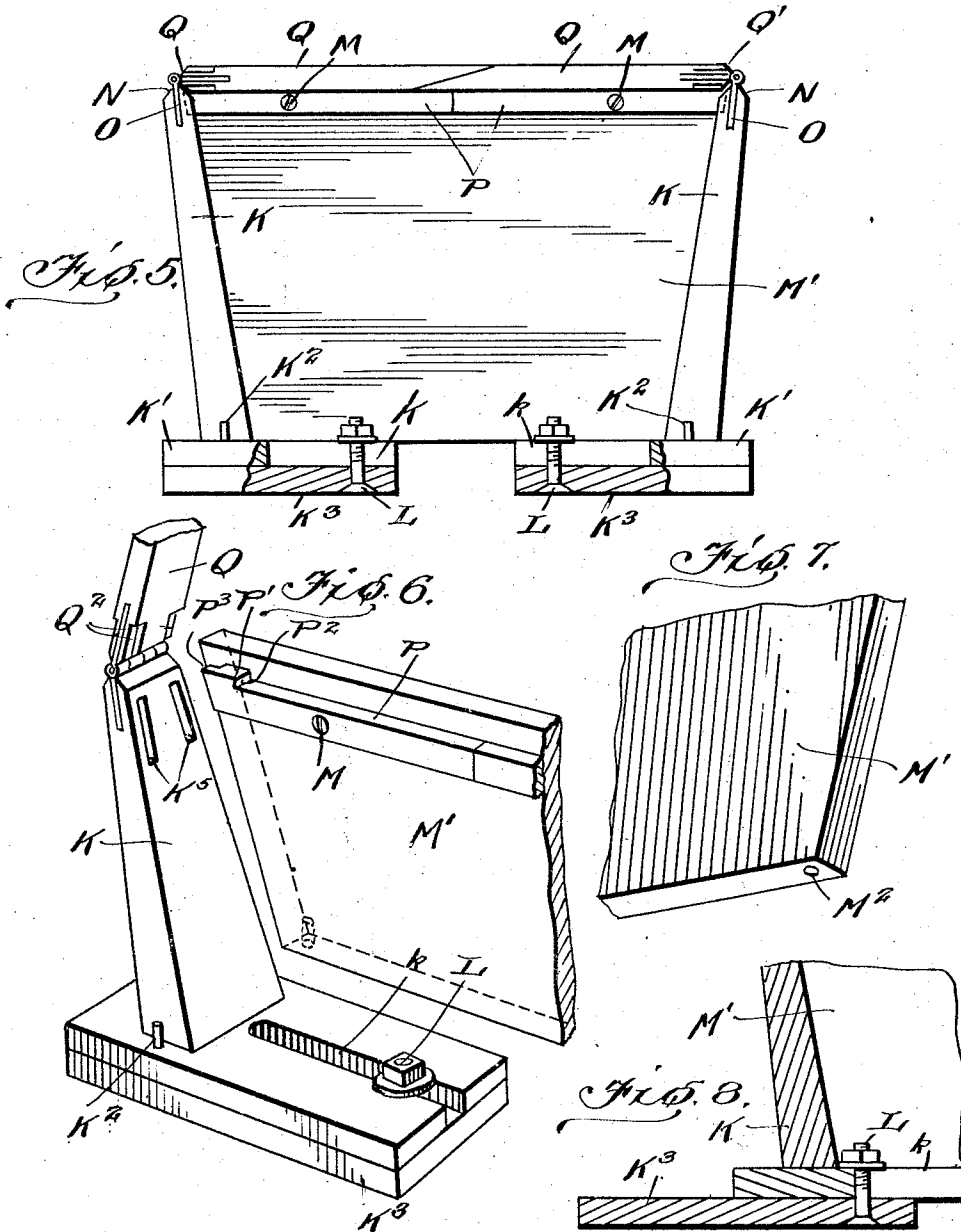
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UNITED STATES PATENT OFFICE.

WILLIAM T. REDMAN, OF BRENTWOOD, MARYLAND.

COLLAPSIBLE CORE FOR CONSTRUCTING HOLLOW CONCRETE WALLS.

994,336.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed December 24, 1910. Serial No. 599,138.

To all whom it may concern:

Be it known that I, WILLIAM T. REDMAN, a citizen of the United States, residing at Brentwood, in the county of Prince George and State of Maryland, have invented certain new and useful Improvements in Collapsible Cores for Constructing Hollow Concrete Walls; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in collapsible cores for use in constructing hollow concrete or composition walls and the object in view is to produce a simple and efficient device of this nature which, when the wall is formed, may be readily taken apart and removed and again used.

The invention comprises a simple and efficient device of this nature having various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a side elevation showing a plurality of collapsible molds adjusted in position for use. Fig. 2 is a vertical sectional view through a section of the wall, showing the manner of supporting the collapsible core member. Fig. 3 is a cross sectional view through one of the core members. Fig. 4 is a bottom plan view with the extensible portion illustrated in Fig. 3 removed. Fig. 5 is a sectional view of a slightly modified form of the invention. Fig. 6 is a detail perspective view of the modified form showing the manner of fastening the parts of the mold together. Fig. 7 is a detail perspective view of a portion of one of the sides of the collapsible core and showing the hole therein for the reception of the dowel pin, and Fig. 8 is an enlarged detail sectional view through one corner of the modified form of the mold.

Reference now being had to the details of the drawings by letter, A, A designate the opposite side walls of the collapsible core illustrated in Figs. 1 to 4 inclusive and in

which it will be noted that the ends A' of said sides are tapering and rounded as at A² and as designated by the shading in Fig. 1 and as illustrated in Fig. 4 of the drawings. A top, designated by letter B, rests upon the cleats B' fastened to the ends H of the cores and projecting from each end H is a flange or block C, slotted as at C' and which flanges or blocks are of lengths equal to the narrowest space intermediate the inner surfaces of the hollow wall D, as shown clearly in Fig. 2 of the drawings. A bolt E passes through an aperture in the extensible block E' and also through the slot C' and is held in an adjusted position by means of the nut F. By the provision of said extensible block E', the latter may be held in different positions according as may be desired at the corner of a building where two blocks come together at angles to each other or where it may be desired to cause wider keys to be formed between the spaces occupied by the cores in building up the wall. Said ends H, as shown in Fig. 2 of the drawings, are wedge shaped and each has an eye H' upon its inner face to which a rope or cord H² is fastened, forming means whereby the sides and ends, when disconnected, may be held from falling. In order to hold the opposite sides securely in place, a turn buckle W is provided, the screws in the ends of which pass through apertures in the opposite walls. In order to prevent the ends H from moving downward, I provide a button X, which is mounted upon a pivotal pin X' and is adapted to turn into the recesses X², shown in dotted lines in Fig. 2 of the drawings.

In Fig. 5 of the drawings, I have shown a slight modification of my collapsible mold showing the ends and sides square instead of round and in which the end pieces K are shown as tapering and each having a flange or block K' at its lower end from which rises a dowel pin K², shown clearly in Figs. 5 and 6 of the drawings, said flange or block being longitudinally slotted as at k, and also an extensible block K³ apertured for the reception of the bolt L which also passes through said slot k. The upper end of each inclined wall K of the core has a double taper as at N and one wing O of a hinge is fastened to the top of said end and the other fastened to a top section Q which is also provided with a double taper Q' at its inner end. Each end piece K is provided with a top section Q, similarly hinged as

shown in Fig. 5 of the drawings. Fastened upon pivotal pins M which project from the sides M' of the modified form shown in Figs. 5 and 6 is a locking lever P having its end P' widened forming a shoulder P², clearly illustrated in Fig. 6 of the drawings, and which widened portion is adapted to engage a recess Q² formed in the under edge of the top section Q to securely hold the latter from longitudinal movement. The extreme end, designated by letter P³, of the locking lever P is contracted and is adapted to engage a slot K⁵ formed in the inner inclined face of the end piece K, thereby preventing a lateral movement to the side of the core to which the lever is fastened when the parts are adjusted in place.

By the provision of the double bevel formed at the upper ends of the end pieces K, it will be noted that the end pieces may be reversed if desired with the projecting flanges K' extending toward each other and, when in such adjusted positions, the top sections will readily fold toward and overlap each other in the same manner as shown in Fig. 5.

Each side M' has a hole M², as shown clearly in Fig. 7 of the drawings, in its lower edge which is adapted to engage over the dowel pin in the manner shown by dotted lines in Fig. 6, thereby holding the bottom of the side from lateral movement. When the top sections Q are positioned as shown in Fig. 5, they will be supported by the two locking levers and serve to hold the latter in proper locking relation in the parts they engage.

In operation, the collapsible core is put together in the manner shown and any number placed end to end in the manner illustrated in Fig. 1 of the drawings. The flanges or blocks K' on the extension members held thereto by means of bolts are adjusted to fill the spaces intermediate the lower ends of the cores and the concrete or composition filled in about the cores. As the concrete is poured in about the cores, the spaces intermediate the ends will be filled forming the keys, one of which is shown in section in Fig. 1 of the drawings. After the concrete or composition has set, the core may be collapsed by moving the top and applying pressure to the tops of the end pieces which are tapering upon their opposite edges or wedge shaped and which will allow the same to be driven downward and allow the side walls to be removed from the faces of the concrete or composition. In the event of the side walls being held fast to the face of the concrete or composition, said locking levers P may be swung upon their pivot and fulcrumed upon the edge of the concrete and serve as means for assisting in loosening the sides from the surface of the

concrete. After the ends have been removed, it will be understood that the side walls may be moved, toward each other and the parts of the core which are fastened together by the chain or rope, be withdrawn from the space and set up upon the top of the wall thus commenced to further build up another course. After the first course has been constructed and in adjusting the core to build up the wall higher, the lower edges of the sides will rest upon the top of the wall as built up, as shown in Fig. 2, and form a support therefor, while the flanges of blocks upon the ends of the core will occupy the narrow space intermediate the inner surface of the hollow wall and which surfaces will not interfere with the removal of the ends of the core when the concrete is set.

What I claim to be new is:—

1. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending portions of said plates and overhanging the sides thereof.
2. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending portions of said plates and overhanging the sides thereof, an extensible member fastened to said plate, and means for holding said member in an adjusted position.
3. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending portions of said plates and overhanging the sides thereof, an extensible member fastened to said plate, means for holding said member in an adjusted position, dowel pins rising from the projecting portion of said plate and adapted to engage holes in the side walls.
4. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending

portions of said plates and overhanging the sides thereof, an extensible member fastened to said plate, means for holding said member in an adjusted position, dowel pins rising from the projecting portion of said plate and adapted to engage holes in the side walls, locking levers pivotally mounted upon the side walls and adapted to engage slots formed in the inner face of the ends of the core.

5. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending portions of said plates and overhanging the sides thereof, an extensible member fastened to said plate, means for holding said member in an adjusted position, dowel pins rising from the projecting portion of said plate and adapted to engage holes in the side walls, locking levers pivotally mounted upon the side walls and adapted to engage slots formed in the inner face of the ends of the core, a top to the mold having a recess therein and adapted to be engaged by said locking levers.

6. A collapsible core for building concrete and composition walls, having its opposite side and end walls inclined and wedge-shaped, a plate fastened at the bottom of each

end wall and extending beyond the opposite upright edges of the latter, the bottoms of the opposite side walls contacting the upper surfaces of said extending portions of said plates and overhanging the sides thereof, an extensible member fastened to said plate, means for holding said member in an adjusted position, dowel pins rising from the projecting portion of said plate and adapted to engage holes in the side walls, locking levers pivotally mounted upon the sides and having one end contracted and adapted to engage a slot in the end of the core, the upper edge of the lever having a shoulder, a top hinged to the end wall and provided with a recess for the reception of said shoulder.

7. A collapsible core for building concrete and composition walls having its opposite walls inclined and end walls inclined and wedge shaped, a projection upon each end wall at its lower end extending beyond the face and edges of the end, means for holding the side walls upon said extension of the end wall, the top of each end having a double bevel, a top section having a double bevel end hinged to the top of the end section.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM T. REDMAN.

Witnesses:

A. L. HOUGH,
J. W. MOYER.