S. F. WAZBINSKI.

COLLAPSIBLE CORE FOR CONCRETE MOLDS.

APPLICATION FILED APR. 15, 1916. RENEWED MAY 22, 1917.

1,242,092. Patented Oct. 2, 1917.

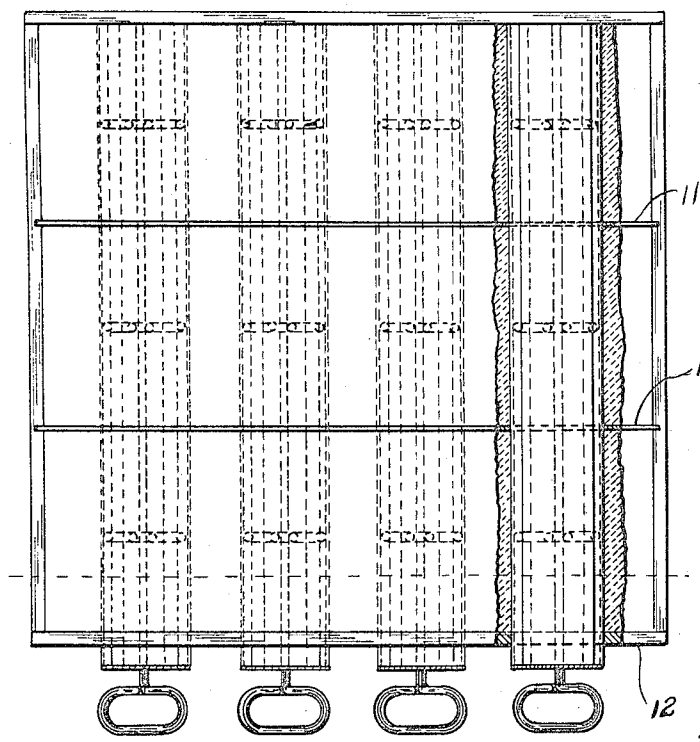

Fig. 1.

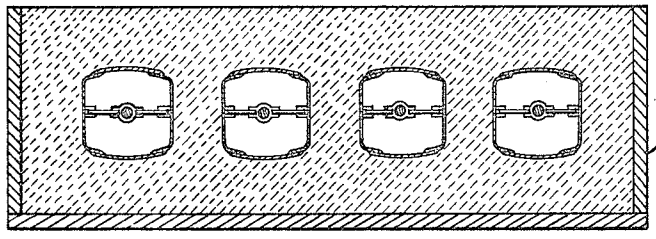

Fig. 2.

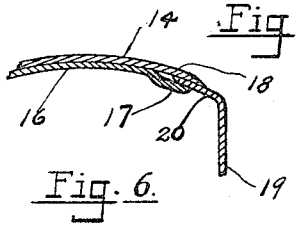

Fig. 6.

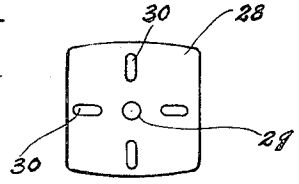

Fig. 5.

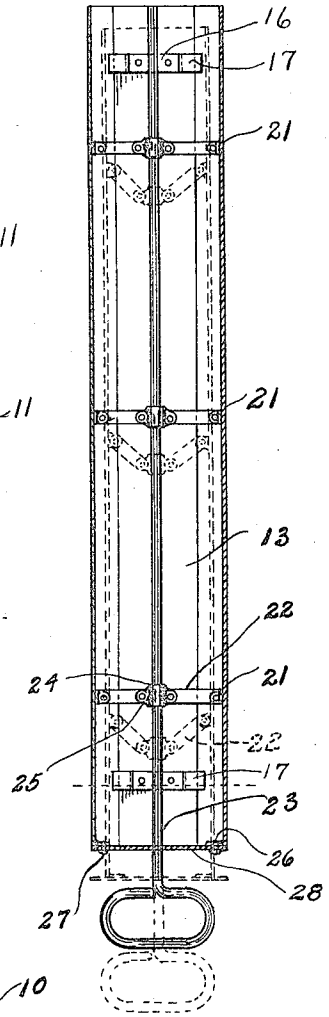

Fig. 4.

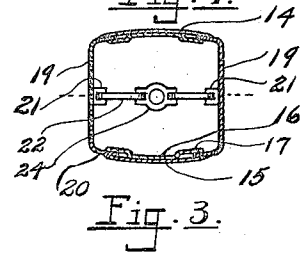

Fig. 3.

Inventor

Stanley F. Wazbinski.

Witnesses

Harriet A. Monroe.

Frank C. Seaman.

Edward R. Monroe.

Attorney

UNITED STATES PATENT OFFICE.

STANLEY F. WAZBINSKI, OF BAY CITY, MICHIGAN.

COLLAPSIBLE CORE FOR CONCRETE-MOLDS.

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Application filed April 15, 1916, Serial No. 91,408. Renewed May 22, 1917. Serial No. 170,272.

To all whom it may concern:

Be it known that I, STANLEY F. WAZBINSKI, a citizen of the United States of America, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Collapsible Cores for Concrete-Molds; 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.

This invention relates to an improvement in collapsible cores for concrete molds.

The primary object of the invention is to provide a core which may be conveniently handled and in which the sections constituting the same may be quickly collapsed in order to effect their removal from the mold, the sections being of such construction that the opening formed by the core is smooth throughout its entire length.

A further object of the invention is to provide a collapsible core consisting of a plurality of connected sections in which the sections, while movable with respect to each other, will at all times contact whereby to house the operating mechanism and exclude foreign matter.

In the drawings

Figure 1 is a top plan view partly in section of a mold with the cores arranged therein,

Fig. 2 is a transverse section taken through the mold,

Fig. 3 is a section taken transversely through one of the cores,

Fig. 4 is a section taken longitudinally through one of the cores,

Fig. 5 is a detail view of the plate which forms a closure for one end of the core,

Fig. 6 is a detail sectional view illustrating the manner in which the side sections and the top and bottom sections are connected.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion and minor details without departing from the spirit or sacrificing any of the advantages of the invention.

While the core which forms the subject-matter of the present invention is particularly adapted for use in molding cement blocks, the same may be used for other purposes, a concrete block mold being illustrated for the sake of convenience.

In the drawings, 10 designates the mold which consists of a substantially rectangular box provided with transversely extending division plates 11 whereby a series of blocks may be formed at a single pouring operation. The wall 12 of the mold box is provided with a series of openings of a number consistent with the width of the box through which the cores 13 are inserted.

The cores 13 consist of top and bottom sections 14 and 15 which are concaved and which have arranged on their inner concaved faces, a plurality of clips 16 of a number consistent with the length of the core. These clips have their terminals 17 offset for a purpose which will be hereinafter described. The outer edges 18 of the members 14 and 15 overlie the offsets 17 of the clips and said edges are beveled to produce a relatively sharp edge.

The side members of the core consist of elongated flanged plates 19, the flanges 20 of said plates, having their edge portions beveled. Arranged on the inner faces of these plates, at intervals, are bifurcated lugs 21 which pivotally support a plurality of links 22. An operating bar 23 is provided, said bar carrying a series of collars 24 which are provided with bifurcated extensions 25 which receive the terminals of the links 22, said links thereby having a pivotal connection with the bar and with the side pieces 19 of the core.

The flanges 20 of the side pieces 19 extend beneath the edges of the top and bottom plates 14 and 15 and are embraced by the offsets of the clips 16. By this construction reciprocation of the bar 23 in one direction will draw the plates 19 inwardly and at the same time have a tendency to draw the upper and lower plates toward each other. Each of the upper, lower and side plates is provided with an inwardly disposed flange 26 and each of these flanges carries a guide screw 27. A plate 28 is fitted against the flanges 26, being formed with a central aperture 29 through which the bar 23 passes, and a plurality of slots 30 which receive the guide screws 27.

In operation, the cores are inserted

through the openings formed in the wall 12 of the mold until their open ends contact with the opposite wall of the mold. Assuming that the cores are in their contracted position as indicated in dotted lines in Fig. 4, the bar 23 is moved forward extending the arms 22 and forcing the side walls of the core outwardly. With the cores in their extended position, the concrete or other material is poured within the molds about the cores and allowed to set.

After the concrete has set, the bar 23 is drawn outwardly swinging the links 22 on their pivots and drawing the side walls 19 inwardly. As these side walls are forced inwardly the sharp edges of the upper and lower members of the mold wipe the flanges 20 of the side plates 19. When the core sections are contracted, the guide screws 27 ride inwardly in the slots 30 of the plate 28 and the core may be removed from the mold.

Particular attention is called to the fact that the clips 16 hold the flanges of the side members snugly against the inner concaved faces of the top and bottom members, the sharp edges of the top section scraping said flanges as the sections are moved, providing a clean joint at all times.

The many advantages of construction of this character will be clearly apparent as it will be noted that the same provides an effective core in which the sections which constitute the same may be readily expanded and contracted and in which the working elements which effect the expansion and contraction do not come in contact with the concrete or other material. The core is closed, both when it is expanded and contracted, thereby preventing material from passing through the side wall of the core.

The device may be made in any desired length and the number of connections between the operating bar and the side walls of the mold may be varied. It will also be seen that the device is such that it may be easily and economically manufactured and the various parts readily assembled.

What is claimed is:—

1. A core comprising top, bottom and side members, the edges of said members being disposed in overlapping relation, means for collapsing and expanding said members, flanges carried by each of the top, bottom and side members adjacent one end of the core, guide pins supported by said flanges, and a plate constituting a closure for the end of the mold and provided with slots to receive said pins.

2. A core including top, bottom and side members, the longitudinal edges of said members being disposed in overlapping relation, means housed by said members for drawing the same toward and from each other, whereby to expand and contract the core, said means including a bar extending beyond one end of the core, flanges carried by each of the top, bottom and side members adjacent said end, guide pins supported by said flanges and a plate constituting a closure for the end of the mold and formed with an aperture through which said bar extends, said plate being provided with slots to receive said guide pins, whereby the members may move with respect to each other.

3. A core comprising top, bottom and side members, clips attached to the inner side of the top and bottom members, side members each having an upper and lower flange slidably received between the clips and the top and bottom members, the edges of the top and bottom members being beveled to provide a smooth joint between the top, bottom and side members, and means for collapsing and expanding the said members.

In testimony whereof I affix my signature.

STANLEY F. WAZBINSKI.