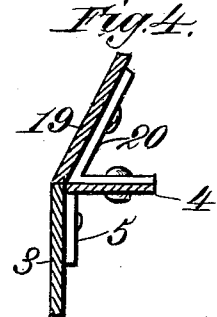
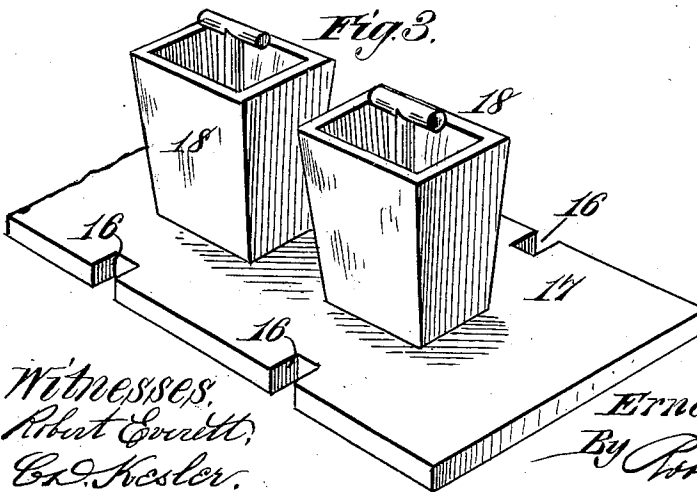
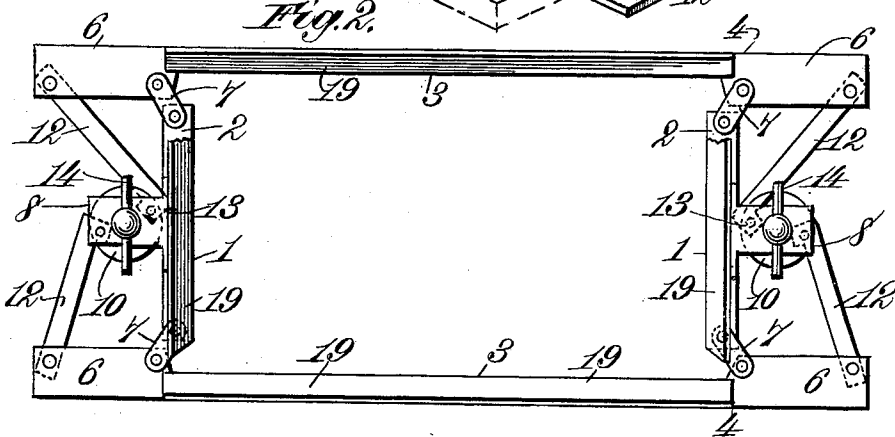
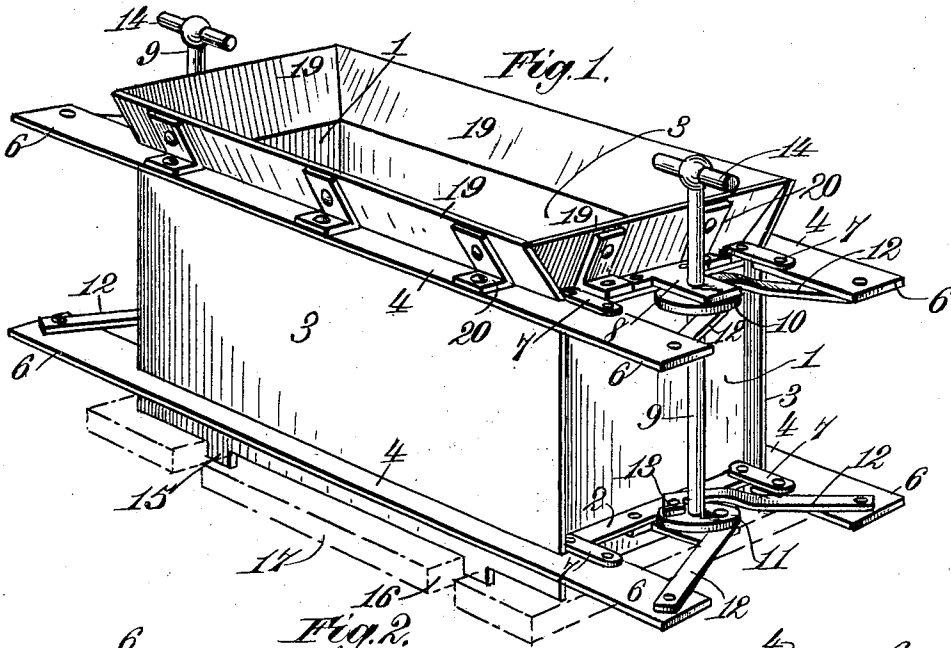


No. 863,757.

PATENTED AUG. 20, 1907.

E. O. RICKS.
CONCRETE BLOCK MOLD.
APPLICATION FILED AUG. 28, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

ERNEST O. RICKS, OF BIRMINGHAM, ALABAMA.

CONCRETE-BLOCK MOLD.

No. 863,757.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed August 23, 1906. Serial No. 332,370.

To all whom it may concern:

Be it known that I, ERNEST O. RICKS, a citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented new and useful Improvements in Concrete-Block Molds, of which the following is a specification.

My invention relates to a mold box for concrete blocks which shall possess the advantage of positively holding the sides thereof in true rectangular position without unnecessarily complicating parts or increasing cost of manufacture.

One difficulty encountered in the operation of most of the molds now on the market, is that they are liable to yield and throw the block produced therein out of true rectangularity. To overcome this, I provide an adjustable box, all the parts of which, excepting the pallet, are linked or hinged together in such a manner that all move simultaneously to open or close the box. During operation, each part moves always in parallel planes which are maintained at right angles to the planes of movement of the two adjacent body portions by the link connections.

In its simplest form, my invention comprises four box sections connected by links and carrying two oppositely disposed actuators to which certain of the links are connected and by which they are moved to open up or close and lock the box in its operative position. The box, in its operation, is independent of the pallet or bottom upon which it may be placed.

My invention further comprises certain other features of novelty hereinafter more particularly described and pointed out in the claims, reference being had to the accompanying drawings, in which:—

Figure 1, is a perspective view of my mold box in its closed position. Fig. 2, is a top plan view of the box in its open position. Fig. 3, is a detail view of the pallet and cores. Fig. 4, is a sectional view to the side of the box illustrating the manner of connecting the bars and hopper irons to the sides of the box.

Similar reference numerals refer to similar parts throughout the drawings.

As illustrated, the mold box comprises end plates 1 provided near their top and bottom outer edges with angle-irons 2. The sides 3 of the box have connected thereto near their upper and lower edges, bars 4. These bars extend a distance beyond the sides of the box at each end, a portion 5 of the bar being cut and bent downwardly, as seen in Fig. 4, and bolted or riveted to the side. The extension portions 6 of these bars stand in a plane with the adjacent angle-irons 2 on the ends 1. The angle-irons of each end 1 are connected at their ends by a link 7 to the inner end of the adjacent side extension 6. These links are swiveled on bolts or rivets which pass through the angle-irons and the ex-

tensions. It will thus be seen that each end is swivelly connected to the side bars 4 by an upper and a lower pair of swiveling links 7. Near the center of the angle-irons 2 of each end plate 1, I bolt bearing plates 8 which serve as journals or bearings for a pair of oppositely disposed vertical shafts 9. Each shaft carries two horizontal cranks, illustrated as circular plates 10 and 11, the plate 10 being placed below the upper bearing 8 and the plate 11 above the lower bearing 8. The shaft is thus held against vertical play. The plates 10 are shown as circular plates, though this is not essential. I connect each plate 10 and 11 by a pair of swiveling links 12 to the outer ends of the adjacent extensions 6. The inner ends of these links are angled at 13 and connected to the plates so that, when the shafts 9 turn the plates 10 and 11 to close the box, the point of pivotal connection for each bar will stand with such relation to the axis of the shaft 9 that no amount of outward pressure on the sides of the box will permit the latter to open. In other words, when the shafts 9, at each end of the box, are turned by their handles 14, a quarter revolution from the position shown in Fig. 2, the ends 13 of the arms 12 swing to or past a dead center so that the box will be positively locked in its closed position. In this figure the dotted lines indicate the position of the sides when the box is closed, and from this it will be evident how the turning of the actuators 9 causes the box sections to open outwardly simultaneously so as to leave the molded block on the pallet, the outward movement of the box sections in parallel planes reduces to a minimum the danger of breaking or injuring the block. Each side portion 3 may be provided with one or more lugs 15 adapted to enter the centering recesses 16 in the pallet 17. One or more cores 18 may be connected to the pallet in any suitable manner.

To facilitate the introduction of the composition into the mold box, I provide hopper-irons 19 which are secured around the top edges of the box by angle-irons 20 which are bolted to the hopper-irons and to the bars 4 or the angle-irons 2, as the case may be.

From the foregoing it will be seen that, according to my preferred construction, the sides and ends of my box are positively connected together by four pairs of swiveling link arms at each end, the inner or short pairs of arms coacting with the outer or longer pairs of arms to hold the sides and ends in true rectangularity. This double connection between the sides and ends gives great rigidity to the box without increasing its weight or necessitating the provision of an outer frame or the application of bracing or locking means.

It will be obvious that the means, by which this novel connection of the ends and sides is made, may be varied, as only one or two pair of links may be used at each end, and therefore I do not limit myself to the

details of construction which represent merely the preferred embodiment of my invention as it is now used in practice.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A mold box adapted to be placed on a pallet and comprising end pieces, sides having portions which extend beyond each end, two pairs of swiveling links directly connecting said sides to each end, one pair only of links at each end being connected to an actuator whereby they are moved to open or close the box.

2. A mold box of the character described, comprising a bottom, end pieces, side pieces having upper and lower portions which extend beyond the end pieces on each side thereof, two pairs of swiveling links which connect the upper portions of said sides to the end piece, similar pairs of links which connect the lower portions of the sides to each end piece, and a common actuator for a corresponding upper and lower pair of links at each end, whereby the latter are moved to open or close the box.

3. A concrete mold box comprising a pallet and cooperating sides and ends mounted thereon, and means to swivelly connect each end at two points to each side, and means to move the sides and ends simultaneously outwardly or inwardly comprising a pair of actuators, one carried by each end and being adapted to act on the swiveled connecting means at its respective end of the box, said actuators having handles and being adapted to serve as a means for lifting the box.

4. In a mold box of the character described, sides having upper and lower end extensions, ends which cooperate with said sides, an actuator connected to each end, and a pair of links connecting each pair of upper and lower extensions to said actuator, as and for the purposes described.

5. In a mold box of the character described, cooperating sides and ends formed of metallic plates, angle-irons bolted along the top and bottom edges of said plates, the angle-irons on one pair of plates extending beyond the other plates, and a pivoted link connecting the outer end of each of said latter angle-irons to the adjacent end plate near a corner thereof, and means to move said links to adjust said side and end plates simultaneously inwardly or outwardly.

6. In a mold of the character described, a pallet, cooperating ends and sides mounted thereon, bars connected along the top and bottom edges of the sides and extending beyond the same, short links connecting the extension portions of said bars to each end at or near the four corners thereof, a shaft journaled in each end, and links connecting the outer ends of said extension portions to cranks on said shafts, as and for the purposes described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ERNEST O. RICKS.

Witnesses

THOS. J. WINGFIELD,
R. D. JOHNSTON.