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MOLD FOR CONCRETE BLOCKS.
APPLICATION FILED MAR. 18, 1920.

1,391,508.

Patented Sept. 20, 1921.

Fig. 1.

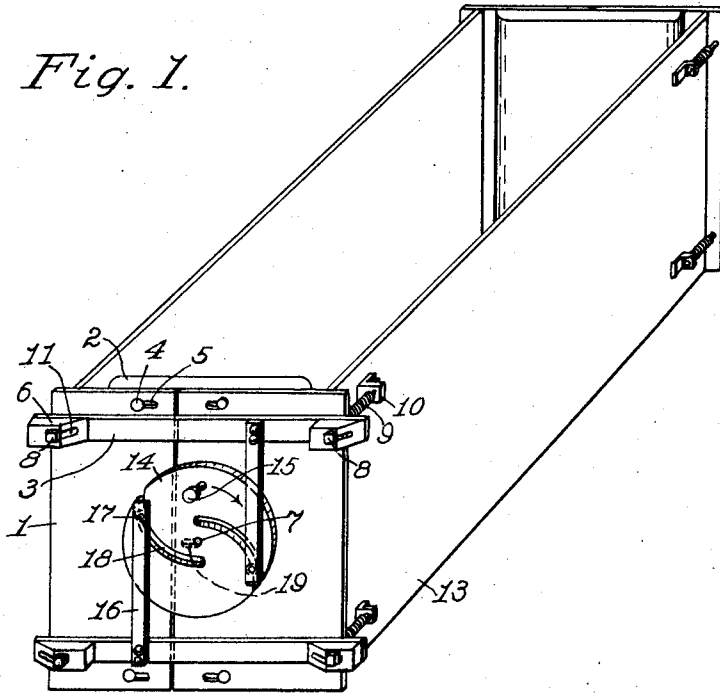
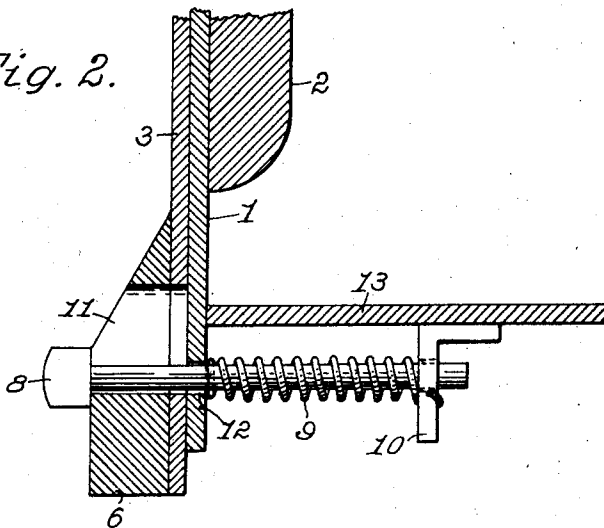


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MOLD FOR CONCRETE BLOCKS.

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Specification of Letters Patent. Patented Sept. 20, 1921.

Application filed March 18, 1920. Serial No. 366,844.

To all whom it may concern:

Be it known that I, FRANK A. ROOSA, a citizen of the United States of America, and a resident of Orange township, Blackhawk county, Iowa, have invented certain new and useful Improvements in Molds for Concrete Blocks, of which the following is a specification.

My invention relates to improvements in molds for concrete blocks, and the object of my improvement is to supply a mold, open at top and bottom, and comprising side and end plates, and having mechanism for elastically interlocking these plates together, operable also to release them from each other, while spreading them apart both longitudinally and transversely, to thereby become disengaged from the sides and ends of a freshly formed concrete block therein, simultaneously.

I have accomplished the above object by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawing, in which like numerals of reference denote corresponding parts, and in which Figure 1 is a perspective view of my improved mold as completely assembled, with its plates interlocked, and Fig. 2 is an enlarged detail horizontal section of elastically interlocked side and end plates.

My improved mold for the forming of concrete blocks is made up of elongated rectangular equally spaced side plates 13, and of sectional end-plates 1, the sections whereof are in the same vertical plane, and their outer vertical edges projected beyond the outer walls of said side plates. The top and bottom edge parts of the end plate sections may have horizontal slots 5 to slidably receive the headed pins 4 projected outwardly from abutting plates 2 inside the mold, when desired, the plates 2 being of requisite thickness to provide inwardly extending bosses or projections adapted to form vertically troughed broad recesses in the ends of a block when molded.

Referring now to said Fig. 2, I have provided elastically-connected corner fastening-means for the said side and end plates. Horizontal bars 3 are positioned against the upper and lower parts of the outer faces of the end plates 1, for slidable reciprocations thereover. Fixed on the outer faces of the end parts of these bars or made integral

therewith are bosses 6, of which parts are of even thickness and parts inclined toward the bars. In each bar the bosses have their inclined surfaces directed the same way, but the inclined surfaces of the bosses on each upper bar are inclined oppositely to the direction of inclination of the inclined surfaces on the bosses on the lower bars. The bosses have medial longitudinal slots 11 which intersect parts of both their flat and their inclined surfaces, and these slots are placed over orifices 12 in the plate sections 1.

The numeral 10 denotes brackets fixed on the outer walls of the side plates 13 near the outwardly projected end parts of the end plate sections 1, and have orifices alined with said orifices 12. A headed pin 8 traverses the alined and communicating slot 11 and orifice 12, also the orifice in said bracket 10, and a helical spring 9 is connected between said pin 8 and said bracket, operating to yieldingly elastically move the section from the bracket, whereby, when the boss 6 is in the position illustrated, the pin head is engaged with the outer flat surface of the boss, the spring under extension, and the section 1 held tightly in contact with the abutting vertical edge of the side plate 13.

The numeral 14 denotes a disk placed centrally over and in contact with the outer face of the end sections 1, and may be connected to and supported by one of said sections by a pin 7 projected from the inner face of the center of the disk into a short horizontal slot or groove 19 in one of the sections 1, both pivotally and slidably. A handle 15 on said disk permits it to be manually rocked to and fro. In the outer face of the disk are a pair of eccentric curved grooves 18, directed oppositely, and positioned on opposite sides of the pin 7, the slots extending to the circumferential edge of the disk.

Like vertical arms 16 are fixed on the bars 3 and have pins 17 extending into said curved grooves 18. When the disk is rocked in one direction the walls of the grooves 18 push the arms to move the bars 3 oppositely to draw the end sections 1 together, the heads of the pins 8 being caused to mount upon the higher flat surfaces of the bosses, whereby the springs 9 are extended, and the end sections held engaged with the ends of said side sections.

Opposite rocking of the disk, reverses the

above actions, the pin heads riding down the inclined surfaces of the bosses, so that a freshly formed concrete block in the mold is entirely released, so that the mold may be removed without damaging the block.

It is to be understood that slight changes in the forms, proportions and arrangements of the parts of the mold and its actuating means may be effected without departing from the scope of my invention.

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

1. A mold, comprising spaced side-plates, end-plates positioned across the ends of and projecting laterally beyond the side-plates, longitudinally-slotted wedge-blocks movable laterally across the projecting parts of the end-plates, these projecting parts having orifices positioned in communication with said slots, headed pins traversing said slots and orifices with their heads riding on the outer slopes of said wedges, and tension springs connected to said side-plates and pins.

2. A mold, having side-plates and end plates movably connected together at their abutting parts, elastic tensioning means engaged between the side plates and end-plates, and means movably mounted on the end-plates and movably connected to the side-

plates operable to shift said side-plates to and from each other transversely.

3. A mold, comprising spaced side-plates, end-plates each formed of two sections alined in the same plane and movable to and from each other laterally with the outer part of each projecting beyond the abutting end of the adjacent side-plate and having orifices in the projection at top and bottom, brackets on the outer walls of said side-plates having orifices in line with the orifices in said projections, a plate positioned along the inner faces of each pair of said sections covering their joint and loosely connected thereto for relative lateral movements only of the sections, wedge-blocks mounted upon the outer faces of said end-plates for lateral movements only thereover and having longitudinal slots in communication with the said orifices in the side parts of said sections, headed pins whose heads ride upon the wedge-blocks and which extend through the said slots, said orifices in said projections and the orifices in said brackets, coiled tension springs connected between said brackets and pins, and mechanism for shifting said wedge-blocks to and fro laterally.

Signed at Waterloo, Iowa, this 1st day of March 1920.

FRANK A. ROOSA.