G. C. HENKLE.

MOLD FOR MAKING REINFORCED CONCRETE BLOCKS.

APPLICATION FILED MAR. 29, 1913.

1,109,753.

Patented Sept. 8, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

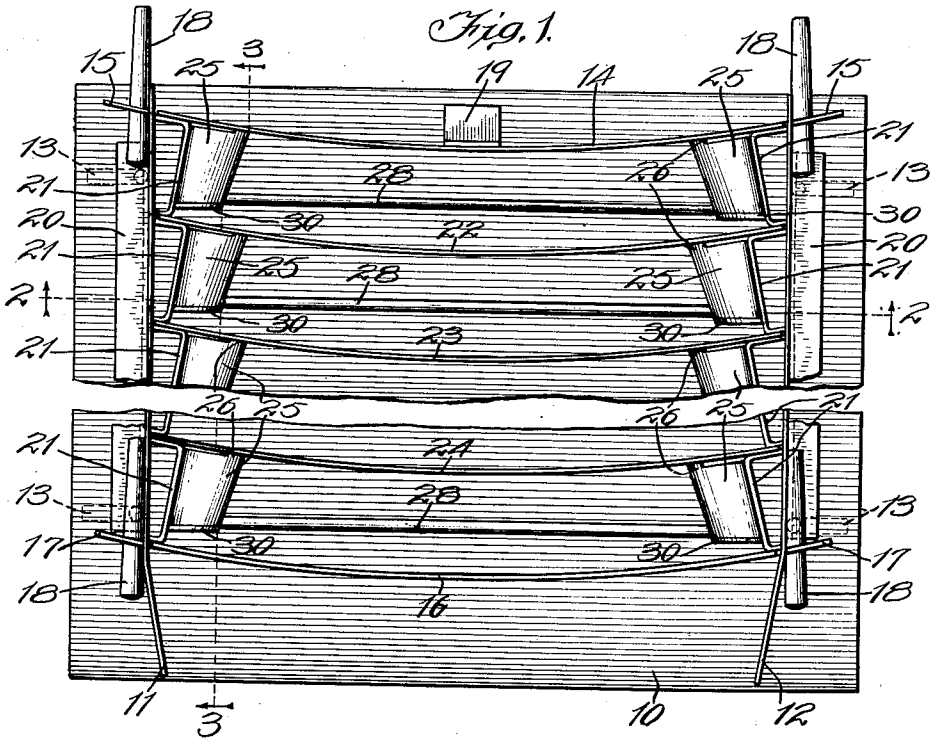
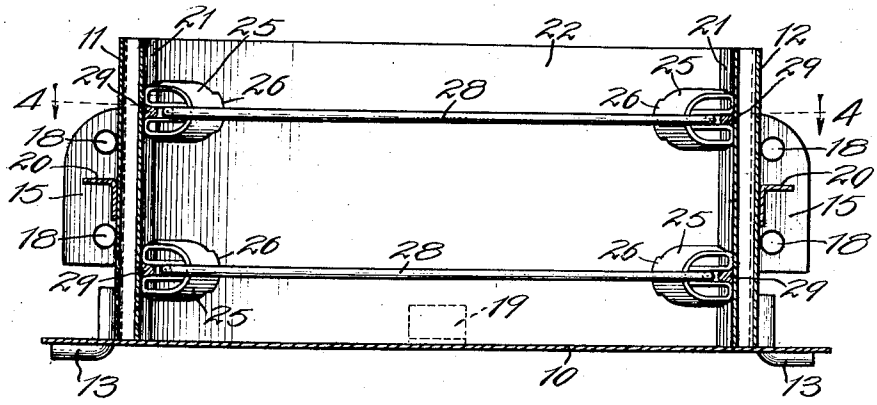


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

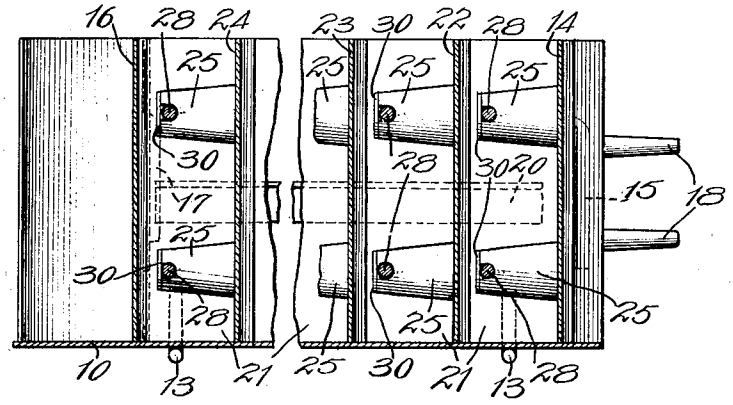


Fig. 4.

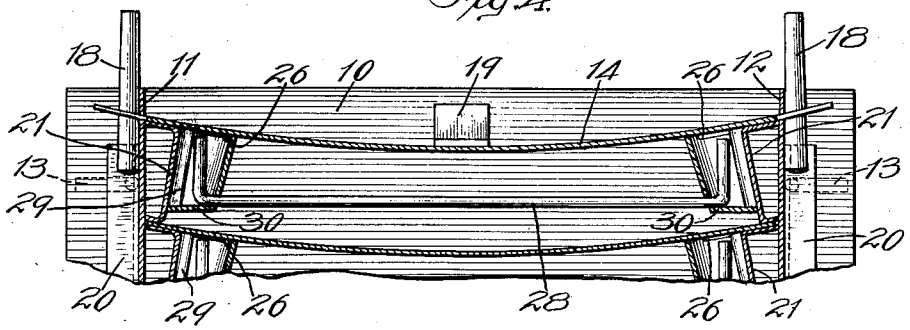


Fig. 5.

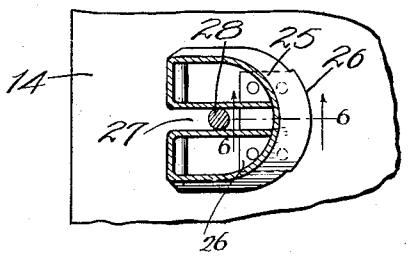
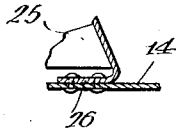


Fig. 6.



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UNITED STATES PATENT OFFICE.

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MOLD FOR MAKING REINFORCED-CONCRETE BLOCKS.

1,109,753. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed March 29, 1913. Serial No. 757,639.

To all whom it may concern:

Be it known that I, GUY C. HENKLE, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Molds for Making Reinforced-Concrete Blocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a mold for making reinforced concrete blocks and has for its object to improve the construction and arrangements of devices of this sort in sundry respects hereinafter pointed out.

More particularly my invention has for its object the provision of a mold for making the form of block shown, described and claimed in an application filed by Charles B. Hurst, Serial No. 757,655 on March 29, 1913, which block has embedded therein one or more reinforcing rods with their ends bent substantially at right angles and lying in recesses formed in the ends of the block so that adjacent blocks may be firmly tied together by links which engage the bent ends of the rods. The means by which I have accomplished these objects are illustrated in the accompanying drawings and are hereinafter specifically described. That which I believe to be new is set forth in the claims.

In the drawings,—Figure 1 is a top view, partly broken away, of my improved mold; Fig. 2 is a section taken on line 2—2 of Fig. 1; Fig. 3 is a section taken on line 3—3 of Fig. 1; Fig. 4 is a section taken on line 4—4 of Fig. 2; Fig. 5 is an enlarged detail of one of the tie rod supporting members, being a section through such member taken on a line extending transversely of the mold; and Fig. 6 is a detail, being a partial section on line 6—6 of Fig. 5.

Referring to the several figures of the drawings,—10 indicates a base-plate of sheet metal or of any other suitable material.

11—12 indicate plates provided with transversely extending pins 13 at one edge adapted to be inserted through suitable openings in the plate 10 for holding the plates 11 and 12 firmly relative to said plate 10.

14 indicates a curved plate provided with wings 15 adapted to pass through suitable slots in the ends of the plates 11—12, as best shown in Fig. 4.

16 indicates a curved transverse plate at the other end of the mold provided with wings 17 also adapted to pass through suitable slots in the plates 11—12.

18 indicates pins passing through suitable openings in the wings 15—17 adapted to hold the plates 11—12 firmly in position relative to the plates 14—16.

19 indicates a bracket mounted upon the base-plate 10 against which the plate 14 bears.

20 indicates angle irons secured in any suitable manner to the plates 11—12 for the purpose of strengthening such plates.

As best shown in Fig. 1 each of the plates 11—12 is provided with a plurality of blocks 21 mounted upon the plate and spaced a short distance apart thereon. In the construction shown these blocks 21 are hollow members formed of sheet metal, but they may be otherwise constructed as may be desired. Each of these blocks 21 is thicker at its forward edge than at its rear edge, as shown in Figs. 1 and 4.

22—23—24 indicate curved plates extending from one to the other of the plates 11—12 with their ends in position between the blocks 21. The plates 14—16—22 and 23 form the side members of each molding receptacle, and the plates 11—12 the end members of such receptacles.

25 indicates supports mounted on the rear faces of the plates 14, 22, 23 and 24 at their ends, each of said supports being mounted upon its plate through the medium of a lip 26 which, as shown in Fig. 6, is riveted or otherwise secured to the plate. Each of the supports 25 is substantially in the form of a segment of a frustum of a cone with the large end forward. Each of the supports 25 is provided with a groove 27 in its outer face, whereby two oppositely disposed supports 25 at opposite ends of one of said plates are adapted to support a tie rod 28, the turned ends of which rest in said grooves 27, the outer ends of said supports being slotted for a short distance, as best shown in Fig. 3, for the reception of the tie rods. In the construction shown the supports 25 are formed of sheet metal, but I do not restrict myself to this construction except as hereinafter specifically claimed.

29 indicates wedge-shaped members mounted upon the blocks 21 in position to enter the outer edges of the grooves 27 when the parts are assembled for the molding op-

eration, said wedges having the effect of separating the grooves 27 slightly beyond the normal for the purpose hereinafter set forth.

30 indicates plates mounted on the blocks 21 at right angles to the plates 11—12 in position to cover the ends of the grooves 27 and of the hollow supports 25.

In practice with the parts assembled as shown in Fig. 1 the several chambers of the mold are filled with concrete in any suitable manner and the blocks formed thereby are permitted to set. Thereupon the pins 18 are removed and the plates 11—12 are turned down laterally upon the pins 13 freeing the transverse plates of the mold from the side-plates. When the wedge-shaped members 29 are withdrawn in this manner from the grooves 27 the resiliency of the supports 25 causes contraction to normal condition, thus freeing the supports 25 from contact with the concrete. In case the resiliency of the supports 25 is not of sufficient force to free the support from the block a slight pressure upon the outside faces of said supports by means of a suitable tool readily serves to loosen the support from the block. By reason of the support 25 being mounted along its inner face only by means of the lip 26 it will be readily understood that the support can be forced very slightly outward away from the block if necessary in order to free the support from the block. The concrete blocks can then readily be removed from the transverse plates, the turned ends of the tie rods 28 being free to slip out of the grooves 27. In the construction shown the blocks 21 are so proportioned that the faces thereof which form the walls of the mold are radial to the circle about which the transverse plates 22 are curved.

It will be understood that the mold may comprise any desired number of compartments so that a number of concrete blocks may be made at a single operation. By the construction described the parts of the mold may readily be separated to facilitate the removal of the concrete blocks and may readily be re-assembled to receive a new charge.

While I have described the construction illustrated with considerable particularity I wish it to be understood that my invention is not to be limited to the specific construction shown except in so far as that is particularly claimed, as various modifications may be made without departing from the spirit of the invention, which is generic in character, particularly with reference to the means employed for forming the recesses in the ends of the blocks and holding the reinforcing rods in position.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A mold for making concrete blocks comprising side and end members forming a receptacle for the concrete, one of said members having means projecting into said receptacle and provided with a recess to receive the end of a tie rod, the adjacent member having means for covering said recess.

2. A mold for making concrete blocks comprising side and end members forming a receptacle for the concrete, one of said side members having means projecting into said receptacle and provided with a recess to receive the end of a tie rod, one of the adjacent end members having a cover for closing said recess.

3. A mold for making concrete blocks comprising separable side and end members forming a receptacle for concrete, one of said members having expansible means projecting into said receptacle provided with a substantially inclosed recess to receive and protect the end of a tie rod, and one of the adjacent members having means for expanding said expansible means.

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Witnesses:
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