J. T. WISNER.

APPARATUS FOR FORMING BLOCKS OF CONCRETE.

APPLICATION FILED JUNE 4, 1918.

1,307,993.

Patented June 24, 1919.

2 SHEETS—SHEET 1.

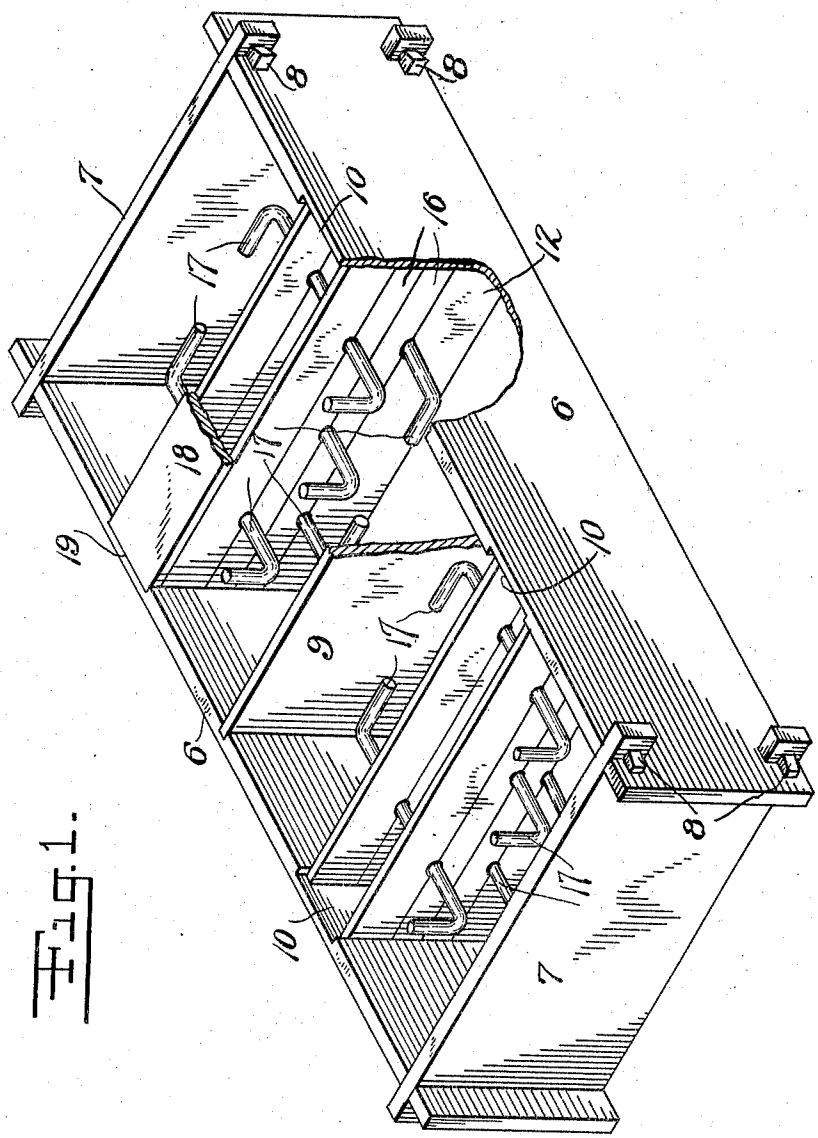


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

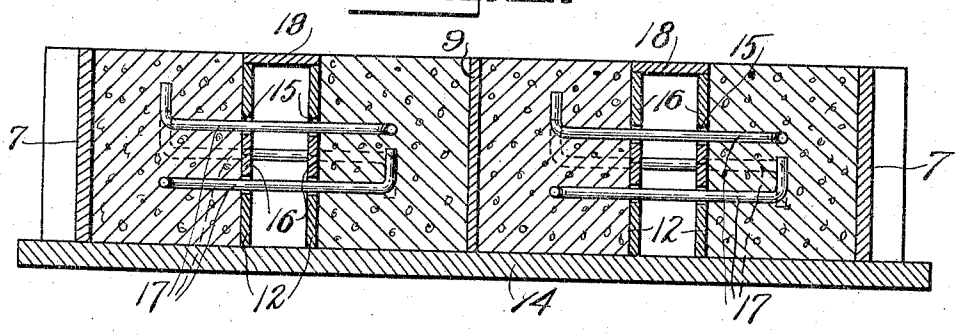


Fig. 3.

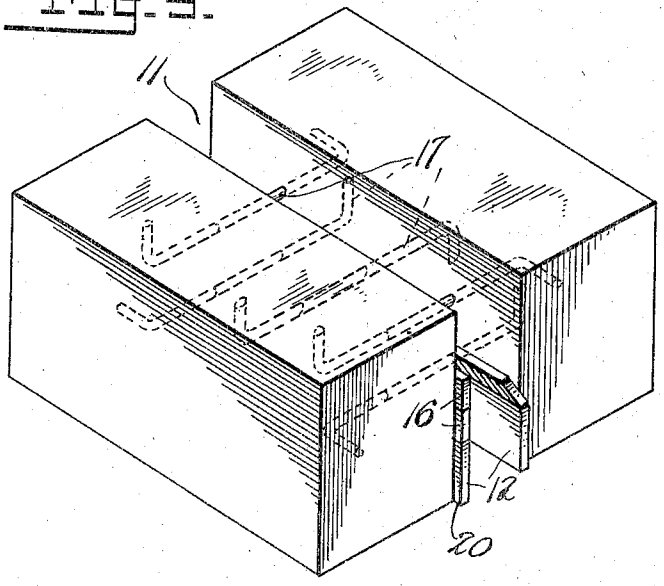


Fig. 5.

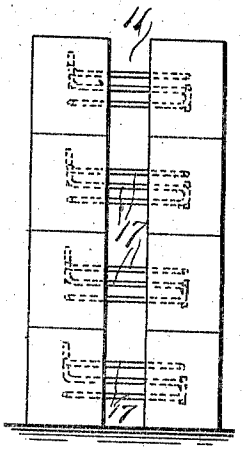
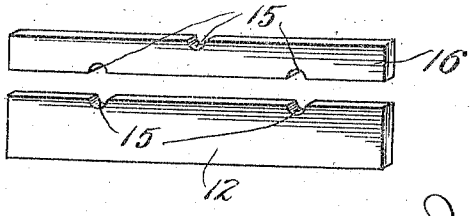


Fig. 4.



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APPARATUS FOR FORMING BLOCKS OF CONCRETE.

1,307,993. Specification of Letters Patent. Patented June 24, 1919.

Application filed June 4, 1918. Serial No. 238,082.

To all whom it may concern:

Be it known that I, JAMES T. WISNER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Forming Blocks of Concrete, of which the following is a specification.

This invention relates to improvements in apparatus for forming blocks of concrete or the like material, the blocks being in two parts or sections with intervening spaces and connected by means of anchor devices embedded in the respective sections.

The invention contemplates the use of a mold or form into which the material is poured, which mold box provides side walls in common for the two sections of the block, an end wall appropriated to each section of the block, and another pair of end walls defining the space between the two sections of the block. These last-named walls are of knock-down construction, that is, made of separate strips or pieces laid upon each other edge to edge and notched for the passage of the bridge or anchor pieces.

One of the objects of the invention is to provide an apparatus for producing blocks of the kind referred to of concrete or similar material which enables the operator to do his work with extreme rapidity, which is simple in construction and very cheap to manufacture, inasmuch as there is no complicated mechanism involved, in fact nothing but straight boards.

Other objects and aims of the invention, more or less broad than those stated above, together with the advantages inherent, will be in part obvious and in part specifically referred to in the course of the following description of the elements, combinations, arrangements of parts, and applications of principles constituting the invention; and the scope of protection contemplated will appear from the claims.

In the accompanying drawings, which are to be taken as part of this specification, and in which I have shown merely a preferred form of embodiment of the invention, Figure 1 is a perspective view with parts broken away, illustrating a mold box that embodies my invention; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a view of a block cast in a mold like that of Fig. 1 showing the relation of the sectional wall to the block; Fig. 4 is a detail of the sectional wall; Fig. 5 is a view showing how blocks like that shown in Fig. 3 may be superposed one upon another to form a hollow wall.

Referring to the numerals on the drawings, there is shown in Figs. 1 and 2 a mold box which is adapted for the casting of two sectional blocks, though of course it will be understood that the principle of my invention is applicable to a single unit mold as well as to one for casting two or more sectional blocks at the same time. As shown in Fig. 1, there are two side walls 6 and end walls 7, which are detachably held together in any proper way, as by tenons or the like and wedge pins 8, so that after a block has been cast within the box frame by the side pieces 6 and end pieces 7, the mold may be removed from around the cast articles easily and rapidly.

In Fig. 1 there is another wall 9 intermediate the two end walls 7 sliding in grooves formed in the side walls 6. This wall 9 divides the mold box of Fig. 1 into two parts, and constitutes a common end wall for the two parts into which the mold box of Fig. 1 is divided. Inasmuch as each half of the mold box of Fig. 1 is the same as the other, only one will be described, and the wall 9 will hereafter be referred to as the end wall opposite the end wall 7.

Between the end wall 7 and the end wall 9 the inner surfaces of the side walls 6 are provided with wide grooves 10, running vertically and parallel to each other. Within these grooves are built up the sectional walls illustrated in detail in Fig. 4, which define the spaces 11 between the two sections of the cast block (Fig. 3). In preparing for the molding of such a block two strips or boards 12 are set on edge upon the bottom wall or pallet 14 of the mold box, spaced apart as far as possible, the extent to which they are spaced apart being determined by the width of the grooves 10 in the side walls 6, into which grooves of course the ends of these wall sections 12 extend, as clearly shown in Fig. 1. The upper edges of these lowermost sections 12 will be provided with one or more notches 15, into which are laid anchor pins which may be of the kind shown in the drawings, so that these pins bridge the space between the strips 12 and have their ends extend respectively beyond the two parallel strips 12. Next another strip 16 is laid above each strip 12, edge to edge, and the super-

posed strip or wall section will or may have grooves 15 corresponding to those in the lower section, so as to surround the anchor device 17. Additional sections may be added in the same way, four being shown in Fig. 1, and there will or may be one or more anchor devices 17 between each pair of adjacent strips 12. Preferably the parts are so proportioned that when the last or uppermost strips 12 are in place, as in Fig. 1, their upper edges do not quite reach the upper edges of side walls 6, so that a cover piece 18 may be laid over them, with its ends fitting into the grooves 10, as indicated at 19 in Fig. 1. Thus there will be two chambers, into which the concrete mixture may be poured, one chamber on each side of the space defined by the two sectional walls, the anchor devices will bridge the space between the two chambers and will have their ends extending into the two chambers, and the space between the two chambers will be entirely closed, by means of the two sectional walls and the cover piece 18. The concrete mixture is now poured into the two chambers and after sufficient time to allow it to partly set, the side walls 6 and end walls 7 are first knocked away, leaving the block on the pallet, with the ends of the strips 12, 16, etc., extending beyond the sides of the block, as indicated at 20 in Fig. 3. Thereupon the two uppermost strips are tapped at their upper edges so as to move their upper edges inwardly toward each other and downwardly, freeing them from the anchor pieces, until they have all been removed from the space between the two sections of the block. The block or blocks may now be removed and the mold box set up for further operations. In Fig. 1 I show how two such sectional blocks, as illustrated in Fig. 3, may be made in one mold box, using the intermediate wall 9 as a common end wall for the two parts, and in Fig. 5 I have shown an arrangement according to which a plurality of two-part blocks are arranged with their spaces in alinement.

I claim:

1. A mold box having side pieces having channels, and end pieces, detachably connected, and a pair of walls intermediate the end pieces of the box and extending into the channels of the side pieces thereof, said pair of walls being spaced apart, and the space between them dividing the box into two chambers, tie rods or members extending through said pair of walls and having their ends extending into the chambers respectively, each of said pair of walls consisting of a series of strips in edge to edge relation, certain of the strips having notches at their edges for the passage between them and the adjacent strips of said tie members.

2. A mold box having side pieces having channels, and end pieces, detachably connected, and a pair of walls intermediate the end pieces of the box and extending into the channels of the side pieces thereof, said pair of walls being spaced apart, and the space between them dividing the box into two chambers, tie rods or members extending through said pair of walls and having their ends extending into the chambers respectively, each of said pair of walls consisting of a series of strips in edge to edge relation, certain of the strips having notches at their edges for the passage between them and the adjacent strips of said tie members, and a cover piece overlying the space between the pair of walls.

3. A mold box having side walls having channels and end walls, detachably connected, and a pair of sectional walls spaced apart from each other and located between the end walls and having end portions extending into the channels of the side walls, said sectional walls being collapsible toward each other.

4. A mold box having side walls having channels and end walls, detachably connected, and a pair of sectional walls spaced apart from each other and located between the end walls and having end portions extending into the channels of the side walls, said sectional walls being collapsible toward each other, the side walls having cut-out portions in their upper edges above the upper limit of said sectional walls, and a cover piece adapted to overlie said sectional walls, with its ends in said cut-out portions of the side walls, the sectional walls extending short of the outer edges of the side walls so that when the cover member is in position it is flush with the edges of the side walls.

In testimony whereof I affix my signature.

JAMES T. WISNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."