C. ZOPHY.

CEMENT BLOCK MACHINE.

APPLICATION FILED MAY 19, 1920. RENEWED AUG. 6, 1921

1,408,558. **Patented Mar. 7, 1922.**

Fig. 1.

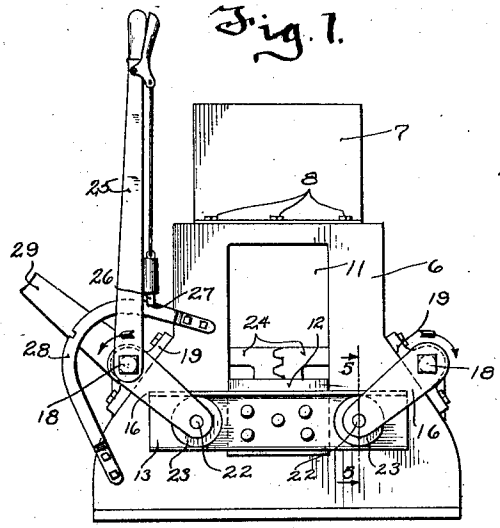


Fig. 2.

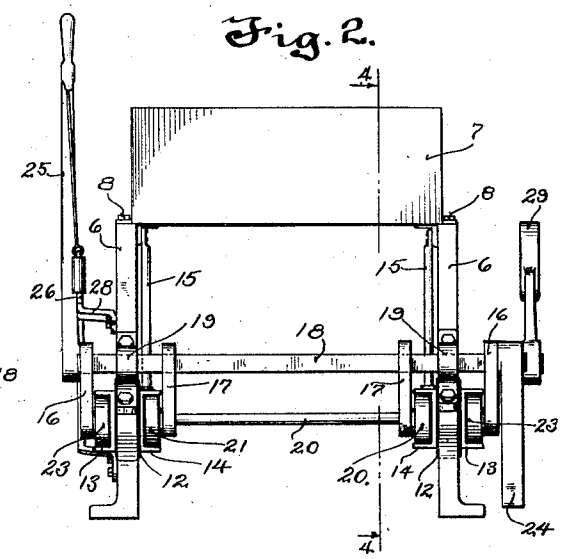


Fig. 3.

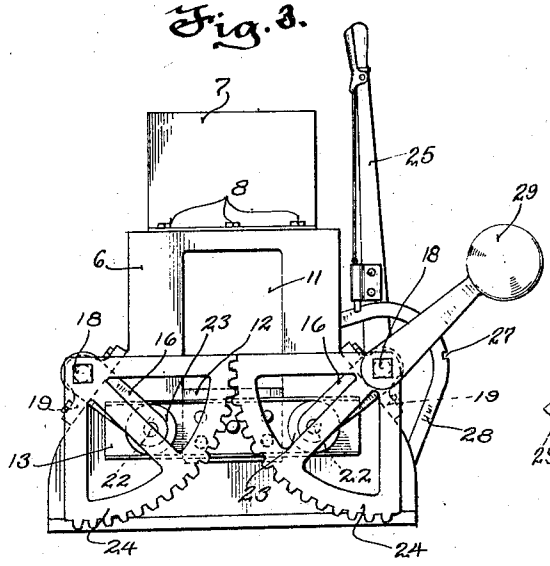


Fig. 4.

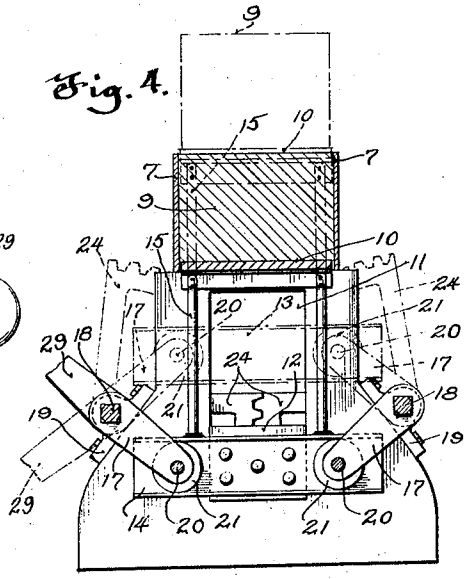
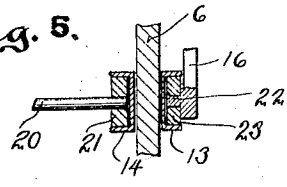


Fig. 5.



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CEMENT-BLOCK MACHINE.

1,408,558. Specification of Letters Patent. Patented Mar. 7, 1922.

Application filed May 19, 1920, Serial No. 382,595. Renewed August 6, 1921. Serial No. 490,348.

To all whom it may concern:

Be it known that I, CLEMENT ZOPHY, a citizen of the United States, and resident of West Allis, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Cement-Block Machines, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The present invention relates to certain new and useful improvements in cement block machines and refers more particularly to machines of the stripper type.

One object of the present invention resides in the provision of a cement block machine provided with means permitting the ready and easy positioning of a block just formed above the mold box to permit the removal of the same.

Another object of this invention is to provide improved lifting means for forcing the finished block to a position above the mold box to permit its removal from the machine, the lifting means being so constructed as to require a minimum amount of energy to operate.

A further object of this invention is to provide a lifting member carried by vertically movable supports which form a part of the lifting means I employ.

A still further object of the present invention resides in the provision of a cement block machine of the class described, which will be of comparatively simple construction, efficient in operation and practical for the purpose described.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawing I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is an end view of a cement block machine embodying my invention;

Figure 2 is a side view thereof;

Figure 3 is a view similar to Figure 1 of the opposite end of my improved machine;

Figure 4 is a sectional view taken transversely therethrough on the line 4—4 of Figure 2; and

Figure 5 is a fragmentary sectional view taken on a plane indicated by the line 5—5 of Figure 1.

Referring now more particularly to the accompanying drawing my invention may be said to consist of a supporting structure, including two vertical standards 6, an open top and bottom mold box 7 secured to the tops of the standards by suitable fastenings 8, and means for positioning a block 9 above the upper end of the mold box after the same has been formed therein.

As is usual in constructions of this character, the bottom of the mold box is closed by a removable pallet or carrying board 10, and in the operation of the machine, when the block 9 has been formed and moved to its dotted line position depicted in Figure 4, the pallet 10 is removed with the block and a new one inserted in its place prior to the refilling of the mold box to form a new block. In the present invention, the completed block is moved to its dotted line position depicted in Figure 4, by means engageable with the under side of the pallet, which means also serve to retain the pallet in its proper position closing the bottom of the mold box.

Each standard 6 has a vertical recess or cut away portion 11 therein, in which is slidably mounted a slide block 12 which is retained in position by means of two channeled beam members 13 and 14 secured to its outer and inner faces, respectively. Carried by each beam member 14 is a supporting member or frame 15 which engages the under side of the pallet 10 and retains the same in position and also provides the means for forcing the same upwardly with the block formed thereon to the dotted line positioned in Figure 4.

The supporting frame 15 is moved vertically by means of lifting arms or levers 16 and 17 having their outer ends secured to shafts 18, said shafts being journaled, one at each side of the supporting structure, in bearing members 19. The lifting arms or levers 17 are carried by the shafts 18 inwardly of the standard 6 and the levers carried by each shaft are connected together by a rod 20 upon the outer ends of which are

journaled roller members 21 which track in the channels of the beams 14.

The lifting arms or levers 16 are secured to the shafts 18 outwardly of the standards 6 and have stub shafts 22 secured in their outer ends and upon which are journaled roller members 23 which track in the channels of beams 13. From this construction it will be readily seen that when the shafts 18 are rotated in opposite directions as indicated by the arrows in Figure 1, the outer ends of the levers 16 and 17 will be raised, causing a corresponding raising of the slide blocks 12 and consequently the pallet supporting frame 15, as depicted in Figure 4. This simultaneous rotation of the shafts 18 in opposite directions is accomplished by the means now about to be described.

Secured to the rear ends of the shafts 18 are two meshed segmental gears 24 so that the rotation of one shaft 18 will rotate the other shaft in a reverse direction. This rotation of the shafts is accomplished by means of an operating handle 25 secured to one shaft 18 which member carries a pawl 26 for engagement in one of two notches 27 formed in a quadrant 28. When the lever is in the position depicted in Figures 1, 2, 3 and 4, the parts will be in a position for filling the box with the material to form the block. When the lever is moved to the position with the pawl 26 engaging in the other notch 27, the parts will be in the dotted line position depicted in Figure 4.

For convenience in assisting the operation of the hand lever, one of the shafts has a counter balanced weight 29 secured thereto.

What I claim as my invention is:

1. A machine of the class described comprising a supporting structure, a mold box mounted thereon, a pallet closing the bottom of the box, a vertically movable member engageable with the pallet, a lifting arm carried by the supporting structure and having a slidable but non-detachable connection with said vertically movable member, said lifting arm being adapted to raise and lower said vertically movable member, and means for actuating said lifting arm.

2. A machine of the class described comprising a supporting structure, a mold box mounted thereon, a removable pallet closing the bottom of the mold box, a vertically movable member engageable with the underside of the pallet, a transverse track carried by said vertically movable member, a shaft journally carried by the supporting structure, a lifting arm having one end fixed to said shaft and its other end slidably engaged with said track whereby actuation of said shaft will raise and lower said vertically movable member, and means for actuating said shaft.

3. A machine of the class described comprising a supporting structure, a mold box mounted thereon, a removable pallet closing the bottom of the mold box, a vertically movable member engageable with the underside of the pallet, two substantially parallel shafts journally carried by said supporting structure, lifting arms carried by said shafts and connected with said vertically movable member to raise the same and bring the pallet above the mold box to permit the removal of a block formed therein, and means for actuating said shafts.

4. A machine of the class described comprising a supporting structure, a mold box mounted thereon, a removable pallet closing the bottom of the mold box, a vertically movable member engageable with the underside of the pallet, two substantially parallel shafts journally carried by said supporting structure, lifting arms carried by said shafts and connected with said vertically movable member to raise the same and bring the pallet above the mold box to permit the removal of a block formed therein, and means simultaneously rotating said shafts in opposite directions.

5. A machine of the class described comprising a supporting structure, a mold box mounted thereon, a removable pallet closing the bottom of the mold box, a vertically movable member engageable with the underside of the pallet, two substantially parallel shafts journally carried by said supporting structure, lifting arms carried by said shafts and connected with said vertically movable member to raise the same and bring the pallet above the mold box to permit the removal of a block formed therein, meshed segmental gears fixed to said shafts, and means carried by one of said shafts for rotating the shafts in opposite directions.

6. A machine of the class described comprising a supporting structure including vertical standards having their intermediate portions vertically recessed, a mold box mounted on the supporting structure, a removable pallet closing the bottom of the mold box, a slide block slidably mounted in the recess of each standard, a transverse channel beam carried by each slide block, a supporting member carried by each connected together slide block and channel beam, shafts journaled adjacent the ends of said channel beams, lifting arms carried by said shafts, roller means carried by the outer ends of said lifting arms and tracking in the channels of said beams, and means for simultaneously rotating said shafts in opposite directions to raise the pallet above the mold box to permit the stripping of a block which has been formed in the mold box.

In testimony whereof, I affix my signature.

CLEMENT ZOPHY.