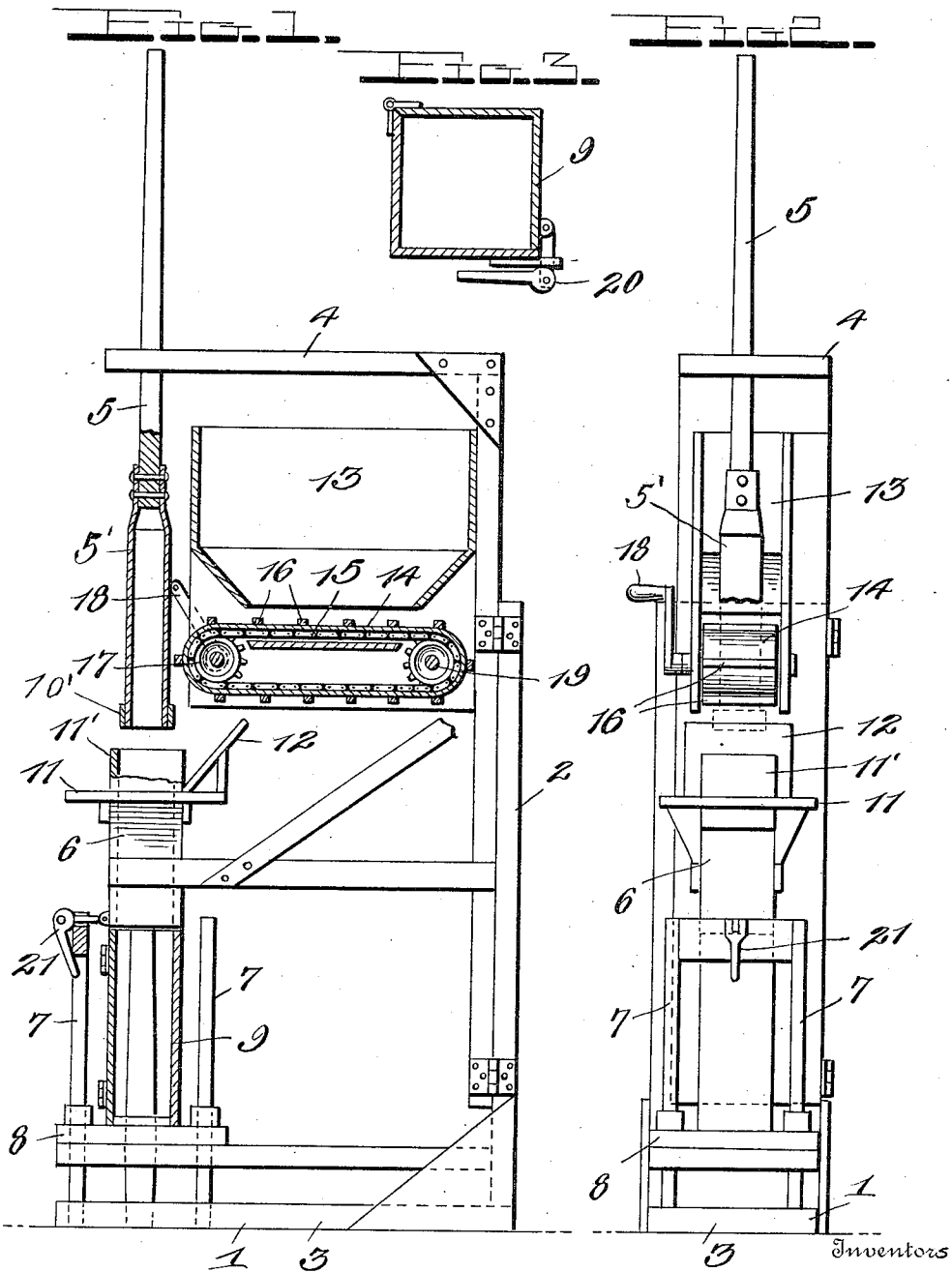


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 CONCRETE BLOCK MACHINE.
 APPLICATION FILED JUNE 21, 1911.

1,050,881.

Patented Jan. 21, 1913.



Witnesses

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GEORGE F. WALKER AND WALTER S. MATHES, OF BAZINE, KANSAS.

CONCRETE-BLOCK MACHINE.

1,050,881.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, GEORGE F. WALKER and WALTER S. MATHES, citizens of the United States, residing at Bazine, in the county of Ness and State of Kansas, have invented certain new and useful Improvements in Concrete-Block Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to concrete machines, and more particularly to a concrete machine for the manufacture of tile.

Objects of this invention are to provide a concrete machine which will make the concrete tile readily and efficiently.

Other objects of this invention are to provide means whereby the concrete can be tamped in conjunction with the operation for filling the mold with concrete.

Another object of this invention is to provide a means for locking the parts securely in position when the same is ready for the various operations, that take place in it.

A further object of this invention is to arrange the machine so that it can be cheaply manufactured, and all its parts readily accessible to the operator that operates it.

Another object of this invention is to have the parts removable, so that they can be readily inspected and repaired whenever the same is necessary.

Other objects of this invention will become apparent as it is more fully set forth.

Although there are many machines on the market for the manufacture of concrete blocks, and the like, they are more or less objectionable, because of the complexity of their parts, and the many different operations, that are required in them to bring about the desired product. In most cases the making of concrete blocks requires the use of several devices, which are independent of one another, and thereby cause a lot of labor and expense which would be avoided by the coöperation of these various devices in a single machine.

This invention brings the operation of filling, tamping, and molding, and other incidental operations into one machine, and thereby makes it possible to spend less labor in manufacturing concrete blocks, and at the same time, this machine does not involve a relatively great expense to manufacture it.

In the accompanying drawings which illustrate by way of example an embodiment of this invention; Figure 1 represents a view

in elevation, partly in section of a concrete machine embodying this invention; Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a detail of the mold box.

Similar reference characters refer to similar parts throughout the drawings.

In the accompanying drawings which illustrate the construction of this invention 1 represents the main frame-work of a concrete machine which preferably consists of uprights 2 and base pieces 3, to which is hinged a frame-work member 4 that is suitably arranged to hold and guide a tamping bar 5 and a filling box 6 as is clearly shown in the drawings. The tamping bar has its lower portion 5' hollowed out in order to permit the same to fit over a core 10. The portion 5' is preferably removably held in place to the part 5 by bolts or other means, as shown in the drawings.

Secured to the bottom member 3 of the frame-work 1 are a number of vertical rods 7 on which is arranged to slide a base plate 8, that forms a base for the concrete mold 9 disposed above it, and around the core piece 10 when the device is arranged to make a hollow tile.

The filling box 6 is provided on this upper portion with a table 11 that has a guiding slide 12 mounted on it, in order to guide the concrete into said box, which has its sides 11' arranged to permit the concrete to flow therethrough into its interior. This box is normally disposed under the tamping bar so that the same can be readily inserted therein and tamp the concrete properly into the mold 9. The concrete tamper is provided on its lower portion with a band 10' which is arranged to actuate in and to loosely fit within the sides of the mold.

Rigidly mounted on, and secured to the member 4 is a bin, or hopper 13 that is arranged to store the concrete that is to be used in the machine and which has provided under it a carrier 14 that consists of a chain 15 having cleats 16 secured to it so as to engage with the concrete and pull it over the sprocket 17 when a handle 18 thereon is actuated by the operator. The concrete is thereby pulled to the front part of the machine and dropped on the sliding plate 12. A sprocket 19 is provided at the back portion of the machine for suitably supporting the carrier at that joint.

The mold box 9 is preferably split into halves that are hinged as shown in detail in

Fig. 3. This hinge permits the box to be opened when the concrete therein is solid enough for removal from the same.

20 is a suitable locking device for holding the mold securely in position when the same is in the machine and ready to receive the concrete. The mold frame 9 is held securely in position by any suitable means.

Provided on the lower portion of the box 6 is a lever lock 21 that is arranged to engage with one of the uprights 7 and lock the member 6 in the proper position, for the various parts secured to the same.

In the construction shown in the drawings we mainly indicate therein a concrete machine that is constructed of wood, but it is not desired to limit this application to this particular form of construction, because it is advantageous to use other materials, particularly those of metallic nature, and which, in their design, acquire a somewhat different form to that shown in the drawings.

In operation, the operator actuates the handle 18 of the carrier 14 and thereby causes the concrete from the hopper 13, to be collected between the various cleats 16 that are provided on the chain 14. The mortar from between these cleats falls down the sliding piece 12 as the chain is made to travel from the sprocket 17. At the same time, the operator actuates the tamping member 5 which puts the material properly in place in the molding frame 9, and makes the same as compact as possible, which is a desirable result in this style of molding. After sufficient material is in the mold frame 9, the member 4 is unlocked by the lifting of the latch 21, that keeps it securely in the operating position, it is swung side-wise from the machine, so as to leave the mold frame 9 free to be lifted upwardly off the piece 3. After the material has set sufficiently the base plate 8 is raised, being properly guided by the rod 7, and the mold frame 9 with it, at the same time, the core 10, which is preferably slightly tapered upwardly as shown in the drawings, leaves the interior of the molded concrete with a desired hole in the same. The plate and mold are then removed to a suitable location and the fastening means 20 are unlocked, and the molded block removed from the mold box 9, which is then returned to the machine and reused

again for making another block. After the mold box has been replaced in position on the machine, the member 4 is swung back into place and locked and the same operations are repeated as previously stated.

Obviously while there is shown but one form of construction in this invention, in the drawings, it is not desired to limit it in any way, otherwise than necessitated by the prior art, as many modifications in the construction of this invention may be made without departing from the principles thereof.

Having thus described this invention it is claimed:

1. In a machine of the class described, the combination of a supporting frame, means carried by the supporting frame for supporting a mold, a stationary guide frame for said mold, a swinging frame connected to the supporting frame, a vertically arranged guide duct also carried by the movable frame, the guide duct being movable by the motion of the movable frame so that it may be arranged either above or to one side of the mold, and means carried by said guide duct for locking the same in position over the mold, said means also serving to lock the frame against swinging motion.

2. In a machine of the class described, the combination of a supporting frame, means carried by the supporting frame for supporting a mold, a stationary guide frame for said mold, a swinging frame connected to the supporting frame, a vertically arranged guide duct also carried by the movable frame, the guide duct being movable by the motion of the movable frame so that it may be arranged either above or to one side of the mold, and a cam locking lever carried by said guide duct for engagement with the upper edge of the mold guide frame, the locking lever being adapted to secure the guide duct over the mold and also to prevent rotational movement of the movable frame.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

GEORGE F. WALKER.
WALTER S. MATHES.

Witnesses:

A. H. YOUNG,
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