

No. 832,441.

PATENTED OCT. 2, 1906.

Z. ANDERSON.
MACHINE FOR THE MANUFACTURE OF BUILDING BLOCKS.
APPLICATION FILED APR. 20, 1906.

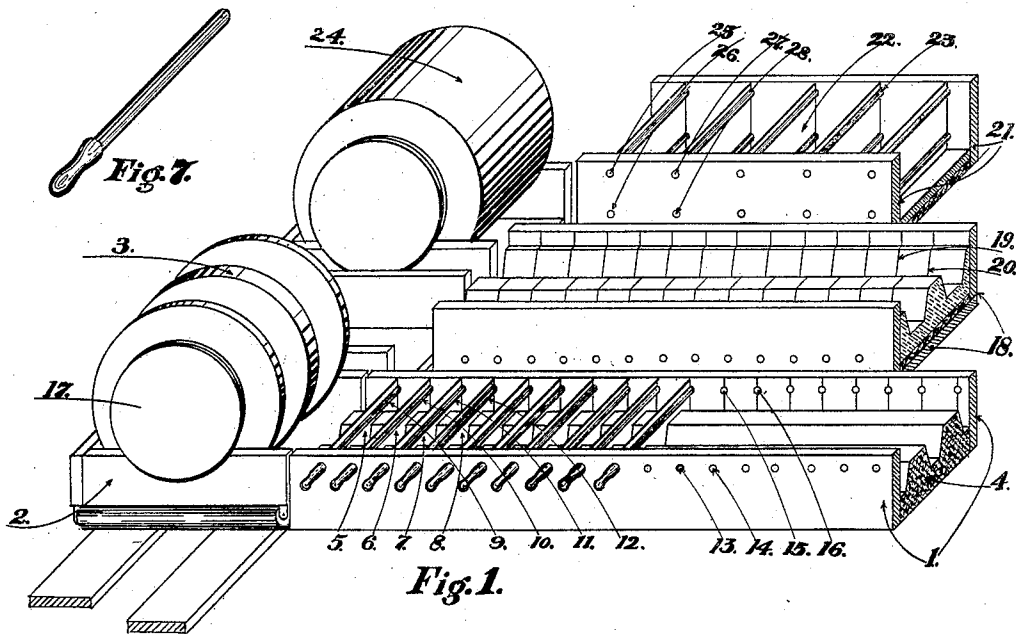
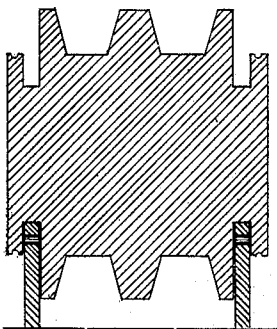


Fig. 2.

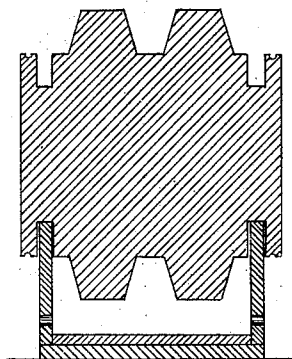


Fig. 3.

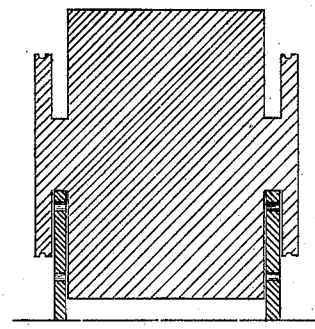


Fig. 4.



Fig. 5.

Witnesses.
Carl S. Munch.
A. M. Hoff.

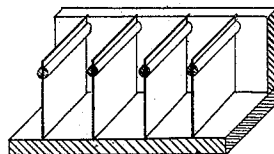


Fig. 8.

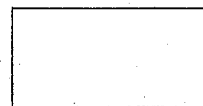


Fig. 6.

Inventor
Zacharias Anderson
by Walter S. Chase
Attorney.

UNITED STATES PATENT OFFICE.

ZACHARIAS ANDERSON, OF MINNEAPOLIS, MINNESOTA.

MACHINE FOR THE MANUFACTURE OF BUILDING-BLOCKS.

No. 832,441.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed April 20, 1906. Serial No. 312,909.

To all whom it may concern:

Be it known that I, ZACHARIAS ANDERSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a certain new, useful, and original Machine for the Manufacture of Building-Blocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is a machine and process for the manufacturing of building-blocks of cement or other similar material, combining a minimum of labor with great speed in the production of the blocks.

With these and other objects in view it consists of the constructions, combinations, and arrangements of parts hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the machine, showing the different kinds of troughs or channels used in the manufacture of the different kinds of blocks, together with a carriage, carrying rollers, at one end of the troughs, embodying said invention. Figs. 2, 3, and 4 are sectional views of three kinds of rollers used in the manufacture of three kinds of blocks and molds for blocks as hereinafter set forth. Figs. 5 and 6 are side views of two forms of partitions used to divide the troughs or channels into molds. Fig. 7 is a perspective view of a rod which is to be thrust through both sides of the troughs or channels at right angles to such sides, the same being split to admit the partitions. Fig. 8 is a perspective view of a part of a longitudinal section of one of the troughs or channels, showing partitions and supporting-rods in position.

In the drawings, 1 is a trough or channel for the manufacture of blocks such as those shown in Figs. 8, 11, and 12 of the drawings for Letters Patent issued to me by the United States Patent Office, the same being No. 802,903, and other similar blocks. These blocks are such as require an inside and an outside block in wall constructions, with a continuous air-space between. These troughs are to be made by standing two planks on edge on a smooth level surface, the distance between the planks to equal the desired length of the blocks and the length of the troughs so made and their number to be optional with the manufacturer. The troughs are to be placed

side by side, with sufficient space between them to admit of the operation of the rollers hereinafter described.

The blocks are to be manufactured in the troughs as follows: The carriage 2 carries a roller 3, which is made of heavy material or of wood covered with galvanized iron or other smooth covering, hollow and filled with sand or other heavy substance through an opening at one end when in use, into juxtaposition with the end of the trough 1, which has been partly filled with molding-sand or other suitable molding material. The roller is then rolled along the trough and back again onto the carriage, making a long continuous mold of the molding material 4. The partitions 5, 6, 7, and 8, (see Fig. 5,) composed of stiff sheets of galvanized iron or other suitable material, are then placed in position, slits having been cut on the insides of the planks forming the troughs to receive them and are held more firmly in place by the rods 9, 10, 11, and 12, (see Fig. 7,) thrust through a series of holes, as 13, 14, 15, and 16, in both the planks forming the sides of the trough 1. These rods are split, so that the partitions 5, 6, 7, and 8 are supported by the two halves of the rods as well as by the slits in the sides of the trough. The rods, furthermore, make longitudinal grooves in the blocks formed in the molds so constructed and also serve to hold in position the planks forming the sides of the troughs. The molds formed by the foregoing process are carefully filled with wet or soft cement and left until the cement sets. The top surfaces of the blocks are troweled smooth before the cement sets. The partitions, rods, and the planks forming the troughs are then removed and the cement is left on the molding material to harden. If desired, a carriage can be placed at each end of the series of troughs, so that the rollers can be rolled along one trough and back on the next, thus saving the labor of rolling the roller along and back on the same trough. While the roller 3 is rolling along the troughs its circular ends 17 hold the tops of the planks forming the sides of the troughs in position. It is to be noted that in manufacturing blocks similar to those for which Patent No. 802,903 was issued to me, as above described, it is desirable to have a groove near the outside edge of the outside block and near the inside edge of the inside block on the top side of the block as used in wall construction for the purpose of holding

the ends of anchors used to anchor the blocks forming the inside wall to the blocks forming the outside wall. These grooves are formed by the rods 9, 10, 11, and 12. In place of molding material for making molds, medium cement may be used, in which event the mold will be permanent. If this is done, the molds so made must be painted to prevent the blocks attaching themselves to the cement molds.

In the drawings, 21 is an illustration of an adaptation of the same machine and process to the manufacture of blocks which are smooth on both sides and such as are used in the construction of solid walls. Troughs similar to those above described are erected of a depth a little greater than the desired thickness of the blocks to be made. The bottoms of the troughs are thickly covered with molding material or sand and a roller 24 (see Fig. 4) is brought into juxtaposition with the end of the trough by the carriage 2 and is rolled along the trough, packing down the molding material or sand, making a smooth even bed. The partitions 22 (see Fig. 6) and rods 23 (see Fig. 7) are then put in position as heretofore described and smooth boards of one-inch lumber or other material are fitted into the bottoms of the molds so made to make a smooth face on the under side of the blocks made in the molds. The molds are then filled with wet or soft cement and the top of each block is troweled smooth before the cement sets. After the cement is set the planks forming the trough, the partitions, and rods are removed and the blocks are left each on its own board to dry and harden. In making the double-faced blocks as above rods are thrust through near the top as well

as near the bottom of the planks forming the sides of the troughs, as appears from the illustration 25, 26, 27, and 28, thus forming two grooves on either side of each block, one near each edge. These grooves are filled with cement when a wall is under construction with the blocks, and thus serves to bind the blocks together.

I regard my machine and process as patentably novel and useful.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

A machine built of planks or other suitable material set with their edges to the ground or any smooth level surface together with rollers the surface of which are such, that, when rolled along the troughs formed of the planks, said troughs containing molding material, they form a long continuous mold in the molding material, together with partitions of galvanized iron or other material dividing said troughs into a series of molds, said partitions being set into slits cut on the inner sides of the planks forming the sides of the troughs, together with rods thrust through the sides of the planks, said rods being split so as to receive and support said partitions between their two halves and also serve to hold the planks forming the sides of the troughs in position and also to make grooves in the blocks made in the molds so constructed.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

ZACHARIAS ANDERSON.

Witnesses:

WALTER S. CHASE,
GEORGE W. STRONG.