(No Model.)

H. W. CALDWELL.

MACHINE FOR MIXING MORTAR OR CONCRETE.

No. 264,861. Patented Sept. 26, 1882.

Fig. 2

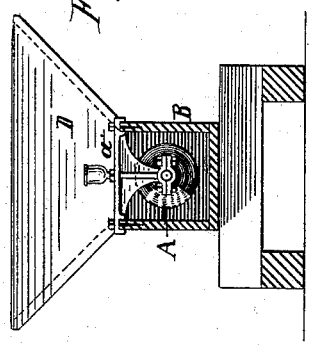


Fig. 1

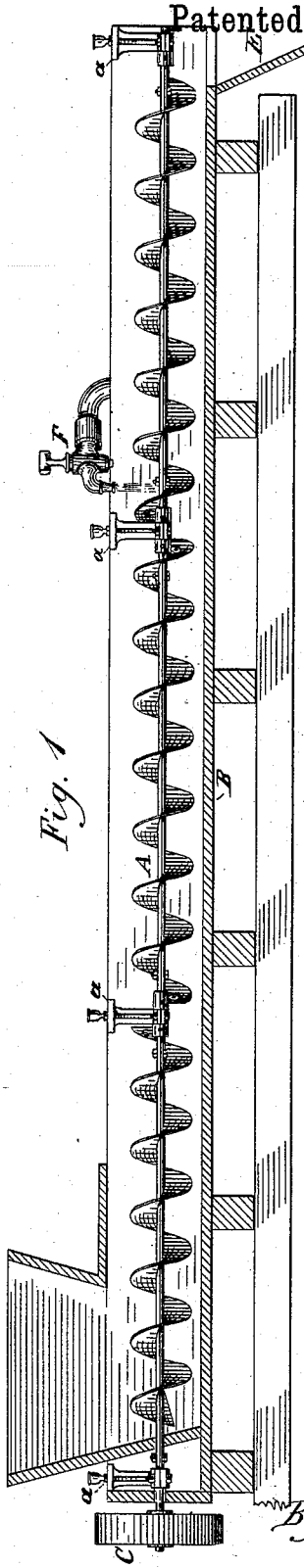
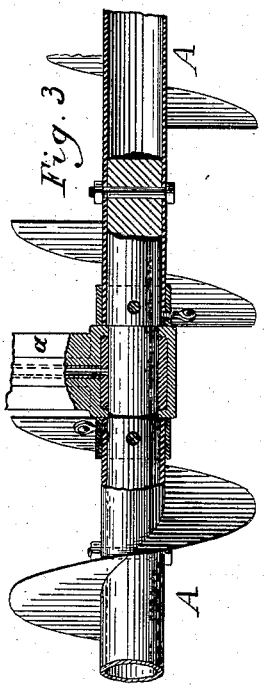


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY W. CALDWELL, OF CHICAGO, ILLINOIS.

MACHINE FOR MIXING MORTAR OR CONCRETE.

SPECIFICATION forming part of Letters Patent No. 264,861, dated September 26, 1882.

Application filed July 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. CALDWELL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Mixing Mortar or Concrete; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to devices or machines for mixing the materials for mortar or concrete—as sand, gravel, broken stone, or cinders—with lime or hydraulic cement and water, so as to make a homogenial mass thereof that is ready for use; and it is my object to produce a machine which will do the work of mixing with dispatch, and that is simple in its construction, is strong and durable, and is easily set up and transported.

The invention consists in the use of a conveyer-screw arranged in the manner hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section of the entire machine; Fig. 2, a cross-section of the same, and Fig. 3 a sectional elevation of the conveyer-screw.

Corresponding letters in the several figures of the drawings designate like parts.

A denotes the conveyer-screw. That preferably is constructed according to specification of reissued Letters Patent No. 6,838, which were granted to me on January 4, 1876. This conveyer-screw may be made up of sections to suit the desired length, and is suspended by hanger-bearings *a* within a box or trough, B, that is of a size to allow sufficient room at the sides and bottom of the conveyer-screw for a stone to pass without doing damage. This trough B may be made of metal or of wood that is lined with metal, and is closed at one end where the conveyer-shaft is projected through such end, and has mounted a pulley, C, for driving such conveyer-screw by a belt; or a gear-wheel or crank may be applied for rotating such conveyer-screw. Over this end of the conveyer-box is arranged a hopper, D, into which the several materials are dumped that are to be mixed. The opposite end of trough B is open, and has a downward spout, E, for discharging the mixed mass of mortar or concrete. A faucet, F, is placed about two-thirds of the entire length of trough B away from the hopper. This faucet F connects with the hydrant or a tank by a pipe or hose, and is to admit the necessary water to be mixed with the material after such material has been thoroughly mixed in a dry state during the first two-thirds of its course through the conveyer-trough.

The several ingredients or materials necessary for mortar or concrete—as broken stone, gravel, sand, cinders, lime, or hydraulic cement—are measured to proper proportions, and are dumped or shoveled into the hopper D, where the conveyer-screw in forwarding them toward the other end will thoroughly mix the particles of the several ingredients first in a dry state and then with the water, and will discharge the product in a homogenial condition through spout E into a cart or wagon-box to be carried off to the building-site where it is to be used.

As will be noticed, the above-described machine or apparatus is exceedingly simple in its construction, cannot well get out of order or break down, is easily repaired in case of an accident, and will do its intended work in a thorough manner without requiring much driving-power.

What I claim is—

1. A machine for mixing mortar or concrete, principally composed of conveyer-screw A, suspended by hangers *a* in a trough, B, having hopper D, and being provided with faucet F, all substantially as and for the purpose set forth.

2. In a machine for mixing mortar or concrete, the conveyer-screw A, suspended by hangers *a* in a trough, B, and having driving-pulleys C, such trough being provided with hopper D at one end, spout E at its opposite end, and faucet F at an intermediate point, the whole being constructed and arranged to operate substantially in the manner described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

HENRY W. CALDWELL.

Witnesses:

MYRON NORTH,

DWIGHT COOKE.