

(No Model.)

E. L. RANSOME.  
CONCRETE MIXING MACHINE.

No. 490,631.

Patented Jan. 24, 1893.

Fig. 1.

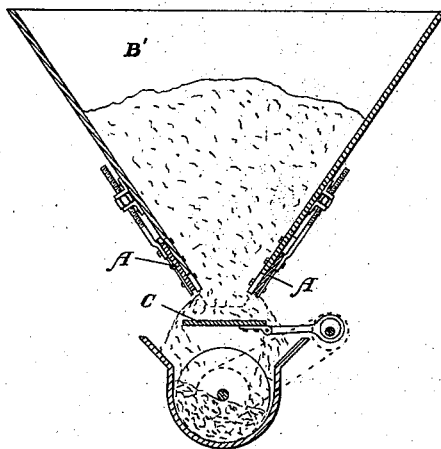
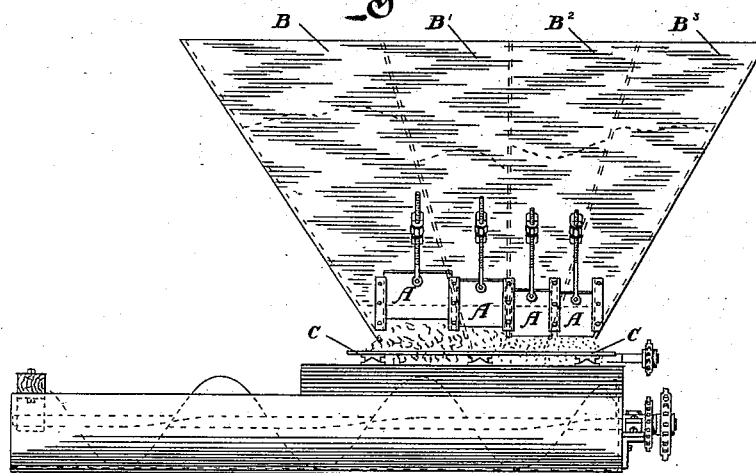


Fig. 2.



Witnesses  
Geo. Kelly  
P. Leslie Ransome.

Inventor  
E. L. Ransome

# UNITED STATES PATENT OFFICE.

ERNEST LESLIE RANSOME, OF OAKLAND, CALIFORNIA.

## CONCRETE-MIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 490,631, dated January 24, 1893.

Application filed April 5, 1892. Serial No. 427,934. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST LESLIE RANSOME, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented a new and useful Improvement in Concrete-Mixing Machines, of which the following is a specification.

My invention relates to the mixing machines in which the materials are automatically fed from a series of chambers, and is a modification of the invention for which Letters Patent No. 416,950 were granted to me on the 10th of December, 1889, and for another modification of which I have also applied for Letters Patent Serial No. 415,409, dated the 17th of December, 1891.

The object of my improvement is to perfect the automatic proportioning of the material. I attain this object by the mechanism illustrated in the accompanying drawings, in which

Figure 1 is a vertical cross sectional view of the proportioning chambers and traveler, and Fig. 2 is a side view.

In operation a supply of broken rock, gravel, sand and cement being respectively maintained in chambers B, B', B<sup>2</sup> and B<sup>3</sup>, and the traveler C being kept in motion by any of the well known means, the several materials are drawn from their respective chambers by the traveler and delivered to the mixing mill, which I have shown placed underneath.

In my former inventions, the gates of the chambers have been placed in the partitions and one end of the chambers thus necessitating the line of motion of the traveler to be in the same general direction with the row of chambers, and the superimposing of the different materials upon the traveler. This I have found to be a source of irregularity of measurement, to obviate which I now place the gates A on one or both sides of each cham-

ber B, and change the line of movement of the traveler C, athwart the row of chambers B. By this change, the material in each chamber rests directly upon the traveler and is drawn out thereby independently of the materials in the other chambers.

What I claim and desire to secure by Letters Patent of the United States is:

1. The apparatus for delivering the several ingredients for concrete to a mixer in automatically proportioned quantities, consisting of a row of containing chambers situated above a conveyer and athwart its line of travel, each having an independent discharge opening and regulating gate through which the contents of the chambers are gaged and carried by the conveyer below the chambers directly to the mixer underneath, substantially as described.

2. The apparatus for delivering the several ingredients for concrete to a mixer in automatically proportioned quantities, consisting of a row of containing chambers, situated above an oscillating bottom and athwart its line of travel, each having an independent discharge opening and regulating gate through which the contents of the chambers are gaged and carried by the oscillating bottom below the chambers to the mixer underneath.

3. The apparatus for delivering the several ingredients for concrete to a mixer in automatically proportioned quantities, consisting of a row of containing chambers, situated above a traveling bottom and athwart its line of travel, each having an independent discharge opening and regulating gate through which the contents of the chambers are gaged and carried by the traveling bottom below the chambers to the mixer.

ERNEST LESLIE RANSOME.

Witnesses:

F. LESLIE RANSOME,  
GEO. J. KELLEY.