

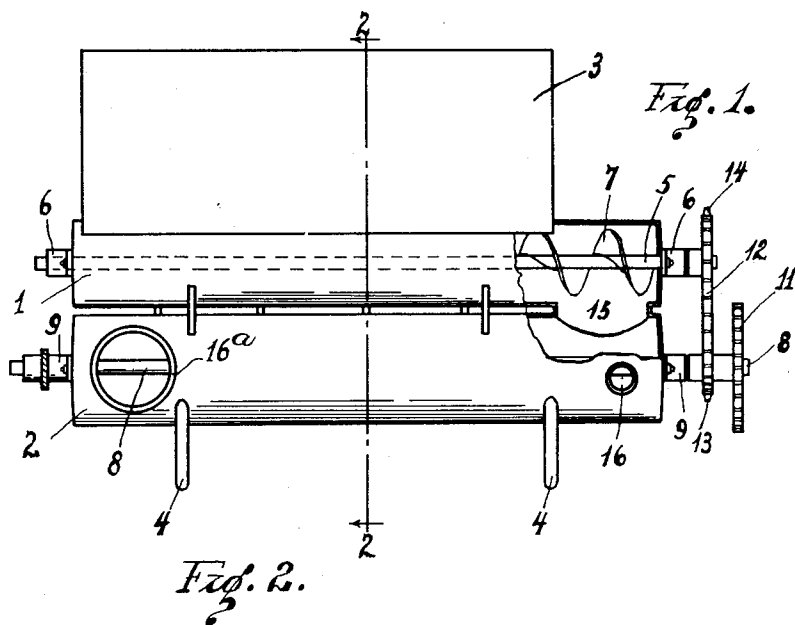
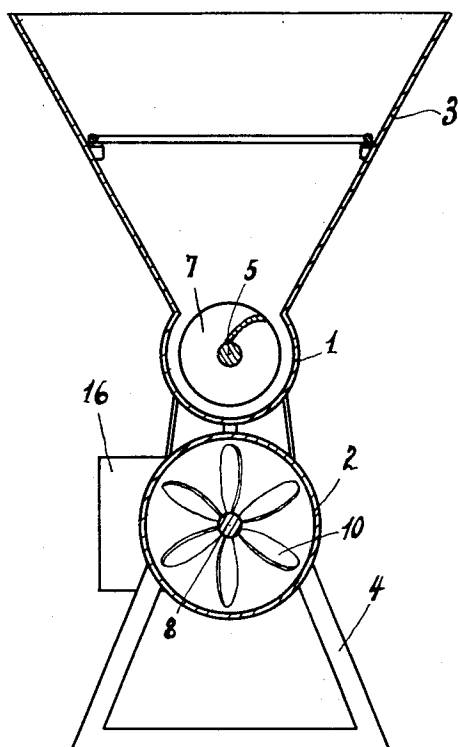
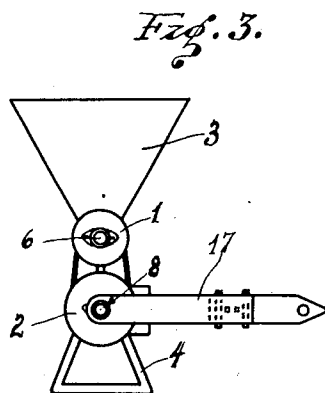
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CONCRETE MIXER

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CONCRETE MIXER.

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An object of my invention is to provide a concrete mixer which is light in weight, and may be readily transported from place to place and which may be set upon the ground adjacent the structure requiring the concrete.

Another object is to provide a concrete mixer in which the dry aggregate is positively fed to the point where water is supplied thereto, thus insuring a properly proportioned concrete.

A further object is to provide a mixer which is simple in construction and which is highly effective in operation.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description, and the appended claims.

In the drawing—

Fig. 1 is a side elevation of my mixer with parts broken away to show interior construction.

Fig. 2 is an enlarged sectional view taken on line 2, 2, Fig. 1.

Fig. 3 is an end view of my mixer.

Referring more particularly to the drawing:

My concrete mixer comprises two superposed cylindrical chambers 1, 2. A hopper 3 is mounted on the cylinder 1 and opens therein. This hopper is adapted to receive the dry aggregate which goes into the completed concrete. Legs 4, 4 are secured to the cylinder 2 and are adapted to support the mixer. A shaft 5 extends longitudinally through the cylinder 1 and is journaled in bearings 6, 6 at either end thereof.

A screw conveyor 7 is mounted on the shaft 5, said conveyor being adapted to move the dry aggregate through the cylinder 1 as will be further described. A shaft 8 extends longitudinally through the cylinder 2 and is journaled in bearings 9, 9 at either end thereof.

Paddles 10 are mounted on the shaft 8 and are adapted to move the concrete through the cylinder 2 as will be further described. A gear 11 is secured to the shaft 8, said gear being rotated from a suitable source of power such as a truck used to convey the mixer. A chain 12 encircles the sprockets 13, 14 on the shafts 8, 5 respectively, thus rotating the conveyor 7 and paddles 10.

The dry aggregate is dumped into the hopper 3 and the conveyor 7 moves the aggregate along the cylinder 1 to an opening 15 at

one end of the cylinder 1, said opening extending into the cylinder 2. A water intake 16 is provided in the cylinder 2 at the same end in which the opening 15 is placed, thus as the dry aggregate falls through the opening 15 it comes in contact with the water entering the intake 16, and is thoroughly mixed therewith.

The paddles 10 on the shaft 8 are so arranged as to convey the concrete from one end of the cylinder 2 to the other, in which an outlet 16^a is placed. These paddles serve to thoroughly mix the dry aggregate and the water and provide a concrete of proper texture. It will be seen that the operation of my mixer is continuous in that the dry aggregate may be constantly fed into the hopper 3, and the completed concrete is ejected from the outlet 16^a. It will also be apparent that as the mix is moved toward the outlet 16^a by the paddles 10, a lateral thrust or pressure will be exerted upon the same, thus causing the mix to press constantly against the wall of the cylinder 2 until it is ejected from the outlet 16^a. The conveyor 7 positively moves a given quantity of dry aggregate at any given speed of the shaft 5, consequently the amount of water entering at 16 can be gauged so that a properly proportioned concrete is provided; and in my mixer the concrete will always be in the same proportions; that is, it will not have an over-supply of water or dry aggregate at any time.

My mixer may be readily transported from place to place on a truck and is lifted to the ground for use. When in position on the ground and while being driven from suitable gearing on the truck it is necessary to provide a place for the mixer in order that it may not move. For this purpose, I provide an extensible arm 17 secured to one end of the bearing 9, the other end being secured to the truck axle or the like.

Having described my invention, I claim:

1. A concrete mixer comprising a pair of superposed hollow cylinders having a connecting opening at adjacent ends, a hopper opening into the upper cylinder, a screw conveyor in the upper cylinder for feeding material to said opening, an outlet pipe in said lower cylinder adjacent the end opposite to said connecting opening and projecting laterally from said lower cylinder and conveying means in the lower cylinder operable to convey the material along said cylinder to-

ward said outlet pipe and simultaneously exert a lateral thrust upon the material so that it will be forced against the wall of the cylinder and forcibly ejected through said outlet pipe upon reaching the same.

5 2. A cement mixer comprising a hollow mixing cylinder, a hollow feed cylinder superposed upon said mixing cylinder, a hopper opening into said feed cylinder adjacent one end, a connecting opening adjacent the other end of said cylinder for passage of dry cement from said feed cylinder to said mixing cylinder, a screw conveyor in
10 said feed cylinder for forcing dry cement toward said connecting opening, a water intake in said mixing cylinder arranged so that the water strikes into the dry cement as it drops from the feed cylinder thus thoroughly comingling with said dry cement, a
15 shaft extending the length of said mixing cylinder, impeller paddles on said shaft for mixing said water and cement and moving the mix away from said opening, an outlet

in said mixing cylinder at the opposite end to said water inlet, and gearing connecting
25 said shaft and conveyor to cause them to be rotated together.

3. A cement mixer comprising a hollow feed cylinder, a hollow mixing cylinder, a hopper opening into said feed cylinder, a
30 passage between said cylinders for dry cement, a screw conveyor in said feed cylinder for forcing dry cement toward said passage, a water intake in said mixing cylinder adjacent said passage arranged so that
35 water strikes into the dry cement as it is moved from said feed cylinder to said mixing cylinder thus thoroughly comingling with said cement, a rotary mixing impeller member extending into said mixing cylinder,
40 and gearing connecting said conveyor and said impeller member to cause them to be rotated together.

In testimony whereof, I affix my signature.

JACK M. OWEN.