

March 9, 1937.

E. H. HOLLIS

2,072,886

CEMENT MIXER

Filed Nov. 27, 1935

2 Sheets-Sheet 1

Fig. 1.

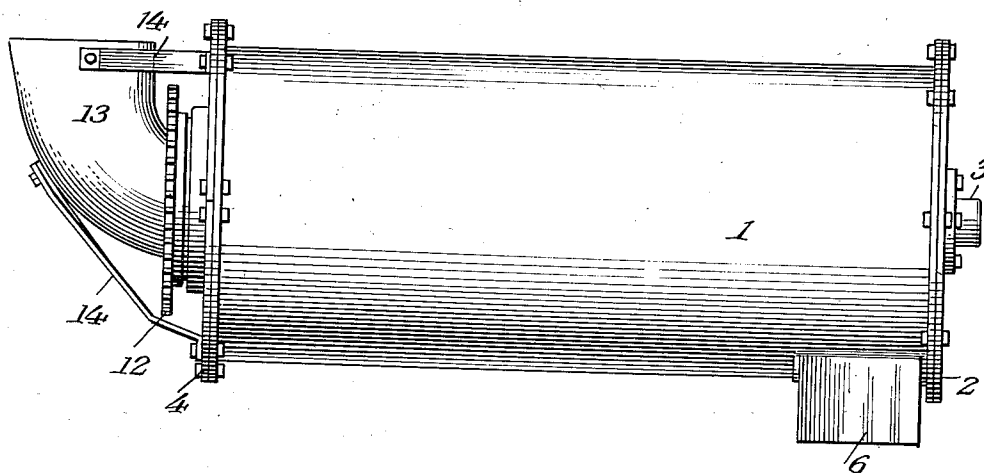
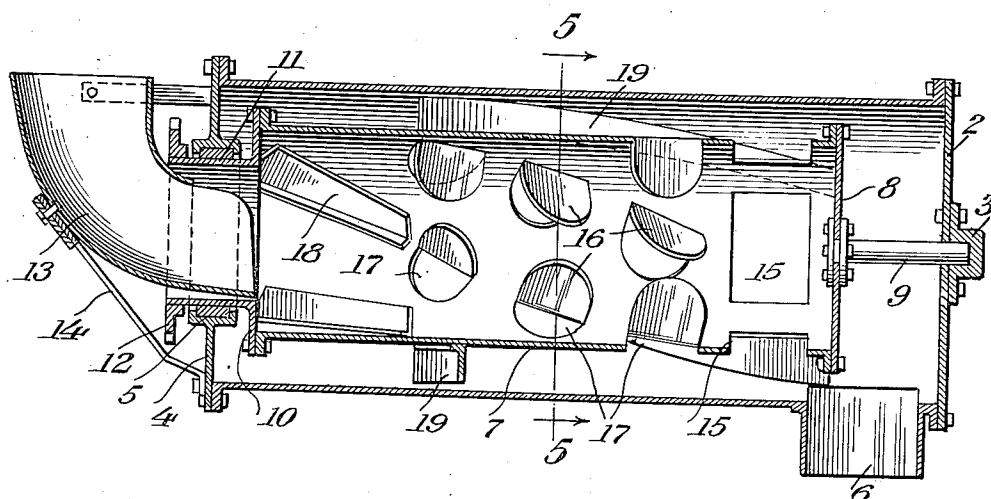


Fig. 2.



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Fig.3.

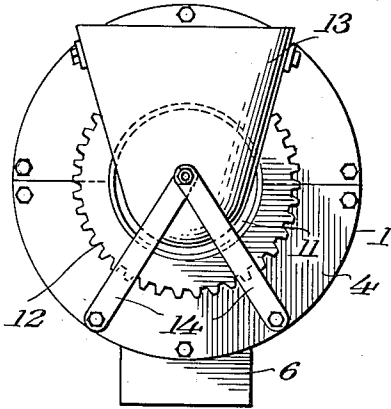


Fig.4.

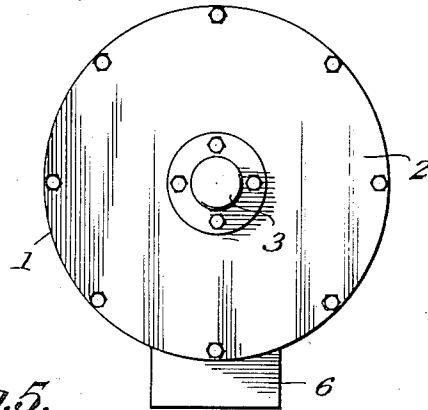


Fig.5.

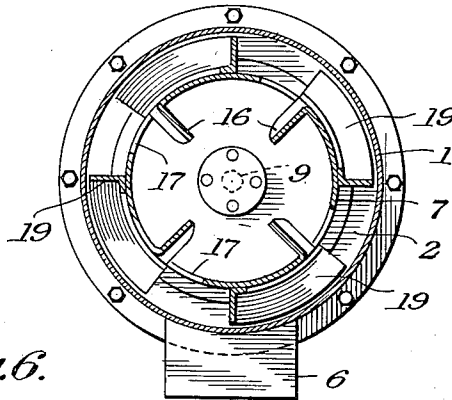
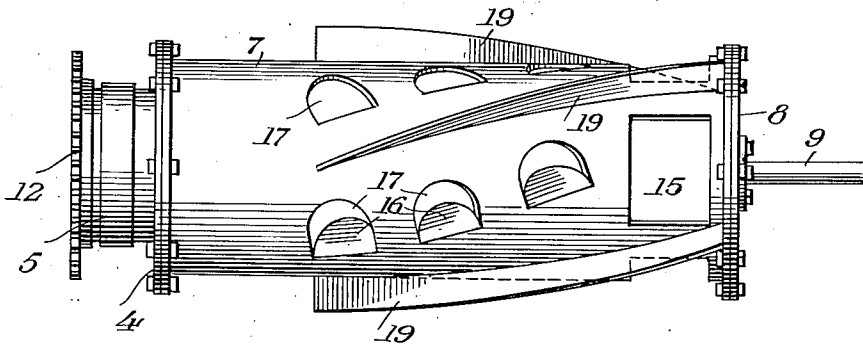


Fig.6.



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CEMENT MIXER

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Application November 27, 1935, Serial No. 51,890

2 Claims. (Cl. 83—73)

This invention relates to plastic or cement mixers and has for the primary object the provision of a device of this character which will thoroughly mix materials during one passage through the device by providing inner and outer mixing means whereby the materials are thoroughly agitated by both means and caused to pass from one to the other to further agitate and mix said materials before escaping from the device.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which Figure 1 is a side elevation illustrating a cement mixer constructed in accordance with my invention.

Figure 2 is a vertical sectional view illustrating the same.

Figure 3 is an end elevation illustrating one end of the device.

Figure 4 is a similar view to Figure 3, showing the other end of the device.

Figure 5 is a transverse sectional view taken on the line 5—5 of Figure 2.

Figure 6 is a side elevation showing the inner mixing element.

Referring in detail to the drawings, the numeral 1 indicates an outer casing of tubular formation and has one end closed by an end wall 2 provided with a bearing 3. The other end of the casing 1 is closed by an end wall 4 having a journal 5. Arranged in the bottom of the casing 1 and adjacent the end wall 2 is a discharge neck 6.

A cylinder 7 is arranged in the casing 1 and in spaced relation thereto and one end is closed by an end wall 8 to which a shaft 9 is secured. The shaft 9 is supported by the bearing 3. The other end of the tube 7 is closed by an end wall 10 on which a cylindrical member 11 is formed. The member 11 is supported by the journal 5 and has secured thereto a drive gear 12 arranged exteriorly of the casing 1. The gear 12 may be geared to a power source in any suitable manner. The member 11 receives therein the discharge end of a hopper 13, the latter is supported to the casing 1 by braces 14. The tube 7 adjacent the wall 8 has discharge openings 15 and also struck out from said tube is a series of agitating flaps

or extensions 16. The extensions 16 are arranged in rows and extend inwardly of the tube. The striking out of the extensions 16 from the tube forms therein openings 17 which lie in close proximity to the extensions.

Diagonally extending fins 18 are secured to the inner walls of the tube and are located between the member 11 and the openings 17. The pitch of the fins 18 is such that the material received from the hopper will be caused to travel in the direction of the openings 17 and 15 of the tube.

Spirally arranged fins 19 are secured to the outer face of the tube and are located adjacent the openings 17 and 15. As material passes through the openings 17 the fins 19 feed said material through the casing to the discharge neck 6.

A device constructed in accordance with the foregoing will thoroughly and efficiently mix material due to the fact that materials are first fed into the tube and are agitated by the fins 18 and extensions 16 and pass through the openings 17 and 15 to the casing 1 where said materials are again agitated by the fins 19 and fed in the direction of the discharge neck 6.

Having described the invention, I claim:

1. A mixing device comprising an outer casing, an inner casing journaled in the outer casing and spaced from the walls thereof and having a material receiving opening, a hopper in communication with said opening, means for rotating the inner casing, a discharge neck in the outer casing, said inner casing having a series of openings, extensions formed on the inner casing and located adjacent certain of said openings, and means carried by the inner casing to agitate materials in said inner casing and in said outer casing.

2. A mixing device comprising an outer casing, an inner casing journaled in the outer casing and spaced from the walls thereof and having a material receiving opening, a hopper in communication with said opening, means for rotating the inner casing, a discharge neck in the outer casing, said inner casing having a series of openings, extensions formed on the inner casing and located adjacent certain of said openings, fins secured to the inner casing and arranged between certain of said openings and the intake opening, and spirally arranged fins secured to the outer face of the inner casing.

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