R. G. LOWE.

POWER AGITATOR.

APPLICATION FILED APR. 12, 1920.

1,413,672. Patented Apr. 25, 1922.

Fig. 1

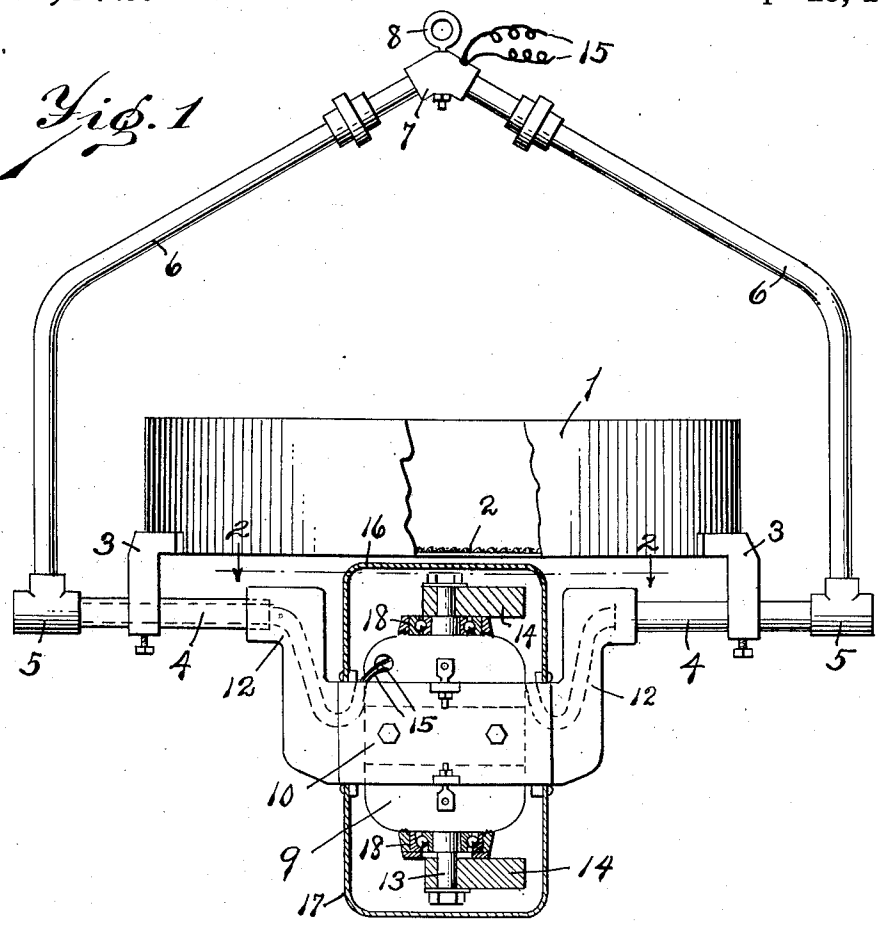
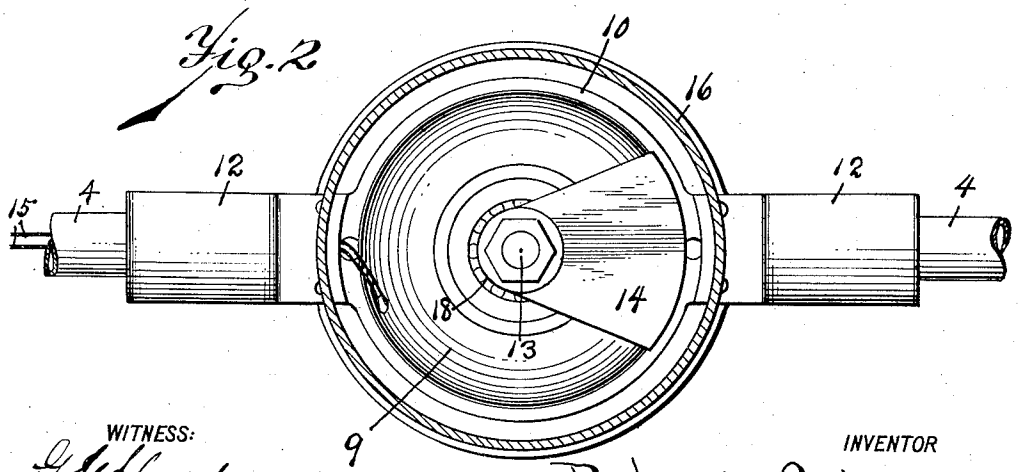


Fig. 2



WITNESS:

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ROBERT G. LOWE, OF CLAWSON, MICHIGAN.

POWER AGITATOR.

1,413,672. Specification of Letters Patent. Patented Apr. 25, 1922.

Application filed April 12, 1920. Serial No. 373,244.

To all whom it may concern:

Be it known that I, ROBERT G. LOWE, a citizen of the United States, and residing at Clawson, in the county of Oakland and State of Michigan, have invented a new and Improved Power Agitator, of which the following is a specification.

This invention relates to means for sifting, mixing, agitating or grinding granular materials or liquids, and its object is to impart gyratory movement to the receptacle in which such materials are contained.

This invention consists, in combination with a receptacle, of a suspended frame to support the same, and an electric motor to impart gyratory movement to the frame, said motor being provided with an armature shaft on which a weight is mounted.

It further consists in mounting a heavy sector on each end of the armature shaft of the electric motor.

It further consists in forming the receptacle with a flat bottom which is normally horizontal and in mounting the motor below said bottom with its shaft at right angles to the middle thereof.

It also consists in the details of construction illustrated in the accompanying drawing and particularly pointed out in the claims.

In the drawing, Fig. 1 is an elevation of this improved power agitator, parts being broken away to more clearly disclose the construction. Fig. 2 is a section on the line 2—2 of Fig. 1 on a larger scale.

Similar reference characters refer to like parts throughout the several views.

The receptacle 1 to hold the materials to be sifted or agitated may be of any desired form, size or construction, that shown in the drawing being a sieve or riddle provided with a woven bottom 2. It is secured to two brackets 3 which are mounted on the tubular cross bars 4 which connect to the T's 5 at the lower ends of the tubes 6. A connection 7 at the upper ends of these tubes 6 has an eye bolt 8 by which this agitator may be suspended.

An electric motor is mounted below the riddle and comprises a housing 9 mounted in a frame member 10 which is generally cylindrical with two hollow arms 12 into which the cross bars 4 connect. The armature shaft 13 is shown to be vertical and has a weight 14 eccentrically mounted at both ends although one may be omitted if desired. The wires 15 enter the connection 7, pass down through one tube 6 and one tube 4 and a hollow 12 to the motor. The movable parts of the motor are protected by the caps 16 and 17. Any desired bearings 18 may be provided for the armature shaft.

When the motor is energized and the shaft 13 rotated, the inertia of the weights 14 will cause the entire structure to gyrate, traveling in a circular path of but small diameter, depending upon the speed of the motor and the weight of the various parts. The stresses on the bearings are not so extraordinary but that they may be taken care of by good ball bearings.

When the centers of gravity of the weights 14 are on the same side of the shaft 13 in a plane passing through the axis of the shaft, the gyratory movement will cause the shaft to travel through a cylinder of movement, while having these centers of gravity on opposite sides of the shaft while still in said plane will cause the shaft to describe a figure which is extremely irregular.

The proportions and sizes of the several parts may all be changed by those skilled in the arts without departing from the spirit of my invention as set forth in the following claims.

I claim:—

1. The combination of a frame, a receptacle mounted thereon, an electric motor rigidly mounted in the frame and comprising an armature shaft, and a weight eccentrically mounted on each end of said shaft, said shaft being substantially vertical.

2. The combination of a frame, a receptacle mounted thereon, an electric motor rigidly mounted in the frame and comprising an armature shaft, a weight eccentrically mounted on each end of said shaft, said shaft being substantially vertical, and caps extending up and down from said frame and enclosing the motor.

3. The combination of a substantially cylindrical frame provided with arms, tubular members connecting to said arms and a receptacle mounted on said tubular members, a motor housing rigidly mounted in said frame, caps on the frame enclosing said housing, a shaft mounted vertically in said housing, and segment shaped weights mounted on the ends of said shaft.

ROBERT G. LOWE.