

J. DUSHANE.

GEARING.

APPLICATION FILED MAY 21, 1910.

990,195.

Patented Apr. 18, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

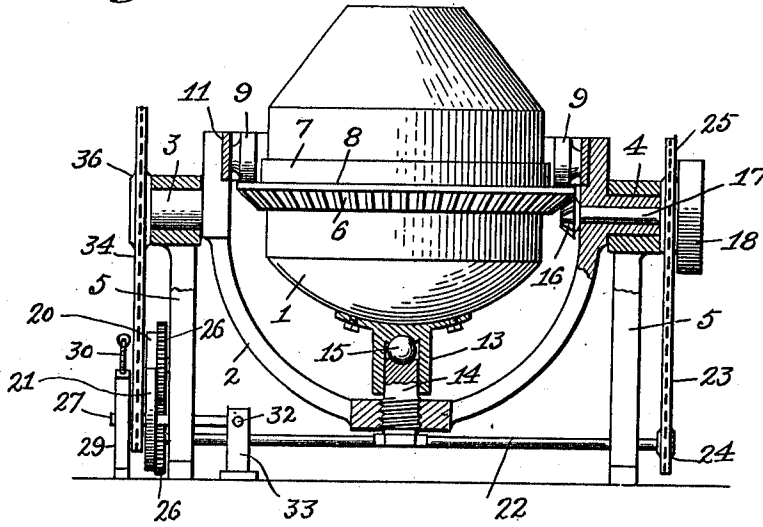
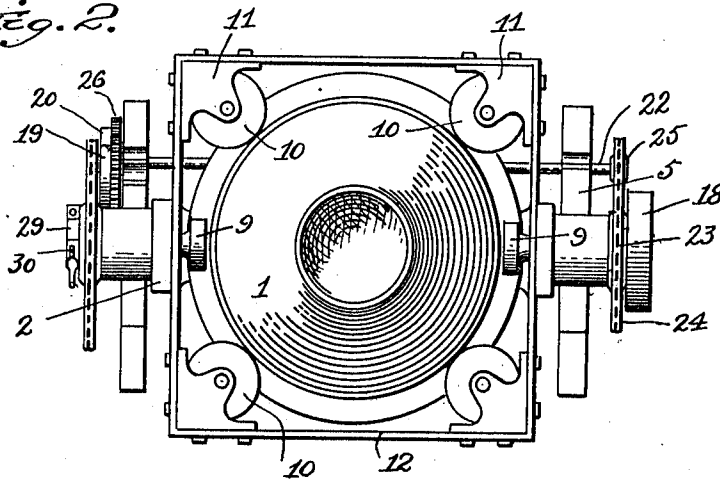


Fig. 2.



Witnesses
Laura A. Gower.
E. F. Deil.

Inventor
James Dushane.

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2 SHEETS—SHEET 2.

Fig. 3.

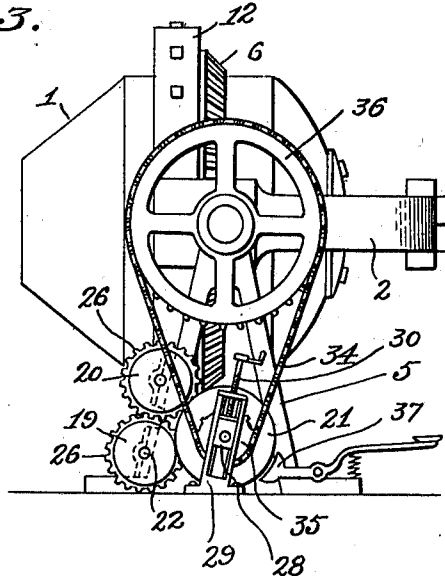


Fig. 4.

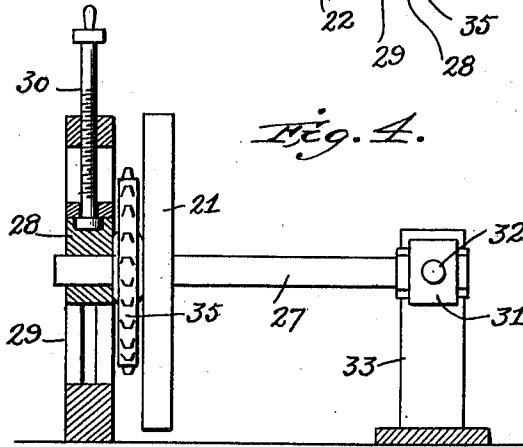


Fig. 5.

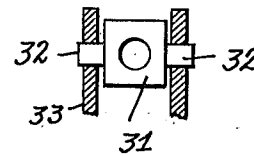


Fig. 6.

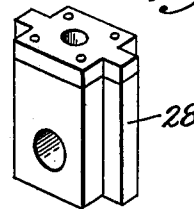
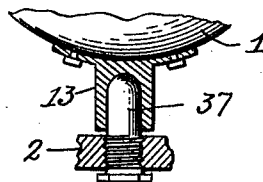


Fig. 7.



Witnesses
Laura A. Gower,
E. S. Dubail.

Inventor
James Dushane.

UNITED STATES PATENT OFFICE.

JAMES DUSHANE, OF SOUTH BEND, INDIANA.

GEARING.

990,195.

Specification of Letters Patent.

Patented Apr. 18, 1911.

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To all whom it may concern:

Be it known that I, JAMES DUSHANE, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Gearing, of which the following is a specification.

This invention relates to improvements in mixing machines, adapted more especially for mixing concrete or other paving compounds either wet or dry.

One object of the invention is to provide means, whereby the mixing drum is substantially and revolvably supported in any desired position.

Another object is to provide a simple and substantial tilting means, whereby the mixing drum can be tilted to any desired position, and securely held in that position.

A further object is to provide a tilting means that can be thrown easily into and out of operation, and will allow of the movement of the mixing drum independently of said tilting means, while the said means is in operation.

These objects are obtained by the means illustrated in the accompanying drawings in which,

Figure 1 represents a side elevation of the device in one position. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a front elevation showing the mixing drum in a different position to that shown in Fig. 1. Figs. 4, 5 and 6 are detail views of the tilting mechanism, and Fig. 7 is a modification of the end support of the mixing drum.

In the drawings, 1 designates the mixing drum, preferably formed open at one end only, supported by a yoke 2, provided with trunnions 3 and 4, mounted in supports 5.

The drum is provided with a central, beveled, annular gear 6 having a flange 7, the flat face 8 of the bevel gear and its flange forming tracks for supporting rollers 9 and 10, said rollers 9 being journaled on the yoke 2, and said rollers 10 being journaled in brackets 11 secured in frame 12, which is mounted upon the outer ends of the yoke 2, to one side of the trunnions 3 and 4. The rollers 9 and 10 are journaled angularly to each other, whereby the rollers 9 engage the rear surface 8 of the bevel gear to support the mixing drum when it is in a dumping position, and the rollers 10 en-

gage the flange 7 to support the drum in a mixing position.

To support the drum in a filling position, it is provided at its closed end with a socket 13, which engages an adjustable screw stud 14 secured to the yoke, these two members having a ball 15 interposed between them to form an anti-frictional bearing. It will be seen that by forming this support as described any looseness of the supporting members can be readily taken up.

The drum is rotated by a bevel gear 16, which engages the bevel ring on the drum, said bevel gear being mounted upon a shaft 17, which passes centrally through the trunnion 4, and said shaft at its outer end is provided with a drive wheel 18, which can be connected to any suitable source of power.

The tilting mechanism embodies frictional wheels 19, 20 and 21. The wheel 19 is mounted upon a shaft 22, which is driven by the sprocket chain 23, engaging the sprocket wheels 24 and 25, the last named being fixed upon the shaft 17. The frictional wheels 19 and 20, are provided with gear wheels 26 which engage each other, so that, when the frictional wheel 19 is operated, the frictional wheel 20 is driven in an opposite direction.

The frictional wheel 21 is mounted upon a short shaft 27, which is supported at its front end in a sliding block 28, adapted to move vertically in a frame 29, and is operated by a screw 30 provided with a handle, the rear end of said shaft being supported by a pivoted block 31, provided with trunnions 32, which engage a support 33. It will thus be seen, that when the screw 30 is operated, the free end of the shaft 27 carrying the frictional wheel 21 is caused to move into contact either with the frictional wheel 19 or 20, thereby rotating the frictional wheel 21, causing the drum to tilt in either direction by means of mechanism hereinafter set forth.

The tilting motion is transmitted to the drum through the sprocket chain 34, which engages a sprocket wheel 35 on the shaft 27, and a sprocket wheel 36 mounted on the trunnion 3.

A brake 37 is provided to engage the frictional wheel 21, whereby the mixing drum can be held positively in any position.

It will be plainly seen that by providing a frictional tilting mechanism, that the mix-

ing drum is free to move independently of the said means, thereby obviating any danger of breaking various parts, should an obstruction be placed in the path of the mixing drum during its tilting movement.

In Fig. 7 of the drawing is shown a modification of the rear support of the drum, the socket that is secured to the end of the drum 3, engages over a stud 37 provided with a rounded end, which engages the bottom of the socket.

Having thus fully described the invention what is claimed is,

1. In a mixing machine, a tilting mechanism, comprising friction wheels geared together to rotate in opposite directions, means for driving one of said wheels, a movable friction wheel, a shaft for the movable wheel pivoted at one end, said movable wheel adapted to engage the geared friction wheels separately, a tilting frame, and means for connecting the movable wheel with the frame.

2. In a mixing machine, a tilting mechanism, comprising friction wheels geared together to rotate in opposite directions, means for driving one of said wheels, a movable friction wheel a shaft for the movable wheel pivoted at one end and having its other end slidably supported said movable wheel adapted to engage the geared wheels separately, a tilting frame, and means connecting the movable wheel with the frame.

3. In a mixing machine, a tilting mechanism, comprising friction wheels geared together to rotate in opposite directions, means

for driving one of said wheels, a movable friction wheel, a shaft for the movable wheel pivoted at one end and having its other end slidably supported, said movable wheel adapted to engage the geared wheels separately, means for adjusting said movable wheel, a tilting frame and means for connecting said movable wheel with the frame.

4. In a mixing machine, a tilting mechanism, comprising friction wheels geared together to rotate in opposite directions, means for driving one of said wheels, a shaft pivoted at one end and slidably supported at the other, a box for supporting said slidable end, a screw for adjusting said box, a friction wheel adapted to engage said geared wheels separately mounted upon said shaft, a brake for said wheel, a tilting frame, and means for connecting said shaft to the frame.

5. In a mixing machine, a tilting mechanism, comprising friction wheels geared together to rotate in opposite directions, means for driving one of said wheels, a shaft pivoted at one end and slidably supported at the other, a box for supporting said slidable end, a screw for adjusting said box, a friction wheel adapted to engage said stationary wheels separately mounted upon said shaft, a tilting frame, and means connecting said shaft to the frame.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES DUSHANE.

Witnesses:

EDW. F. DUBAIL,
LAURA A. GOWER.