

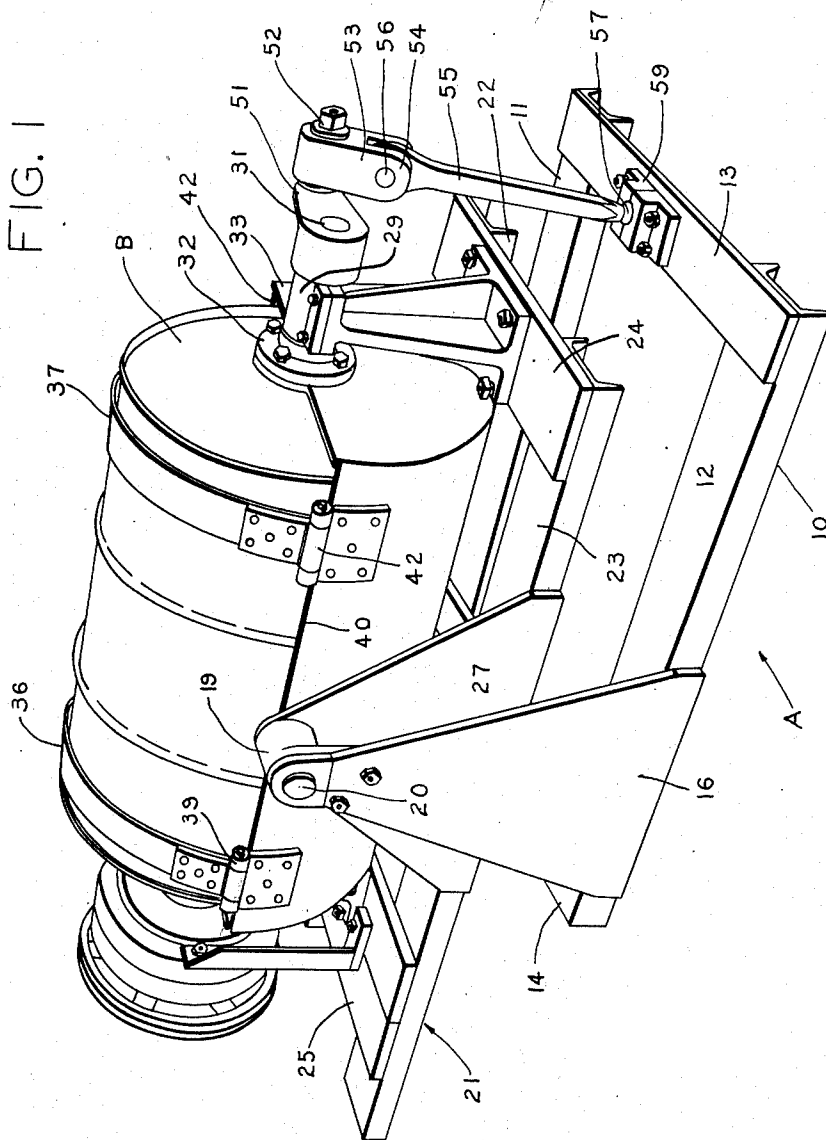
Sept. 9, 1952

F. A. STAHL
PAINT MIXER

2,610,041

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2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

FIG 2

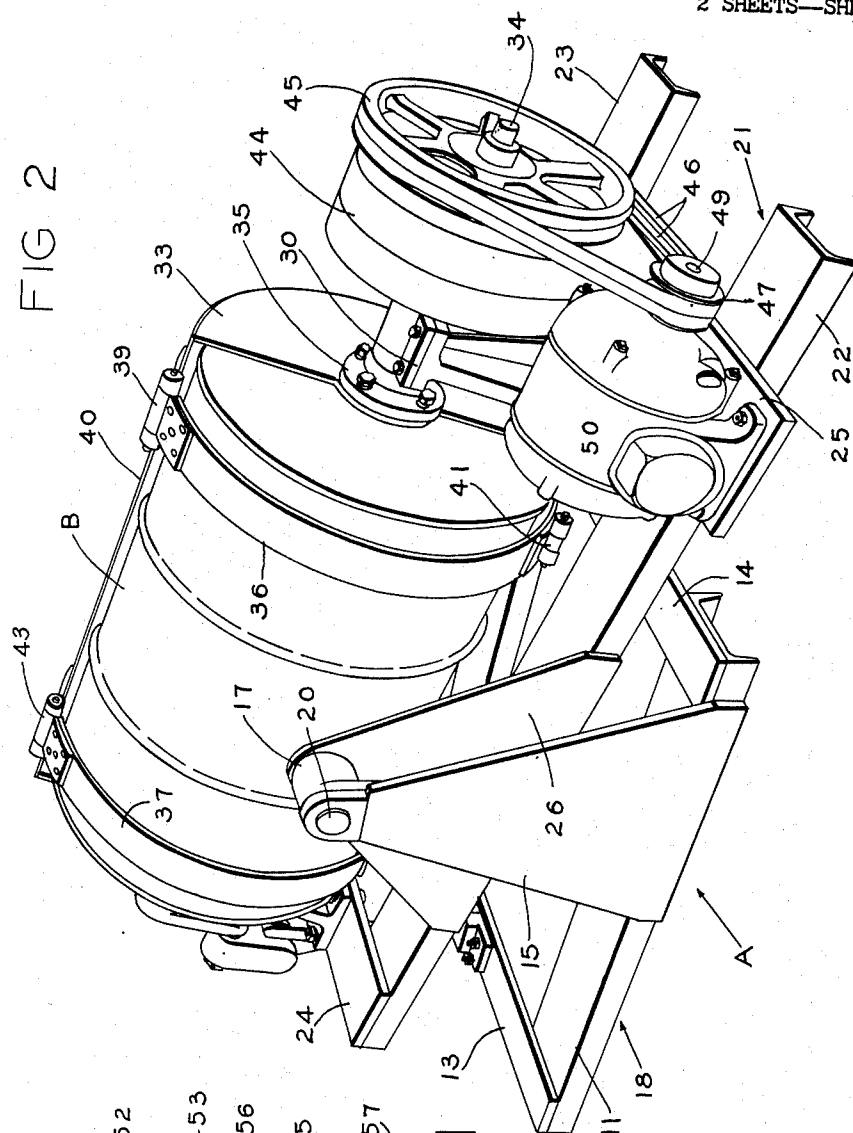
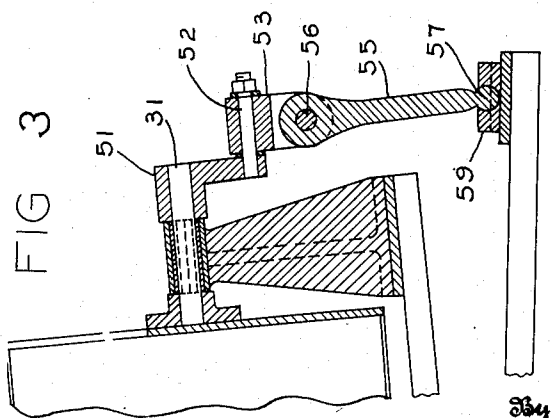


FIG 3



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PAINT MIXER

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My invention relates to an improvement in paint mixers, wherein it is desired to provide a means of mixing paint or other materials in large containers.

Paint and other materials are often shipped or stored in large drums. Considerable difficulty is experienced in properly mixing the paint thus contained. The pigments and heavier materials have a tendency to sink to the bottom of the drums, while the lighter oils and the like have a tendency to float on the surface. It is extremely difficult to stir the paint sufficiently to obtain a similar consistency throughout. At the same time it is difficult to agitate the paint in any other manner, except by stirring.

It is an object of the present invention to provide an apparatus capable of receiving a drum of paint or similar material to be mixed for agitating the drum sufficiently to thoroughly mix the contents. As a result the drum of paint may be inserted in my apparatus and the contents thereof thoroughly and effectively mixed in an extremely short period of time.

A feature of the present invention resides in the provision of a paint mixer for use in mixing drums of paint, and which acts to rock the drums endwise while rotating the drums about their longitudinal axis. Accordingly while the drum is rotated to produce a stirring effect upon the contents thereof, the drums are simultaneously rocked in a manner to direct heavy particles first toward one end of the drum and then toward the other. This action results in a quick mixing of the paint to a similar consistency throughout the drum.

A feature of the present invention resides in the simplicity of the apparatus. My apparatus includes a platform supported by intermediate opposed pivots which allow the platform to rock. Upon this platform I provide a pair of aligned shaft supports which rotatably support a drum container for rotation about an axis extending at substantially right angles to the axis of the platform supports. A crank is connected to the drum supporting shafts for rotation therewith and a connecting rod connects this crank to one end of the supporting base frame. Thus by rotating the drum support about its aligned pivots the platform is automatically tilted.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of my specification:

Figure 1 is a perspective view of my paint mixer showing one side thereof in detail.

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Figure 2 is a perspective view of my paint mixer showing the opposite side thereof in detail.

Figure 3 is a sectional view through the crank and connecting rod which connect the platform to the supporting base to rock the platform.

The paint mixer A includes a supporting base 10 which is shown as being substantially rectangular in form. The base 10 includes a pair of longitudinally extending side frame members 11 and 12. These parallel frame members 11 and 12 are connected at one end by a cross member 13 and at the other end by a cross member 14. The base members and cross members are secured together in any suitable way as by welding or the like.

A pair of plates 15 and 16 are secured to the frame members 11 and 12, respectively, near the cross member 14 and extend upwardly therefrom. These plates 15 and 16 are provided with a pair of aligned bearings 17 and 19 at their upper extremities. These bearings 17 and 19 support aligned pivots 20 which support the auxiliary platform of the paint mixer.

The auxiliary platform of the paint mixer is indicated in general by the number 21. This platform includes a pair of longitudinally extending parallel frame members 22 and 23 which are connected at one end by the cross member 24 and are connected near the other end by a cross member 25. A pair of upstanding supporting plates 26 and 27 are connected to the side edges of the frame members 22 and 23, respectively, and are fastened thereto by welding or other suitable means. The pivot pins 20 are connected to the upper ends of the plates 26 and 27 so as to pivotally support the platform 21 about the aligned pivots 20.

A bearing bracket 29 is supported by the cross member 24 and extends upwardly therefrom. A similar bearing bracket 30 is supported by the cross member 25. The bearings of the bearing brackets 29 and 30 are in longitudinally aligned relation relative to the platform 21. The bearing 29 supports a stub shaft 31 which is connected by a flange 32 to one end of a hollow semi-cylindrical receptacle 33. The bearing 30 supports a stub shaft 34 which is connected by a flange 35 to the other end of the receptacle 33. Thus the receptacle 33 is rotatably supported by the aligned stub shafts 31 and 34.

The receptacle 33 is trough-shaped to support a cylindrical drum B containing paint or other material to be mixed. A pair of semi-circular straps 36 and 37 are hingedly connected at each end to the receptacle 33, these straps acting to hold the drum B in the receptacle 33. The strap

36 is connected by a hinge 39 to one longitudinal edge 40 of the receptacle 33 and is connected by a hinge 41 to the opposite edge 42 of the receptacle 33. The strap 37 is similarly terminally connected by hinges 43 to the edges 40 and 42 of the receptacle 33. One or both of the hinges connecting each strap 36 or 37 to the receptacle is provided with a removable pintle so that the strap may be disconnected from the receptacle at one end and swung to one side so that the drum B may be inserted into or removed from the receptacle 33.

The shaft 34 is provided with a gear reducing unit 44 thereupon which is connected to a pulley 45 freely rotatable upon the shaft 34. The pulley 45 is driven by belts 46 from a cooperating pulley 47 on the motor shaft 49 of the drive motor 50. Accordingly when the motor 50 is in operation the belts 46 will drive the pulley 45 which acts through the gear reducing unit 44 to rotate the shaft 34 at a reduced speed. Rotation of the shaft 34 acts through the receptacle 33 to rotate the shaft 31 at the opposite end of the platform 21.

As best illustrated in Figures 1 and 3 of the drawings, a crank 51 is mounted upon the end of the shaft 31. This crank 51 is pivotally connected at 52 to a ring 53. The connecting rod 55 is provided with a ball shaped end 57 supported within a socket 59 mounted upon the cross member 13 of the base frame 10. As a result the connecting rod 55 is universally connected to the base frame 10 and also to the crank 51.

The operation of my paint mixer is believed obvious from the foregoing description. The motor 50 is operated until the receptacle 33 is in substantially the position illustrated in Figure 1 with the open side of the receptacle uppermost. The straps 36 and 37 are disconnected at one end from the receptacle and swung to one side out of the path of a drum being removed from or inserted into the receptacle. The drum B containing the material to be mixed is then placed within the receptacle 33 and two straps 36 and 37 replaced in drum holding position.

The motor 50 is then started in operation acting through the belts 46 and the reducing gear unit 44 to rotate the receptacle 33 about the axes of the shafts 31 and 34. Rotation of the shaft 31 causes rotation of the crank 51. Accordingly as the lower end 57 of the connecting rod 55 is universally connected to the base 10, the operation of the crank 51 acts to raise and lower the adjacent end of the platform 21. In other words, the platform 21 tilts from substantially the horizontal position shown in Figure 1, first in one direction and then in the other, lowering first one end of the drum B and then the other. The contents of the drum are thus moved longitudinally of the axis of the drum as well as angularly about the drum axis.

In accordance with the patent statutes, I have described the principles of construction and operation of my paint mixer, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A paint mixer for mixing drums of material comprising a base, a pair of upwardly extending supports thereupon, a pair of aligned pivots supported by said supports, a frame tiltably supported intermediate its ends by said pivots, a pair of bearings mounted upon said frame near opposite ends thereof on opposite sides of the axis of said pivots, a drum support rotatably supported between said bearings, a crank rotatable with said drum support, a connecting rod connecting said crank and said base for tilting said base upon rotation of said drum support, the connection between the rod and base being substantially on a vertical plane through the axes of said bearings, and means for rotating said drum support.

2. A paint mixer for mixing drums of material comprising a base, a pair of supports extending upwardly therefrom, a frame between said supports having uprights on opposite sides thereof inwardly of said uprights on said base, aligned pivots connecting said uprights on said base to said uprights on said frame, a pair of bearings on said frame disposed on opposite sides of the axis of said pivots, a pair of stub shafts supported by said bearings, a trough shaped receptacle designed to snugly accommodate a drum and connected to said stub shafts and extending therebetween, means connected to opposite edges of said receptacle for holding a drum contained therein, a crank connected to one of said shafts, means connecting said crank to said base to tilt said frame upon rotary movement of said shafts, and means for rotating said shafts.

3. A paint mixer for mixing drums of material including a base, opposed supports on opposite sides of said base, a platform between said supports, upwardly extending members on said platform, intermediate the ends thereof and inwardly of said supports, aligned pivots connecting said supports to said members to tiltably suspend said platform between said supports, pivot supports extending upwardly from opposite ends of said platform, a drum support mounted between said pivot supports on aligned pivots, means cooperable between said drum support and said base to tilt the platform as the drum support rotates, means rotating said drum support, said cooperable means comprising a rotatable crank and a connecting rod, and a universal joint connecting said connecting rod to said base.

FRED ALBERT STAHL.

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