

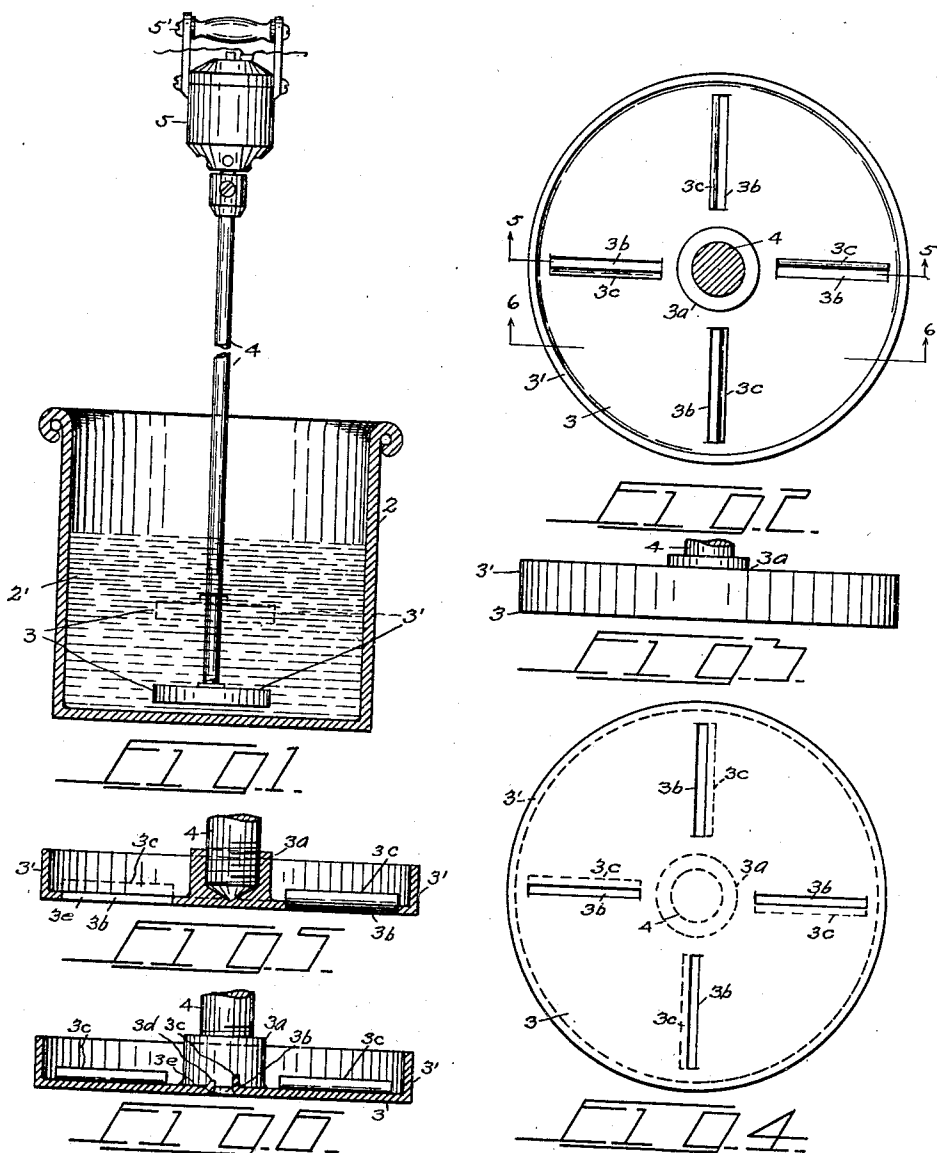
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PAINT MIXER

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PAINT MIXER.

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This invention relates to paint mixers, designed for use by painters and the like, for stirring and breaking-up white lead and other viscous paints, and mixing them with oil and other thinning agents ready for spreading over the work.

The object of the invention is to provide a motor driven mixer, which is easily portable and may be propelled manually. A further object is to provide a shallow cup-shaped cylindrical body to which an operating shaft or rod may be attached. A further object is to provide a plurality of radial slots or openings in the bottom of the body through which the lead and other ingredients of the mixture may pass when the body is moved vertically in a keg or pail, the said slots preferably being relatively narrow so as to insure the thorough breaking-up of the relatively thick pasty lead. A further object is to provide radial vanes or ribs, which project above the plane of the bottom of the body and stir, as well as displace the ingredients radially as the body is being whirled or rotated. And a further object is to provide means for enabling the mass of lead and oil to swirl and become thoroughly agitated and broken up, without pronounced centrifugal movement, or danger of the mixture rising and overflowing the pail.

I attain these objects by the means set forth in the detailed description which follows, and as illustrated by the accompanying drawing, in which—

Figure 1 is a central vertical section of a paint pail, to which my improved mixer is applied. Fig. 2 is a top plan view of the mixer, Fig. 3 is a side elevation of the same. Fig. 4 is a bottom plan view of the mixer. Fig. 5 is a transverse vertical section taken on line 5—5 of Fig. 2. And Fig. 6 is a similar section taken on line 6—6 of Fig. 2.

In the drawing, 2 represents a pail or like container suitable for mixing white lead, or other pigments, as 2', that require breaking-up and thinning for conditioning them for use.

3 represents my paint mixer, consisting of a disc-shaped body having an upturned peripheral flange 3', which in practice is usually from one-fourth to three-eighths of an inch in height. The center of the disc 3 is provided with a boss 3^a, which is bored and threaded to receive the lower end of an operating rod or stem, as 4, by which the

disc is supported and handled. At the top end of the rod 4 is mounted a small electric motor 5, by which the disc 3 is rotated at high speed, the motor being equipped with a handle 5' for manually controlling the device. The disc 3 is provided with radial slots 3^b, which are preferably formed by first slitting the bottom and then shearing and drawing the metal at each side and end of the slits by means of suitable dies, for providing one tall and one short rib or vane, as 3^c—3^d, after which the shorter vane 3^a is preferably flattened, as shown at 3^e in Fig. 6. This provides a number of vanes 3^e, that border the corresponding sides of the slots, as shown in Figs. 2 and 4. The object of this peculiar construction is to provide vanes 3^e of suitable height, and at the same time restrict the slots 3^b to the most suitable breadth to perform the desired mixing work. The slots 3^b may be of any suitable length, and the vanes 3^e of any suitable height, but I have found that the best results are attained when the slots and vanes are constructed substantially as herein shown. In practice, the painter opens a keg of white lead as 2', for example, the lead as a rule being relatively thick and stiff and inclined to be lumpy, and it is always necessary for the painter to first remove a quantity of lead and then stir and agitate the viscous mass usually by the use of a wooden paddle or stick, for long intervals in order to thoroughly break up the mass and render it capable of being spread smoothly and evenly by brush, or by means of the well-known spraying machines. Ordinarily, oil or some other thinning agent is incorporated with the lead and the stirring continued until the mass becomes properly conditioned. In the present case, the stirring and agitating is accomplished by means of the shallow cup-shaped disc 3, the latter being rotated at high speed by the motor 5. To begin the mixing work, the operator grasps the handle 5' of the motor, turns on the current, and then plunges the disc 3 into the mass of unmixed paint. During the mixing operation, the operator raises and lowers the disc 3, and also maneuvers the said part from side to side in the pail, until the whole mass is suitably mixed. When the disc 3 is submerged, portions of the lead and oil pass upwardly through the slots 3^b, and are instantly stirred and agitated by the rapidly revolving vanes 3^e. The

vanes 3^c act like the blades of an ordinary fan and tend to displace the paint laterally or centrifugally. This centrifugal action, if allowed to continue without restriction, it
5 has been found, tends to cause the paint to rise and creep up the walls of a pail, and unless the agitation is stopped at frequent intervals, the paint overflows the top of the pail. To overcome this tendency of the mixture to creep towards the mouth of the pail,
10 I provide the upturned flange 3'. This flange is preferably considerably higher than the vanes and tends to stop the lateral displacement of the paint and causes the mass
15 to be thrown back into the path of the vanes where it is reagitated before it finally escapes from the disc. By the use of my improved mixer, I am able to condition 100 pounds of lead in a few minutes time, whereas it usually requires many hours of vigorous and steady stirring and agitating, by means of the old style hand operated paddle or stirring stick to do the said work, and the composition produced by this improved
25 method is more finely and evenly broken up and mixed than is possible to accomplish by the older and cruder means in common use.

Having thus described my invention, what I claim, is—

- 30 1. A mixing device comprising a plane disc having a plurality of radial slots through which the ingredients of a mixture may pass, radial vanes forming one side of

said slot and rising above the disc, the peripheral portion of said disc comprising a
35 cylindrical flange disposed at right angles to the plane of the disc adapted to prevent centrifugal movement of the mixture beyond the disc, and means for rotating said disc.

2. In a portable mixer, a shallow cup-
40 shaped body comprising a disc and a cylindrical flange, means for rotating said disc, said disc having a plurality of radial openings for the passage of the ingredients to be mixed when the disc is raised and lowered, and a plurality of vanes arranged radially and at right angles to the plane of the disc for agitating and stirring the ingredients, the height of said vanes being less than the height of said flange adapted to
45 effect the centrifugal movement of the mixture towards said flange with sufficient force to cause the mixture to rebound and become reagitated by the vanes.

3. A paint mixer comprising a rotatable
55 disc having radial slots and radial vanes bordering and rising above the said slots, the peripheral margin of said disc comprising a cylindrical flange, said flange rising above the tops of said vanes sufficiently to
60 prevent the vanes from throwing the mixture laterally beyond said flange, and means for driving said disc.

In testimony whereof, I affix my signature.

LORENZO C. WAIT.