Jan. 19, 1932. S. H. GIBSON 1,841,434

PAINT STIRRER

Filed Aug. 15, 1929

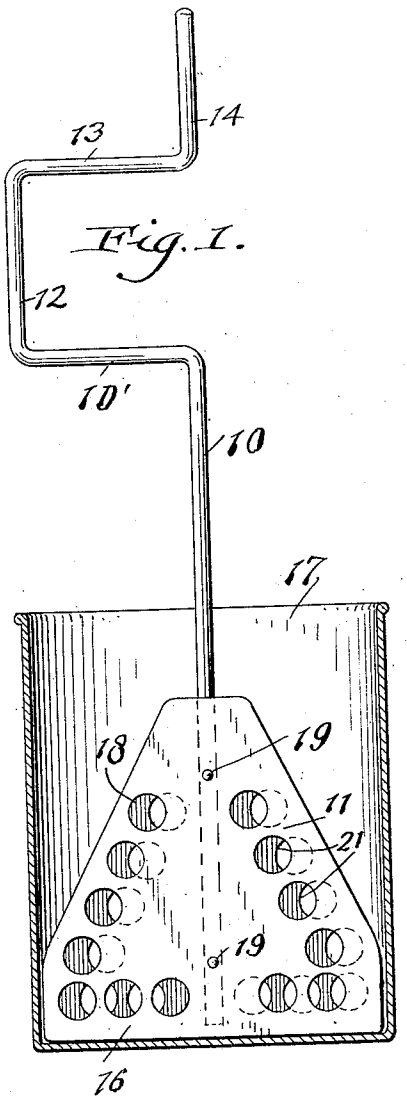


Fig. 1.

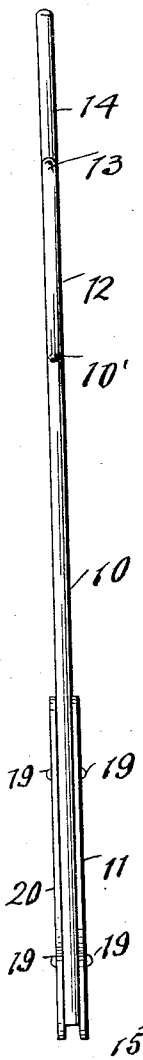


Fig. 2.

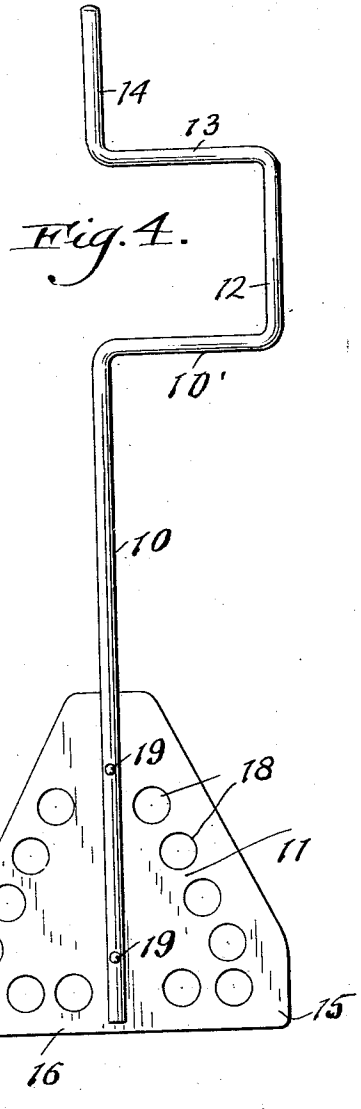


Fig. 4.

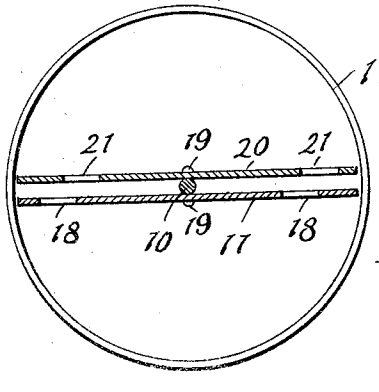


Fig. 3.

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UNITED STATES PATENT OFFICE

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PAINT STIRRER

Application filed August 15, 1929. Serial No. 386,199.

This invention relates to paint stirrers, and more particularly to devices of this character adapted for manual operation to give a final stirring to ready-prepared paint just before the application thereof to the surface to be painted.

A substantial part of the market for paint to be supplied by the manufacturer is constituted by individual or home users who have little or no experience in the preparation of paint for final use. Such individual or home users will buy a can of paint from the local store, selecting the color from a color chart, and then before applying the paint merely stir it a few times with a stick or other home-made implement. As a result, an inferior effect is produced when the poorly mixed paint is applied to the surface, as it will not be of uniform consistency, causing a mottled surface which will generally vary considerably in color from that of the color chart. Upon complaint to the vendor that the paint did not correspond to the color chart, an experienced painter is often sent out by the store who will properly mix the paint and produce a paint surface which exactly coincides with the color chart, proving that the entire difficulty is in the final stirring of the paint.

In order to cope with this problem it is proposed to provide a simple paint stirrer which may be used by an inexperienced painter, which will thoroughly mix the paint so that the desired effect may be produced. By economical manufacture, these stirrers may be supplied gratis by the vendor with each can of paint.

The present invention has to do with this problem and has for its general object to simplify and improve the construction and operation of devices of this character.

A specific object of the invention is to provide a paint stirrer which will thoroughly stir the paint at the bottom of the can and permit the paint thrown up from the bottom to overflow the stirrer at the top without spilling out of the can.

Another specific object of the invention is to design a plurality of stirring elements so that each element will have a different surface of revolution in the stirring process.

Features of the invention adapted to carry out the foregoing objects are:

A tapered paddle which has its lower portion substantially the width of the bottom of the can and its sides converging thereabove, and

A plurality of holes in each of the stirring elements which are unaligned with holes with the other elements, but may be in overlapping relation with respect thereto.

Other objects and features of novelty will be apparent as the following description proceeds as taken in conjunction with the accompanying drawings, in which:

Fig. 1 is an elevation of the preferred embodiment of a paint stirrer according to my invention; and showing in vertical section the paint can with which it is used;

Fig. 2 is an end elevation of the stirrer shown in Fig. 1;

Fig. 3 is a horizontal cross section of the stirrer shown in Fig. 1; and

Fig. 4 is an elevation showing a modified construction of the paint stirrer.

Referring more particularly to the drawings, the paint stirrer comprises, essentially, a handle 10 and a blade 11. The handle 10 comprises a vertical shaft, the lower portion of which is substantially straight. The upper portion of the shaft 10 is bent laterally as at 10', then vertically upward as at 12, again laterally as at 13, and finally vertically as at 14 into alignment with the lower portion of the shaft. It will be obvious that by grasping the portion 14 in one end, which is held stationary, and rotating the portion 12 with the other hand, the operator may impart a comparatively steady rotary movement to the shaft 10.

The blade 11 is generally triangular in shape with its base perpendicular to the shaft 10 and its sides converging upward toward the shaft. The outer corners of the blade 11 may be cut away as at 15 so that the lower portions of the sides will be perpendicular to the base. The width of the base 16 is predetermined, slightly less than the diameter of the paint can 17, with which it is to be

used, so that the base 16 will loosely fit the bottom of the can and center the device therein for rotary movement. Furthermore, the portions 15 extend a short distance up the sides of the can. This arrangement, in addition to insuring that all of the paint at the bottom of the can will be thoroughly agitated, has the further advantage that the portions 15 may be used to scrape the sides of the can by merely elevating the stirrer during rotation thereof.

The blade 11 is perforated by a plurality of apertures 18 which are preferably distributed along the bottom and side margins of the blade. These apertures facilitate the mixing of the paint in an obvious manner. The blade is rigidly secured to the shaft 10 by any desired means, which in the embodiment shown comprises rivets 19.

The above description applies equally to each of the figures of the drawings, but in the preferred embodiment of the invention shown in Figs. 1 and 2 a second blade 20 is provided on the other side of the shaft 10, the shaft holding the blades in spaced relation. The blade 20 is preferably parallel to and similar to the blade 11, with the exception that it is provided with apertures 21 which are located out of alignment with the apertures 18 in the blade 11, but preferably in overlapping relation therewith. This arrangement provides that each of the blades will present a different surface of revolution and thus effect a more thorough stirring or cutting of the paint, as the paint which passes through the apertures 18 cannot pass undisturbed through apertures 21.

While the disalignment of the apertures 18 and 21 may be provided in various ways, it will be noted that in the specific embodiment, the corresponding holes are in the same horizontal plane but at different distances from the axis of rotation. Hence the holes are at different distances from the adjacent side edges, being offset in the direction of the centrifugal force set up by the stirring.

It will be noted that the holes of one side of each blade are respectively spaced as distances from the shaft 10 and the side edge, which are different from the corresponding distances of the opposite holes in the other side. An economy of manufacture is provided thereby as the plate 20 may be merely a plate 11 reversed. Thus all plates 11 and 20 may be punched alike, and the disalignment taken care of during assembly by merely reversing one plate.

When ready-mixed paint has been on the shelf in the can for an indefinite period the heavier ingredients thereof will settle to the bottom. Thus, in mixing, it is quite important that the surface of revolution cover substantially the entire bottom of the can. Agitation of the material at the lower portion of the can will throw it upward toward the upper portion of the can. The tapered sides of the blade 11, or the blades 11 and 20, will permit the paint thrown up from the bottom of the can to overflow the blades in passing, and such overflow will cause an additional agitation of the paint.

It will be obvious that the specific structure shown and described is susceptible of very many modifications within the scope of the broader idea thereof. It is, therefore, to be understood that the scope of the invention is not to be limited to the details shown and described but includes such embodiments of the broad idea as fall within the scope of the sub-joined claims.

Having thus described the invention what I claim as new and desire to secure as Letters Patent of the United States is:

1. A paint stirrer comprising a vertical shaft, and blades secured adjacent their intermediate portions to each side of the lower portion of said shaft and spaced apart thereby, there being a single integral perforated blade on each side of said shaft.

2. A paint stirrer comprising a vertical shaft, a pair of flat blades secured each adjacent their intermediate portions to the opposite sides of the lower portion of said shaft, each of said blades being provided with a plurality of apertures, on each side of said shaft apertures of one blade being out of alignment with the apertures of the other.

3. A paint stirrer comprising a vertical shaft, blades secured to the lower portion of said shaft, each of said blades being provided with a plurality of apertures, the apertures of one blade being out of alignment with the apertures of the other but in overlapping relation therewith.

4. A paint stirrer adapted to stir paint in a can, comprising a blade having a lower edge adapted to conform to the bottom of a paint can and extend toward the sides thereof, and having side edges extending upwardly from said lower edge and inwardly from the sides of the can to permit the paint thrown up from the bottom of the can to overflow the upper portion of the blade, without spilling out of the can, said blade having apertures spaced from one side edge, and other apertures spaced different distances from the other side edge.

5. A paint stirrer comprising a vertical shaft and a plurality of parallel blades connected thereto, each of said blades being perforated in the same pattern, the perforations of one blade being at different distances from the shaft from the perforations of another blade.

6. A paint stirrer having a blade adapted to rotate about a vertical axis, and provided with holes in each side, the holes in one side being at different distances from the side edges from the corresponding holes of the

other side and an identical blade reversed with respect to the first mentioned blade.

7. A paint stirrer having a plurality of blades adapted to rotate about a vertical axis, and each provided with a plurality of eccentric apertures, one of said blades being reversed, whereby the apertures therein are disposed at different distances from the axis of rotation from the corresponding apertures of the other.

8. A paint stirrer adapted to stir paint in a receptacle, comprising a blade rotatable about a vertical axis, and having a straight lower edge adapted to contact with the bottom of the receptacle for substantially the full diameter thereof to dislodge paint therefrom, said blades having a plurality of eccentric apertures, the upper edges of said blade converging thereabove, whereby rotation of the blade causes the paint dislodged by said lower edge to swirl over said converging upper edges and cooperate with the orifice effect of said apertures to cause rapid mixing of the paint.

In testimony whereof, I hereunto affix my signature.

SAMUEL H. GIBSON.