J. W. MASURY.

Paint-Mixer.

No. 196,533 Patented Oct. 30, 1877.

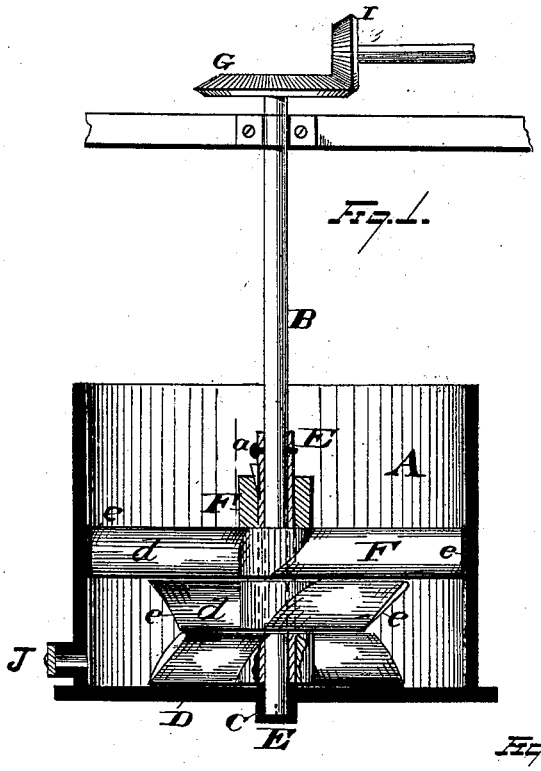


Fig. 1.

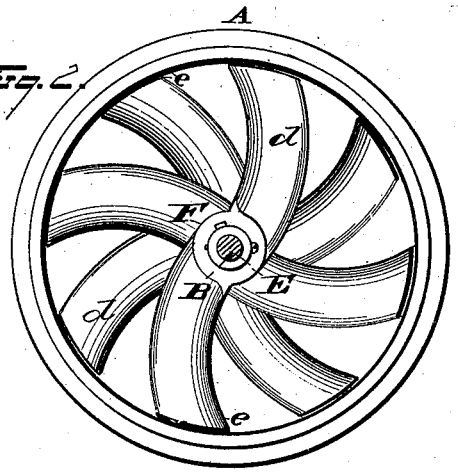
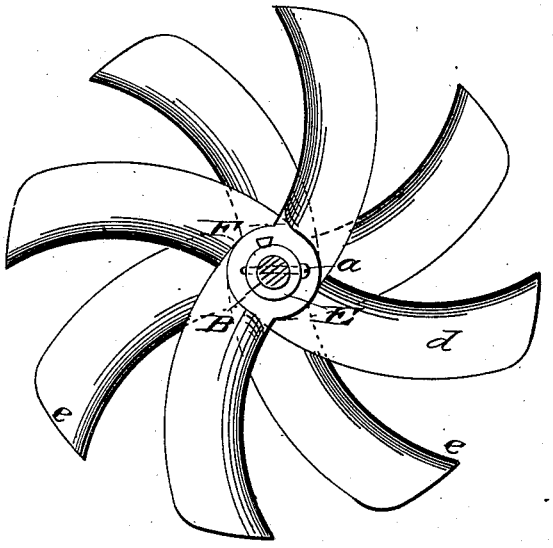


Fig. 2.

Fig. 3.



WITNESSES

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JOHN W. MASURY, OF NEW YORK, N. Y.

IMPROVEMENT IN PAINT-MIXERS.

Specification forming part of Letters Patent No. **196,533**, dated October 30, 1877; application filed April 25, 1877.

To all whom it may concern:

Be it known that I, JOHN W. MASURY, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Mixers for Liquid Colors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in mixers for liquid colors.

Heretofore, paint-mixers have been constructed with their mixing and agitating blades rigidly secured to the driving-shaft, and have been found to be defective, owing to the fact that it is practically impossible to properly cleanse either the mixing cylinder or blades, as access cannot be had to the different parts of the apparatus, the blades being located within the cylinder and rigidly secured to the driving-shaft.

Owing to the defects above noted, it is often the case that a sufficient portion of the colors of one mixing will adhere to the sides of the cylinder and the surface of the mixing-blades to seriously affect the color of the next mixing; also, if the apparatus should remain unused for a short time, the leavings of the last mixing will adhere to the tub or cylinder and blades, and oxidize, forming a skin, which is not only difficult to remove, but also becomes incorporated in the following mixing, and injures the same.

The object of my invention is to provide a mixer for liquid colors of such a construction that all parts of the apparatus may be quickly brought to view, and access readily had to such parts for cleansing purposes, whereby quantities of quick-drying colors of different kinds and shades may be successively mixed without danger of intermingling any of the colors of the preceding with the next succeeding mixing; and to that end my invention consists, first, in a mixer for liquid colors having vertically-movable blades, whereby the blades may be removed from the tub or cylinder, and enable the operator to thoroughly cleanse both the cylinder and blades; second, the blades of a mixer for liquid colors constructed on an incline to the driving-shaft, and formed with reversely-curved arms projecting from said driving-shaft; third, the combination, with the cylinder or tub and driving-shaft of a mixer for liquid colors, of two or more inclined reversely-curved blades, arranged to cross each other.

In the accompanying drawings, Figure 1 represents a vertical section of my improved mixing apparatus. Fig. 2 is a plan view of the same, and Fig. 3 shows the blades removed from the tub.

A designates the tub or cylinder, which is made of any desired material. The inside of tub A is turned out in a lathe to form a perfect cylinder, as in use its inner surface must be subjected to the direct scraping action of the mixing-blades rotating therein. B is the driving-shaft, which is stepped into a bearing, C, inserted in the bottom D of the tub. E is a tube adapted to snugly fit the driving-shaft, to which tube the propeller-blades F are rigidly secured by set-screws, feather and spline, or in any desired manner. Tube E may be locked to the driving-shaft by means of a locking-pin, *a*, as represented in Fig. 1, or by a feather and spline, and, as will be understood by referring to Fig. 3, the tube E, with the several mixing-blades F rigidly secured thereto, may be readily removed from the tub or cylinder A by raising the tube therefrom, and thus the blades and the interior of the cylinder may be quickly and perfectly cleansed preparatory for another succeeding mixing.

In order to provide sufficient space above the op of the tub or cylinder for the removal of the blades therefrom, the driving-shaft extends a considerable distance above the cylinder, as shown in Fig. 1, and the driving-gear G secured thereto, leaving sufficient space on the shaft for the movement of the tube E.

When large-sized mixers require the driving-gear to be applied in close proximity to the blades, to obviate the springing of the driving-shaft, if the latter be of undue length, the bevel-gear may be rigidly secured to the tube E, and the pinion I arranged below the bevel-gear, so that the blades may be readily raised by turning them slightly to avoid any contact with the driving-pinion I.

Blades F are formed similar to propeller-blades, having their arms *d* reversely curved, and formed at an incline to the driving-shaft, and are arranged on the driving-shaft to cross each other, as represented in Fig. 2. The lower blade, F′, moves in direct contact with the bottom of the tub or cylinder, and thus prevents the paint from adhering thereto, while the ends *e* of the several blades move in direct contact with the inner surface of the tub or cylinder. As motion is imparted to the driving-shaft, the blades operate to throw the liquid toward the shell of the tub, and as the leverage of the blades is greatest at their point of contact with the shell, the mixing of the colors is effected with the minimum amount of power.

The tub or cylinder is provided with a valve or faucet, J, for the purpose of drawing off the paint after it has been properly mixed.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mixer for liquid colors, the combination, with the tub or cylinder and the driving-shaft, (the latter having its lower end stepped in the cylinder, and its upper end supported in bearings at a sufficient distance above the top of the cylinder to allow the blades to be raised on the shaft above the top of said cylinder,) of one or more blades attached to a tube or sleeve, which latter is removably secured to the driving-shaft, substantially as and for the purpose set forth.

2. In a mixer for liquid colors, the combination, with the tub or cylinder and the driving-shaft, (the latter having its lower end stepped in the bottom of the cylinder, and its upper end supported in bearings at a sufficient distance above the top of the cylinder to allow the blades to be raised on the shaft above the top of the cylinder,) of two or more blades formed with reversely-curved and oppositely-inclined arms, said blades being attached to a tube or sleeve which is removably secured to the driving-shaft, substantially as and for the purpose set forth.

3. In a mixer for liquid colors, the combination, with the driving-shaft, arranged relatively to the tub or cylinder, whereby the sleeve to which the blades are secured may be raised above the cylinder or tub, of two or more blades arranged to cross each other, and secured to a single tube or sleeve, which latter is removably secured to the driving-shaft, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of April, 1877.

JOHN W. MASURY.

Witnesses:

FRANCIS B. CARLETON,

JOHN BODINE.