

(No Model.)

R. H. SMITH.  
PAINT MIXER.

No. 296,792.

Patented Apr. 15, 1884.

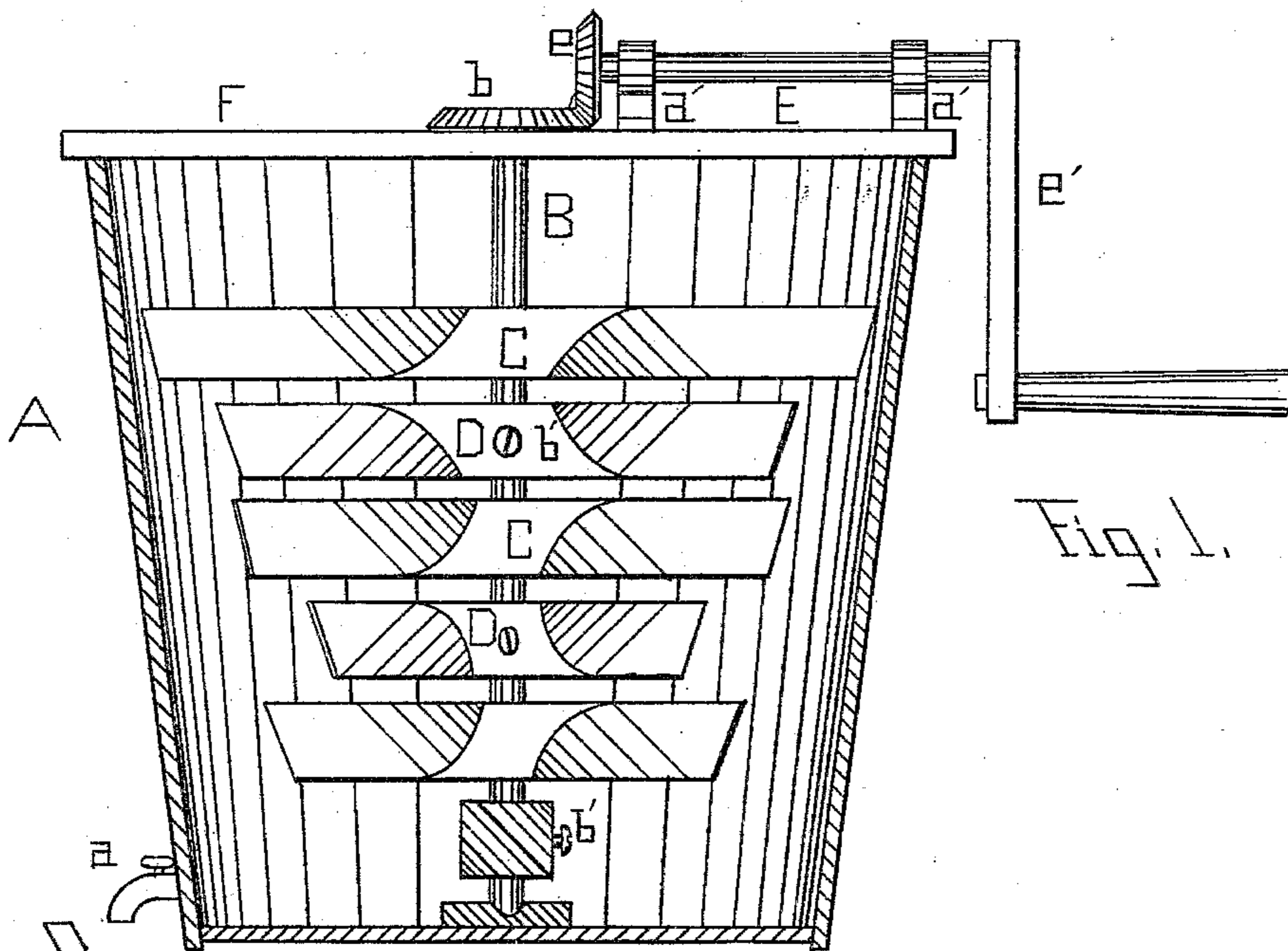


Fig. 2.

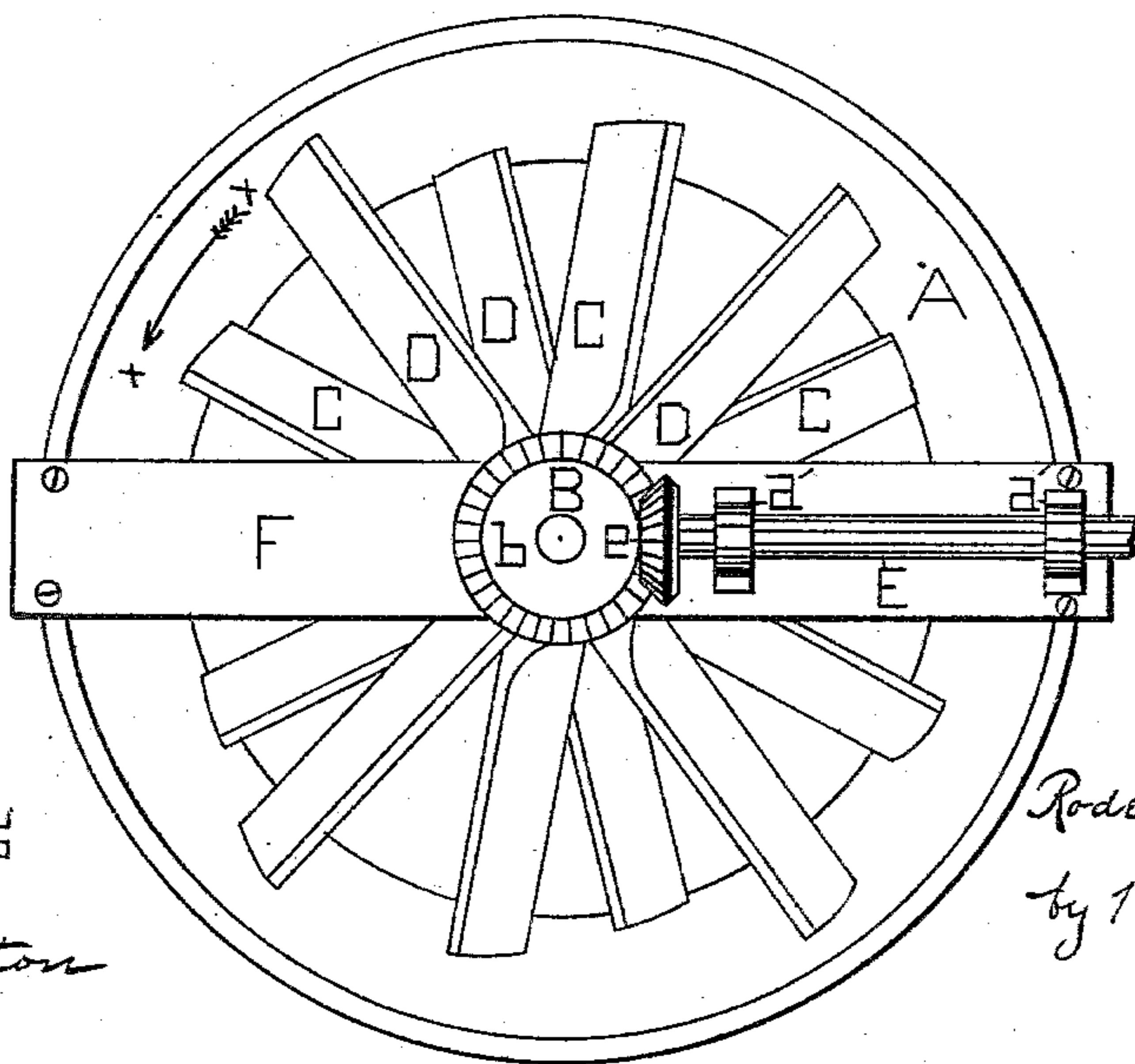
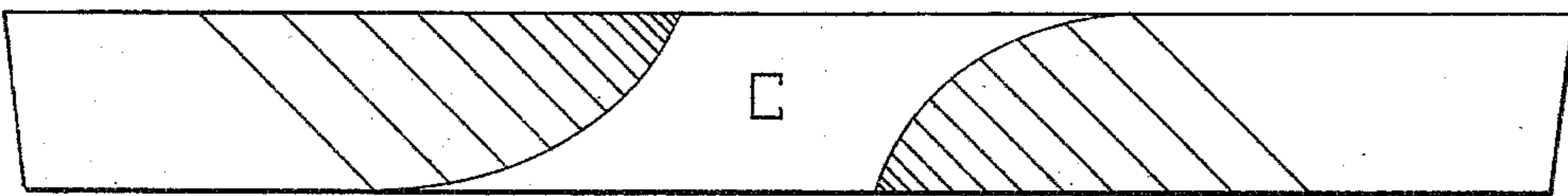


Fig. 3.

WITNESSES  
E. L. Thurston  
Newton & Macmillan

INVENTOR:  
Roderick H. Smith  
by Rice & Dixon  
his attys

# UNITED STATES PATENT OFFICE.

RODERICK H. SMITH, OF CHICAGO, ILLINOIS.

## PAINT-MIXER.

SPECIFICATION forming part of Letters Patent No. 296,792, dated April 15, 1884.

Application filed November 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, RODERICK H. SMITH, of Chicago, Illinois, have invented certain new and useful Improvements in Paint-Mixers, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my improved paint-mixer with the front half of the receptacle cut away. Fig. 2 is a detailed view of one of the blades. Fig. 3 is a top view.

The object of my invention is to provide an apparatus for mixing paints which shall be simple in construction, inexpensive, and at the same time be capable of performing the desired work thoroughly and in the shortest possible time.

To this end it consists of a tub or other suitable receptacle, in which are placed two sets of arms or blades, one set being stationary and the other movable, being revolved by means of a vertical shaft, to which they are rigidly attached by any suitable means, all of which will be hereinafter more fully described, and definitely pointed out in the claim.

In the drawings, A represents the receptacle, which may be of any desired material, and preferably cylindrical in shape.

B is the revolving shaft.

C represents the blades, which are fixed in position; D, the movable blades, which revolve with the revolution of the shaft B. The fixed blades C and the revolving blades D are of similar construction. Each one is slanted or beveled on opposite sides of the center in such a manner that the planes of the two arms *c* and *c'* make nearly a right angle with each other, as if, in other words, a flat piece had been given a quarter twist at the center; but the stationary blades present the appearance of having been twisted to the right and the revolving blades to the left, or vice versa. Both sets of blades, in the preferable construction, are provided with a central orifice, through which the shaft B passes. The stationary blades are fixed to the sides of the receptacle by means of screws or in any secure manner, at various heights, and in a horizontal position, and in such a manner that their vertical planes shall preferably be at an angle with each other, as clearly shown in the drawings. Alternating with

these blades on the central shaft, B, are the movable blades D, fixed rigidly thereto by means of the set-screws *b'* or other suitable means, with their vertical planes also at an angle. The shaft B is stepped in the bottom of the receptacle, and revolves in suitable bearings at its upper end in the cross-bar F.

The power is transmitted to the shaft B, in the preferable form of construction, by means of the beveled-gear wheels *b* and *e*, respectively attached to the shaft B and crank-shaft E, which crank-shaft runs in the bearings *a' a'*, attached to the cross-piece F. As the crank is turned the shaft B revolves, and with it the arms D, preferably in the direction of the arrow *x x*. Such a revolution gives to the mixture of oils and pigments in the receptacle both a centrifugal and an upward motion. This would mix the ingredients if a sufficient time were taken; but the presence and shape of the stationary blades greatly hasten the operation. As a portion of the mixture is carried around by one of the revolving blades, it is thrown upward against the next stationary blade, which cuts and divides it, a portion being still further carried along by the revolving arm, while the rest, by its momentum, passes up the inclined face of the stationary arm, where it is met by the lower edge of the next revolving arm, again cut and separated, and carried along, and so on until the pigments and oils are thoroughly mixed, which is found, in actual operation, to be in a very short time. The mixed paint is then drawn off by means of the faucet *a*.

If desired, the arms C may be fastened at one side of the shaft B; but the construction described is deemed the preferable form.

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

In a paint-mixer, the combination of a receptacle provided with blades, which are beveled on opposite sides of the center in opposite directions, attached thereto, with a revolving shaft, to which are rigidly attached blades whose opposite sides are beveled in opposite directions, substantially as and for the purpose set forth.

RODERICK H. SMITH.

Witnesses:

E. L. THURSTON,  
T. H. HOOD.