

(No Model.)

P. FAUST.
PAINT MIXER.

No. 484,851.

Patented Oct. 25, 1892.

FIG - 1 -

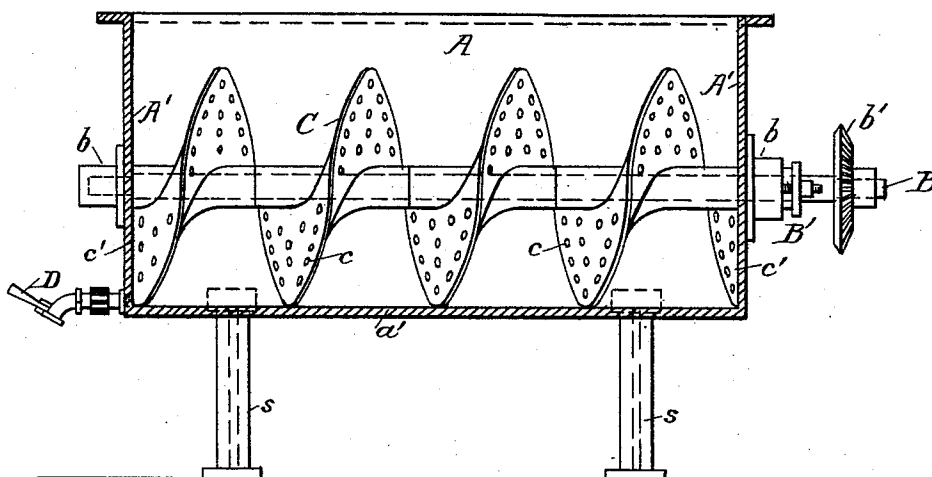
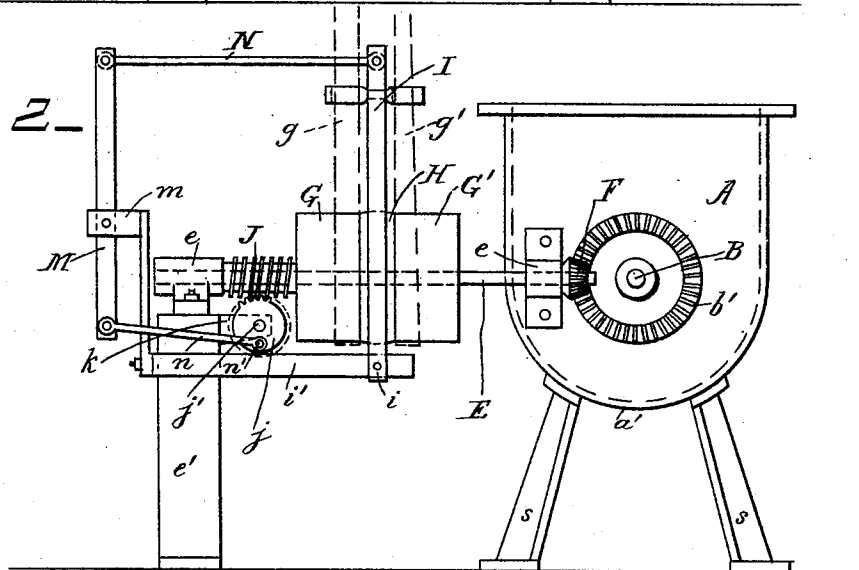


FIG. 2 -



Witnesses
John Cullen
A. W. Harrison

Inventor
Peter Faust.
By his Attorney
Herbert W. Jenner.

UNITED STATES PATENT OFFICE.

PETER FAUST, OF BROOKLYN, NEW YORK.

PAINT-MIXER.

SPECIFICATION forming part of Letters Patent No. 484,851, dated October 25, 1892.

Application filed July 29, 1892. Serial No. 441,666. (No model.)

To all whom it may concern:

Be it known that I, PETER FAUST, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paint-Mixers; 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 appertains to make and use the same.

This invention relates to devices for mixing liquid or solid substances, and more particularly paint.

This invention consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a longitudinal section through the tank of the mixer. Fig. 2 is an end view of the mixer, showing the driving mechanism.

A is the mixing-tank, supported on the legs *s* and adapted to receive the material to be mixed.

B is a worm-shaft journaled in the bearings *b*, secured to the ends of the tank and having a beveled toothed wheel *b'* secured on the end of it outside the tank.

C is a worm, preferably formed in sections and secured upon the shaft B inside the tank. This worm is made large enough to work close against the semicircular bottom *a'* of the tank, and the ends *c'* of the worm form scrapers, which work close against the ends A' of the tank. The worm is also provided with a series of holes or perforations *c*, extending through it. These holes *c* are very small and numerous. They pass transversely through the blade of the worm and are preferably substantially parallel with its axis.

When the worm is revolved, it presses the paint in one direction, and the resistance of the paint to compression causes it to be forced repeatedly through the holes *c* in a series of small streams, which are repeatedly reunited and resubdivided by the continued motion of the worm and its perforations, thereby effecting the homogeneous mixture of the paint. One of the bearings *b* is provided with a stuffing-box B' to prevent leak around the shaft.

D is a faucet for letting the mixed liquid material out of the tank.

Any approved mechanism may be used for driving the worm besides that hereinafter described. The worm is driven for a space of time in one direction and then its motion is reversed and it is driven in the opposite direction. This change of motion is repeated and the material in the tank is worked back and forth from one end of the tank to the other and is squeezed through the holes in the worm until the material has been mixed sufficiently.

E is a driving-shaft journaled in the bearings *e*, one of which is secured to the tank and the other carried by the bracket *e'*, which rests on the floor.

F is a beveled toothed pinion secured on the shaft E and gearing into the wheel *b'*, which revolves the worm.

G G' are belt-pulleys which run loose upon the shaft E, and H is a pulley secured on the said shaft between the two loose pulleys. The pulley H is driven from any suitable driving-pulley by the open belt *g* and the crossed belt *g'*, which run upon the pulleys G and G', respectively, when not on the pulley H.

I is a belt-shifter for moving the belts. This belt-shifter has its lower ends *i* pivoted to the bars *i'*, which are secured to the bracket *e'*. The shifting of the belts may be effected by hand; but in order that the motion of the worm may be reversed automatically at periodic intervals the following mechanism is used. A worm J is secured on the hub of the loose pulley G, and *j* is a worm-wheel provided with a shaft *j'*, which runs in a bearing *k*, projecting from the bracket *e'*.

M is a lever pivoted in the bracket *m*, which is secured to the bracket *e'*.

N is a connecting-rod pivoted to the top of the lever M and to the belt-shifter I, and *n* is a connecting-rod pivoted to the lower end of the lever M and to the crank-pin *n'*, projecting from the worm-wheel *j*.

The belts are arranged so that the belt *g* never entirely leaves the loose pulley G when driving the pulley H, and so a continuous rotary motion of the worm J in one direction is effected. The worm J turns the worm-wheel continuously and the motion of the crank-pin reciprocates the belt-shifter. The belts are therefore caused to engage with the pul-

ley H at periodic intervals and to drive it for a prearranged space of time first in one and then in the opposite direction.

What I claim is—

5 1. In a mixer, the combination, with a water-tight tank provided with a semicircular bottom, of a worm formed of a continuous spiral blade provided with a series of perforations, and driving mechanism for revolving
10 the worm in the tank, whereby the material is squeezed repeatedly through the said perforations, substantially as set forth.

15 2. In a mixer, the combination, with a water-tight tank provided with a semicircular bottom, of a worm formed of a continuous spiral blade provided with a series of perforations, the periphery and ends of the worm operating to scrape the bottom and ends of the tank,

respectively, and driving mechanism for revolving the worm in the tank, substantially as set forth.

3. In a mixer, the combination, with a tank, of a worm formed of a continuous spiral blade provided with a series of perforations, driving mechanism for revolving the worm in the tank, and automatic reversing mechanism operating to change the direction of the motion of the worm at periodic intervals, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PETER FAUST.

Witnesses:

CHARLES J. BRADLEY,
WALDEMAR STEINDORFF.