

Mar. 13, 1923.

1,448,446

E. F. HULBERT

MIXING DEVICE

Filed June 30, 1921

FIG. 1

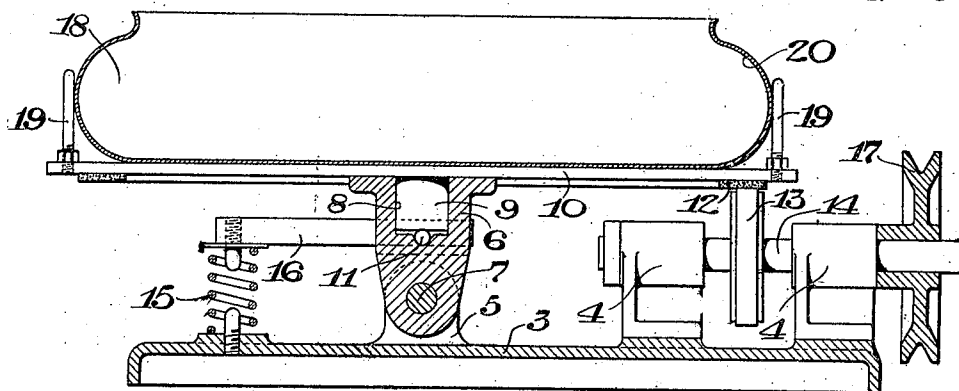
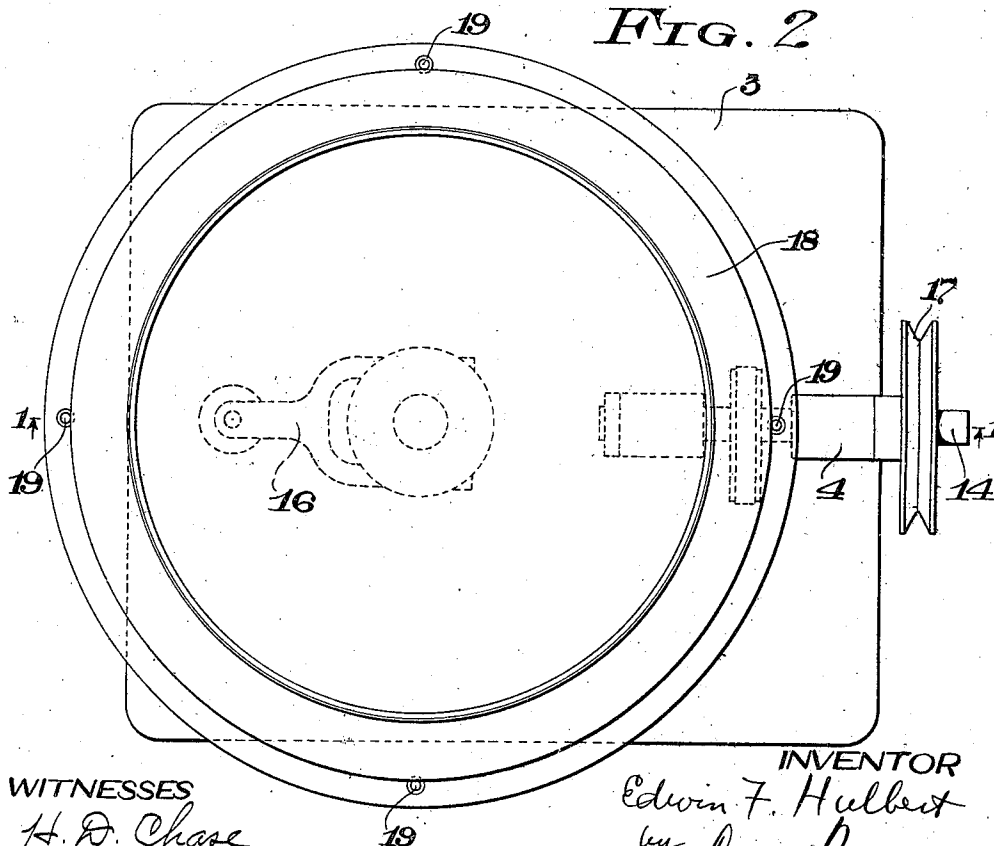


FIG. 2



WITNESSES

H. D. Chase
C. L. Kaal

INVENTOR

Edwin F. Hulbert
by Louis Leake
ATTORNEY

UNITED STATES PATENT OFFICE.

EDWIN F. HULBERT, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO PFISTER & VOGEL LEATHER COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

MIXING DEVICE.

Application filed June 30, 1921. Serial No. 481,592.

To all whom it may concern:

Be it known that I, EDWIN F. HULBERT, a citizen of the United States, residing in the city of Milwaukee, county of Milwaukee, and State of Wisconsin, have invented a certain new and useful Improvement in Mixing Devices, of which the following is a specification.

My invention relates to mixing devices and more particularly to a paint mixer.

The object of the invention is to provide a paint mixer in which the motions imparted to the bowl cause an efficient mixing within it without the aid of paddles or other agitating devices. The methods heretofore used necessitated such agitating devices as paddles and they are not satisfactory in that they do not agitate the liquid clear down to the bottom nor equally throughout. There is a tendency of the suspended solids to settle in parts as the lineal velocity of the liquid differs in the center more than it does at the periphery. Also changing the bowls is troublesome because the paddles have to be cleaned each time a change is made. The object of my invention is to obviate these limitations and to provide a device in which the agitation is thorough and complete and a new bowl substituted without the necessity of stopping to clean any part of the machine.

My invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings: Fig. 1 is a vertical sectional view of a device embodying the invention, taken on the line 1—1 of Fig. 2; Fig. 2 is a plan view of the device.

In the drawings the numeral 3 designates a base plate provided with shaft bearings 4 and an upright 5. A support 6 is vertically pivotally mounted on a shaft 7 carried by the upright 5. This support has a vertically extending bore 8 in its upper end receiving the journal or pivot shaft 9 for a table or platen 10, a ball bearing 11 being interposed between the end of the bore and the end of the shaft 9 to take the end thrust of said shaft.

A ring member 12 is secured to the bottom of the platen 10 and is held in driving engagement with a cam or eccentric 13 on a drive shaft 14, journaled in the bearings 4 by means of a spring 15 interposed between the base 3 and a laterally extending arm 16,

on the support 6. The ring 12 and eccentric 13 have frictional driving connection with each other and for this purpose the eccentric may be made of paper, leather or other suitable material, and the ring of metal. Power is transmitted to the shaft 14 from any suitable source of supply to a pulley 17 on said shaft. A mixing receptacle 18 is mounted on the platen between spaced retainer pins 19, said receptacle having smooth interior walls, an open top with side walls converging toward the top to prevent the ingredients spilling out during mixing.

With this construction the rotation of the shaft 14 is transmitted to the platen through the frictional drive connection above described, thus causing the platen to rotate on the support 6 and at the same time, due to the eccentric and the pivotal mounting of the support 6 on the shaft 9, the platen is given an oscillatory motion in a vertical plane, both of which motions combine to produce a thorough mixing action of the ingredients within the bowl 18.

I desire it to be understood that this invention is not to be limited to any specific form or arrangement of parts except in so far as such limitations are specified in the claims.

What I claim as my invention is:

1. In a mixing device, the combination, with an oscillatory support, of a rotatable table journaled on and carried by said support, a mixing receptacle on said table, and means having driving engagement with said table for simultaneously rotating said table and oscillating said support.

2. In a mixing device, the combination of a vertically oscillatory support, of a rotatable table journaled in said support, a drive shaft, an eccentric on said shaft having frictional driving engagement with said table whereby to rotate said table and swing said support, means for maintaining said table in driving engagement with said eccentric, and a mixing bowl mounted on said table.

3. In a mixing device, the combination, with a base, of a vertically swinging support mounted thereon and provided with a laterally extending arm, a table journaled on said support, an eccentric, a spring interposed between said base and arm to maintain said eccentric in frictional driving engagement with said table, and means for positioning a mixing bowl on said table.

4. In a mixing device, the combination, of an oscillatory support, a rotatable table journaled on said support, means for positioning a mixing receptacle on said table, and rotating means frictionally engageable with said table for simultaneously rotating said table while oscillating its support.

5. In a mixing device, the combination of an oscillatory support, a rotatable table journaled on said support, a mixing receptacle on said table, and means having frictional driving engagement with said table to rotate the same and swing said support.

EDWIN F. HULBERT.