July 19, 1927. 1,636,127

G. FICKLE

MIXING DEVICE

Filed Oct. 12, 1925

Fig. 1.

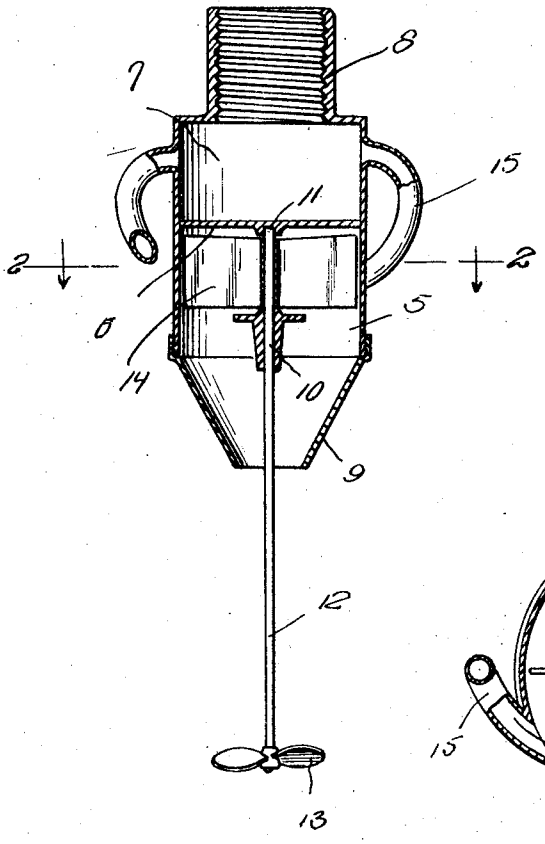
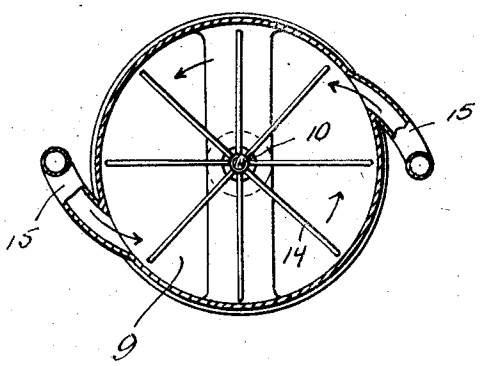


Fig. 2.



Inventor

Gerald Fickle,

By Clarence A. O'Brien

Attorney

Patented July 19, 1927. 1,636,127

UNITED STATES PATENT OFFICE.

GERALD FICKLE, OF GLENWOOD, IOWA.

MIXING DEVICE.

Application filed October 12, 1925. Serial No. 62,034.

The present invention relates to a device suitable for attachment to soda water fountains or to any water pipe and arranged to drive a stirring mechanism, whereby the contents of a glass or other receptacle is completely mixed during the time that the water is entering the glass or receptacle, which will obviously overcome the necessity of the fountain operator making each individual soda or drink by hand.

The primary object of the invention is to substantially improve over the type of device that has been previously patented, this being brought about mainly by the fact that the stirring element per se will be rotated at a high speed during operation, and for the reason that the present invention comprises but few parts and these co-related in such a manner as to make negligible the liability of inefficient operation and breaking of parts.

With the foregoing and other objects in view as the nature of the invention will be better understood, the same comprises the novel form, combination and arrangement of parts hereinafter more fully described in the accompanying drawing and claim.

In the drawing, wherein like reference characters indicate corresponding parts throughout both of the views:—

Figure 1 is a vertical sectional view through my improved mixing device, and

Fig. 2 is an enlarged horizontal section taken substantially upon the line 2—2 of Fig. 1, and looking downwardly in the direction of the arrows.

Now having particular reference to the drawing, my novel mixing device constitutes the provision of a cylinder 5 that is formed or provided internally with a cross wall 6 for providing at the upper end of the cylinder a pressure chamber 7.

The upper end of said cylinder 5 is formed with an internally threaded inlet nozzle 8 for association with a conventional discharge faucet employed in soda fountains and the like, while the lower end of the cylinder detachably carries a conical-shaped fluid discharge nozzle 9 for directing the fluid in proper stream like form into the glass or other receptacle that is held beneath the present mixing device, during the mixing of the same.

Journaled at its upper ends within suitable vertically alined bearings 10 and 11, in the lower end of the cylinder 5, is a shaft 12 that projects through the discharge nozzle 9 and is equipped at its lower end with a suitable agitating member 13, and being provided at its upper end between said bearings 10 and 11 with a turbine wheel 14.

Leading from a plurality of points in the pressure chamber 7 of the cylinder 5 are fluid jet pipes 15 that are preferably tangentially arranged with respect to the cylinder and that enter said cylinder 5 adjacent the turbine wheel 14 for directing the fluid from the pressure chamber onto the blades of the turbine wheel in a whirling manner, for causing the rapid rotation of the wheel, the consequent rotation of the shaft 12, and agitating member 13 which is within the glass or receptacle being filled by the fluid that after leaving the discharge faucet of the fountain passes through the mixing device in an obvious manner.

The advantages and operation of the mixing device of this character will be readily understood by even those unskilled in the art, and while I have herein shown and described the preferred embodiment of the invention, I nevertheless do not desire to be limited to the specific disclosure insomuch as departures may be made without affecting the spirit and scope of the appended claim.

Having thus described my invention, what I claim as new is:—

In a turbine for a mixing device of the class described, a cylindrical casing, a wall arranged horizontally within the intermediate portion of the casing for dividing the same into an upper pressure chamber and a lower turbine chamber, an inlet nozzle provided at the top of the pressure chamber, a discharge nozzle arranged on the lower open end of the casing and communicating with the turbine chamber, a turbine wheel operable within the turbine chamber, and a pair of curved fluid jet pipes arranged tangentially on opposite sides of the casing, the upper ends of said jet pipe communicating with the pressure chamber, the lower ends thereof communicating with the turbine chamber whereby the fluid from the pressure chamber will be directed against the blades of the turbine wheel to effect the rotation thereof.

In testimony whereof I affix my signature.

GERALD FICKLE.