

Nov. 23, 1926.

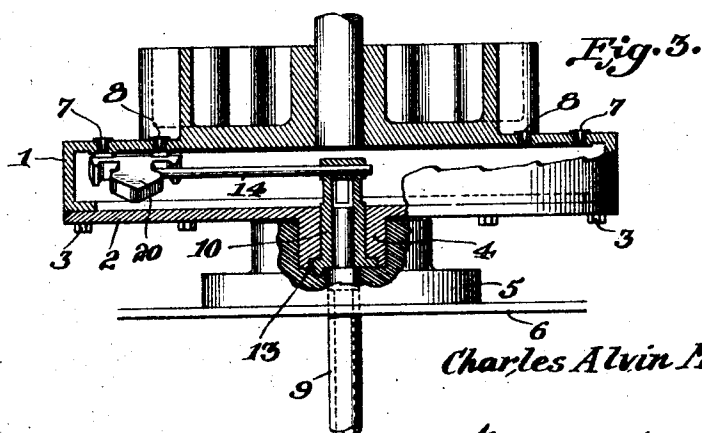
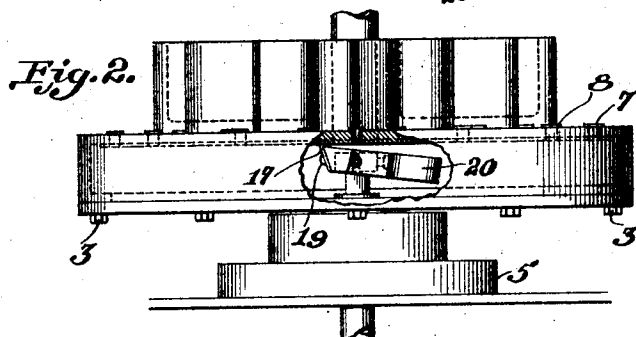
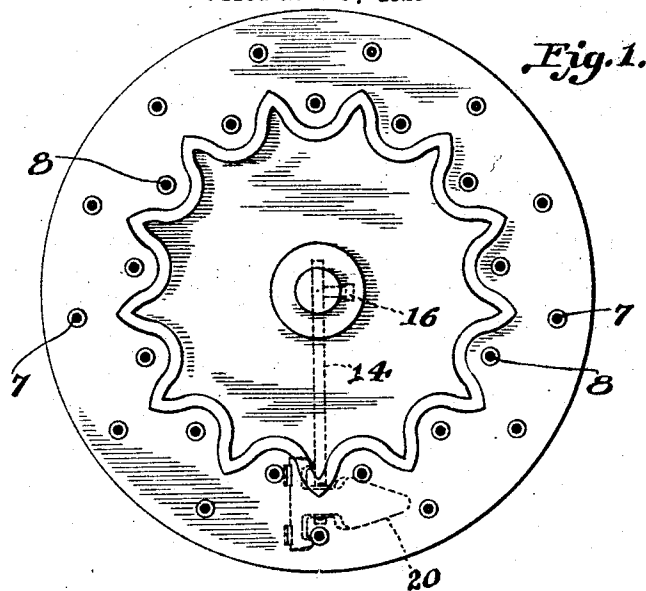
1,608,030

C. A. MILLER, SR

SELF CLEANING FOUNTAIN WHEEL

Filed Nov. 9, 1925

2 Sheets-Sheet 1



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Fig. 4.

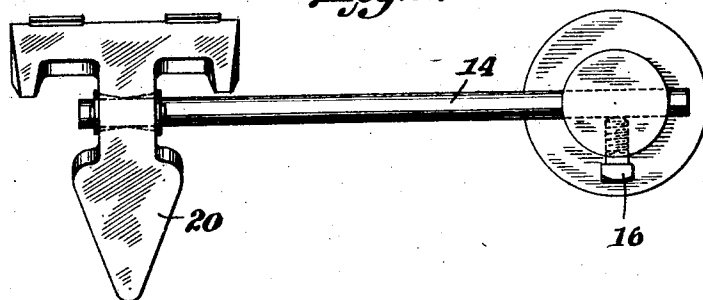


Fig. 5.

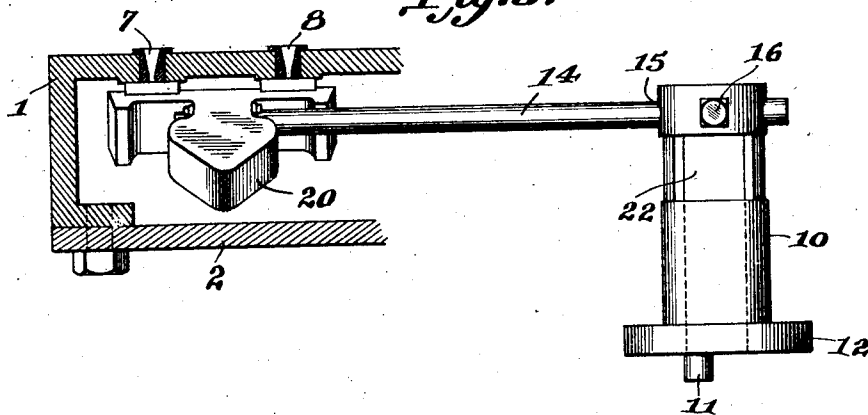
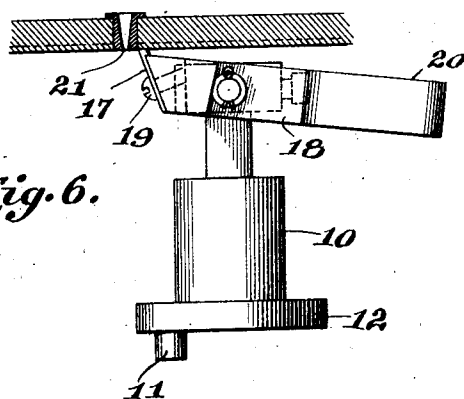


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES ALVIN MILLER, SR., OF BAINBRIDGE, GEORGIA, ASSIGNOR TO MILLER MANUFACTURING COMPANY, OF BAINBRIDGE, GEORGIA.

SELF-CLEANING FOUNTAIN WHEEL.

Application filed November 9, 1925. Serial No. 67,937.

This invention relates to improvements in bottle washing machines, particularly in machines having a rotary hollow fountain wheel in which spray nozzles are suitably located.

The prime object of this invention is to provide means for automatically keeping the nozzle openings free from refuse and foreign matter.

Other objects of this invention will appear from the following detailed description of the device and from the disclosure in the two sheets of drawings, which are herewith made a part of this application.

In the drawings,

Figure 1 illustrates a plan view of the fountain wheel in assembled form.

Figure 2 represents a vertical side elevational view of Figure 1, having a section broken away in order to disclose the scraper in its relationship to the wheel.

Figure 3 illustrates a vertical elevational view of Figure 1 with portions broken away in order to disclose in a detailed manner the relationship of the scraper with the nozzles, and the means for anchoring the scraper in the base plate.

Figure 4 illustrates a plan view of the scraper or cutting member in relationship to the carrying rod and the rod holder.

Figure 5 represents a vertical elevational view of the scraper mechanism in relationship to the nozzles and surface which are to be cleaned.

Figure 6 illustrates a vertical elevational end view of Figure 5.

In the drawings like numerals will represent similar elements in the different figures.

N numeral 1 designates the main body portion of the rotating hollow fountain wheel adapted to be used in connection with bottle washing machines or other similar devices. while numeral 2 represents the bottom plate of the fountain wheel suitably fastened to the main body portion 1 by means of machine screws 3. The bottom plate 5 is provided with a journaled member or hub 4 which is adapted to rest and revolve on a base plate 5 attached or fastened in a suitable manner to the machine or device as at 6. Numerals 7 and 8 designate nozzles preferably located at suitable intervals in the outer periphery of the upper surface of the main body portion 1. It is preferred

in this invention to taper the nozzles outwardly as clearly disclosed in the drawings, thereby insuring that any refuse lodged within the nozzles, having been cut loose by the scraping mechanism at its smaller end, may be blown entirely free from the nozzle by the force of the water, thus constantly keeping the nozzles from being clogged up by refuse which might, without the use of this invention, be washed into the fountain wheel by the water. In ordinary practice water will enter the fountain wheel through a tubular portion 9 extending into the base plate 5. A tubular anchor element 10 is adapted to extend through the hub or journal portion 4, and to be keyed to the base plate 5 by means of key 11. The anchor element 10 is provided with shoulder portions 12 extending circumferentially along the lower outer edge thereof, thereby forming a suitable bearing surface upon which, in part, the fountain wheel is adapted to revolve, the shoulder portion 12 being designed to cooperate with the notch sections 13 located in the hub or journal 4. A rod 14 extending through a suitable opening 15 in the anchor element 10 is securely keyed to the anchor at any desired point along the length of the rod, by means of a set screw 16 or otherwise. The rod 14 carries, preferably at or near one of its ends, a scraping device consisting of a scraping or knife edge 17 fastened to the main body portion 18 of the scraper by means of screws 19 or otherwise. The main body portion of the scraper 18 is loosely mounted upon the rod 14. In order to insure a perfect contact of the knife edge 17 of the scraper with the surface to be cleaned, the main body portion 18 of the scraper is provided with an extra weighted section 20, which acts as a counterweight, thereby forcing the knife edge 17 against the surface to be cleaned as at 21.

In operation, this invention provides a mechanism for clearing refuse from nozzles common to spray or fountain wheels. This device is particularly adapted in connection with bottle washing machines having a hollow rotating fountain wheel, the wheel being supplied with water through a tube 9, from which tube the water is adapted to flow through the tubular anchor element 10, having outlets 22, to the fountain wheel. By means of the anchor element 10 the rod 14 is held stationary, while the fountain

wheel revolves by means of the driving mechanism of the machine. The scraper being loosely mounted on the rod and counter-weighted will obviously cut or scrape from the surface to be cleaned any refuse that may be lodged in the nozzles 7 and 8.

What I claim is:—

1. In a bottle washing machine, a rotary hollow fountain wheel, spray nozzles in the wheel, automatic cleaning means for keeping the nozzles free and open of refuse consisting of a scraper loosely mounted on a rod within the wheel and adapted to scrape the refuse from the nozzles.

2. In a bottle washing machine, a rotary hollow fountain wheel, spray nozzles in the wheel, cleaning means for keeping the nozzles free and open of refuse, consisting of a scraper loosely mounted on a rod within the wheel and adapted to scrape the refuse from the nozzles and means for holding the rod firmly in position while the wheel rotates.

3. In a bottle washing machine, a rotary hollow fountain wheel having a plurality of spray nozzles, cleaning means in fixed relation to the rotation of the wheel for keeping the nozzles free and open of refuse, consisting of a scraper loosely mounted on a rod within the wheel and adapted to scrape the

refuse from the inlet of the spray nozzles, means for holding the rod in position while the wheel rotates, comprising an anchor member keyed to an element of the machine.

4. In a bottle washing machine, a rotary hollow fountain wheel having a plurality of spray nozzles, means fixed relative to the rotation of the wheel for automatically keeping the wheel free and open of refuse, consisting of a scraper loosely mounted on a rod within the wheel and adapted to scrape the refuse from the inlet of the spray nozzles, means for holding the rod firmly in position while the wheel rotates, comprising an anchor element keyed to the machine and of means for insuring contact of the scraper with the surface to be cleaned, consisting of a weight counterbalancing the scraper.

5. A hollow rotating fountain wheel having spray nozzles, means for keeping the nozzles free and open from refuse, consisting of a scraper within the wheel and adapted to scrape the refuse from the nozzles, the scraper being loosely mounted on a rod held stationary in an anchor keyed to the machine element.

In testimony whereof I affix my signature.

CHARLES ALVIN MILLER, SR.