Dec. 9, 1924. 1,518,916

S. W. GREENWELL

FLUID PUMP

Filed March 27, 1922

Fig. 1.

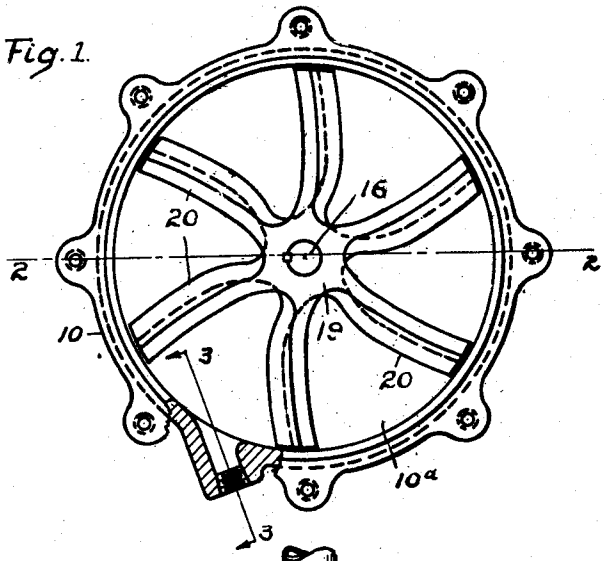


Fig. 2.

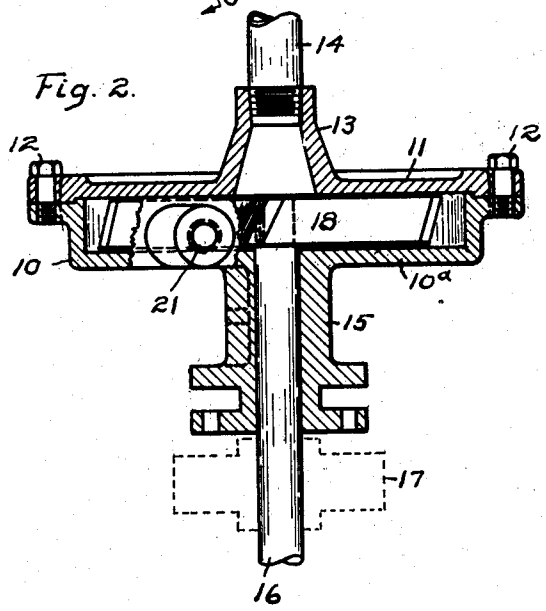
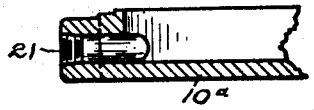


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

SIDNEY W GREENWELL, OF HUNTERTOWN, INDIANA.

FLUID PUMP.

Application filed March 27, 1922. Serial No. 547,253.

To all whom it may concern:

Be it known that I, SIDNEY W. GREENWELL, a citizen of the United States, residing at R. F. D. No. 1, Huntertown, in the county of Allen and State of Indiana, have invented a new and useful Fluid Pump, of which the following is a specification.

The invention relates to pumping mechanisms designed for various uses, especially to the pumping of fluids. In rural districts where there is no water system a mechanism which will throw a stream of water with more or less pressure is often very desirable, as for instance, in the cleaning of a motor vehicle.

The object of the invention is to provide a pumping mechanism which will be capable of delivering fluid under pressure and which shall have novel construction.

The invention consists in the combination of a casing and an impeller so constructed that the fluid drawn into the casing by the impeller will be directed against one side face of the casing, the discharge being located adjacent said side so as to take advantage of the pressure created at said side by the action of the impeller.

In the accompanying drawings I have illustrated an embodiment of the invention in which—

Figure 1 is a plan view of a mechanism embodying the invention. the cover being removed; Fig. 2 cross-sectional view on line 2—2 of Fig. 1 and Fig. 3 a cross-sectional view on line 3—3 of Fig. 1.

Referring to the embodiment of the invention illustrated in the drawings, 10 is the main casing and 11 the cover secured thereto by the bolts 12. An outstanding hollow boss 13 is formed in the center of the cover which is internally threaded at its outer end to receive a pipe 14 for the inlet of fluid.

A suitable bearing 15, suitably packed, is formed on the casing 10 and revolubly supports the shaft 16. The shaft may be driven by any suitable means, such as by the rear wheel of a motor vehicle, the latter being jacked up so that the vehicle will not move and a suitable friction means being secured to the shaft for engagement with the vehicle wheel. Such friction means is indicated at 17.

The impeller 18 is keyed on the inner end of the shaft 16 and consists of a hub 19 having radiating therefrom a selected number of blades 20. Each blade 20 is curved longitudinally and also twisted laterally so that when the impeller is revolved in the direction of the arrow the blades will throw the fluid toward the side 10^a of the casing and build up a pressure of fluid on said side. A discharge opening 21 is formed in the peripheral wall of the casing adjacent the wall 10^a, the opening being tapered outwardly, so as to take advantage of this pressure in the fluid and permit the fluid to discharge from the casing while under that pressure. The discharge opening will bear a definite relation to the intake opening so far as size is concerned. I have found that where the mechanism is constructed, with a two inch intake opening very good results are obtained with a one inch discharge opening, a stream of water being ejected through a pipe or hose, connected to the discharge, with considerable force, and it is my belief that the result is obtained by the use of the propeller-like blades 20 and the position and form of the discharge opening, the wall 10^a of the casing being flat, as in a drum.

What I claim is:

In a pump, an annular casing having a flat wall on one side and a discharge port formed in its annular wall and projecting therefrom at a tangent thereto, a wall of said port being continuous with and in line with the inner face of the flat wall of the casing, an attachable member for closing the opposite side of the casing and having a central intake port therein, and a rotary impeller mounted in the casing and having longitudinally curved and laterally twisted blades adapted to project a fluid along the said flat wall and the annular wall toward the discharge port, substantially as described.

In witness whereof I have hereunto subscribed my name this 24th day of March, 1922.

SIDNEY W. GREENWELL.