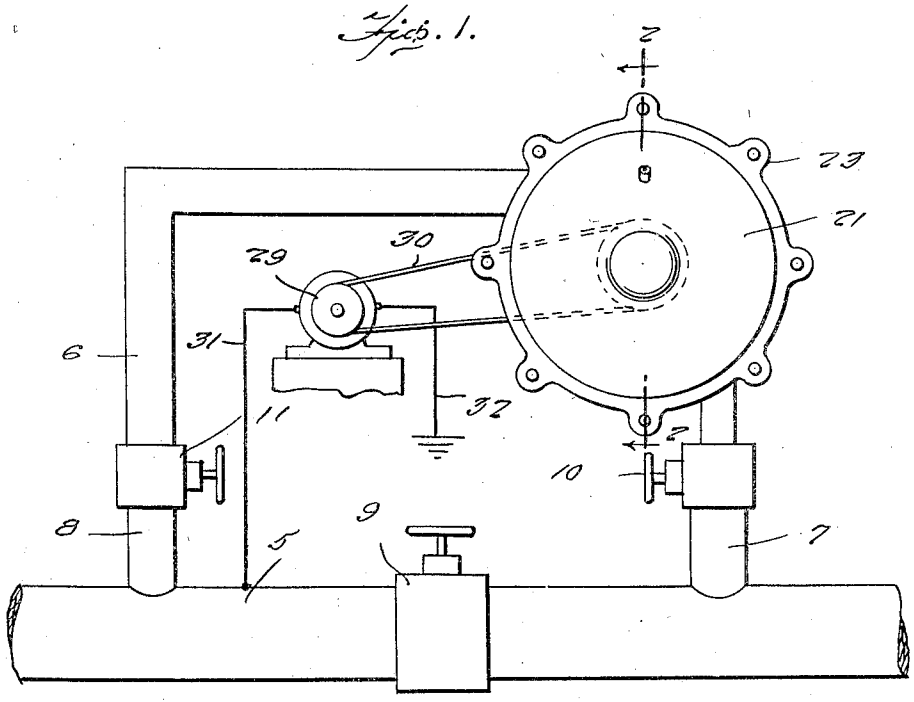
March 17, 1942. L. A. BROWN 2,276,714

FLUID MOTOR

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Fig. 1.



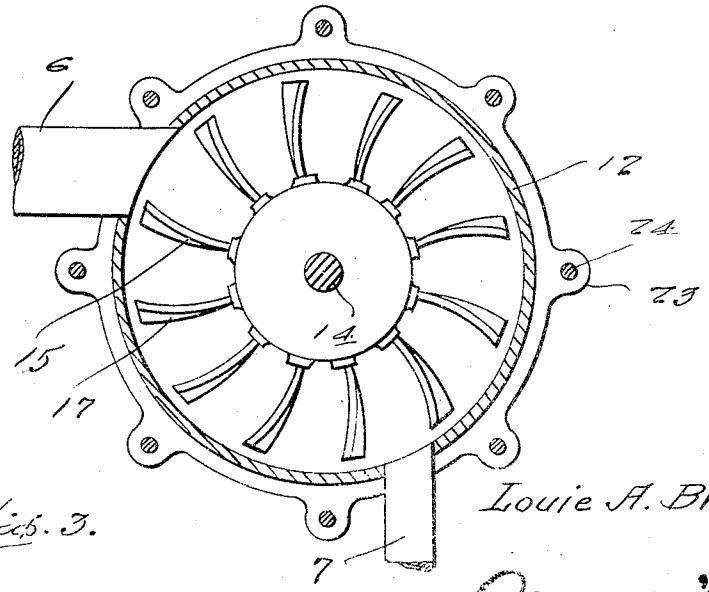


Fig. 3.

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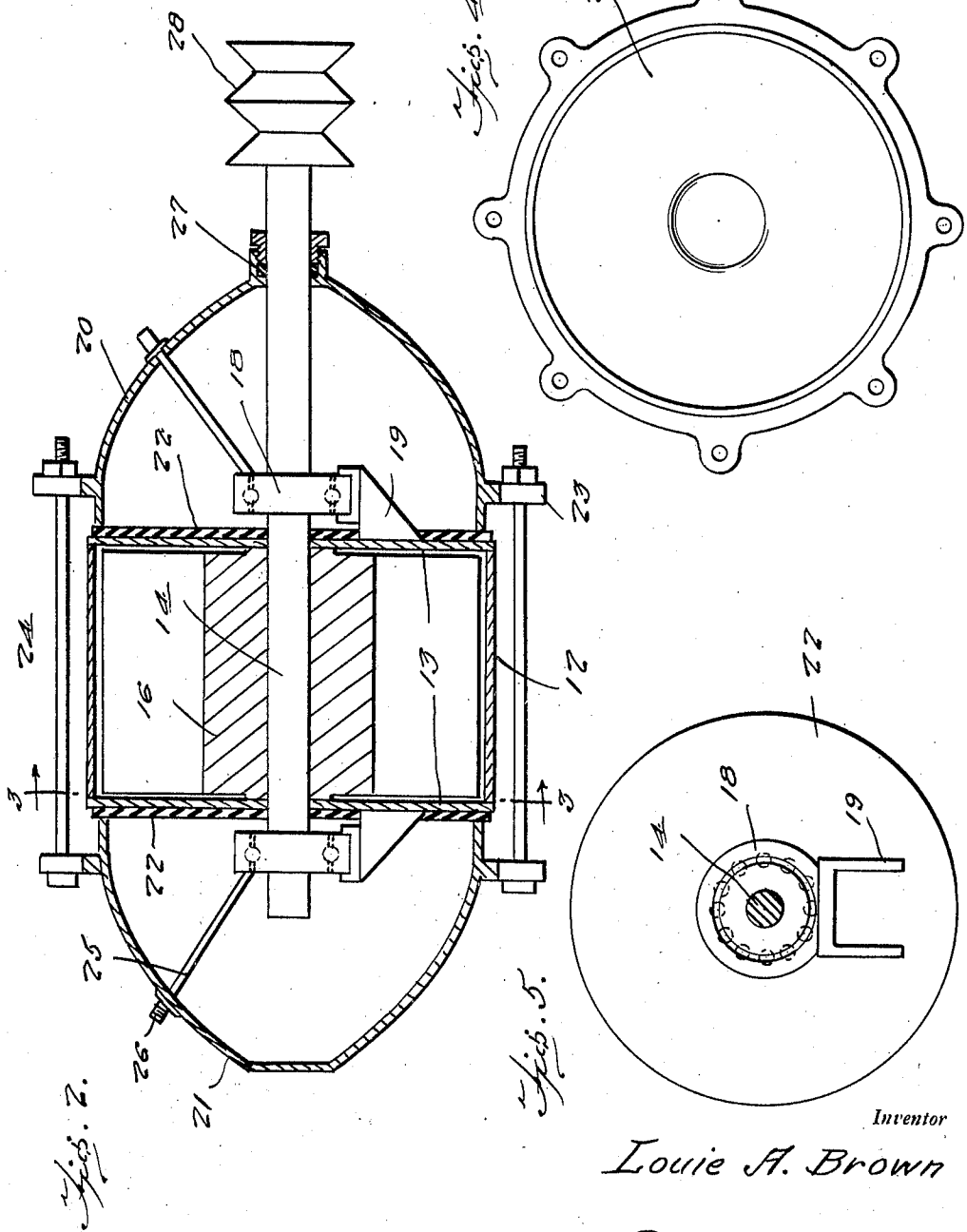
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FLUID MOTOR

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Application June 6, 1941, Serial No. 396,945

2 Claims. (Cl. 253—50)

It is generally known that pipe lines provided for carrying liquids or gas have a tendency to induce a current of electricity by the continuous flow of the substance therethrough, thus causing a decomposition of the metal.

Accordingly, it is an object of the present invention to utilize the power created by the flow of gas or liquid in the pipe line to operate a generator for neutralizing electricity and thus reduce the electrolysis to which the pipe line is subjected.

A further object is to provide a device for accomplishing the aforesaid purpose which is of simple and practical construction, efficient and reliable in performance, relatively inexpensive to manufacture and install in operative position and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a side elevational view of the device showing the same mounted in position in a pipe line,

Figure 2 is a vertical longitudinal sectional view through the housing for the propeller or turbine wheel,

Figure 3 is a vertical sectional view taken substantially on a line 3—3 of Figure 2,

Figure 4 is an end elevational view of one of the end plates for the housing, and

Figure 5 is an end elevational view of the housing with the cover plate removed.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a supply pipe through which liquid or gas is adapted to flow and the numeral 6 designates a by-pass pipe of smaller diameter and including an intake end 7 and discharge end 8, both of which are connected at spaced intervals to the pipe 5. Between the pipes 7 and 8 the pipe 5 is provided with a valve 9 of conventional construction and valves 10 and 11 are mounted respectively in the pipes 7 and 8.

The pipe 7 leads to a cylindrical casing 12 including end plates 13—13 and through which a shaft 14 is positioned. Secured to the shaft within the casing is a propeller or turbine wheel 15 having a weighted hub 16 and a plurality of blades 17 extending substantially radially therefrom and preferably curved, as shown in Figure 3 of the drawings to be more effectively influenced by the force of the fluid entering the casing from the pipe 7 for rotating the turbine wheel.

The shaft, at each end of the casing 12 is supported in bearing assemblies 13 mounted on brackets 19 secured to the outer surface of the end plates 13.

Cover plates 20 and 21 enclose the bearing assemblies, the cover plates being of substantially conical form and have their edge portions bearing against yieldable packing plates 22—22 interposed between the cover plates and the adjacent end plates 13 of the casing. The cover plates are formed with apertured ears 23 for receiving clamping bolts 24 adapted to draw the cover plates into engagement at each side of the casing as shown in Figure 2 of the drawings.

Lubricating pipes 25 extend through each of the cover plates 20 and 21 to the respective bearing assemblies, the outer ends of the lubricating pipes having lubricating fittings 26 secured thereto.

One end of the shaft 14 projects through a packing gland 27 in the cover plate 20 and the outer end of the shaft is provided with a pulley 28 for driving a generator 29 by means of a belt 30. The negative connection 31 for the generator is attached to the pipe 5, while the positive connection 32 is grounded at a point remote from the pipe line.

From the foregoing it will be apparent that the force of the liuid or gas passing through the by-pass 6 will serve to operate the turbine wheel for driving the generator, which neutralizes electrolysis in the pipe line by reason of the connection thereof with the generator as indicated.

It is believed the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what is claimed as new is:

1. A turbine construction comprising, a turbine housing interposed in a pipe line and having a turbine wheel secured on a shaft journalled in the housing, bearing assemblies for the shaft outwardly of the housing, a conical cover for each assembly positioned against the respective sides of the housing, a gasket between each cover and the housing, apertured lugs on the sides of the covers and bolts connecting the lugs of the respective covers for clamping the latter on the housing.

2. A turbine construction comprising a turbine

housing composed of a pair of end plates and an annulus having its edges abutting the ends of said plates, a turbine wheel positioned in the housing and having a shaft journaled in the end plates, intake and discharge pipes connected to the annulus, bearing brackets for the draft secured on the outer side of the end plates, cover plates for each end of the housing, gaskets positioned between the edges of the cover plates and the adjacent end plate, and bolts connecting the cover plates for securing the said parts of the housing in assembled relation.

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