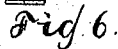
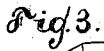
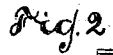


Fluid Meter.

Patented April 16, 1872.



John H. A. Goische
per
Van Santvoord & Hantz
Attorn

Fig. 4:

UNITED STATES PATENT OFFICE.

JOHN H. A. GERICKE, OF HOBOKEN, NEW JERSEY.

IMPROVEMENT IN FLUID-METERS.

Specification forming part of Letters Patent No. 125,805, dated April 16, 1872.

To all whom it may concern:

Be it known that I, JOHN HARTMANN AUGUST GERICKE, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Fluid-Meters; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a vertical central section of my meter. Fig. 2 is a plan or top view of the same.

The remaining figures are details, which will be referred to as the description progresses.

Similar letters indicate corresponding parts.

This invention relates to an improvement on that class of fluid-meters for which a patent was granted to Leopold F. Buschmann, January 17, 1871, No. 111,040; and it is intended particularly to facilitate the construction of this meter, and also to reduce the friction of the fluid passing through it. My improvement consists in the arrangement of two elbows, which are provided at their inner ends with flanges for the purpose of being fastened together, one of said elbows being bored out to receive the guide-curves and the other to receive a turbine or reaction water-wheel, which is mounted on a shaft that has its bearing at one end in a socket in the hub of the stationary-guide curves, while its other end extends through a tube projecting from the inner surface of the second or discharge elbow, and provided with a stuffing-box in such a manner that the guide-curves, as well as the turbine-wheel, can be readily fitted into their places, and that by separating the elbows easy access can be had to said parts for the purpose of cleaning or repairing; and, furthermore, by the curvatures of the two elbows, the fluid flows to and from the guide-curves and turbine-wheel with the least possible friction, while the tubular projection of the discharge-elbow effectually prevents leakage. The supply-elbow is provided with a stop-cock to regulate or close the supply of fluid to the meter, as may be desired.

In the drawing the letter A designates the supply-elbow, and the letter B the discharge-elbow. These elbows are provided at their inner ends with flanges *a b*, which are faced off, so that when the same are fastened together by means of screws *c* a tight joint will be produced between them. The inner end of the supply-elbow is bored out to receive the guide-curves C, detached views of which are shown in Figs. 3, 4, and 5, Fig. 3 being a view of one face, Fig. 4 a side view, and Fig. 5 a view of the opposite face of the same. These guide-curves are dropped into the socket provided for them in the end of the supply-elbow, and they are held in place by screws *d*. The inner end of the discharge-elbow B is bored out to receive the turbine or reaction wheel D, detached views of which are shown in Figs. 6, 7, and 8, where Fig. 6 represents a plan or face view of the wheel, Fig. 7 is a transverse section of the outer ring, Fig. 8 is a detached side view of the hub or body of the wheel. This wheel is mounted on a spindle, E, which has its bearing at one end in the hub or body of the guide-curves, while its other end extends through a tube, F, cast solid with the discharge-elbow and projecting from the inner surface thereof, as shown in Fig. 1. This tube is provided with stuffing-boxes *f g*, one in each end, and by filling these stuffing-boxes with suitable packing-pieces the leakage of the fluid through said tube is prevented. On the spindle E is mounted a worm, G, which transmits the motion of the turbine-wheel to the registering apparatus. In the supply-elbow A is arranged a stop-cock, H, which serves to shut off the fluid or to regulate the supply. By combining the two elbows A B with the guide-curves C and turbine-wheel D, the fluid to be measured is conducted to and from the wheel with the least possible friction; and by enabling the fluid to exert its full power (or nearly so) on the wheel, I have produced a meter which gives a correct result independent of the head under which the fluid is made to pass through the meter or of the velocity of said fluid; and, furthermore, by securing the guide-curves in the end of one elbow and the wheel in the end of the other elbow easy access can be had to

those parts simply by separating the two elbows.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the elbows A B with the guide-curves C and wheel D, the elbow B being provided with a tubular projection, F, for the reception of the spindle E, which connects externally with the gearing, substan-

tially in the manner herein shown and described.

This specification signed by me this 7th day of February, 1872.

J. H. A. GERICKE.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.