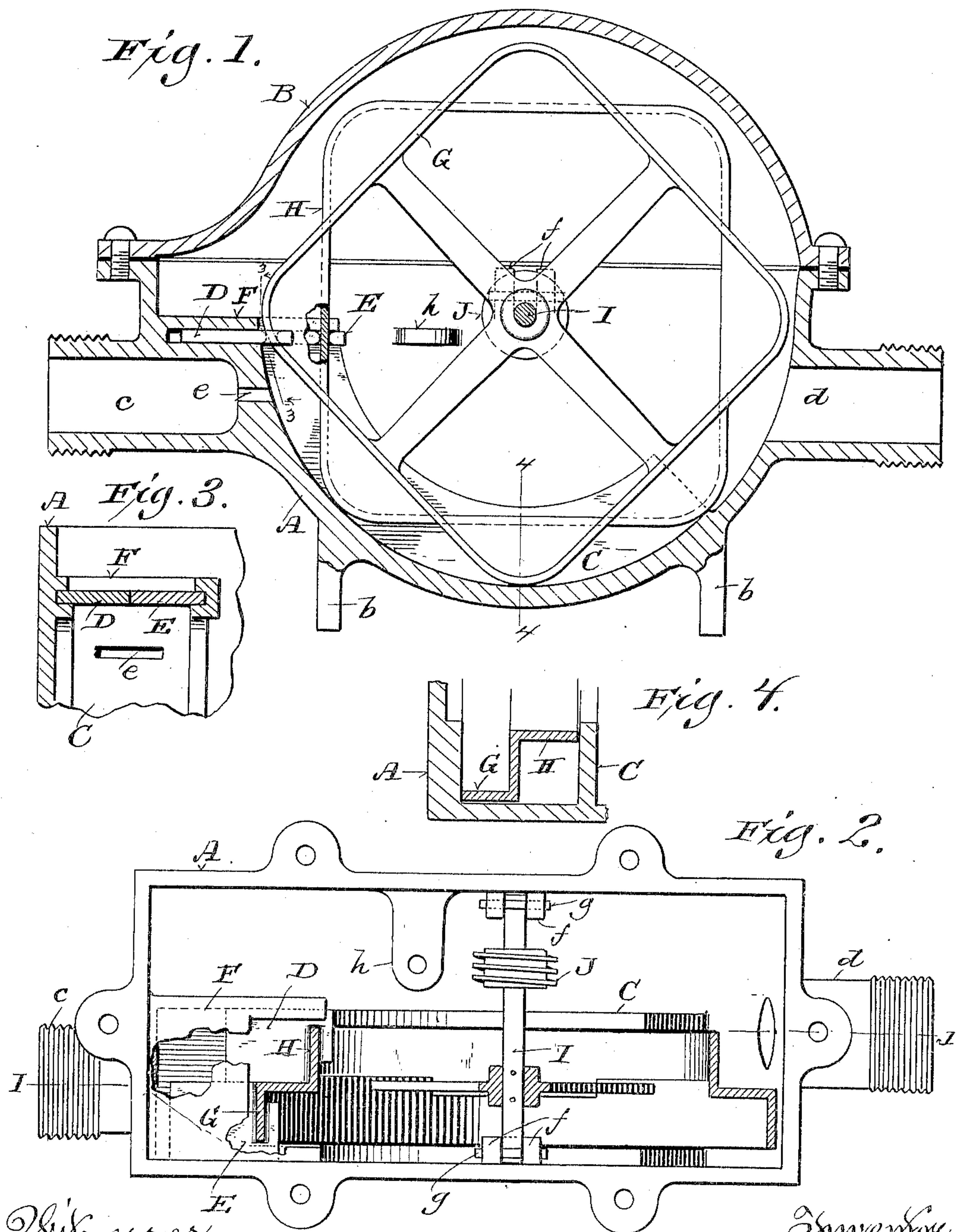


G. FAJEN.
ROTARY METER.

APPLICATION FILED NOV. 25, 1904.



Witnesses
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UNITED STATES PATENT OFFICE.

GUSTAV FAJEN, OF MILWAUKEE, WISCONSIN.

ROTARY METER.

No. 804,526.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed November 25, 1904. Serial No. 234,205.

To all whom it may concern:

Be it known that I, GUSTAV FAJEN, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Rotary Meters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed, the object of the invention being to provide simple, economical, and accurate fluid-meters of the rotary type similar to the one set forth in my application filed March 9, 1905, Serial No. 249,188.

Figure 1 of the drawings represents a vertical longitudinal section of fluid-meter casing cut on lines 1 1 in Fig. 2, the mechanism inclosed by the casing being in side elevation, partly broken and partly in section; Fig. 2, a plan view, partly in horizontal section, of what is shown in Fig. 1, the upper cover-section of the casing being removed; and Figs. 3 and 4, detail sectional views, respectively, represented by lines 3 3 and 4 4 in Fig. 1.

Referring by letter to the drawings, A indicates the lower main section, and B the upper cover-section, of an approximately annular casing, these sections being provided with outer meeting flanges that are bolted together against interposed packing. The section A of the casing is provided with legs *b*, an inlet-nozzle *c*, and an outlet-nozzle *d*, these nozzles being screw-threaded for connection with pipe through which fluid under pressure has flow to and from the meter of which said casing forms a part. The inlet-nozzle has communication with a segmental trough C in the lower main section A of the casing, the passage *e*, in what is shown as a thickened portion of said casing-section, being preferably restricted, and horizontal gates D E are loose in a guide-chamber F at the upper end of the trough, this chamber being recessed at the front to obtain clearance for a rotary device hereinafter specified.

Adjacent to their forward ends the gates D E are transversely recessed from their inner edges to have sliding hook connection with polygonal bands G H, that are rounded at their corners and which have spoke-and-hub connection with an axle I, for which recessed bearing-lugs *f* are provided upon the inner sides of the casing-section A, pins *g* be-

ing engageable with the lugs over the axle to hold the same in place. The bands G H are of the same size and so disposed that each rounded corner of one projects midway between similar corners of the other, all the corners being closed on their inner sides between the bands. The gates that dam the upper end of the trough C have reciprocative motion, due to their connection with the bands G H of the rotary device, and the band-opposing edges of the recesses in said gate are beveled to reduce frictional contact with said bands.

The axle I is shown provided with a worm J, by which to transmit motion to any suitable registering mechanism, a bearing or step *h* for a register-spindle being shown in the lower section of the meter-casing.

The bands G H are shown as being of approximately rectangular contour; but their contour may be approximately of any preferred polygonal contour, and in any of their various forms they are disposed one against the other, so that each rounded corner of one projects midway between similar corners of the other, and all of the corners are closed on their inner sides between bands, as above specified.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rotary meter comprising a casing having a fluid-inlet and a fluid-outlet, a segmental trough in the casing in communication with the inlet of same, a rotary device embodying a polygonal band that has rounded corners and engages the trough, a slide-gate arranged in hook connection with the band to dam said trough above said inlet, and means in connection with the rotary device for transmitting motion to register mechanism.

2. A rotary meter comprising a casing having a fluid-inlet and a fluid-outlet, a segmental trough in the casing in communication with the inlet of same, a rotary device engaging the trough and embodying a pair of polygonal bands that are rounded at their corners and set so that each corner of one projects midway between corners of the other, these projecting corners being closed on their inner sides between bands, slide-gates arranged in hook connection with the bands to dam said trough above said inlet, and means in connection with the rotary device for transmitting motion to register mechanism.

3. A rotary meter comprising a casing hav-
ing a fluid-inlet and a fluid-outlet, a segmen-
tal trough in the casing in communication
with the inlet of same, an axle for which the
5 casing is provided with bearings, a pair of po-
lygonal bands centered on the axle to engage
the trough and having rounded corners, the
set of the bands being such that the corners
of one project midway between corners of the
10 other and are closed on the inner side be-
tween bands; slide-gates arranged in hook
connection with the bands to dam said

trough above said inlet, and a gear element
in connection with said axle for transmitting
motion to register mechanism.

In testimony that I claim the foregoing I
have hereunto set my hand, at Milwaukee, in
the county of Milwaukee and State of Wis-
consin, in the presence of two witnesses.

GUSTAV FAJEN.

Witnesses:

N. E. OLIPHANT,
GEORGE FELBER.