J. G. SMITH & J. C. McGREGOR.

OIL GATE.

APPLICATION FILED SEPT. 5, 1908.

917,970.

Patented Apr. 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

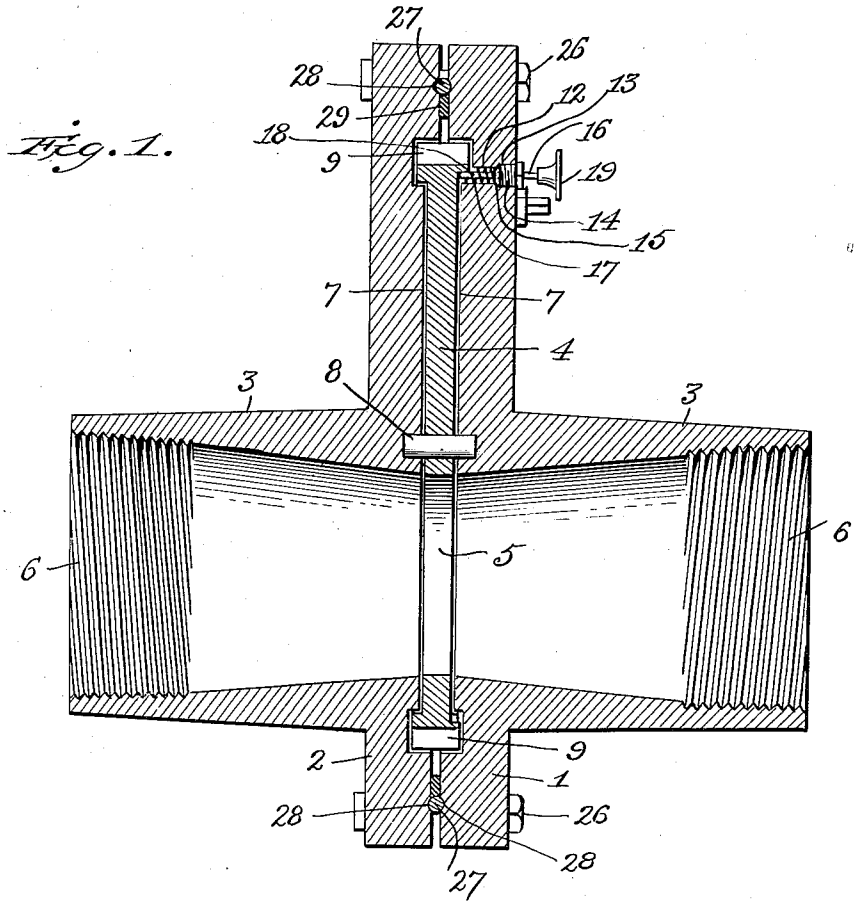
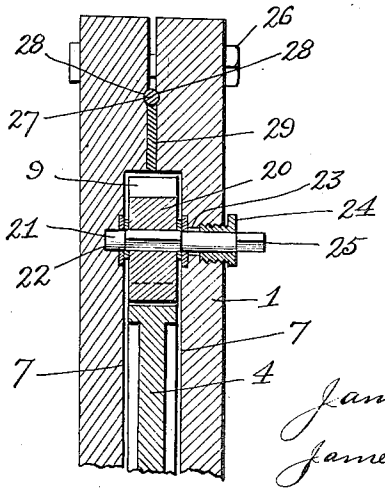


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 2.

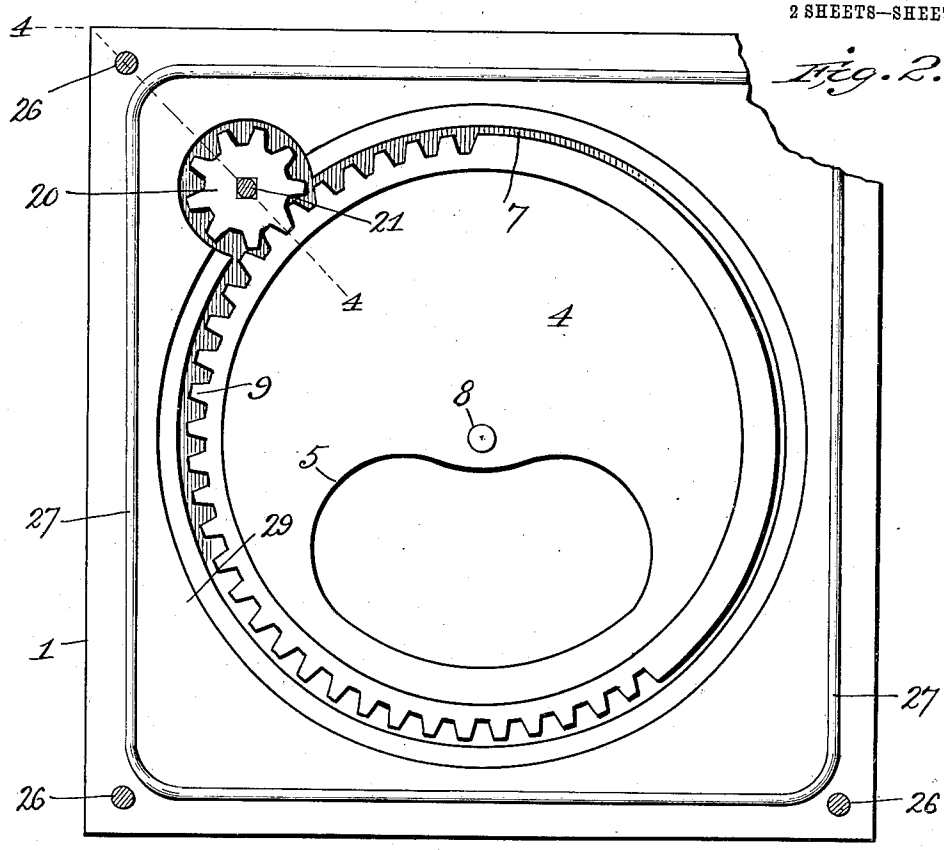
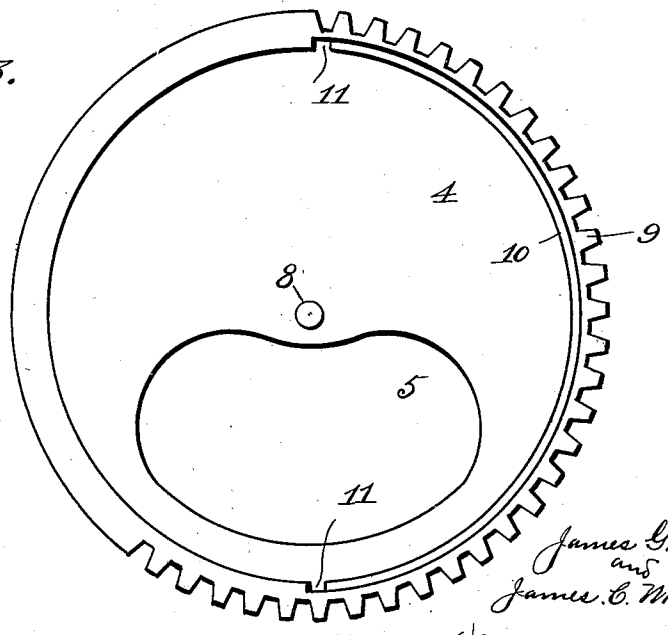


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES G. SMITH, OF SHIPPENSVILLE, AND JAMES C. McGREGOR, OF NEW BETHLEHEM, PENNSYLVANIA.

OIL-GATE.

No. 917,970. Specification of Letters Patent. Patented April 13, 1909.

Application filed September 5, 1908. Serial No. 451,838.

To all whom it may concern:

Be it known that we, JAMES G. SMITH and JAMES C. McGREGOR, citizens of the United States, residing at Shippensville and New Bethlehem, Clarion county, Pennsylvania, respectively, have invented certain new and useful Improvements in Oil-Gates; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

Our invention relates to oil gates and has for its object the construction of a simple and durable gate capable of being readily taken apart and comprising but few operative elements.

The structure will hereinafter be fully described in connection with the accompanying drawings in which like parts are similarly designated.

Figure 1 is a vertical central section through the gate. Fig. 2 shows the back plate of the gate removed, to show the relative positions of the operating parts. Fig. 3 is a front view of the rotary valve plate. Fig. 4 is a section on the line 4—4 of Fig. 2.

Referring now to the drawings in detail the oil gate comprises a casing consisting of a front plate 1 and a rear plate 2, each having a boss 3 extending therefrom. This boss is wider horizontally than it is vertically where it joins the plate and has an internal opening at the plate corresponding in shape to the valve ports in the valve 4, Fig. 2. The two bosses 3—3 register with one another and each ends in a circular, internally threaded portion 6, by means of which they are connected up for use.

The two plates 1 and 2 have registering recesses 7 in which is mounted a rotary valve 4 to rotate on a central pin or spindle 8 and in this plate between its center and rim is located the valve port 5. The valve 4 is circular, having part of its periphery, approximately two-thirds of it, provided with gear teeth 9. Near the edge of this valve just inside the teeth we cut a rabbet or groove 10 having holes, depressions or recesses 11 at each end thereof somewhat deeper than the rabbet or groove.

In the plate 1, we bore a hole 12 to register with the groove 10 in the valve. This hole 12 is larger in diameter at its outer portion 13, which is threaded for the reception of a gland-nut 14 and a washer 15. In this hole is placed a spindle 16 surrounded by a coil spring 17 one end of which is secured in a hole 18 in the pin 16 and the other end of said spring abuts against the washer 15. The pin 16 projects outside of the casing through the gland 14 and has secured on its outer end a knob or like device 19. The inner end of the pin rides on the rabbet or in the groove 10, limits the movement of the valve 4, and when valve 4 has reached its end position it is forced into the recess 11 by means of the spring 17 thereby preventing the valve 4 from working open or shut. Gearing with the teeth 9 of the valve 4 is a pinion 20 secured to a short shaft 21, one end of which has bearing in a circular recess 22 in plate 2 and the other end of which projects through an opening 23 in the plate 1, said opening 23 being provided with a gland 24 through which the other end of shaft 21 projects. The projecting end of the shaft 21 is squared as at 25 for the reception of a crank handle or wrench or other operating device.

The two plates 1 and 2 are held together by bolts 26 and between them we place a wire 27 taking into registering grooves 28 in each plate. This wire serves as a packing between the plates and in addition thereto we use an asbestos, rubber or other gasket 29 surrounding the recessed portions 7 of the plates.

We claim:

An oil gate comprising two flat recessed plates, the bottom of the recesses being flat, said plates having bosses thereon with a passage-way through them, a circular, flat, ported valve plate having a thickened rim portion and having gear teeth formed in said thickened rim portion and extending over a portion of the periphery, a central pivot pin extending into the recessed plates and centrally through the ported valve plate, a packing between the flat recessed plates and bolts adjustably securing the plates together whereby said plates can be brought nearer together to closely fit the ported valve plate, a pinion mounted in the recesses of said flat plates and engaging the toothed portion of the ported valve plate, said ported, valve plate having a groove formed

near its periphery and adjacent the toothed portion thereof, said groove ending in recesses, a spring urged locking pin passing through one of the flat plates and packed oil tight therein, the end of said pin engaging said groove and adapted to lock the ported plate in its end positions when engaging said recesses and means to rotate the pinion.

In testimony that we claim the foregoing as our invention, we have signed our names in presence of two subscribing witnesses.

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Witnesses:
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