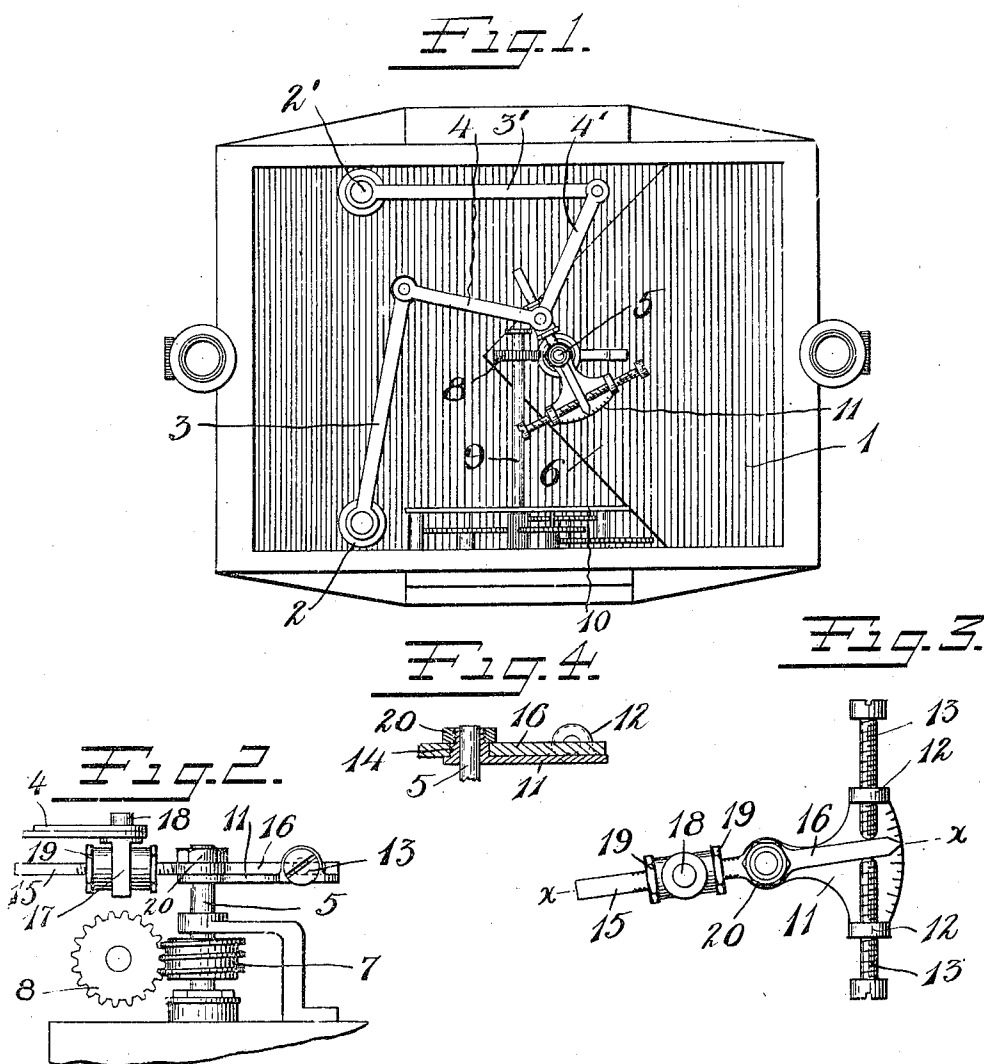


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METER.
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1,031,696.

Patented July 9, 1912.



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UNITED STATES PATENT OFFICE.

RICHARD L. DEZENDORF, OF RICHMOND HILL, NEW YORK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RICHARD L. DEZENDORF, a citizen of the United States, residing at Richmond Hill, county of Queens, State of New York, have invented certain new and useful Improvements in Meters, of which the following is a full, clear, and exact description.

My invention relates to improvements in meters, and has for its object to provide a meter with an angularly adjustable tangent post.

Heretofore tangent arms have been soldered to the crank shafts of the meters, and in adjusting meters so that they will register in accordance with a standard instrument it has often been necessary to move the tangent post angularly relatively to the crank shaft. In order to do this it has been necessary to unsolder the tangent arm from the crank shaft, move it angularly and then permit the solder to harden with the tangent arm in the new position. In some instances it is necessary to do this several times in order to secure the correct adjustment. This requires time and a high degree of skill and the soldering is liable to heat the crank shaft so as to injure its packing or stuffing.

The object of my invention is to do away with the soldering and provide a simple and accurate means for making the angular adjustment.

The following is a description of an embodiment of my invention, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of a meter embodying my invention, the top of the meter being removed. Fig. 2 is an enlarged detail of the tangent and connecting parts in side elevation. Fig. 3 is a plan view of the same with certain parts omitted. Fig. 4 is a partial section through the line $x-x$ Fig. 3.

Referring more particularly to the drawings, 1 is the gallery of a meter, having the usual flag wires 2-2' and flag arms 3-4 and 3'-4'. 5 is the crank shaft operating valves in the usual manner within the chamber 6. 7 is the worm carried by the crank shaft, with which a gear 8 engages, which in turn through the rod 9 actuates the registering train 10. All of these parts are of the usual construction in dry gas meters.

To the upper end of the crank shaft I rigidly secure a projection 11. This projection, as here shown, has two ears 12 hav-

ing screw-threaded perforations through which pass screws 13. Concentric with the shaft and preferably on a boss 14 secured to the projection 11 is mounted a tangent consisting of the tangent arm 15, rear extension 16, post carrier 17, tangent post 18 and adjusting nuts 19. The adjusting nuts 19 afford a means for adjusting the tangent post longitudinally of the arm 15 in the ordinary manner. The arm 15 is free to move about the axis of the crank shaft 5 and relatively to the projection 11. The extension 16 lies between the ends of the two screws 13. By unscrewing one screw and screwing the other screw inwardly, the tangent can be turned through a very considerable angle relatively to the crank shaft and securely held in any position in which it may be placed. The tangent is held against movement longitudinally of the crank shaft by the nut 20, which is preferably screw-threaded upon the boss 14 of the projection 11. In the operation of the device, when it is desired to adjust the tangent post angularly relatively to the crank shaft, one of the screws 13 is loosened and the other screw is tightened so as to move the extension 16 the proper distance in the proper direction and hold it rigidly in its adjusted position. The invention permits of various other modifications, whereby the tangent post can be angularly adjusted without resorting to unsoldering.

What I claim is:

1. In a gas meter, the combination of a crank shaft for operating the meter valves, flag wires and flag arms for operating said crank shaft, a projection on said crank shaft rigidly secured thereto, a tangent mounted adjacent to said projection and movable about the axis of said shaft, and tangent moving and holding means coacting with said tangent and projection for adjusting said tangent angularly relatively to said shaft and projection and holding the same in adjusted position so as to vary the relations of the flag arms to the crank shaft.

2. In a gas meter, the combination of a crank shaft for operating the meter valves, flag wires and flag arms for operating said crank shaft, a projection rigidly secured to said shaft, a tangent having an arm and an extension and movable relatively to said shaft, and adjusting means coacting with said extension and said projection for adjusting said tangent angularly relatively to

said crank shaft and holding the same in adjusted position so as to vary the relations of said flag arms to said shaft, said tangent having a tangent post on said arm.

5 3. In a gas meter, the combination of a crank shaft for operating the meter valves, flag wires and flag arms for operating said crank shaft, a projection rigidly secured to said shaft, a tangent having an arm and an
10 extension and movable relatively to said shaft, and adjusting means coacting with said extension and said projection for adjusting said tangent angularly relatively to
15 said crank shaft and holding the same in adjusted position so as to vary the relations of said flag arms to said shaft, said tangent having a tangent post on said arm, said arm and extension being on opposite sides of the axis of said shaft.

20 4. In a meter, the combination of a crank shaft, a projection rigidly secured thereto, a tangent having an arm and an extension

and movable relatively to said shaft, and adjusting means coacting with said extension and said projection for adjusting said
25 tangent angularly relatively to said crank shaft and holding the same in adjusted position, said tangent having a tangent post on said arm.

5. In a meter, the combination of a crank
30 shaft, a projection rigidly secured thereto, a tangent having an arm and an extension and movable relatively to said shaft, and adjusting means coacting with said extension and
35 said projection for adjusting said tangent angularly relatively to said crank shaft and holding the same in adjusted position, said tangent having a tangent post on said arm, said arm and extension being on opposite sides of the axis of said shaft.

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Witnesses:

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