The present invention relates to improvements in tin gas meters and particularly to meters of the so-called "dry" type employing bellows adapted to be alternately filled and emptied of gas and cooperating registering mechanism actuated by the bellows to indicate the amount of gas that has passed through and been measured by the bellows.

In meters of this type as generally constructed, the bellows comprise a metal disk and a flexible diaphragm attached to the edge thereof and heretofore it has generally been the practice to connect the bellows disk to the registering mechanism by rocker shafts for which bearings were soldered directly to the diaphragm disks. Such constructions have been comparatively costly necessitating care in attaching the bearings, and when it became necessary to detach the rocker shaft bearings from the diaphragm disks for the purpose of repairs, the rocker shaft bearing posts, which are generally composed of white metal, were frequently melted and thus rendered useless.

It is accordingly a primary object of this invention to provide improved means for attaching the rocker shaft to the bellows or diaphragm disks whereby the bearing structure may be attached by soldering and removed with facility without danger of injury thereto.

Another object of this invention is to provide a novel rocker shaft carrier construction adapted in its entirety to be securely and quickly attached to or removed from the bellows disk with the bearings properly aligned and located, and without injury thereto.

It is a further object of this invention to provide a construction of the above noted character which is light but strong, and well adapted to the purpose for which it is intended.

It is a still further object of the invention to provide a rocker shaft carrier construction for tin meters which is composed of relatively few simple parts, utilizing minimum amount of white metal and capable of being produced at relatively low cost.

With these and such other objects in view as will hereinafter appear, the invention comprises the improvements, combinations, and arrangement of parts hereinafter more fully disclosed, the features of novelty being pointed out more particularly in the appended claims.

Reference will be had to the accompanying drawing for a more complete understanding of the invention in which—

Figure 1 is a vertical section substantially through the center of the improved rocker shaft carrier construction and parts to which it is connected.

Figure 2 is a central longitudinal section through the post or bearing supporting plate forming part of my invention.

Figure 3 is a top end view of said supporting plate.

Figure 4 is an outer plan view of said plate, and

Figure 5 is a plan view of a blank from which said supporting plate is constructed.

Referring to the drawing by reference characters in which like characters designate like parts in the various views, 10 designates a portion of one of the metal diaphragm disks of which there are two in a tin meter construction, and to the outer edge of which the flexible diaphragm is secured in a well known manner. Adapted to be secured to the central portion of disk 10 is the rocker shaft carrier construction 11 forming the subject matter of my present invention and which comprises a comparatively thin sheet metal post supporting plate 12 formed from a rectangular sheet metal blank 13 shown in Figure 5 by stamping operations. Such stamping operations comprise turning the edges over at right angles to the body portion to provide a continuous rectangular downwardly turned flange 14. Blank 13 has formed or stamped therein at spaced points a pair of holes 15 around which the metal is cut by stamping or otherwise, as indicated at 16 in Figure 5 and the cut sections are then bent upwardly at right angles to the body portion to form a pair of spaced securing and reinforcing apertured legs 17.

A pair of rocker shaft bearing posts 18 and 19 are secured to the respective upper and lower ends of plate 12, each post being formed of white bearing metal cast around
plate 12 and a leg 17, as well as being cast about the opposite ends of a spacing and bracing rod 21 whose opposite ends, as shown in Figure 1, are provided with reduced portions 22 providing firm grips for the metal of posts 18 and 19. Rod 21 passes through apertures 15 in legs 17. Post 18 is provided with a bearing 23 and post 19 is provided with an open ended bearing 24 in vertical alignment with bearing 23. Bearings 23 and 24 rotatably support the opposite ends of a rocker shaft 25 to which is secured in well known manner one end of a bellows motion transmitting rocker arm structure 26, the opposite end of which is suitably secured to flag rod or shaft 27 which supports one end of flag arm 28.

To secure the structure so far described to a meter, flange 14 is soldered to the diaphragm disk 10 of the meter. Flange 14 is primarily for reinforcing the structure and permitting the use of light weight sheet metal in the construction. It will accordingly be obvious that flange 14 may be turned in the opposite plane direction from that shown and the entire pole body portion of plate 12 soldered to disk 10.

It will be seen from the foregoing disclosure that a rocker shaft carrier construction for meters is provided which eliminates the difficulties heretofore experienced in securing and removing the rocker shaft bearing posts in meters, and that a construction is provided consisting of relatively few simple parts which are comparatively inexpensive to manufacture, and which are assembled in such relation as to provide a strong construction of minimum weight.

While but a single embodiment of the invention has been disclosed, it is to be understood that the invention is not limited therefore but that such changes and alterations are contemplated as fall within the terms of the appended claims. Accordingly, what is desired to be securely by U. S. Letters Patent and is claimed as new is:

1. A rocker shaft carrier for gas meters comprising a sheet metal base plate provided with a marginal reinforcing flange; projections formed by bending portions of said base plate outward substantially at right angles; and reinforcing metal cast around said projections and forming rocker shaft bearings.

2. A rocker shaft carrier for meters comprising rocker shaft bearing posts; a base plate provided with projections embedded in said posts, said projections being apertured; and a bracing rod extending between said posts with the ends of said rod extending through said apertures and embedded in said posts, said ends being of irregular shape whereby they are firmly anchored in said posts.

3. In a gas meter, having a metal dia-