July 5, 1927. 1,635,083

A. J. HERMESMEYER

TANDEM WAFER REGULATOR

Filed July 20, 1925

Fig. 1.

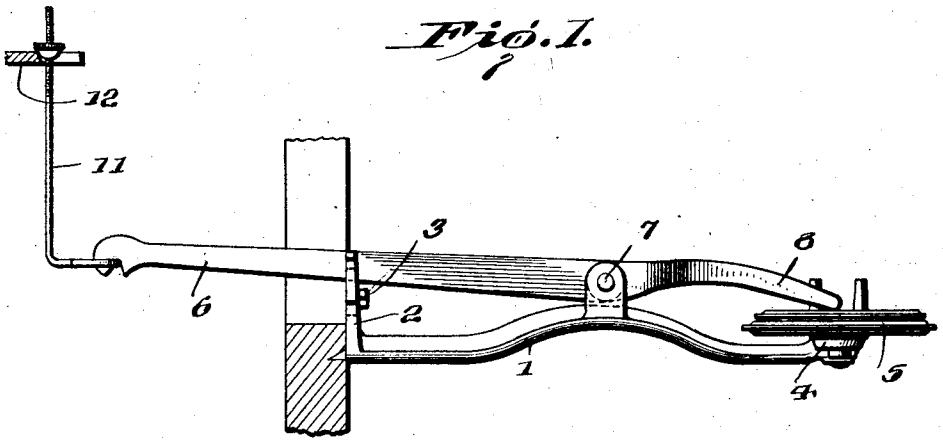
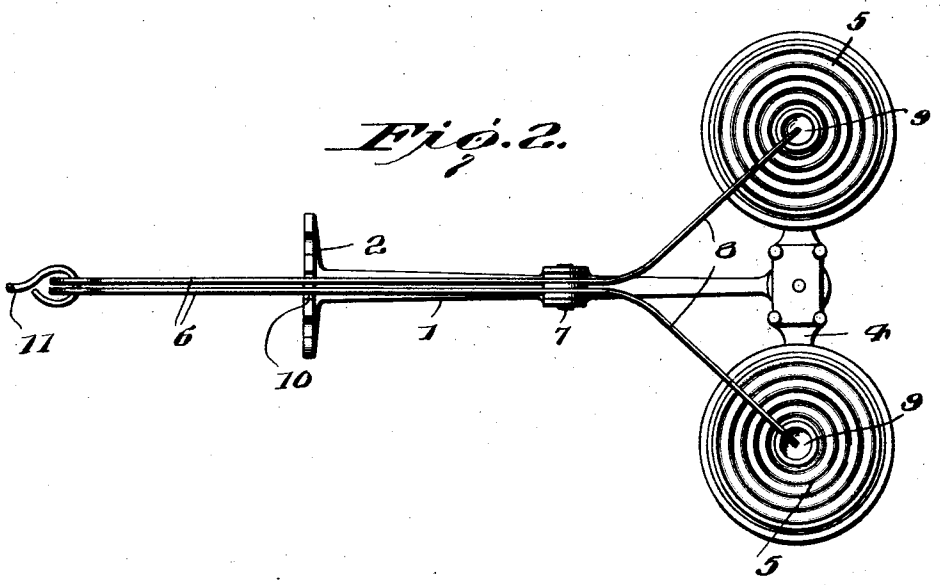


Fig. 2.



Inventor

Anthony J. Hermesmeyer

By Duncan C. Hodges

his Attorney

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ANTHONY JOSEPH HERMESMEYER, OF QUINCY, ILLINOIS, ASSIGNOR TO H. M. SHEER COMPANY, OF QUINCY, ILLINOIS, A CORPORATION OF ILLINOIS.

TANDEM WAFER REGULATOR.

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My invention relates to an improvement in tandem wafer regulators.

The so-called tandem type of wafer regulator has many advantages and has proven very efficient; but in the old style of tandem in case one of the two wafers should become inoperative the result is that approximately there is only 50% of the regulation, due to the fact that the yoke between the two wafers has only about 50% of the movement if one wafer is expanded and the other wafer is inoperative.

My present invention obviates this by employing two wafers, and while both wafers may operate simultaneously, each wafer may operate independently through the medium of two separate levers so that, in case one wafer becomes inoperative, in practically all cases the other wafer will take care of the regulation almost as fully as when both wafers are acting together. Practically perfect regulation will continue in this way at least until the operator has an opportunity of replacing the worn-out wafer with a new one. Thus the use of two wafers with this independent control is a great advantage.

In the accompanying drawings:

Fig. 1 is a side elevation;

Fig. 2 is a plan view.

The numeral 1 represents an arm having an upturned bracket 2 at one end, which is adapted to be fastened in place by a bolt or other device 3. A cross-arm 4 is attached at the outer end of the arm 1. Wafers 5 are removably supported in the outer ends of this cross-arm. These wafers are of the well-known thermostatic type.

Two levers 6 are located side by side, and for the most part parallel and fulcrumed about midway of the arm 1 by means of the pivot 7. The outer ends 8 of these levers diverge and terminate substantially over the center 9 of each wafer as viewed in Fig. 2, in position to be raised with the expansion of the wafers. The opposite ends of the levers are confined within a notch 10 in the bracket 2, and the extreme end is in position to engage the lower end of the rod 11, which tilts the heat-regulating mechanism 12, a fragment only of which is illustrated in Fig. 1. The two levers 6 while under ordinary conditions adapted to operate together and in unison, are, nevertheless, totally independent of each other, although fulcrumed on the same pivot 7. So if either wafer becomes inoperative, the lever extending to the other wafer continues to function just as before.

In this very simple way, provision is made for the automatic operation of the heat control, whether both wafers of the tandem or only one is in action.

The use of the two wafers with this independent control is thus a great advantage as the chances of damage through inoperation of the wafer is decreased approximately 50%, and in case one wafer becomes damaged, the other would continue to maintain practically perfect regulation, at least for a considerable period of time, or until the strain of operating the entire regulator weights alone impaired the efficiency of the perfect wafer. Thus the operator should have ample warning and time to secure and substitute a new wafer for the inoperative one before the efficiency of the operative wafer is impaired.

I claim:

1. The combination of a supporting arm, a cross arm carried by said supporting arm substantially at the outer end thereof, a plurality of wafer thermostats carried by the cross arm on opposite sides of the supporting arm, operating levers extending substantially parallel and in close proximity with each other throughout a portion of their lengths and having divergent outer ends extending into position to be actuated by the wafer thermostats.

2. The combination of a supporting arm, a cross arm carried by said supporting arm substantialy at the outer end thereof, a plurality of wafer thermostats carried by the cross arm on opposite sides of the supporting arm, operating levers pivotally mounted on the supporting arm, said levers extending substantially parallel and in close proximity with each other throughout the major portion of the length thereof, and having the outer ends thereof beyond the pivotal points bent laterally in opposite directions forming divergent outer ends extending into position to be actuated by the wafer thermostats.

In testimony whereof I affix my signature.

ANTHONY J. HERMESMEYER.