

applied by Messrs Bancroft & Lewis, of Philadelphia, to a Buckeye engine in the works of Wm. Sellers & Co.

The inertia weight consists of a wheel, which, being centred on the shaft, has its centrifugal force completely balanced, while its inertia force acts to *aid* the centrifugal force of the governor. Instead of causing racing this is said to have overcome all tendency to race, thus enabling the governor to be adjusted for practically perfect isochronism.

It is well known that an increase in the amount of the balanced forces—centrifugal and centripetal—of a governor tends to increase the effectiveness of the governor to overcome disturbing influences; yet an increase in these forces may produce an increase of friction in the pivots, which may defeat the desired object. The friction of pivots is not increased, however, by so designing the governor as to utilize inertia to aid centrifugal force.

In this respect the shaft governor may have a decided advantage over the old ball governor, which is purely centrifugal.

Referring back to Fig. 18, it is not essential that the inertia weight be centred on the shaft. It may be centred at the weight-arm pivot, thus forming a part of the weight-arm. If its centre of gravity is coincident with the centre of pivot it will not affect the centrifugal adjustment of the governor weight, but will aid the governing moment by its inertia.