

# William L. Collamore, Governor.

73578

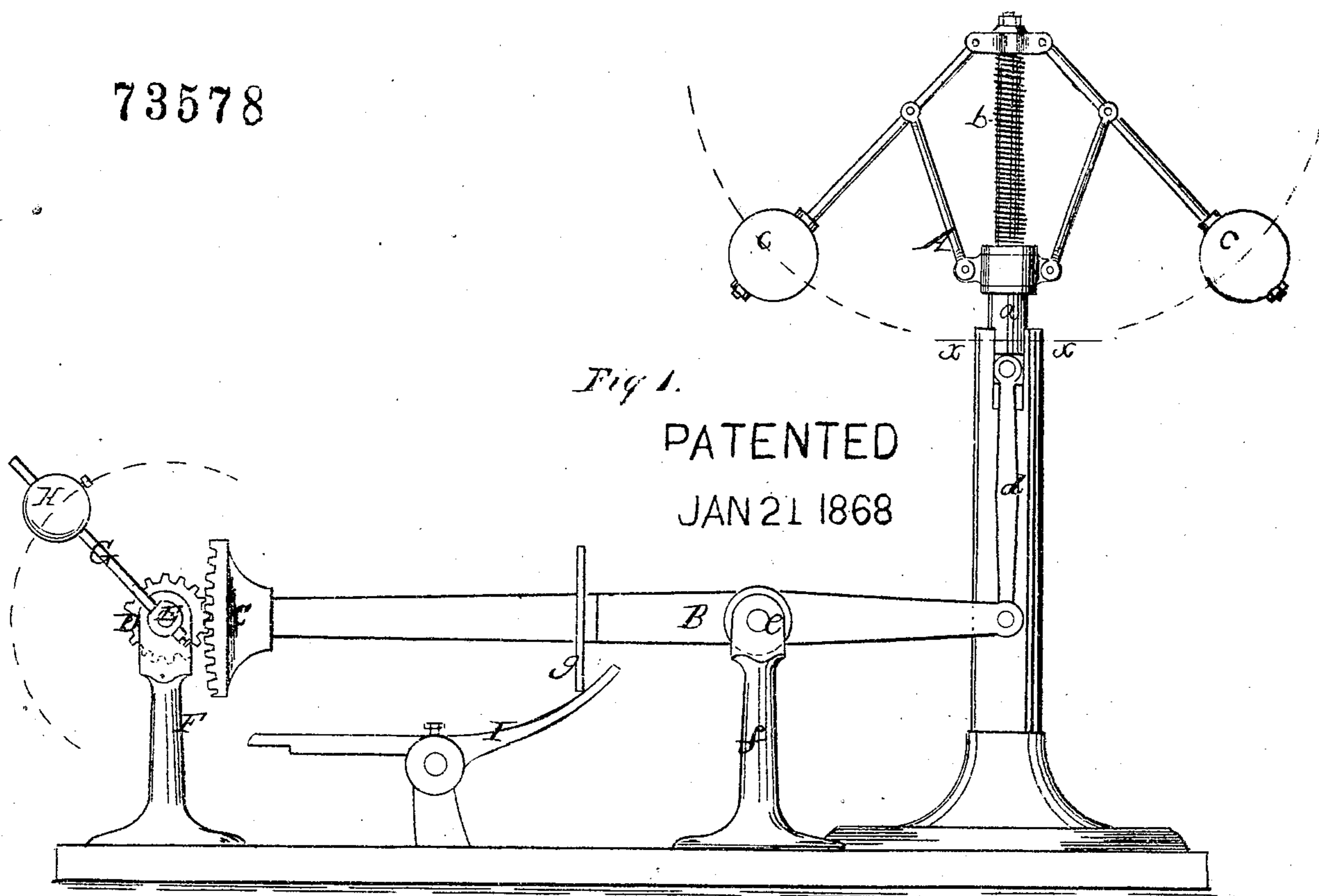
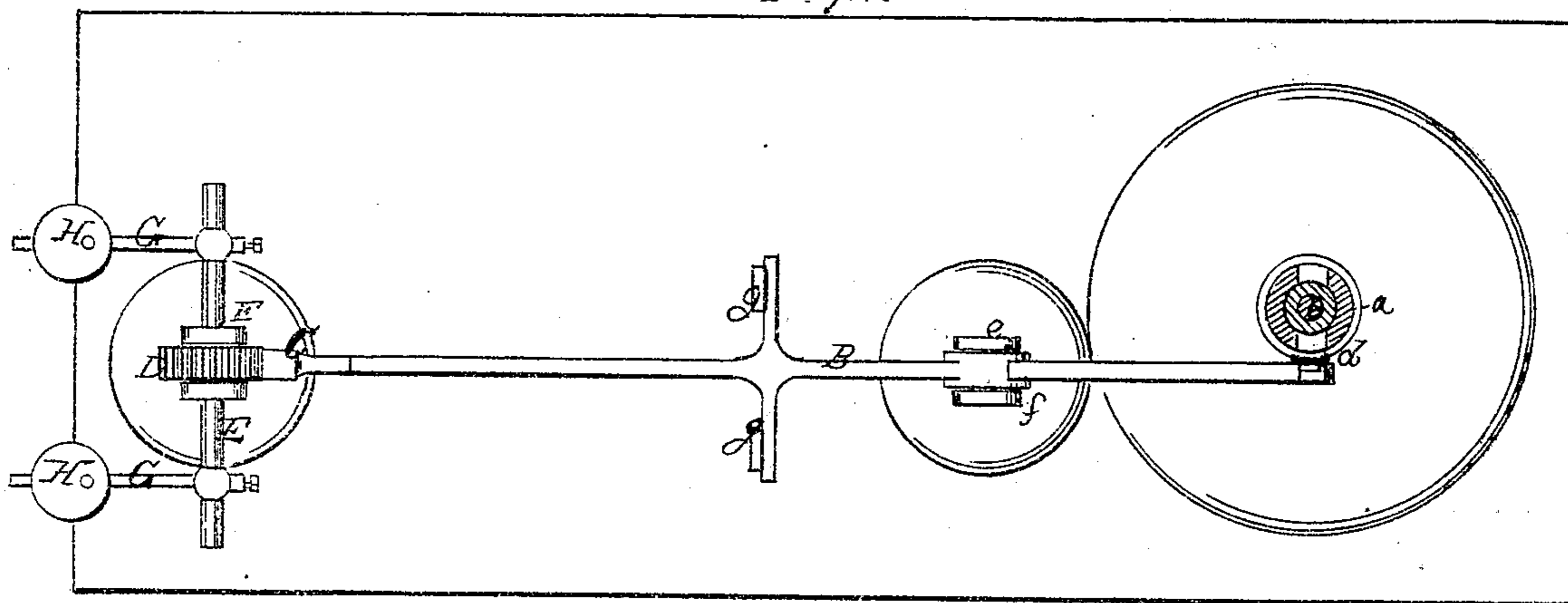


Fig 1.

PATENTED  
JAN 21 1868

Fig 2.



Witnesses  
Theo Enshe  
W. Brown

Inventor  
W<sup>m</sup> L. Collamore  
Per Munnell  
Attorneys

# United States Patent Office.

WILLIAM L. COLLAMORE, OF WARREN, RHODE ISLAND.

*Letters Patent No. 73,578, dated January 21, 1868.*

## IMPROVEMENT IN STEAM-GOVERNORS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM L. COLLAMORE, of Warren, in the county of Bristol, and State of Rhode Island, have invented a new and improved Governor; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved governor for steam-engines, and for other purposes, where governors are usually employed. The invention consists in a novel combination of a supplemental weight to the ordinary ball-governor, substantially as hereinafter fully shown and described, whereby the governor is rendered far more sensitive than at present, and a material saving of steam and fuel effected. In the accompanying sheet of drawings—

Figure 1 is a side view of my invention.

Figure 2 a horizontal section of the same taken in the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

A represents an ordinary ball-governor constructed in the usual manner, and having its collar *a*, which rises and falls on the spindle *b* under the influence of the balls *c*, connected by a link, *d*, with a lever, B, which has its fulcrum at *e* in an upright, *f*. The fulcrum *e* is at one side of the centre of the lever B, and the link *d* is attached to the end of the short arm of the same, the long arm being provided with a segment-rack, C, which gears into a pinion, D, on a horizontal shaft, E, the latter having its bearing in the upper part of an upright, F. On this shaft E there are fitted two arms G G, one near each end thereof, each arm having an adjustable weight, H, upon it, as clearly shown in both figures. The long arm of the lever B is provided with arms *g*, which press against levers I, through the medium of which the steam-valve is operated to admit more or less steam to the cylinder. When the engine increases in speed, the balls *c* of the governor of course rise, and also the collar *a*, the latter drawing up the short arm of the lever B, which causes the long arm to be forced down, and the rack C, under this movement of the lever, turns the pinion D and raises the weights H, the lever acting upon the levers I, and the latter actuating the valve, so as to reduce the supply of steam to the cylinder and retard the speed of the engine. In case the speed of the engine is retarded so as to run below the speed required, the collar *a*, as it falls, forces down the short arm of the lever B, and the long arm consequently rises and the shaft E is turned, so that the weights H on the arms G G fall, assisting the balls *c* of the governor. The weights H may be rendered more or less efficient by adjusting them further in or out on the arms G G, and said weights render the governor extremely sensitive, and cause the engine to run much more uniformly than usual. This invention has been practically tested on a Corliss engine, and operates perfectly.

I claim as new, and desire to secure by Letters Patent—

The combination of the supplemental weights H and lever B with a governor, substantially as herein specified.

WILLIAM L. COLLAMORE.

Witnesses:

STEPHEN CLARK,

I. O. WATERMAN.