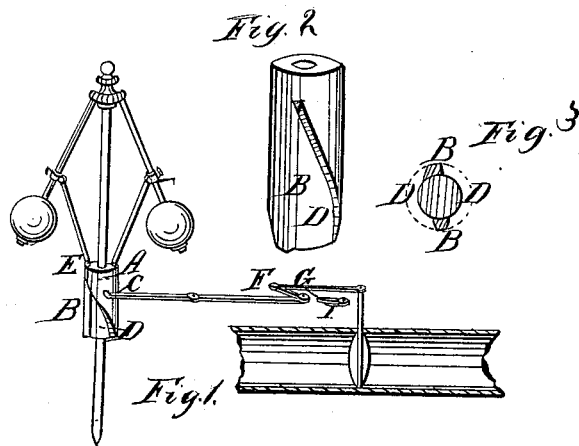


W. McCammon,

Governor.

No 6,462.

Patented May 22, 1849.



UNITED STATES PATENT OFFICE.

WILLIAM McCAMMON, OF ALBANY, NEW YORK.

DISK CUT-OFF ACTED UPON AND REGULATED BY THE GOVERNOR.

Specification of Letters Patent No. 6,462, dated May 22, 1849.

To all whom it may concern:

Be it known that I, WILLIAM McCAMMON, of Albany, in the county of Albany and State of New York, have invented a new and useful Improvement upon the Governor of a Steam-Engine for Regulating the Motion and Cutting Off Steam, and is what I term "McCammon's Variable Cut-Off"; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the governor and improvement as attached to the throttle of a steam engine. Fig. 2 is a perspective view of the improvement, being in the form of a cam. Fig. 3 is a cross section of Fig. 2 at its base.

The mode of construction of my invention is, make a cylinder of the desired length and diameter, depending upon the size of the governor, say six or nine inches long, and three or four inches in diameter. Around the outside of the cylinder wrap a piece of wood about one half inch thick, made when flat in the shape of a right angled triangle with the acute angles cut off about one inch having the base equal to the semicircumference of the cylinder, and the perpendicular equal to its height, and the hypotenuse either a straight or curved line.

I wish to be understood that I do not confine myself to the particular arrangement of the governor or levers, or the kind of valves herein set forth, on the contrary any form or arrangement may be used in combination with the parts of my invention as may be preferred.

Fig. 2 is the cam made with one or more slots depending upon the motion of the governor to that of the engine. For instance, if the governor has two motions to the engine's one, the cam will have one slot. If the engine and governor have the same motion, the cam will have two slots. If the

engine make two revolutions to the governor one, the cam will have four slots. In this case, I have made the drawing with two slots, so that the governor and engine must make the same number of revolutions.

When the engine arrives at the center, B Fig. 1, will strike the knob on the lever C (same letters refer to the same things on the different figures) and open the valve through the intervention of the connection F and handle G and will keep it open until it drops in the recess D when the valve will close by the action of the spring I and the same for the other center of the engine. If the work increase, or the pressure of steam decrease, the governor balls will fall, which will expose more surface for retaining the valve open as at A, and less for keeping it shut, should the balls fall entirely down so that E would be in a line with the lever C the valve would be retained constantly open by the cam at that part not having any recess for the knob to drop into, as at E should the work on the engine decrease, or the steam increase, the balls would fly apart and expose less surface for retaining the valve open, and more for keeping it shut.

What I claim as my invention and desire to secure by Letters Patent is the apparatus set forth in the above specification viz.

A cylinder moving freely on the spindle of the governor of the steam engine and operated by the balls thereof, having therein a slot or slots with one vertical and one inclined side, by means of which levers and other apparatus arranged essentially as described in the above specification regulate the opening and shutting of a throttle valve in the steam pipe, so as to cut off the steam at any desired portion of the stroke, varying according to the speed of the engine.

WILLIAM McCAMMON.

Witnesses:

R. J. WILTON,
WILLIAM DAVIS.