A. Nadow,

Governor.

No. 48,426. Patented June 27, 1865.

Fig 1.

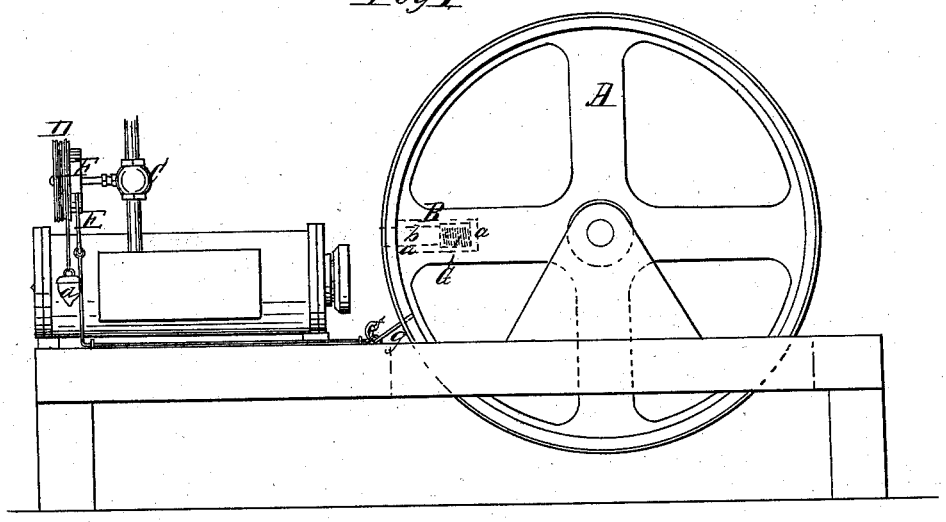
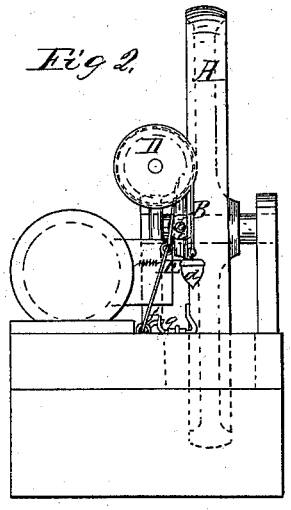


Fig 2.



Witnesses.
Wm. Bradley
J. B. Gardiner

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UNITED STATES PATENT OFFICE.

ALEXANDER NADOW, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVED AUTOMATIC STOP-MOTION FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. **48,426**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, ALEXANDER NADOW, of Springfield, Hampden county, State of Massachusetts, have invented an Automatic Stop-Motion for Engines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

It is well known to every one acquainted with the management of steam-engines that accidents frequently occur caused by the breakage of some of the parts connected with the governor, which destroys the control of that mechanism over the engine, and the steam being let on full the engine "runs away with itself," causing often serious damage, and sometimes almost entirely destroying the machine. To overcome this, different stop-motions have been devised, but all, so far as my knowledge extends, have been applied in some way to the governor in such a way as to stop the engine by the dropping of the balls caused by the governor-belt breaking or slipping on its pulley. Now, as far as it goes this does very well, but there are many accidents which cause great speed to the engine, which it does not affect—as, for instance, in the ordinary engine where the governor is connected to its valve by a lever in case this lever breaks, or, what is not an uncommon accident, one of the pins which form the joints comes out. In such case the governor would have no control over the engine on account of its connection with the valve being broken, and the engine would begin to run at a high speed and the governor would run with it, so that no contrivance which depended on the falling of the balls would be of any use in such case. It is plain that from whatever cause the engine runs beyond its ordinary speed the fly-wheel must partake of that speed so long as it is connected with the piston.

In my invention I use the centrifugal force generated by the accelerated motion of the fly-wheel to stop the engine.

I will now describe its construction and operation.

In the drawings, Figure 1 is a side, and Fig. 2 an end, view of an engine with my invention applied.

To the fly-wheel A, I attach a piece shown in dotted lines at B, Fig. 1, and an end view at Fig. 2. This consists of a case, *a*, in which a small rod, *b*, runs. To the inner end of this rod a spring, *c*, is attached.

C is the throttle-valve of the engine. To the stem of this valve a pulley, D, is attached. A cord is wound around this and a weight, *d*, attached to the end, and the pulley is kept from turning by the wire E, which catches in a notch on F. This wire continues down and along the bed of the engine to the fly-wheel, where it is bent up into the arm *f*. This is acted on by the wire *g*, which projects out beyond the rim of the fly-wheel.

The operation is as follows: The rod *b* is set near the edge of the fly-wheel, and is adjusted so that in the ordinary speed of the wheel it will remain in, but if the engine starts at a higher speed it will fly out beyond the rim, and as it comes around strike *g*, which acts on *f*, which acts on E, and pulls it out from the notch on F, thus allowing the weight *d* to close the valve.

I do not wish to confine myself to steam-engines in this invention; but it can be used on any other engine where it can be applied; but

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

The rod *b*, in combination with the fly-wheel A and suitable mechanism for closing the valve, substantially as described.

ALEXANDER NADOW.

Witnesses:

J. B. GARDNER,

MILTON BRADLEY.