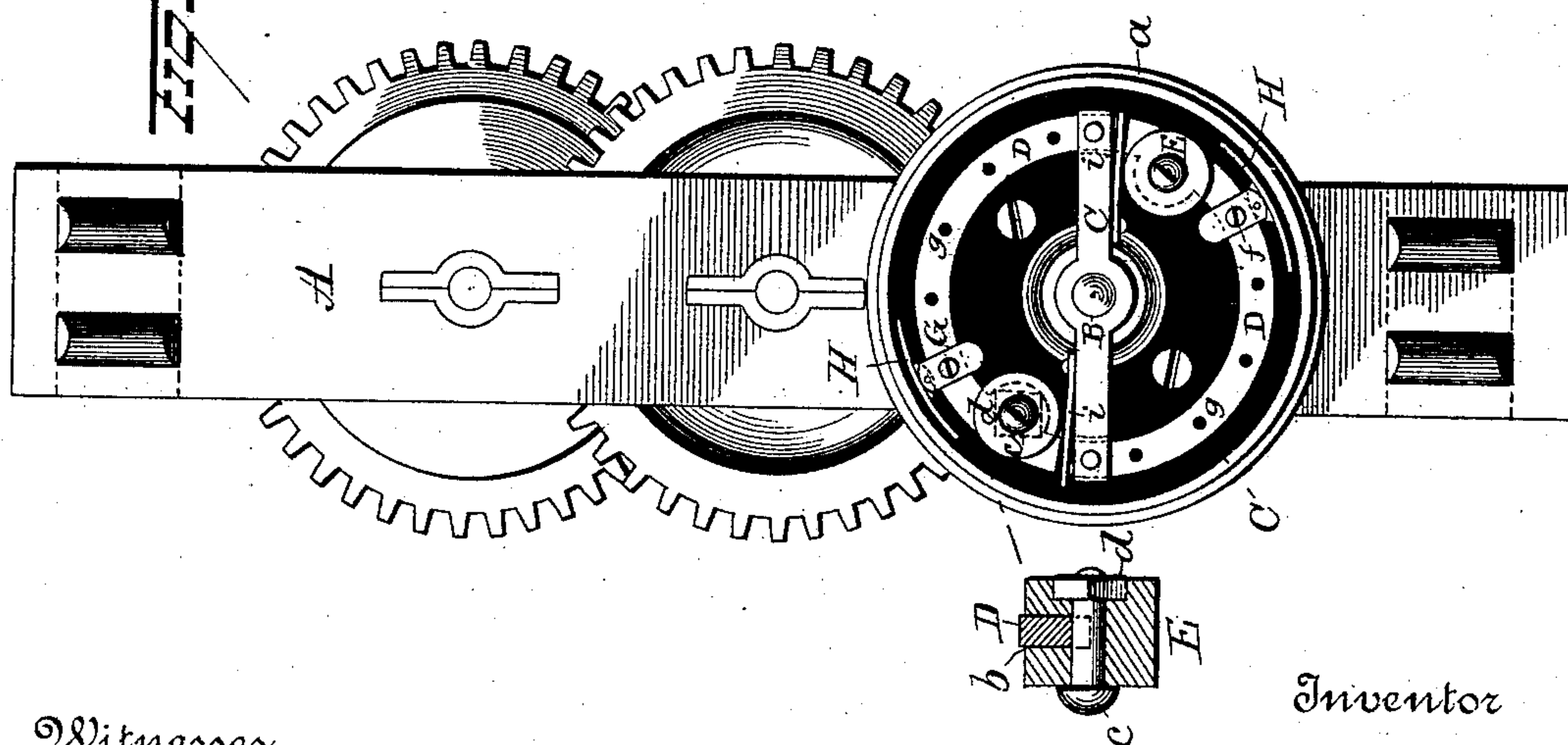
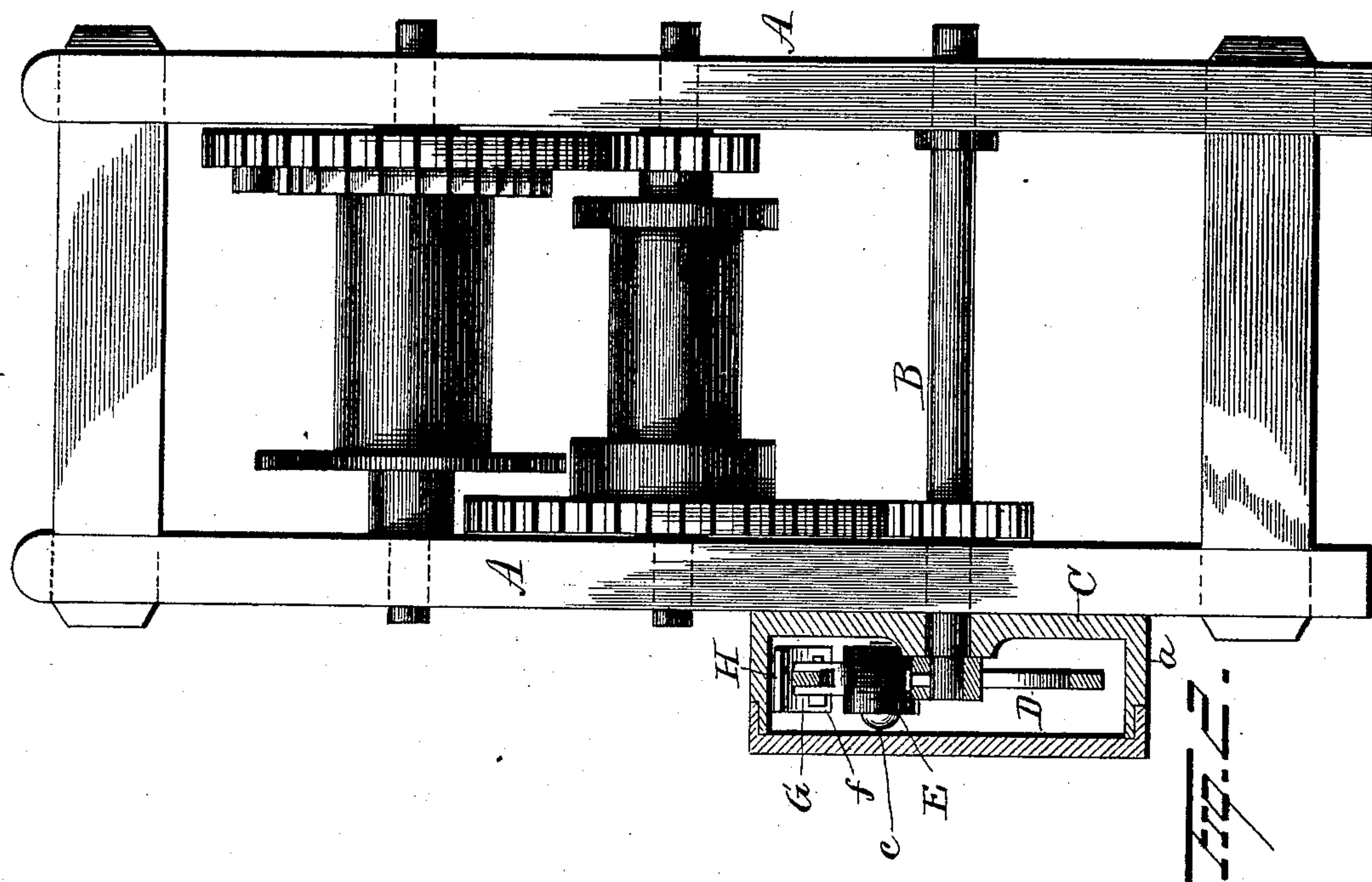


(No Model.)

G. M. ATHERTON.  
SPEED CONTROLLER.

No. 472,598.

Patented Apr. 12, 1892.



Witnesses  
*E. J. Nottingham*  
*G. F. Downing*

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# UNITED STATES PATENT OFFICE.

GARRICK M. ATHERTON, OF LONGTON, KANSAS, ASSIGNOR OF ONE-HALF TO  
FRANKLIN A. DU BOIS.

## SPEED-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 472,598, dated April 12, 1892.

Application filed October 3, 1891. Serial No. 407,632. (No model.)

*To all whom it may concern:*

Be it known that I, GARRICK M. ATHERTON, a citizen of Longton, in the county of Elk and State of Kansas, have invented certain new and  
5 useful Improvements in Speed-Controllers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the  
10 same.

My invention relates to an improvement in devices for controlling the speed of revoluble shafts, the object of the invention being to produce a speed-regulator whereby the speed  
15 of a revoluble shaft and the mechanism connected therewith will be effectually regulated and said mechanism made to run at a uniform speed.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is  
25 an end view showing the application of my improved speed-regulator to a hoisting mechanism; and Fig. 2 is a side view of the mechanism, showing the regulator in section.

A represents the frame of a windlass, said  
30 windlass being provided with gearing adapted to rotate a shaft B, with which my improved regulator or controller is connected. It is evident that my improvements are applicable to numerous classes of machinery, and is here  
35 shown as applied to a windlass for convenience of illustration. Secured to one of the uprights of the frame A is a plate C, having a laterally-projecting annular flange *a*, said  
40 plate being also made with a central perforation for the passage of one end of the shaft B. Secured to the end of the shaft B is a cross-bar C, having recesses at each end for the reception of one end of two curved bars D D, which latter are pivotally connected to the  
45 ends of said cross-bar C. The free end of each curved bar D is provided with a weight E. Each weight E may be made of a block of brass or other metal and provided with a notch *b* to receive the bar D. A screw *c*  
50 passes through the block and preferably through a recess in the bar D, said screw also

passing through a nut *d*, inserted in the end of the block or weight E. By this means the block or weight E may be secured to the bars D.

Mounted on each bar D is a collar G, to  
55 which a friction-shoe H is secured. The collars G are each provided with a perforation for the reception of a set-screw *f*, said set-screw also passing through a perforation *g* in  
60 the bar D. Each bar D is preferably provided with a series of perforations *g*, whereby the shoes H may be adjusted nearer to or farther from the free ends of said bars D. It will be seen from the above-described con-  
65 struction that when the shaft B revolves the friction-shoes H will be made to engage the flange *a* of the plate C by the centrifugal action of the bars D, and that by adjusting the shoes nearer to or farther from the free ends  
70 of said bars the frictional pressure which they exert on the flange *a* will be increased or diminished. The operating parts of the device may be protected by a cover placed on the flange *a*. Springs *i* are secured at one  
75 end to the cross-bar C near the ends of said cross-bar and adapted at their free ends to bear on the pivoted ends of the curved bars D, and thus prevent the engagement of the shoes H with the flange *a* when the device is  
80 not in use.

By the use of a device constructed as above set forth the speed of the machinery to which it is attached may be regulated and made to  
85 run at a uniform speed.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a speed-controller, the combination, with a flanged plate and a shaft, of a cross-  
90 bar on one end of said shaft, springs, a bar pivotally connected at one end to the end of said cross-bar, a weight at the end of said pivoted bar, and an adjustable shoe carried by said pivoted bar and adapted to engage the  
95 flange of said plate, substantially as set forth.

2. In a speed-controller, the combination, with a flanged plate and a shaft, of a cross-  
100 bar on one end of said shaft, springs, curved bars pivoted at each end of said cross-bar and extending in opposite directions, a weight at the free end of each curved bar, and a shoe

adjustably secured to each of said curved bars and adapted to engage the flange of the plate when the shaft is rotated, substantially as set forth.

5 3. In a speed-controller, the combination, with a flanged plate and a shaft, of a cross-bar secured to said shaft, springs, an arm or bar pivoted to said cross-bar, and a weight at the free end of said pivoted arm or bar, said  
10 weight consisting of a block having a recess to receive the bar, a screw passing through

said block, and a nut in the block in which the screw enters, whereby the block or weight may be clamped to the bar, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GARRICK M. ATIERTON.

Witnesses:

G. L. RULE,

F. M. ROGERS.

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