(No Model.)

J. A. ROUSE.

HORSE POWER SPEED REGULATOR.

No. 272,330. Patented Feb. 13, 1883.

Fig. 1.

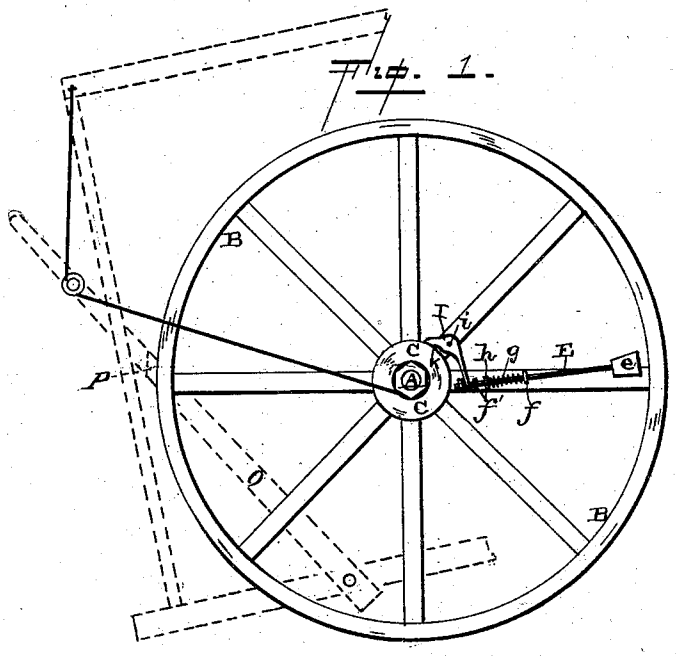
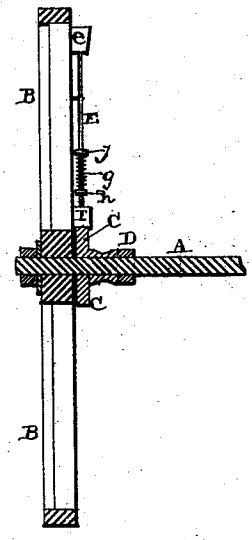


Fig. 2.



Witnesses.
Louis L. Gardner
E. D. York

Inventor.
J. A. Rouse,
per
C. E. Allen,
Atty.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JASPER A. ROUSE, OF EAST BERKSHIRE, VERMONT.

HORSE-POWER SPEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 272,330, dated February 13, 1883.

Application filed December 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, JASPER A. ROUSE, a citizen of the United States, residing at East Berkshire, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Horse-Power Speed-Regulators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in devices for regulating the motion of horse-powers, and thereby effectually prevent the occurrence of any inconvenience, danger, or injury which may result from a sudden acceleration of speed from any cause; and the object of my invention is to locate the mechanism which operates the brake upon the arbor of the drive-wheel, inside of the belt, where it is less exposed to injury, more simple in its construction, and therefore less expensive and more durable, and where its operation is entirely independent of the drive-wheel.

In the accompanying drawings, in which similar letters refer to similar parts throughout the several views, Figure 1 is a side elevation of speed-regulator embodying my invention. Fig. 2 is a vertical section of the same.

A is the arbor of the drive-wheel B. On this arbor, and between the drive-wheel and the power, is hung the loose pulley C, from the inside of which extends the tubular drum D. This drum is designed for the rope which operates the lever O, which is so arranged upon the power or otherwise as to force a pad or brake, P, against the rim of the drive-wheel B, for the purpose of checking the rapidity of its revolution.

E is a rod having a weight, *e*, on its outer end. It is attached to the inside of one or more of the spokes of the drive-wheel B by means of loops *f f'*, through which it is designed to slide.

g is a spring coiled around the rod E, between its adjusting-nut *h* and the loop *f*, its tension being regulated by the adjustment of the nut *h*.

I is a bell-crank lever, pivoted at *i* to the inside of the spoke of the drive-wheel B, adjacent to the one to which the rod E is attached. One of its arms is slightly curved on its lower face to form a brake-pad, K, upon the loose pulley C, the other being secured to the lower end of the rod E, in such a position that the outward movement of the weight *e* has the effect to raise this end of the lever and correspondingly depress the brake-pad K upon the rim of the pulley C.

In operation, the rod E is so placed that the pad K does not impinge upon the pulley C, the rope around the drum D being also sufficiently loose to keep the brake O free from the drive-wheel B. As the revolutions of the drive-wheel become accelerated the weight *e* of the rod E is moved outward by centrifugal force, carrying forward with it the lower arm of the lever I, to which it is attached, thereby causing the pad K to bear upon the loose pulley C and the pulley to revolve upon the arbor of the drive-wheel B. This immediately causes the brake-rope to wind around the drum D until by the tightening of the rope the lever-brake O, to which it is connected, is forced against the rim of the drive-wheel B, the effect of which is to check the speed of the drive-wheel B until, the centrifugal force being reduced, the action of the spiral spring draws the rod E back to its normal position, which at once relieves the loose pulley C from the pressure of the pad K, loosens the rope on the drum D, and moves the lever-brake P from the rim of the drive-wheel B. Greater or less centrifugal force, required to operate the weight *e*, is obtained by turning forward or backward the adjusting-nut *h*, thereby increasing or diminishing the tension of the spring *g*, so that the motion of the drive-wheel B can be readily adapted to the character of the work required of the power. At the same time, the regulating device being located where it is out of the way, and least liable to be injured, and where no complicated mechanism is necessary to render its action direct, effective, and wholly independent of the drive-wheel, it possesses novel and superior advantages and improvements over those speed-regulators which have their mechanism necessarily more complicated and expensive in their construction on account of their position exterior to the drive-wheel.

I am aware that prior to my invention lever-brakes acting upon the drive-wheel of speed-regulators have been arranged in conjunction

with a rope and loose pulley and weighted arms upon the drive-wheel. I therefore do not claim such a combination, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a horse-power speed-regulator, of the drive-wheel B, bell-crank lever I, with the weighted rod E, spring *g*, loose pulley C, having a rope-drum, D, hung on the arbor A, and between the drive-wheel and the motive power, and connected by a rope to a brake-lever, P, operating on the drive-wheel, substantially as and for the purpose described.

2. The loose pulley C, having a tubular drum extension, D, placed between the drive-wheel B and the motive power, in combination with the bell-crank lever I and spring-actuated weighted rod E, substantially as shown, and for the purpose specified.

3. The bell-crank lever I, with its brake-face K, and pivoted at *i*, in combination with the spring-actuated rod E, which acts centrifugally, and drive-wheel B, to control the movement of the loose pulley C, whereby a brake may be applied to the drive-wheel B, substantially as and for the purpose set forth.

In testimony whereof I do affix my signature in presence of two witnesses.

JASPER A. ROUSE.

Witnesses:

CHARLES E. ALLEN,

CHAS. F. LEWIS.