

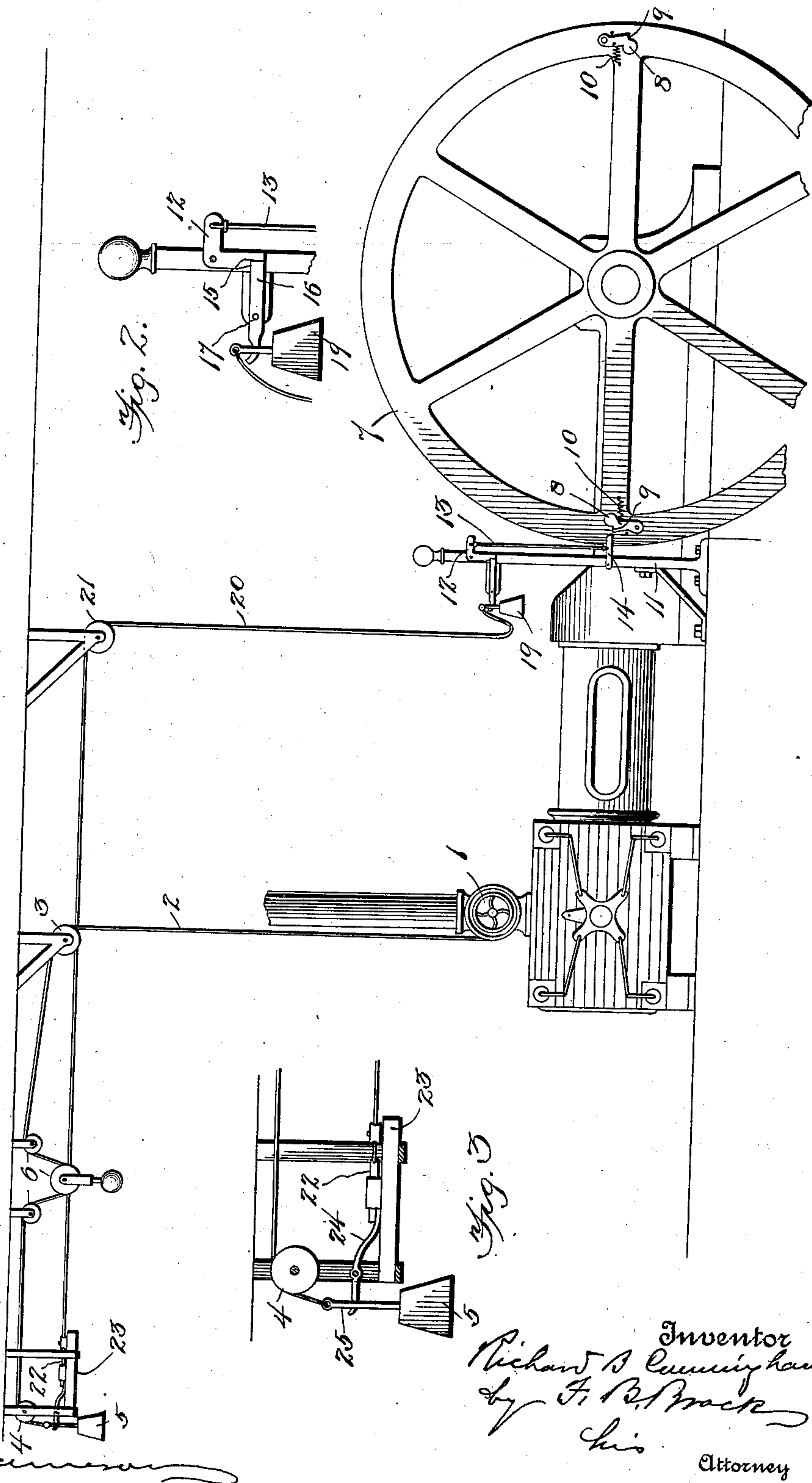
No. 655,146.

Patented July 31, 1900.

R. B. CUNNINGHAM.
AUTOMATIC ENGINE STOP.

(Application filed Mar. 12, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

RICHARD B. CUNNINGHAM, OF PORTSMOUTH, OHIO, ASSIGNOR OF TWO-THIRDS TO LEVI D. YORK, OF SAME PLACE.

AUTOMATIC ENGINE-STOP.

SPECIFICATION forming part of Letters Patent No. 655,146, dated July 31, 1900.

Application filed March 12, 1900. Serial No. 8,321. (No model.)

To all whom it may concern:

Be it known that I, RICHARD B. CUNNINGHAM, of the city of Portsmouth, State of Ohio, have invented certain new and useful Improvements in Automatic Engine-Stops; and I do declare the following to be a full and clear description thereof.

My invention relates to engine-stops, and has for its object to provide means for closing the throttle of an engine when the speed thereof exceeds that desired.

With this object in view my invention consists of a power device attached to the throttle of an engine normally held inactive, in combination with means operated by a moving part of the engine when the same exceeds the desired speed to trip said power device and render it operative to close the throttle, and thereby stop the engine.

My invention may assume various mechanical forms, one of which is referred to in the accompanying drawings, in which—

Figure 1 is a diagrammatic view illustrating the operation of my invention, and Figs. 2 and 3 are details on a larger scale.

Referring to the drawings, 1 represents the wheel controlling the throttle-valve of any suitable engine. Operatively secured to said wheel is a cord 2, extending over suitable pulleys 3 and 4 and having depending from the end thereof a weight 5, a suitable device for taking up the slack of the cord 2 being shown at 6.

7 is any revolving part of the engine, here shown as the fly-wheel, and has secured, near the periphery thereof, pivoted levers 8, provided with shoulders 9 and springs 10, which latter normally retain the free ends of the levers within the periphery of the wheel 7.

Mounted on any suitable fixed portion of the engine, here shown as a standard 11, is a bell-crank trigger-lever 12, connected by a rigid bar 13 to a pivoted lever 14, whose free end extends outward in close proximity to the shoulders 9 on the levers 8. The bell-crank trigger-lever 12 has on its lower end a notch or shoulder 15, (see Fig. 2,) which normally engages the inner end of the lever 16, pivoted at 17 and supporting upon its outer arm a weight 19, which weight has attached thereto a cord 20, extending from the pulley 21 and secured to a trigger 22, mounted on

the depending frame 23. Mounted in the frame 23 is a pivoted lever, one end of whose arm 24 normally rests under the end of the trigger 22, as will be readily understood from an inspection of Fig. 3. The opposite end 25 of said lever supports the weight 5, attached to the cord 2, as hereinabove described.

The operation of the device is as follows: The weight 19 being hung upon the lever 16 and the latter being retained in its horizontal position by the bell-crank trigger 12 and the weight 5 being sustained by outer arm 25 of the lever, whose opposite arm is engaged by the trigger 22, and the springs 10 being so tensioned as to prevent the levers 8 from flying upward under centrifugal force until the revolutions of the fly-wheel become more rapid than desired, and the throttle being opened, with the cord 2 partially wound around the operating throttle-wheel 4, the engine is set in motion. When the speed of the fly-wheel becomes too high, the levers 8, acting under centrifugal force, are thrown outward, when one of the shoulders 9 of said levers will engage the lever 14 and give it an upward thrust, turning the bell-crank trigger 12 upon its pivot and freeing the lever 16 and permitting it to turn under the influence of the weight 19, which latter is thereby dropped off of the lever and produces a pull on the cord 20, thus drawing the trigger 22 and permitting the weight 5 to fall. The falling of this weight 5 operates through the cord 2 to turn the throttle-wheel 1 and close the throttle-valve, thereby stopping the engine.

The device 6, besides taking up the slack of the cord 2, permits the ordinary and normal movements of the throttle 1 (such as starting or stopping the engine by hand) without affecting or releasing the trigger which sustains and holds the power device or weight 5 inoperative.

It will be apparent to those skilled in the art that various modifications may be made in the structure herein described without departing from the principle of the invention, and it is to be understood that all such modifications as are included within the scope of the claims hereof are within the scope of the invention.

Having thus described my invention, what I claim is—

1. The combination of a throttle-valve and operating-wheel therefor, a cord attached to said wheel, a weight secured to said cord, means normally sustaining said weight where-
5 by it is unaffected by the ordinary movements of the throttle, a second weight operative to free the first weight, a trigger device sustaining said second weight, and means operated upon the excessive speed of the engine
10 to trip said trigger device.

2. The combination with the throttle, of a power device, a trigger mechanism normally holding said power device during the ordi-

nary movements of the throttle inoperative, a second power device connected to said trigger mechanism, a second trigger normally holding the second power device inoperative, and means actuated upon the excessive speed of the engine to trip said second trigger device.
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In testimony whereof I have affixed my signature in the presence of two witnesses.

RICHARD B. CUNNINGHAM.

Witnesses:

F. C. SEARL, Jr.,
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