

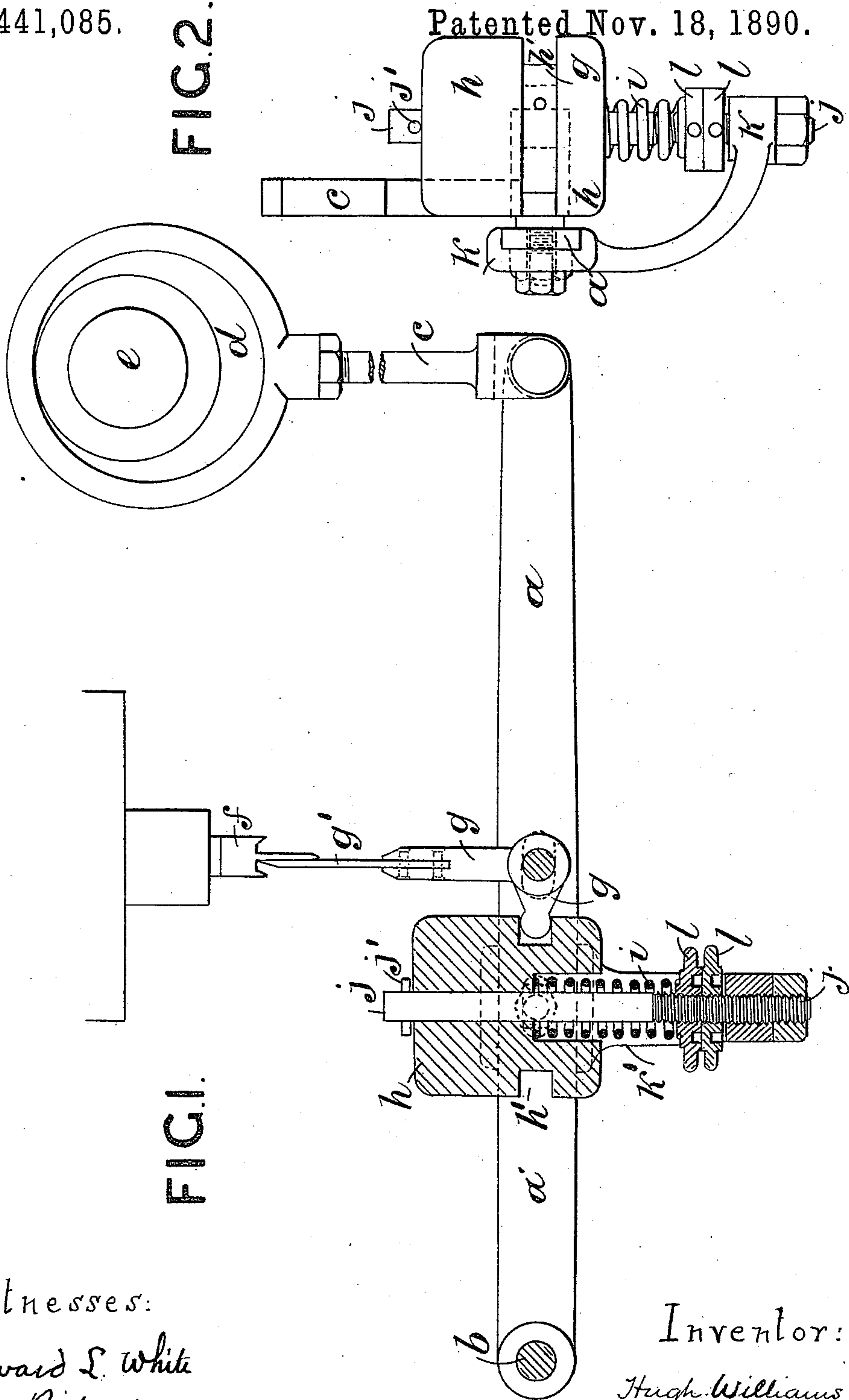
(No Model.)

H. WILLIAMS.

MECHANISM FOR GOVERNING THE SPEED OF GAS OR SIMILAR  
MOTOR ENGINES.

No. 441,085.

Patented Nov. 18, 1890.



Witnesses:  
Howard L. White  
C. B. Richards.

Inventor:  
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# UNITED STATES PATENT OFFICE.

HUGH WILLIAMS, OF STOCKPORT, ENGLAND.

MECHANISM FOR GOVERNING THE SPEED OF GAS OR SIMILAR MOTOR-ENGINES.

SPECIFICATION forming part of Letters Patent No. 441,085, dated November 18, 1890.

Application filed July 24, 1889. Serial No. 318,533. (No model.) Patented in England October 16, 1888, No. 14,831.

*To all whom it may concern:*

Be it known that I, HUGH WILLIAMS, a subject of the Queen of Great Britain, and a resident of Stockport, in the county of Chester, England, have invented certain new and useful Improvements in Mechanism for Governing the Speed of Gas or Similar Motor-Engines, (for which I have obtained a patent in Great Britain, No. 14,831, bearing date October 16, 1888,) of which the following is a specification.

My invention relates to improvements in that arrangement of mechanism for regulating the supply of gas or other fluid to gas or similar motor-engines in which the admission-valve is opened by a finger or trigger connected to the governor and pivoted on a vibrating lever operated from an eccentric or cam or equivalent on the crank-shaft. In such an arrangement, when the engine has exceeded its normal speed, the governor acts to withdraw the finger, so as to leave the admission-valve closed and thereby allow no gas or other fluid to be admitted to the engine; but when the engine resumes its normal speed the governor moves the finger back into position to again actuate the admission-valve. Now according to my present improvements I employ in connection with the pivoted finger a weight supported by an adjustable spring or springs, which weight, when the engine is running at or below its normal speed, is held in equilibrium by said spring or springs, and so vibrates with the lever upon which the pivoted finger is mounted, without, however, operating said finger to withdraw it from under the admission-valve; but when the speed of the engine rises the consequent acceleration in the movements of the vibrating lever and the inertia of the weight cause the spring or springs to yield more or less, whereby the weight acting on the pivoted finger moves it out of the way of the striking-plate on the admission-valve. The effect of this movement of the finger is that no gas or other fluid is admitted to the engine until the necessary reduction in its speed has been effected.

In order that my invention may be fully understood and readily carried into effect, I will describe the accompanying sheet of drawings, reference being had to the letters marked thereon.

Figure 1 is a side elevation, partly in section, of my improved mechanism for governing the speed of gas or other similar motor-engines, and Fig. 2 is an end elevation of the same.

In these views, *a* designates the vibrating lever, which is fulcrumed at *b* and is rocked by the rod *c*, actuated by the eccentric *d* on the crank-shaft *e*. *f* is the striking-plate on the admission-valve, which plate may either be plain, as shown, or may be notched or graduated. *g'* is the finger or trigger mounted on the elbow-lever *g*, one end of which rests in a groove *h'* in the weight *h*, the lever *g* being pivoted on the vibrating lever *a*. *h* is the weight, which is supported by the spring *i*, the latter being coiled around a spindle *j*, which is screwed into an arm *k*, secured to the vibrating lever *a*. The spindle *j* passes through and serves as a guide for the weight *h*, which is secured thereto by a pin *j'*, and on a screwed portion of the spindle *j* are two nuts *l*, by means of which the tension on the spring *i* may be regulated as desired.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a gas or similar motor-engine, the combination, with a vibrating lever and a finger pivoted thereon and arranged to operate the admission-valve, of a guide, a weight mounted loosely thereon, and a spring, said weight and spring being situated in line with each other and transversely of the lever, substantially as described.

2. The combination, with the vibrating lever *a* and valve-operating movable finger *g'*, of the lever *g*, weight *h*, stem *j*, and spring *i*, all mounted on said lever *a*, substantially as set forth.

3. The combination, with the vibrating lever *a* and valve-operating movable finger *g'*, of the lever *g*, weight *h*, stem *j*, spring *i*, arm *k*, and the adjusting-nuts *l l* on said stem, all mounted on said lever *a*, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HUGH WILLIAMS.

Witnesses:

ALF. R. BELLAMY,  
ROBERT I. SMITH.