

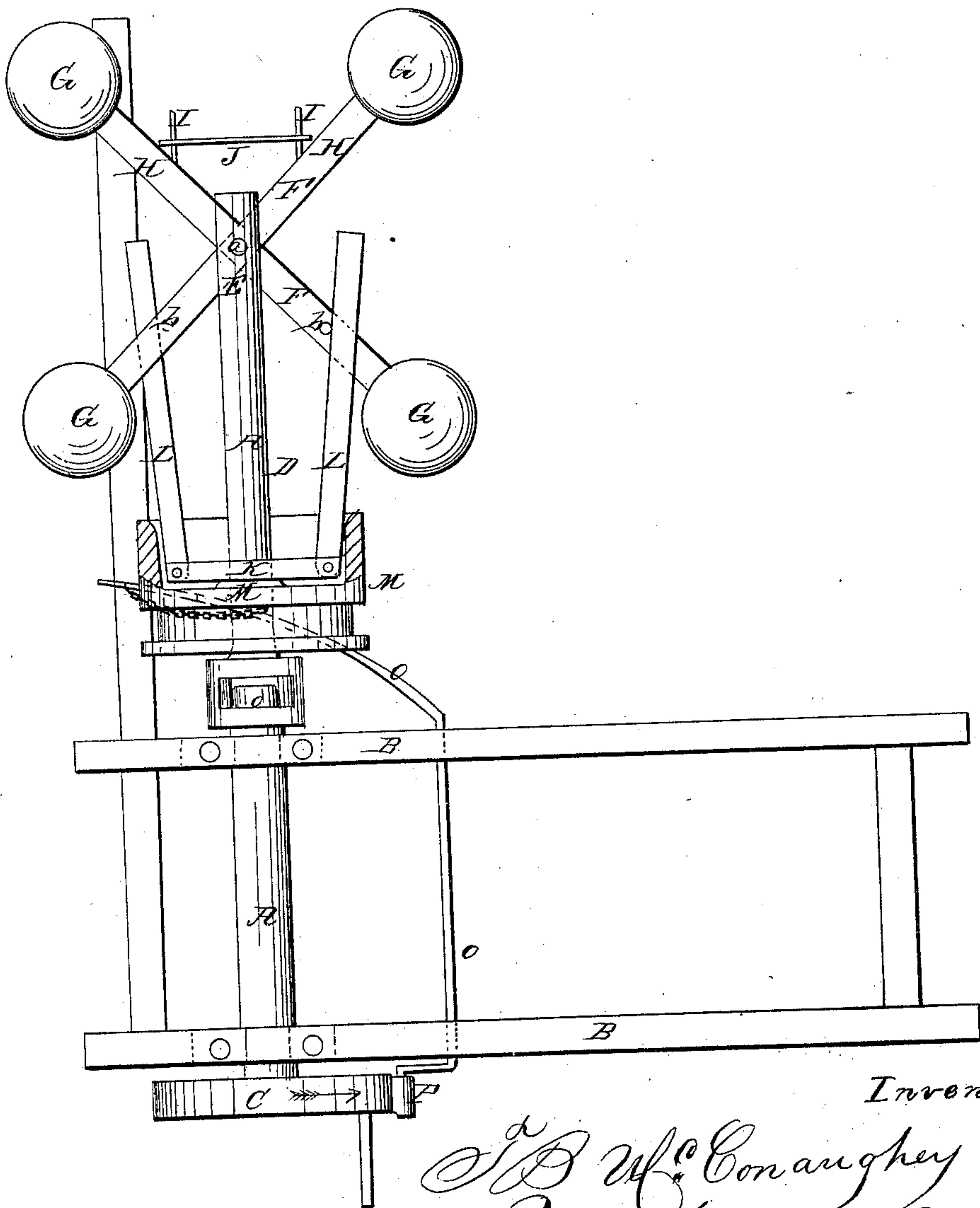
T. B. McConaughey,

Governor.

N^o 57,941.

Patented Sep. 11, 1866.

Fig. 1.



Inventor.

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Witnesses

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THOMAS B. McCONAUGHEY, OF NEWARK, DELAWARE.

IMPROVEMENT IN GOVERNORS FOR HORSE-POWERS,

Specification forming part of Letters Patent No. 57,941, dated September 11, 1866.

To all whom it may concern:

Be it known that I, THOMAS B. McCONAUGHEY, of Newark, New Castle county, State of Delaware, have invented new and useful Improvements in Governors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

The governor embraced in the present improvements is intended more especially for horse-powers, although it can be applied to steam and other engines; and the improvements consist in a novel construction and arrangement of the parts composing the governor, whereby efficiency and perfectness of operation are secured, as will be apparent from the following detail description thereof, reference being had to the accompanying plate of drawings, in which the figure is a plan or top view of a governor made according to my invention, with portions broken out to more freely show it.

A in the drawing represents the shaft to which my improved governor is connected, which shaft is arranged horizontally to turn in bearings of a frame, B, of any suitable construction. On one end of the shaft A a pulley, C, is fixed, and on the other end, D, the governor, which is constructed and arranged as follows: The end D of the shaft A is slotted in the direction of its length, and in such slot E two arms, F, are hung across each other upon a common center-pin, *a*. These arms are both of equal length, and to each of their outer ends a ball, G, is secured, all of which are of equal weight and size, and at a corresponding distance from the center-pin *a*.

To each arm F, and projecting from the same portion, H, of each, notched arms I are secured, having a rubber or other suitable spring, J, stretched across from one to the other, which spring at each end is held or secured on the notches of said arms.

K is a collar secured to the governor-shaft, having hung to each of its ends an arm, L, that projects therefrom in parallel lines with the said shaft A. These arms extend over the ball-arms F, one to each arm, resting by their inner edges against a pin, *d*, of said arms F,

and by their outer edges against the inner edge of a common loose collar, M, of the governor-shaft A. This loose collar M is connected through a cord, N, with a lever O, carrying a brake-shoe, P, that is in suitable position for bearing against the periphery of a pulley, C, secured to the shaft A.

By the revolution of the shaft A the arms F, by the centrifugal force thus generated in the balls attached to the same, are made to open from each other in proportion to such force, which, however, is partially restrained or counterbalanced by the action of the spring connected to such arms, as before explained, whereby, as is obvious, the pins of the ball-arms are brought to bear against the inner edges of the arms L, pivoted to the fixed collar of the shaft B, and in turn bringing their outer edges to bear with sufficient pressure against the loose collar of the said shaft B to produce friction enough between them to cause the said collar to revolve with the shaft, and thereby winding the cord, bringing the brake-shoe to bear against the shaft-pulley, producing friction thereon, and consequently retarding the rotation of the shaft, as is manifest.

From the above description of the manner in which my improved governor is constructed, arranged, and operated, it is plain to be seen that, by means of the spring connecting the two arms of the governor, as explained, the adjustment of the governor to any required degree of speed is rendered exceedingly simple, and that, furthermore, this spring enables the governor to be used in a horizontal position, and also insures a very powerful and efficient governor, even at a comparatively low speed, which, as is well known, is positively necessary, especially in horse-powers, for the reason that when the belt runs off or breaks, which often occurs, it then requires a greater amount of force to keep the speed down than it does if the belt is on.

As is well known, a governor for horse-powers must never allow the speed to become so high as to endanger the life and limbs of the horse or horses, and it also must be quick, active, and sensitive, and of such a construction as to be free of the shaft the moment the speed becomes reduced to the proper rate; and by my governor all of the above desiderata

are secured, as its use and operation have established.

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

The governor herein described, the same consisting of the ball-arms F, hung upon a common center-pin, *a*, of the governor-shaft, and provided with arms I, connected together by a spring, J, in combination with the swinging arms L of the fixed collar K of the gov-

ernor-shaft, and loose collar M, when combined and arranged together and connected with the governor-shaft so as to operate substantially in the manner described, and for the purpose specified.

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