

(No Model.)

A. BÄCK.

GOVERNOR FOR STEAM ENGINES.

No. 261,980.

Patented Aug. 1, 1882.

Fig. 1.

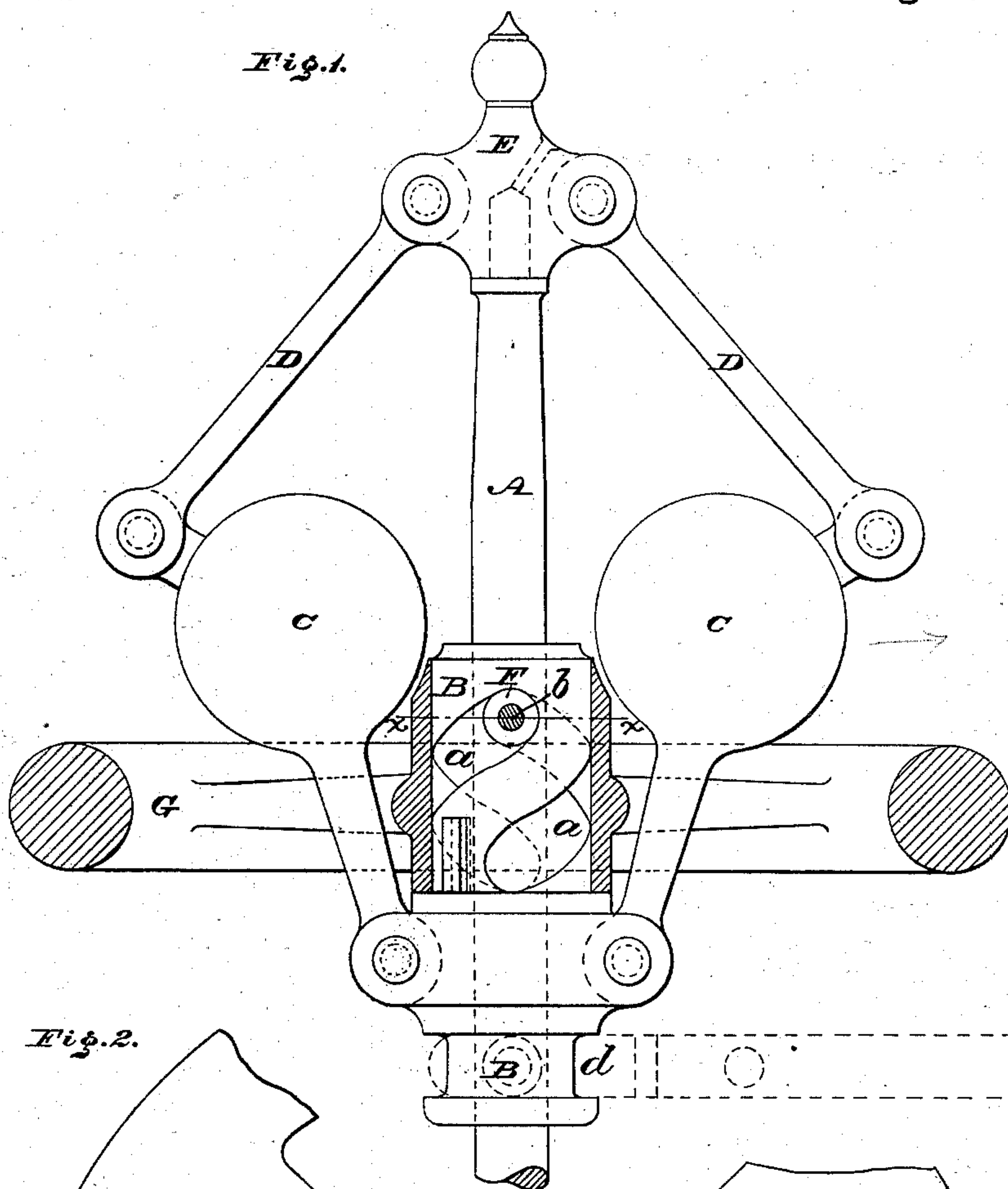
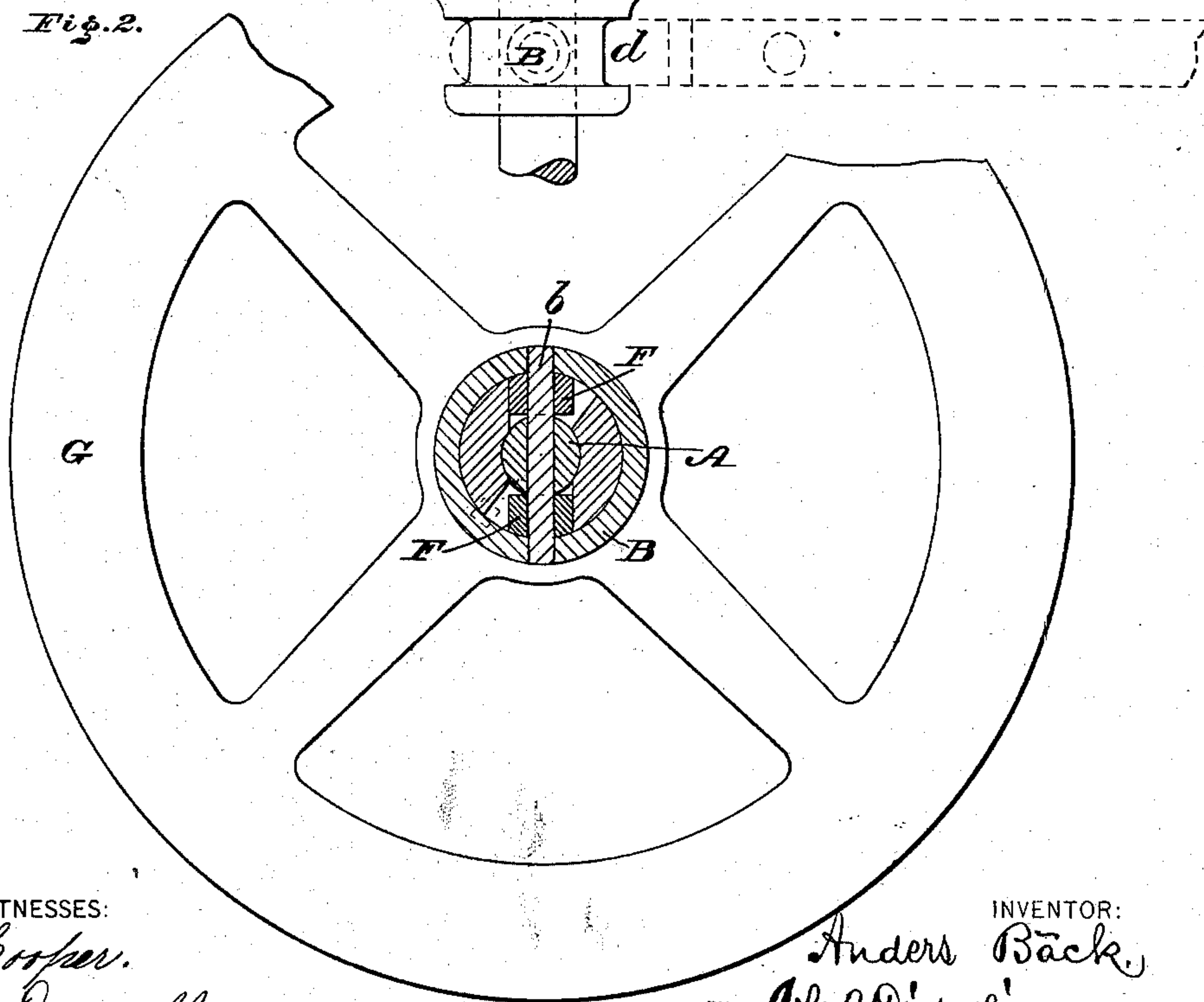


Fig. 2.



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ANDERS BÄCK, OF KORSNAS, GREAT KOPPARBERG, SWEDEN.

## GOVERNOR FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 261,980, dated August 1, 1882.

Application filed October 6, 1881. (No model.) Patented in Sweden March 5, 1880.

*To all whom it may concern:*

Be it known that I, ANDERS BÄCK, a citizen of Sweden, residing at Korsnäs, in Great Kopparberg, Sweden, have invented a new and useful Improvement in Governors for Steam-Engines, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation, partly sectional, of the governor embodying my invention. Fig. 2 is a horizontal section in line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of a governor which works with uniformity and sensitiveness, the construction and operation being hereinafter fully set forth.

Referring to the drawings, A represents a vertical shaft, which is suitably mounted or supported and connected to a proper part of the engine, so as to be rotated thereby.

B represents a sleeve, which is loosely fitted on the shaft A, and has pivoted to it the arms of the pendulum-balls C C, said arms extending vertically, and having the balls C on the upper ends.

To the balls C are pivoted the lower ends of arms D, whose upper ends are pivoted to a cap, E, which latter is supported freely on the top of the shaft A, so that the arms D, pendulum-balls C, and sleeve B are suspended from said cap E.

The wall of the upper part of the sleeve B has formed in it spiral ways *a a*, and the shaft A has secured to it a pin or pins, *b*, on which are mounted rollers F, which are so located that they project into said ways *a a*.

Keyed or otherwise firmly secured to the periphery of the sleeve B is a balance-wheel or weighted arms, G, said wheel, in the present case, being secured to the upper part of the collar, above the place of connection of the pendulum-balls with said sleeve, the spokes of the wheel not interfering with the freedom

of motion of said balls. The sleeve is also formed with a neck, *d*, with which engages the lever of the governor-valve.

It will be seen that the outward movement of the governor-balls raises the sleeve B, and as the latter rotates the walls of the spiral ways *a* ride up the rollers F, thus assisting the elevation of the sleeve, the balance-wheel, furthermore, assisting rotation of the sleeve. By these means the governor will be found to move with ease and regularity and operate sensitively.

I am aware that it is not new to construct two independent grooved sleeves on independent supplementary shafts, one governor-ball being attached to each sleeve. This construction, instead of employing one sleeve and one shaft, uses two sleeves and three shafts, besides two connecting-frames. My construction is much more simple and less expensive than this.

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

1. A governor-shaft provided with a lateral pin, in combination with a sleeve which is adapted to move up and down on said shaft, and provided with a spiral way that receives said pin, and a pair of governor-balls attached to said sleeve, and operating substantially as set forth.

2. A governor-shaft provided with a lateral pin, in combination with a sleeve which is adapted to move up and down on said shaft, and provided with a spiral way that receives said pin, a fly-wheel attached to said sleeve, and a pair of governor-balls attached to said sleeve, and operating substantially as set forth.

In witness whereof I have signed my name in the presence of subscribing witnesses.

ANDERS BÄCK.

Witnesses:

GUST. HARCLAY SEYRSTAD,  
E. A. ZETTERLUND.