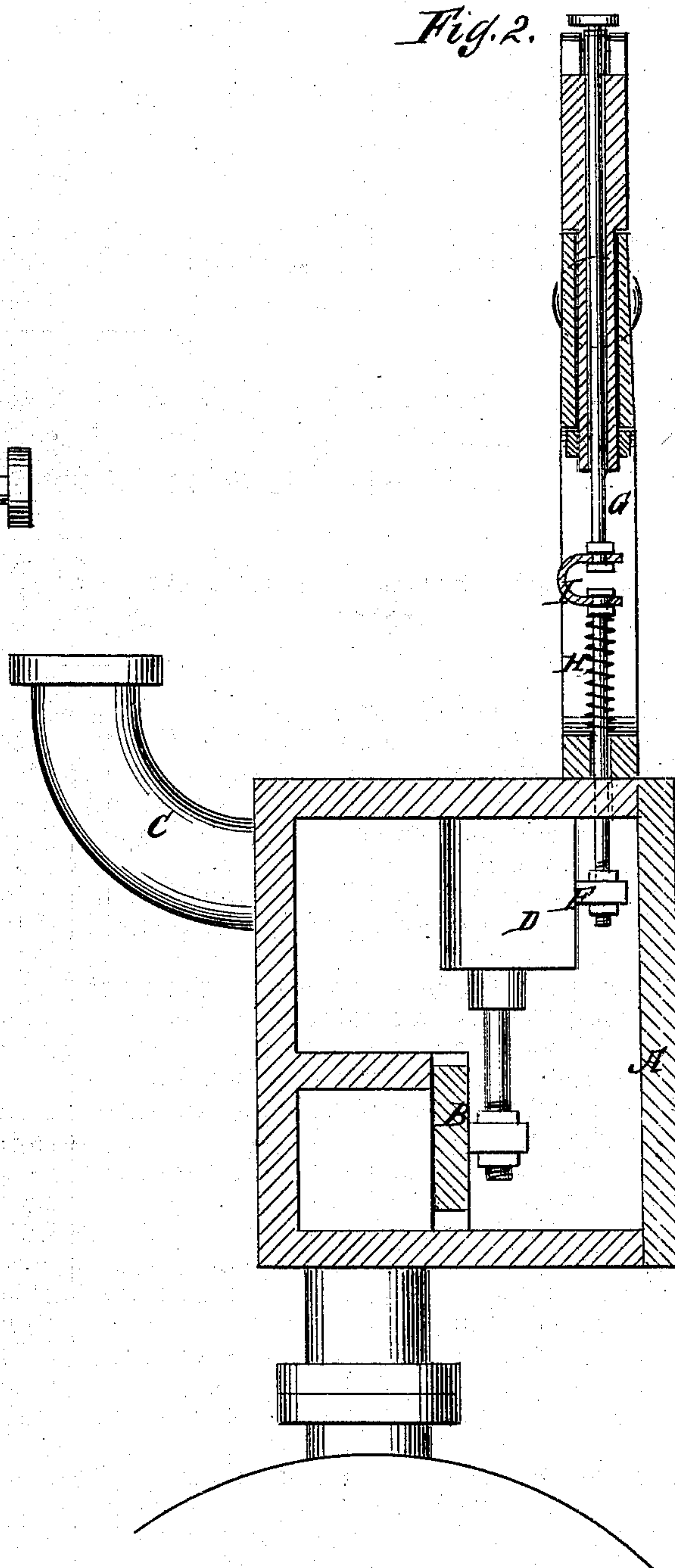
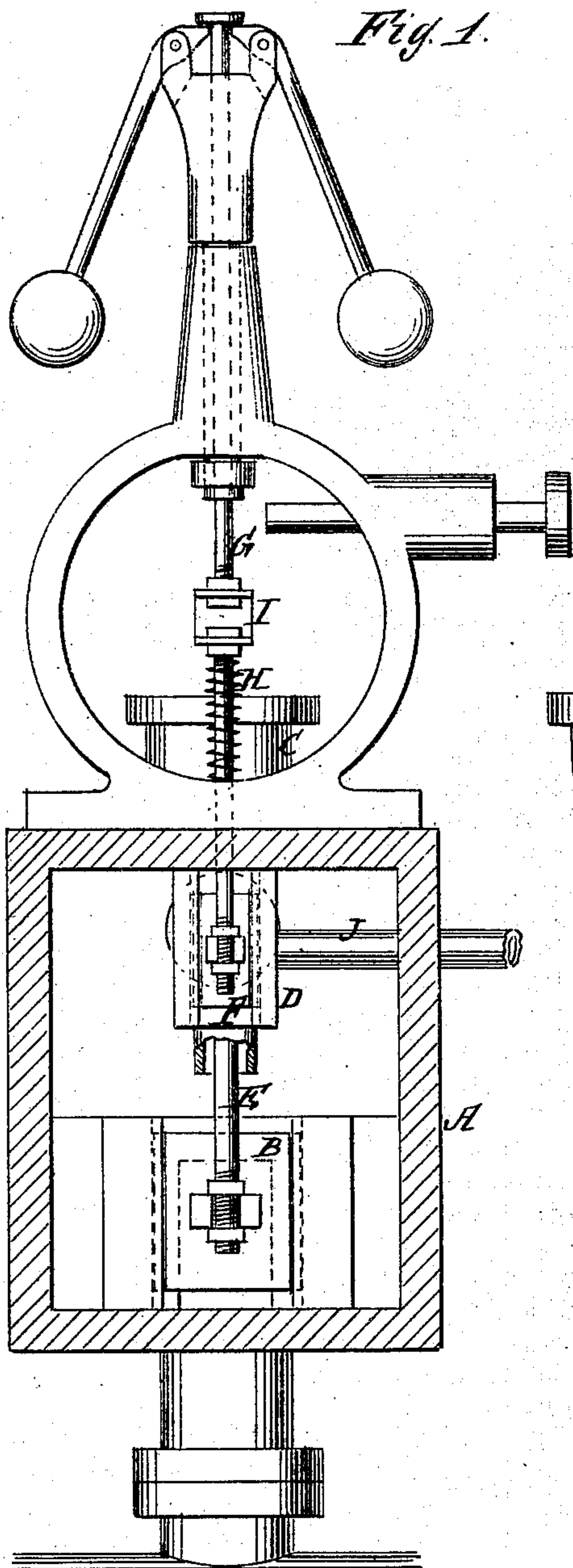


J. K. TRUE.
STEAM-GOVERNORS.

No. 182,391.

Patented Sept. 19, 1876.



WITNESSES:

E. Woff
John Goethals

INVENTOR:

INVENTOR:
J. G. True
BY *Wm. H. [Signature]*
ATTORNEYS.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN K. TRUE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN STEAM-GOVERNORS.

Specification forming part of Letters Patent No. **182,391**, dated September 19, 1876; application filed June 20, 1876.

To all whom it may concern:

Be it known that I, JOHN KNOWLES TRUE, of San Francisco, county of San Francisco, and State of California, have invented a new and Improved Steam-Governor, of which the following is a specification:

The invention will first be described in connection with the drawing, and then pointed out in the claim.

Figure 1 is a sectional elevation of the chest containing the throttle-valve, and the small engine for working it, and a side elevation of the governor; and Fig. 2 is a sectional elevation of the whole, taken in a plane at right angles to that of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the chest containing the throttle-valve B, admitting steam to the valve-chest of the engine to be regulated, steam being admitted to said chest by the pipe C. D is the small engine for working valve B, which is connected to the piston-rod E of the small engine. F is the valve to the latter, the rod of which is coupled to the governor G, so that when the balls of the governor rise by increase of speed valve F will descend, and admit steam in the upper end of engine D, which will close valve B; and, when the balls fall, it will admit steam to the lower end, and raise valve B.

The spring H on the rod of valve F balances the weight of the valve. The valve F can be set for high or low speed by the adjustable coupling I. J is the exhaust-pipe for engine D.

I propose, in practice, to have the valve F so constructed that both steam-ports will be a little open when both exhausts are closed, so that the piston will be prevented from making full strokes; and, when the opening of one steam-port is slightly increased by the movement of the valve, the opposite exhaust will be slightly opened, to allow a little movement of the piston.

A buffer-spring will be employed, in practice, in connection with the piston and throttle-valve, to prevent them from stopping too suddenly.

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

The throttle-valve B, the rod E, and the engine D, the latter having valve F connected with the governor, in combination with, and located in, the steam-chest, as and for the purpose specified.

JOHN KNOWLES TRUE.

Witnesses:

GEO. L. GIBSON,
D. H. LEUTZ.