

A. Bisbee,

Steam-Engine Valve-Gear.

N^o 14,150.

Patented Jan. 29, 1856.

Fig. 1.

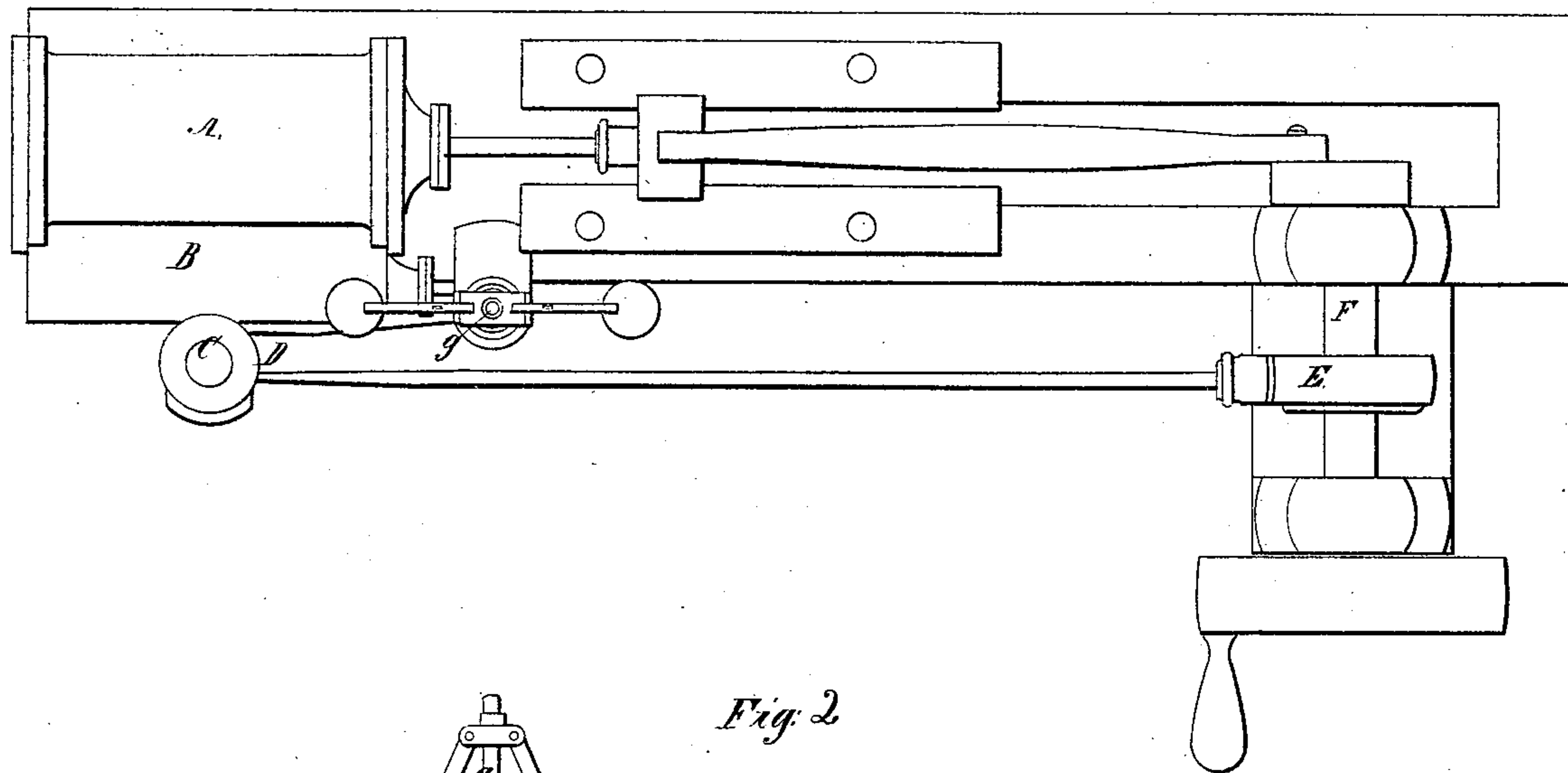


Fig. 2.

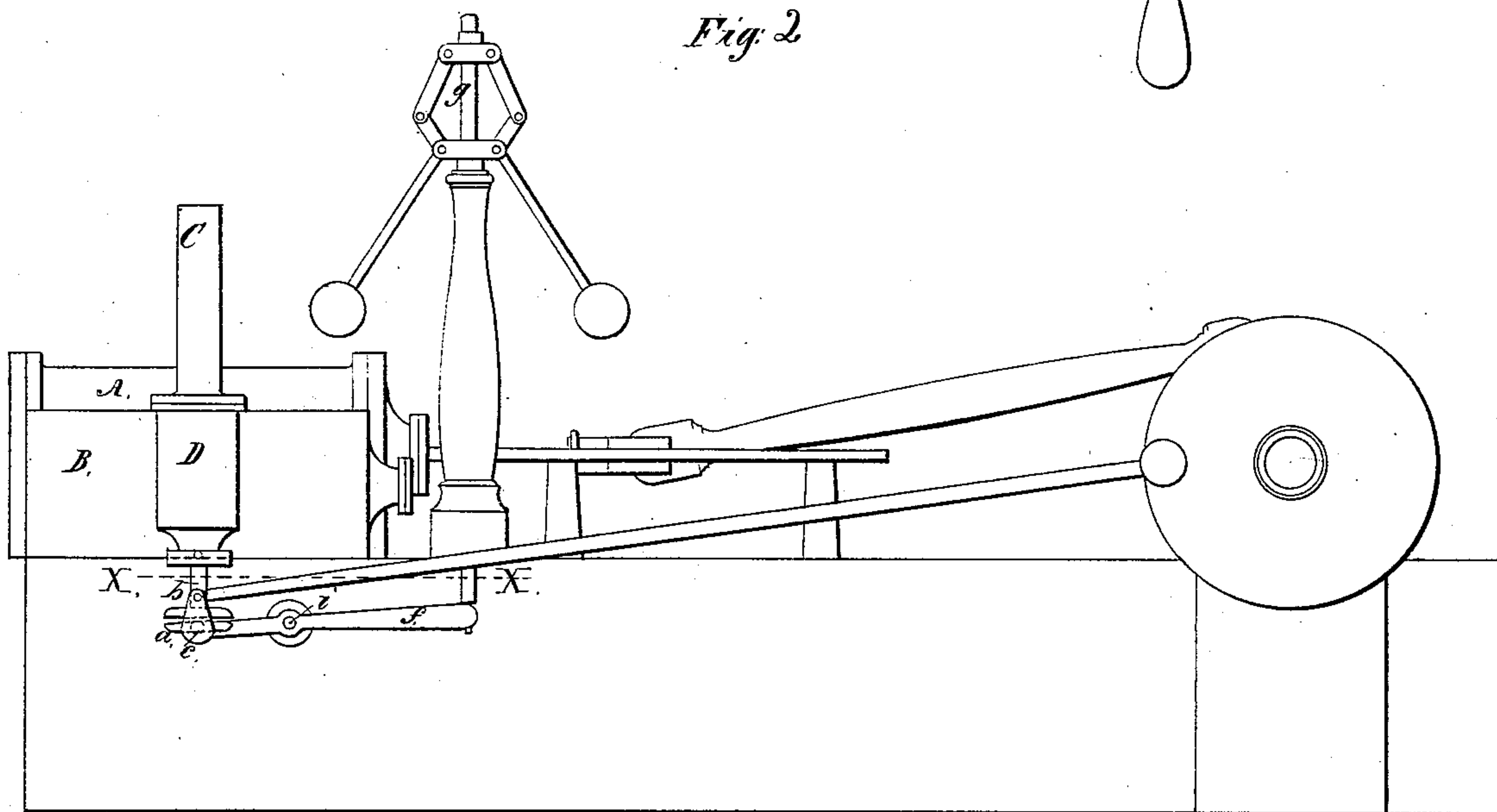
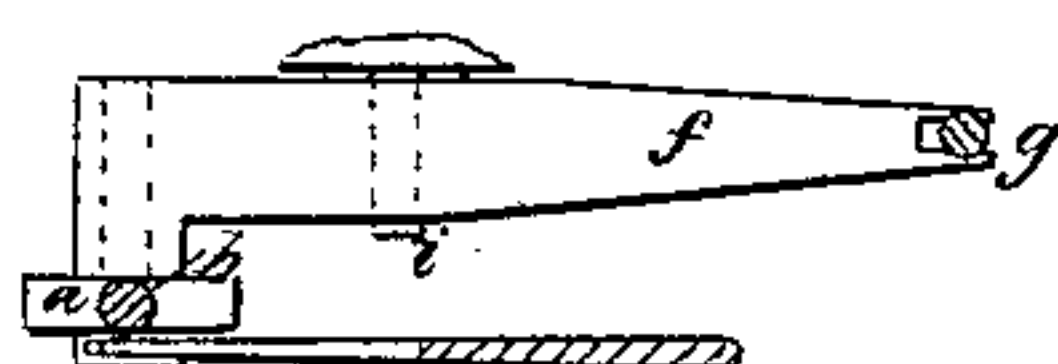


Fig. 3.



UNITED STATES PATENT OFFICE.

ALBERT BISBEE, OF CHELSEA, MASSACHUSETTS.

MEANS FOR OPERATING THE THROTTLE-VALVES OF STEAM-ENGINES.

Specification of Letters Patent No. 14,150, dated January 29, 1856.

To all whom it may concern:

Be it known that I, ALBERT BISBEE, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and
5 Improved Method of Regulating the Valves of Steam-Engines by Means of the Governor, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—
10 Figure 1, is a plan; Fig. 2 a side elevation; Fig. 3 is a section on *x, x*, of Fig. 2.

To enable others skilled in the art to understand my invention I will proceed to describe the manner in which I have carried
15 it out.

In the accompanying drawings A represents the cylinder; B, the stem box; C, the steam pipe; D, an enlargement of the same in which is contained a balance throttle
20 valve, through which the steam is admitted to the steam box.

This valve is operated by a vibrating toe *a*, to which is communicated an equable vibrating motion by means of the eccentric E, upon the main shaft F. That the valve
25 may be opened an amount proportionate to the quantity of steam required the pivot *c* upon which the toe *a* vibrates is caused to approach more or less near to the valve, its position being regulated by the position
30 of the governor balls as follows: The lever *f* is pivoted at *i*, and sustains upon its

shorter arm the vibrating toe *a*. The other end of this lever is attached to the governor rod *g*, by which means as the balls rise the
35 toe *a* descends, and as they fall the latter ascends. When the balls are in their highest position the toe is dropped so low as not to reach the stem *b* of the valve and no steam is admitted. When on the contrary
40 the balls fall the toe is raised and as it vibrates it raises the valve and sustains it open until a full charge of steam is admitted to the steam box from whence it is worked off by the ordinary slide valves, operated by
45 eccentrics upon the main shaft not shown upon the drawings.

This exceedingly simple and economical arrangement has proved equally efficient with the most complicated devices origi-
50 nated for the purpose, it is not liable to become deranged, and may be applied to any ordinary steam engine.

What I claim as my invention and desire to secure by Letters Patent is—
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Raising and lowering the vibrating toe *a* by means of the lever *f* operated by the governor in the manner substantially as herein set forth.

ALBERT BISBEE.

Witnesses:

SAM. COOPER,
THOS. R. ROACH.