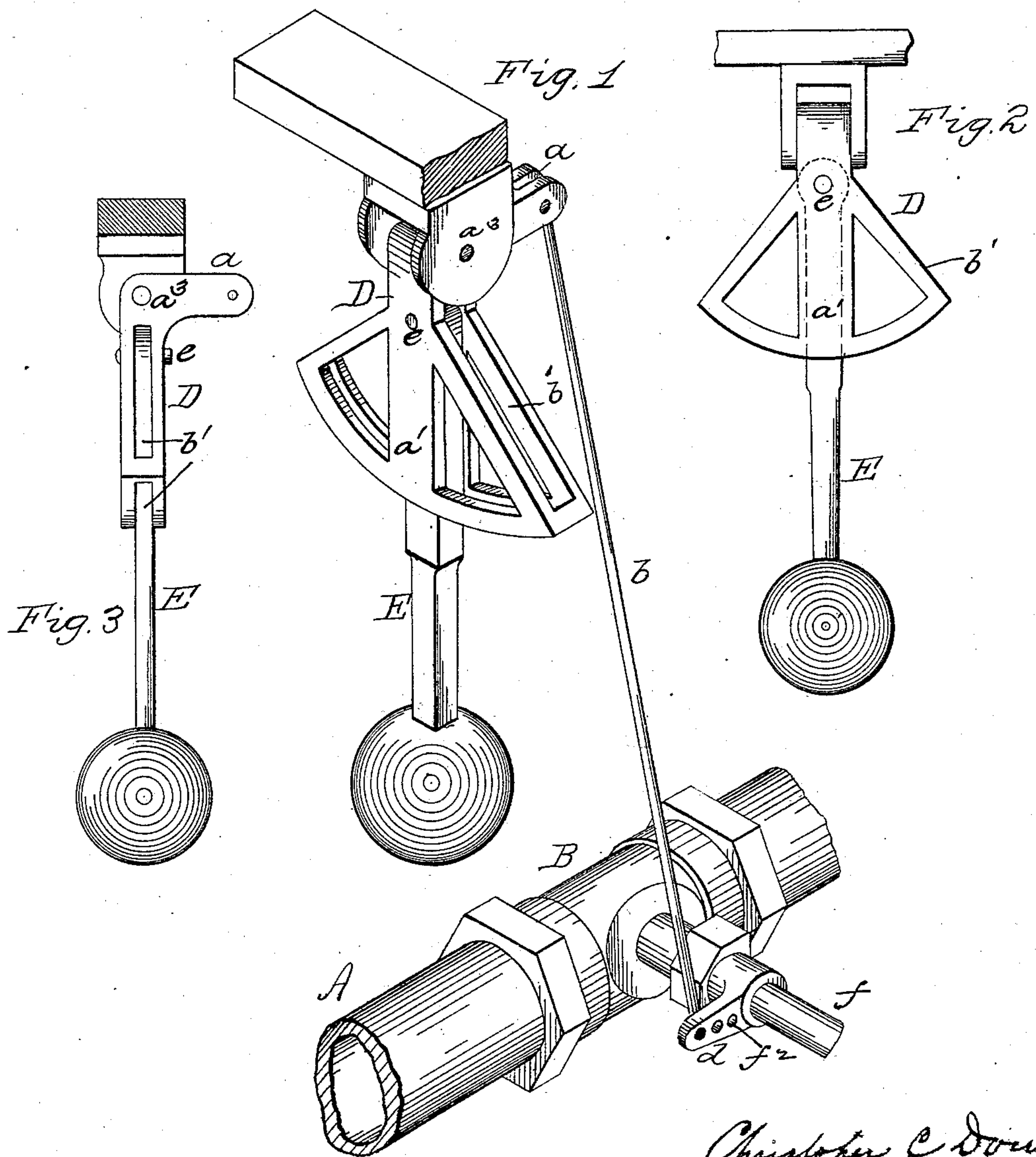


(No Model.)

C. C. DOW.  
MARINE ENGINE GOVERNOR.

No. 279,861.

Patented June 19, 1883.



Witnesses:  
George W. Seitzer  
George W. Schermerhorn

Christopher C. Dow  
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by  
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his  
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# UNITED STATES PATENT OFFICE.

CHRISTOPHER C. DOW, OF CAMDEN, NEW JERSEY, ASSIGNOR OF ONE-HALF  
TO HENRY HOVEY, OF SAME PLACE.

## MARINE-ENGINE GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 279,861, dated June 19, 1883.

Application filed January 15, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTOPHER C. DOW, of Camden, in the county of Camden and State of New Jersey, have invented a new and valuable Improvement in Marine-Engine Governors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective illustration of my invention. Fig. 2 is an elevation of the governor. Fig. 3 is an end view.

My invention has relation to marine-engine governors, and has for its object to provide a simple, durable, and efficient governor which will prevent racing of the propeller.

My invention accordingly consists of the novel combination, construction, and arrangement of parts comprising a governor, as hereinafter more specifically described and claimed.

Referring to the accompanying drawings, A represents a portion of the main steam-pipe of the engine, which is furnished with a valve, B, at any convenient point between the engine and boiler. The key *f* of said valve is provided with a crank, *d*, having a series of openings, *f*<sup>2</sup>.

To a suitable support adjacent to the throttle-valve B is hung the governor, which consists of a bell-crank lever, D, and a weighted pendulum, E. The lever D, on its long arm *a'*, is formed with a segmental slot, *b'*, which is parallel with or in the plane of the axial line of the shaft or pivotal connection *a*<sup>3</sup> of said lever. Its short arm *a* is, by means of a rod, *b*, attached to the crank *d* on the key of valve B. The lower end, *b*<sup>2</sup>, of rod *b* is adjustably connected to said crank by inserting its fastening-pin *b*<sup>3</sup> in any one of the openings *f*<sup>2</sup>. Such adjustment of the lower end of rod *b* regulates the extent of the opening of valve B proportionately to the movement of the lever D. The pendulum E oscillates or moves within the slot *b'*, and is pivoted at *e* to the long arm *a'* of said lever. The axial line of pivot *e* is at right angles to that of pivot *a*<sup>3</sup>, and is longitudinal with or in the line of the keel of the vessel, while the pivot *a*<sup>3</sup> is transverse to the line of said keel. The tendency of the weighted pendulum is to maintain its perpendicular po-

sition at all times, and as lever D has no longitudinal swinging movement independently of the pendulum, said lever is retained by the latter, and the throttle-valve B is held in one position, so that as the ship pitches and the angle of the steam-pipe A changes there will be contraction or expansion of the area of the steam-passage in accordance with the requirements of the engine. For instance, when the propeller is lifted from the water the area of the steam-passage is contracted or completely closed until the propeller descends or is submerged. The slotted segmental arm *a'* prevents the pendulum exercising any control over the lateral swinging of lever D, so that the rolling of the vessel cannot effect any variation of the steam-supply.

It will be noted that the foregoing-described governor is extremely simple and inexpensive in construction, dispensing with all expensive fittings, and is readily and easily set up in position, and is not liable to disarrangement by the rolling or pitching of the vessel.

I am aware that a pendulum operating the regulating or throttle valve of a marine steam-engine has been heretofore known, and do not, therefore, broadly claim such device.

What I claim is—

1. The combination, in a marine steam-governor, of the pipe A, having valve B, with key *f* and crank or handle *d*, connection *b*, and bell-crank lever D, having segmental slot *b'* for the reception of pendulum E, which is pivoted at *e* to lever D, whose pivot-point *a*<sup>3</sup> is at right angles to the pivot *e*, substantially as shown and described.

2. The combination, in a marine steam-governor, of the pipe A, having valve B, with key *f* and crank or handle *d*, lever D, having segmental slot *b'* for the reception of pendulum E, pivoted to said lever at *e* and at right angles to the pivot *a*<sup>3</sup>, and the connection *b*, the lower end, *b*<sup>2</sup>, of which is adjustably secured to crank *d*, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHRISTOPHER C. DOW.

Witnesses:

GEORGE W. SELTZER,  
ALLEN H. GANGEWER.