

No. 697,899.

Patented Apr. 15, 1902.

B. W. STOREY.
GOVERNOR FOR MARINE ENGINES.

(Application filed May 17, 1901.)

(No Model.)

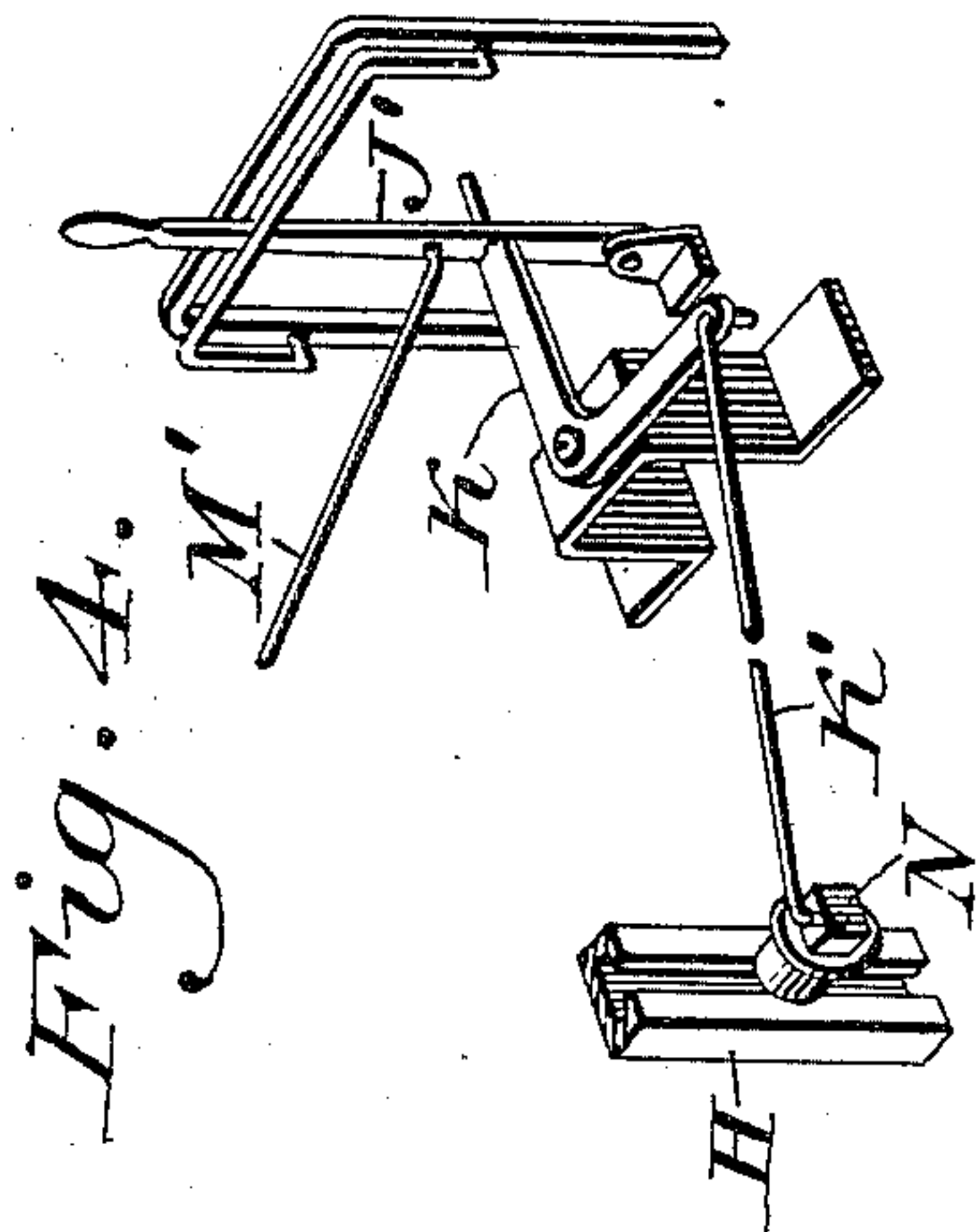


Fig. 4.

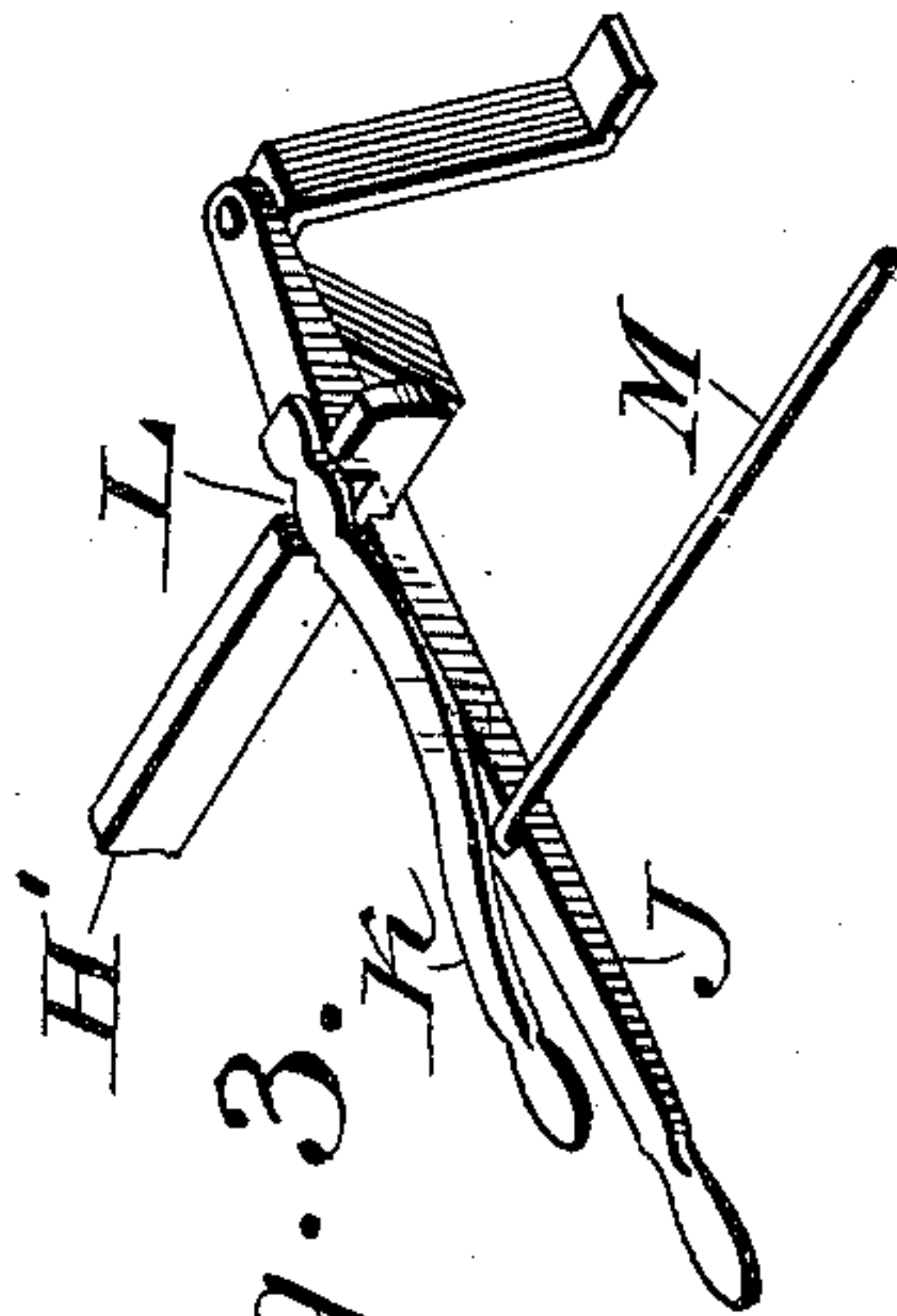


Fig. 3.

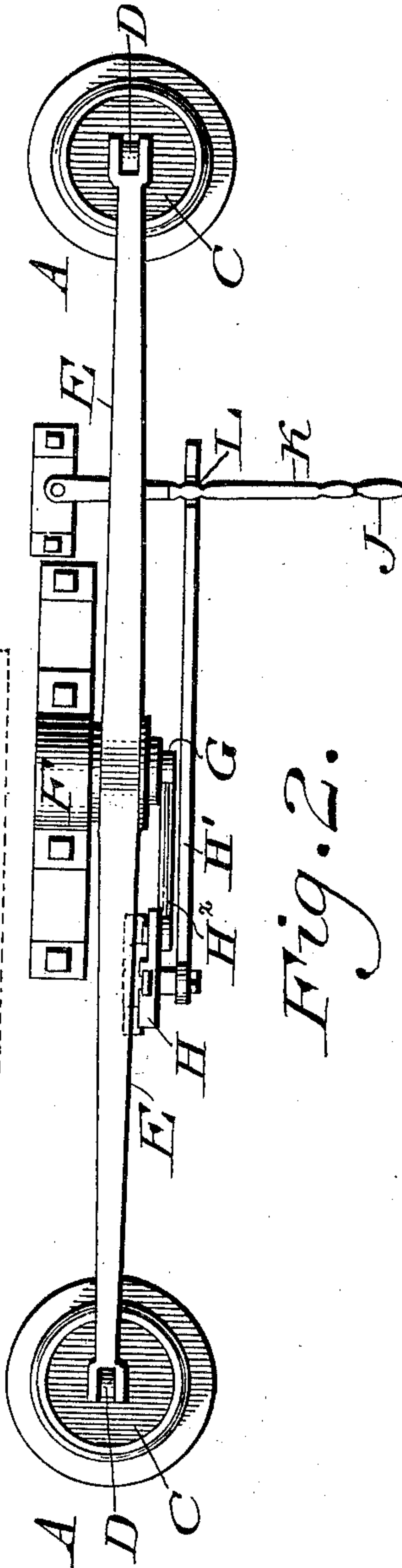
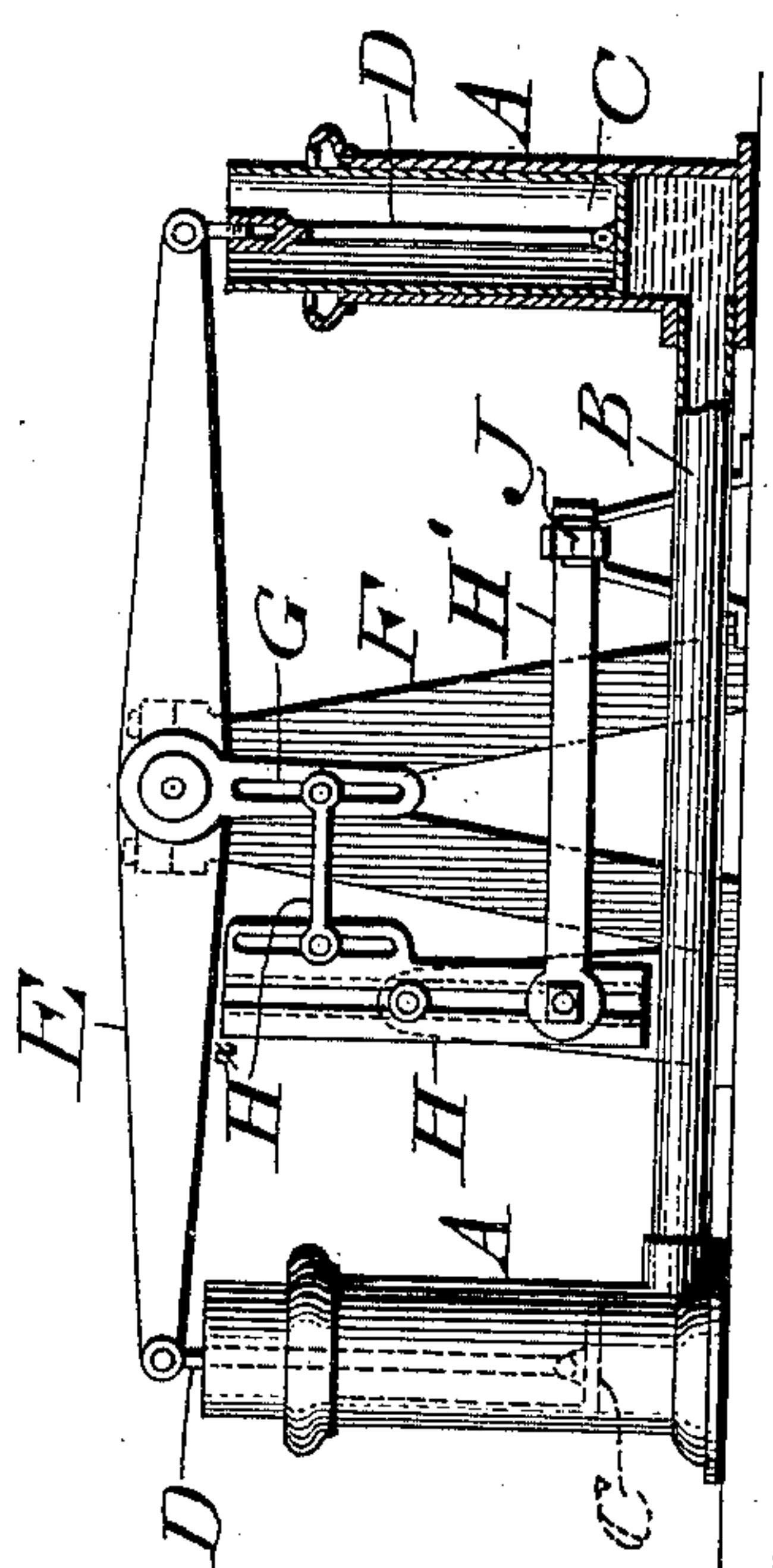


Fig. 2.

Fig. 1.



Witnesses
P. J. Cragle
H. C. Kennedy

By

By Wiedersheim & Fairbank Attorneys

Inventor

Bradford W. Storey

UNITED STATES PATENT OFFICE.

BRADFORD W. STOREY, OF MOUNT HOLLY, NEW JERSEY, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO THE INTERNATIONAL MARINE GOVERNOR
COMPANY, A CORPORATION OF NEW JERSEY.

GOVERNOR FOR MARINE ENGINES.

SPECIFICATION forming part of Letters Patent No. 697,899, dated April 15, 1902.

Application filed May 17, 1901. Serial No. 60,680. (No model.)

To all whom it may concern:

Be it known that I, BRADFORD W. STOREY, a citizen of the United States, residing at Mount Holly, in the county of Burlington, State of New Jersey, have invented a new and useful Improvement in Governors for Marine Engines for Preventing Racing, of which the following is a specification.

My invention consists of a governing device for a marine engine adapted to prevent racing of the latter owing to the propeller becoming uncovered or partially so due to the rising of the stern of a ship, the same embodying a plunger which is movable in a chamber containing fluid, preferably mercury, whereby as the level of the latter varies due to the undulations of the ship, said plunger rises and falls and is thereby adapted to operate the throttle or supply valve of the engine, so as to cut off the steam as the propeller is uncovered and again turn it on as the propeller re-enters the water, provision being also made for adjusting the members of the device and adapted to be placed in different positions and for rendering the device inoperative.

Figure 1 represents a side elevation of a governor for a marine engine embodying my invention, the same being shown located in position in the hull of the steamship, said hull being illustrated by dotted lines. Fig. 2 represents a top or plan view thereof enlarged. Fig. 3 represents a perspective view of a detached portion. Fig. 4 represents a perspective view of another form of the invention.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates two chambers of cylindrical or other suitable shape, which are connected by the tube B, whereby said chambers are placed in communication. Within the cylinders are the plungers C, whose stems D are connected with the swinging beam E, the latter being mounted on the standard F. Depending from said beam, at about the center thereof, is the arm G, which has a connection, by means of the link H^x, the rocker H, and the bar or rod H', with the lever J of the throttle-valve of a marine engine, said lever J being adapted to be

coupled with or uncoupled from said connection H, said chambers and appurtenances being suitably located in the hull of a steamship.

The chambers A contain a quantity of mercury, on which is superimposed the plungers C, said mercury being adapted to flow from one cylinder to the other through the tube B, according to the change of angle of the device due to the motion of the ship, the plungers forming positive floats in said chambers.

The arm G and rocker H are each vertically slotted, so that the link H^x may be raised and lowered for purposes of adjustment, and said arm causes quick or sensitive motions of the rocker, and the latter is also vertically or longitudinally grooved, so that the stud which connects the rod or bar H' with said rocker may be raised or lowered in order to adjust the position of the same, and when said rocker is reversed said rod or bar may be connected with the rocker above the axis for location thereof overhead when so desired, or, as shown in the drawings, located below said axis when the device is on a floor of the ship.

The operation is as follows: During the time of heavy seas or storm, when the racing of the engine is liable to occur, the arm G is coupled with the lever J. Now as the ship rises and falls it is evident that the chambers A follow the motions thereof, and thus the level of the mercury in the different cylinders varies, so that as the mercury leaves one chamber and necessarily requires another place of occupation it enters the other chamber and causes the plunger in the latter chamber to rise, while that in the first-named chamber is permitted to sink, and thus when the racing is about to occur or has occurred the beam, which is accordingly moved, causes the throttle-valve to be operated, whereby steam to the engine is cut off, and thus the propeller is rendered inoperative. As soon, however, as the propeller is again submerged the fluid or mercury reverses the position of the plungers, whereby the throttle is again operated in such manner as to turn on the steam, and power is recommunicated to the propeller. The lever J is coupled with the member H' of

the connection H H' by means of the pivotal dog K, which is mounted on said lever and adapted to engage with said member H', in a recess L therein, it being evident that said dog may be raised so as to clear said recess, whereby the throttle may not be operated, a feature of importance when there are no heavy seas or storms.

Connected with the lever J is the rod or member M, which leads to the throttle or supply valve.

In Fig. 4 I show another form of throttle-lever, such as J', which is connected with the member H by means of the elbow-lever K and rod K', the latter being adapted to freely enter an eye N in said member H, so that when said rod is removed from said eye the lever J will be rendered inoperative, as will also be the connection M' of the throttle or supply valve.

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

1. A governor for a marine engine for preventing or reducing racing, consisting of a chamber, a fluid therein, a plunger occupying said chamber and adapted to be controlled by the level of said fluid, a beam controlled by the motion of said plunger, and a connection between said beam and the supply-valve of said engine, consisting of a rocker, a link attached to a member of said beam and rocker and an arm connected with said rocker and the lever of said valve.

2. A governor for a marine engine for preventing or reducing racing, consisting of a chamber, a fluid therein, a plunger occupying said chamber and adapted to be controlled by the level of said fluid, a beam controlled by

the motions of said plunger, and a connection between said beam and a supply-valve of said engine, said connection consisting of a rocker, a link attached to a member of said beam and rocker, and an arm connected with said rocker and the lever of said valve, said member, rocker and arm being provided with means for adjustment of the same.

3. A governor for a marine engine for preventing or reducing racing, consisting of a chamber, a fluid therein, a plunger occupying said chamber and adapted to be controlled by the level of said fluid, a beam controlled by the motion of said plunger, a connection between said beam and the supply-valve of said engine, consisting of a rocker, a link attached to a member of said beam and rocker and an arm connected with said rocker and the lever of said valve, and means for disconnecting said lever from said arm.

4. A governor for a marine engine for preventing or reducing racing, consisting of a chamber, a fluid therein, a plunger occupying said chamber and adapted to be controlled by the level of said fluid, a beam controlled by the motion of said plunger, and a connection between said beam and the supply-valve of said engine, consisting of a rocker, a link attached to a member of said beam and rocker and an arm connected with said rocker and the lever of said valve, and means for disconnecting said lever and arm, said member, rocker and arm being provided with means for adjustment of the same.

BRADFORD W. STOREY.

Witnesses:

JOHN A. WIEDERSHEIM,
C. D. McVAY.