

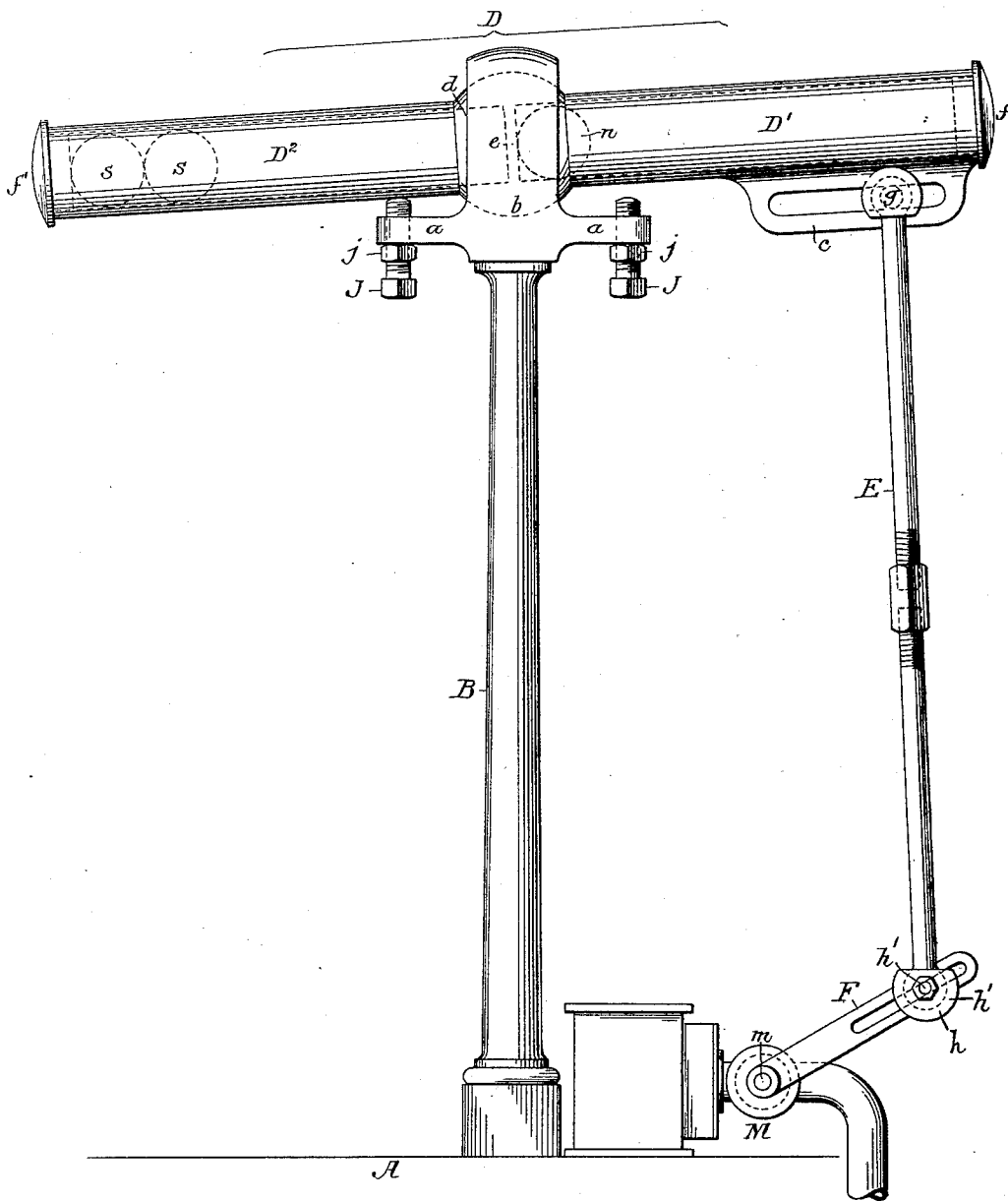
(No Model.)

J. H. COE.

DEVICE FOR PREVENTING THE RACING OF SHIPS' PROPELLERS.

No. 433,274.

Patented July 29, 1890.



Witnesses:
Albert Popkins,
Jas. L. Skidmore,

Inventor:
John H. Coe
By his Attorneys
Howson & Howson.

UNITED STATES PATENT OFFICE.

JOHN H. COE, OF PHILADELPHIA, PENNSYLVANIA.

DEVICE FOR PREVENTING THE RACING OF SHIPS' PROPELLERS.

SPECIFICATION forming part of Letters Patent No. 433,274, dated July 29, 1890.

Application filed May 20, 1890. Serial No. 352,499. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. COE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain
5 Improvements in Devices for Preventing the Racing of Ships' Propellers, of which the following is a specification.

The object of my invention is to automatically regulate the flow of steam to the engines of a steam-vessel using a steam-propeller, by which the "racing" of the propeller is checked to a great extent. This object I attain in the following manner, reference being had to the accompanying drawing, in
15 which the figure is a view in elevation of my improved automatic regulator.

A is the deck of the vessel, on which is secured the standard B, having at its upper end a socket *b*, to which is adapted the ball-pivot *d* of the beam D, thus forming a universal joint. The beam D is hollow, and has a central partition *e*, and the ends of the beam are closed by caps *f f'*, screwed or otherwise secured to the beam. The beam D has a
25 slotted flange *c*, and adapted to the slot is a pin *g*, swiveled to the upper end of a connecting-rod E. The lower end of the rod is swiveled to a block *h*, which is secured to a slotted lever F by means of a pin *h'*. The
30 rod E is adjustable in length, and in the present instance is made in two parts, connected together by a right and left hand nut.

The lever F is secured to the valve-stem *m* of the throttled valve M of the engine that
35 drives the propeller. The rod is adjustably secured to both the beam and the lever in order to regulate the opening and closing of the valve.

To regulate the throw of the beam D, two
40 set-screws J J are screwed into extensions *a a* on the standard B. These screws are provided with jam-nuts *j j*. By raising and lowering the screws the throw of the beam is diminished or increased. I preferably place
45 a single ball *n* in the cavity in the portion D' of the beam which is connected to the rod E, and two balls *s s* in the cavity in the opposite portion D², so that the weight of a rod is balanced. In place of the balls mercury or other
50 fluid may be used, and the number and form of rolling or sliding weights need not be adhered to.

The beam D extends parallel with the length of the vessel, so that as the vessel rises and falls by the action of the sea the beam 55 will act accordingly. As the vessel's stern rises out of the water, thus exposing the propeller, the beam D will act to close the valve and cut off the steam to the extent required, and as the stern falls the valve will be opened. 60 The valve and lever F may be connected by gearing, if circumstances require.

I claim as my invention—

1. The combination, in an automatic regulator, of the standard mounted on the vessel, the beam pivoted thereto, sliding weights 65 carried by said beam, with the regulating-valve, and a rod connecting the beam with the valve, so that as the vessel pitches the flow of steam through the valve will be regulated. 70

2. The combination of the standard, a socket therein, a beam, a ball-pivot adapted to said socket, weights carried by said beam, and a valve, with a rod connecting the beam to the valve, substantially as set forth. 75

3. The combination of the standard, the beam pivoted thereto, weights carried by said beam, a slotted flange on one portion of said beam, a slotted valve-lever, and a rod adjustably secured to both the flange and the lever, whereby the flow of steam through the valve will be regulated, substantially as described. 80

4. The combination of the standard, the hollow beam pivoted thereto, said beam having a central partition *e*, forming two portions 85 with caps closing the ends of the two portions, weights confined in said hollow beam, a valve, and a rod connecting the beam to the valve, substantially as set forth.

5. The combination of the standard, the beam pivoted thereto, sliding weights carried by said beam, extensions on said standard, set-screws adapted to the extensions to limit the movement of the beam, a valve, and a rod connecting the beam to the valve, substantially as described. 95

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. COE.

Witnesses:

HENRY HOWSON,
HARRY SMITH.