

(No Model.)

C. STENSLAND.  
MARINE GOVERNOR.

No. 450,777.

Patented Apr. 21, 1891.

Fig. 1.

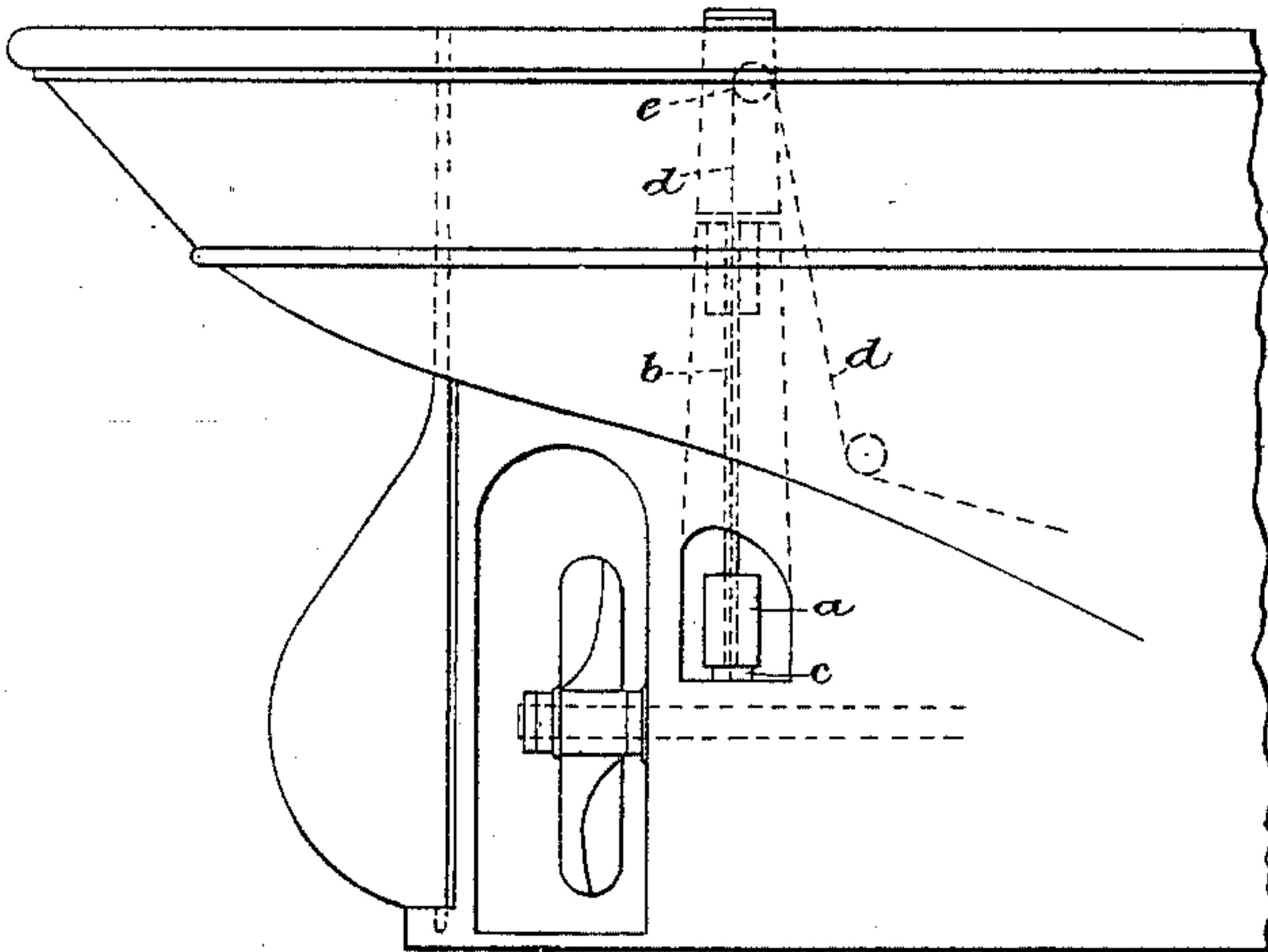


Fig. 3.

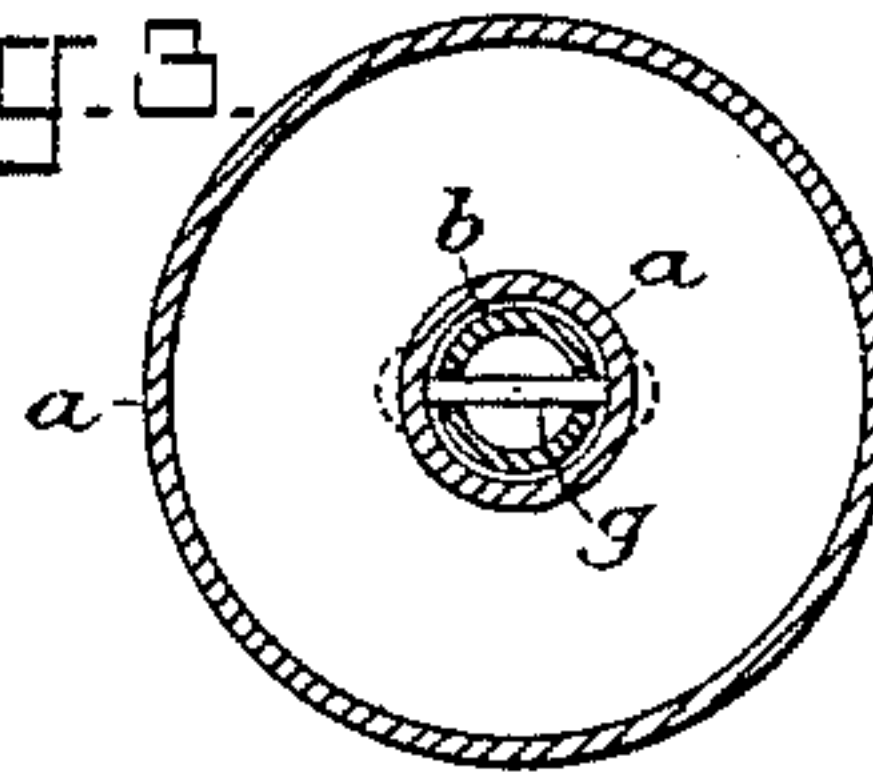


Fig. 4.

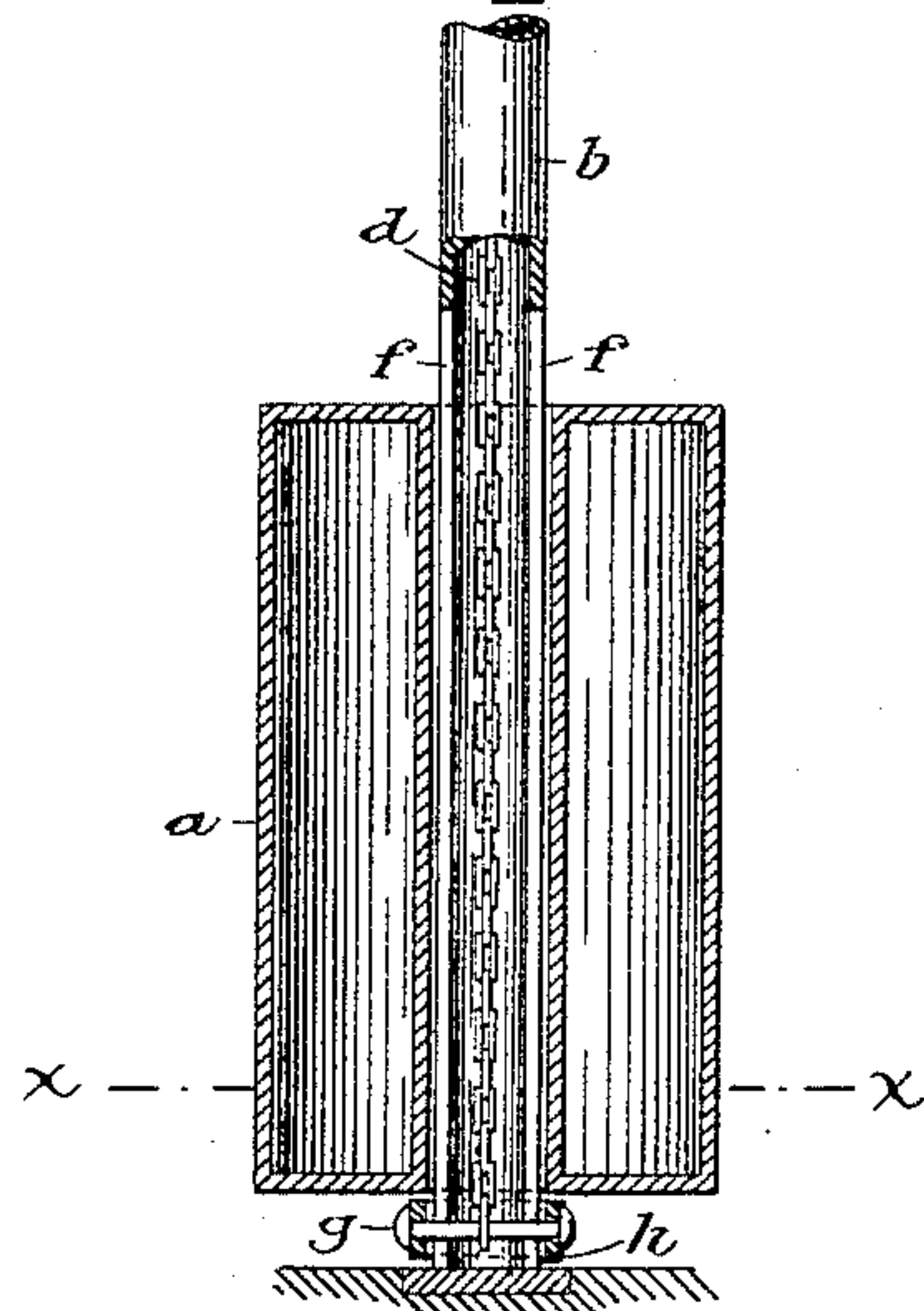


Fig. 2.

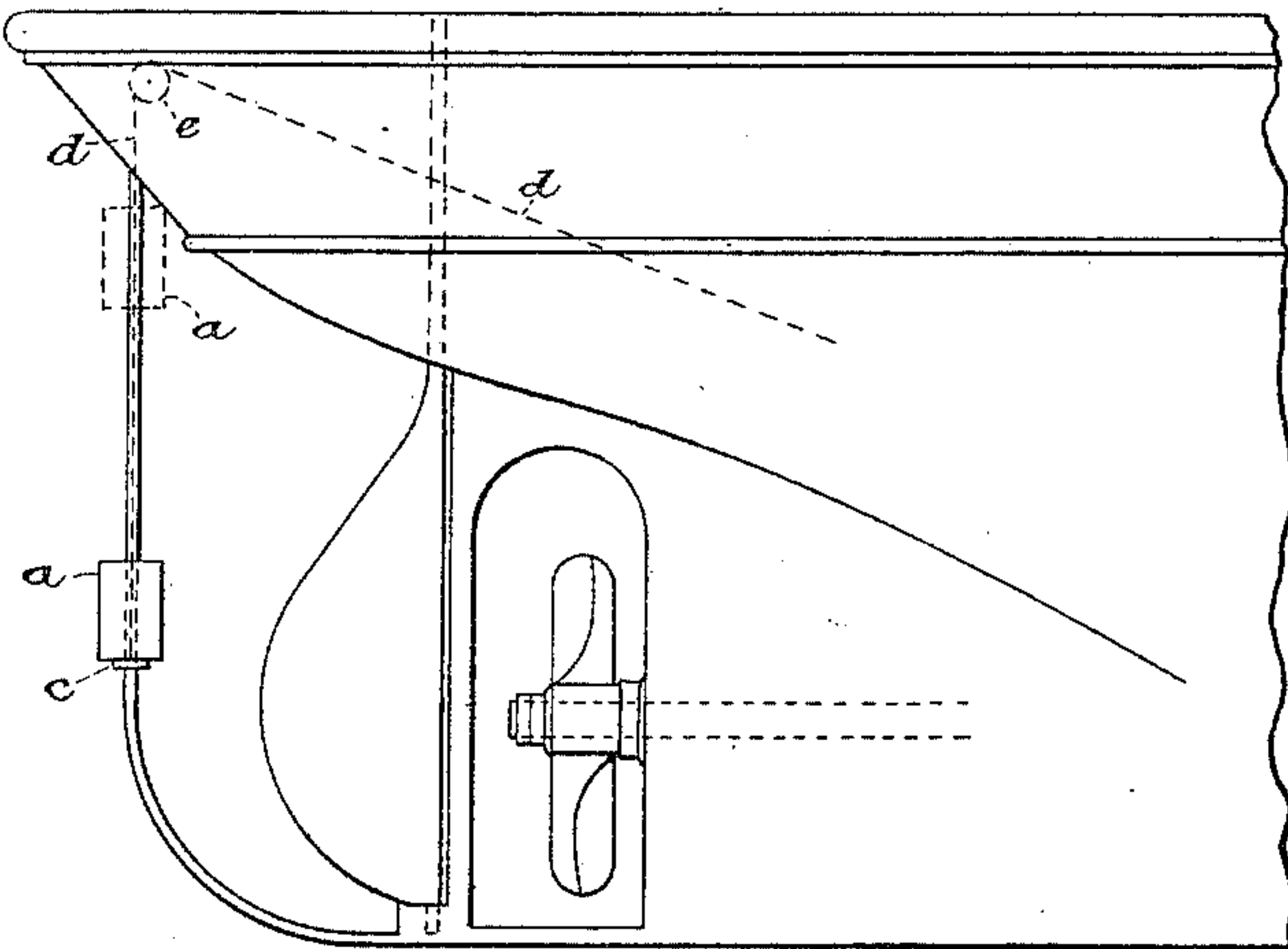
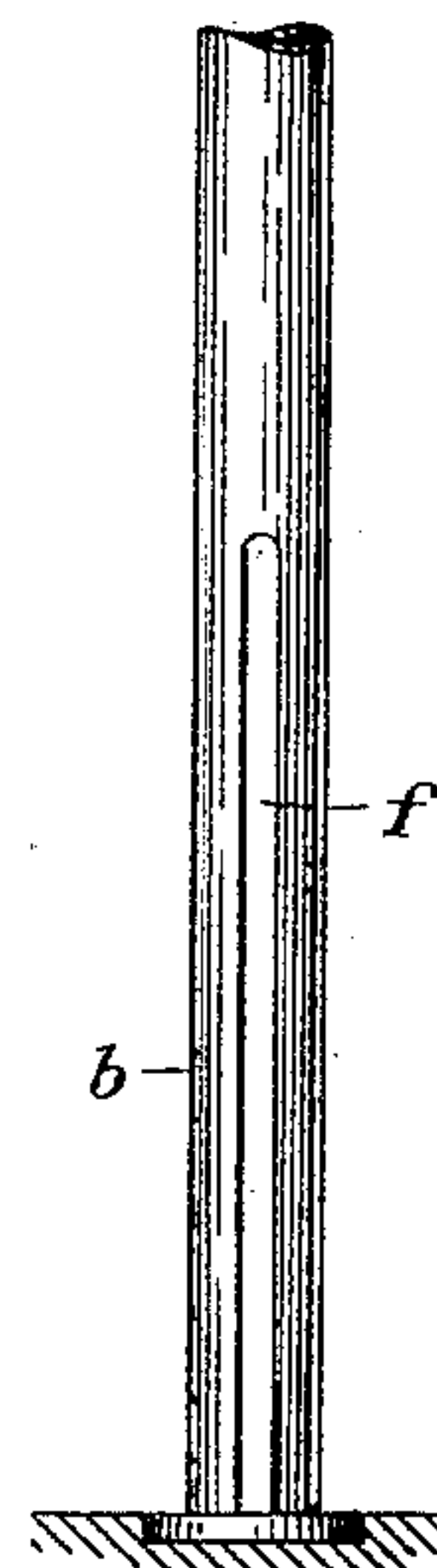


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## MARINE GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 450,777, dated April 21, 1891.

Application filed November 5, 1889. Serial No. 329,337. (No model.)

*To all whom it may concern:*

Be it known that I, CORNELIUS STENSLAND, a subject of the King of Norway, residing at Christiania, in the Kingdom of Norway, have  
5 invented certain new and useful Improvements in Marine Governors, of which the following is a full, clear, and exact description.

It has been the experience of captains and officers on board of steamships that the speed  
10 of the propeller of their steamships is unfavorably influenced by high seas, because when the propeller is partly or wholly lifted up on the surface of the water the resisting force of the water is reduced and the pro-  
15 peller and the engine are caused to work at a much higher speed, which has a bad and injurious effect both on the engine and on the ship. The scuttling motion caused there-  
20 by is also disagreeably felt by the passengers.

The present invention has as its object to shut off the steam at the same time that the resistance of the water to the propeller is diminished, and in the same proportion as the resistance varies in high seas.

25 In the drawings, which illustrate my invention and which form a part of this specification, Figure 1 is a side elevation of the rear end of a steamship with my regulator attached thereto. Fig. 2 is also a side elevation of the  
30 rear end of a steamship, but with my regulator attached thereto after or back of the propeller. Fig. 3 is a transverse section taken on the line *xx* of Fig. 4. Fig. 4 is a vertical section, partly in elevation, showing the construction of my float and means for connecting the  
35 same with the steam-engine. Fig. 5 is an elevational view of the stand-pipe which carries the float.

The regulator consists of a hollow float *a*,  
40 which is placed movable in a vertical way on a hollow bar *b*, which is cut through in a longitudinal direction, so as to give a slit *f*, Fig. 5, in which the bolt *g* can move up and down. This bolt is fastened to a ring *h*, which sur-  
45 rounds the outer side of tube *b*.

Fig. 4 shows the float *a* with the ring *h* in section in the direction of the slit of the tube, and Fig. 3 shows a horizontal cut of the float and the tube from above. From the bolt *g* a

connecting device *d* passes to the steam-regu- 50  
lator, which device can be led over the disk *e*, or the up-and-down motion of the float may be transmitted to the steam-regulator by a bar system with angular knees, &c., or by electricity. The up-and-down motion of the 55  
float is always effected by its own weight as soon as the water falls or rises, and as it moves the ring *h* and the bolt *g*, placed in same, in which bolt the connection to the steam-regulator is fastened, are also drawn 60  
upward or downward, by which the regulating of the steam is effected. In this way the regulation of the speed of the propeller is effected.

The regulator can be placed before the pro- 65  
peller, as shown in Fig. 1, which would require a conical tube in which the float can go up and down, or it can also be placed behind the propeller or rudder, as shown in Fig. 2; but the first arrangement would be the more 70  
advantageous.

The operation of this regulator is based upon the fact that the higher or lower the water surrounding the propeller rises or falls that just so much higher or lower will be the 75  
float, which is always on the surface of the water, and the float being directly connected with the steam-supply pipe of the engine the engine is supplied with more or less steam in proportion to the level of the water around 80  
the propeller.

What I claim as new, and desire to secure by Letters Patent, is—

In a speed-governor for marine engines, the combination, with the hollow slotted bar *b*, of 85  
the float *a*, surrounding the same, and a connecting device *d*, situated within said bar and connected with the float and engine-governor, substantially as set forth.

In testimony that I claim the foregoing as 90  
my invention I have signed my name, in presence of two witnesses, this 31st day of August, 1889.

CORNELIUS STENSLAND.

Witnesses:

ARTHUR GEIDY,  
OSC. WINGE.