

(No Model.)

A. F. A. PETERSEN.

Mechanism for Controlling the Steering Gear of Vessels.  
No. 233,876.

Patented Nov. 2, 1880.

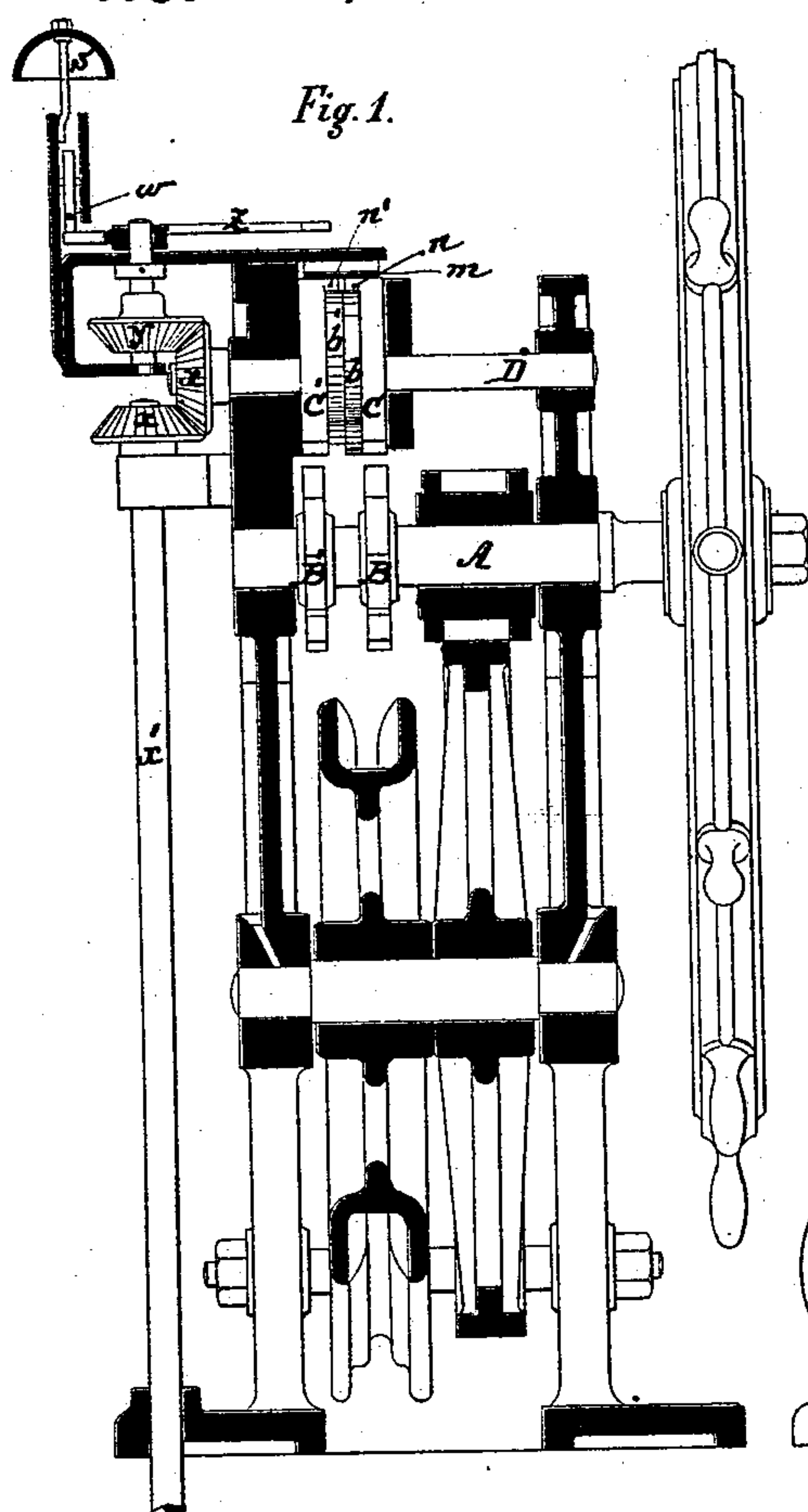


Fig. 1.

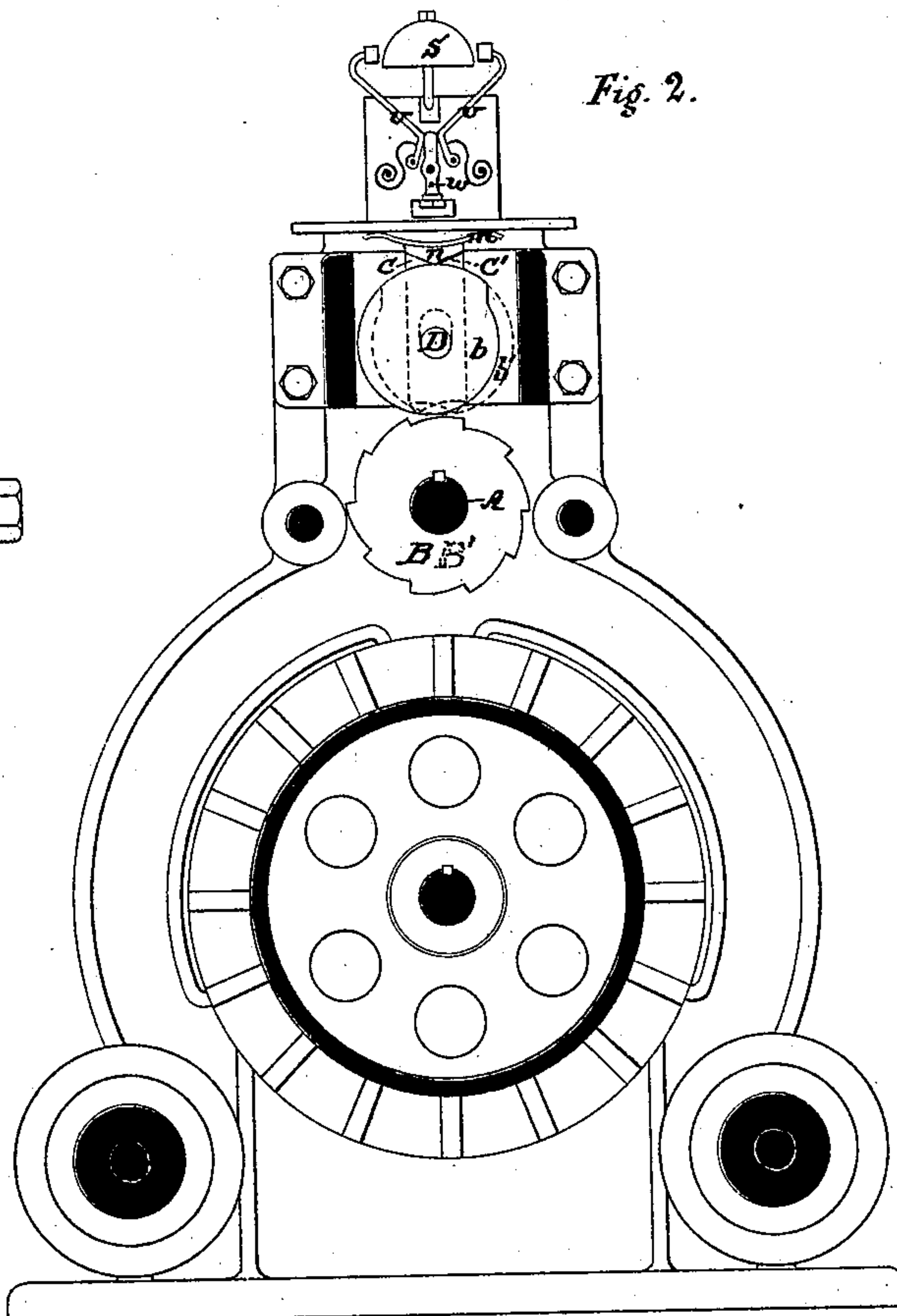


Fig. 2.

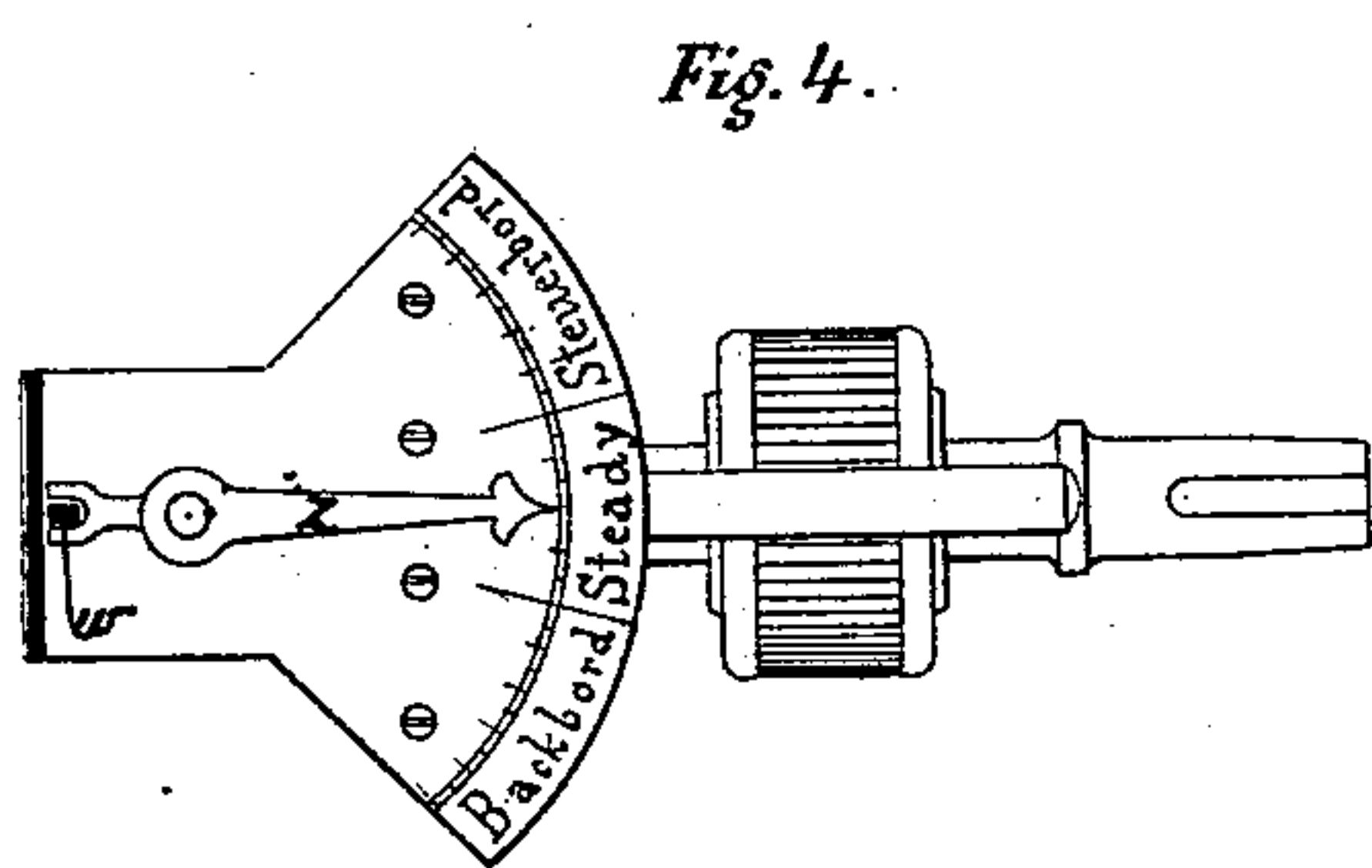


Fig. 4.

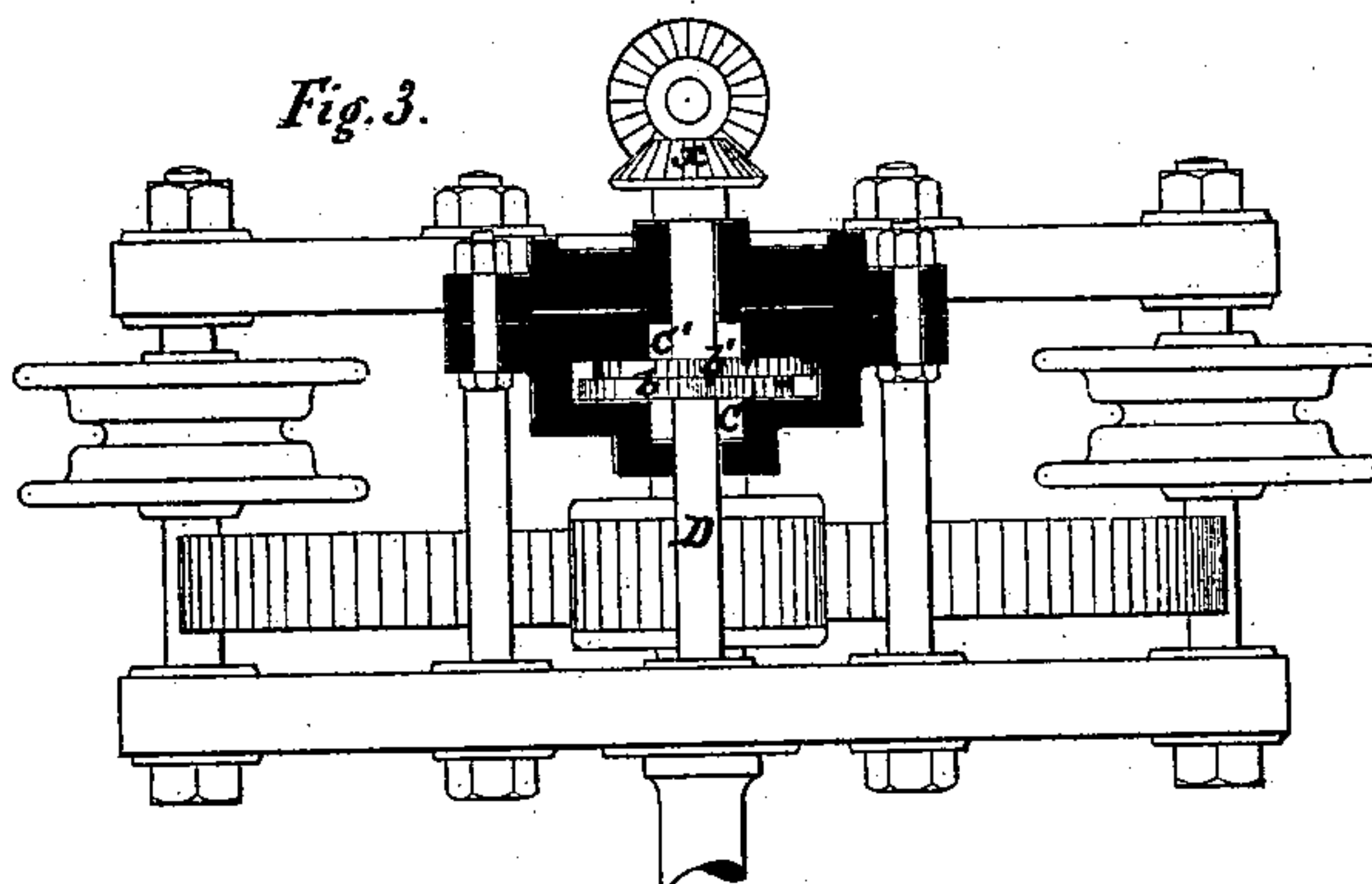


Fig. 3.

Witnesses:

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# UNITED STATES PATENT OFFICE.

ADOLF F. A. PETERSEN, OF HAMBURG, GERMANY.

MECHANISM FOR CONTROLLING THE STEERING-GEAR OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 233,876, dated November 2, 1880.

Application filed July 3, 1880. (No model.) Patented in Germany July 3, 1880.

*To all whom it may concern:*

Be it known that I, ADOLF FRIEDRICH AUGUST PETERSEN, of Hamburg, Germany, have invented a new and useful Improvement in Machinery for Controlling Steering Apparatus in Ships, and insuring the action of the rudder in accordance with the orders of the officer in charge, of which the following is a specification.

The purpose of this invention is to place in the hands of the commander of a ship an absolute control of the movements of the rudder in such a manner that the same can only be moved according to his will, and that all errors and doubts about the meaning of the order by the men at the wheel are entirely prevented.

The contrivance consists, substantially, of a locking and signaling apparatus, which may be set in action by a lever of a telegraph from the commanding-bridge, and which permits the rudder only to be turned according to the position of this lever.

The invention may be equally applied to hand or steam steering-gears.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a section; Figs. 2 and 3, elevation and plan, with section through the controlling apparatus; Fig. 4 a detail view, showing the index.

On the shaft A of the steering-gear two cog-wheels, B and B', are mounted, and above each of these is a stopper or pawl movable in a strong guide-bracket. Two partly-eccentric disks, b and b', attached to a shaft, D, passing through a suitable slot made in the pawls C C', can be moved from the commanding-bridge by means of wheels and rods or suitable gearing x x'. These eccentric disks b b' are shifted against each other on the shaft in an angle corresponding with the division of the scale on the telegraph apparatus, so that when turned these disks press against the projecting studs n or n' on the stoppers or pawls C and C' and lift or allow them to fall down into the teeth of the cog-wheels B B' of the steering-gear. A spring, m, on the top of the guide-bracket always exerts a downward pressure on the stoppers. When the disks b and b' are moved a bevel-wheel, y, and the pointer z on

the steering apparatus are moved also. The pointer works by means of the lever w on a spring-hammer, v v, and the latter, knocking against the bell s, calls the attention of the men at the wheel to the order given.

The working of the apparatus is as follows: As long as the officer on the bridge turns the lever between the limits marked "steady" (see Fig. 4) no effect whatever is produced on the steering or signaling apparatus. The man at the wheel is free to turn it in any direction; but when the lever is shifted, for example, to starboard, the disk named "port" disengages its stopper, and the latter falls down into the teeth of its cog-wheel, preventing any turning of the wheel to port. At the same time the pointer z moves to starboard and the bell rings.

Any motion of the wheel against the order is made impossible by these means. The commander, shifting, on the other hand, the lever to port, lifts the port-stopper out of gear and engages the starboard-stopper. The order is signalized for "port," and the turning of the rudder can only be done in accordance with the order "to port."

The advantages of this invention for the use of the navy and mercantile marine cannot be too highly valued. The responsibility of steering a ship is directly thrown upon the commanding officer. Blunders, through misunderstanding or mistaking the order, are entirely prevented, and the will of the commander, instead of being transmitted by call and recall, acts mechanically upon the steering apparatus in accordance with the direction he had himself given to the mechanism.

What I claim is—

1. The combination of pawls C C', ratchet-wheels B B', eccentrics b b', and the lever for operating said eccentrics, substantially as and for the purpose set forth.

2. The combination of pointer z and bells s with cog-wheels B B', pawls C C', eccentric disks b b', and a suitable operating-lever and connections, substantially as set forth.

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Witnesses:

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