

(Model.)

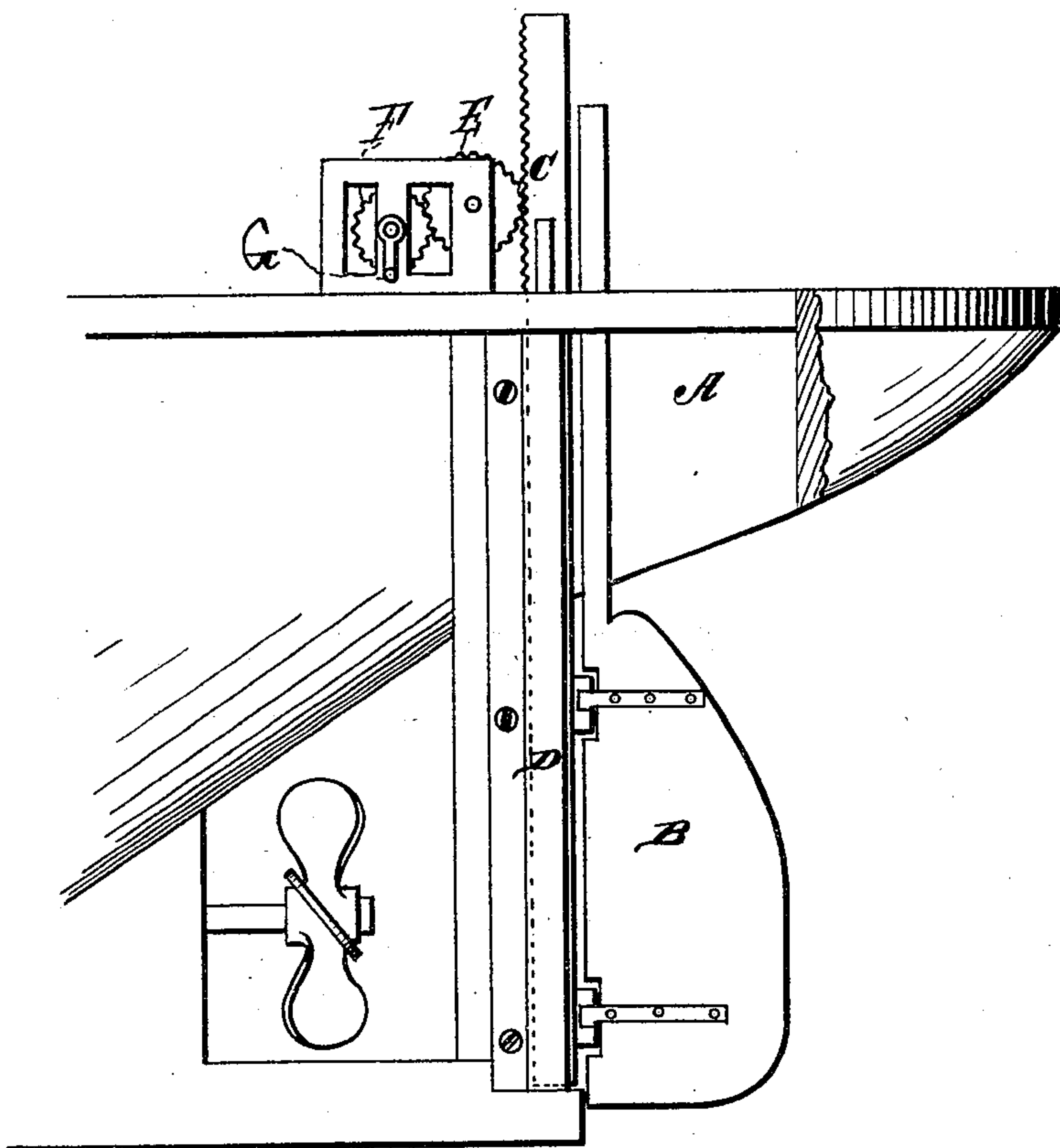
R. F. LOPER, Jr.

## Means for Raising and Lowering Ships' Rudders.

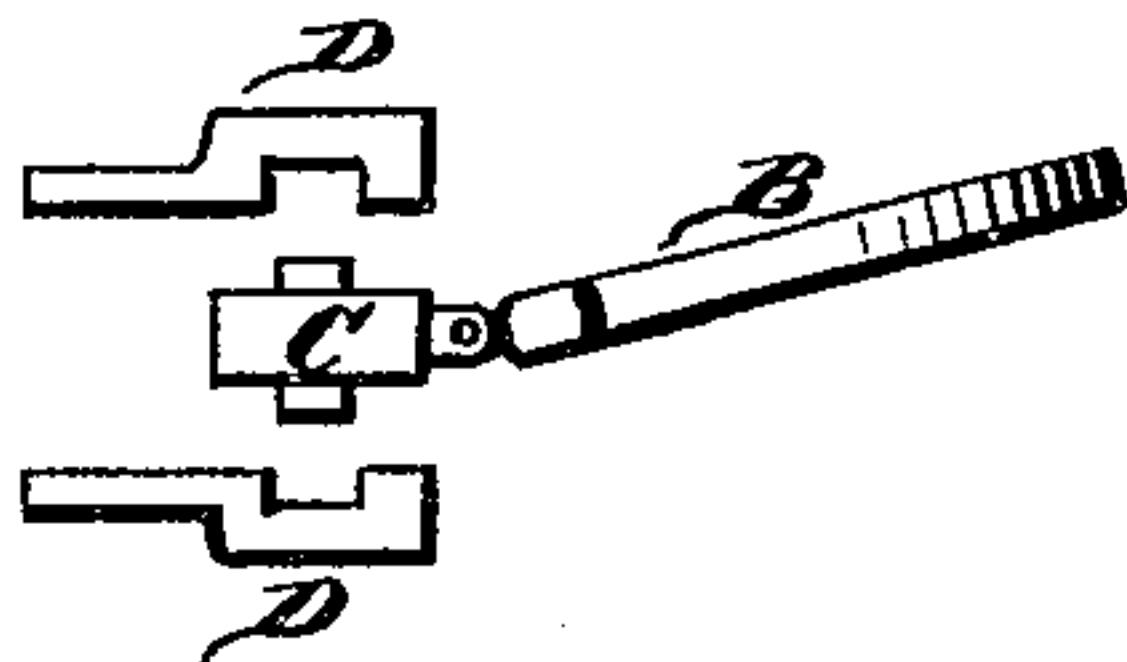
**No. 234,594.**

**Patented Nov. 16, 1880.**

*Fig. 1.*



*Fig. 2.*



**WITNESSES**

Robert Everett

W. Clay Smith.

*By*

INVENTOR

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# UNITED STATES PATENT OFFICE.

RICHARD F. LOPER, JR., OF STONINGTON, CONNECTICUT.

## MEANS FOR RAISING AND LOWERING SHIPS' RUDDERS.

SPECIFICATION forming part of Letters Patent No. 234,594, dated November 16, 1880.

Application filed June 9, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, RICHARD F. LOPER, Jr., of the town of Stonington, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Means for Raising and Lowering Ships' Rudders; 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 representation of a stern of a vessel, showing my device applied; and Fig. 2 is a detail view of the same.

My invention relates to the construction of rudders for steamships and the like; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth.

The object of my invention is to so construct and arrange a rudder and its bearings in relation to a steam-propellor as to allow said rudder when disabled from any cause to be elevated above deck and repaired, and to be replaced in position and service without endangering the vessel.

In carrying out my invention I employ a proper rudder-pocket, A, which allows the rudder to be elevated or depressed at will. The rudder proper, B, is hung upon a sliding stern-post, C, which operates in suitable guide-ways D, as shown. 30

The sliding stern-post C may be elevated by windlass, derrick, steam-engine or otherwise. I prefer, however, to provide its front face with teeth, which engage with the teeth of a spur-gear, E, operated by a spur-gear, F, having a crank, G. 35

What I claim is—

The combination of the rudder B, sliding stern-post C, having teeth and working in the ways D, with the spur-gears E and F and crank G, as and for the purposes set forth. 40

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses. 45

RICHARD F. LOPER, JR.

Witnesses:

W. F. RUDLETON,  
G. H. WOOD.