R. M. MOUNTFORT.

SURGE-RELIEVERS FOR STEERING APPARATUS.

No. 191,070. Patented May 22, 1877.

Fig. 1.

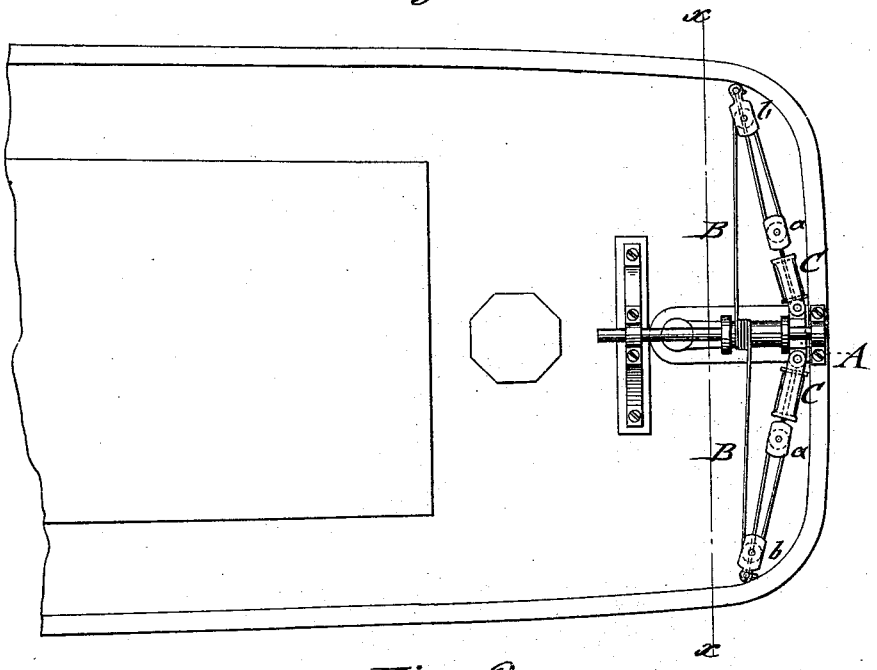


Fig. 2.

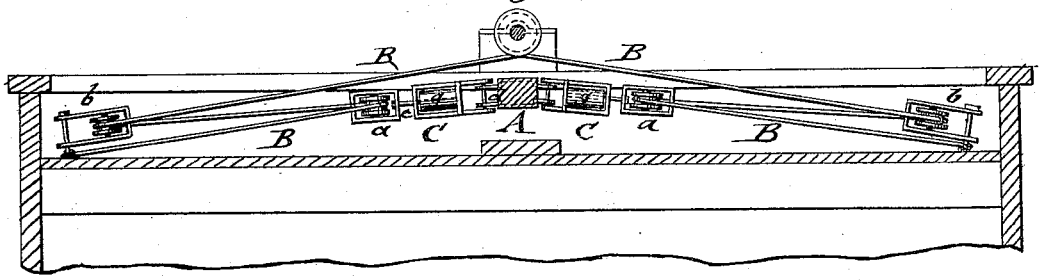


Fig. 3.

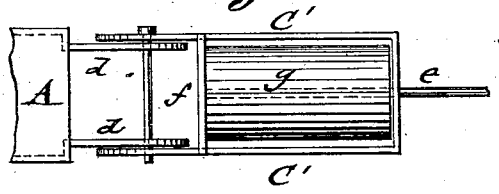
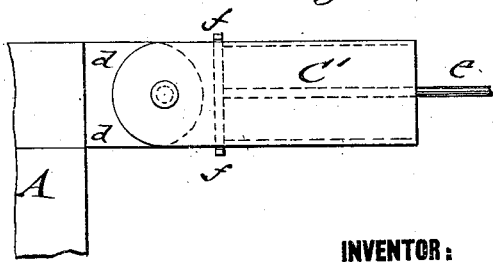


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT M. MOUNTFORT, OF BRUNSWICK, MAINE.

IMPROVEMENT IN SURGE-RELIEVERS FOR STEERING APPARATUS.

Specification forming part of Letters Patent No. **191,070**, dated May 22, 1877; application filed February 17, 1877.

To all whom it may concern:

Be it known that I, ROBERT M. MOUNTFORT, of Brunswick, in the county of Cumberland and State of Maine, have invented a new and Improved Tackle-Block for Rudder-Heads, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of a rudder-head, with my improved tackle-blocks attached; Fig. 2, a vertical transverse section of the stern of a vessel on line *x x*, Fig. 1, showing tackle-blocks in end view; and Figs. 3 and 4 are detail side and top views of my improved tackle-block.

Similar letters of reference indicate corresponding parts.

This invention is intended to prevent the twisting off of the rudder from the rudder-head by the pressure or power of the waves dashing on the rudder; and it consists of cushioning devices attached to the tackle-blocks at both sides of the rudder-head.

In the drawing, A represents the rudder-head of a vessel, which is connected by ropes B passing over tackle-blocks *a* at both sides of the rudder-head, and over fixed blocks *b* at both sides of the vessel, to the shaft of the steering-wheel, being wound in opposite direc-thereon, to govern thereby the rudder in the customary manner.

Intermediately between the rudder-head A and side blocks *a* is interposed a cushioning device, C, which is pivoted to fixed lugs or ears *d* of the rudder-head, and connected by a central rod, *e*, that passes through the U-shaped cylindrical or other casing C′ of the cushioning devices to the tackle-block *a*, the rod *e*, binding by an end plate or disk, *f*, guided along casing *c′* on a rubber or other elastic spring-block, *g*, and passing centrally through the same.

Any violent shocks or jerks on the rudder by the pressure of the waves are taken up by the cushioning-blocks *g*, so that the rudder is not twisted off from the rudder-head by the power of the shocks, while in heavy weather the steering is rendered easier and less fatiguing, as the powerful shocks are not transmitted to the steering-wheel as at present, but taken up or neutralized more or less by the elastic blocks.

I am aware that it is not broadly new in a steering apparatus to use slides with springs to take the shock of the waves; but,

What I claim as new, and of my invention, is—

In a steering apparatus, the case C′, pivoted between head A and blocks *a*, and connected by a central rod, *e*, with the tackling-block, in combination with a spring, *g*, arranged substantially as and for the purpose specified.

ROBERT M. MOUNTFORT.

Witnesses:

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