J. B. Van Deusen.

Steering.

No. 55,559. Patented June 12, 1866.

Fig. 1.

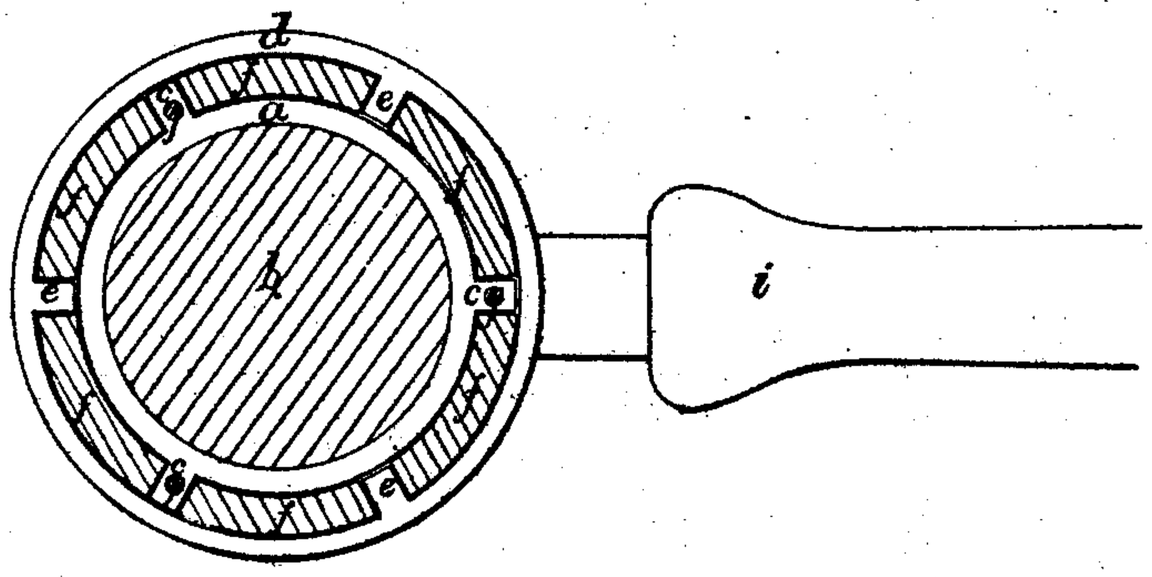
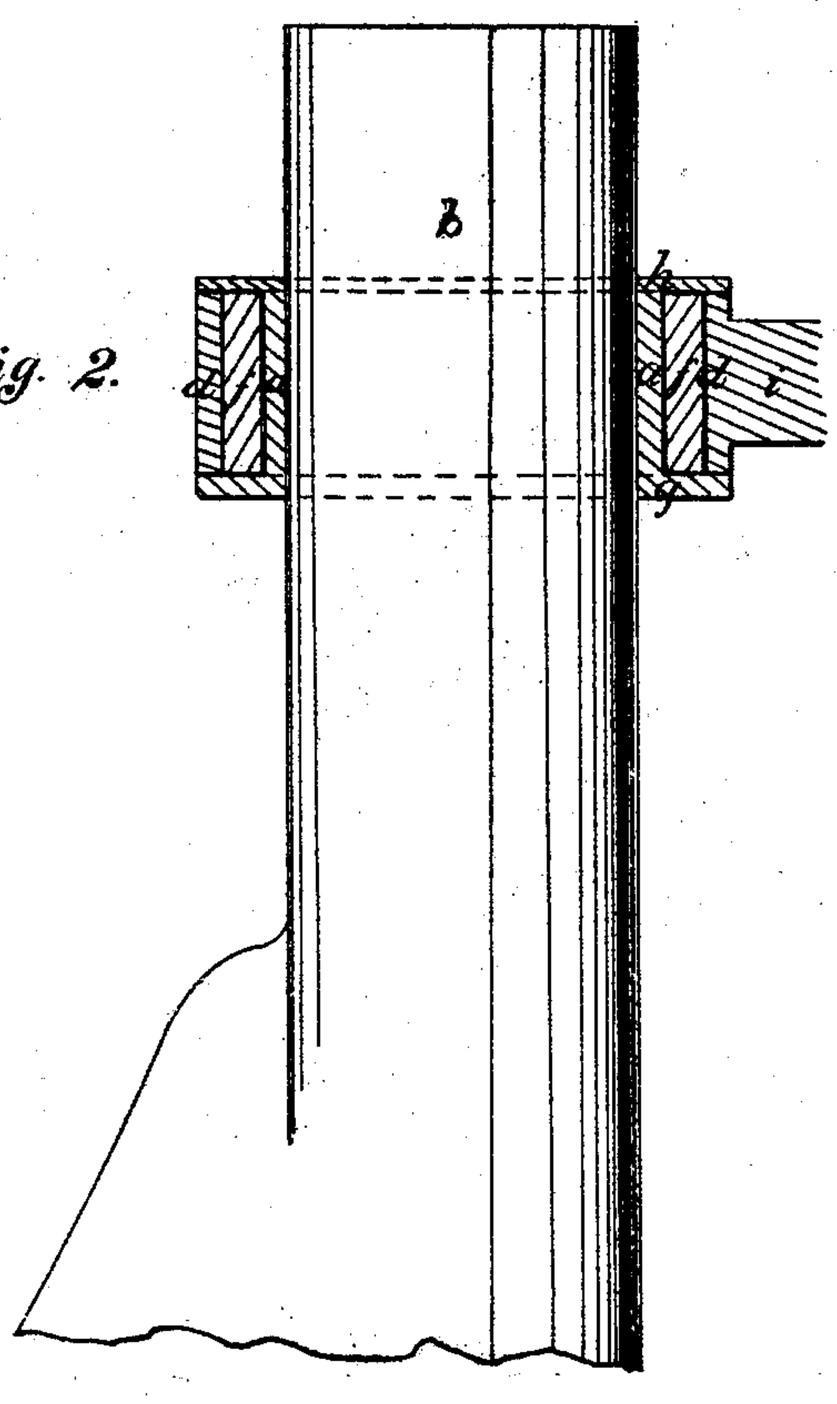


Fig. 2.



Witnesses,

J. C. Coombs

G. W. Reed.

Inventor,

J. B. Van Deusen

UNITED STATES PATENT OFFICE.

J. B. VAN DEUSEN, OF NEW YORK, N. Y.

IMPROVED STEERING APPARATUS.

Specification forming part of Letters Patent No. **55,559**, dated June 12, 1866.

To all whom it may concern:

Be it known that I, J. B. VAN DEUSEN, of of the city, county, and State of New York, have invented a new and useful Improvement in Steering Apparatus for Ships and other Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a horizontal section of the rudder-head and the tiller attachment, and Fig. 2 is a vertical section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in so interposing springs between the rudder-head and tiller of a steering apparatus that while the rudder can be controlled by the tiller, yet, in case the rudder should be suddenly struck by a sea, the sudden jerk on the tiller will be greatly diminished and the liability of injury to the rudder or steering apparatus will be greatly reduced.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I provide a ring, *a*, of proper dimensions and of suitable metal, the said ring being fitted tightly and firmly secured upon the rudder-head *b*, and having several radial projections *c*, of proper dimensions, on its outer periphery. Around this ring *a* I place another ring, *d*, having the same number of projections *e* on the inner periphery. These two rings I put together in such a way that the projections of one ring will be in the center between the projections of the other ring. Into the open spaces between the projections I fit pieces of india-rubber, *f*, or of any other suitable elastic substance, in such a manner that one end of the said elastic substance shall bear against the projection *c* of the inner ring, *a*, and the other end of the same shall bear against the projection *e* of the outer ring, *d*.

In order to keep these two rings in their proper positions, I provide a flange, *g*, around the bottom of the ring *a*, and likewise an annular cover, *h*, which I firmly attach to the projections of one of the rings *a* or *d* by means of screws *j j* or other means. The outer ring, *d*, has the tiller *i* secured to it in a firm, strong, and substantial manner.

A rudder having a tiller attached in this manner may be governed directly by hand, or through any other intermediate and well-known mechanical devices; yet in either case it will be less dangerous and can be more easily managed than it could be without the springs, as the springs will lessen, to a great extent, any sudden jerk to which the rudder may be subjected.

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

1. The interposition, between the tiller and the rudder-head of a steering apparatus, of a spring or springs, operating substantially as and for the purpose herein described.

2. The combination of the inner and outer ring, with their radial projections and india-rubber or other springs, substantially as and for the purpose as herein fully described.

J. B. VAN DEUSEN.

Witnesses:

J. W. COOMBS,
G. W. REED.