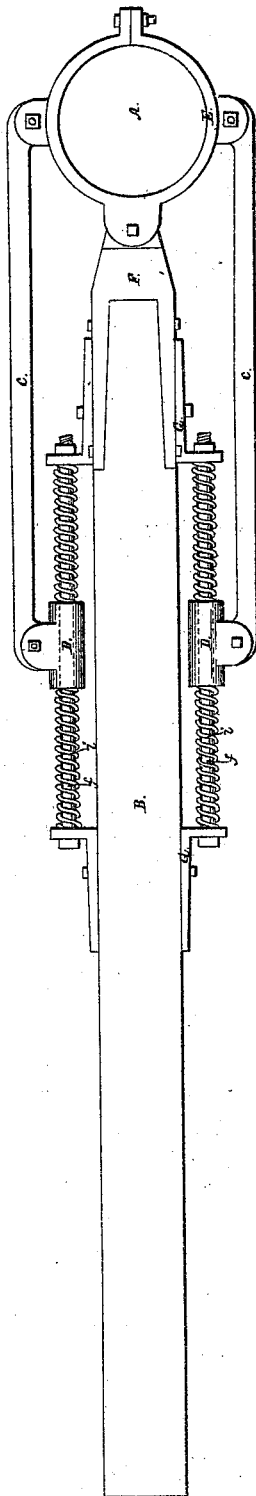


J. G. Hull.

Steering.

N^o 5,786.

Patented Sep. 19, 1848.



UNITED STATES PATENT OFFICE.

JOHN G. HULL, OF NEW YORK, N. Y.

METHOD OF ATTACHING TILLERS.

Specification of Letters Patent No. 5,786, dated September 19, 1848.

To all whom it may concern:

Be it known that I, JOHN G. HULL, of the city and county of New York, State of New York, have invented an Improved
5 Mode of Machinery for Preventing Rudder-Heads and Tillers of Vessels from Breaking, also an Improved Tiller; and I do declare that the following is an exact description thereof.

10 The nature of my invention consists of providing an attachment of a tiller to a rudder without mortising or weakening the rudderhead and to give a long purchase on the tiller whereby both are strengthened and
15 to support the tiller with connecting bars from a trussband secured on the rudder from which the bars pass forward on each side taking their action distant from the rudder and in order to prevent the impulse
20 of a sea from breaking the castings they take their pressure against fixed springs on the tiller.

To enable others skilled in art to make and use my invention I will proceed to describe its construction and operation. (See
25 annexed drawing.)

A represents the head of a rudder to which my apparatus is applied.

30 E is a trussband with three flanges, one on each side to receive connecting bars C and one on the front or forward side to connect shackle F and to keep the trussband it is fixed with screwbolts at the opening.

35 B is the tiller let in and firmly secured to shackle F, which is belted to a flange on the trussband and allowed to work on a center.

G G are side straps secured to the tiller and around the rods or ways *f f* by the slide sockets D D.

C C are connecting bars which are at- 40 tached to the tiller. They are connected to the shackle F passing through the sockets D D which slide on the ways *f f* and to prevent accident from a sudden impulse of the sea the compressible springs *i i i i* are placed 45 on the ways to prevent a sudden jerk, whereby the castings are not liable to break. The castings may be of iron brass or other composition the springs of india rubber composition or steel. 50

I do not claim the mode of projecting the tiller in the rudder by mortise or hole, or the manner of supporting the tiller by springs applied to the rudder or turning the rudder with screws or cogwheels. 55

What I claim as new and my invention is—

1. A mode of attaching the tiller to a solid rudderhead by hooping the same with a trussband to which my tiller is applied and supported by two connecting bars, which 60 take their effect on the tiller by their connection with the sockets D D and springs *i i i i* ways *f f* and straps G G on each side, in same manner and purpose as herein described. 65

2. I claim the double action compress springs on the tiller to prevent any sudden impulse of the sea from breaking the castings or any part of my apparatus or tiller or any part of the steering gear to which it 70 is applied.

JOHN G. HULL.

Witnesses:

ABRAM C. HULL,
PETER VON SOOSTEN.