

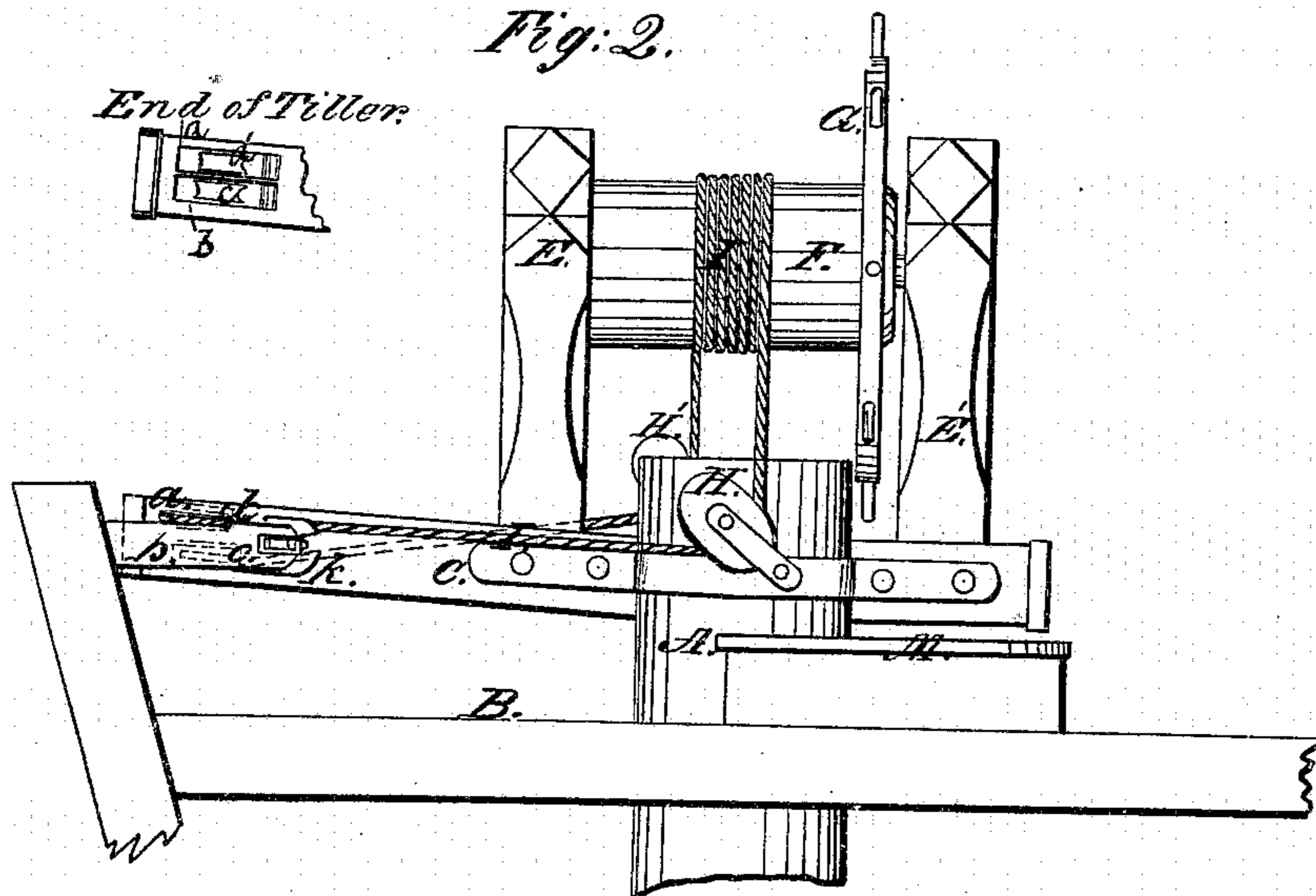
*C. Flanders.*

*Steering.*

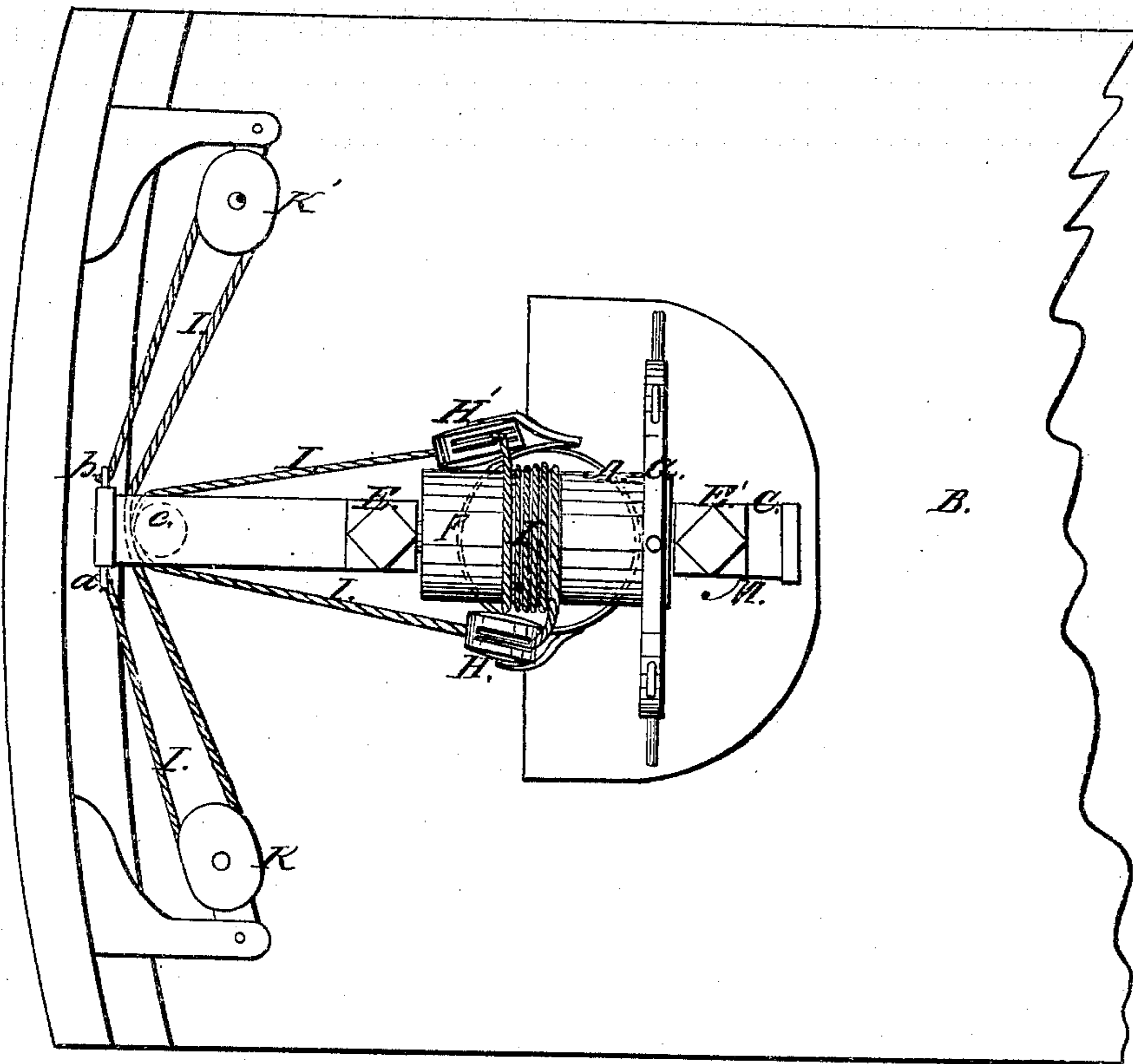
*N<sup>o</sup> 10,129.*

*Patented Oct. 18, 1853.*

*Fig. 2.*



*Fig. 1.*



# UNITED STATES PATENT OFFICE.

CHARLES FLANDERS, OF BOSTON, MASSACHUSETTS.

## STEERING APPARATUS.

Specification of Letters Patent No. 10,129, dated October 18, 1853.

*To all whom it may concern:*

Be it known that I, CHARLES FLANDERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Steering Apparatus for Navigable Vessels; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes a top view, and Fig. 2, a side elevation of my improved steering apparatus as applied to the rudder head and deck of a vessel.

In such drawings, A represents the rudder head, and B, the deck, and C, the tiller, the latter being made to extend aft from the rudder head. The tiller is carried through the rudder head, and has a post, E, or E', elevated on each side of the said rudder head as seen in the drawings. These two posts serve to support the windlass, F, and its hand wheel, G, such windlass being disposed over the rudder head. Below the windlass and on each side of the rudder head a leading block, H, or H' is attached as seen in Figs. 1 and 2; a rope, I, after being several times wound around the windlass barrel, having its two ends respectively led through these blocks. The tiller near its after end is provided with two sheave holes, a, b, for the reception of two sheaves or grooved rollers, c, d, made to stand horizontally or thereabout or inclined to the horizon as the case may require.

The two halves or parts of the rope after being carried respectively through the leading blocks, H, H', are led in opposite directions through the sheave holes and partially around the sheaves of the tiller, and from thence are respectively carried toward and through two other leading blocks K, K', and finally returned toward and fastened to the

after end of the tiller, the whole being as seen in the drawings.

When the wheel is rotated or turned either to the leeward or windward the tiller and rudder will be put in motion in a corresponding direction as will be readily understood by nautical men.

The platform for the steersman to stand upon while at the wheel is shown at M, as placed or fastened upon the deck.

A steering apparatus constructed in the manner as described will be found to possess several decided advantages over many if not all others in use, which operate the tiller by means of ropes and a windlass, it possessing the two essential requisites of power and quickness of movement. The extension aftward of the tiller and leading the ropes through it, before its ends are fastened to it is important on account of this arrangement of the ropes causing little or no encumbrance to the deck on each side of the tiller, thus enabling the mariners to walk about on such without the usual interference of the ropes.

I am aware that there is nothing new in moving a tiller by means of ropes and a windlass. I therefore do not claim such, but

What I do claim is—

My combination and arrangement of the rope, I, the two sets of leading blocks, H, H', K, K', the sheaves, c, d, in the after end of the tiller with one another, the tiller and windlass so as to operate together and move the rudder substantially in manner as specified.

In testimony whereof I have hereto set my signature this twenty sixth day of July, A. D. 1853.

CHAS. FLANDERS.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.