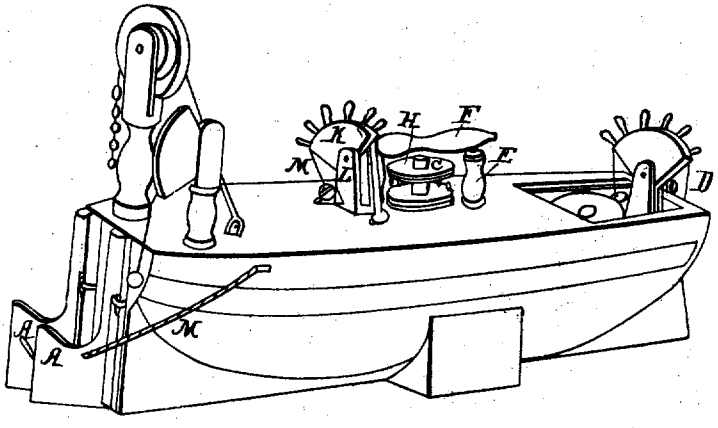
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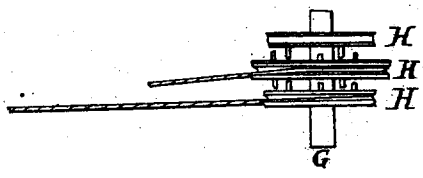
Steering.

No. 0

Patented Nov. 19, 1833.







N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

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Nov. 19, 1833

Benjamin Franklin Adams

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Benjamin Franklin Adams himself of his improvement. being an apparatus for steering vessels called Adams' Steering Horizontal Quadrant wheels.

Be it known that I Benjamin Franklin Adams of Boston in the County of Suffolk & State of Massachusetts have made an improvement in the useful arts, being an apparatus for steering vessels called Adams' Steering horizontal quadrant wheels. which is described as follows: reference being had to the annexed drawing. The steering apparatus consists of the following principle parts. The quadrants with the wheel ropes and blocks. the steering horizontal wheels working on an arbor. the steering quadrant. For double steering and heavy boats I use two rudders A.A. instead of one placed parallel and side by side at the stern of the vessel. Each of the rudders need only be of about half the area or superficies of the common rudder. & will have much more power to turn the vessel, yet not impede its head way more than one half, for the impeding of the vessels head-way is as the cubes of the areas of each rudder taken separately. A rudder B. is fixed on the head (D. of the rudder to prevent the head of wearing out. In any convenient part of the vessel place upright E.E. with a cross piece F. to receive an arbor G. upon which the horizontal steering wheels turn. There are three horizontal steering wheels H.H.H. placed upon the before mentioned arbor. each having a groove in its periphery to receive a chain or a band. To the upper and under wheels are fixed any convenient number of pins I. pointing towards the centre wheel. To the centre wheel are affixed

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made to receive these pins. by means of which pins on the upper and lower wheels and the holes in the centre wheel. the wheels are united or disengaged and the vessel steered in different directions. A steering quadrant K made of wood or metal. having a groove in its rim is supported and turns on a pin between an upright L. having a slot or opening in it the steering ropes, chains or bands M passing round the steering horizontal wheels is fastened in the grooves of the quadrant. Six handles for steering are fixed on the periphery of the quadrant } Operation } One or two hands being placed at the steering quadrant steer the vessel in the usual way. say. in a direct course.. When it is required to go in a contrary direction or backward then the centre wheel is attached to the upper wheel by pins and holes and steering up and down the arbor, this enables the steersman to go in a contrary direction. What I claim as my invention and desire to be secured by Letters Patent is the before described horizontal steering wheels by which the direction of a vessel can be changed by the shifting wheels and the quadrant for steering the vessel

Benjamin Franklin Adams

Witnesses
Wm P. Elliot
Sam'l P. Walker Jr.

Dr in portfolio

DJR
MJC

[illegible]