

J. McCREARY.

Improvement in Coupling and Steering Apparatus.

No. 129,844.

Patented July 23, 1872.

Fig. 1.

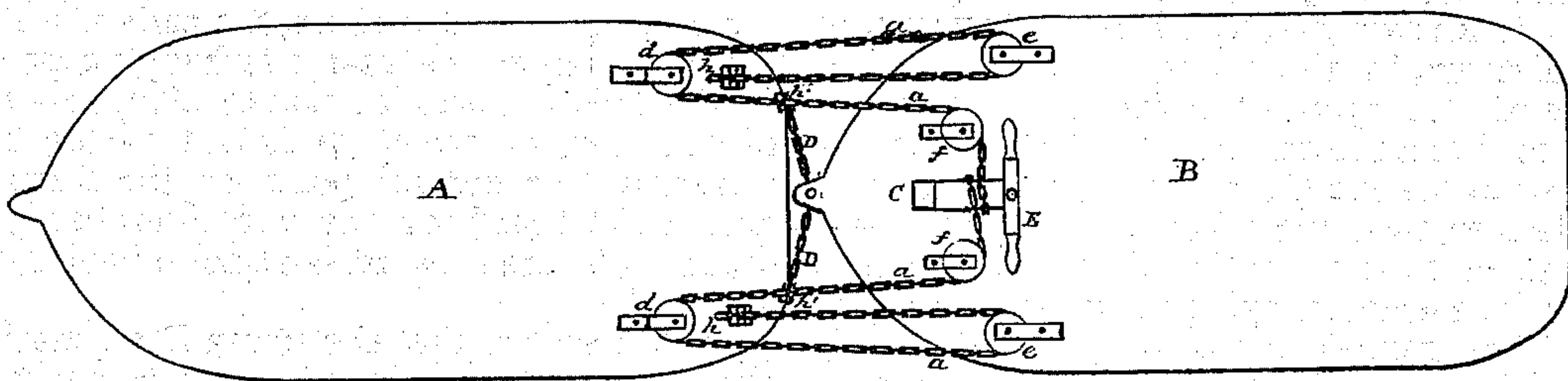
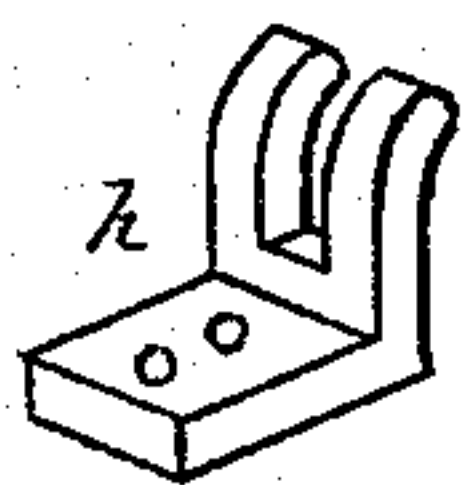


Fig. 2.



Witnesses.

J. L. Coombs
J. J. Coombs.

Inventor

John McCreary

UNITED STATES PATENT OFFICE.

JOHN McCREARY, OF MIDDLETOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO ELIJAH McCREARY, OF SAME PLACE.

IMPROVEMENT IN COUPLING AND STEERING APPARATUS.

Specification forming part of Letters Patent No. 129,844, dated July 23, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JOHN McCREARY, of Middletown, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Improvement in Devices for Coupling and Steering Canal-Boats; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and the letters of reference marked thereon.

Specification describing certain improvements in steering devices for canal-boats, invented by JOHN McCREARY, of Middletown, in the county of Dauphin and State of Pennsylvania.

My invention relates to certain improvements in devices for steering canal-boats, &c., described in Letters Patent granted to Elijah McCreary and John McCreary April 16, 1872, No. 125,684, by means of which two boats are coupled together, and navigated and steered as one boat by means of a single steering-wheel. My improvements consist, first, in substituting for the projecting cut-water and notch described in said patent for centering the boats together and forming a universal joint a chain attached at both ends to one boat, and at its center to a central point on the adjacent end of the other boat, as shown in the annexed drawing; Second, in attaching the ends of the coupling-chain to one of the boats by means of crow-foot claw-hooks, so as to render the chain easily adjustable, as hereinafter shown and described.

In the accompanying drawing, Figure 1 is a top view of a pair of boats coupled and centered together, showing also the coupling, steering, and centering devices. Fig. 2 is a detached view of one of the claw-hooks, to which the ends of the coupling-chain are attached, on an enlarged scale.

A is the forward boat, and B the rear boat. These boats are coupled together by means of a chain or rope, *a*, the ends of which are fastened to the forward boat by means of the claw-hooks *h h* on said forward boat. The central portion of said chain or rope is wound around a horizontal windlass, C, on the rear

boat, and it passes around pulleys or sheaves *d d* on the forward boat, and *e e* and *f f* on the rear boat. D is a chain, the ends of which are attached to the rear overhanging guard of the forward boat at points *h' h'*, and the central part of which is linked to the cut-water, or to a central point on the forward end of the rear boat, the said chain being so attached to the forward boat as to have a little slack.

It is essential that the chain D on the forward boat or the point of its attachment to the rear boat shall be on a projecting or overhanging guard or bumper, (or both may be so placed,) so that the connection will form a universal joint between the adjacent ends of the two boats and allow the boats to assume any angle in respect to each other, whether vertically or laterally, without coming in contact at any point except said point of connection.

E is the steering-wheel, shown in the drawing as placed upon the end of the windlass-shaft; but, in order to gain power, the said wheel may be mounted on a separate shaft, with a small pinion gearing with a larger cog-wheel on the windlass-shaft. By this gearing the power of the windlass may be increased or multiplied to any desired degree. When a chain is used the windlass-shaft should be fluted or corrugated to prevent the chain from slipping.

Instead of a horizontal windlass the chain or rope may be made to pass around a vertical shaft or a chain-wheel, as shown in the said patent of Elijah and John McCreary of April 16, 1872.

The coupling and steering chain is attached to the forward boat by slipping one of its links edgewise between the claws of the crow-foot. It may thus be easily and quickly adjusted to any degree of tautness or slackness desired.

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

1. The combination of the two boats A and B, the coupling and steering chain *a* passing around pulleys *d d*, *e e*, and *f f*, and around windlass C or its equivalent, and the chain D at-

tached to an overhanging guard or bumper on one boat and to the adjacent end of the other boat, so as to form a universal joint between them and keep them centered, substantially as shown and described.

2. In combination with the subject-matter of the foregoing claim, I also claim the claw-

hooks *h h* for attaching and adjusting the coupling and steering chain *a*, substantially as described.

JOHN McCREARY.

Witnesses:

J. J. COOMBS,

JAMES S. GRINNELL.