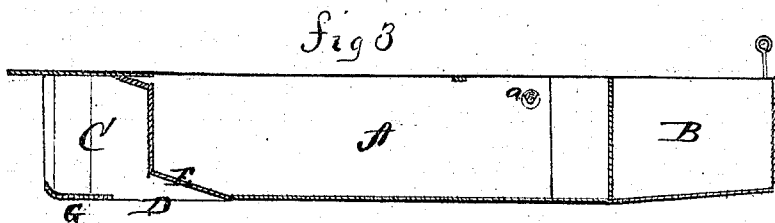
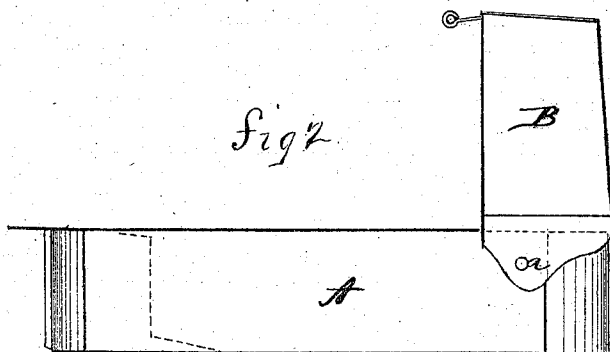
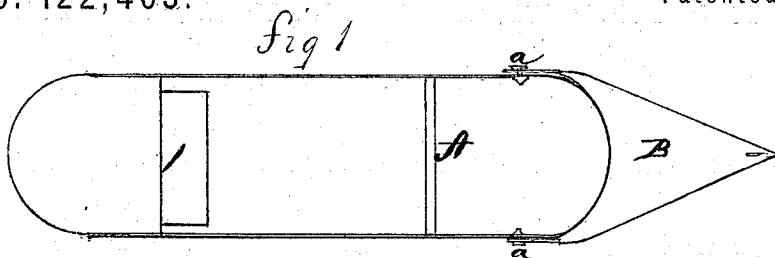


(139.)

C. W. HERMANCE.
Improvement in Canal Boats.

No. 122,463.

Patented Jan. 2, 1872.



Witnesses
J. L. Ourand
C. L. Ewert.

Inventor
Chas. W. Hermance
per Alexander Mason
Attorney

UNITED STATES PATENT OFFICE.

CHARLES W. HERMANCE, OF SCHUYLERSVILLE, NEW YORK.

IMPROVEMENT IN CANAL-BOATS.

Specification forming part of Letters Patent No. 122,463, dated January 2, 1872.

To all whom it may concern:

Be it known that I, CHARLES W. HERMANCE, of Schuylersville, in the county of Saratoga and in the State of New York, have invented certain new and useful Improvements in Canal-Boats; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and attachment to canal-boats of a separate or false bow attached to the boat in any manner that will render the same adjustable, thereby causing the bow and boat to conform to the size of the locks without lessening the carrying capacity of the boat. It also consists in a recess formed at the stern of a canal-boat for the reception of the propelling-wheel, and in the construction of the bottom at the rear for feeding the wheel with water from the bottom of the boat.

The requirements of internal commerce demand an increased rate of speed on the canals without loss of tonnage, and this can only be accomplished by a modification in the present form of boats now in use.

The object, therefore, of the first part of my invention is to enable the boats in present use on the waters of our canals, which are constructed mainly of round or square bows to attain a higher rate of speed with an increase of tonnage, by steam or animate power, without causing bow or side swells injurious to the canal-boats. The object of the second part of my invention is to conduct the waves or swells caused by the wheel directly in rear of the boat without deflection toward the bottom and prevent the washing of the banks of the canal.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, showing the false or adjustable bow lowered; and Fig. 2 is a side view, showing the said bow raised. Fig. 3 is a longitudinal vertical section, showing the recess in the stern and the construction of the bottom.

A represents a canal-boat of any ordinary

construction, and B is the false or adjustable bow made in V or other shape, so as to have a sharp edge in front. The sides of the bow B are continued toward the rear at the base and hinged to the sides of the boat A by bolts *aa*, or other suitable means, so that it can be raised upward, thus enabling the boat to pass through the canal-locks. When lowered this sharp pointed bow cuts the water and prevents, to a great extent, all bow or side swell. In the stern of the boat is formed a recess or chamber, C, to receive the propeller-wheel or screw, said recess or chamber being made large enough so that the sides of the boat will project in rear of the wheel. By thus placing the propelling-wheel within the recess C at the stern of a canal-boat the action of the wheel forces the water directly to the rear of the boat, preventing any injury to the canal-banks, proper direction being given to the water by the sides of the recess. In the bottom of the boat is an opening, D, with an inclined plane, E, above the same and in front of the wheel. This inclined opening supplies the wheel with water, and the direction given to the water by being forced upward through the opening has a tendency to maintain the inclination and rise to the surface, and not wash the bottom of the canal.

A canal-boat when fully loaded floats within twelve inches of the bottom of the canal, and it is, therefore, obvious that some device is necessary to prevent the action of the wheel from forcing water to the bottom which would be injurious to the canal; therefore, I provide the recess C, in which the wheel revolves, with a bottom, G, thereby preventing any action of the wheel or water upon the bottom of the canal.

It will be seen that the false bow is made of a depth equal to the depth of the boat, and the rear end of said bow is made to fit neatly around the bow of the boat with an ear or bar on each side, which extends back of the bow and pivoted to the sides of the boat. The top of the hinged bow is closed to allow additional carrying capacity and the bottom is closed to move in the water. The rear end of this bow is open, so that a quantity of water will fill in the same and cause the bow to sink in the water the depth the boat is sunk by its load. When the bow is raised to pass through the lock it will

empty its water back into the canal. When the bow is lowered it will take in a quantity of water sufficient to cause its upper surface to be on a line with the surface of the main boat.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a canal or other boat I claim a hinged false bow, closed at its top and bottom and open at its rear end, and made of a size and to correspond with the size and shape of the bow of the boat, substantially as and for the purposes set forth.

2. In a canal-boat I claim the combination of the recess C, opening D, inclined plane E, and bottom G, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of July, 1871.

CHAS. W. HERMANCE. [L. S.]

Witnesses:

G. F. WATSON,
ROBERT HERMANCE.

(139)