

H. W. FRACKMANN.

Improvement in Propulsion of Canal Boats.

No. 124,348.

Patented March 5, 1872.

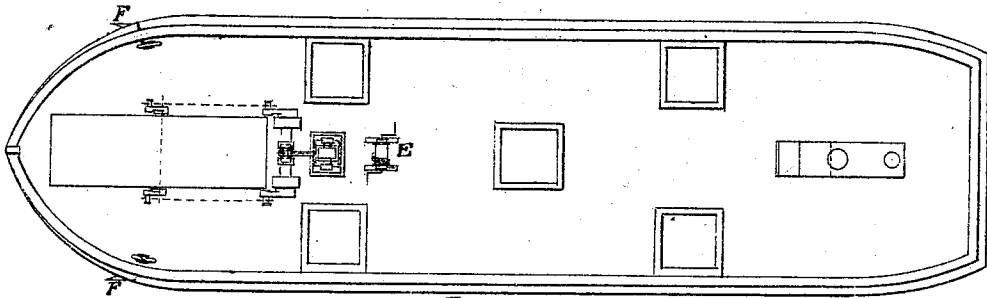


Fig. 1.

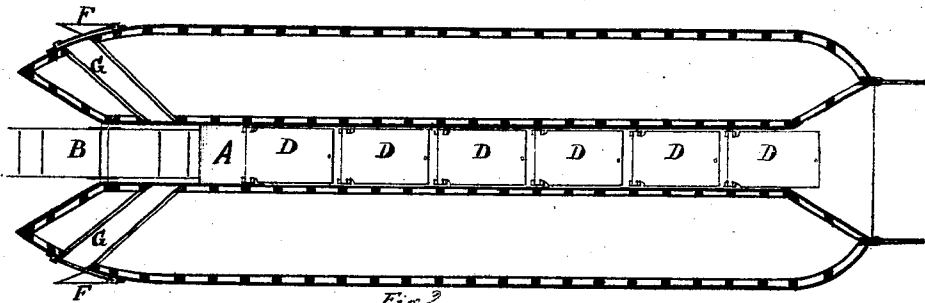


Fig. 2.

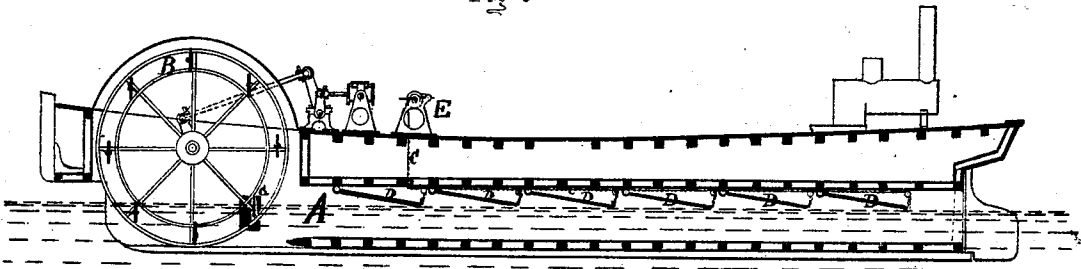


Fig. 3.

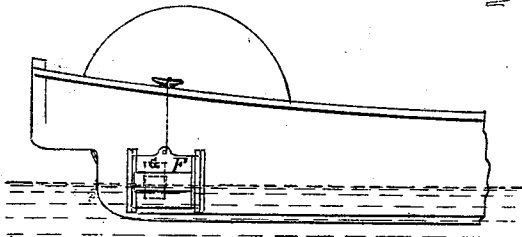


Fig. 4.

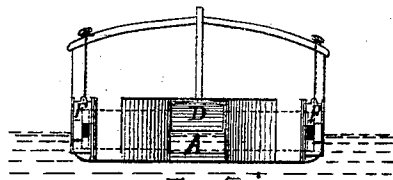


Fig. 5.

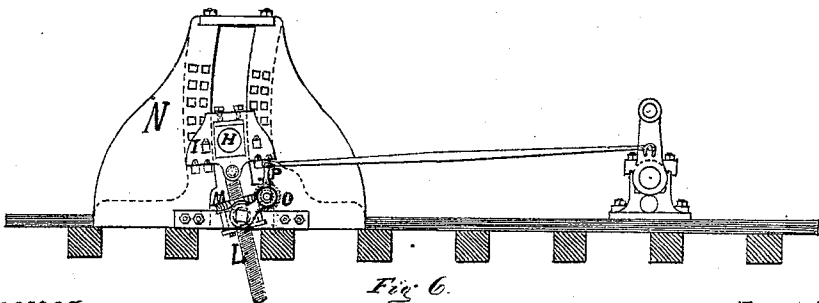


Fig. 6.

Witnesses:

August Albrecht
W. O. Fairbanks

Inventor

Henry W. Frackmann.

UNITED STATES PATENT OFFICE.

HENRY W. FRACKMANN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND OTTO ALBRECHT, OF SAME PLACE.

IMPROVEMENT IN PROPULSION OF CANAL-BOATS.

Specification forming part of Letters Patent No. 124,348, dated March 5, 1872; antedated February 17, 1872.

SPECIFICATION.

I, HENRY W. FRACKMANN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Canal-Boats, of which the following is a specification:

Nature and Object of the Invention.

My invention consists of a canal-steamboat, constructed in the peculiar manner too fully described hereafter to need preliminary explanation, with the view to the attainment of preventing the washing away of banks of canals, and of overcoming the slow and expensive method of propelling canal-boats by animal power.

Description of the Accompanying Drawing.

Figure 1 is a plan of main deck of my improved canal-steamboat. Fig. 2 is a horizontal section through box-keelson, showing the dashers, spray-catchers, and diagonal openings leading into box-keelson. Fig. 3 is a vertical longitudinal section of the same, showing box-keelson and dashers, paddle-wheel, windlass, and chain. Fig. 4 is a side view of the stem of boat showing spray-catcher and diagonal opening. Fig. 5 is a front view of boat, showing box-keelson and dasher, and spray-catcher, with diagonal opening in boat. Fig. 6 is a side view of the arrangement for raising and lowering the paddle-wheel.

General Description.

A is a fore and aft center box-keelson on top of frames or ribs, the bottom, sides, and top of which are water-tight. The two vertical sides widen toward the stem, thus forming a funnel. The box-keelson A is open at stem and stern to allow the water to pass through. B is the propelling paddle-wheel near the stem of the boat. D D D are dashers hanging on pivots under or near the top side of box-keelson, for the purpose of leveling the waves which may be caused by the propelling-wheel. C is a chain connected with all the dashers D D D, to regulate them, for the after edge of said dashers D D D are to be about even with the level of the water. E is a windlass to raise and lower dashers D D D by means of chain C. F F are

adjustable spray-catchers, the outside surfaces of which are even with the outside of the boat, while the inside line conforms with the shape of stem of boat. This inner side has an opening, which is opposite the diagonal openings G. The spray-catchers F F can be raised or lowered to conform with the level of the water. G G are diagonal openings in stem of boat leading into the box-keelson A, for the purpose of allowing the rebounding sprays and waves to pass into the box-keelson. H is the paddle-wheel shaft. I is a pedestal with flanges resting upon iron bars. N is a pedestal-frame, with holes to receive bars on which the pedestal I is to rest. L is a screw; M, a worm-wheel; O, a worm; and P, a pawl and ratchet. The latter receives its motion from the rock-shaft and transfers it to worm I, worm-wheel M, and screw L for the purpose of raising or lowering pedestal N of the paddle-wheel B to suit the draft of the boat.

The main object of my invention has been to prevent the washing away of banks of canals, and to overcome the slow and expensive method of propelling canal-boats by animal power, and this I have attained as regards the following.

It is a well-known fact that canal-boats constructed in the old manner, when propelled faster than ordinary mules walk, will cause waves, thereby washing away the banks of canals, and eventually destroying them, for which reason steam-power applied to said ordinary boats for trial before had to be abandoned.

In constructing a canal steamboat with a box-keelson, A, at its bottom, running lengthwise in the center fore and aft, all waves caused by the propelling paddle-wheel B will have to pass through the said box-keelson A. The waves in the box-keelson A will be brought to the level of the water by the time they reach the stern of the boat by means of dashers D D D, which, at one end, are pivoted under or near the top side of box-keelson A, while the other end hangs down on the water. When the wave strikes against the first dasher its power and size will be reduced; more so when it strikes against the second dasher, and so on until it reaches the last dasher, when it becomes entirely calm and level with the water. As the edges of dashers ought to be about even with the level of water, a chain, C, is employed and connected with said dashers D D D, and wind-

lass E, located on deck of vessel, by which means the edges of said dashers can be raised or lowered, as desired, or can be hoisted altogether in case of backing of the boat. On each side of the boat, near the stem, is an adjustable spray-catcher, F, which will catch the sprays and waves caused by the stem or other points of the boat going through the water, and rebound them into the diagonal opening G leading into the box-keelson A, where they will be leveled. The said spray-catchers F F can be adjusted up and down to suit the draft of the boat, for the lower edge of said spray-catchers F F must be about even with the level of the water. On account of raising or lowering the paddle-wheel B to suit the draft of the boat, the said paddle-wheel B can be adjusted so as to cause the least possible disturbance of the water. Having thus overcome the difficulty of quieting the waves, and thereby preventing the washing away of banks of canals, I am enabled to run my herein-described canal-boat at a higher speed than ordinary boats, thereby saving expense and time in transportation of goods,

and making canal transportation more profitable than it is at present.

Claims.

I claim as my invention—

1. Dashers D D D, swinging on pivots at or near the top side of box-keelson A, substantially as and for the purpose hereinbefore set forth.

2. Adjustable spray-catchers F F, with diagonal openings G G near the stem of boat, substantially as and for the purpose hereinbefore set forth.

3. A canal-boat, with a fore-and-aft center box-keelson A, open at stem and stern, in combination with pivoted dashers D D D, windlass E, chain C, spray-catchers F F, and diagonal openings G G, substantially as and for the purpose hereinbefore set forth.

HENRY W. FRACKMANN.

Witnesses:

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AUGUST ALBRECHT.