G. Parker.

Wheels in Channels.

No. 6,239. Patented Mar. 27, 1849.

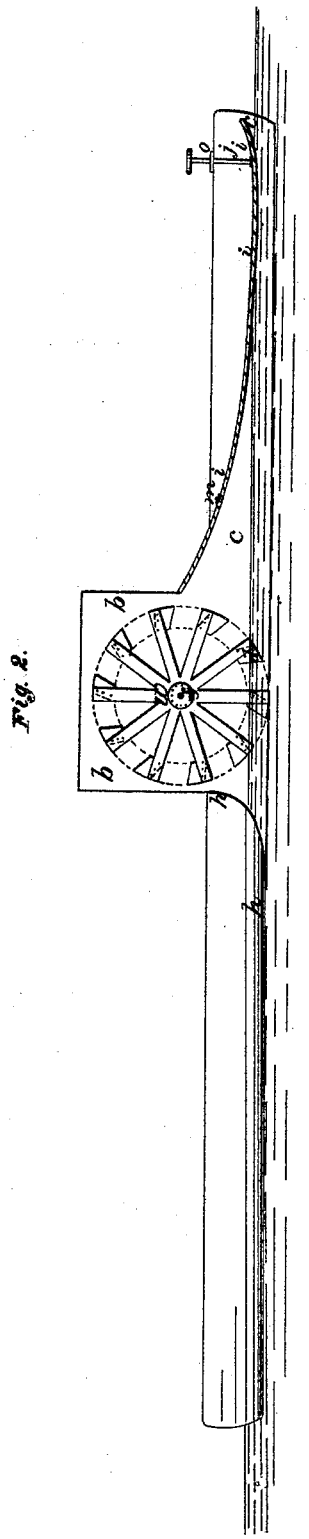

Fig. 2.

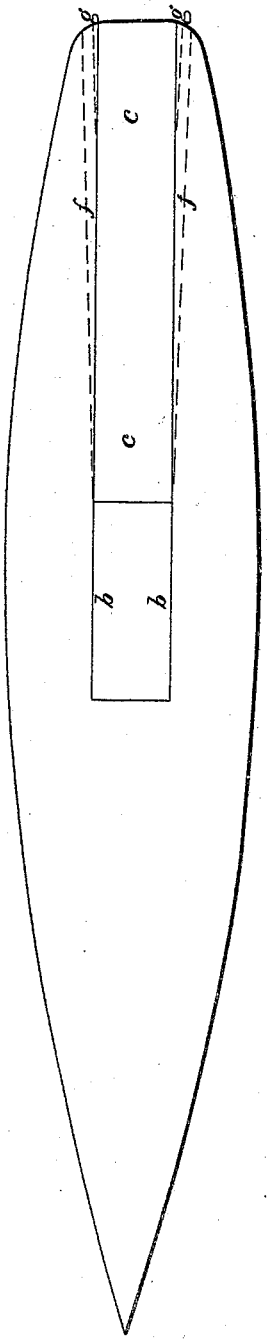

Fig. 1.

UNITED STATES PATENT OFFICE.

GRENVILLE PARKER, OF WORCESTER, MASSACHUSETTS.

IMPROVED CANAL-STEAMBOAT.

Specification forming part of Letters Patent No. **6,239**, dated March 27, 1849.

To all whom it may concern:

Be it known that I, GRENVILLE PARKER, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful improvements in the structure and arrangement of the paddle-wheels and other appendages connected therewith of steamboats with a view to adapt them to the navigation of canals, of which the following is a full and exact description, reference being had to the annexed drawings of the same, making a part of this specification, in which—

Figure 1 is a horizontal and Fig. 2 a vertical section of a boat with my improvements applied thereto.

The great obstacle heretofore presented to the navigation of canals by steamboats has been the excessive agitation of the water by their propelling-wheels, which has the effect of destroying the banks by washing or abrasion. This obstacle I propose to surmount by placing a paddle-wheel having buckets inclined to its radii backward in the middle of the boat, where it acts upon the water through an opening in the bottom extending from the wheel-house to the stern of the vessel. That part of the opening aft of the wheel-house I call the "water-way." This water-way is provided with an adjustable top or cover, which rests upon or near the surface of the water to allay or quell any swell or waves that may be produced by the action of the wheel, which it does by bringing into contact with the same a long plane gradually-declining surface, under which they must pass.

The wheel-house or pit *b b* is represented as being near the center of the vessel; but it may be placed either forward or aft of this point at the option of the constructor. The sides of the wheel-house and of the water-way *c c* must be well supported by timbers and planked like the bottom and sides of the rest of the hull. If it should be deemed advisable, the water-way may be made gradually wider as it approaches the stern, as represented by the dotted lines *f f* or *g g*, Fig. 1.

The paddle-wheel W may be constructed and mounted in any of the usual methods, provided that care be taken to secure the buckets to the arms in an inclined position, as represented at *d*, Fig. 2, so that they will leave the water in nearly a vertical position, this arrangement being important, as the agitation of the water by them when propelling the vessel is thereby greatly diminished. To diminish the slap or jar of these buckets upon their entrance into the water, I prefer to bend or arch them longitudinally behind the plane of the arms, the height of their arch being equal to their dip. I, however, do not intend to limit myself to a curved or any particular form of inclined bucket. This inclination of the buckets, although it diminishes greatly the agitation of the water, nevertheless leaves waves of sufficient force and magnitude to injure greatly the banks of a canal, and they must therefore be allayed, and this is done after they leave the wheel by means of the adjustable top *i i* of the water-way *c*, which I call the "wave-queller," and which is for this purpose lowered by means of the screw J until sufficient of its after end is in contact with the water to produce the desired result.

The wave-queller *i i* must be made to fit between the sides of the water-way, but not so tightly as to prevent it from being easily raised and lowered. It may be made of plank and timber properly framed together or of any other suitable material. Its forward end is suspended by hinges *m* and its after end by the screw J, by which it is raised and lowered, the screw turning in a nut *o*, secured to the deck. The after end of the queller is curved upward in order that it may not drag the water after it and also that it may not dip under the surface when the vessel moves backward.

The top *i i* of the water-way may be permanently attached to the sides, instead of being adjustable, at the option of the constructor, or as the particular circumstances of each case may render advisable.

The vessel may be steered by one rudder placed in the center of the water-way or by two rudders, one placed on each side of the water-way, as may be deemed best.

Having thus described the construction and operation of my improved steamboat for canal navigation, I desire it to be understood that I do not claim to be the inventor of any of the parts of the same in themselves; but

What I do claim is—

The combination of the paddle-wheel having inclined buckets with the wave-queller arranged as herein described or in any other substantially similar manner, whereby the boat is propelled with comparatively little disturbance of the water or abrasion of the banks of the canal from the action of the wheel.

GRENVILLE PARKER.

Witnesses:
WM. GREENLEAF,
ELI GOULDING.