

T. W. EDGAR.

Means of Snubbing Canal-Boats.

No. 136,982.

Patented March 18, 1873.

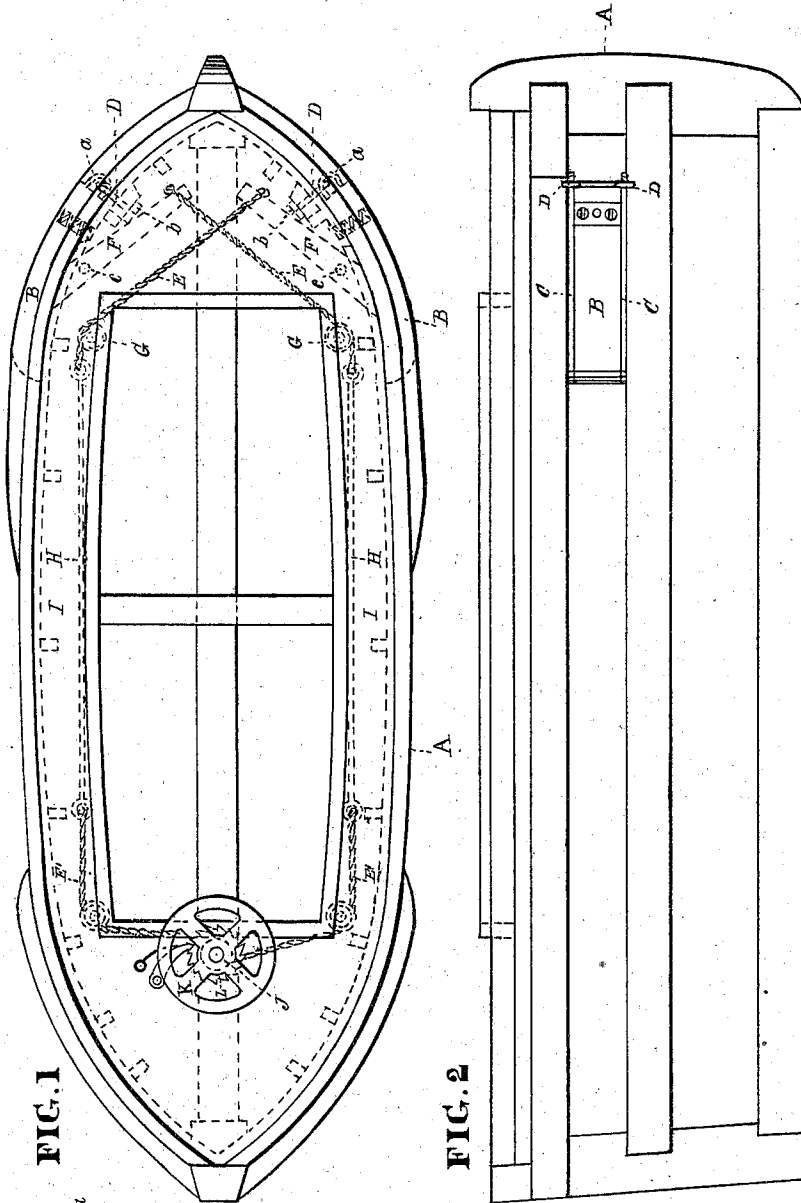


FIG. 1

FIG. 2

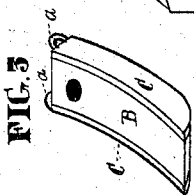


FIG. 3

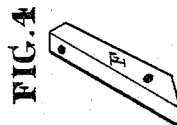


FIG. 4

Witnesses
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Inventor
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UNITED STATES PATENT OFFICE.

THOMAS W. EDGAR, OF ESPY, PENNSYLVANIA.

IMPROVEMENT IN MEANS OF SNUBBING CANAL-BOATS.

Specification forming part of Letters Patent No. **136,982**, dated March 18, 1873.

To all whom it may concern:

Be it known that I, THOMAS W. EDGAR, of Espy, in the county of Columbia and State of Pennsylvania, have invented a Brake for Canal-Boats in passing through locks, and a Fender for the same and other Vessels, to prevent collision, of which the following is a specification:

Heretofore boats have been passed through the locks by what is technically called snubbing; that is to say, to prevent the boat striking against the gates or walls of the lock, the bowsman has to clamber up the gate or wall of the lock and wind a rope attached at one end to the boat around a post or other permanent object, to check the boat in its passage; and the proper execution of this work depends upon the activity and experience of the bowsman. Without these prerequisites the work is liable to be badly executed. Frequently, the bowsman, being a small man or but a boy, is unable to go through the operation in time, and has to call on the teamster for assistance, who is then obliged to leave his horses, run to the boat, and catch the end of the line thrown up to him by the bowsman. This is attended with danger to the horses, if near a railroad and a train is passing. On account of the difficulties above mentioned the boat is often not checked in time, and consequently strikes the gate with such force as to break or seriously injure the bow of the boat, or to break or badly injure the gate, or else, by the sides of the boat striking against the walls of the lock, to injure the boat, and sometimes both the boat and lock; and very few boats pass through the locks without more or less injuring them or the boats; and in consequence of the nature of the operation of snubbing the boats many lives have been lost by the men being caught by the ropes and pulled into the water and drowned.

The object of my invention is the avoiding of all these difficulties and the dispensing with the necessity of a third man to snub the boat, and also dispensing with a considerable quantity of lines, &c. The nature of the invention consists in providing the sides of the boat, at the front end, in front of the break of the boat, with brakes which are hinged at their front ends to the sides of the boat.

The brakes are provided with spiral or other springs which draw them to the sides of the boat when not in use. The brakes are operated by means of levers which protrude through the sides of the boat. There are chains connected with the levers for manipulating them. They pass around pulleys and under the running-boards to the capstan-post and connect therewith. The capstan is provided with a wheel in the usual manner. Instead of chains running all the way, rods may take their place at the middle or straight part of the boat, as hereinafter described. The brakes are also intended to act as fenders in passing other boats or bridges, abutments, aqueducts, &c. They are also intended to be used for this purpose on river-boats or sea-going vessels of all descriptions.

Figure 1 is a plan view of a canal-boat with the improvement connected therewith. Fig. 2 is a side elevation of the same. Fig. 3 is an isometrical view of one of the brakes B. Fig. 4 is a like view of one of the levers F.

Like letters in all the figures indicate the same parts.

A is a canal-boat. B B are brakes which are hinged at their front ends to the sides of the boat. They have straps C C on their edges, with eyes *a a* on the front ends which connect with eyebolts D D that pass through the sides of the boat and are secured on the inside of the same by nuts *b b*. E E are chains connected at one end to the levers F F, whose fulcrum-pins *c c* are connected with timbers of the boat or suitable fixtures. The chains pass around pulleys G G, and are connected at their other ends with the longitudinal rods H H under the running-boards I I. With the rear ends of these rods are connected chains E' E', which connect with the vertical rod or capstan J, provided with a hand wheel, K, and ratchet-wheel L. This device for operating the brakes could be so arranged as to be managed at any part of the vessel; but I prefer placing the capstan in the position represented, so as to be handy to the steersman, who can apply the brakes without going far from his steerage-wheel, thus avoiding the necessity of the services of an extra hand.

When the parts B B are used as fenders they

may be cushioned on their insides with India rubber, so as not to injure the sides of other vessels when brought in contact with them.

I claim as my invention—

1. The combination of brakes with the sides of a canal-boat, operated by any suitable mechanism for projecting them outward, for snubbing the boat in locks, substantially as described.

2. The combination of the brakes B B with the sides of a boat, the brakes being operated by means of the levers F F, chains E E and E' E', rods H H, and capstan J, substantially in the manner and for the purpose set forth.

THOMAS W. EDGAR.

Witnesses:

STEPHEN USTICK,
THOMAS J. BEWLEY.