

E. T. LIGON.

Improvement in Chain-Propellers for Canal-Boats.

No. 128,319.

Patented June 25, 1872.

Fig. 1.

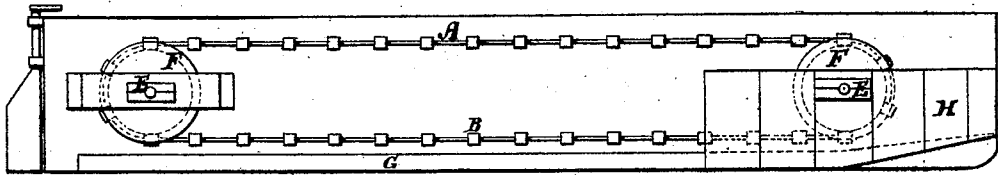


Fig. 2.

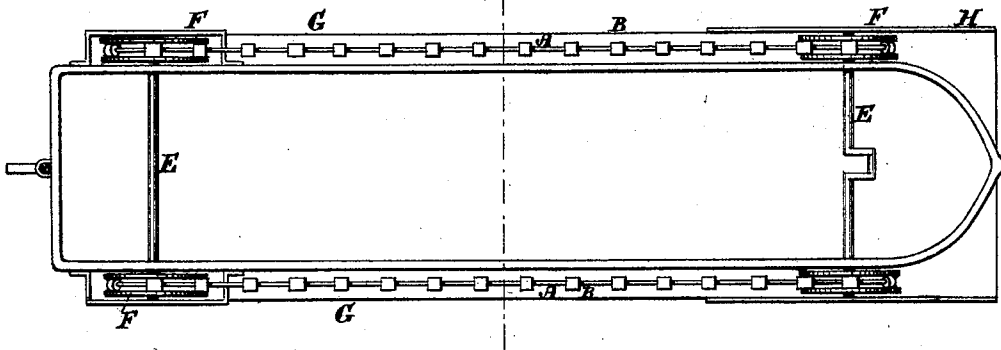


Fig. 3.

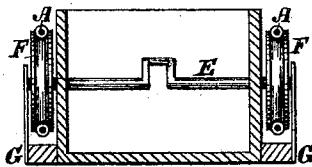
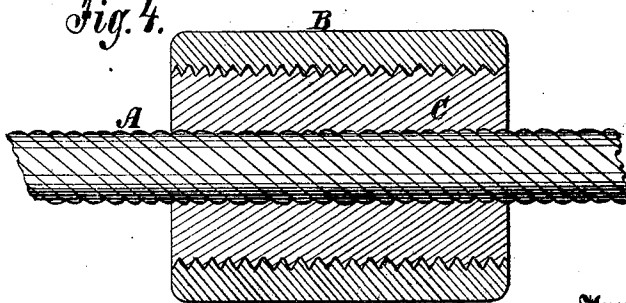


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

EDWIN T. LIGON, OF DEMOPOLIS, ALABAMA.

## IMPROVEMENT IN CHAIN-PROPELLERS FOR CANAL-BOATS.

Specification forming part of Letters Patent No. 128,319, dated June 25, 1872.

Specification describing a new and useful Improvement in Propelling Canal-Boats, invented by EDWIN T. LIGON, of Demopolis, in the county of Marengo and State of Alabama.

My invention relates to the class of endless-chain canal-boat propellers; and has special reference to the mode of forming the buckets and applying them to the endless wire ropes or cables. These buckets are composed of short sections of rubber tubes, and metal tubes inclosing the same. The rubber tubes are bound or secured to the cable by means of wire, or other suitable means; and the metal tube, which is of the same length, is formed with an internal screw-thread and screwed upon the rubber tube, thus forcing the rubber to take a firm hold of and adapt itself to the form of the cable, so as to retain its position while passing through the water. The metal tube or cylinder also protects the rubber from the wear or injury to which it would otherwise be exposed. I arrange the cables on grooved wheels or pulleys at the sides of the boat, so that the shaft of either wheel or pulley can be rotated by the engine.

Figure 1 is a side elevation of a boat provided with my improved propellers. Fig. 2 is a plan, Fig. 3 is a cross-section, and Fig. 4 is a section of one of the buckets and side view of part of a cable.

Similar letters of reference indicate corresponding parts.

A represents the cables; B, the metal portions of the buckets; C, the flexible parts. E represents the pulley-shafts; F, the pulleys. G are the guards along the bottom of the boat for the cables and buckets, also to protect the canal bottom; and H represents the scoop at the bow.

It will be seen by this mode of propulsion that the power applied will be direct, uniform, and in a straight line with the course of the vessel; that the commotion it will necessarily produce will be nowhere violent, but will be concentrated on a small line some distance below the surface of the water, and will be equally distributed on both sides of the boat from stem to stern.

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

The improved propeller, formed of a cable having its buckets formed of elastic inner tubes and the outer metal tubes, as shown and described.

EDWIN T. LIGON.

Witnesses:

THOS. J. FOSTER,  
GEO. F. GLOVER.