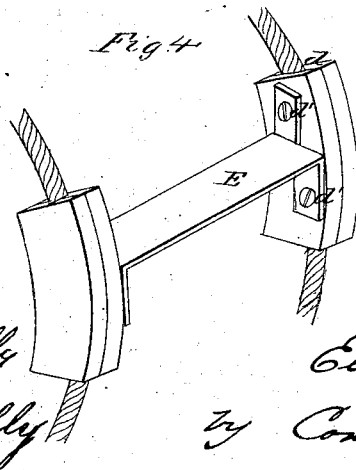
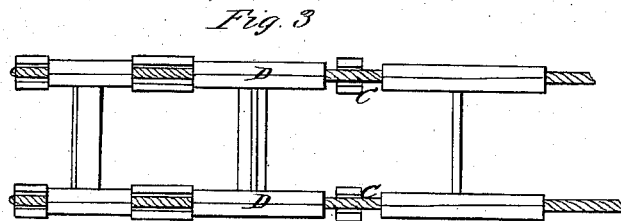
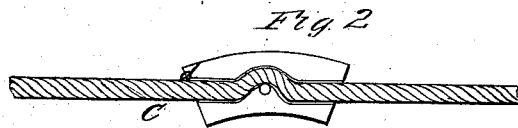
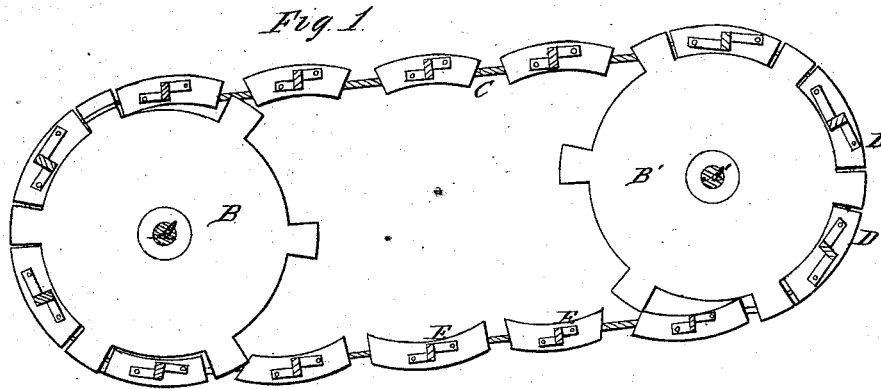


E. E. EVERITT.
Endless-Chain Propeller.

No. 160,890.

Patented March 16, 1875.



Witnesses
J. B. Connolly
A. A. Connolly

Inventor
Elisha E. Everitt.
by *Connolly Bros.*

UNITED STATES PATENT OFFICE.

ELISHA E. EVERITT, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ENDLESS-CHAIN PROPELLERS.

Specification forming part of Letters Patent No. **160,890**, dated March 16, 1875; application filed August 8, 1874.

To all whom it may concern:

Be it known that I, ELISHA E. EVERITT, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Endless-Cable Propeller; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical longitudinal section of my invention. Fig. 2 is a sectional view of detail. Fig. 3 is a plan view, and Fig. 4 is a perspective view of portions of propeller.

My invention has relation to endless-cable propellers; and consists in the novel construction and combination of parts, as hereinafter fully described and claimed.

In the accompanying drawing illustrating my improvement, A and A' are two shafts, mounted in suitable bearings, the latter being in a more elevated plane than the former, and being also designed to be horizontally adjustable. B and B' are spur or cog wheels, mounted upon said shafts, sustaining the endless wire cables C C. Lugs D D, adapted to mesh with the wheels B B', and forming supports for the beaters or paddles E, are affixed at uniform intervals upon said cables. In order to prevent the slipping of the lugs upon the cable the former are grooved, as shown at *d*, the latter being bent to accommodate itself to said groove. The lugs D D are formed in two vertical sections or half-boxes, and are held together by bolts or rivets *d'*. Said lugs may be manufactured of metal, wood, leather, or any substance adapted to the purpose—metal,

however, being preferred. Instead of two endless cables running upon four wheels, a single endless cable, with beaters on each side, may be employed, two driving-wheels only being then required.

The advantages of the foregoing construction are briefly as follows: The wire cable, being devoid of links and eyes, will not wear out, and is not liable to become disarranged, as chains are. It will also be found to be much lighter, stronger, and better adapted to the purposes in view than chains. The grooving of the lugs and the corresponding bending of the cables furnishes a simple and effective means of uniting the two together. The grooving of the spurs of the wheels and the meshing therewith of the lugs produces a smoothness and accuracy of movement necessary to perfect working. The joint combination of the cable, lugs, wheels, and paddles produces a flexible propeller without a single joint. The arrangement of the shafts in different planes causes each beater as it enters and passes below the water-line to "take fresh water," no two beaters thus at the same time operating upon the same horizontal laminae of fluid.

What I claim as my invention is—

The improved chain-propeller, consisting of the cables C, grooved lugs *d*, transverse paddles E, and grooved spur-wheels B B', constructed and combined substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of July, 1874.

ELISHA E. EVERITT.

Witnesses:

M. DANL. CONNOLLY,
FRANK HARTMAN.