W. J. CARROLL.

ENDLESS-CHAIN PROPELLER.

No. 192,563. Patented July 3, 1877.

Fig. 1.

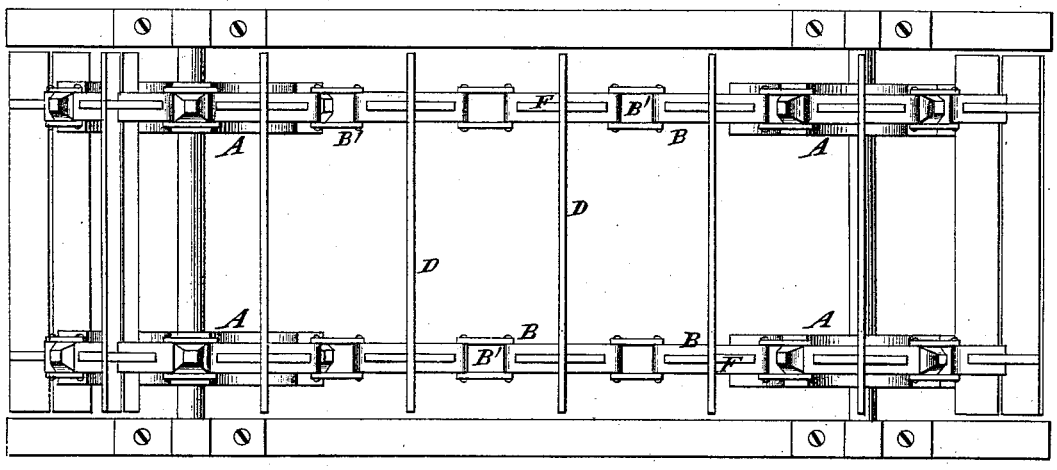


Fig. 2.

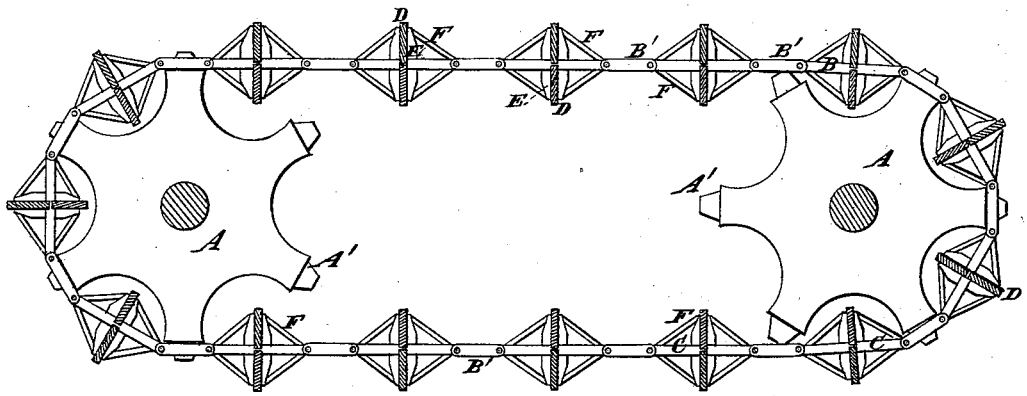
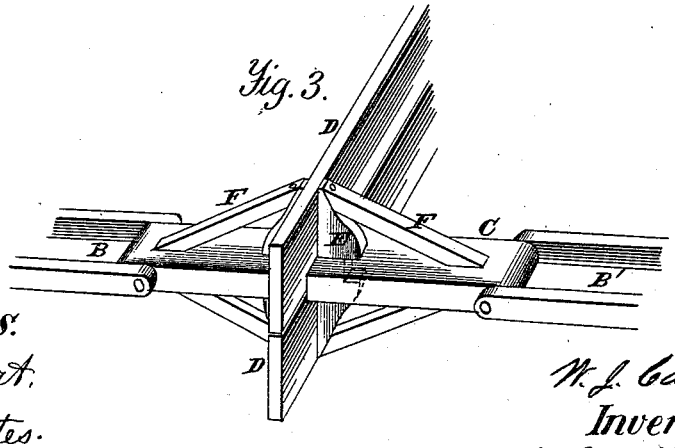


Fig. 3.



Witnesses:
A. Ruppert.
Wm. F. Bates.

W. J. Carroll
Inventor.
D. P. Holloway & Co.
Attys

UNITED STATES PATENT OFFICE.

WILLIAM J. CARROLL, OF NATCHEZ, MISSISSIPPI.

IMPROVEMENT IN ENDLESS-CHAIN PROPELLERS.

Specification forming part of Letters Patent No. **192,563**, dated July 3, 1877; application filed December 9, 1876.

To all whom it may concern:

Be it known that I, WILLIAM J. CARROLL, of Natchez, in the county of Adams and State of Mississippi, have invented a new and useful Improvement in Propellers for Steam-Vessels, of which the following is a specification:

My invention has for its object the use of a series of buckets attached to endless chains, and caused to revolve in such manner that in passing through the water they shall be made to travel in a right line; and my improvement consists in the manner of attaching the buckets to the endless chain so as to support, brace, and strengthen them to perform their work.

In the annexed drawing, making part of this specification, Figure 1 is a plan view of a wheel. Fig. 2 is vertical longitudinal section of the same; and Fig. 3 is a perspective view, showing distinctly the manner of securing the buckets to the chain, which is the subject of my application.

The same letters are employed in all the figures in the designation of the same parts.

A A are four sprocket-wheels on two parallel shafts, to one or both of which the propelling power is applied. The points A′ enter the open links B′ of the parallel endless chains B B, and cause them to revolve. The buckets D are attached to the intermediate solid links C in the following manner: They are made of two boards notched near the ends to fit over the links C, and inserted between the faces of the parallel bars E, which are notched also at the middle to fit over the link C at the end of the slot formed in the latter. When the buckets are inserted between the bars E, they are fastened by spikes passing through bars E, and also, if preferred, through the ends of the lateral braces F F, of which there are four, two above and two below the link, extending from the links C, near each end, to the top of the bars E and edges of the buckets D.

This construction gives great stability to the buckets, and will enable them to sustain the strain applied to them.

The open links are made of parallel bars pivoted on each side to the ends of solid links.

The buckets are equally adapted to sustain pressure in either direction.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an endless propeller, the buckets D and links C, in combination with the bars E and lateral braces F for supporting the buckets against pressure, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM J. CARROLL.

Witnesses:

CHAS. CARROLL,

WM. SCHOFIELD.