

J. NEUMANN.
Chain Propellers.

No. 133,794.

Patented Dec. 10, 1872.

Fig. 1

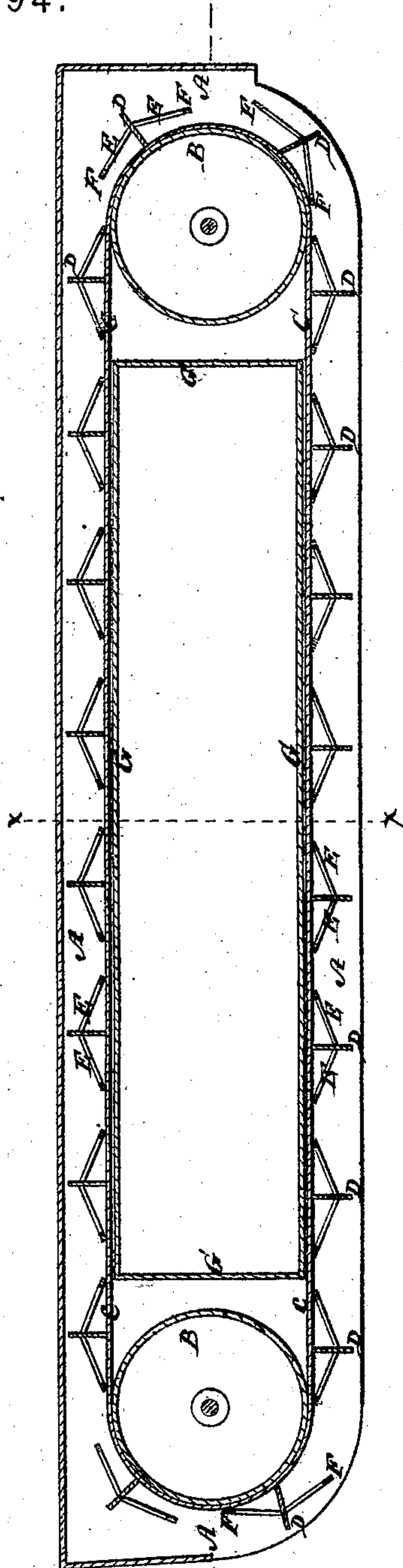
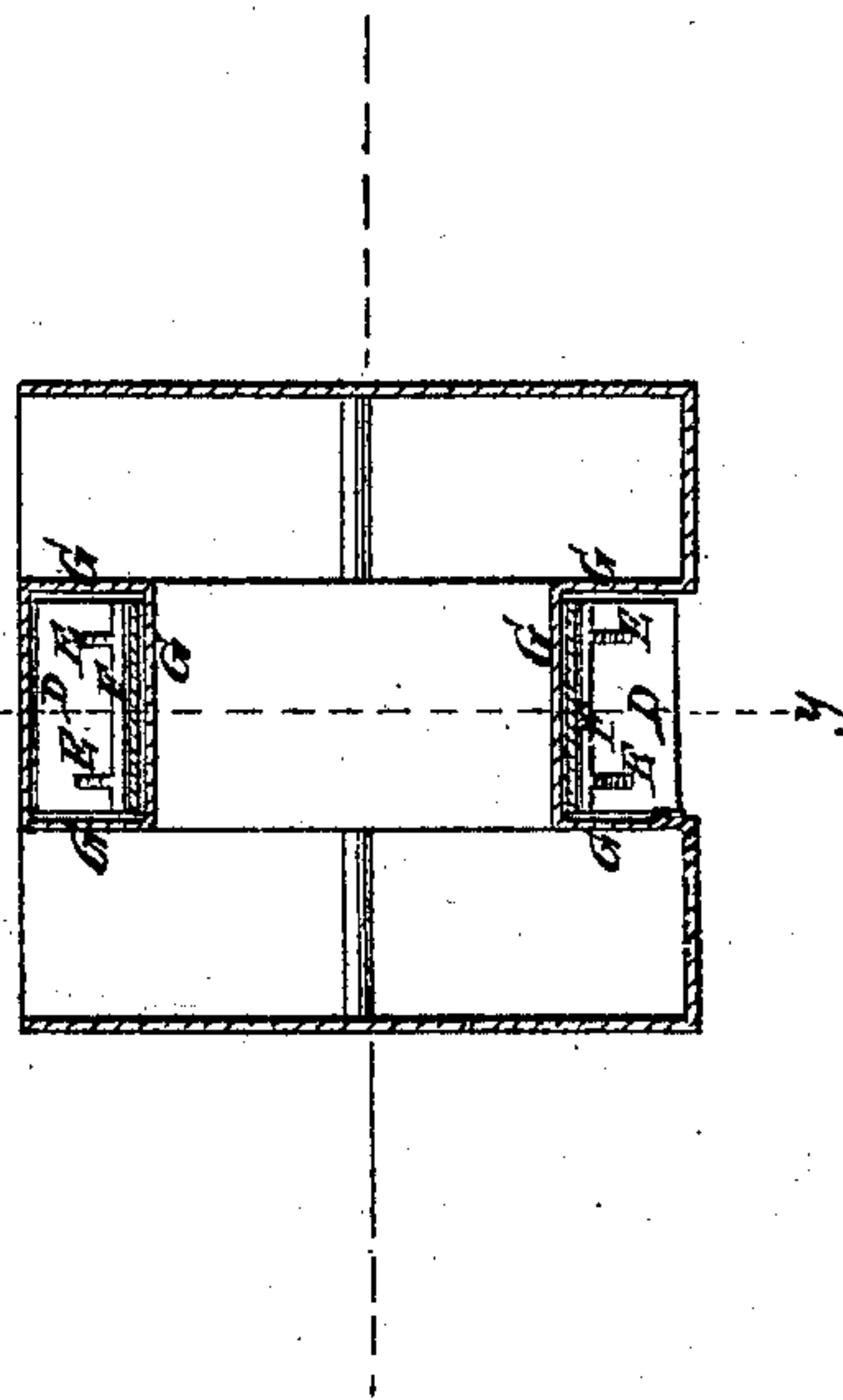


Fig. 2



Witnesses:

E. Wolff.
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PER

UNITED STATES PATENT OFFICE.

JOHN NEUMANN, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN CHAIN-PROPELLERS.

Specification forming part of Letters Patent No. 133,794, dated December 10, 1872.

To all whom it may concern:

Be it known that I, JOHN NEUMANN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Propeller for Boats, of which the following is a specification:

My invention consists of an endless carrier of wire ropes, chains, or belts running the whole length of the boat, over a drum at each end, in a channel along the center of the boat, at the top, the ends, and the bottom, with numerous buckets extending across the belt or carrier and projecting from it at right angles, with braces for supporting them which bear upon the belt while in a straight line, but which are not attached to the belt, so they will allow the latter to bend in going around the drums.

Figure 1 is a longitudinal sectional elevation taken on the line *y y* of Fig. 2, which is a transverse section taken on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is a channel or groove around the top, ends, and bottom of the boat, along the center, open at the bottom, closed at the top, and mostly at the ends. B represents a large drum at the ends of the boat extending from the channel at the bottom to the channel at the top. C represents an endless carrier of wire rope, chains, or belts, of any suitable kind, arranged in the channel A and working over the drums. D represents the buckets attached to the carrier crosswise and projecting at right

angles from it, being as long and wide as the channel will permit, and arranged as close together as necessary for obtaining the greatest resistance of the water. E represents the braces attached to these buckets, near the outward edges, and extending on each side to the carrier, whereon they bear by a foot-piece, F, to support them against the resistance of the water. They are not attached to the carrier, so that the latter will have freedom to bend in going around the drums. The power may be of any preferred kind, and will be attached to the drums, or one of them, in any preferred way. G represents water-tight partitions dividing the channels from the interior space of the vessel.

It will be seen that by this plan a very large bucket capacity is obtained, whereby a great amount of power can be employed, and the action will not be such as to produce swells likely to interfere with the banks of a canal, so that the apparatus will be particularly useful for canal-boat propulsion; but it is also useful for river and lake navigation.

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

A propeller for boats, consisting of an endless carrier, C, drums B, buckets D, and braces E, arranged in a central longitudinal channel, A, substantially in the manner described.

JOHN NEUMANN.

Witnesses:

T. B. MOSHER,
C. SEDGWICK.