

(No Model.)

G. TOD, Jr. & J. BUCKER.
APPARATUS FOR PROPELLING BOATS.

No. 265,185.

Patented Sept. 26, 1882.

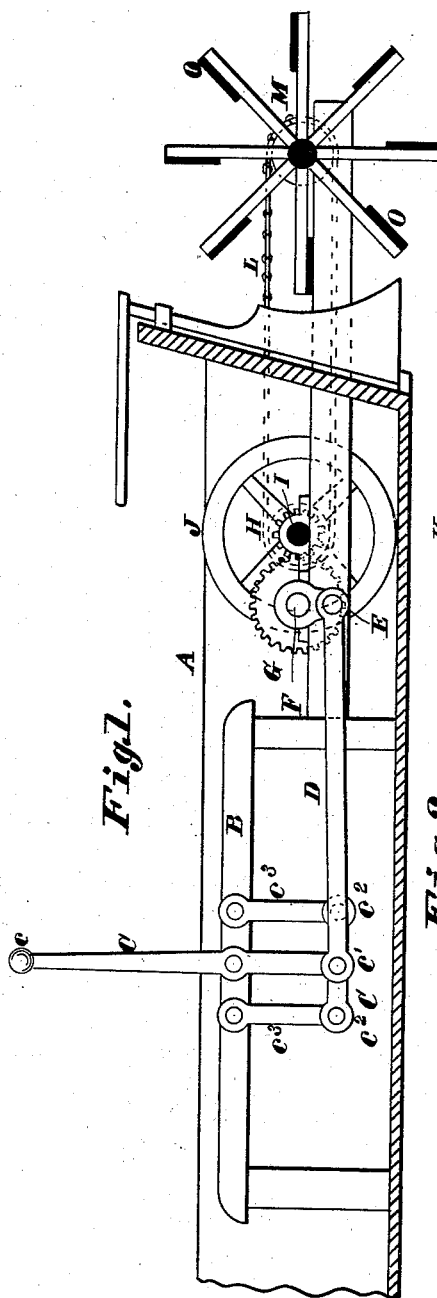


Fig. 1.

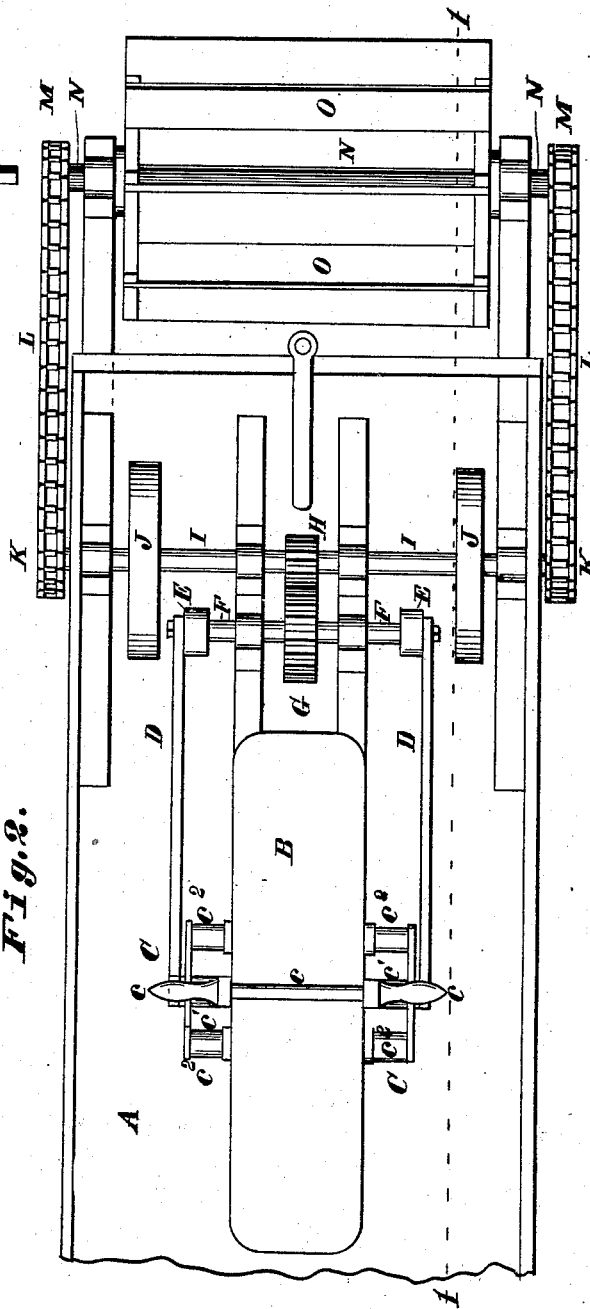


Fig. 2.

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UNITED STATES PATENT OFFICE.

GERHARD TOD, JR., AND JOSEPH BUCKER, OF WASHINGTON, MISSOURI.

APPARATUS FOR PROPELLING BOATS.

SPECIFICATION forming part of Letters Patent No. 265,185, dated September 26, 1882.

Application filed May 16, 1882. (No model.)

To all whom it may concern:

Be it known that we, GERHARD TOD, Jr., and JOSEPH BUCKER, both of Washington, in the county of Franklin and State of Missouri, have invented a certain new and useful Apparatus for Propelling Boats, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

10 In the drawings, Figure 1 is a longitudinal section at 1 1, Fig. 2. Fig. 2 is a top view.

The improvement relates to a combined foot and hand power by which a paddle-wheel is rotated.

15 A represents the stern part of a boat.

B is a longitudinal seat, that is straddled by the person or persons operating the apparatus.

20 C is a combined foot and hand lever frame, having a handle-bar, c , and foot-bars c' c^2 . The two outer foot-bars, c^2 , are connected with the seat by radius-links c^3 , so as to keep the three foot-bars c' c^2 in a relatively-horizontal position. The bar c' is connected by rods D to cranks E on the ends of crank-rod F. The crank-rod 25 carries a spur-wheel, G, engaging with a spur-pinion, H, upon a shaft, I, carrying balance-wheels J.

Upon the ends of the shaft I are chain-gear wheels K, connected by gear-chains L with chain-gear wheels M upon the paddle-shaft N. 30 The paddle-shaft carries a paddle-wheel, O, at the middle, and the shaft N may carry a paddle-wheel in addition at each end.

In working the apparatus the hands are applied to the bar c and the heels of the boots 35 are placed in the recess or space between the bars c' and c^2 . Thus both the arms and legs may be used both by extension and retraction. The bars c' c^2 may carry friction-rollers.

We claim as our invention— 40

A propelling apparatus consisting of lever C, having handle c and foot-bar c' , rod F, carrying cranks E E, and spur-wheel G, connecting-rods D D, shaft I, carrying pinion H, balance-wheels J J, and chain-wheels K K, paddle-wheel O, having shaft N, carrying chain-wheels M M, and the connecting-chains L L, 45 as set forth.

GERHARD TOD, JR.
JOSEPH BUCKER.

Witnesses:

GERHARD TOD, Sr.,
JOHN F. BUCKER.