

(No Model.)

N. C. CORCKRAN & R. J. THOMPSON.

BOAT PROPELLING DEVICE.

No. 327,771.

Patented Oct. 6, 1885.

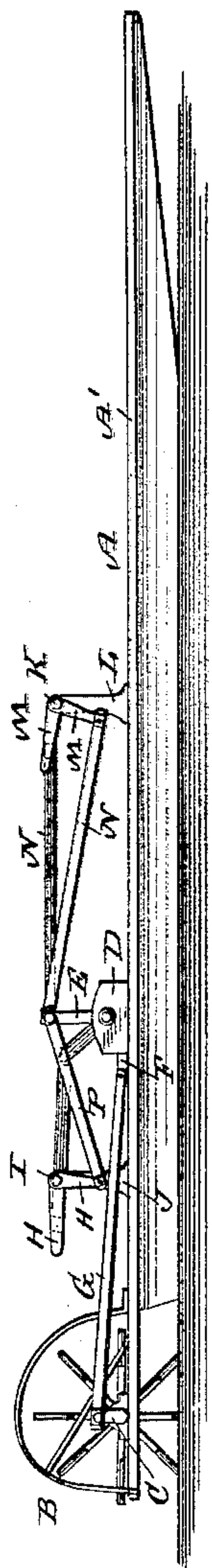


FIG. 1.

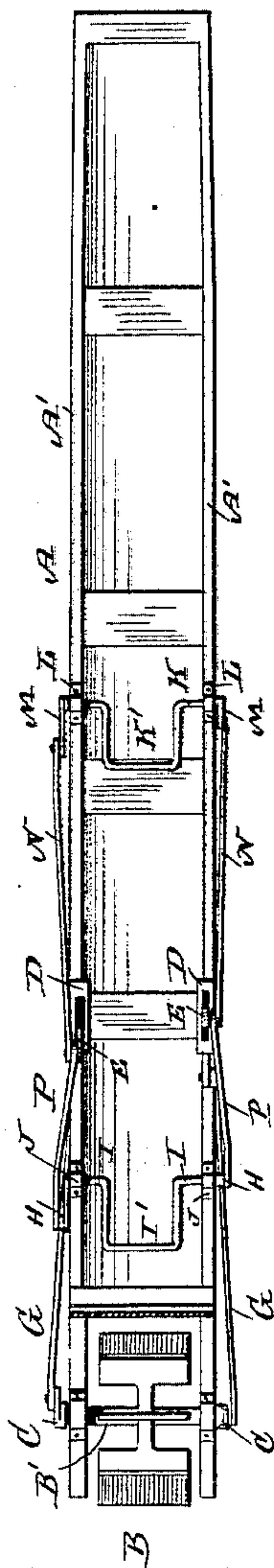


FIG. 2.

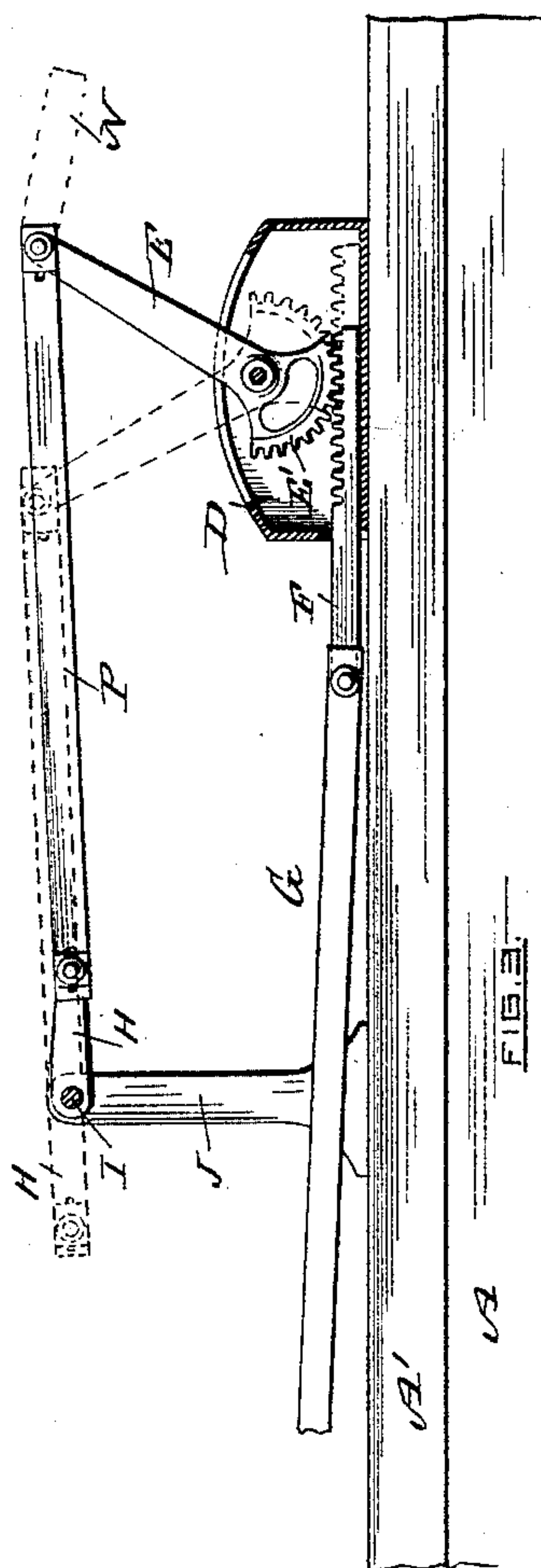


FIG. 3.

WITNESSES:

Chas. F. Schuch
Jno. Mathew Ritter

INVENTOR:

N. C. Corckran
R. J. Thompson
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

NEWTON C. CORCKRAN AND ROBERT J. THOMPSON, OF DONIPHAN, MO.

BOAT-PROPELLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 327,771, dated October 6, 1885.

Application filed July 28, 1885. Serial No. 172,873. (No model.)

To all whom it may concern:

Be it known that we, NEWTON C. CORCKRAN and ROBERT J. THOMPSON, of Doniphan, in the county of Ripley and State of Missouri, have
5 invented a new and Improved Boat-Propelling Device, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved device for propelling a
10 boat.

The invention consists in a boat provided with a stern-wheel, which derives its rotary motion by crank-arms and connections operated by hand in the boat.

15 The invention also consists of various parts and details, hereinafter more fully set forth and described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate
20 corresponding parts in all the figures.

Figure 1 is a side elevation of a boat with our improvement attached thereto. Fig. 2 is a plan view of the same, and Fig. 3 is a detail view of the device for transmitting the
25 motion to the stern-wheel connection.

The boat A, of usual construction, is provided with a stern-wheel, B, mounted on the shaft B', which is journaled in suitable bearings supported from the stern of the boat.
30 The shaft B' is provided on each outer end with the crank-arms C C, which are placed in opposite positions on the shaft B'. To each of the top rails, A' A', of the boat A are secured opposite each other the boxes D, in each of which is pivoted the lever E, provided on its lower end with the segmental gear-wheel E', which meshes into the rack F, having its bearings on the bottom of the box D,
40 and projecting beyond the latter, and connected by means of the pitman G to the crank-arm C on the shaft B' of the stern-wheel B. The upper ends of the levers E are connected by means of the connecting-rods P to the crank-arm H, attached to the outer ends of the shaft
45 I, mounted in the suitable bearing, J, secured to the top rail, A', of the boat A between the box D and the stern-wheel B.

The shaft I is formed in the center of the

boat into the crank-arm I', which is turned by
50 the operator seated in the boat.

The two levers E have relative positions to the crank-arms C of the stern-wheel B and the crank-arms H on the shaft I. A similar connection is established with the shaft K,
55 placed in suitable bearing, L, attached to the top rails, A', toward the front of the boat A. This shaft K is formed in the center of the boat into a crank-arm, K', turned by another operator seated in the boat, and also provided
60 on each outer end with the crank-arms M, which are connected to the levers E by means of the connecting rods N. The relative positions of the crank-arms M to the levers E is similar to the crank-arms H on the shaft I.
65

The operation is as follows: One or more operators are seated in the boat A and turn the center crank-arms, I' and K', by which a rocking motion is imparted to the levers E alternately by means of the crank-arms H and M
70 and the connecting-rods P and N. The rocking motion of the levers E gives a rotary motion to the stern-wheel B by means of the segmental gear-wheel E', the racks F, the pitmen G, and the crank-arms C on the shaft
75 B', on which the stern-wheel B is mounted.

By turning the crank-arms I' and K' in either direction a forward or backward motion of the boat is obtained.

Having thus fully described our invention,
80 we claim as new and desire to secure by Letters Patent—

1. The combination, in a boat, of a stern-wheel, crank-arms on the ends of the shaft thereof, sliding racks in front of the wheel,
85 pitmen connecting said racks and crank-arms, levers having segmental gear-teeth meshing with said racks, a shaft journaled between the said racks and stern-wheel, provided with a crank-arm between its ends and crank-arms
90 at its ends, and rods connecting the pivoted toothed levers with the crank-arms on the said crank-axle, substantially as set forth.

2. In a boat-propelling device, the stern-wheel having crank-arms on the ends of its
95 shaft, sliding racks in front of said wheel, pitmen connecting said crank-arms and racks, pivoted levers having segmental gear-teeth

meshing with said racks, crank-shafts jour-
naled in front and rear of said levers and pro-
vided with crank-arms on their ends, and rods
pivotally connecting said crank-arms and the
5 upper ends of the pivoted toothed levers, sub-
stantially as set forth.

3. In a boat-propelling device, the stern-
wheel B, mounted on the shaft B', the crank-
arms C, placed in opposite positions on the
10 shaft B', the pitmen G, and the racks F, piv-

otally connected, in combination with the alter-
nately-rocking levers E, pivotally attached in
the boxes D, and provided with the segmental
gears E', substantially as shown and described.

NEWTON C. CORCKRAN.
ROBERT J. THOMPSON.

Witnesses:

J. W. CUDE,
A. J. MCCOLLUM.