

J. R. PARKS.

Means for Propelling Canal-Boats.

No. 154,712.

Patented Sept. 1, 1874.

Fig. 1.

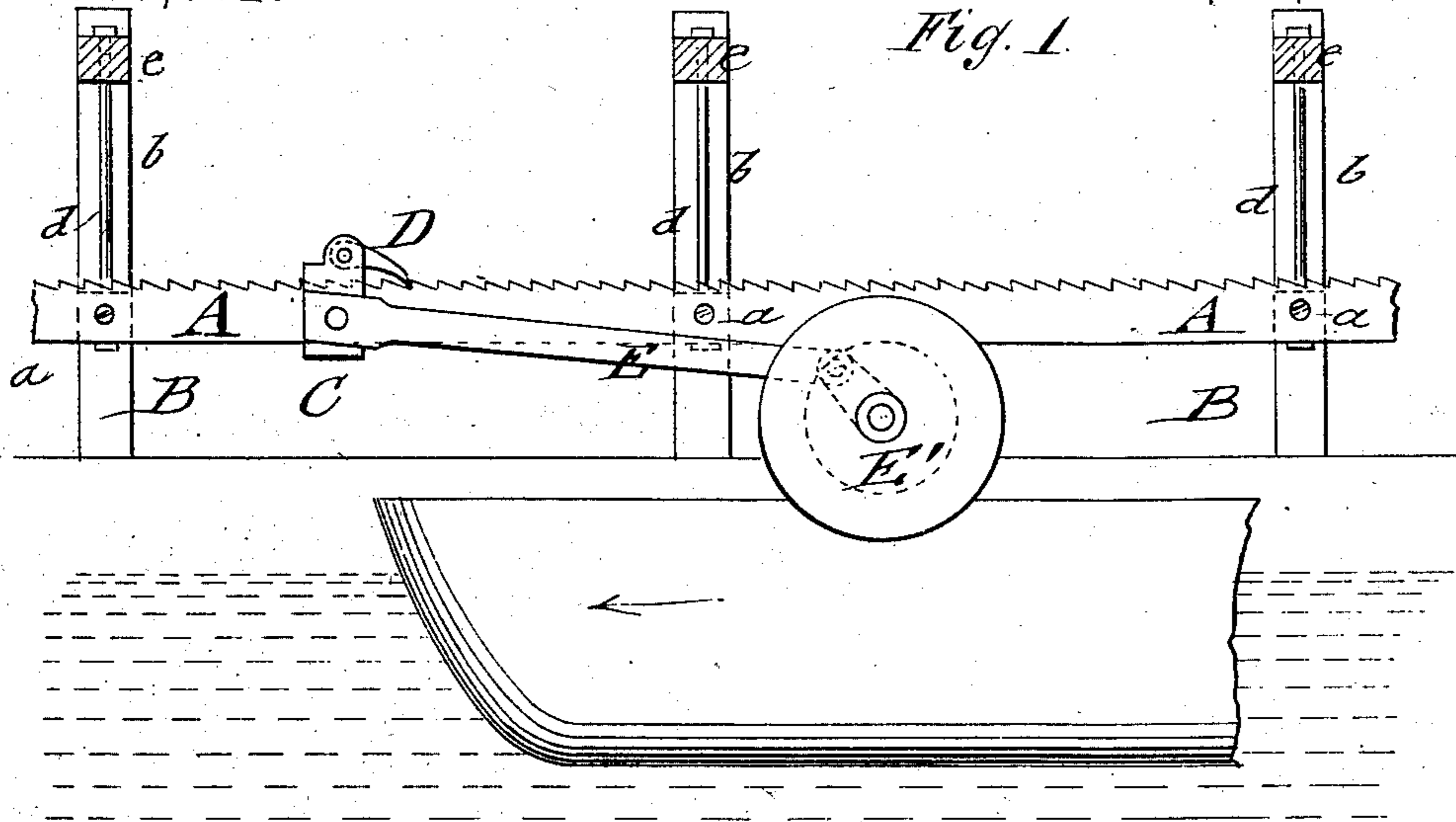
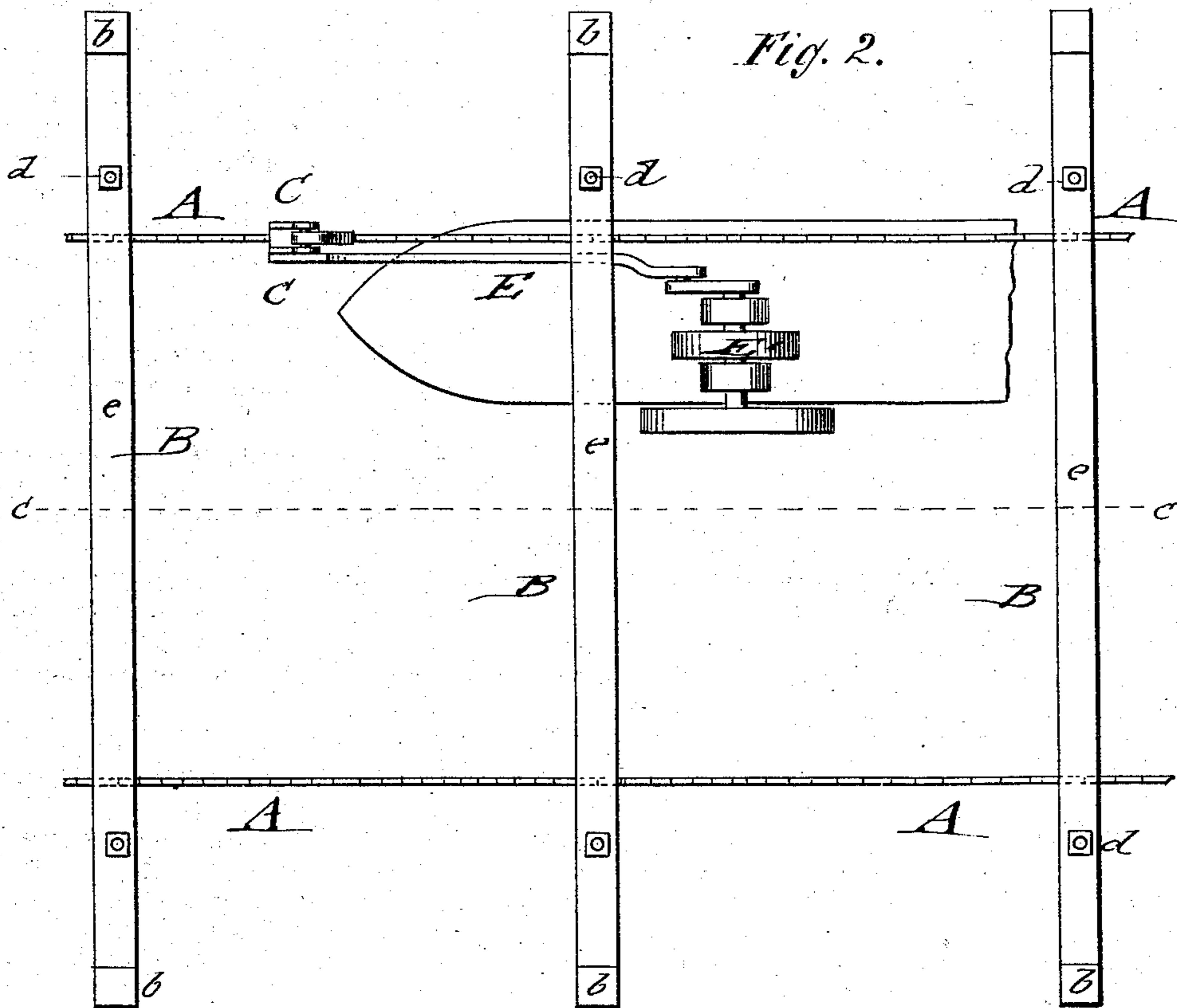


Fig. 2.



WITNESSES:

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JOHN R. PARKS, OF TOLONO, ILLINOIS.

IMPROVEMENT IN THE MEANS FOR PROPELLING CANAL-BOATS.

Specification forming part of Letters Patent No. **154,712**, dated September 1, 1874; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, JOHN R. PARKS, of Tolono, in the county of Champaign and State of Illinois, have invented a new and Improved Mode of Propelling Canal-Boats, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved device for propelling canal-boats, partly in section, on the line *c c*, Fig. 2; and Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to a mode for propelling canal-boats without causing the washing of the banks; and it consists of an elevated toothed guide-bar hung over the canal, for carrying a sliding clutch and pawl, which is connected, by a lever-rod, with a crank of the driving-shaft of an engine placed in a boat, so that the forward part of the crank-shaft rotation moves the sliding clutch, while, by the rear part of the crank-shaft rotation, together with the action of the pawl, the boat is propelled in forward direction.

In the drawing, A represents a toothed bar or rack, which is suspended, by a suitable frame, B, at one or both sides of the same, along the full length of the canal. The toothed bar A is elevated at convenient height for the ready passage of the boats below, and is firmly held by horizontal beams *a* of frame A, which are supported by posts *b* set into the banks of the canal, and by vertical rods *d* hung from the lateral top pieces *e*, extending over the canal from post to post. Any other suitable construction for firmly supporting the toothed bar A may be used, provided that the interior side is left free for the motion of clutch C. The teeth of rack B are cut in the direction of the

motion of the boat, so that the pawl D, which is pivoted to the upper part of clutch C, may swing back into the same and prevent the rearward motion of the clutch. The clutch C slides, by means of guide-flanges, along the toothed bar B, and is connected, by a lever-rod, E, with a crank on the driving-shaft E' of an engine, placed into a boat for that purpose. The engine rotates the driving-crank shafts, and produces, alternately, the forward motion of the clutch, and the forward motion of the vessel, which follows up the advanced position of the clutch by means of the pawl catching into the teeth of the rack-bar. The boat is thus propelled along the rack-bar without disturbing the water of the canal to such a degree as to cause the washing of the banks.

No wheels, screw, or rudder are necessary, while the boat with the engine will be able to tow a train of loaded boats connected therewith.

For the return-trip, the clutch is placed on the rack-bar, at the opposite side, enabling the drawing of the boats, even against a fair current, and avoiding, frequently, the use of locks.

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

The means for propelling canal-boats, consisting of the combination, with an elevated toothed bar, of a sliding clutch, connecting lever-rod, and the driving-crank of an engine in the boat, substantially as and for the purpose set forth.

JOHN R. PARKS.

Witnesses:

JOHN BAKER,
WILLIS STONE.