

A. BELZ.  
PROPELLING BOATS.

No. 185,662.

Patented Dec. 26, 1876.

Fig. 1.

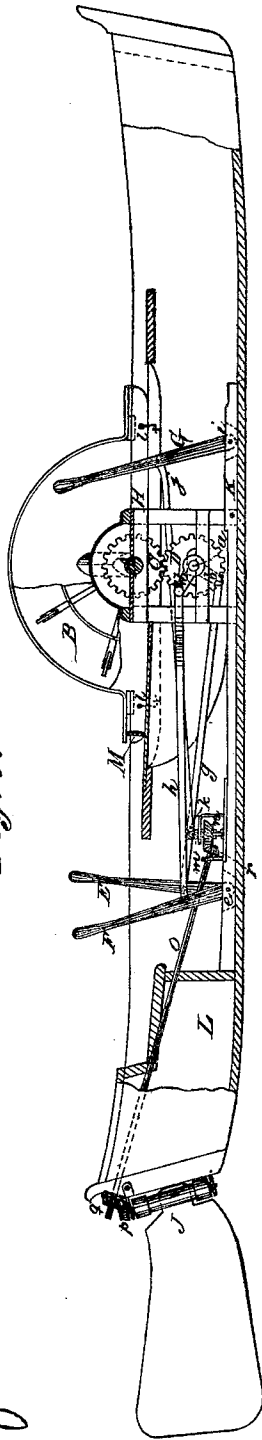
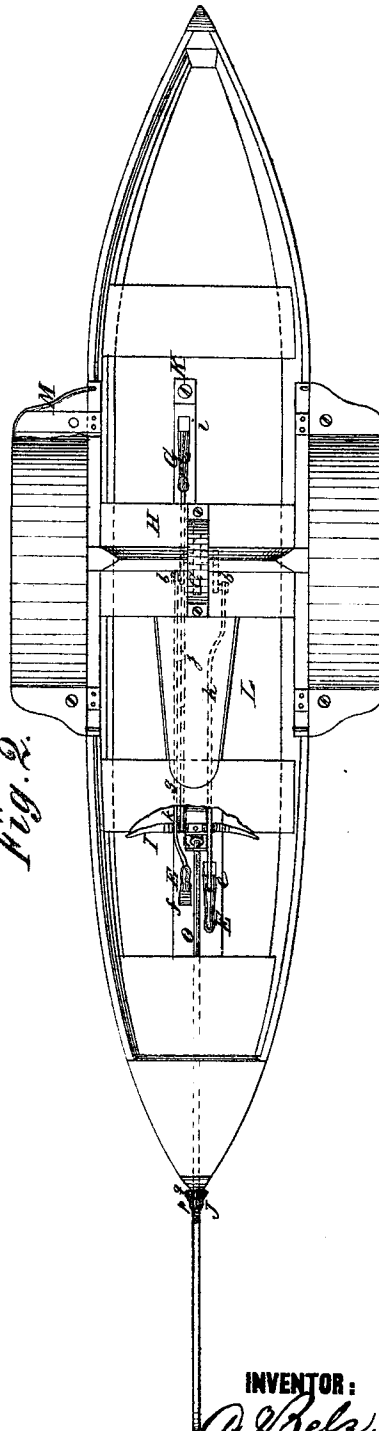


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE

ALBERT BELZ, OF APPLETON, WISCONSIN.

## IMPROVEMENT IN PROPELLING BOATS.

Specification forming part of Letters Patent No. **185,662**, dated December 26, 1876; application filed June 6, 1876.

*To all whom it may concern:*

Be it known that I, ALBERT BELZ, of Appleton, in the county of Outagamie and State of Wisconsin, have invented a new and Improved Boat-Propeller, of which the following is a specification:

Figure 1 is an elevation in section. Fig. 2 is a plan.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in claims.

In the drawing, A is the paddle-wheel shaft, provided with ordinary paddle-wheels B. C is a spur-wheel, which is keyed to the shaft A, and takes its power from a similar wheel, D, which is fixed upon the shaft *a*. The cranks *b b'* are placed on opposite ends of the shaft *a*, and are arranged at right angles to each other. E F are levers, which have their fulcrum at *e f*, and communicate motion to the cranks *b b'* through the connecting-rods *g h*. G is a lever, having a fulcrum at *i*, and transmitting its motion through the connecting-rod *j* to the rod *g*, these rods being pivoted together at *k*. The spur-wheel D, the paddle-wheel B, and accompanying devices are supported upon a frame, H, which is not permanently attached to the boat L, being retained in position by the hooks *l l*.

To remove the entire propelling apparatus from the boat, it is only necessary to loosen

the hooks *l l* and withdraw the pins at *e* and *i*, when it may be readily lifted out.

M is a guard, consisting of an iron rod, which is hooked onto the frame H at each end, and extends across the outside of the wheel-house. The levers E, F, and G have a common bed-piece, K, which is also mortised to receive the tenons of the detachable frame H. The steering apparatus consists of a T-lever, I, placed upon a short vertical shaft, *m*, in the bottom of the boat, near the stern. The motion of the lever I is communicated to the rudder-post J through the inclined shaft *o* and bevel-wheels *n, p, q*, and *r*.

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

1. The combination of the detachable frame H, carrying the wheels B, and boat L, as shown and described.

2. The combination of the lever I, shaft *o*, rudder-post J, and wheels *m n p q*, as shown and described.

3. The combination of the bed-piece K, levers E F G, and frame H, substantially as specified.

4. The combination of the guard M and detachable frame H, substantially as shown and described.

ALBERT BELZ.

Witnesses:

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