

C. THEOBALD.
Vibrating-Propellers.

No. 158,148.

Patented Dec. 22, 1874.

Fig. 1.
F

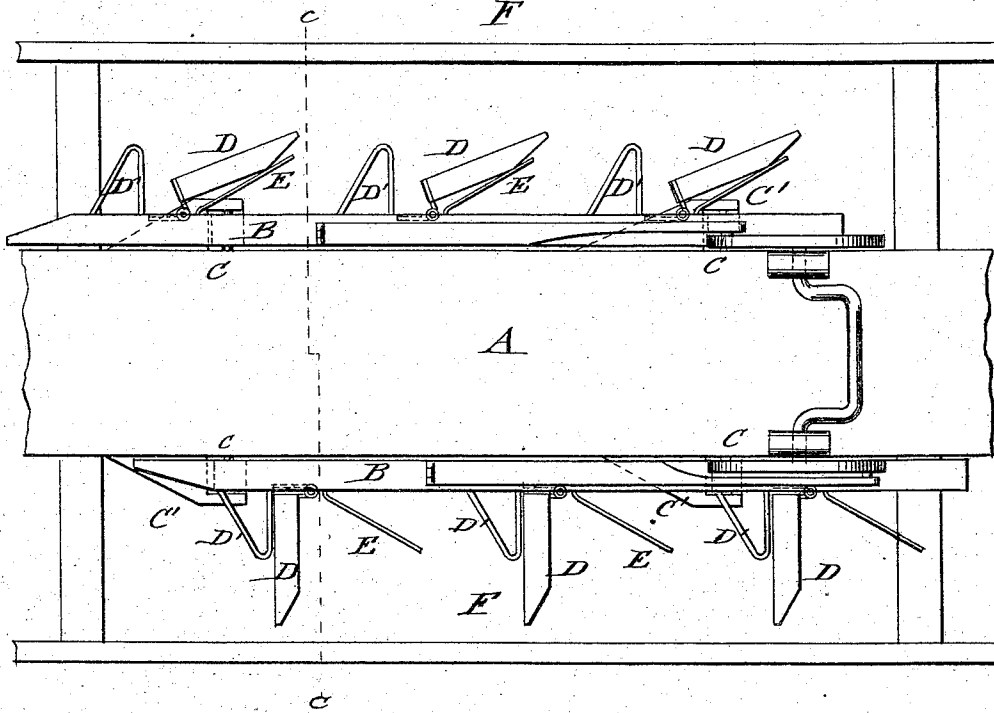
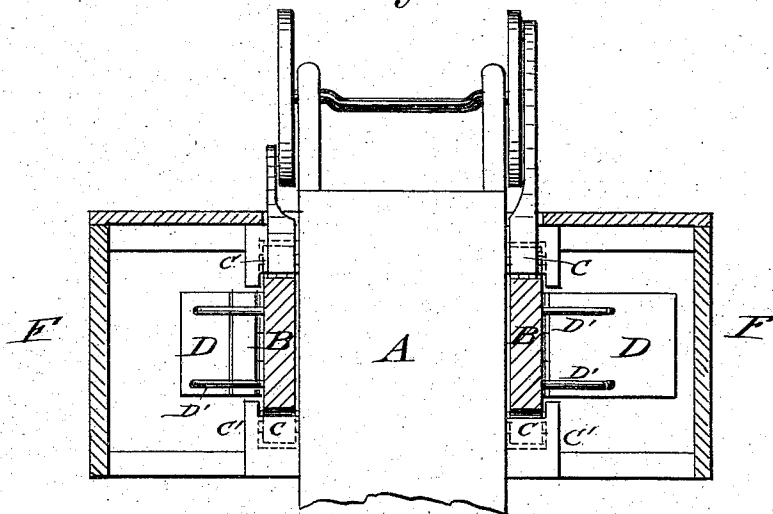


Fig. 2.



WITNESSES:

E. Wolff
A. F. Terry

INVENTOR:

Clement Theobald
BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CLEMENT THEOBALD, OF ELLISTON STATION, KENTUCKY.

IMPROVEMENT IN VIBRATING PROPELLERS.

Specification forming part of Letters Patent No. **158,148**, dated December 22, 1874; application filed August 15, 1874.

To all whom it may concern:

Be it known that I, CLEMENT THEOBALD, of Elliston Station, in the county of Grant and State of Kentucky, have invented a new and Improved Canal-Boat Propeller, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of my improved canal-boat propeller; Fig. 2, a vertical transverse section of the same on line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

In the drawing, A represents a boat of any suitable size, having a steam-engine of suitable power to impart motion from the driving-shaft by hinged crank-lever, or other connection, to the sliding boards B, which are reciprocated either simultaneously or alternately, as found most advantageous. Boards B run on suitable upper and lower friction-rollers C, which turn in side bearings C'. The bearings C' are inclined or tapered off in forward direction for interfering as little as possible with the motion of the boat. A series of paddles, D, is hinged at suitable intervals to each board B, according to the size and speed of the boat, being supported in rectangular position by horizontal braces D', for giving forward pro-

pulsion to the boat, and cushioned off on band-springs E when carried back in the water. The forward stroke of the slide-boards B throws the paddles sidewise along the boat, and on the cushioning-springs, so as to offer hardly a resistance to the water, while the return stroke throws them on the braces into position for producing the propulsion of the boat. The reciprocating boards, with the hinged paddles, are inclosed by top and side extending boxes F, which are open at the bottom, and strongly applied to the boat. The front edges of the boxes F are tapered for cutting readily through the water. The boxes convey a sufficient amount of water to the paddles, but prevent the agitation of the same and the washing of the banks. In rivers or open waters the boxes may be dispensed with.

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

A submerged incased propeller, consisting of reciprocating bars B B arranged under the water on each side of boat, and provided with a series of short hinged side paddles, D, sustained alternately, as shown and described.

CLEMENT THEOBALD.

Witnesses:

A. CASTLEMEN,
WM. A. PETTET.