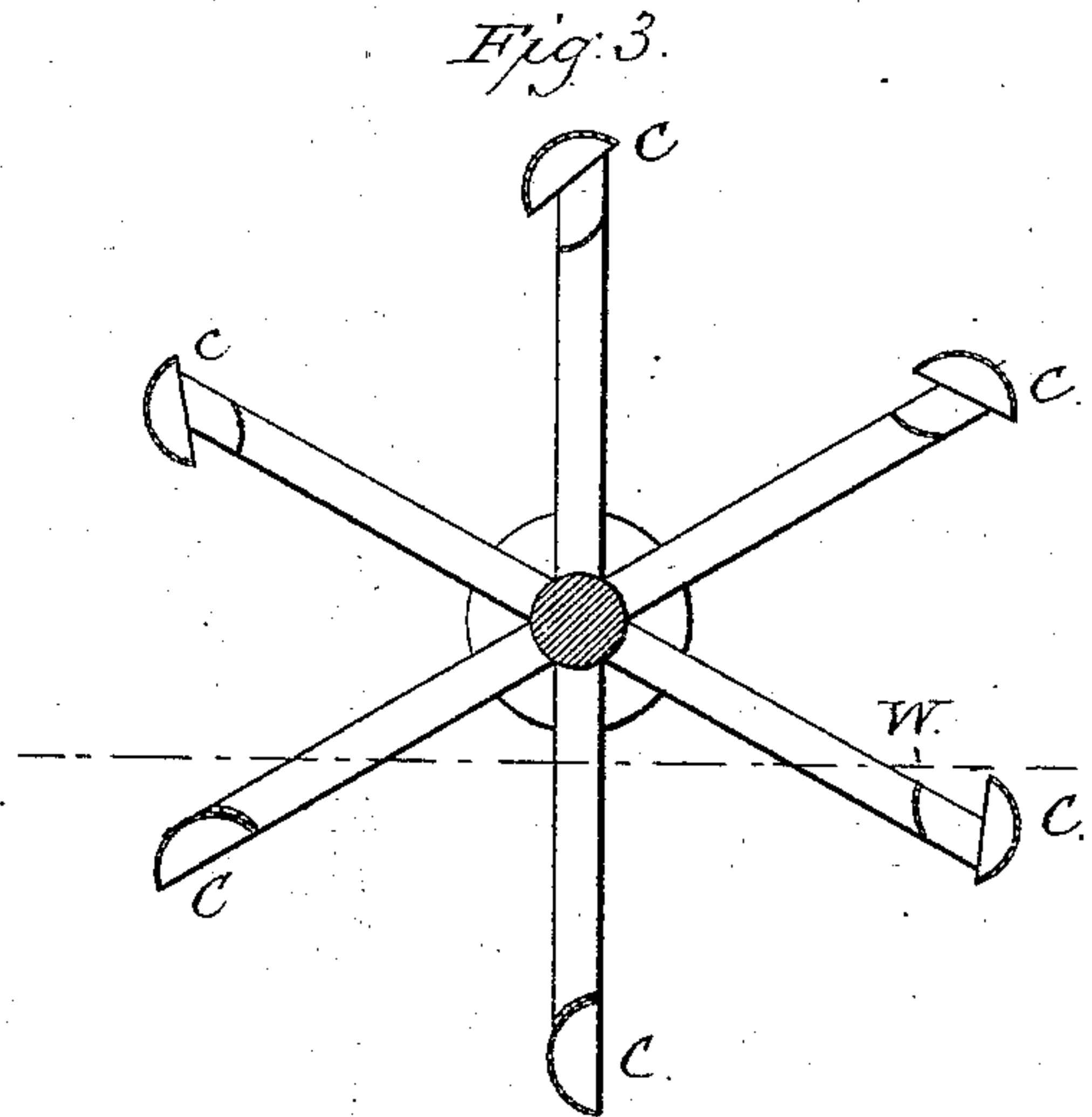
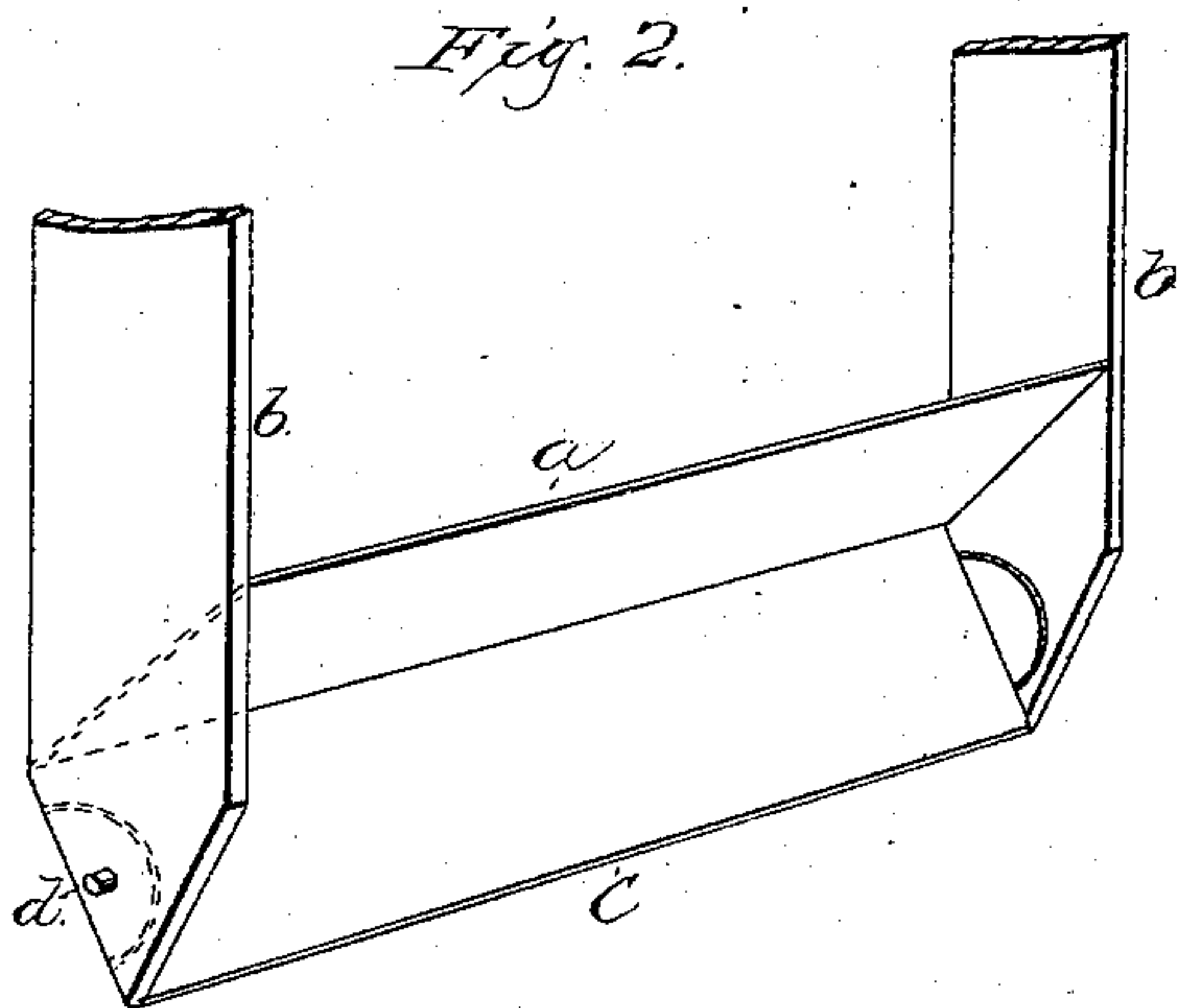
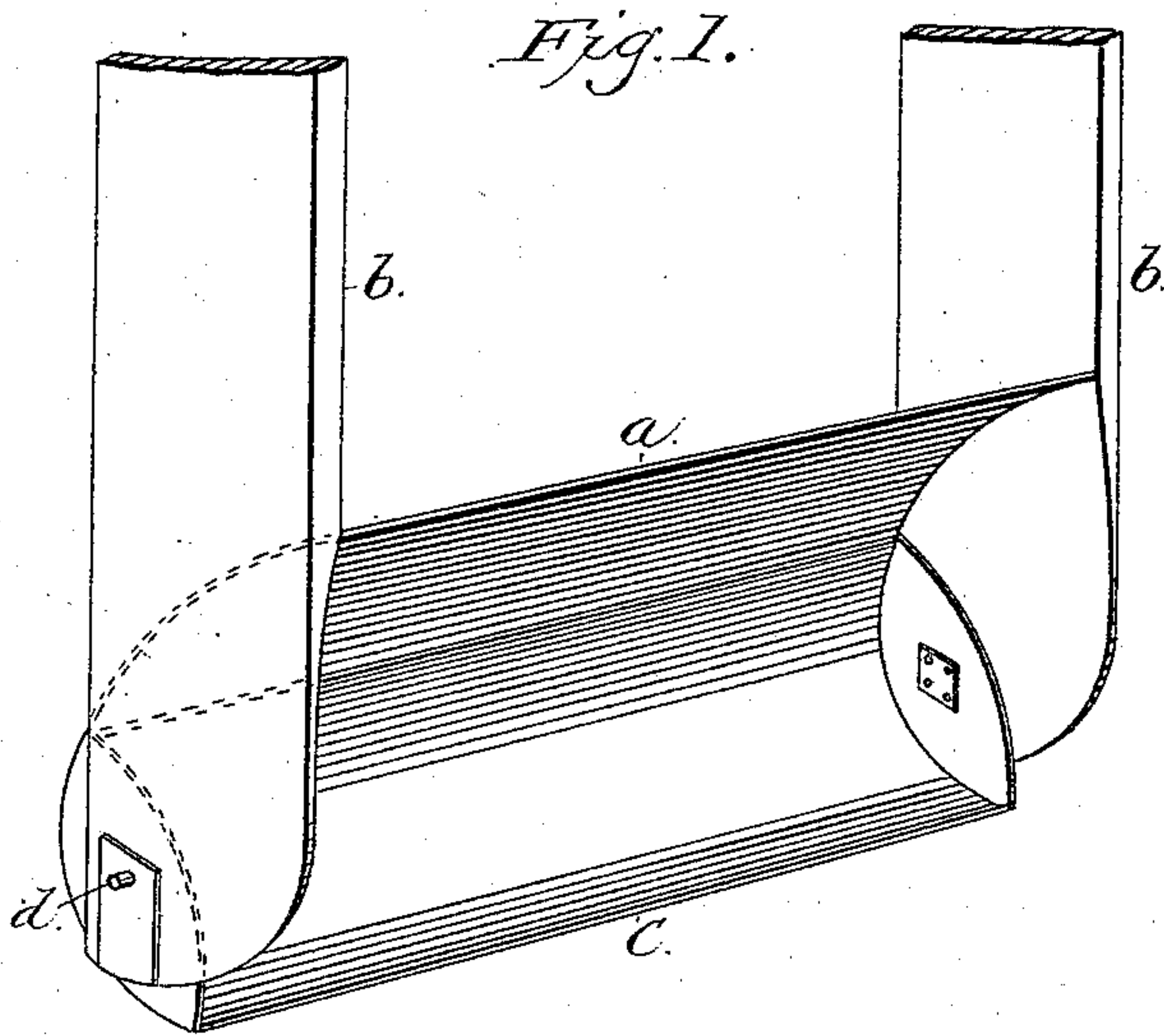


(Model.)

L. C. FOGG.  
FEATHERING PADDLE WHEEL.

No. 279,558.

Patented June 19, 1883.



Witnesses;  
S. E. Bryant,  
W. C. C. Kinds.

Inventor;  
Leonard C. Fogg

# UNITED STATES PATENT OFFICE.

LEONARD C. FOGG, OF KENNEBUNKPORT, MAINE, ASSIGNOR OF ONE-THIRD  
TO WM. H. H. HINDS, OF SAME PLACE.

## FEATHERING PADDLE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 279,558, dated June 19, 1883.

Application filed February 21, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, LEONARD C. FOGG, of Kennebunkport, in the county of York and State of Maine, have invented a new and Improved Self-Adjusting Paddle for Paddle-Wheels for Propelling Boats, of which the following is a specification.

The nature of my invention consists in substituting a self-adjusting paddle in two parts for a paddle with a plain surface in one part, as is now generally used, for the reason that a paddle with a plain surface in one part allows the water to easily glance from it, thus losing a large percentage of the power applied.

The object of my invention is to utilize the greatest possible percentage of the power applied.

My improvement consists in a paddle made in two parts, which two parts may have either a plain or a concave surface.

In the drawings, Figure 1 is a perspective view of the arms of a paddle-wheel with a paddle or float of my invention attached. Fig. 2 is a similar view of a modified form of same. Fig. 3 is a side view of paddle-wheel, showing position of paddles or floats with relation to the water. *w* represents the water-line.

In Fig. 1, *b b* represent the arms of a paddle-wheel. These arms are connected by a concave plate, *a*, extending from one to the other at a little distance from the end of the arms. A concave plate, *C*, is pivoted between the arms *b b* between the plate *a* and the ends of the arms. This plate *C* is free to turn on its pivots *d d*; but one side of the plate *C* projects a greater distance than the other side from the pivots. This eccentricity of the pivots will cause the side of the plate having greatest weight to stand out from the center of the wheel when the latter is in revolution by reason of centrifugal force. The concave plate *C* may be of sheet metal and be riveted to the ends which carry the pivots. The pivoted

plates should be so set in the arms *b b* as to be readily removable.

In Fig. 2 the revolving plate is shown to be flat instead of being concave, as in Fig. 1, and the connecting-plate, which unites the arms *b b*, is also flat. It is apparent that considerable change may be made in the form of these plates without departing from the spirit of my invention.

The operation of my device is as follows: The wheel being in rotation, the centrifugal force will carry the heaviest end of the plates *C* to the outside of the circle. As the buckets enter the water, the plates *C* will be, by the pressure of the water, carried into the position shown in Figs. 1 and 2, forming with plates *a* a trough or bucket with a considerable surface bearing against the water. As the arms lift from the water the direction of the water-pressure changes, and plates *C* swing away from plates *a*, leaving a passage for the water between, so that little or no water is lifted, and the full power of the wheel is used for propulsion.

What I claim is—

1. The combination, with the arms of a paddle-wheel, of fixed cross-pieces which form a part of the paddle or bucket, and movable cross-pieces pivoted between the arms of the wheel, so as to swing toward the fixed cross-pieces and complete the paddles, or swing away and leave a passage for the water between said pieces, substantially as described.

2. The combination, with the arms of a paddle-wheel, of concave pieces rigidly secured between said arms, and concave plates pivoted between said arms, so as to swing against or away from the fixed concave pieces, substantially as shown.

LEONARD C. FOGG.

Witnesses:

WM. H. H. HINDS,  
S. E. BRYANT.