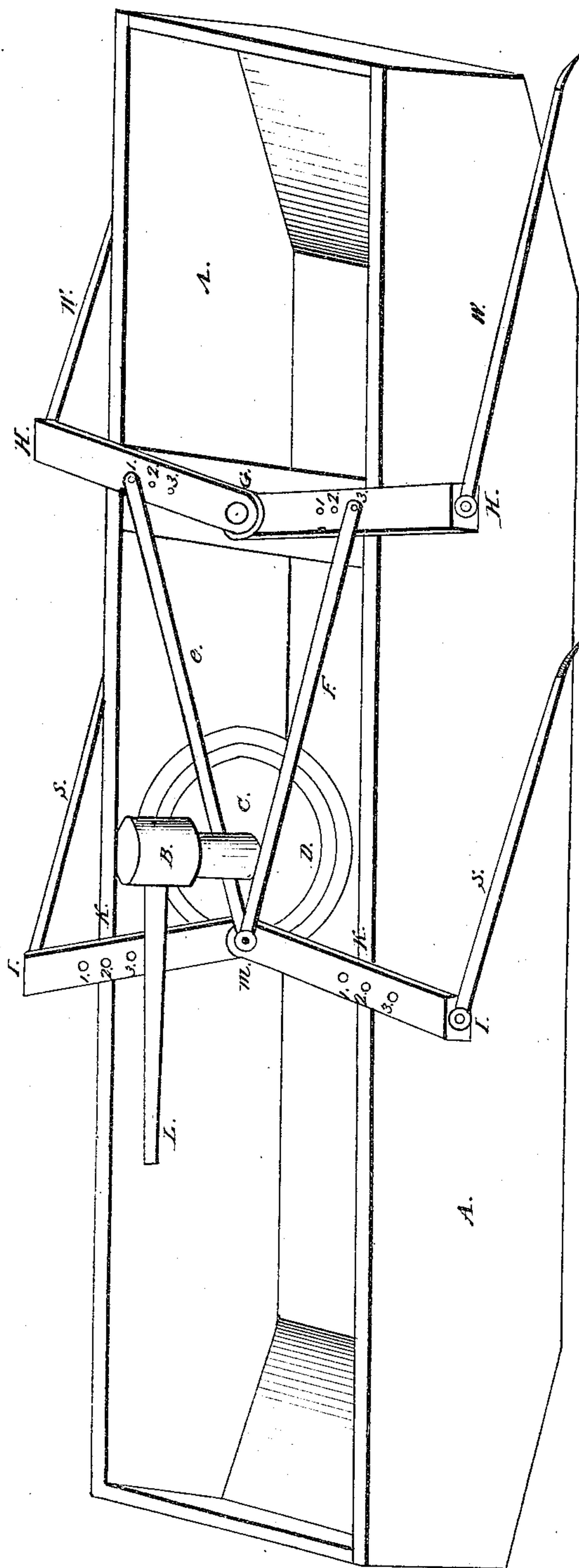


*A. F. Stelle,*  
*Towing.*

*N<sup>o</sup> 47,048.*

*Patented Mar. 28, 1865.*



# UNITED STATES PATENT OFFICE.

AROLD F. STELLE, OF CROSSINGVILLE, PENNSYLVANIA.

## IMPROVED POLE PROPELLER.

Specification forming part of Letters Patent No. 47,048, dated March 28, 1865.

*To all whom it may concern :*

Be it known that I, AROLD F. STELLE, of Crossingville, in the county of Crawford, State of Pennsylvania, have invented a new and Improved Machine for Propelling Boats and Barges; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing and the letters of reference marked thereon.

A A is the body of the boat or barge.

C is an eccentric wheel on the shaft B. This wheel is round, yet hung on the shaft B, outside its center.

D is a groove around and near the rim of wheel.

K K and H H are levers, of which K K are hung on the fulcrum-pins 2 2 in the sides of the boat, and H H on a fulcrum-pin, G, in a piece crossing the boat.

S S and W W are propellers attached to the levers K K and H H by bolts. (See I I and at H H.)

E F are connecting-rods, one end of which are attached to the levers K K by the bolt *m*, which projects through the levers into the groove D. The other ends are attached to the levers H H by the pins at 1 3.

L is an arm or lever, to which a horse is hitched, and walks around on a platform which is laid across the boat and covers the wheel C, levers, and connecting-rods. This platform is left off in the drawing to better show the machinery.

1 2 3 are holes in the levers by which the power and motion of the levers are regulated by changing the fulcrum.

Now, as the wheel C revolves, the pin *m* moves in the groove D, which moves the levers K K and H H alternately back and forth, thereby operating the propellers S S W W, which catch on the bottom of the stream and thus propel the boat forward.

What I claim as my invention, and desire to secure by Letters Patent, is—

The levers K K H H and the propellers S S W W, in combination with the eccentric wheel C, and the connecting-rod E F, when the same are constructed in the aforesaid combination for the purposes set forth.

AROLD F. STELLE.

Witnesses:

A. B. RICHMOND,  
IRA H. PIERCE.