

# C.M. Mooney. Water Wheel.

117193

Fig. 1

PATENTED JUL 18 1871

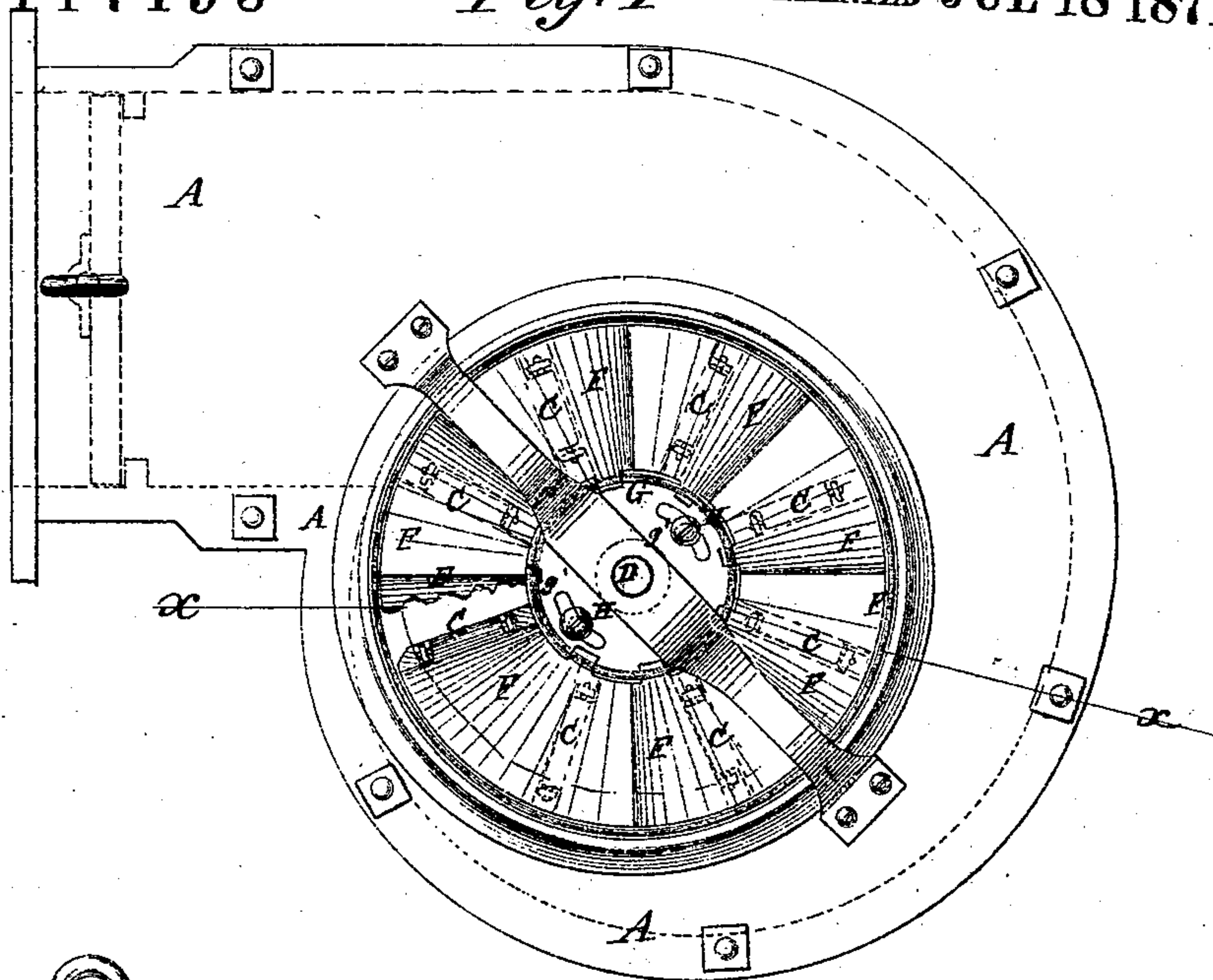


Fig. 2

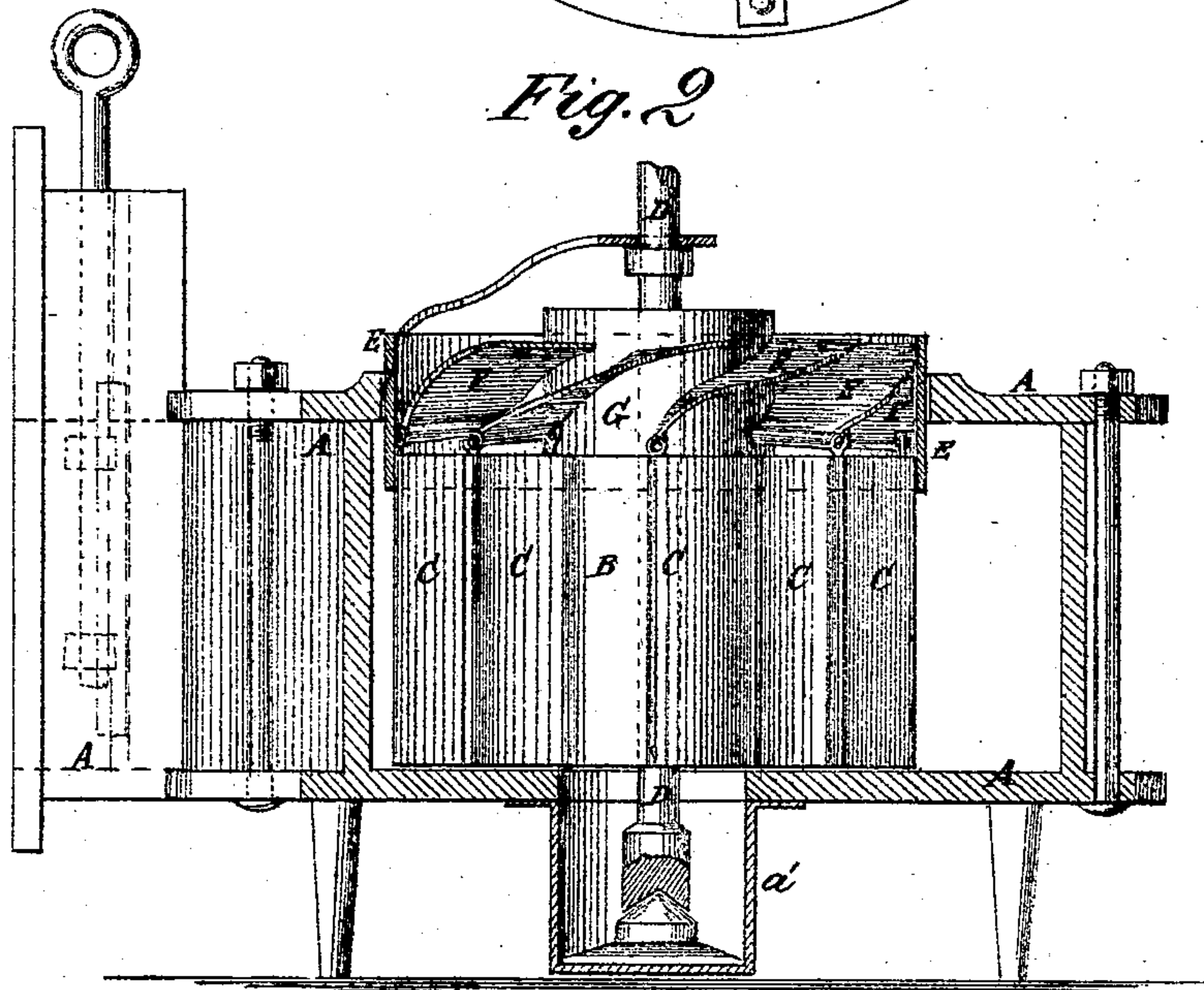
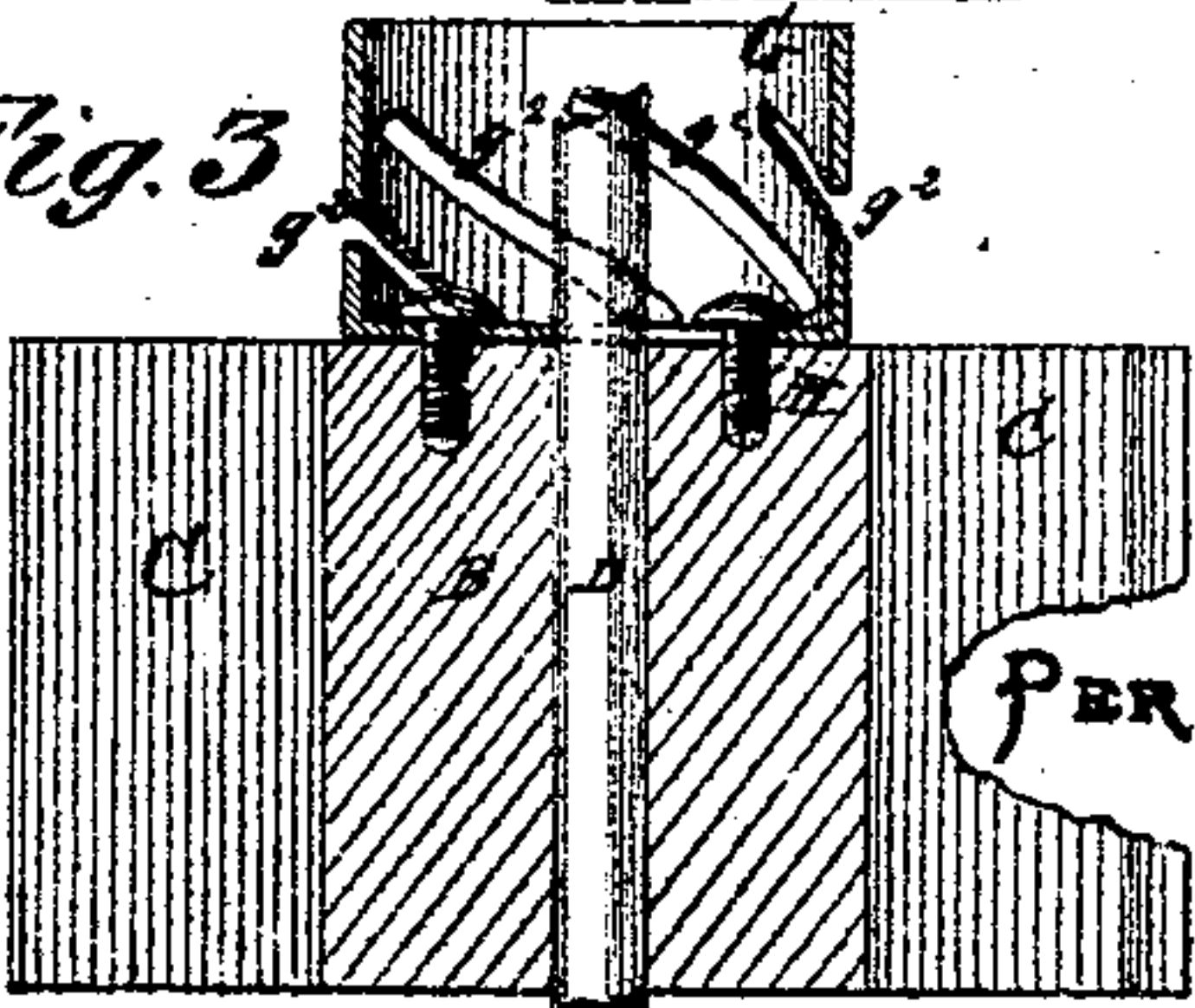


Fig. 3



Witnesses:

A. W. Amqvist  
Wm. H. C. Smith,

Inventor:

C. M. Mooney.

Attorneys.



# UNITED STATES PATENT OFFICE.

CHARLES M. MOONEY, OF SCOTCH PLAINS, NEW JERSEY.

## IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 117,193, dated July 18, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES M. MOONEY, of Scotch Plains, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Water-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top view of my improved water-wheel, part being broken away to show the construction. Fig. 2 is a detail sectional view of the same taken through the line *x x*, Fig. 1. Fig. 3 is a detail sectional view of the adjusting-curb.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved water-wheel, simple in construction, effective in operation, and easily adjusted to work with less or more water, as may be required, the wheel revolving with the same velocity, but decreasing in power as the amount of water decreases; and it consists in the construction and arrangement of the hinged buckets and adjusting-curb, as hereinafter more fully described.

A is the casing, the mouth of which is made with a flange for convenience in securing it in place to receive the water. The water-space within the casing A becomes gradually smaller as it passes around the wheel, as shown in Figs. 1 and 2. B C is the wheel, the hub B of which is attached to the shaft D, with the upper part of which the machinery to be driven is connected in the ordinary manner. The lower end of the shaft D revolves in a step in the bottom of the sand-well *a'*, which should be provided with a gate to allow the sand to flow out when desired. C are the buckets, which are straight, are attached to the hub B, and project radially, as shown in the drawing. To the upper parts of the outer edges of the buckets C is attached a curb, E, open at both ends, and within which are placed the

scroll-buckets F, the lower edges of which are hinged to the upper edges of the buckets C, as shown in Figs. 1 and 2. G is a curb, having about the same diameter as the hub B of the wheel B C, and the bottom of which has a hole in its center for the passage of the shaft D. The curb G is secured adjustably to the upper end of the hub B by two or more screw-bolts, H, which pass through curved slots *g*<sup>1</sup> in the bottom of the curb G and screw into the end of the hub B, so that by loosening the said bolts the curb G may be moved in either direction to adjust the hinged buckets F. In the sides of the curb G are formed inclined slots *g*<sup>2</sup> to receive pins formed upon or attached to the inner edges of the hinged buckets F, so that by adjusting the curb G in one or the other direction the upper ends of the buckets F may be raised or lowered to adjust the size of the discharge-openings to the amount of water being used, thus keeping the wheel all the time full. By this means the velocity of the wheel will be the same whether much or little water be used, but its power will decrease with the decrease in the amount of water.

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

1. The buckets F, hinged at their lower ends to the upper ends of the buckets C of the wheel B C, and surrounded with a curb, E, attached to the upper parts of the outer edges of said buckets C, substantially as herein shown and described, and for the purpose set forth.

2. The inner slotted curb G, adjustably attached to the upper end of the hub B of the wheel B C, in combination with said wheel B C and with the hinged buckets F, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me this 29th day of May, 1871.

CHARLES M. MOONEY.

Witnesses:

JAMES T. GRAHAM,  
T. B. MOSHER.