

J. J. Springsteen, Water Wheel,

N^o 4,055.

Patented May 16, 1845.

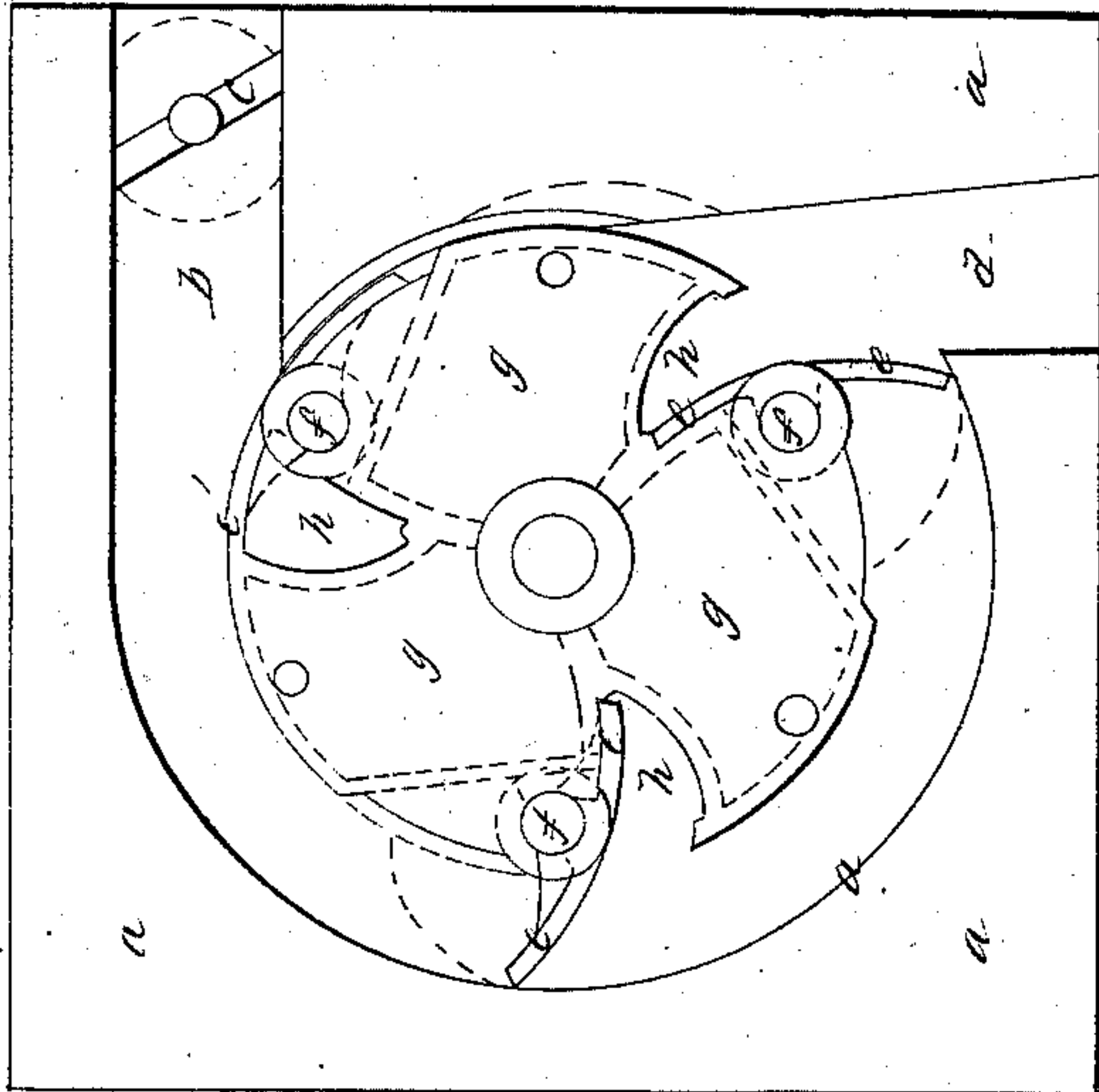


Fig. 2.

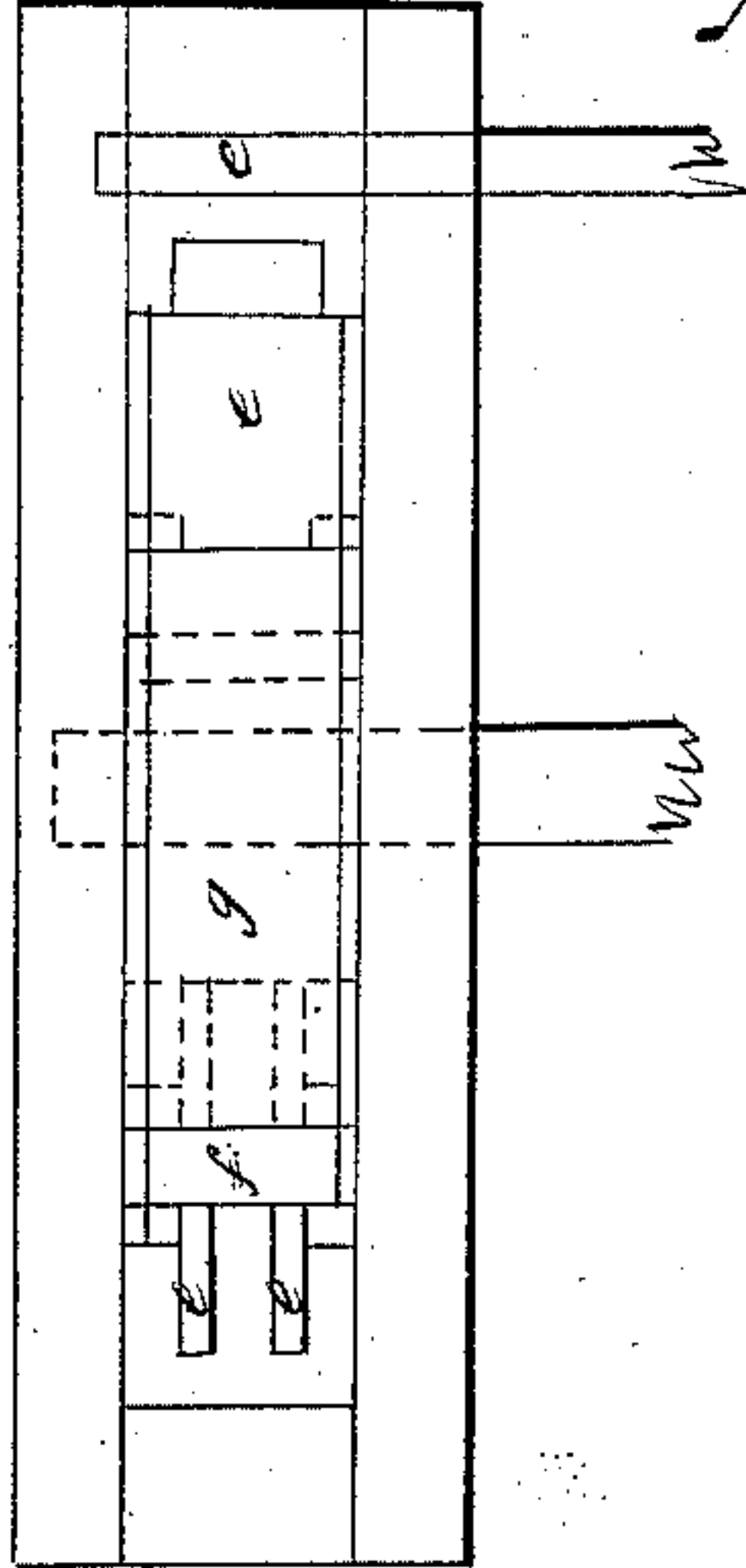
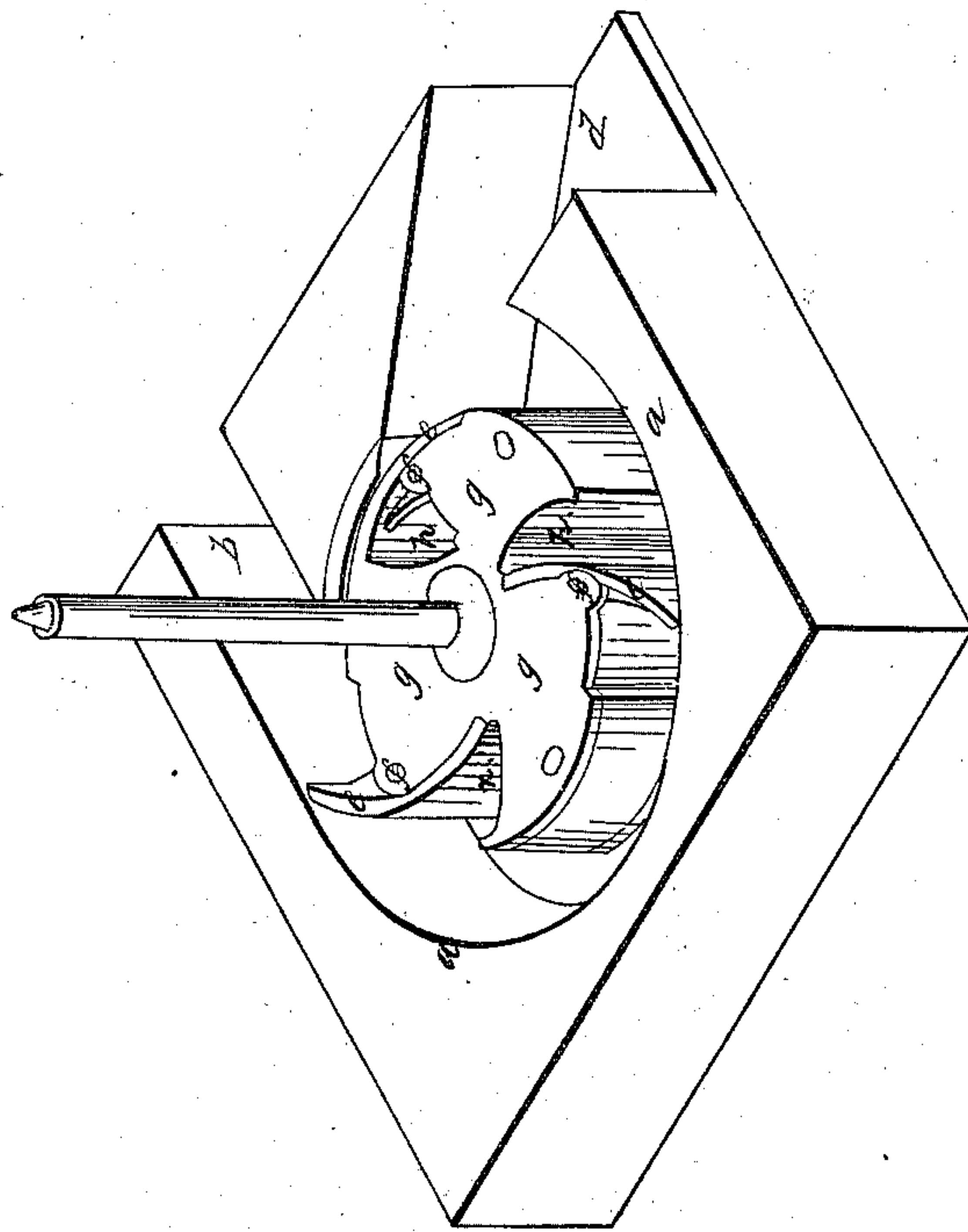


Fig. 1



UNITED STATES PATENT OFFICE.

JOHN J. SPRINGSTEEN, OF OWEGO, NEW YORK.

WATER-WHEEL.

Specification of Letters Patent No. 4,055, dated May 16, 1845.

To all whom it may concern:

Be it known that I, JOHN JAMES SPRINGSTEEN, of Owego, in the county of Tioga and State of New York, have invented a
5 new and useful Improvement in Water-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

10 Figure 1 is an isometrical view. Fig. 2 is a top plan.

The nature of my invention consists in constructing a water wheel to be worked under pressure with movable buckets which
15 are suspended by their centers and when closed are on a line with and form a part of the periphery of said wheel; when open they fill the space between the curve and wheel.

20 The construction is as follows: A curve a , a , is constructed with an inlet b , for the water from the upper level or head which enters the curve at a tangent to the wheel this is regulated by a gate c , which revolves
25 on a center in the common way; the inner side of this tangential opening comes up to the body of the wheel, when the brackets are closed in; but from that point, around about three fourths of the circumference of
30 the curve, there is a space between it and the wheel equal to the projection of the buckets. When open this terminates in a tangent race d , between which, and the inlet above named, the buckets are closed in by
35 the curve, which approaches the wheel at

that point. The wheel has around its periphery three more or less buckets (e , e'). These are curved to correspond with the curve of the wheel, and are recessed into it so as to be flush with its periphery as
40 shown at (e'). They are hung on bearings f , at their center so as to be nearly balanced in turning; under the forward end of each of the buckets there is a recess (h) corresponding with the curve made by that end
45 when turning in toward the axis which it does as the other end opens outward against the curve as shown at e ; the rest of the wheel is made solid or is entirely incased as at g . When the water is let on to this
50 wheel as the buckets come around the outer end being a little heavier than the other is thrown outward but as the bucket is nearly balanced there is no sudden strain brought upon it, but it opens and closes in
55 the easiest possible manner while the greatest effect of the water is obtained.

Having thus fully described my improvements what I claim as new and desire to secure by Letters Patent, is— 60

The combination of the movable balanced buckets with a water wheel having recesses to receive the inner ends of said buckets in the manner and for the purpose above specified.

J. J. SPRINGSTEEN.

Witnesses:

LAFAYETTE CALDWELL,
J. J. GREENOUGH.