

J. Hazeltine,

Water Wheel,

No. 14,535,

Patented Mar. 25, 1856.

Fig. 1

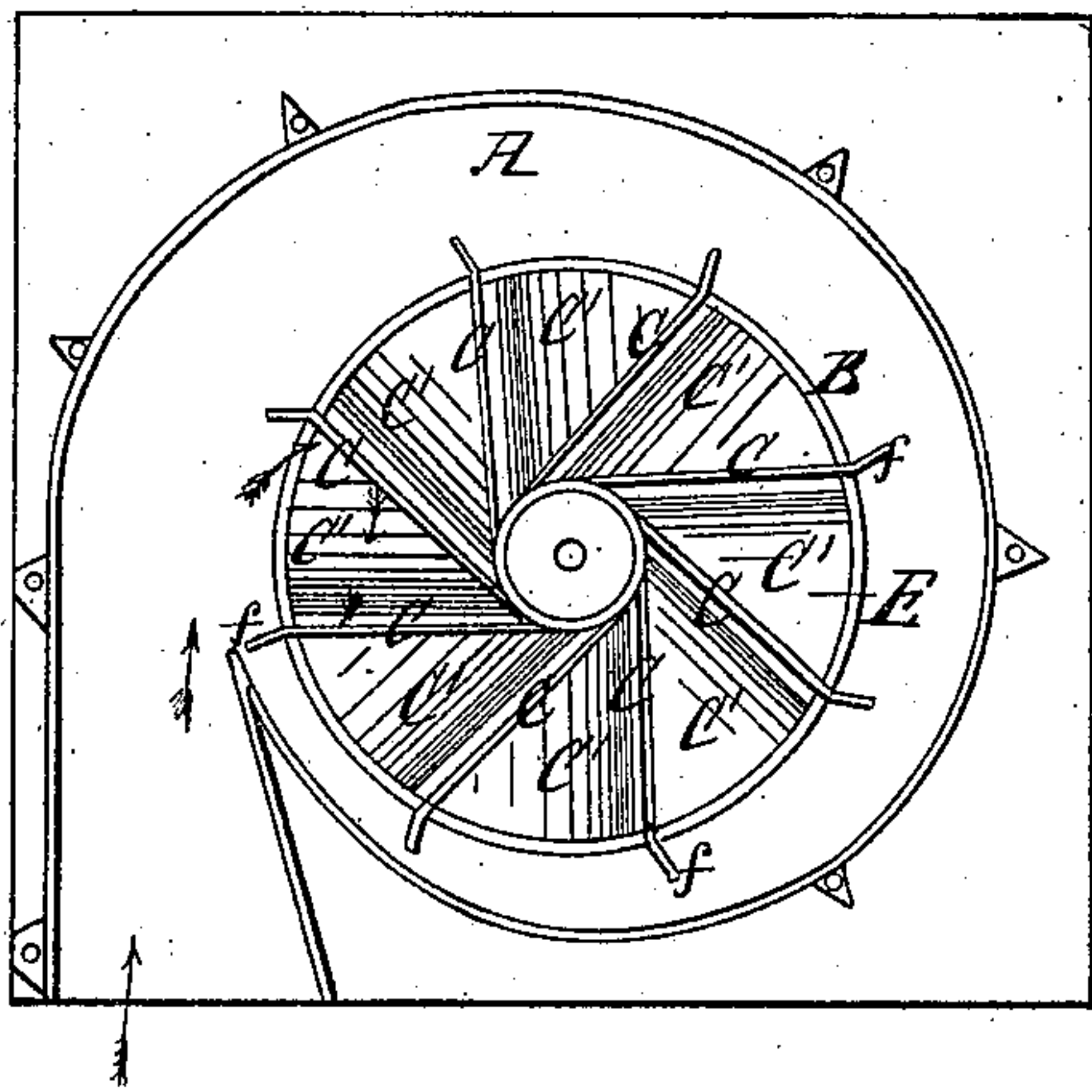


Fig. 2.

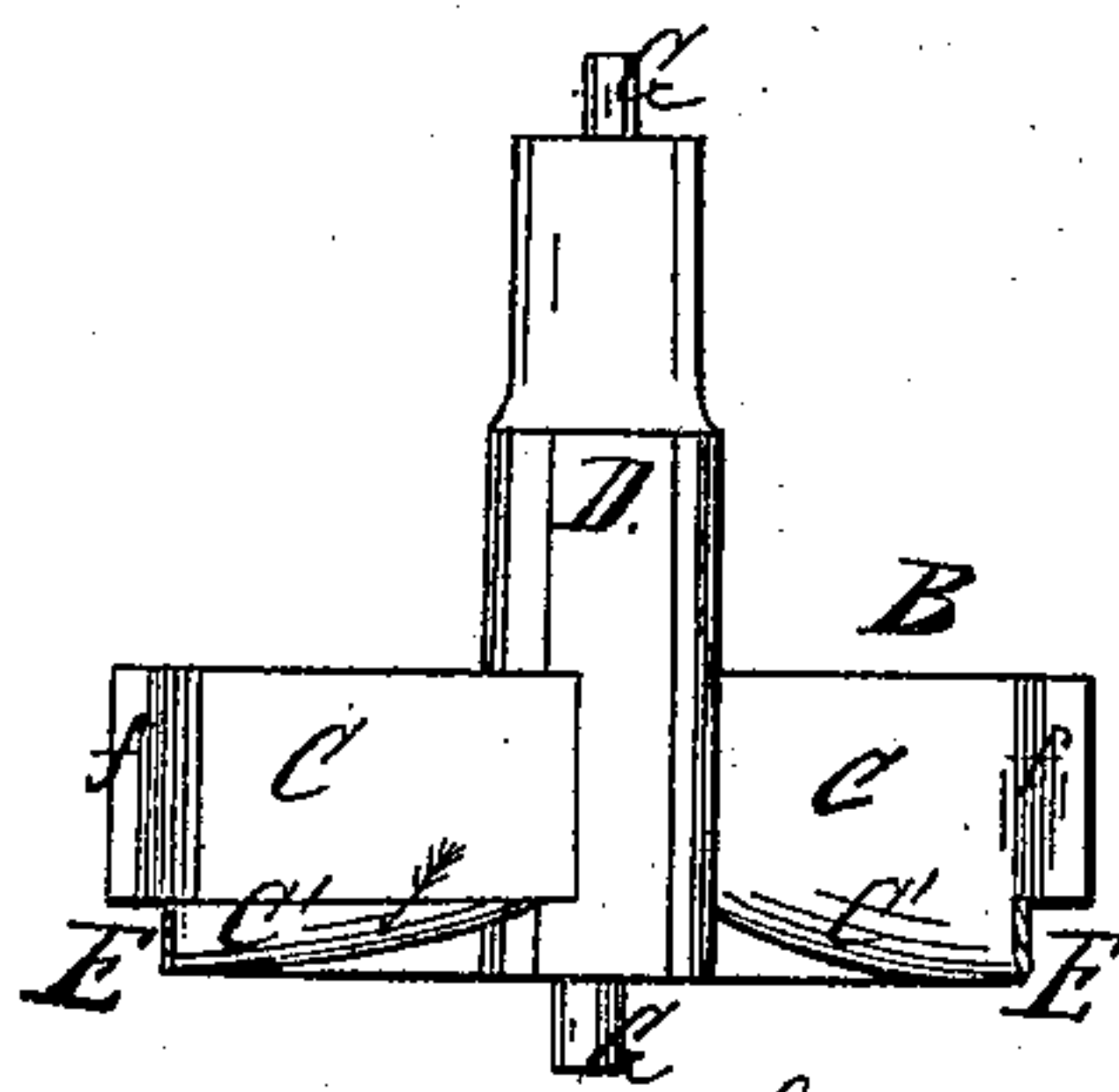
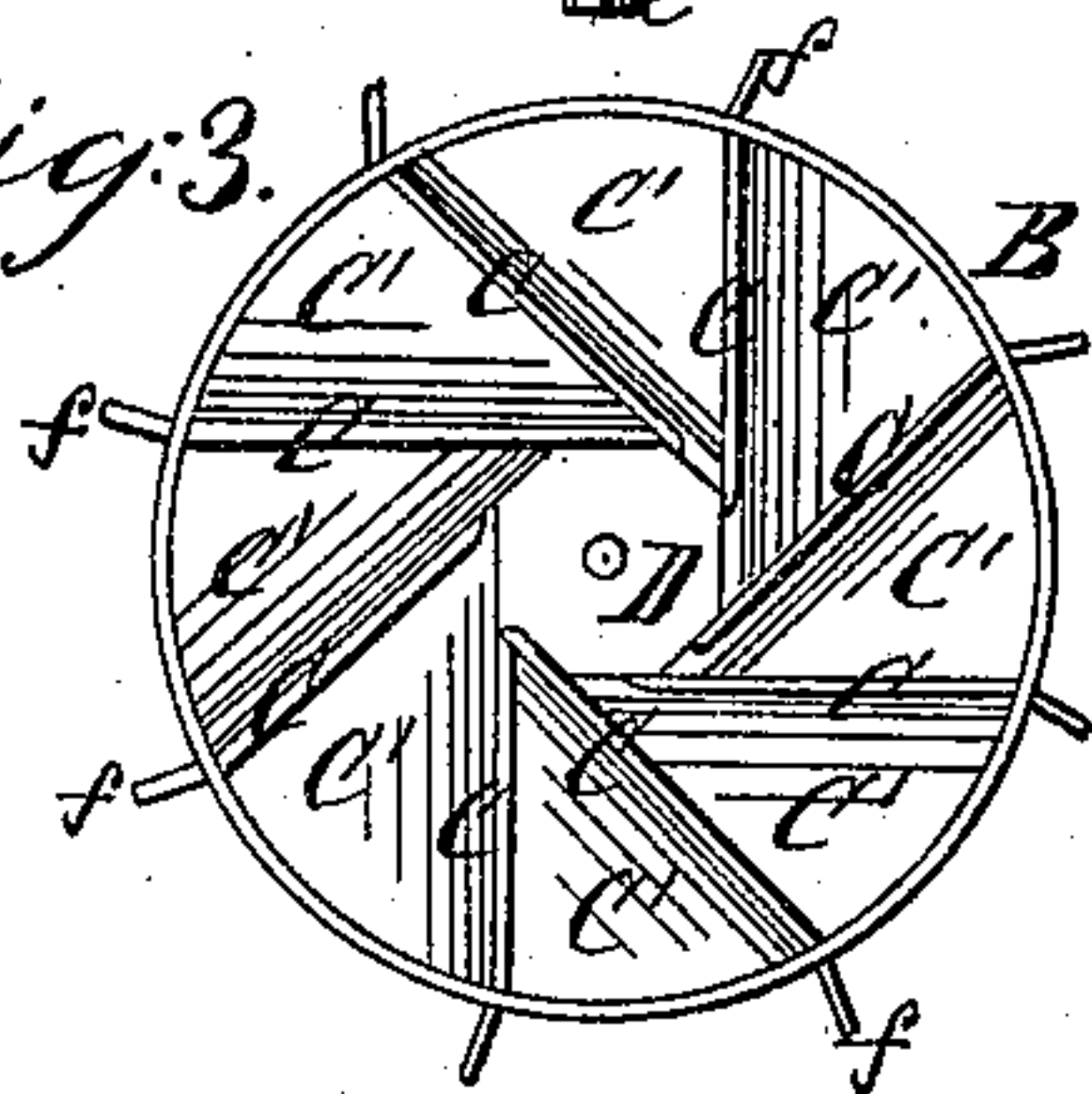


Fig. 3.



UNITED STATES PATENT OFFICE.

JOHN HASELTINE, OF GOFFSTOWN, NEW HAMPSHIRE.

WATER-WHEEL.

Specification forming part of Letters Patent No. 14,535, dated March 25, 1856.

To all whom it may concern:

Be it known that I, JOHN HASELTINE, of Goffstown, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Water-Wheels; and I do hereby declare that the same are described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my improvements, I will proceed to describe their construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is a plan or top view of the wheel surrounded by a scroll which conducts the water onto the wheel. Fig. 2 is an elevation of the shaft with one float or bucket extending from each side. Fig. 3 is a representation of the under side of the wheel.

The nature of my invention consists in making the outer portion of the float upon which the water acts first radial, the inner portion, which receives the second action of the water, tangential, and the lower portion, upon which the water acts by its weight, to incline downward from the shaft or center of the wheel and from the tangential portion of the floats.

In the above-mentioned drawings, A is a scroll by which the wheel B is supplied with water. It is made so deep as to allow the radial and perpendicular portion *f* of the floats to turn freely in it while it gradually diminishes in width to its termination. The radial portion of the float *f* is connected to the shaft D of the wheel B by the tangential portion C of the float, which is made perpendicular or parallel with the shaft D, as represented. The inclined portion C' of the float is joined to the lower edge of the tangential portion so as to incline downward from the tangential portion to its edge, and from the shaft to its periphery, or where it joins the hoop E, which hoop E surrounds the extremities of the inclined portion C' of the floats and may be joined to them. The hoop E is represented in section in Fig. 2. The shaft D is provided with piv-

ots G G, which may be fitted to turn in appropriate boxes fitted for them. The floats above mentioned may be made of wood or of wrought or cast iron, or the wheel may be cast whole, as preferred. The water enters the scroll A, as indicated by the arrows, and acts first on the radial portions *f f* of the floats, and as it is confined on the outside by the scroll it necessarily turns toward the shaft of the wheel and acts on the tangential portion C of the floats, and after it has communicated its motion to the radial and tangential portions of the floats it (the water) acts by its weight on the inclined portions C' of the floats, which slip from under it as it descends and leaves the wheel, and as the inclined portions C' of the floats descend from the tangential portion and from the shaft D the water has a tendency to flow or run toward the periphery of the wheel as it descends through it, as indicated by the arrow in Fig. 2.

It is confidently believed by those who use this wheel that it yields a greater amount of effective power than any other in proportion to its cost and the quantity of water applied to it.

I believe that I have described the construction, operation, and use of my improvements so as to enable any person skilled in the art to make and use them. I will now specify what I desire to secure by Letters Patent, to wit:

I claim—

Making the outer portion *f* of the floats radial, the second portion C tangential, and the third and last portion C' to incline downward from the shaft D and from the tangential portion C when the same or the several parts are constructed, combined, and arranged substantially as described, so that the water will act against the two first by propulsion and upon the latter by its weight.

JOHN HASELTINE.

Witnesses:

JOSEPH B. CLARK,
JNO. D. IRVING.