

J. TANEY.
Water-Wheels.

No. 143,040.

Patented September 23, 1873.

Fig. 1.

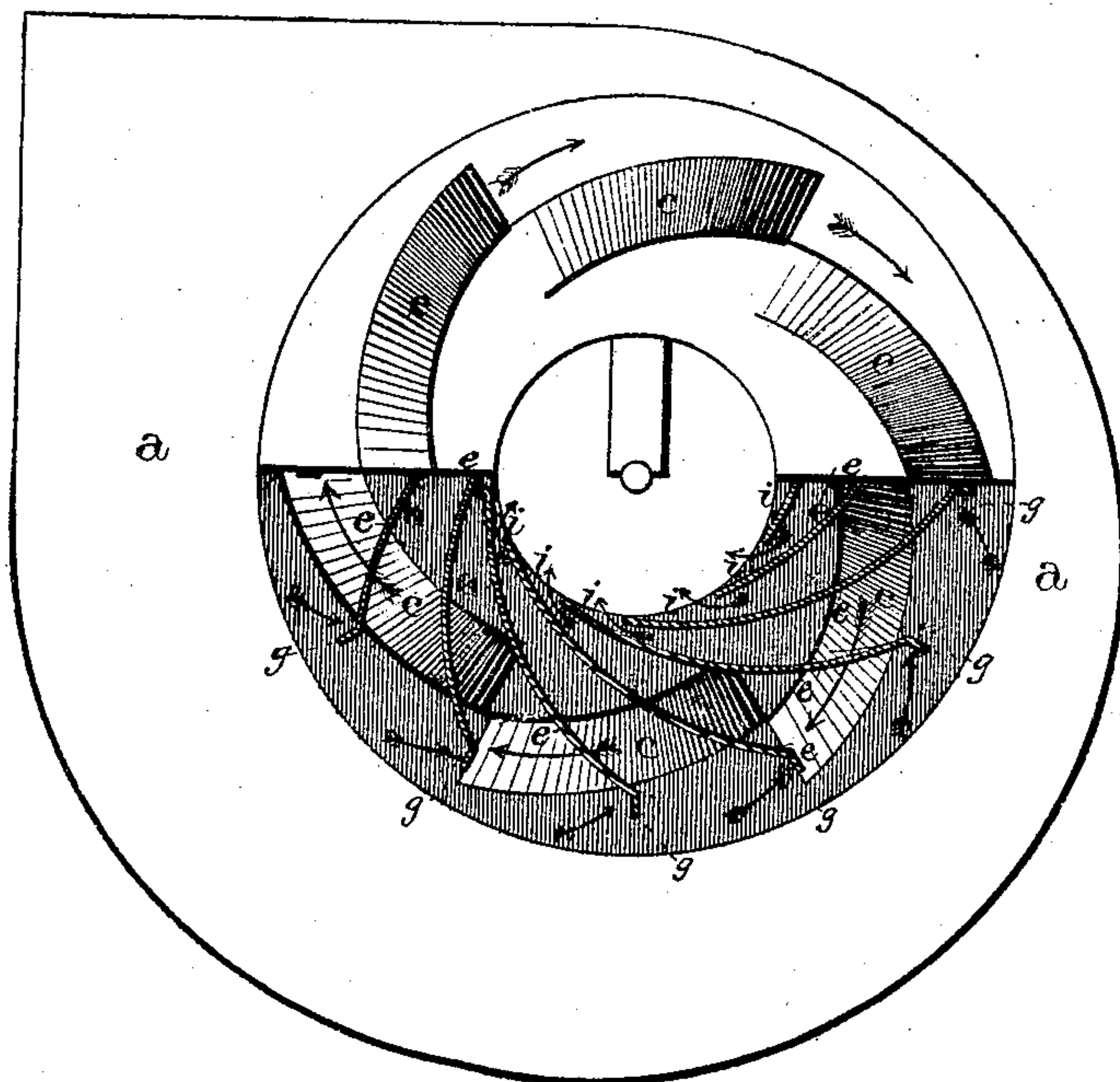
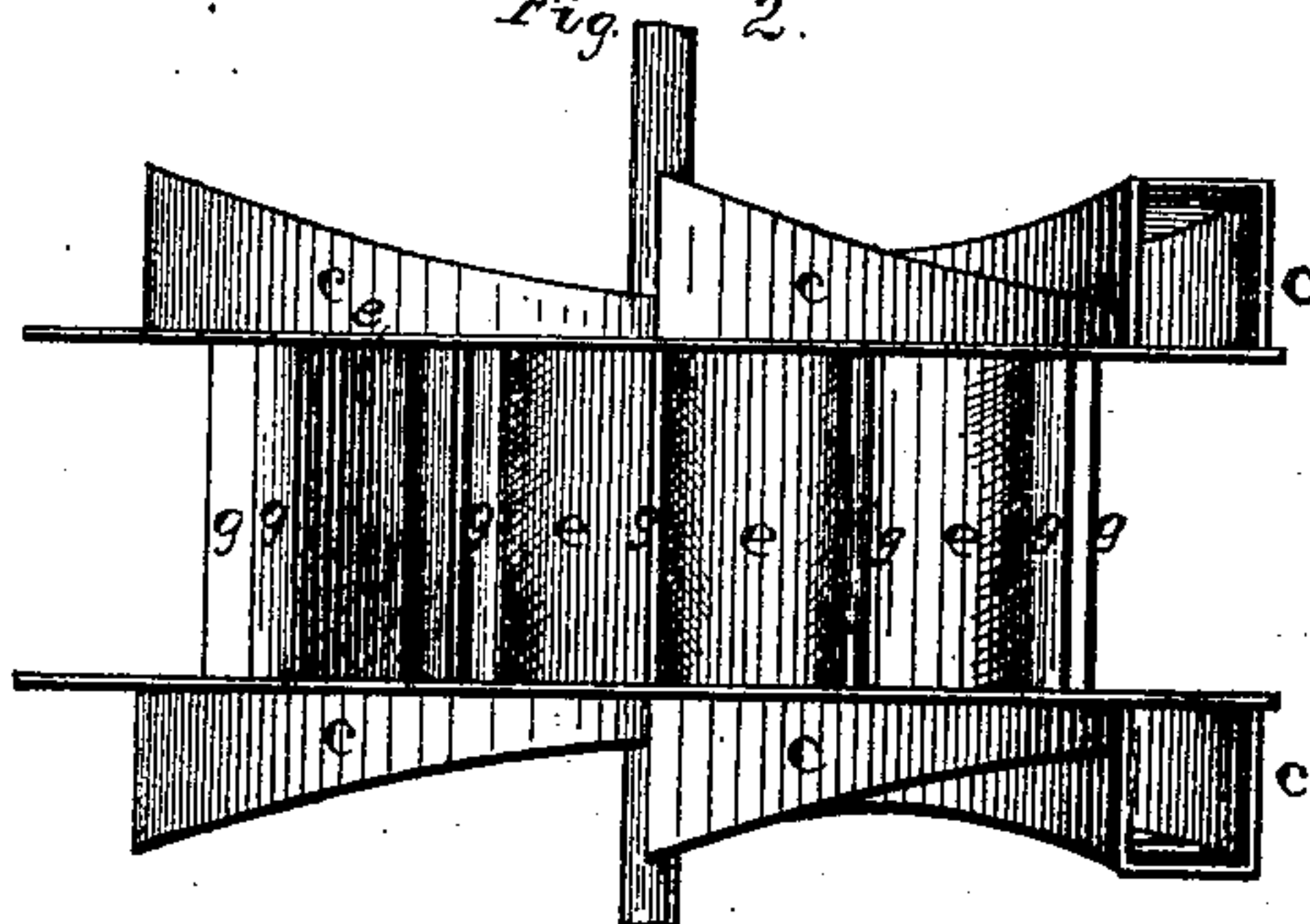


Fig. 2.



WITNESSES.

Wm. Johnson
W. F. Kendig

INVENTOR.

Jos. Taney
per
T. A. Lehmann,
atty.

UNITED STATES PATENT OFFICE.

JOSEPH TANEY, OF BANGOR, MAINE.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. **143,040**, dated September 23, 1873; application filed September 5, 1873.

To all whom it may concern:

Be it known that I, JOSEPH TANEY, of Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Water-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in water-wheels; and it consists in providing the wheel with a spiral vent, above and below, at the outer rim, and a central discharge, so that the water will act upon it both by impact and pressure.

The accompanying drawings represent my invention.

a represents the scroll-casing in which the wheel is placed. Near the outer edge of both the top and bottom plates of this wheel are formed spiral vents *c*, placed eccentrically to the curve of the wheel, and which extend above and below the plates, giving vent to the water both on top and bottom of the wheel, and which are about twice as long as the depth of the wheel. The buckets *e* have their outer ends formed upon a radius of the wheel,

as shown at *g*, and then are curved inward toward the center at a tangent to the line of the wheel, leaving the central vents *i* between their inner ends, which will discharge but one-half the volume of the water received by the wheel.

The water first acts upon the wheel by impact upon the buckets, and then, as the water fills the wheel and its motion makes a pressure on the rim of the wheel, the curved vents above and below in the rim give vent to this pressure, and free the wheel from the reaction of the water in the scroll-passage, and thus becomes a pressure-wheel, the curves of the buckets and the vents being such that both the impact and pressure of the water will be utilized to its full extent.

Having thus described my invention, I claim—

A water-wheel having the curved vents *c* in its outer rim, and the central vents *i*, substantially as herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 2d day of September, 1873.

JOSEPH TANEY. [L. S.]

Witnesses:

WILLIAM C. HOLT,
THOMAS C. FARRIS.