

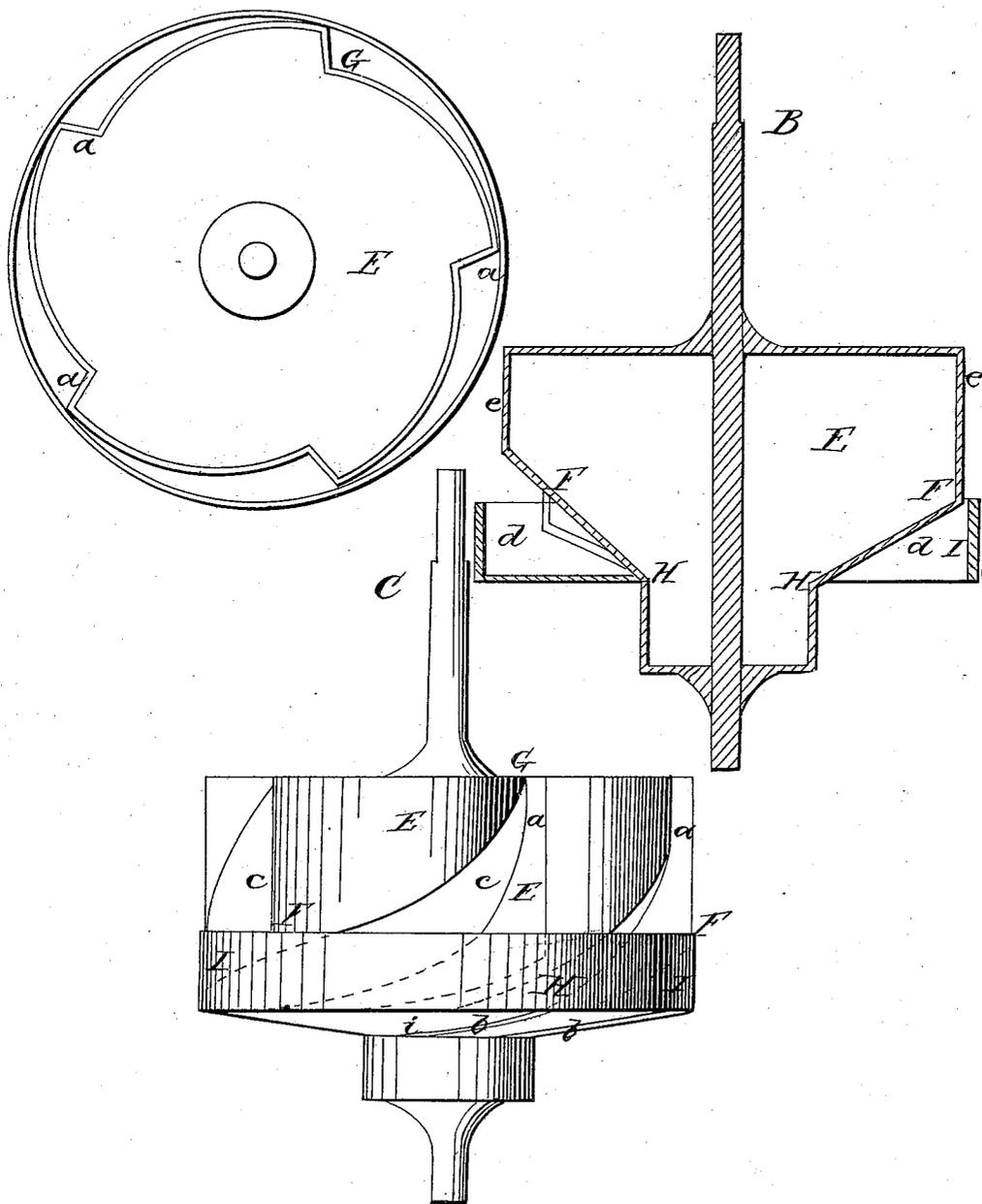
T. Tripp,

Water Wheel,

No. 12,420,

Patented Feb. 20, 1855.

A



UNITED STATES PATENT OFFICE.

THOMAS TRIPP, OF SANDY CREEK, NEW YORK.

WATER-WHEEL.

Specification forming part of Letters Patent No. 12,420, dated February 20, 1855.

To all whom it may concern:

Be it known that I, THOMAS TRIPP, of the town of Sandy Creek, in the county of Oswego and State of New York, have invented a new and Improved Water-Wheel for the Purpose of Propelling Grist and Saw Mills and other Machinery; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters marked thereon, which form a part of this specification, in which—

Figure A represents a top view of a perpendicular wheel, showing the upper part of the buckets which receive the direct action of the water. Fig. B represents a sectional view of the same and also the under cap forming the issues which are marked *d d*. Fig. C represents a side view of the entire wheel, showing at *a a* where the water impinges by direct action and producing reaction as it passes through the curved or winding convex fissures to the issues at *b b*.

Similar letters of reference in the several figures denote like parts.

The nature of my invention consists in so constructing the buckets of a compound or direct and reaction water-wheel as that the direct surface shall receive the water in a direction normal to a plane parallel to the axis of the wheel, and the reacting surface combined therewith having its central line equidistant from the axis and at the same distance therefrom as is the central line of the direct surface.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

E represents the body of the wheel, which may be of a diameter suitable to the volume of water to be used, and its sides *e e* may have such depth as experience may point out. That portion of the body of the wheel embraced between the lines F G, Fig. C, contains the buckets *a a* for receiving the water by its direct action. These buckets may be of any suitable number and curve from G F, as seen in Fig. C. They are arranged at equal distances around the periphery of the

body E of the wheel. A suitable scroll-curb incloses this part of the wheel to hold the water to the buckets and give it proper direction. From F to H the body of the wheel is conical, Fig. B, and is covered by a rim I, which incloses the buckets upon which the water after it leaves the buckets *a* reacts, and thus the whole power of the water is expended first by its direct and then by its reacting properties. The buckets *a* terminate where those which take the reaction commence, the latter being shown in dotted lines, Fig. C. The central lines of the direct and reacting surfaces are about equidistant from the axis of the wheel. The conical shape of the lower part of the body of the wheel admits of enlarging the issues of the reacting buckets, so that after the power or force of the water is expended in passing through the wheel it may escape without causing any drag on the wheel. The edges or lips of the escape-apertures are nearly parallel to the surfaces of the direct surface, and are so located that any one thereof is nearly directly below and lies nearly in the vertical plane of the reacting surface. It thus appears that the water enters and leaves in opposite directions, and hence tends in the best possible manner to impart its mobile power to turn the wheel in one direction.

In constructing a horizontal wheel I use two in all respects like the above-described perpendicular wheel and fasten them upon a horizontal shaft, the issues at the extremities right and left.

Having thus described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

So constructing the buckets that the direct surface of the warped-surface bucket shall receive the water in a direction normal to a plane parallel to the axis, and the reacting surface combined therewith, having its central line equidistant from the axis and at the same distance therefrom as is the central line of the direct surface.

THOMAS TRIPP.

In presence of—
LATHAM GRAY,
V. R. TOMPKINS.