

(No Model.)

H. S. DAGGETT.

WATER ELEVATOR.

No. 324,235.

Patented Aug. 11, 1885.

Fig. 2.

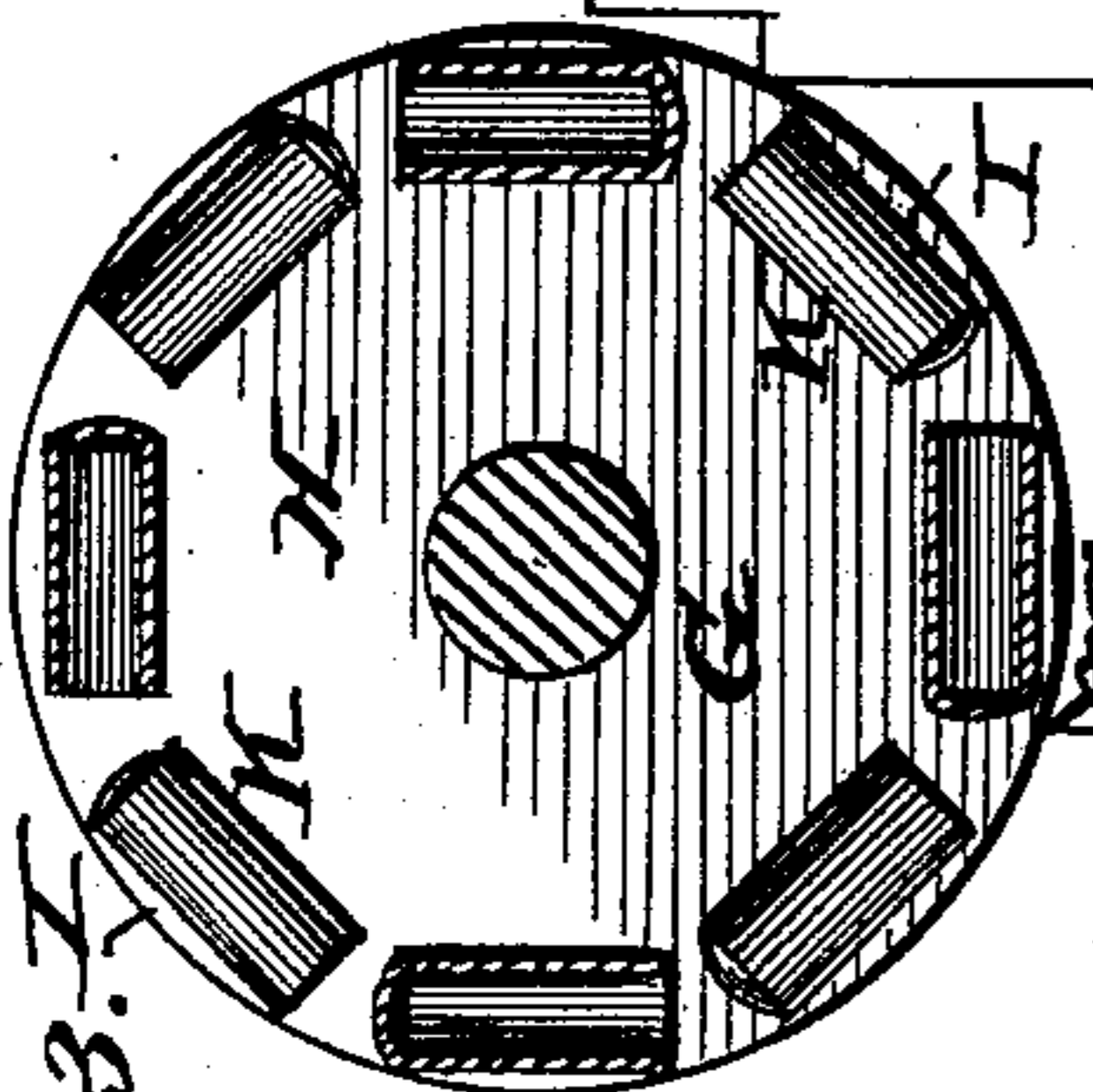
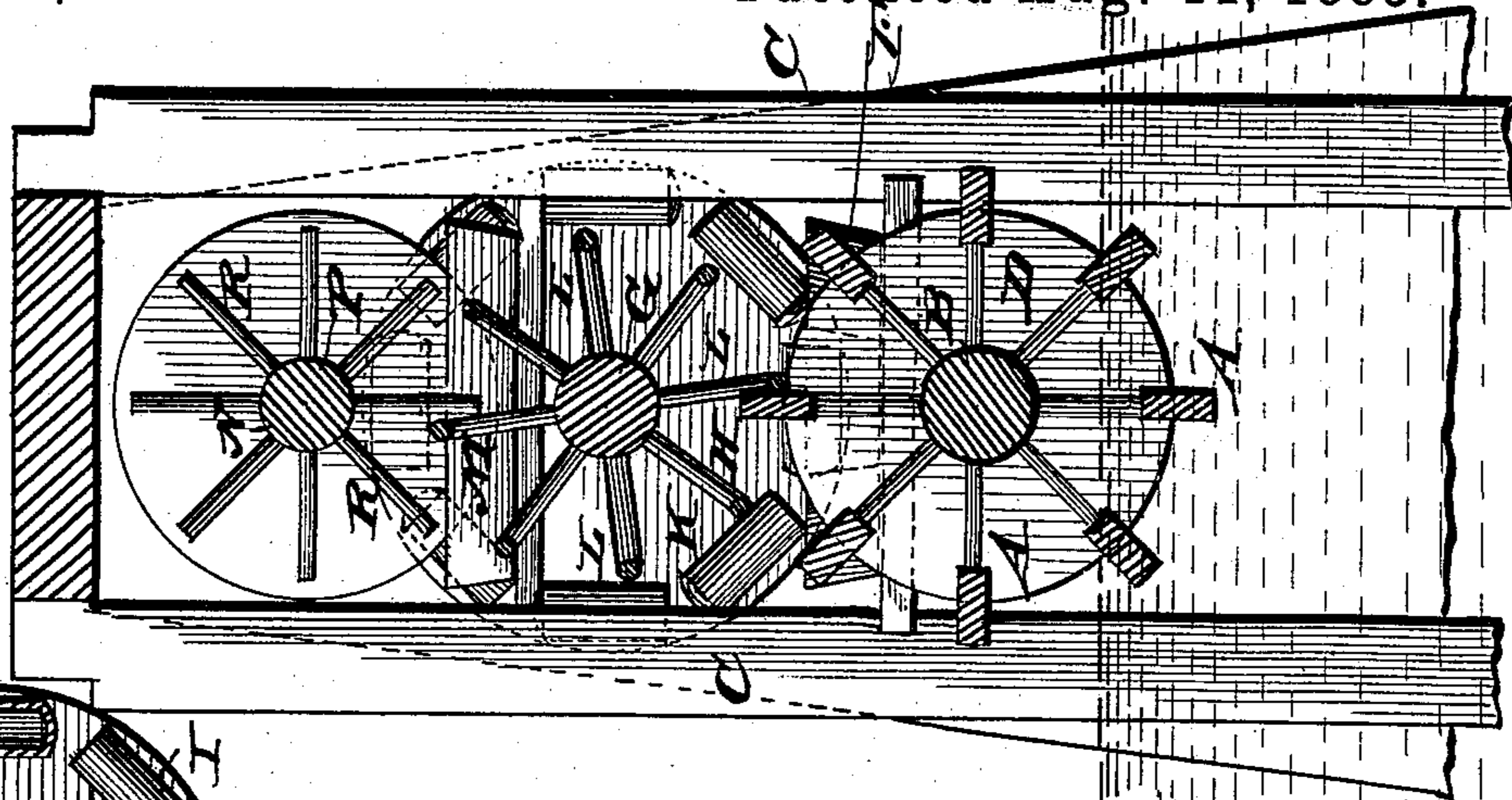
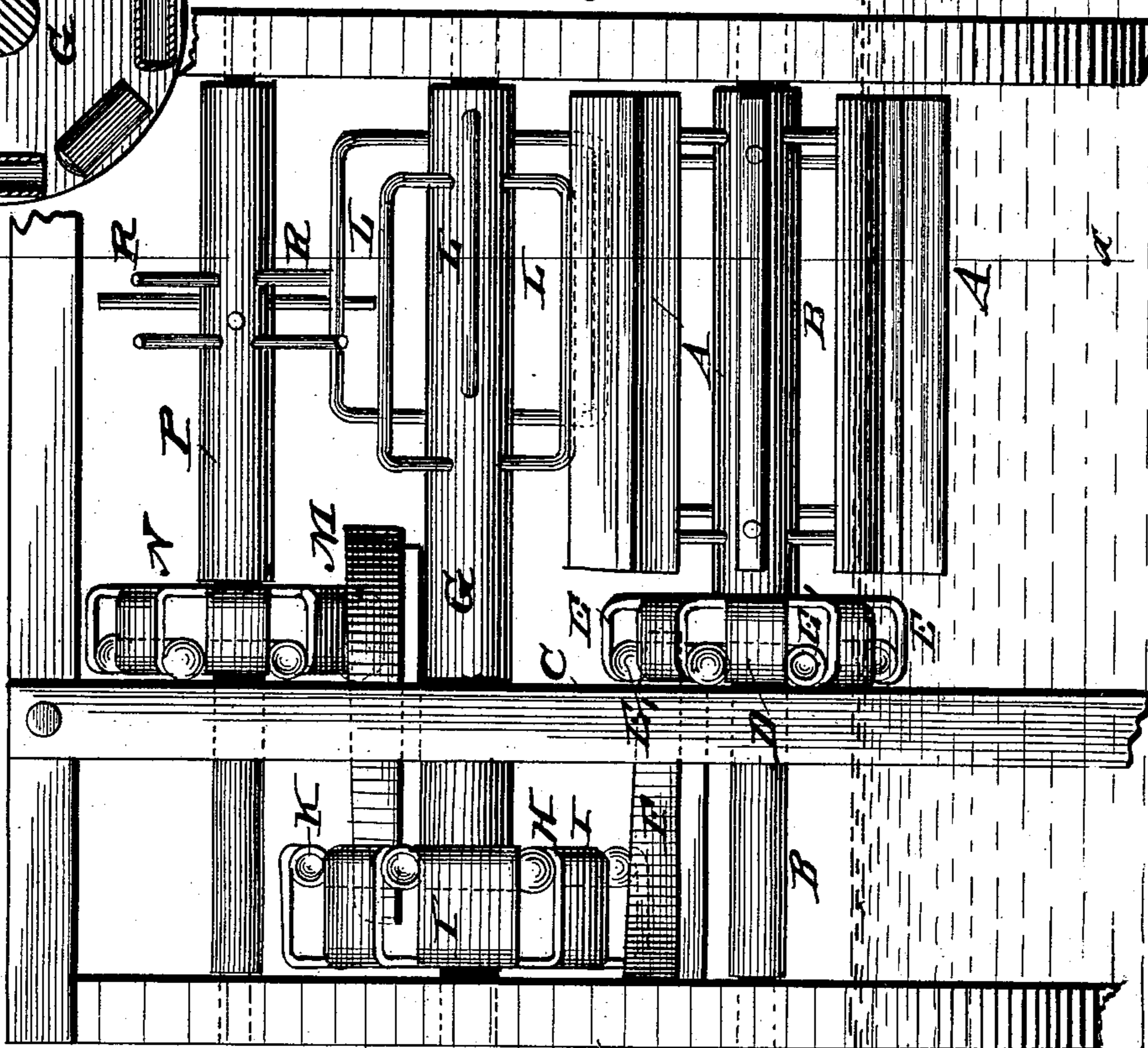


Fig. 3.

Fig. 1.



WITNESSES:

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HENRY SMITH DAGGETT, OF GYPSUM, COLORADO.

WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 324,235, dated August 11, 1885.

Application filed September 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. DAGGETT, of Gypsum, in the county of Eagle and State of Colorado, have invented certain new and useful Improvements in Water-Elevators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in water-elevators; and it has for its object to provide a cheap and efficient machine or system of machinery, whereby water may be taken up from a running stream or other water supply and economically elevated to a suitable tank or distributing-reservoir, to be distributed and supplied at lower levels, as more fully hereinafter specified. The above-mentioned objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a front view of a machine embodying my improved system of elevators; Fig. 2, a transverse vertical sectional view taken on the line *x x* of Fig. 1; Fig. 3, a detached view of one of the water-elevating wheels, showing the same partly in elevation and partly in section.

In the said drawings, the letter A indicates an ordinary undershot water-wheel, the shaft B of which is journaled in bearings in the vertical timbers C, erected in the bed or adjacent banks of a running stream or water-course in such manner that the blades of the wheel may extend into the running water, so that the wheel may be driven thereby. To the shaft of said wheel is secured a wheel, D, which is provided on one face with a series of arms, E, extending from its periphery parallel with the shaft to a suitable distance, the said arms being provided with tangential buckets E', arranged to dip into the stream as the wheel rotates, and take up the water with the current, and discharge it at the proper point above.

Between the shaft B and the upper portion of the periphery of the wheel D' is located a trough, F, into which the water from the rotating buckets of the said wheel is discharged as they successively pass over said trough.

The letter G indicates a shaft, immediately above the shaft B, having its journals in bearings in the vertical timbers above mentioned, the said shaft being parallel with the said shaft B. The shaft G is provided with a wheel, H, similar in construction to the wheel D', and having a series of arms, I, and tangential buckets K, which are so arranged that as the wheel rotates the buckets will dip into and take up the water from the trough F, before mentioned. The shaft G is provided with a series of radial frames, L, which intergear with the blades of the water-wheel and serve to propel the said shaft G in a direction opposite to that in which the shaft B is moving.

Just above the shaft G, and between it and the upper part of the periphery of the wheel H, is located a trough, M, similar to the trough F, which receives the water from the buckets K and collects it to be further elevated by the buckets on the wheel N, which is constructed precisely like the elevating bucket-wheels before mentioned. This wheel is likewise mounted on a shaft, P, journaled above and parallel with the first-mentioned shafts, and said shaft is provided with radial arms R, which intergear with the radial frames L in such manner as to transmit a rotary motion to said shaft P and cause its buckets to take up and discharge the water into a reservoir above, which may be the final or distributing reservoir.

In the present instance I have described and shown an undershot water-wheel with a system of intergearing mechanism of peculiar construction for transmitting motion to the successive elevating-wheels; but it is evident that, by obvious changes in the construction and arrangement of the parts an overshot, turbine wheel, steam-engine, or other motive power may be applied to operate the system of elevating-wheels, and that other intergearing mechanism may be employed without departing from the spirit of my invention.

Having described my invention, I claim—

1. In a water-elevator, the combination of the bucket-wheels having longitudinal buckets and mounted upon parallel shafts, intermeshing power-wheels mounted on the said shafts and receiving motion from the water-wheel shaft, and the intermediate troughs, whereby

the water is conveyed at successive steps from a stream or other water supply to a tank or distributing-reservoir, substantially as specified.

- 5 2. The combination, with the water-wheel mounted on a shaft provided with a wheel carrying a series of tangential buckets and the successive shafts and elevating bucket-wheels arranged above the same, of the inter-
10 gearing radial frames and the intermediate

troughs, whereby the respective shafts are separated to rotate the buckets and elevate the water, substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two 15 witnesses.

HENRY SMITH DAGGETT.

Witnesses:

GEORGE R. HARRIS,
CLARENCE WHITE.