

C. Lewis,

Water Wheel

Nº 2,171.

Patented July 16, 1841.

Fig 1.

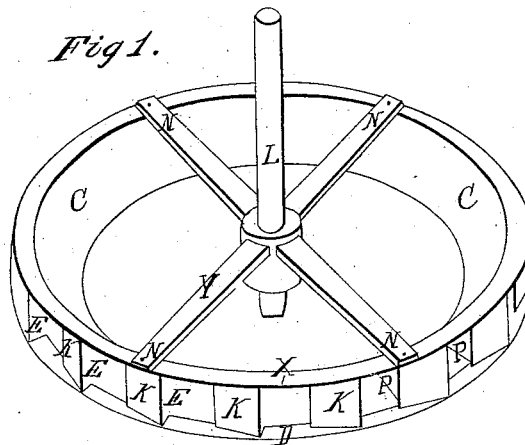


Fig 2.

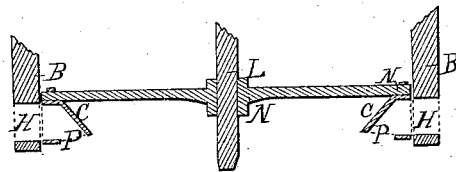
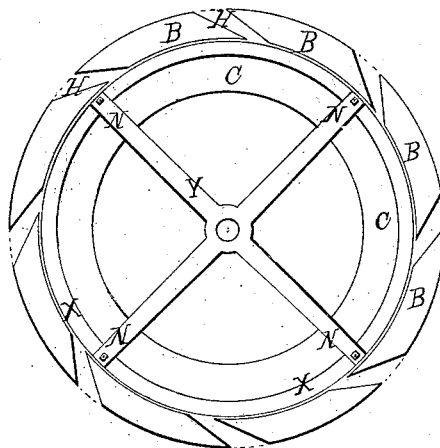


Fig 3.



UNITED STATES PATENT OFFICE.

CLARK LEWIS, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 2,171, dated July 16, 1841.

To all whom it may concern:

Be it known that I, CLARK LEWIS, of Syracuse, in the county of Onondaga and State of New York, have invented an Improvement in Water-Wheels, of which the following is a specification.

This wheel is called the "combined percussion and reaction wheel."

The wheel is made of cast-iron.

Figure 1 is a perspective drawing of the wheel. *y* represents four arms placed on an upright shaft at L. X is a rim made fast to the arms at N N N N and forms the upper part of the wheel. CC is a flaring curb. This curb is made fast to the rim X and forms the inside of the wheel. It contracts to the shaft as it extends downward on an angle of forty-five degrees to the shaft until it reaches the lower edge of the buckets, as shown at C, Fig. 2.

Fig. 2 presents a sectional view or line drawn through the center. D, Fig. 1, represents a rim exactly corresponding with the one X between those two rims. The buckets stand upright, as represented at K and E, E being the face and K the back. These buckets form a kind of box-bucket. The bucket E, against which the water strikes most directly, the back part of it is spiral as it extends downward under the flaring curb C so as to discharge the water at P on the under side of the wheel. K is a back bucket placed back of the one marked E. The water strikes against the one marked E and passes round the one marked K and discharges at P under the flar-

ing curb C in a backward direction and forms percussion by striking and reaction by discharging in a backward direction.

Figs. 2 and 3 represent the wheel standing in an upright curb. B represents the curb, which surrounds the whole wheel and extends to the top of the water in the flume. Through this curb the water passes in spouts or chutes (marked H) and strikes the buckets, as represented above. These chutes will vary in size and number according to the size of the wheel and amount of power required. This wheel will also run the other side up from the one already described. When so, the water will discharge on the top of the wheel. It will run also on horizontal shafts. When so, the water discharges on either side.

What I claim as my invention, and desire to secure by Letters Patent, is—

The manner in which I construct the buckets of my wheel, as above set forth, so as to discharge at the center and produce a reaction as well as a percussive effect, in combination with the stationary rim having apertures in it for admitting the water to the wheel, the whole being constructed substantially in the manner and for the purpose above described.

Dated Syracuse, February 4, 1841.

CLARK LEWIS.

Witnesses:

R. RAYNOR,
R. HINMAN.