

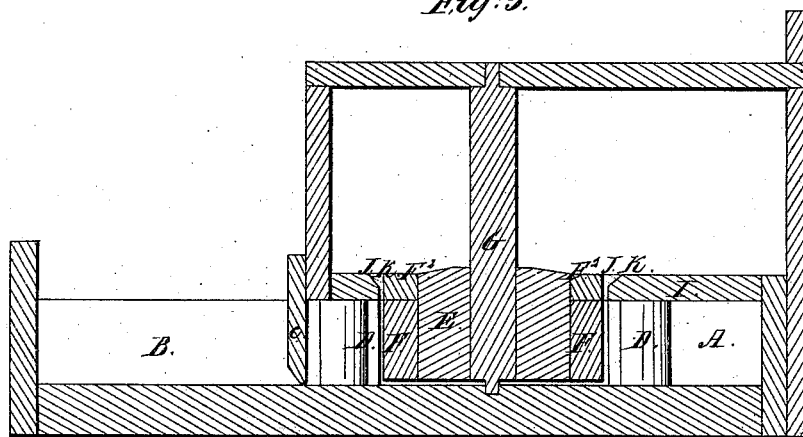
*J. Weaver,*

*Water Wheel.*

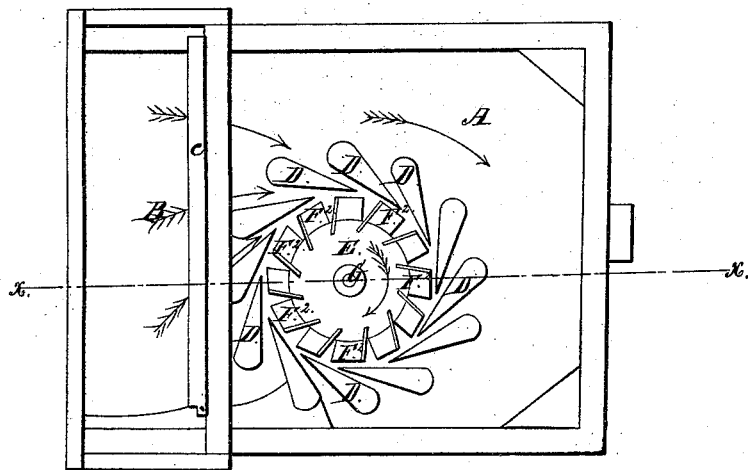
*N<sup>o</sup> 3625.*

*Patented June 10, 1844.*

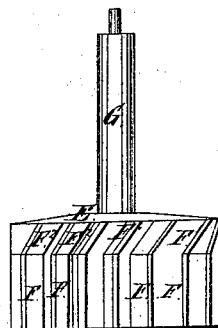
*Fig: 3.*



*Fig: 1.*



*Fig: 2.*



# UNITED STATES PATENT OFFICE.

DANIEL WEAVER, OF NEAR MCKEANSBURG, PENNSYLVANIA.

## WATER-WHEEL.

Specification of Letters Patent No. 3,625, dated June 10, 1844.

*To all whom it may concern:*

Be it known that I, DANIEL WEAVER, of near McKeansburg, Schuylkill county, State of Pennsylvania, have invented a new and useful Improvement in Reaction Water-Wheels, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

10 Figure 1 is a plan of the penstock and water case in which the wheel revolves—the top of the case being removed in order to show the wheel and chutes. Fig. 2 side elevation of the wheel. Fig. 3 is a vertical section at the line *x x* of Fig. 1.

15 The case lettered A is a water tight chamber except the opening in its top in which the wheel revolves, to which the water is conducted through the vertical water tight penstock B in which there is a gate C for shutting off and letting on the water at pleasure. Within this case and on its floor are arranged a circle of wedge shaped chutes D for directing the water to the buckets of the wheel revolving horizontally within said circle of chutes—said chutes being placed on lines tangential to the circumference of the circle of the wheel and at the requisite distance apart to form suitable passages for the water to pass to the buckets of the wheel. The large ends of said chutes or guides are rounded: the small ends are brought to a feather edge.

25 The wheel consists of a wood cylinder E into which, on its periphery, are inserted flat wings or buckets F radiating from the center and standing vertical about two thirds the length of the cylinder, for the remaining third of the length of the cylinder the

40 buckets incline from a perpendicular line forming an angle of about 135 degrees with the vertical portion, or 45 degrees with a horizontal plane as seen at F<sup>2</sup>. The shaft G passes through the center of the cylinder and turns on a pivot inserted into the floor or framing of the case. The gudgeon in the upper end turns in a suitable box in a cap of the frame. When the wheel is placed in its proper position in the case the top I Fig. 3 of the latter is put over it bringing 50 the inclined portions of the buckets in the circular opening J in the top of the case, the top of the cylinder being nearly on a level with the top of the case. The edge J K of the case around the circle in which 55 the wheel revolves is beveled off at an angle of about 35 degrees. The water in the penstock B being let into the case A by raising the gate C passes through the spaces between the chutes D and acts against the 60 vertical portions of the buckets F, it then passes through the spaces or pens between the inclined portions F<sup>2</sup> of the buckets to the top of the case acting against the said inclined portions of the buckets in turning 65 the wheel, and then escaping over the edge J K of the top I.

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

70 The combination of the wheel constructed as aforesaid with the circle of chutes in the case in which the wheel is placed as above set forth.

DANIEL WEAVER.

Witnesses:

WM. P. ELLIOT,  
ALBERT E. JOHNSON.