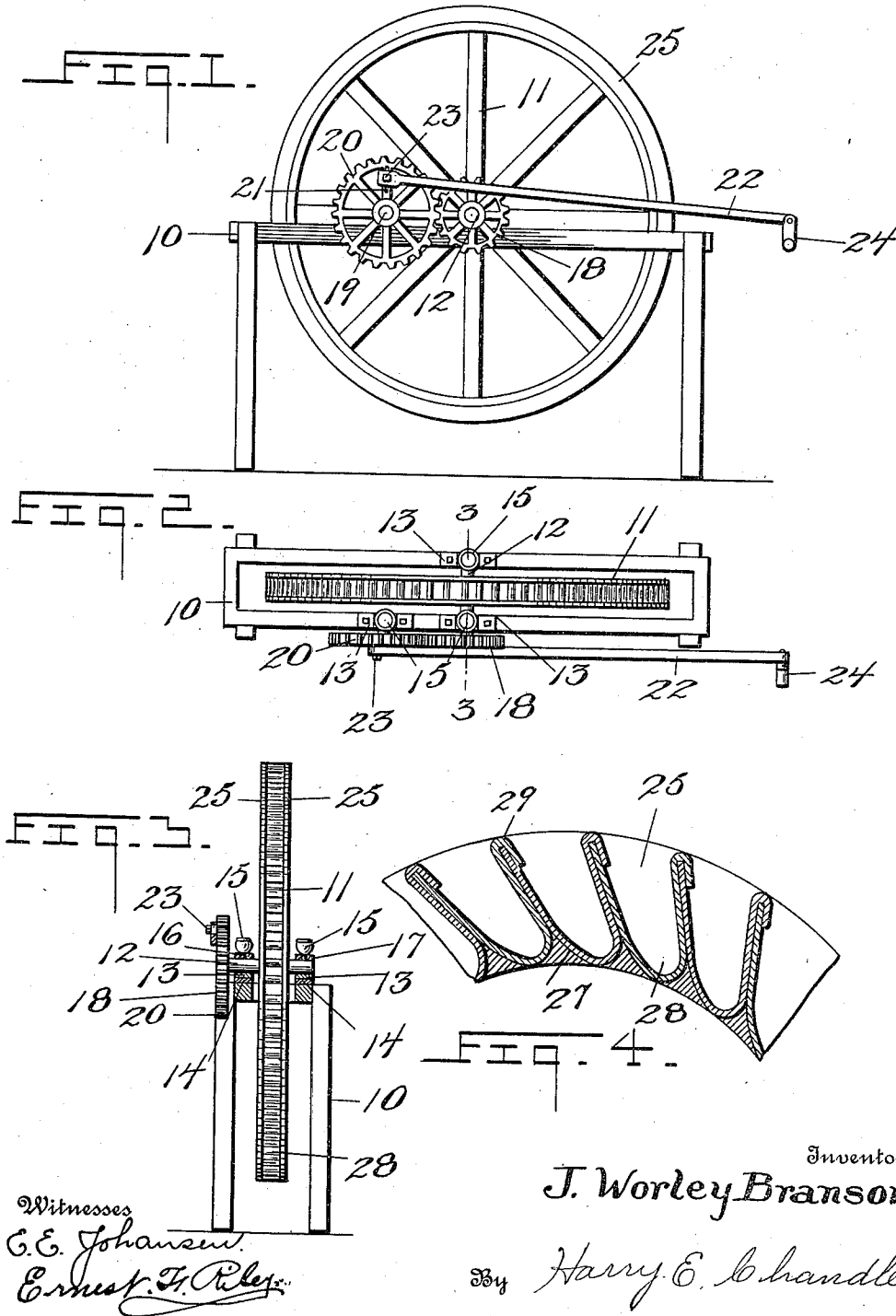


J. W. BRANSON.
 IMPACT WATER MOTOR.
 APPLICATION FILED OCT. 17, 1910.

1,006,906.

Patented Oct. 24, 1911.



Witnesses
 C. E. Johansen.
 Ernest F. Riley.

Inventor
 J. Worley Branson

By Harry E. Chandler
 Attorney

UNITED STATES PATENT OFFICE.

JOHN WORLEY BRANSON, OF WALLACE, VIRGINIA.

IMPACT WATER-MOTOR.

1,006,906.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed October 17, 1910. Serial No. 587,369.

To all whom it may concern:

Be it known that I, JOHN WORLEY BRANSON, a citizen of the United States, residing at Wallace, in the county of Washington and State of Virginia, have invented certain new and useful Improvements in Impact Water-Motors, of which the following is a specification.

This invention relates to water power pumping machines, and the object of the invention is to provide a water driven motor of simple and novel construction whereby a maximum amount of power may be derived from a minimum sized stream or supply of water.

Another object is to provide a novel arrangement of gearing by which power is transmitted from the water wheel to a suitable pump, the rotating parts constituting the mechanism being mounted in desirable bearings.

A still further object is to provide a water wheel having pockets constructed and fitted to the rims of the wheel in a novel manner. Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings: Figure 1 is a side elevation of my improved water power pumping machine, Fig. 2 is a top plan view thereof, Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 2, Fig. 4 is an enlarged sectional view of a portion of the water wheel showing the arrangement of the pockets therein.

Referring more particularly to the drawings, 10 designates a suitable supporting frame constructed of angle iron, and which is adapted to be supported beneath a stream of water or other supply for the proper rotation of a water wheel 11 mounted upon a shaft 12 which is rotatable in bearings secured to the horizontal portions of the angle irons 10. Each of these bearings comprises a pair of plates 13 and 14 bolted to the angle iron frame and provided with semicircular recesses adapted for receiving the shaft 12, the oil cups 15 having threaded stems 16 being secured to the raised portions 17 of the upper plate 13 for properly lubricating the bearings. One end of the shaft 12 is ex-

tended beyond the side of the frame and has a gear wheel 18 secured thereto.

A second shaft 19 is mounted in similar bearings forwardly of the shaft 12, having similar oil cups and one end of the shaft 19 is also extended beyond one side of the frame and has a larger gear wheel 20 keyed thereto in mesh with the gear wheel 18. One of the spokes of the gear wheel 20 is provided with a slot 21 for adjustably attaching a pitman 22 in an eccentric position as by means of a bolt 23. The outer end of the pitman may be attached to a suitable crank shaft 24 having operative connection with a pump or other machinery desired to be driven.

The wheel 11 is provided with spaced rims 25 connected by the triangular shaped bars 27 providing pockets therebetween adapted to receive the ends of the cups 28 which are adapted to catch the water in propelling the wheel. These cups comprise sections of sheet metal bent upon themselves in U form, said cups being secured together by having one transverse edge bent as shown at 29 to form a recess in which the adjacent edge of the other cup is clampingly engaged, the cups being thus bound together in a unitary band fitting against the bars and in the pockets therebetween.

It will thus be seen that I have provided a water wheel from which a maximum amount of power may be derived for operating a pump or other machinery and by the arrangement of gearing shown the drive will be positive and desirable.

Having thus described my invention, what I claim is:

1. A water motor comprising a frame, a shaft journaled in the frame, a wheel mounted upon the shaft, a pair of spaced rims secured to the periphery of the wheel, spaced triangular bars connecting the rims and providing pockets between the adjacent bars, U-shaped plates having their bases fitting in said pockets and having one edge bent down upon the upper edge of the adjacent plate and gearing driven by the rotation of the wheel.

2. A water motor comprising a frame, a shaft journaled in the frame and bearing a pinion on its outer end and a wheel secured centrally thereof, a pair of spaced rims secured to the periphery of the wheel, bars connecting the rims and of configuration to

provide pockets between adjacent bars, U-shaped members having their bases engaged in said pockets and extending outwardly, one edge of each U-shaped member being
5 reversely bent to fit over the upper edge of the adjacent U-member, said bend being disposed in alinement with the edge of the rim, gearing driven by the pinion of the shaft,

and a pitman adjustably connected with said gearing.

In testimony whereof I affix my signature, in the presence of two witnesses.

JOHN WORLEY BRANSON.

Witnesses:

H. G. PETERS,

O. A. BUTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."