

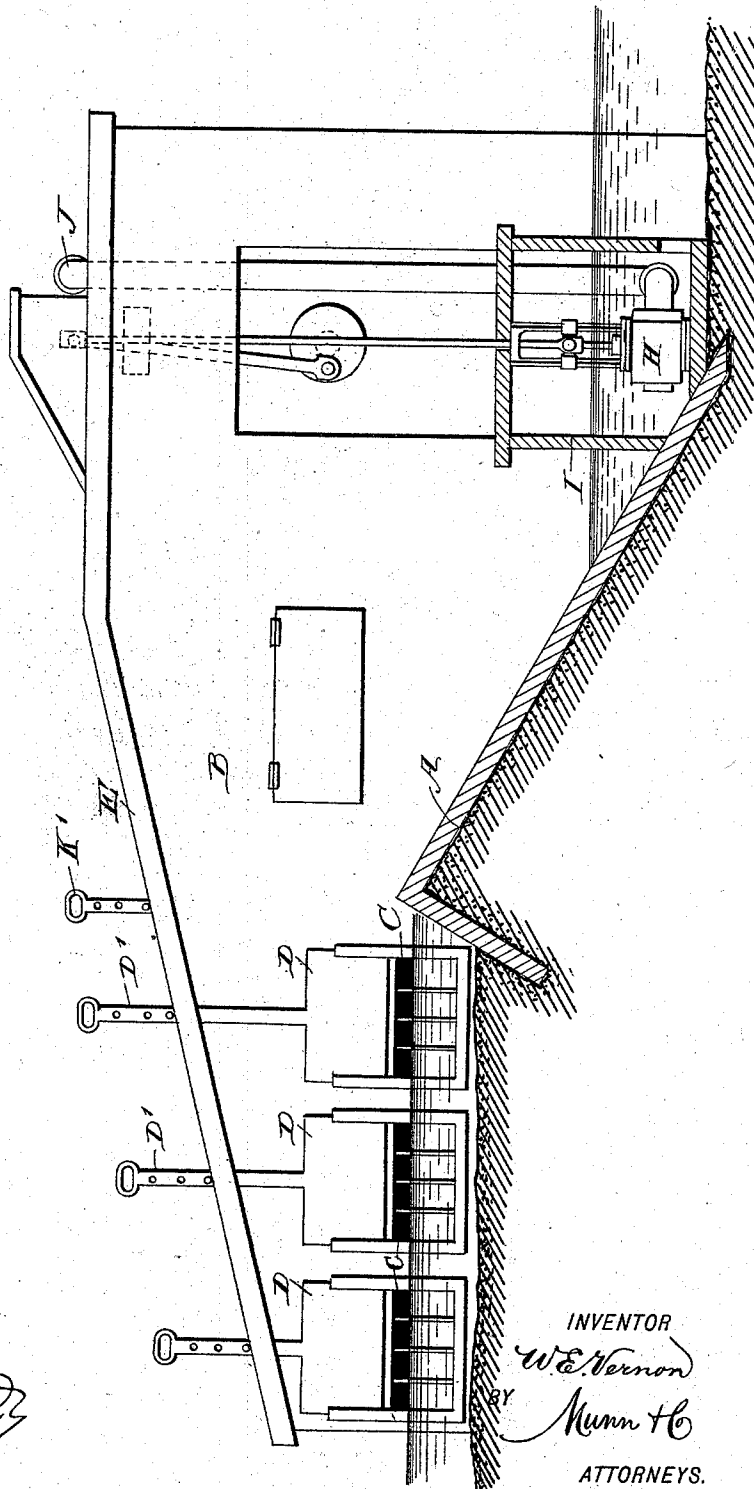
(No Model.)

W. E. VERNON.
WATER POWER.

2 Sheets—Sheet 1.

No. 530,370.

Patented Dec. 4, 1894.



I

WITNESSES:

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INVENTOR

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ATTORNEYS.

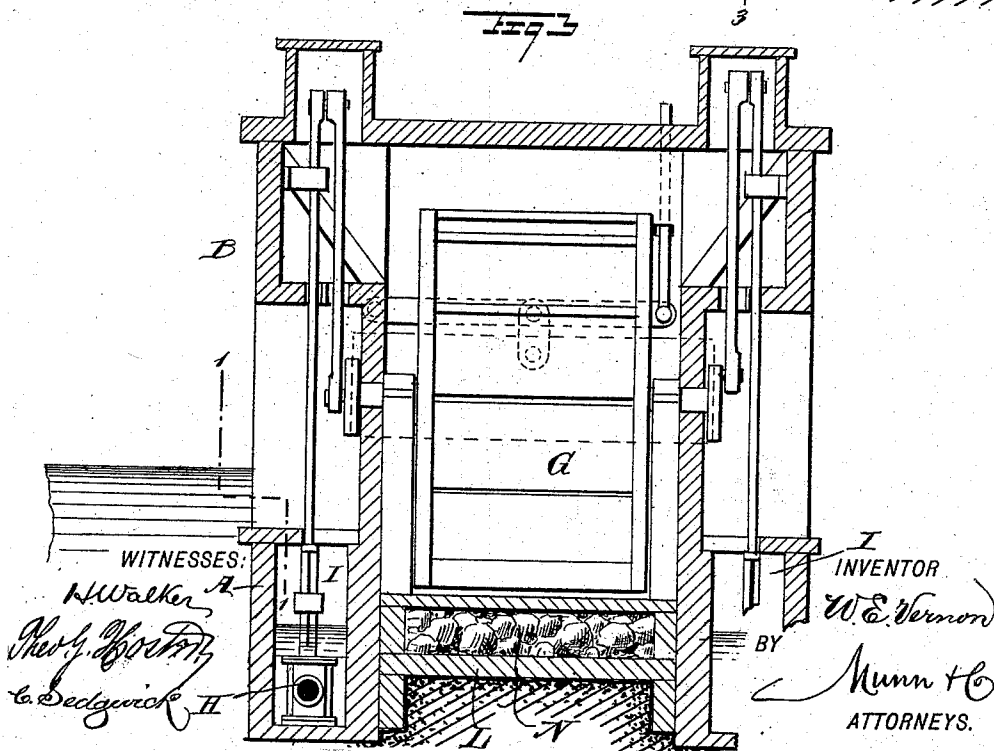
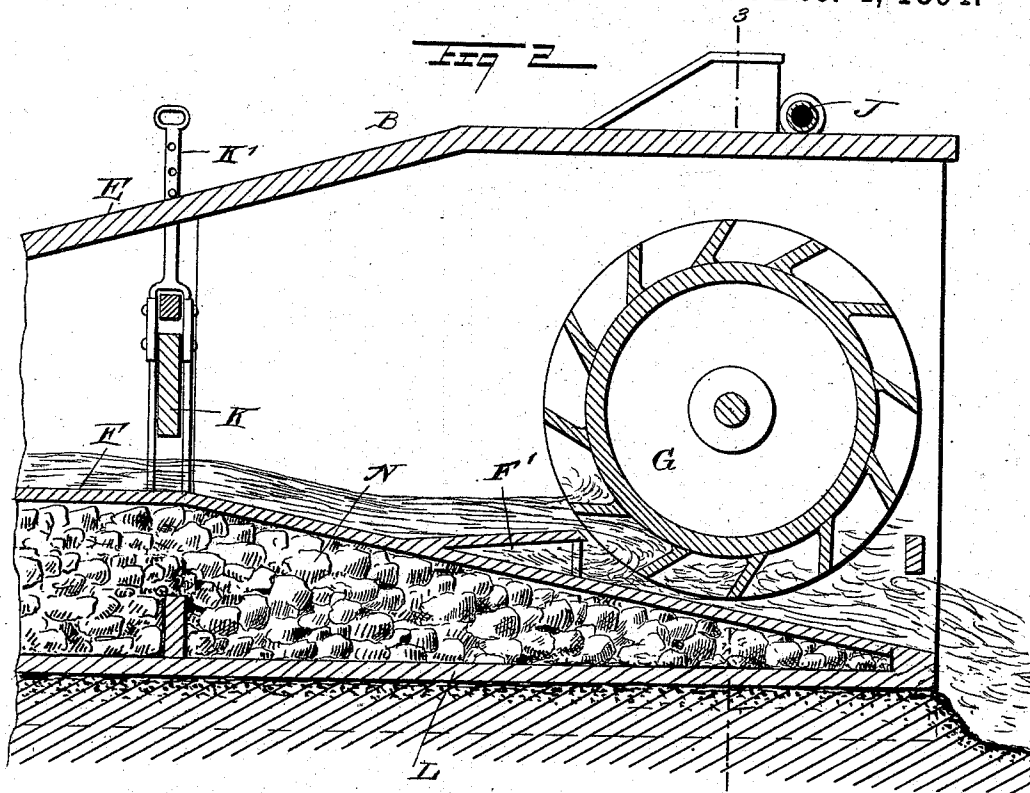
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W. E. VERNON.
WATER POWER.

2 Sheets—Sheet 2.

No. 530,370.

Patented Dec. 4, 1894.



UNITED STATES PATENT OFFICE.

WILLIAM E. VERNON, OF SAN ANGELO, TEXAS.

WATER-POWER.

SPECIFICATION forming part of Letters Patent No. 530,370, dated December 4, 1894.

Application filed March 13, 1894; Serial No. 503,405. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. VERNON, of San Angelo, in the county of Tom Green and State of Texas, have invented certain
5 new and useful Improvements in Water-Powers, of which the following is a full, clear, and exact description.

The invention is hereinafter described, and the novel features are specifically indicated.

10 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts in section on the line 1—1 of Fig. 3. Fig. 2 is a sectional side elevation of the improvement; and Fig. 3 is a transverse section of the same on the line 3—3 of Fig. 2.

20 In the stream, river, &c., is built a transversely extending dam A, abutting at one end against the inlet side of a power house B, built into the bank of the stream or river, as indicated in Fig. 1. On the side of the power
25 house B, facing the river or stream is arranged one or a series of inlet openings C, the upper ends of which correspond approximately to the height of the dam A, so that the water banked by the dam A readily flows through
30 the said inlet openings into the upper end of the power house B.

The openings C are controlled by gates D, having arms D' extending upward, to be
35 E of the power house, it being understood that the operator standing on the roof of the said power house can readily manipulate the arms D' so as to raise or lower the gates according to the amount of water it is desired
40 to have flow from the stream above the dam A through the said inlet openings C. The roof E is inclined downward in the upward direction of the stream, as is plainly indicated in Fig. 1, so that in case of high water,
45 driftwood, &c., may readily pass over the power house without injury to or destruction of the same.

In the power house B is arranged the race-way F, leading from the opening C down-
50 ward to draw the greatest amount of water

from the openings downward, the said race-way F being provided in its incline with the slightly upwardly extending apron F' over which passes the water onto an undershot wheel G, mounted in the lower part of the
55 power house B, as is plainly shown in Fig. 2. In addition to the function of directing the current against the wheel, the apron, F', serves to receive the back flow of water in the space beneath it. The water after leaving the wheel G, flows down the lower part of the race-way F and out of the power house below the lower end of the dam A.

The wheel G is adapted to actuate pumps H, of any approved construction and arranged in separate boxes I built at the sides
65 of the lower part of the power house, as is plainly indicated in Figs. 1 and 3, the said boxes I being open to the water in the river or stream below the dam A. The pumps H
70 discharge the water into the outlet pipes J leading to the place from which the water pumped is to be distributed for irrigating or other purposes.

In order to regulate the water passing down
75 the race-way F, I provide a transversely extending gate K built in the power house over the race-way, as is plainly indicated in Fig. 2. This gate K is hung on an arm K' extending upward through the inclined roof E of
80 the power house to be locked to the said roof in a suitable way, by the operator standing on the inclined roof of the power house.

Under the race-way F extends horizontally the bottom or floor L of the power house, the
85 said floor forming with the said race-way a box or pocket filled in with heavy rocks N as indicated at the left in Fig. 2, to prevent displacement of the power house by high water, &c.

90 Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a dam, arranged in the bed of a stream and extending part
95 way across the latter, of the power-house, and having its upper end closed, and its top inclined downward in the up-stream direction, as and for the purpose specified, gated inlet openings in the side of the power-house, 100

which are located below the top of the dam, a downwardly-inclined water-way in the power-house, and a water-wheel located in the lower enlarged end of the power house, 5 as shown and described.

2. A water power, comprising a power house set in the bank of a stream or river and formed in its side facing the stream or river with inlets, gates for opening and closing the 10 said inlet openings, a race-way extending longitudinally in the said power house, and

connecting at its upper end with the said inlets, a water wheel journaled in the lower part of the said power house and upon which discharges the said race-way, an apron arranged above said wheel on the bottom of the race-way, at an angle thereto to guide the water upon the wheel as shown and described. 15

WILLIAM E. VERNON.

Witnesses:

L. C. DUPREE,
B. W. RIMIS.