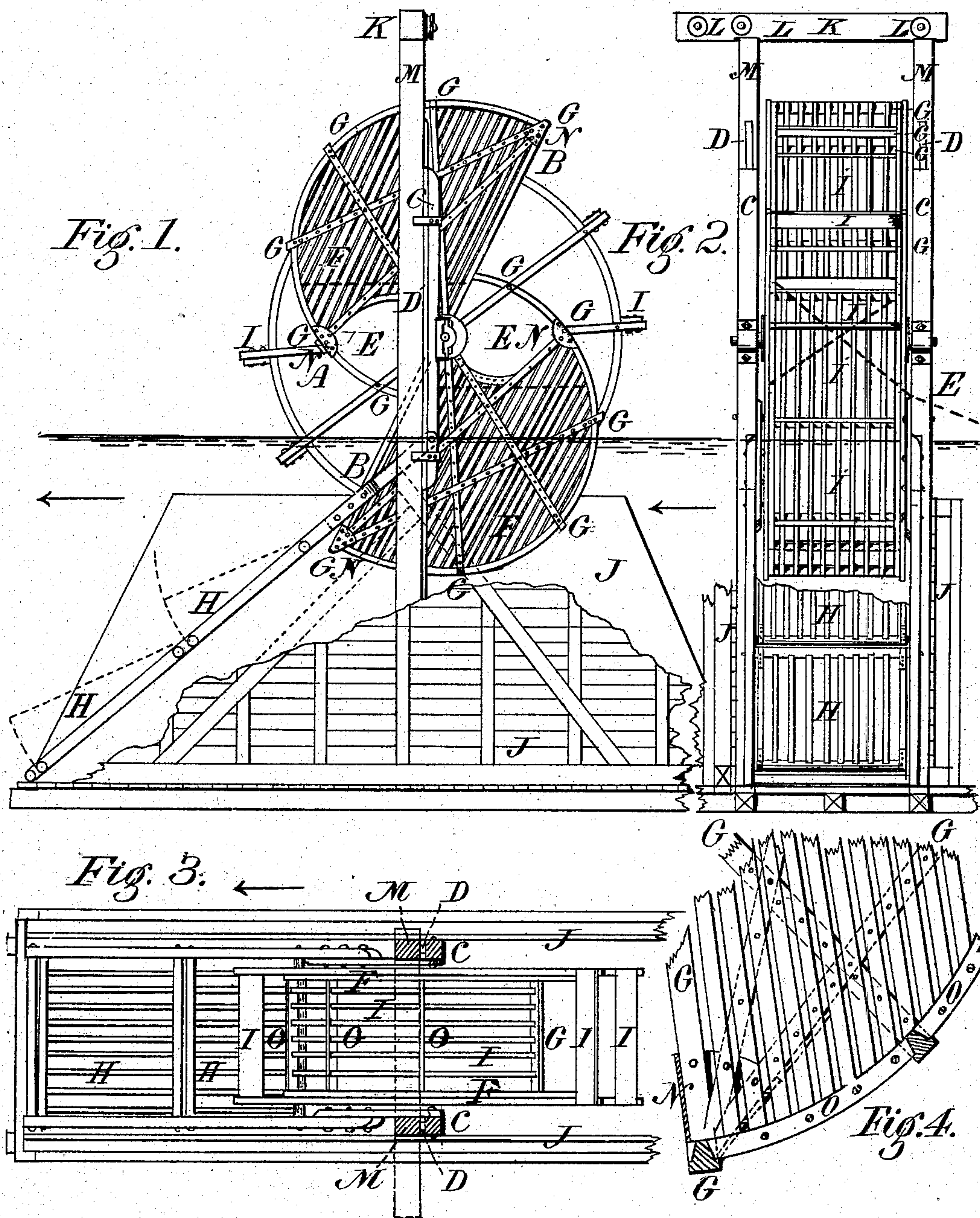


(No Model.)

W. R. McCORD.
FISH WHEEL.

No. 257,960.

Patented May 16, 1882.



Attest
C. B. Falbot
J. M. M. Leay

William Rankin McCord
Inventor

UNITED STATES PATENT OFFICE.

WILLIAM R. McCORD, OF EAST PORTLAND, OREGON, ASSIGNOR TO HIMSELF,
S. B. STORY, C. W. PRINDLE, AND J. M. McCOY.

FISH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 257,960, dated May 16, 1882.

Application filed January 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RANKIN McCORD, of East Portland, in the county of Multnomah, in the State of Oregon, have invented
5 an Improved Fish-Wheel, of which the following is a specification.

My invention consists of two or three spiral-shaped "baskets," F, as may be desired, arranged, as described, on a shaft driven by the
15 current of a stream.

In the drawings, Figure 1 represents a side elevation. Fig. 2 represents an end elevation as seen from downstream, and Fig. 3 is a plan. Fig. 4 is an enlarged view, showing the shape
15 of the slats at the back of the baskets.

The baskets F in small wheels are nearly semicircular at the back; but in larger ones this curve is made spiral, having a smaller and smaller radius as it approaches the center.
20 When two baskets are used (as in the drawings) buckets I are used for turning the wheel when both baskets are horizontal; but with three baskets these are not necessary. The size of the wheels varies (according to the depth
25 of water and kind of fish to be taken) from ten to forty feet in diameter; also, the distance between the slats or bars from an inch or two to four or five inches. In Fig. 4 a section of the back of the wheel is shown at an enlarged
30 scale, showing the slats O and the ends of same where they enter the cross-bars on the ends of the wheel arms G. These pieces O are made in this way so that they can be taken out when they are broken by sturgeon or floating drift-
35 wood, when, having a number of duplicate pieces, these are placed in the breaks and business proceeds without delay.

At the bottom ends of the slide-pieces C is a frame, H, having a pin at its upper end in
40 each side piece. Its bottom end lies on the floor of "fish-road," and in it are placed two or three grates, also hinged at the upper end, the lower end being loaded with a weight sufficient to keep it from floating. When a snag
45 or stone comes through the road these open and let it go through without breaking the grates, at other times lying in place and forming a weir to make the fish leave the bottom and rise toward the wheel, when they pass over
50 the top of this and into the baskets F in the wheel. This is necessary on account of rais-

ing the wheel from low to high water. It being desirable to keep the wheel about one-third in the water, and by doing so at high water, which is the best fishing stage, they could run
55 below the wheel and not be caught. The wheel is inclosed on each side with stones, plank, or anything that will keep the fish from dodging the wheel. A row of piles or stakes, or anything of the kind, answers equally well. On
60 each side of the wheel is an upright timber, M, on which is nailed a strip of two by four inch stuff for a tongue, D, and on the central face of each of the slides C are two similar pieces spiked thereto for guides, fitting over the first,
65 and on the side of C next the wheel (on either side) are two wrought-iron hooks (not shown) which pass around to back or downstream side of M and prevent the loose sliding pieces C from becoming disengaged. C is always on
70 the upstream edge of M. At the top of M a cap, K, is placed, having sheaves L, over which chains or ropes pass to a windlass on the shore for raising or lowering the wheel.

The wheel-arms G are so placed that they
75 meet the cross-pieces supporting the ends of the pieces O at the outer edge of the baskets F, where the arms and cross-pieces are clamped together with a piece of wrought or cast iron, N, and at the back of the baskets are similarly
80 fastened. The pieces are all bolted together wherever they cross each other, and so form strong braces for keeping the wheel firm.

The fish are discharged at points E E, on the shore side of the wheel, behind and below the
85 shaft, by sliding down an incline. (Shown by dotted line in Figs. 1 and 2.) This incline is a board floor placed inside the baskets F at the back side or shaft side, and in such a way that the fish do not discharge until a certain
90 point is reached, when they slide out readily into a box placed at the side to receive them. In this they are sorted, and the small ones returned to the stream. The sides of the baskets F are made of strips of plank screwed or
95 nailed on the inside of the wheel-arms, the outer ends being between two of the segments O and the inside one bolted to the outer one.

The segments O may be made of hoop-iron screwed to the cross-pieces and wheel-arms; 100 but wood is preferable, and is used in most wheels.

I am aware of many forms of fish - wheels, but that in which my invention consists is the circular and partially-spiral shape of the baskets, (so that the fish are taken without injuring them,) and the baskets themselves, made of pieces of wood or metal in the form shown, with the slats, arms, and braces at the sides, and in combination the slide-pieces and rising and falling grates in the fish - road, as stated, all made in a similar manner of bars and slats.
I claim—

1. A fish-wheel, A, having baskets F in the form described, the sides secured to the wheel-arms, the diagonal pieces G, and the bottom made of the segments O, as described. 15
2. Pieces C and frames H', rising and falling, as shown, on guides D, in combination with the wheel.

WILLIAM RANKIN McCORD.

Attest:

C. B. TALBOT,
J. M. MCCOY.