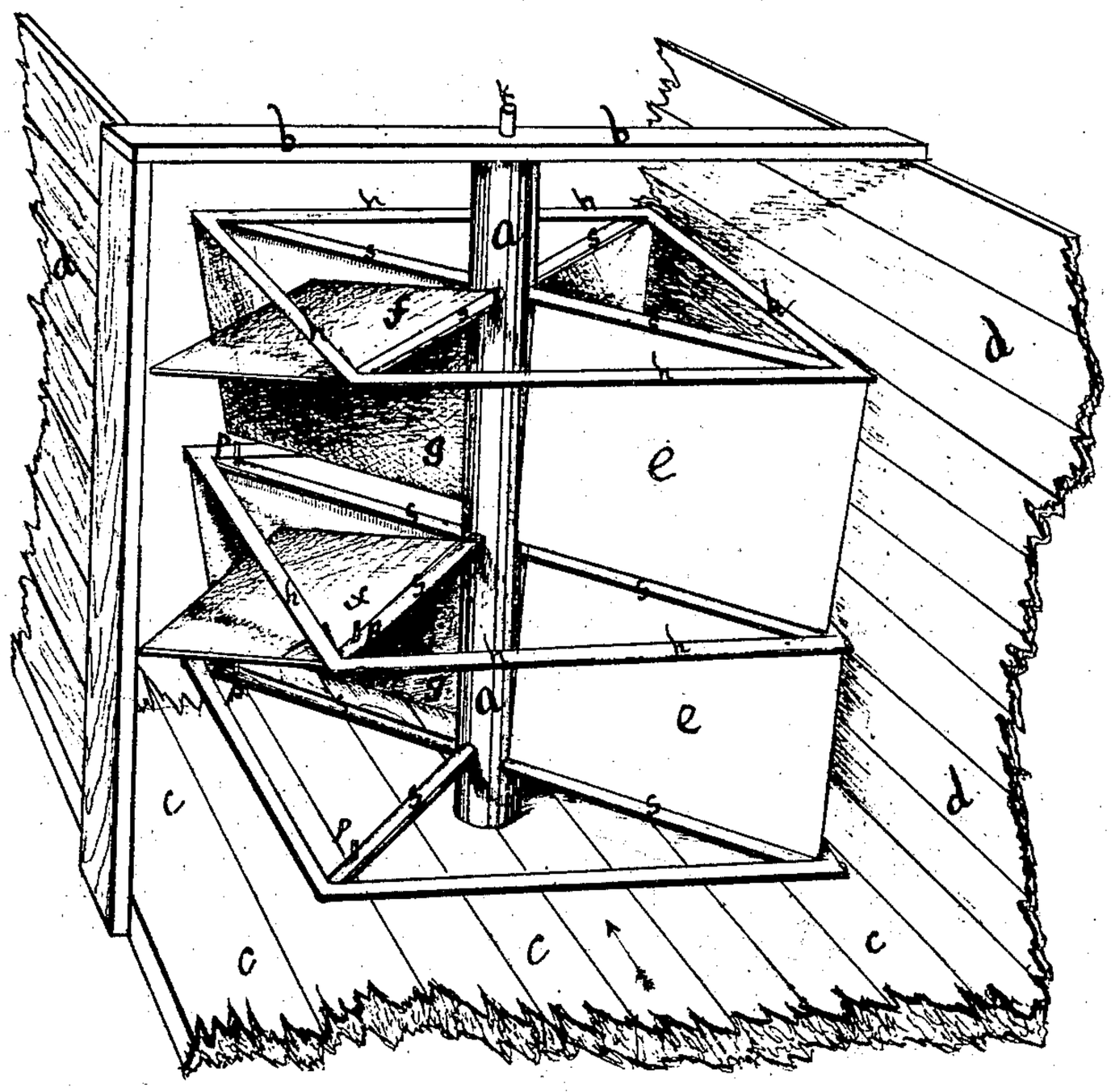
E. A. White,

Current Wheel.

No. 99614. Patented Feb. 8. 1870.



Witnesses.

Kaen Mahony

James H. Roberts

Inventor.

Eugene A. White

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United States Patent Office.

EUGENE A. WHITE, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 99,614, *dated February* 8, 1870.

IMPROVEMENT IN CURRENT-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same

I, EUGENE A. WHITE, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and Improved Tide and Current-Wheel, of which the following is a specification.

My invention relates to the arrangement and combination of floats, pins, frame-work, &c., in such a manner that by the float's offering resistance upon one side of the wheel, and no resistance on the other side, the action of the water causes the wheel to turn in the same direction, whichever way the current of the water may run.

The accompanying drawing represent my wheel in a sluice-way—

d representing the sides;

c, the bottom.

I will state however, that the more common way, and probably more convenient way of building and securing my wheel, will be by dispensing with a sluice-way, and resting it upon some rock on the bottom, or upon some composition placed there for that purpose, and using piles instead of the sides *d* of the sluice-way represented.

a represents an upright shaft, placed and revolving in the bottom *c*, and secured at the top by means of the cross-bar *b*.

k is a pinion or axle, passing through the bar *b*.

e f and *g* are floats, in different positions.

s s are the arms, holding the floats.

h h are connecting rods, passing across from one arm to another, strengthening them.

p p are pins, which project upward from each arm *s*, excepting the top ones.

In practical operation, supposing the current to be running in the direction indicated by the arrow in the drawing, the current strikes the floats *e e*, *g g*, and *f f*.

The floats *e e* lay closely against the pins behind them, resisting the pressure of the current.

The current in pushing them, pushes that side of the wheel partly round. At the same time the floats *f f* rise as high as the connecting-rods *h h* will allow them to, and the water passes under them. The floats *g g*, it will be noticed, are just commencing to rise.

When the floats *f f* swing round to the place now occupied by the floats *e e*, they will assume the position of the floats *e e*, and help move the wheel.

In some cases it may be necessary to place weights on the floats, in order to make them drop readily at the right instant.

By extending my floats, and making them wider, I can incease my power very much. My wheel is especially adapted to rapid tides, and rivers with deep and strong currents. It takes up very little room, and does not obstruct the passage of vessels; also obviates the necessity of a dam.

I claim as my invention—

The combination and arrangement of the floats *e*, *f*, and *g*, the pins *p*, and connecting-rods *h*, for the purposes above set forth, and substantially in the manner above described.

EUGENE A. WHITE.

Witnesses:

N. P. KEMP,

KAEN MAHONEY.