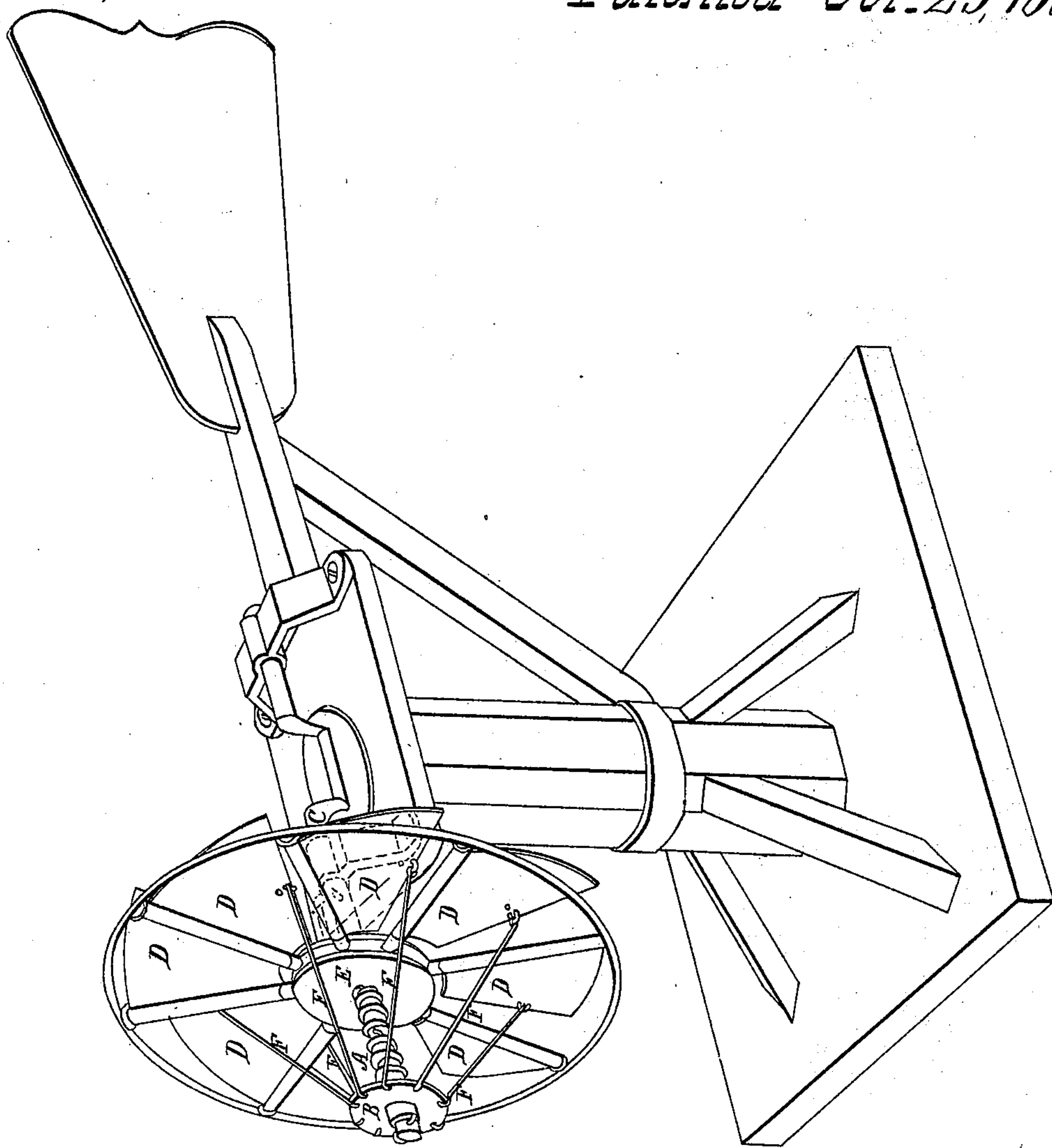


J. W. Neff,

Wind Wheel,

N^o 25,908.

Patented Oct. 25, 1859.



UNITED STATES PATENT OFFICE.

JAMES W. NEFF, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. 25,908, dated October 25, 1879.

To all whom it may concern:

Be it known that I, JAMES W. NEFF, of the town of Sacramento, county of Sacramento, and State of California, have invented a new and useful Improvement in Windmills; and I do hereby declare that the following is a clear and exact description thereof, reference being had to the accompanying drawing.

The drawing is a perspective view of the entire windmill.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

A is the spiral spring, made of any suitable material and in size and proportion to the size of the sails, and this spring is placed on the main shaft between the hub and the flange B. The flange B is made of cast-iron about from six to twelve inches in diameter and one-half inch thick, and has holes in it to receive the rods F, which connect it with the sails.

C is the shaft, on which is placed the spiral spring A, and which extends out in front of the sails from three to eight feet and may be made of cast or wrought iron.

D is the sails, and may be made of any suitable material, such as iron, zinc, wood, or cloth, and are attached to the spokes or arms by means of butts or hinges to allow them to swing backward and forward when desired.

E is the cast-iron hub, which is made of two pieces with spaces between to receive the

spokes or arms of the wind-wheel or sails, and are bolted together firmly to hold the arms or spokes, and has also a hole in the center to slip on the shaft C.

F are the connecting-rods, of iron or any suitable material, which connect the sails with the flange B. They are made to fasten with end hook and eye, or with a screw and nut, so that they can be shortened or lengthened, as may be desired. By this arrangement it will be seen that the operation of my invention allows the sails to regulate themselves by the pressure of the wind, for the harder it blows the farther open the sails become, so that my windmill will make the same number of revolutions in a high or low wind. This allows the fury of the storm to pass through the sails without endangering the safety of the mill and avoids the possibility of blowing it down.

Having thus described the construction and operation of my invention, what I claim is—

The arrangement of the sails D, arms or spokes G, and hub E, as described, and placing them in rear of the spiral spring A and flange B, and connecting flange B with sails D by rods F, the whole operating as described, and for the purposes set forth.

JAMES W. NEFF. [L. S.]

Witnesses:

R. S. CAMPBELL,
T. E. LLOYD.