INTERNATIONAL

Henry Hughes

PATENT & TRADE-MARKS OFFICE.
QUEEN'S CHAMBERS.
OPPOSITE POST OFFICE.

Wellington N.Z.

23052

PATENT OFFICE
25 MAR 1908
NEW ZEALAND.

No. 23052

26th June, 1907.

COMPLETE SPECIFICATION.

"IMPROVEMENTS IN WINDMILLS."

We, FREDERICK HAMILTON JACKSON, Ironmonger, and RICHARD PIERCE, Blacksmith, both of New Plymouth, in the Dominion of New Zealand, do hereby declare the nature of our invention for "Improvements in windmills" and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:-

This invention relates to an improved construction for the sails of windmills.

The construction devised consists of a rectangular frame of metal or material of like strength that is secured upon a shaft extending medially across the frame. This shaft is carried in suitable bearings mounted on the windmill tower in such a manner as to allow of the frame rotating freely. Secured upon each side of the frame is a semi-circular metal sheet that is arranged diagonally across the frame, and so that its face shall extend outwards at right angles to the plane of the frame. The sheet on one side is arranged at the reverse diagonal angle to that on the other side. These sheets are suitably stayed to prevent them shifting.

The faces of the sheets being arranged diagonally, will serve to catch the wind when blowing from either side, so that the pressure of the wind will act upon them and cause the frame and shaft to revolve in the ordinary manner.

In the accompanying drawings:-

Figure 1 is a side elevation of the improved construction of sails.

Figure 2 is a plan thereof.

A, is the rectangular frame of metal that is securely mounted upon the shaft B. C, are the semi-circular metal sheets that are secured on opposite sides of the frame A, and extend outwards

in a plane at right angles to the plane of the frame. These two sheets are secured diagonally across the frame in reverse angles to each other, as shown in the drawings.

The shaft B will be carried in suitable bearings arranged to support it in either a horizontal or vertical position, and to allow of its free rotation with the frame. It will be seen that when the wind hits upon the undersurfaces of the inclined faces of the sheets C, the tendency of such will be to turn away from the impact, and thus the frame and shaft will be caused to rotate. The sheets C will be suitably stayed at their outer edges by means of the guys or stay ropes or rods D connecting such edges with the frame.

The shaft bearings will be mounted on any suitable swivelling frame, and an ordinary wind vane will be provided in order to turn the sail frame in the direction to be acted upon by the wind.

The shaft may be geared up with any mechanism to be actuated by the windmill in any of the approved and known ways.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim, is:-

Means for actuating windmills consisting of a rectangular frame secured upon a shaft extending centrally across the frame and sheets of metal secured one on each side of the frame, and extending

across it at reverse diagonal angles to each other, such sheets also extending outwards from the frame in a plane at right angles to its surface, substantially as specified.

Dated this 25th day of March, 1908.

Henry Hughes
AGENT FOR THE APPLICANTS

INTERNATIONAL
Henry Hughes
PATENT AND TRADE-MARKS OFFICE.
QUEEN'S CHAMBERS.
OPPOSITE POST OFFICE.
Wellington. N.Z.

PROVISIONAL SPECIFICATION.

"IMPROVEMENTS IN WINDMILLS."

We, FREDERICK HAMILTON JACKSON, Ironmonger, and RICHARD PIERCE, Blacksmith, both of New Plymouth, in the Colony of New Zealand, do hereby declare the nature of our invention for "Improvements in windmills" to be as follows:-

This invention relates to an improved construction for the sails of windmills.

The construction devised consists of a rectangular frame of metal or material of like strength that is secured upon a shaft extending medially across the frame. This shaft is carried in suitable bearings mounted on the windmill tower in such a manner as to allow of the frame rotating freely. Secured upon each side of the frame is a semi-circular metal sheet that is arranged diagonally across the frame and so that its face shall extend outwards at right angles to the plane of the frame. The sheet on one side is arranged at the reverse diagonal angle to that on the other side. These sheets are suitably stayed to prevent them shifting.

The faces of the sheets being arranged diagonally will serve to catch the wind when blowing from either side so that the pressure of the wind will act upon them and cause the frame and shaft to revolve in the ordinary manner.

Dated this 26th day of June, 1907.

Henry Hughes

23052.

FIG. 1

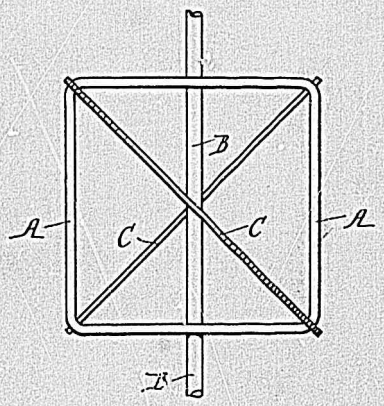
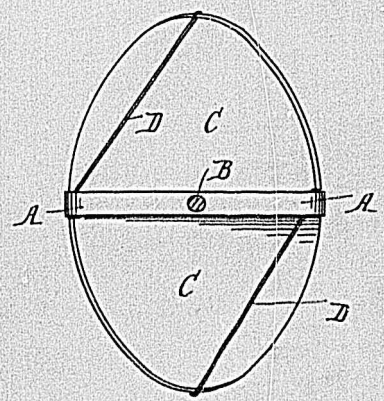


FIG. 2



Henry Hughes

AGENT FOR THE APPLICANTS