PATENTS.

Applicant: J.M. PHILLIPPS. No. 14516

Invention: Windmill. Date: 12 2 :02

APPLICATION—

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OFFICE FOR PATENTS & TRADE MARKS
HENRY HUGHES
ESTABLISHED 1868
WELLINGTON, N.Z.

COMPLETE SPECIFICATION.

"IMPROVED MEANS FOR AUTOMATICALLY STOPPING AND RESTARTING THE REVOLUTION OF WINDMILLS"

I, James Martin Phillipps, of Whirepapa, Auckland, New Zealand, Farmer, do hereby declare the nature of my invention for "Improved means for automatically stopping and restarting the revolution of 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 has been devised for the purpose of providing means whereby the sails of a windmill may be automatically put into or out of the position in which they will be operated by the wind, so that in cases where the windmill is employed to operate a water pump to fill a tank, the sails of such windmill may be turned to the angle of rest when the tank is full and turned to the active position when the level of the water within the tank falls below a certain point thereby ensuring that the tank will be kept full of water.

The accompanying drawing is an elevation of the appliances employed for carrying out this invention.

A are the standard supports of the windmill to which is secured the vertical rectangular frame B. This frame has pivoted to it, at (c), the lever C the outer end of which has attached to it the enclosed hollow vessel D, while the inner end is connected, by means of a connecting piece E, with one end of a lever F pivoted at (f) to the frame B. To the other end of this lever F is attached the end of a wire rope G that is connected to suitable gearing by means of which the sails of the windmill above may be turned round so as to be placed at an angle of rest.

Mounted upon a suitable framework H is the water tank J that is in communication with the vessel D by means of the flexible pipe connection K.

This tank is so arranged with regard to the vessel D that when the end of the lever C to which it is attached is at its highest point, the top of the vessel D shall be on a level with the top of the tank J.

When the lever C is in its highest position, as shewn by the solid lines in the drawings, the end of the lever F to which the rope G is connected will be in a raised position so that no tension will be on the rope and consequently the sails of the windmill will remain in that position wherein they will be caused to revolve. The tank J is connected to the pump operated by the windmill so that as such pump is working water will be pumped into the tank and up through the pipe connection K into the vessel D which will be filled when the level of the water within the tank reaches the top thereof.

When the vessel D becomes full of water its weight will cause the lever C to fall thus raising the other end of it and depressing the end of the lever F to which the cord G is attached, thus pulling upon that cord and turning the sails of the windmill to the angle of rest.

As the water is withdrawn from the tank J, the water within the vessel D will flow back into the tank through the pipe K and when the vessel D has become empty the lever C will rise again, thus removing the tension from the rope G and allowing the windmill

to return to the position in which it will be operated. These operations will be repeated as the tank is filled and emptied thus ensuring that the windmill and pump shall not be caused to work unnecessarily, and that the tank shall be kept filled with water.

A cross bar (b) is secured to the frame E on which the lever C will rest when it falls and which will prevent the lever from falling too far.

An air pipe (d) is placed in the top of the vessel D through which air will escape from and enter the vessel as it is filled with and emptied of water.

Having now particularly described and ascertained the nature of my said invention, I declare that what I claim is,-

1. A lever arm pivoted to a frame attached to the standards of a windmill, the outer end of such lever having an enclosed vessel attached thereto, while the inner end is connected to appliances whereby the sails of the windmill may be turned to a position of rest, in combination with means whereby the enclosed vessel may be filled with water and emptied of the same, as and for the purposes herein set forth.

2. A rectangular frame attached to the standards of a windmill, a lever pivoted to such frame, one end of which has attached to it a rope, or the

like, connected to appliances whereby the sails of the windmill may be turned to the angle of rest, while the other end is connected to the inner end of a lever pivoted to the frame and adapted to be operated by the filling and emptying of an enclosed vessel attached to the outer end thereof, as and for the purposes herein set forth.

3. In appliances for automatically stopping and re-starting the revolution of windmills, a pivoted lever arm one end of which is connected with means whereby the sails of the windmill may be turned to the angle of rest and the other end of which is provided with an enclosed vessel, such vessel being in flexible communication with a water tank and so disposed that when the tank is filled, the vessel shall also be filled, and when the tank becomes partially emptied, the vessel shall be emptied, the filling and emptying of such vessel causing the lever to fall and rise, as herein set forth.

4. The general arrangement, construction and combination of parts in my improved means for automatically stopping and re-starting the revolution of windmills as herein described and explained, as illustrated in the accompanying sheet of drawings, and for the several purposes set forth.

Dated this 12th day of February 1902.

HENRY HUGHES

Per A.G. Stevens Agent for the Applicant

14516.

