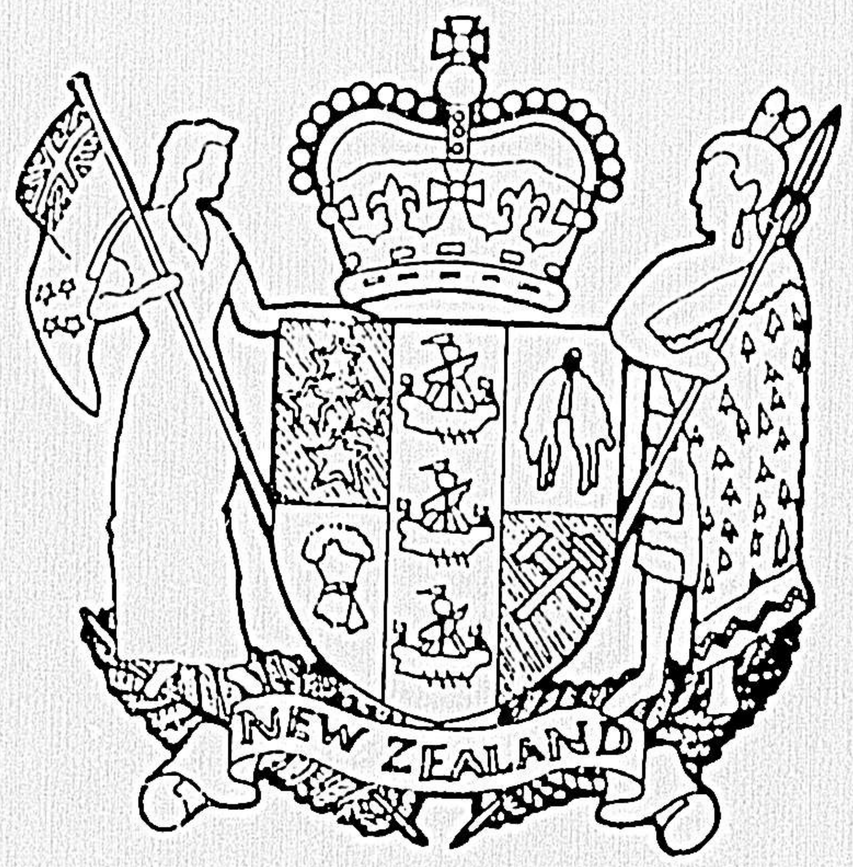


NEW ZEALAND

PATENT SPECIFICATION

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JOURNAL.
No. 14
Date: 24 JUL 1919

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PATENT OFFICE
6 MAR 1919
NEW ZEALAND.

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"THE PATENTS DESIGNS AND TRADE MARKS ACT 1911"

Copy to Accompany
COMPLETE SPECIFICATION

"An improved windmill governor"

I, JAMES SIMPSON, of Ruawai, Northern Wairoa in the Provincial District of Auckland and Dominion of New Zealand, Farmer do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:-

41381

This invention relates to windmills and its object is to provide a governor for the purpose of steadying the mill and regulating the speed thereof, which under ordinary conditions varies considerably owing to the variations of the wind force.

The invention consists in pivotally mounting or hinging each sail of the mill radially between the outer frame and the hub or boss, and in also pivotally connecting one of the inner corners of each sail to a loose ring surrounding the hub.

Two arms weighted at their outer ends are secured one to each of two sails directly opposite each other, said arms being connected by a suitable tension-spring, the tendency being, when the speed of the mill increases, for the weighted arms to fly outwards and cause the front edges of the sails to which said arms are attached to come closer up to the wind, the latter movement causing all of the sails to do likewise.

The invention will be more fully described with reference to the accompanying drawing. Figure 1 being a front view and Figure 2 an edge view of a windmill constructed and fitted with governors, according to this invention.

The sails 1 are each pivoted or hinged radially between the frame 2 and the hub or boss 3. A loose ring 4 is provided around the hub 3 between the latter and the sails to which ring one of the inner corners 5 of each sail 1 is pivotally connected so that the relation of the front edges 6 of the sails 1 to the wind, can be all altered or adjusted simultaneously.

Arms 7 each weighted at its outer end are attached to opposite sails 1 as shown, and are connected by a tension spring 8. Any number of arms 7 preferably an even number can be employed.

When the mill is rotated at a fast speed the tendency is for the weighted arms 7 to fly outwards causing the sails to which they are secured to turn on their pivots or hinges and bring their front edges 6 closer up to the wind and as all the sails are connected by the ring 4, each sail has the same movement which results in a smaller surface or sail area being presented to the wind.

On the wind force decreasing the tension spring 8 draws the arms 7 closer together resulting in the sails 1 being all turned together on their pivots or hinges to again present their full or a greater surface to the wind.

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

First A windmill in which each sail is radially pivoted or hinged so as to be capable of being adjusted to suit the wind force substantially as described and illustrated.

Second A windmill in which each sail is radially pivoted or hinged so as to be capable of being adjusted to suit the wind force, and a loose ring around the hub, each sail being pivotally connected to said ring in order that the sails can all be adjusted simultaneously substantially as described and illustrated.

Third A windmill in which each sail is radially pivoted or hinged and having weighted arms attached to opposite sails said arms being connected by a ten-

41381

sion spring for the purpose set forth substantially as described and illustrated.

Fourth The improved means for automatically governing the speed of windmills substantially as herein described with reference to the accompanying drawings.

Dated at Auckland this third day of March 1919.

JAMES SIMPSON,
by his Attorney,
W. M. Lasby

Certified to be a true copy
W. M. Lasby
Attorney.

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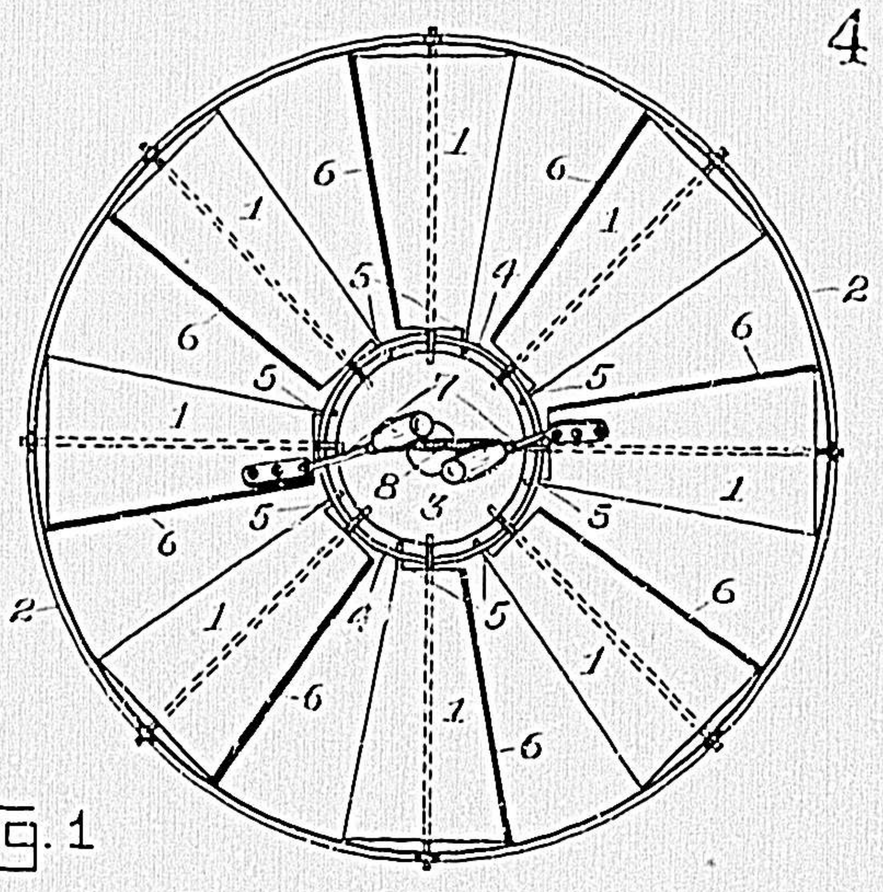


Fig. 1

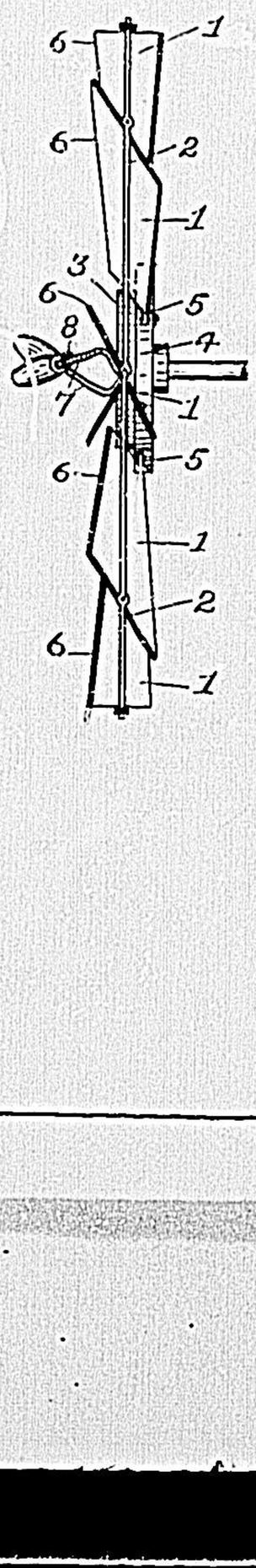


Fig. 2

JAMES SIMPSON
by his Attorney
T. M. Pasley

END