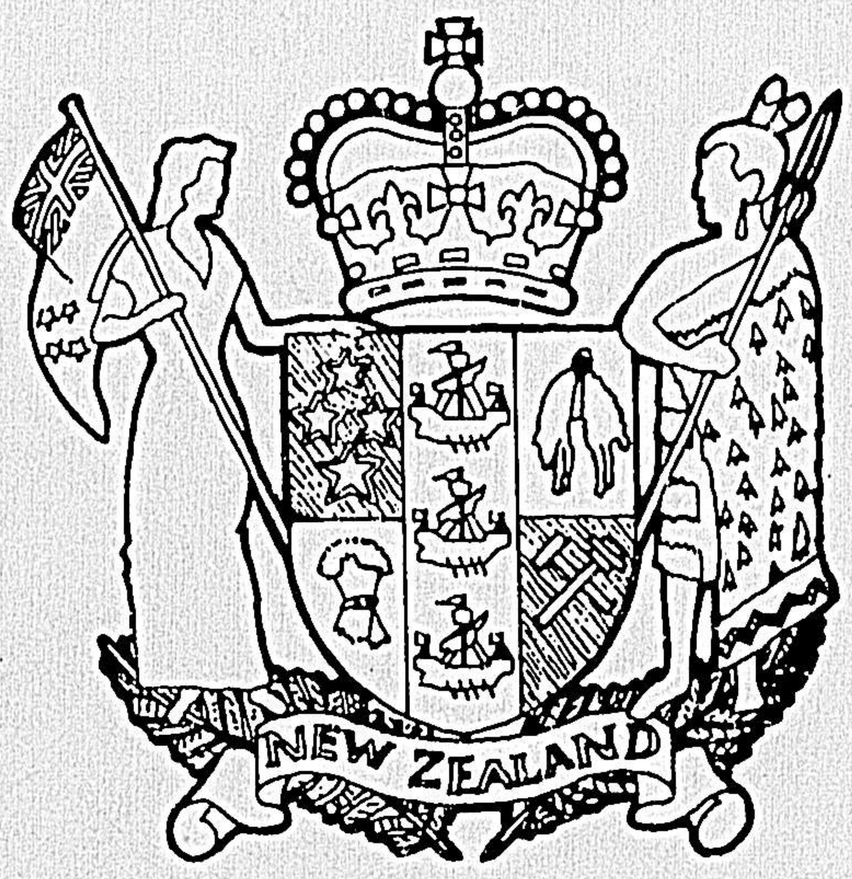


NEW ZEALAND

PATENT SPECIFICATION

40561.

40561

7.8.18.

40561

NEW ZEALAND

"THE PATENTS DESIGNS AND TRADE MARKS ACT, 1911"

JOURNAL.
No. 20
Date: 17 OCT 1918

90.7

COMPLETE SPECIFICATION

F O R

LETTERS PATENT

Messrs. Baldwin & Rayward,
Patent Attorneys,
Wellington etc.,

BALDWIN & RAYWARD
HEAD OFFICE
215/217 LAMBTON QUAY,
WELLINGTON.
Patent Agents and Consulting Engineers

No.

Date

PATENT OFFICE
7 AUG. 1918
NEW ZEALAND.

"AN IMPROVED WINDMILL"

I, RALPH STANLEY LEVESQUE, of Victoria Road, Cambridge, in the Provincial District of Auckland, in the Dominion of New Zealand, Fruit 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:-

40561

BALDWIN & CLIFFORD
HEAD OFFICE
215/217 LAMBTON QUAY,
WELLINGTON.
Patent Agents & Engineers

This invention provides an improved windmill characterised by hollow horizontally rotating vanes approximately pyramidal in shape and truncated at their apexes, whereby holes are left for the passage of air; also a brake of novel construction for controlling the speed of rotation of the vanes.

The invention may be conveniently and advantageously carried into practice as illustrated in the accompanying drawing, wherein:-

Figure 1, is an elevation of the windmill,

Figure 2, a plan of the vanes,

Figure 3, a plan,

Figure 4, an end view and

Figure 5, a front elevation of a vane,

The vanes 1 are secured to horizontal arms 2, which are fixed to, and radiate from a central shaft 3. Each vane 1 is approximately pyramidal in shape, the centre line of the truncated apex 4 falling laterally outward of the centre line of the base 5, and falling vertically centrally of the centre line of the said base. The truncating of the vanes leaves a hole 6 for the passage of air, which passing through any one of the vanes is owing to the shape of the vanes made to impinge on the sloping outer side of the next succeeding vane until the power of the wind is exhausted. By using the power of the wind in the above manner, the efficiency of the windmill is greatly increased.

The vanes are conveniently made of corrugated sheet iron, which gives stiffness for preserving the shape thereof.

By arranging the vanes to rotate horizontally the windmill is always ready to be operated by the wind independent of what point of the compass it may be blowing.

BALDWIN & BALDWIN
HEAD OFFICE
215/217 LAMBTON QUAY,
WELLINGTON.
Patent Agents and Consulting Engineers

The shaft 3 is mounted vertically in a stand or frame 7, and by means of bevel wheels 8 and 9 transmits motion to a horizontal shaft 10 provided with a pulley 11 and crank 12. Rotary motion for operating machines such as a chaff cutter or other machine is obtained from the pulley 11, and reciprocating motion for working a pump or other reciprocating machine is obtained from the crank 12.

The brake for controlling the speed of the vanes comprises a lever 13 pivoted on a pin 14, a lever 15 pivoted upon a pin 16 and connected to the lever 13 by a rod or cord 17, a spring 18 connecting the outer end of the lever 13 to the stand 7, and a catch 19 pivoted upon a pin 20 and adapted to engage any one of the teeth 21 of a rack formed upon the lever 15. The inner end of the lever 13 has bifurcated end 22, which fits against a conical shoulder 23 formed on the shaft 3.

The brake is applied by depressing the lever 15, which pulls down the lever 13, and presses the bifurcated end 22 forcibly against the shoulder 23, thereby setting up friction which retards the speed of rotation of the vanes. The catch 19 falls by gravity into engagement with the teeth 21, and retains the lever 15 after the same has been depressed. When the lever 15 is raised after releasing the catch 19, the spring 18 raises the outer end of the lever 13 and removes the pressure of the bifurcated end 22 from the shoulder 23, thereby leaving the vanes 1 free to rotate at increased speed.

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:-

1. In a windmill, a plurality of horizontally arranged hollow vanes approximately pyramidal in shape, substantially as set forth.

2. In a windmill, a plurality of horizontally arranged hollow vanes approximately pyramidal in shape and truncated at their apexes, substantially as set forth.

3. In a windmill, a plurality of horizontally arranged hollow vanes approximately pyramidal in shape, and with holes in their apexes, through which the wind passes from any one vane to a next succeeding vane, substantially as set forth.

4. In a windmill, a plurality of horizontally arranged vanes mounted on radial arms of a vertical shaft, a shoulder on the shaft, a lever having a bifurcated end adapted to press upon the shoulder, a rod connecting the lever to a second lever having rack teeth, and a catch adapted to engage the said teeth, substantially as set forth.

40561

5. The combination and arrangement of parts, comprising the improved windmill, substantially as described and as illustrated in the accompanying drawing.

DATED at Wellington this 1st day of August 1918.

Baldwin & Rayward

Attorneys for the Applicant.

TRUE COPY:-

Baldwin & Rayward

Levavasseur
Reg # 40561

40561

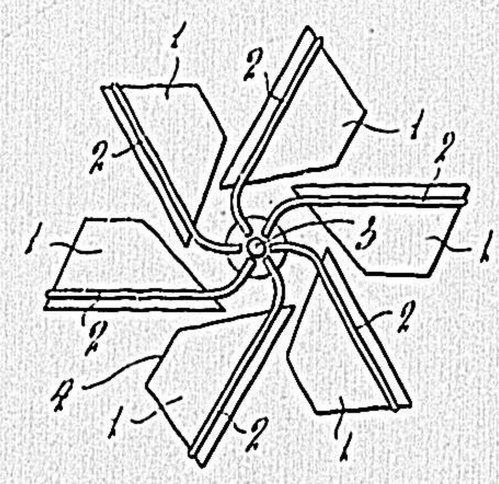


FIG. 2.

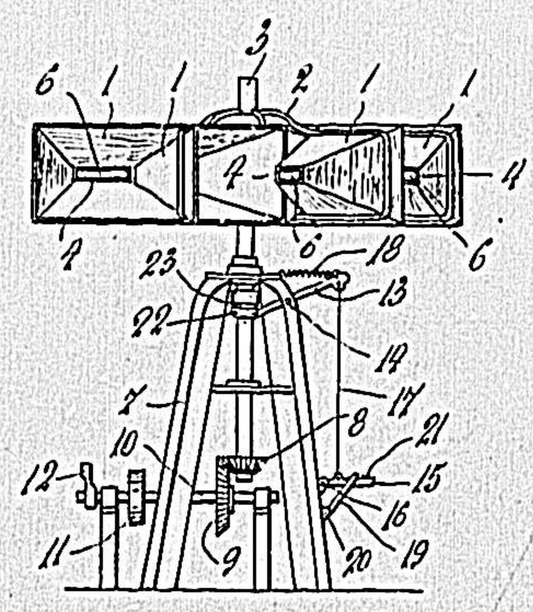


FIG. 1.

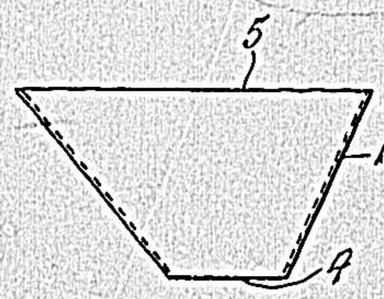


FIG. 3.

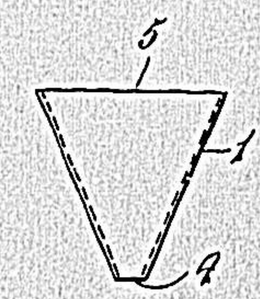


FIG. 4.

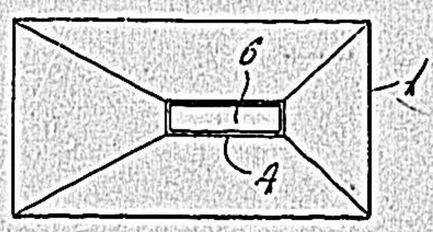


FIG. 5.

Baldwin & Raymond

END