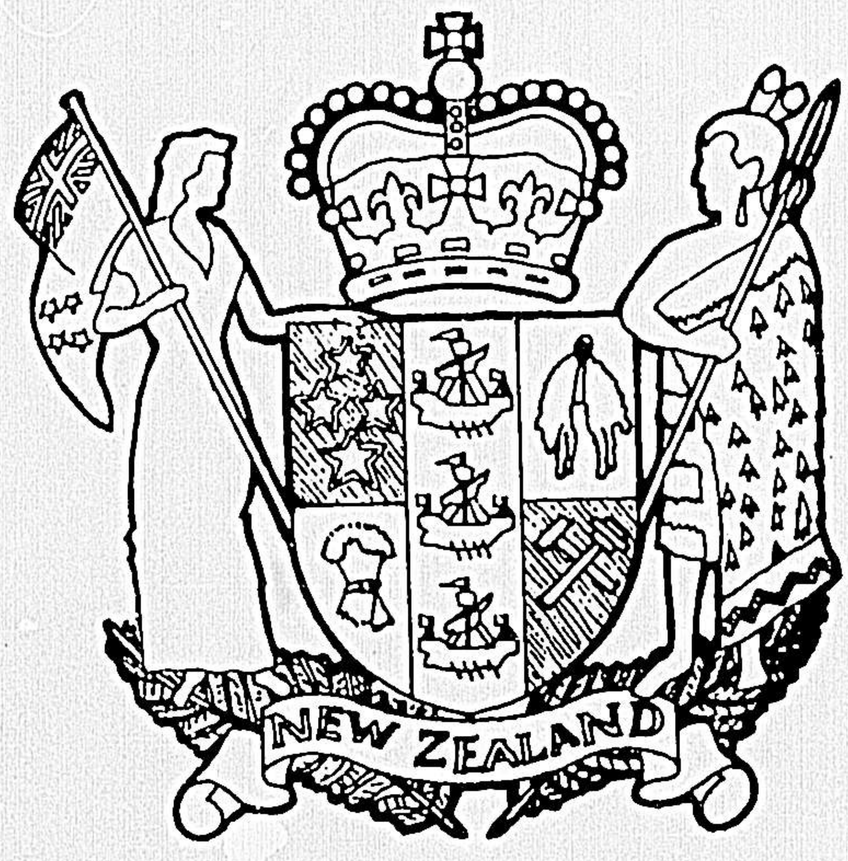


NEW ZEALAND

PATENT SPECIFICATION

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29 OCT. 1918
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January 29th 1918.

COMPLETE SPECIFICATION.

"IMPROVED LUBRICATING MEANS FOR WINDMILLS".

We, GIBSON THOMPSON, Engineer, and ALBERT HENRY TURNER, Engineer, both of 96 Manchester Street, Christchurch, in the Dominion of New Zealand, 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:-

---oOo---

This invention relates to windmills of the type in which the gearing or moving parts are not enclosed within a casing.

In windmills of this type, each of the moving parts has been provided with a separate lubricator adapted to contain but a very small supply of oil, the replenishment of which is required at frequent intervals.

It is the object of the present invention, therefore, to overcome this objection by providing a means for storing and automatically distributing a sufficient quantity of oil to provide the lubrication for a considerable length of time.

In order that the nature of the invention and its construction may be fully understood, reference will now be made to the accompanying sheet of drawings, in which:-

Fig. 1 - is a sectional elevation of a windmill mechanism of the non-geared type, showing the invention applied thereto, and,

Fig. 2 - is a cross-section of the same through the line A-B .

Referring to the drawings, 1 is the head or frame of the mechanism which is mounted in the usual manner upon the mast or other structure. Journalled in bearings 2 and 3 in the head 1, is the shaft 4 upon which is carried the wheel, such shaft being formed with a crank 5, connecting by means of a connecting rod 6 with the pump all as customary.

According to the present invention, a vessel or receptacle 7, adapted to contain oil, is provided.

and mounted at a suitable height above the mechanism.

As here shown, this purpose is effected by providing the said receptacle with a pair of straps or brackets 8 which extend downward and are clamped beneath the nuts 15 of one of the main bearings.

Arranged so as to pass through the bottom of the receptacle 7, and to extend upwardly therein to a height above the oil level in such vessel, are a plurality of tubes 9, 10, and 11, each of which is adapted to communicate with one of the bearings or other portions of the mechanism.

Thus, as here shown, the tubes 9 and 11 are arranged to communicate with the main bearings 2 and 3 of the shaft 4, while the tube 10 is adapted to communicate with the crank bearing 12 of the connecting-rod. For this purpose, such bearing 12 is provided with a cup or funnel 13, which is elongated in a transverse direction as shown in Fig. 2, so as to be capable of collecting oil from the said tube 10 through the entire revolution of the crank.

For the purpose of conveying oil from the receptacle to the said tubes 9, 10 and 11, each is provided with a length of worsted or other absorbent material 14 which extends upwards from the bottom of the receptacle and downwards within such tubes so as to constitute a syphon.

In cases where gearing or other additional parts are employed in the mechanism, additional tubes will be provided to supply lubrication to such parts.

From the foregoing description, it will be seen that by this construction, a supply of oil suffic-

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ient to last for a considerable length of time may be placed in the receptacle and from whence it will be distributed automatically by the action of syphons in the required gradual and regular manner.

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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:-

1. - In combination with a wind-mill mechanism, means for supplying lubrication t-hereto, comprising an oil-containing receptacle mounted upon the windmill main bearings or other portions of the said mechanism, a plurality of tubes connecting with the portions of the mechanism to be lubricated, each of such tubes extending upwardly within the said receptacle to a height above the oil-level of the latter, syphons of worsted or other absorbent material provided in each of said tubes and adapted to provide a gradual supply of oil to the latter from the receptacle, and an elongated cup provided upon the crank-bearing adapted to collect oil from its said tube throughout the entire revolution of the crank and to supply such oil to such bearing.

2. - Improved lubricating means for windmills, constructed, combined, arranged and operating, substantially as herein described and explained and as illustrated in the accompanying drawings.

Dated at Christchurch, the 26th day of October, 1918.

Agents for the Applicants.

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FIG.1

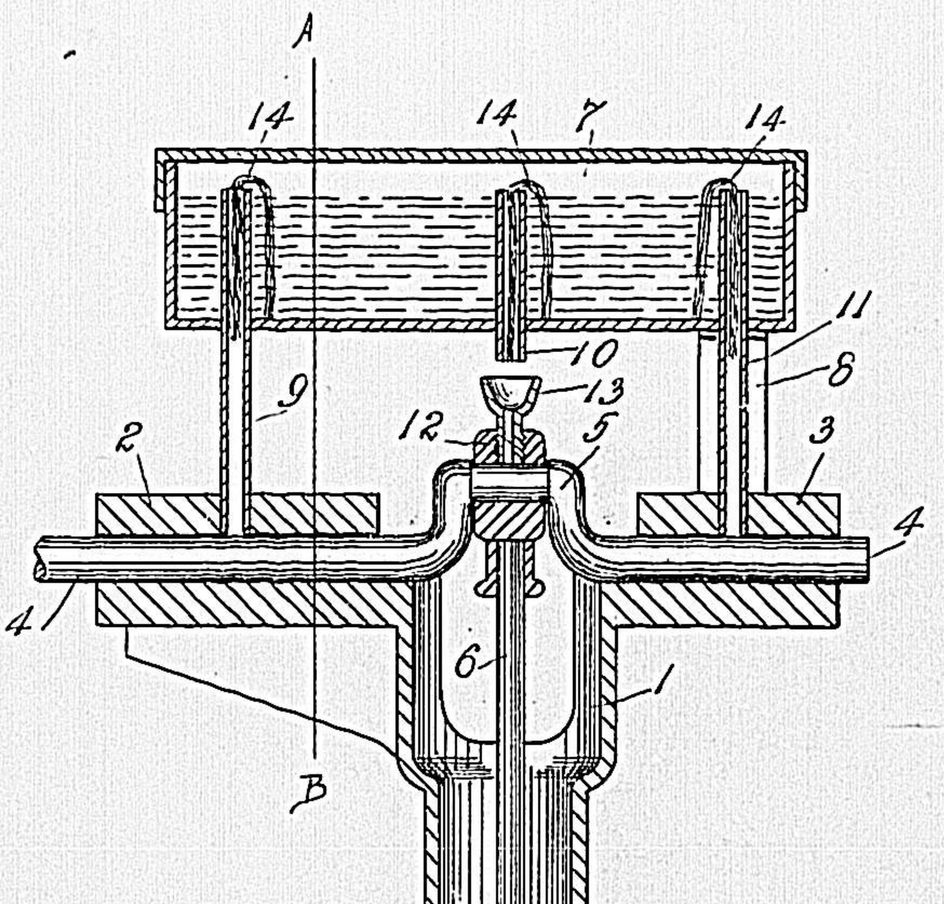
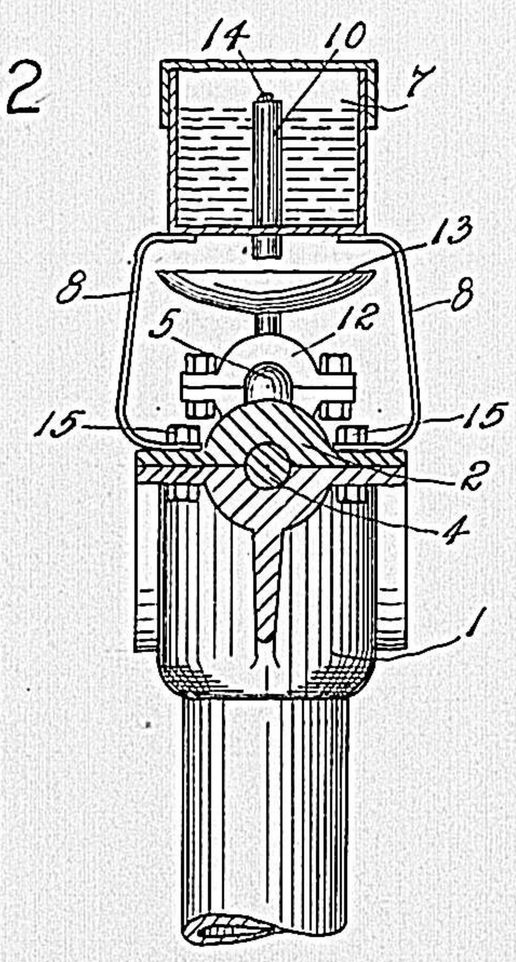


FIG.2



END