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NEW ZEALAND.

"THE PATENTS, DESIGNS, AND TRADE-MARKS ACT, 1889."

COMPLETE SPECIFICATION
FOR LETTERS PATENT.

Where provisional specification has been left, quote No. and date of acceptance.
No.:
Date:

(*) Here insert title of invention as in application.

(*) A Pivoted Windmill

(*) "I" or "We," followed by name in full, address, and calling of applicant or applicants, as in application.

(*) I, Lewis Rose Gillanders, of Ravensbourne, Dunedin, Otago, New Zealand. Engineer.

(*) "My" or "our." (*) See above.

do hereby declare the nature of (*) My invention for (*) A Pivoted Windmill

and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:

(d) Here describe the invention at length.

(d) The essential character of the invention consists in the design and construction of a windmill in which there is

no rigid supporting framework, and the revolving motions are made on pivoted centre bearings, whereby expense of construction and friction in working are reduced to a minimum, and a maximum of power utilised from the wind for useful operations.

The invention is composed of a vertical mast of any suitable material, made either solid, or built in parts, of any height and form of cross-section as may be required to suit locality and circumstances.

The lower end of this mast is fitted with a socket to fit and revolve on a pivot, fixed in the foundation beam underneath.

The top end is also fitted with a pivot and socket from which supporting rope guys or stays radiate to their

NOTE.—If the description cannot be contained in the space provided, as many sheets of wide-ruled foolscap paper as may be required may be inserted between this and the sheet containing the claim.

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to the raising of water direct from a well by means of an endless belt carrying suitable buckets, which belt is made to travel within the vertical mast – made hollow for the purpose – over two pulleys, one of which is keyed on the axle of the motor wheel, and drives the belt, the other, with its axle and bearings, are placed at the bottom of the mast.

The belt is compelled to travel round these pulleys, ascending on one side with full buckets, discharg=ing at the top into a spout, and descending on the other side to the well.

Refering to the drawing. Figure I is a side elevation, and Figure II a front elevation.

The same reference letters are used in both Figures to denote corresponding parts.

A. A. is the hollow mast of rectangular section, B. B. the foundation beam set in the bottom of the well. C. C. the pivot and socket for lower end of mast, and D. D. those for the top end. E. E. show the direction of the supporting rope guys or stays.

F. F. is the motive wheel, with its axle G. G. and belt pulley H shown

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respective fastenings on the ground, the mast is thus sustained in the vertical position and free to turn on its pivots round a vertical axis.

The horizontal axle, with its motive wheel and other gear, is carried by bearings placed on back and front of the mast at the required height, the back end of this axle is conical, and revolves in a socket bearing which takes the thrust caused by the wind pressure on the motive wheel, and thus relieves the front bearing from all end pressure.

The motive wheel may be of ordinary construction and secured to the front end of the axle in the usual way.

The vane for directing the motive wheel to the wind may be of any form, or construction, and rigidly fastened to the mast, or hinged thereto as may be desired.

The invention can be applied as a windmotor for all the purposes for which wind power is suitable.

The accompanying drawing shows the invention as applied

dotted. I is the socket-bearing at back end of axle.

Openings are made at the lower end of mast for the free admission of water to the buckets, provision is also made for conveniently taking up the slack of the belt as shown at J. J.

K. K. are the buckets, and L. L. shows a hose pipe for conducting the water where required.

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(*) See first page.

(*) "I" or "we."

(*) See above.

(*) Here state distinctly the features of novelty claimed

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:—

(*) The construction of a windmill having a vertical mast pivoted or hinged at top and bottom, and free to revolve round a vertical axis, and supported in the vertical position by rope guys, or other such like stays, and made to carry and sustain, the wind motive wheel, axle, and other gear, as set forth and described.

(*) Signature of the applicant or applicants.

Dated this Nineteenth day of August A.D. 1892.

(*) Lewis Ross Gillanders

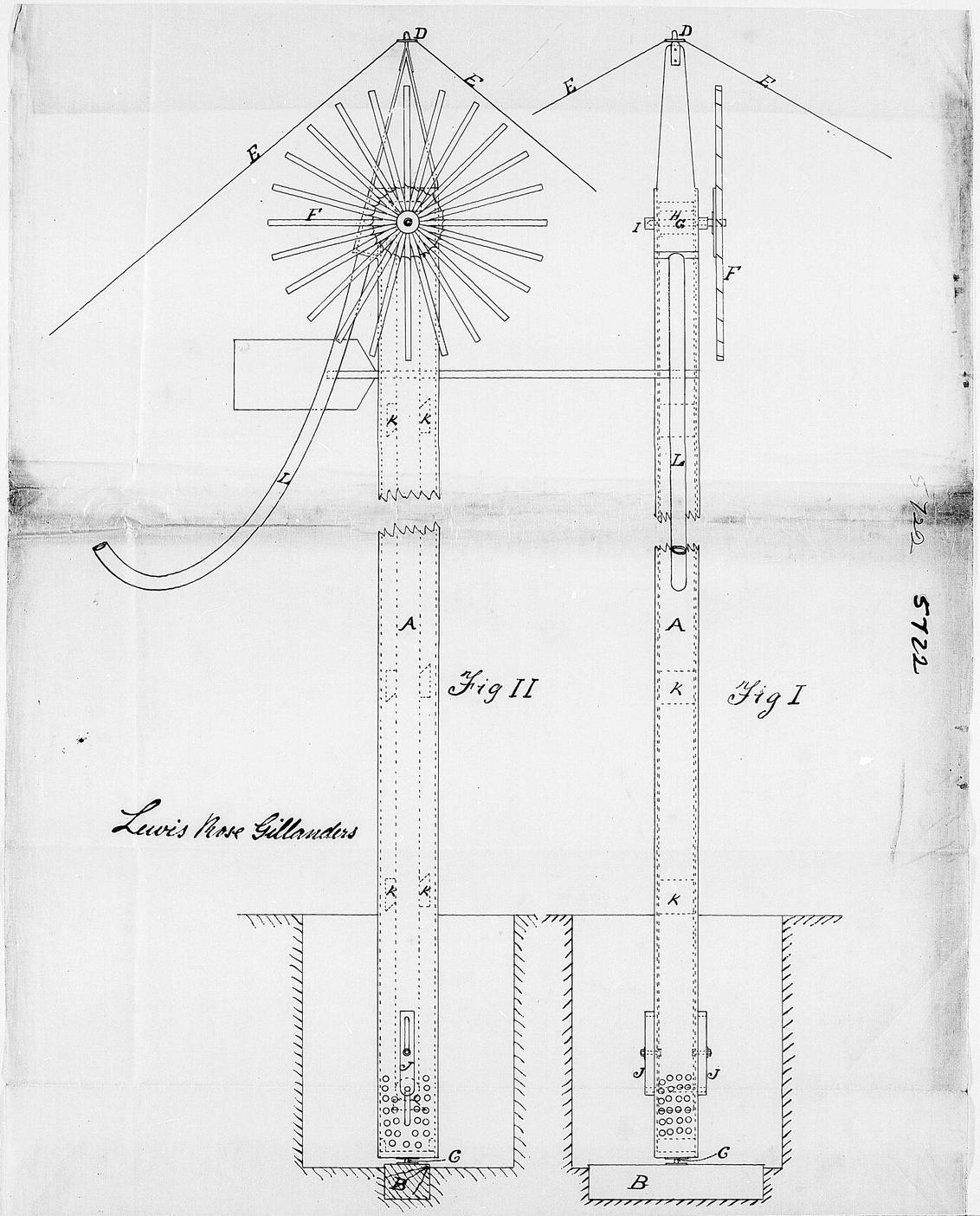
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LARGE

DRAWING

FILMED

SEPARATELY.



Lewis Rose Gillanders

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