

No. 680,449.

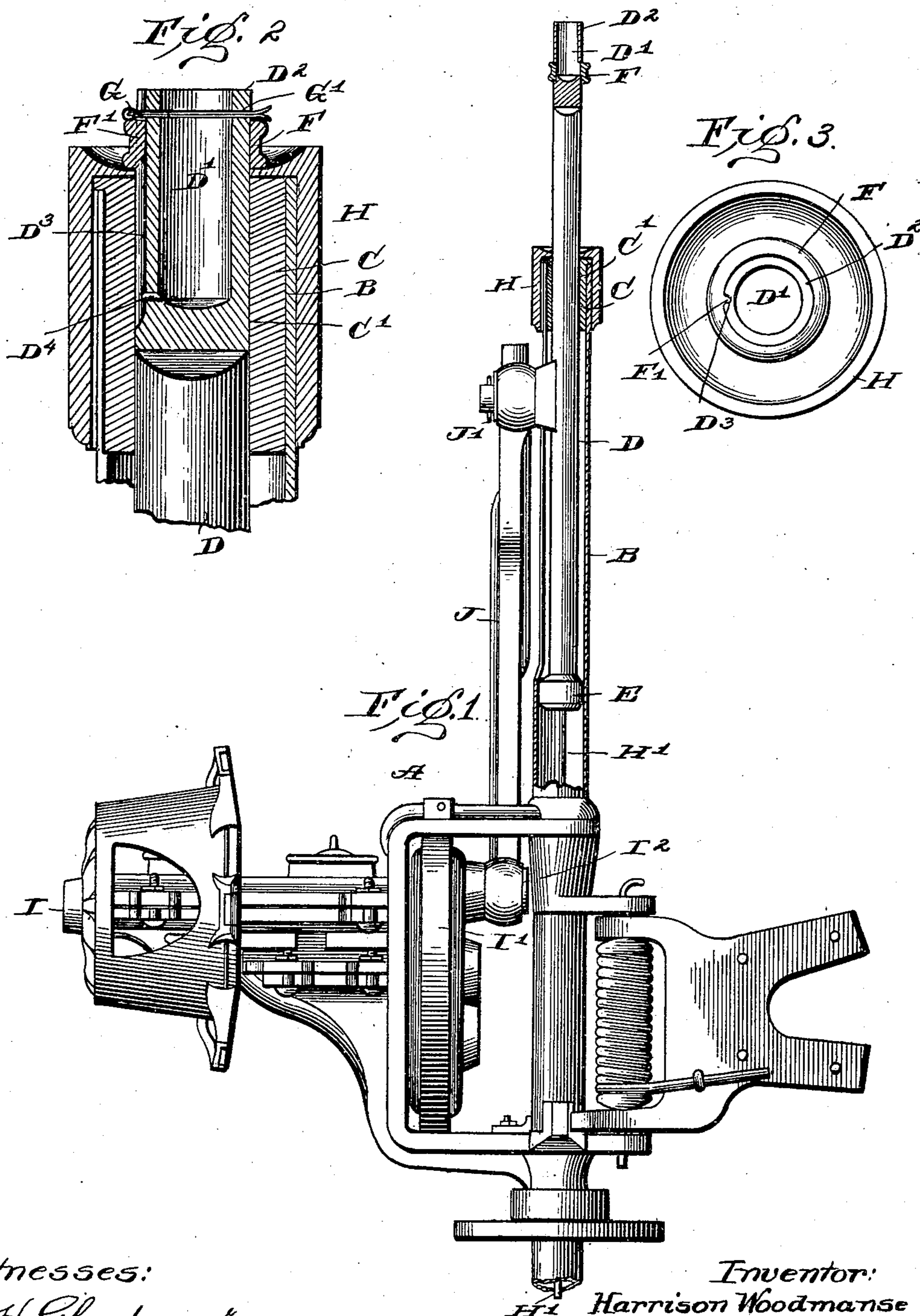
Patented Aug. 13, 1901.

H. WOODMANSE.

MEANS FOR MOUNTING AND LUBRICATING PISTONS.

(Application filed June 26, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

HARRISON WOODMANSE, OF FREEPORT, ILLINOIS.

MEANS FOR MOUNTING AND LUBRICATING PISTONS.

SPECIFICATION forming part of Letters Patent No. 680,449, dated August 13, 1901.

Application filed June 26, 1901. Serial No. 66,056. (No model.)

To all whom it may concern:

Be it known that I, HARRISON WOODMANSE, a citizen of the United States of America, residing at Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Means for Mounting and Lubricating Pistons, of which the following is a specification.

The object of my invention is to produce inexpensive means for mounting and automatically lubricating the pistons of windmills, &c.; and it consists of certain new and useful features of construction and combinations of parts hereinafter fully described, and specifically pointed out in the claims.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of the upper portion of an incomplete windmill in partial central vertical section embodying my improvements. Fig. 2 is an enlarged detailed view of parts of the same. Fig. 3 is a top plan view of parts shown in the foregoing views unsectioned.

Like letters of reference indicate corresponding parts throughout the several views.

A is the head of a windmill.

B is a tubular piston-slideway extending vertically upward through the windmill-head.

C is an inner piston-slideway seated in the upper end portion of the tubular piston-slideway B and having the circular bearing C' therein concentric with and of less diameter than the bore of such tubular slideway B.

D is a piston provided with an oil-receptacle D' in the upper end D² thereof, having a vertical gateway D³ sunk into the outer surface of the same and furnished with an oil-duct D⁴, opening thereinto from the oil-receptacle D'.

E is a collar fast to the lower end portion of the piston D for preventing too great lateral vibration and consequent binding of the same in the bearing C' in the inner slideway C.

F is a vertically-slidable collar on the piston D, provided with a gate F', working in the vertical gateway D³ on the oil-receptacle D to alternately open and close the oil-duct D⁴ therein.

G is a pintle inserted through holes G' in the top of the oil-receptacle D' to retain the collar F thereon.

H is a cap which serves to cover the top end of the tubular slideway B and also to slide the collar F upward at each downward stroke of the piston D.

H' is a rod connecting the lower end of the piston D with a pump or other mechanism to be operated thereby.

I is a wind-wheel shaft carrying a wheel I', having a wrist-pin I² projecting therefrom.

J is a pitman connecting the wrist-pin I² on the wheel I' with a connecting-pin J', projecting outward from the piston D.

Supposing the receptacle D' to contain oil, each rotation of the shaft I will cause the piston D to perform a complete reciprocation, during which operation the gate F' will have been lifted by the collar F and a small quantity of oil will have escaped from the receptacle D' through the duct D⁴ to lubricate such piston D and its bearing C' in the inner piston-slideway C. Oil therefrom will also very gradually and constantly work downward therefrom and lubricate the collar E. Gravity acting on the collar F will cause it and its gate F' to descend and close the oil-duct D⁴ as soon as the piston D fairly starts on its upward course.

The herein-described means of mounting and lubricating the pistons of windmills will be found to be both satisfactory and inexpensive.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a piston-slideway, of a piston vertically mounted therein and provided with an oil-receptacle, in the upper end thereof, having a vertical gateway sunk into the outer surface of the same and furnished with an oil-duct opening thereinto from the oil-receptacle, and a vertically-slidable collar, on the piston, provided with a gate working in the vertical gateway, on the oil-receptacle, to alternately open and close the oil-duct therein, at each reciprocation of the piston, substantially as and for the purpose specified.

2. The combination, with a tubular piston-slideway, of an inner piston-slideway seated in the upper end portion thereof and having a circular bearing therein concentric with, and of less diameter than, the bore of said tubular piston-slideway, a piston vertically

mounted in the inner piston-slideway, and provided with an oil-receptacle, in the upper end thereof, having a vertical gateway sunk into the outer surface of the same and furnished with an oil-duct opening thereinto
5 from the oil-receptacle, and a vertically-slidable collar, on the piston, provided with a gate working in the vertical gateway, on the oil-receptacle, to alternately open and close the
10 oil-duct therein, at each reciprocation of the

piston, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRISON WOODMANSE.

Witnesses:

W. H. BLOSSER,

M. A. PUTNAM.