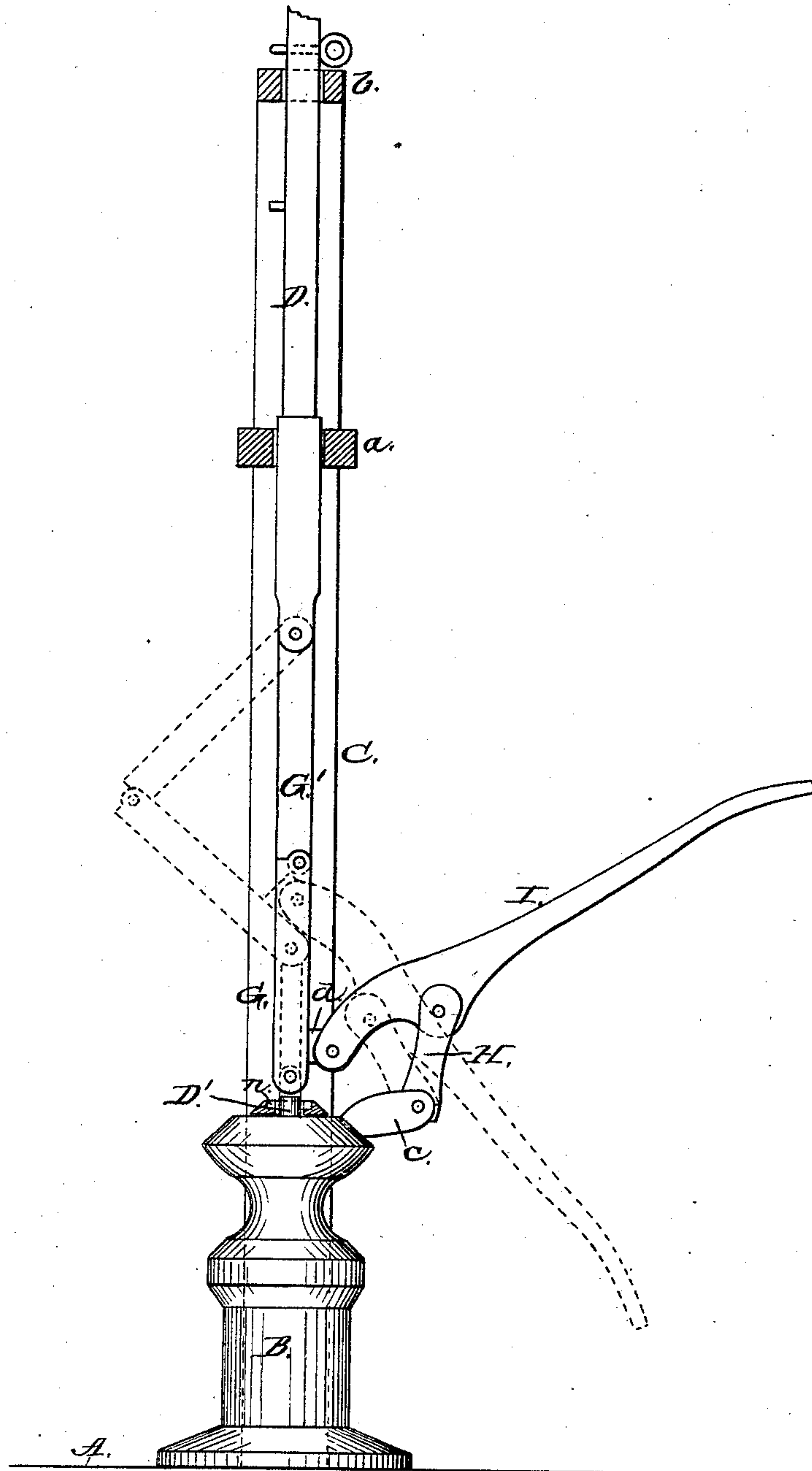


(No Model.)

I. H. PALMER.
Pump Attachment.

No. 232,143.

Patented Sept. 14, 1880.



WITNESSES

Mary S. Utley
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UNITED STATES PATENT OFFICE.

ISAAC H. PALMER, OF LODI, WISCONSIN.

PUMP ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 232,143, dated September 14, 1880.

Application filed June 12, 1880. (No model.)

To all whom it may concern:

Be it known that I, ISAAC H. PALMER, of Lodi, in the county of Columbia and State of Wisconsin, have invented a new and valuable
5 Improvement in Windmill-Pump Attachments; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The drawing is a representation of an elevation of my improved pump, partly in section.

15 This invention has relation to improvements in windmill-pump attachments.

The object of the invention is, in pumps operated by wind-engines, to devise means whereby they may be worked by hand without, in
20 the upstroke of the piston-rod of the pumps, having to raise the superincumbent weight of the mill-plunger and its connections when the wind fails.

The nature of the invention will be herein-
25 after more fully set forth.

In the annexed drawing, the letter A designates the pump-cover, B the pump, and C the frame, through which reciprocates the plunger D in suitable guides *a b*.

30 D' indicates the piston-rod of the pump, connected to the lower end of the plunger, reciprocated by the wind-engine through the medium of the knee-jointed connecting-rods G G', pivoted to vibrate in the same plane respectively
35 to the said piston-rod and to the plunger, and connected to each other by a rule or other joint in such manner that while they will freely flex in one direction they are practically rigid as regards bending in the other.

40 It is evident that the reciprocation of the plunger will work the pump.

H indicates a rocking standard pivoted to an offset, *e*, of the top of the pump, and affording a fulcrum to the handle-lever I in its upper end. This lever is of equal weight at each
45 side of its fulcrum, and its weight end is pivoted to a projecting lug or arm, *d*, extending outward from the rod G slightly above its connection to the piston-rod of the pump.

The lever I being evenly balanced on the standard H, no appreciable additional power is required to carry it when the wind-engine is at work.

Instead of the oscillating standard I may use a fixed one by connecting the weight end
55 of the lever I to the lug *d* on rod G.

Should the wind fail the pump may be worked by operating the lever I, when its weight end purchases upon the lug *d* and flexes and straightens the rods G G', thus actuating
60 the pump-piston without raising the plunger.

I am aware that oscillating standards for the levers of hand-pumps have been used before; hence I do not claim this feature broadly.

As the pump-piston in this description of
65 pumps must have some play, the diameter of the hole in the cap must be made considerably greater than that of the said rod, and I prevent bugs and insects from getting into the pump by means of a washer, *n*, resting loosely
70 on the pump-cap and encircling the piston-rod. This washer is of greater diameter than the hole in the cap, and follows the piston during its play, at all times covering the said hole.

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

1. In a pump operated by a wind-engine, the combination, with the piston D' and the reciprocating mill-plunger D, of the knee-jointed connecting-rods G G' and a pump-handle
80 fulcrumed on the pump and connected to the rod G, substantially as specified.

2. The combination, with a pump-piston rod and a reciprocating plunger, D, of the knee-jointed rods G G', connecting said rod and
85 plunger, the oscillating standard H upon the pump, and the lever I, fulcrumed on said standard and pivoted to an offset, *d*, of the pump, substantially as specified.

In testimony that I claim the above I have
90 hereunto subscribed my name in the presence of two witnesses.

ISAAC H. PALMER.

Witnesses:

J. W. WATSON,
S. H. WATSON.