

(No Model.)

2 Sheets—Sheet 1.

J. N. MAHER.
PUMPING RIGGING FOR OIL WELLS.

No. 592,655.

Patented Oct. 26, 1897.

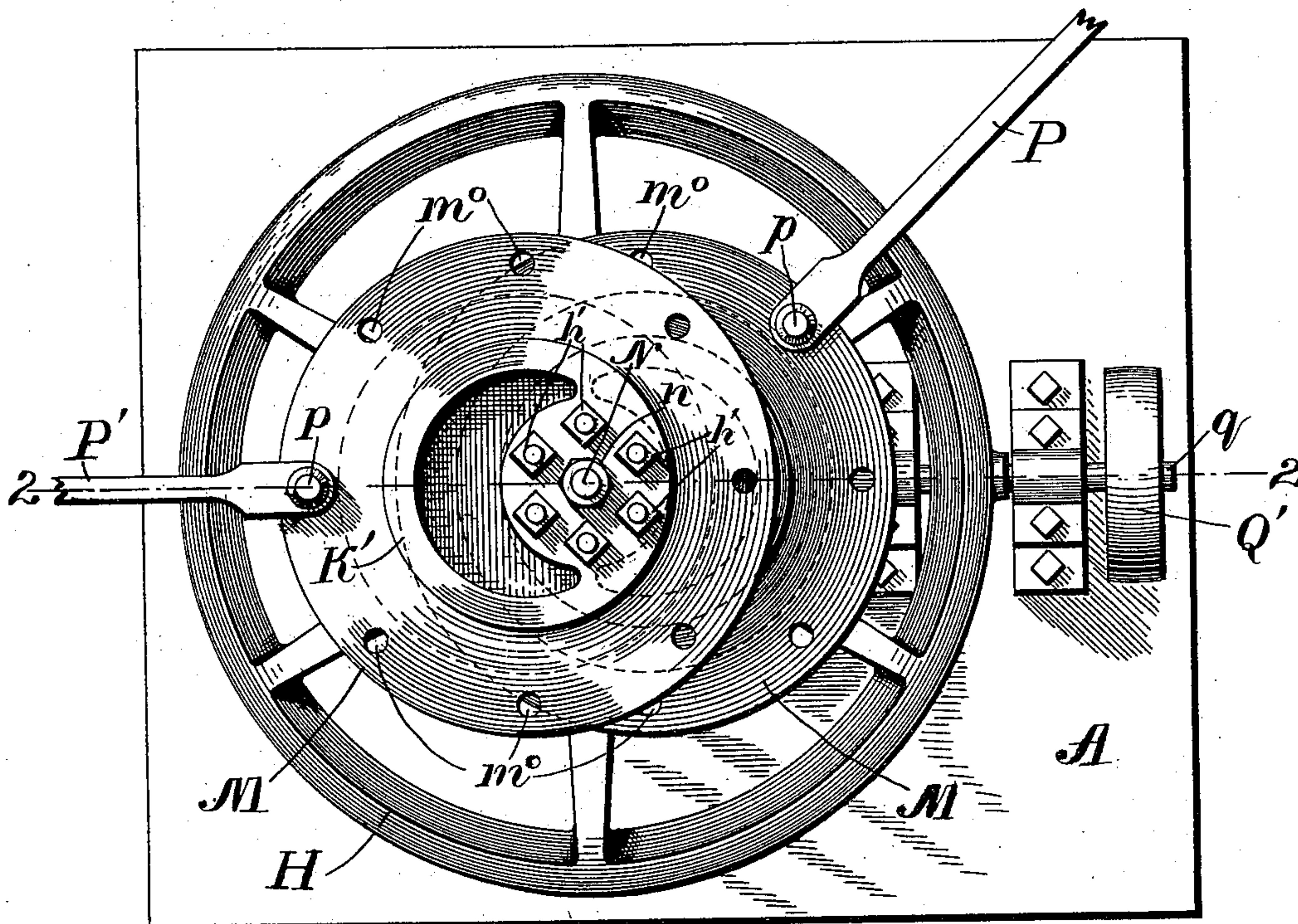


FIG. 1.

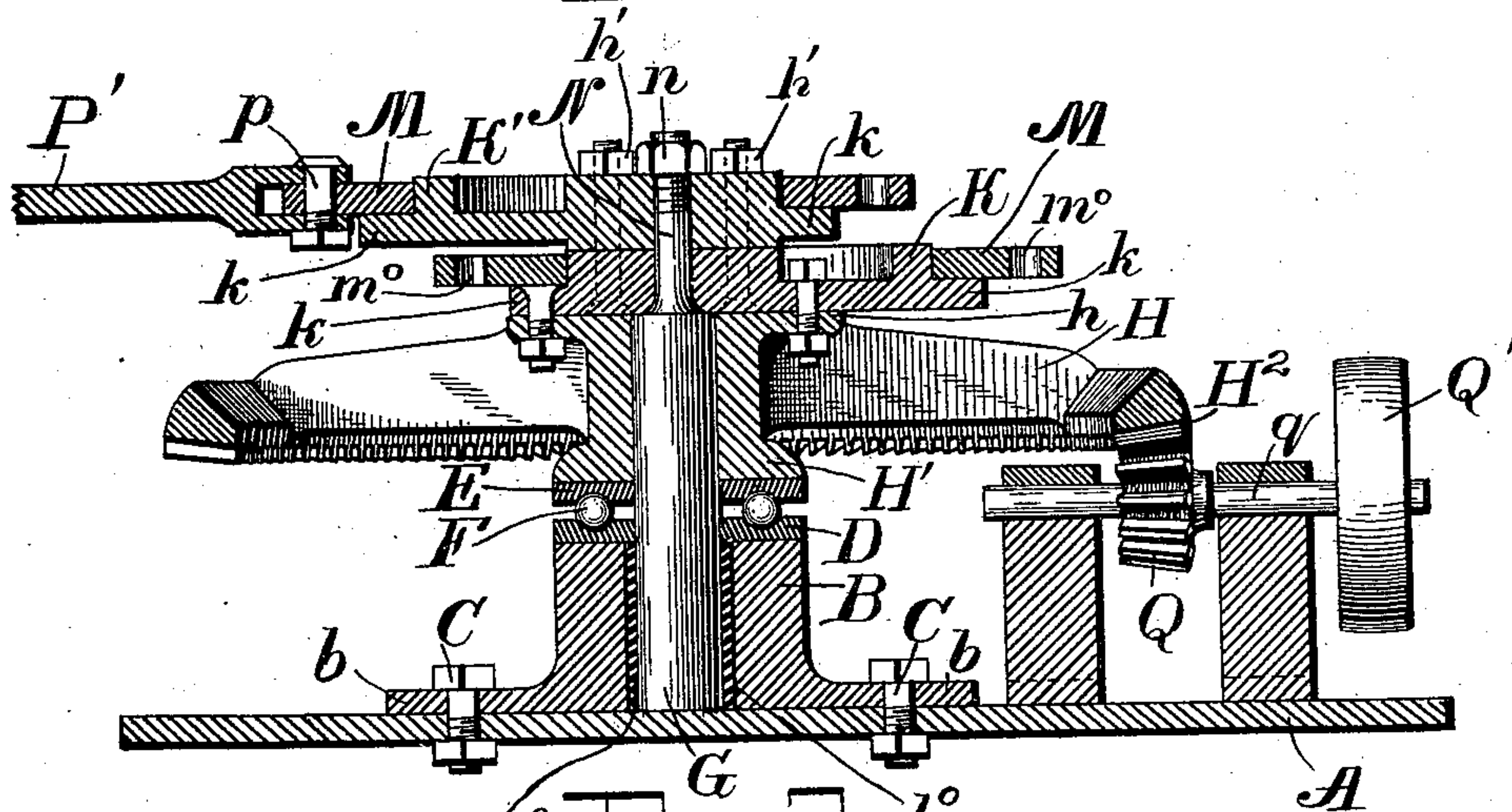


FIG. 2.

Witnesses

Riley C. Bowen
D. H. Blakelock.

Inventor

J. N. Maher
by Whitman & Wilkinson,
Attorneys.

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2 Sheets—Sheet 2.

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FIG. 3.

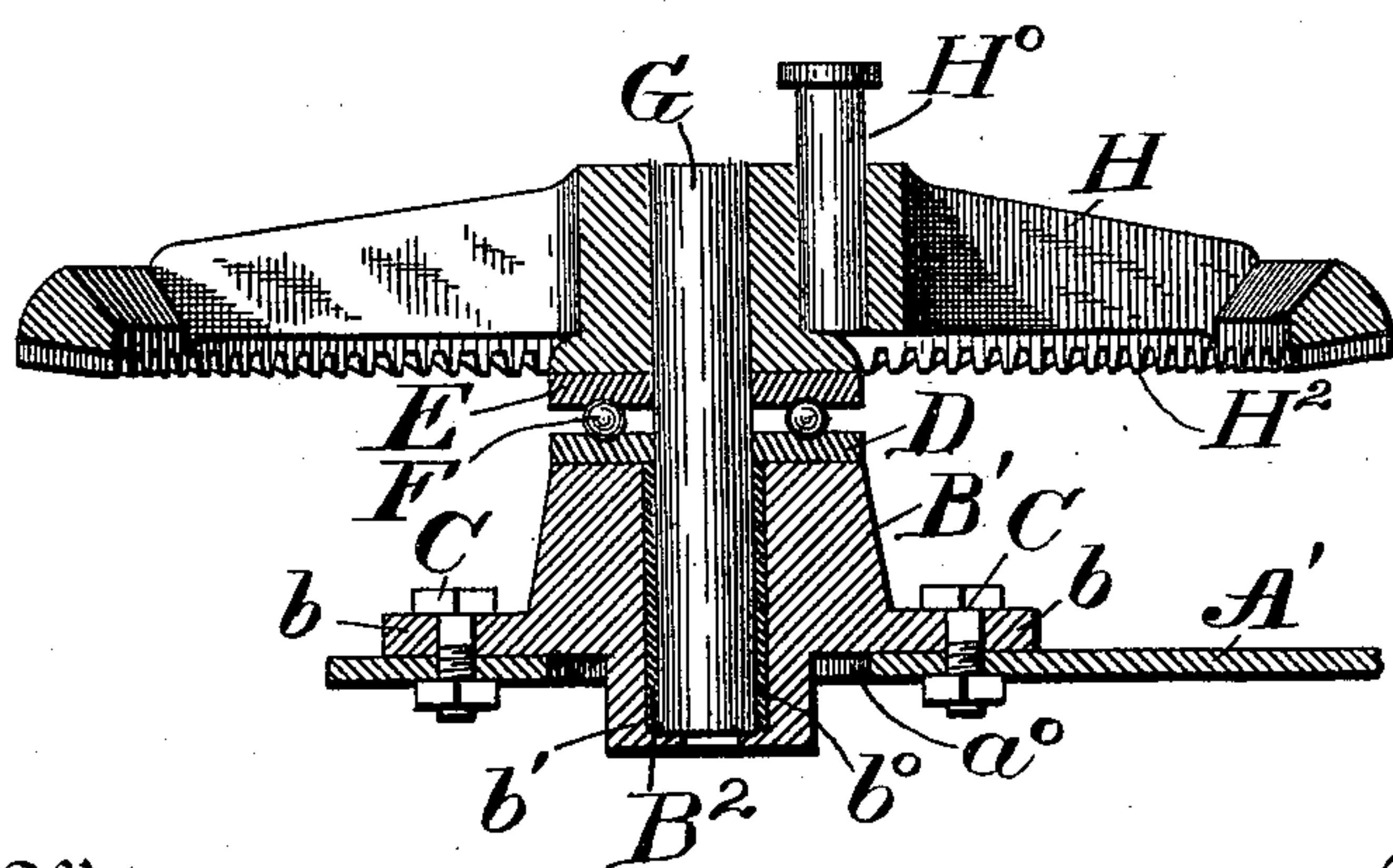
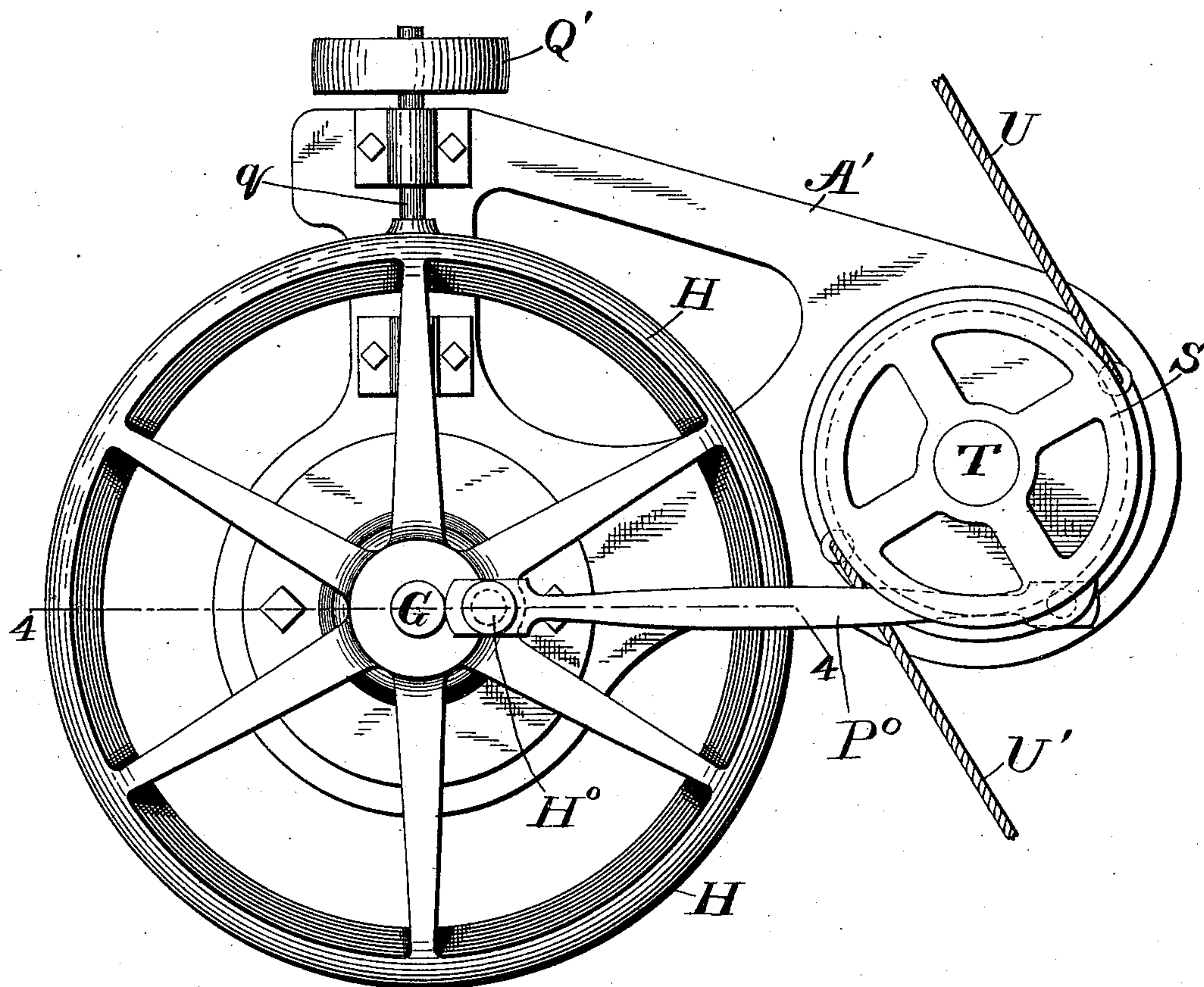


FIG. 4.

Witnesses
W. H. Blakelock
Percy C. Bowen.

Inventor
J. N. Maher,
by Whitman & Wilkinson,
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN N. MAHER, OF FRANKLIN, PENNSYLVANIA, ASSIGNOR TO GEORGE ALLEN, OF SAME PLACE.

PUMPING-RIGGING FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 592,655, dated October 26, 1897.

Application filed February 24, 1897. Serial No. 624,799. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. MAHER, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Pumping-Riggings for Oil-Wells; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in pumping-rigs for use in oil-wells, Artesian wells, and the like; and it consists in certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a plan view of my improved pumping-rig. Fig. 2 represents a section along the line 2 2 of Fig. 1. Fig. 3 represents a plan view of a modified form of pumping-rig; and Fig. 4 represents a section along the line 4 4 of Fig. 3, the connecting-rod being omitted.

Referring particularly to Figs. 1 and 2, A represents the bed-plate on which the apparatus is mounted, which is provided with the pedestal B, provided with flanges *b*, secured by means of bolts C to the bed-plate A. This flanged pedestal B is perforated, as at *b*⁰, to loosely inclose the axle G. The space between the axle G and the inner sides of the pedestal B is filled with Babbitt metal B², whereby the said axle G is held in rigid engagement. Surrounding the said axle are two grooved bearing-rings D and E, with interposed balls F. The lower bearing-ring D is secured to or rests on the bearing-plate, while the upper bearing-ring E is secured to or bears against the hub H' of the crown-wheel H. This hub H' is flanged, as at *h*, and to the flanged portion the eccentrics K and K⁰ are secured. These eccentrics have outwardly-projecting flanges *k* lying in a horizontal plane and adapted to support the rings M, which are perforated, as at *m*⁰, and serve as eccentric-

straps. To any one of these perforations *m*⁰ the connecting-rods P or P' may be attached, as by means of the pin *p*. These eccentrics K and K' are held together by the central pin N with its nut *n* and by the bolts *h'*, which pass through both eccentrics and engage in the flange *h* of the hub H'. The crown-wheel H is driven by means of the pinion Q on the shaft *q*, which shaft is driven by the pulley Q' from any convenient source of power. It will be noted that the rings M, which serve as eccentric-straps, are made in one piece and are slipped over the top of the eccentric, where they are supported upon the horizontal flanges *k*, projecting beyond the face of the eccentric.

In the form of device shown in Figs. 3 and 4 a somewhat modified form of bed-plate A' is shown, and the crown-wheel, otherwise constructed substantially as shown in Figs. 1 and 2, is provided with a crank-pin H⁰, engaging the end of the connecting-rod P', which drives the rotary drums S, mounted on the pivot-pin T and led as by a plurality of ropes U or U' to the points where the power is applied. By means of the arrangement shown in Figs. 3 and 4 a reciprocating motion is imparted to the drums S. The preferred form of construction of these drums has been fully described in my application entitled "Pumping-rigging for oil-wells," filed November 27, 1896, and serially numbered 613,678, and will therefore not be further described herein.

It will be obvious that various modifications might be made in the herein-described apparatus which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a pumping-rigging, the combination with a bed-plate, of a flanged pedestal rigidly secured thereto, a vertical axle rigidly mounted in said pedestal, a crown-wheel revolubly mounted on said axle above said pedestal provided with a hub having horizontal extensions at its upper and lower ends, bearing rings and balls interposed between said pedestal and said hub, superimposed eccentrics

rigidly secured directly to each other and to the hub of the crown-wheel, said eccentrics being so arranged with relation to the axle as to equalize the strain upon the latter and
5 being also provided with horizontal flanges projecting beyond their faces, perforated rings resting on said flanges and engaging said eccentrics, and connecting-rods pivot-

ally connected to said perforated rings, substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

JOHN N. MAHER.

Witnesses:

WILLIAM B. GRIFFEN,
CYRUS S. MARK.