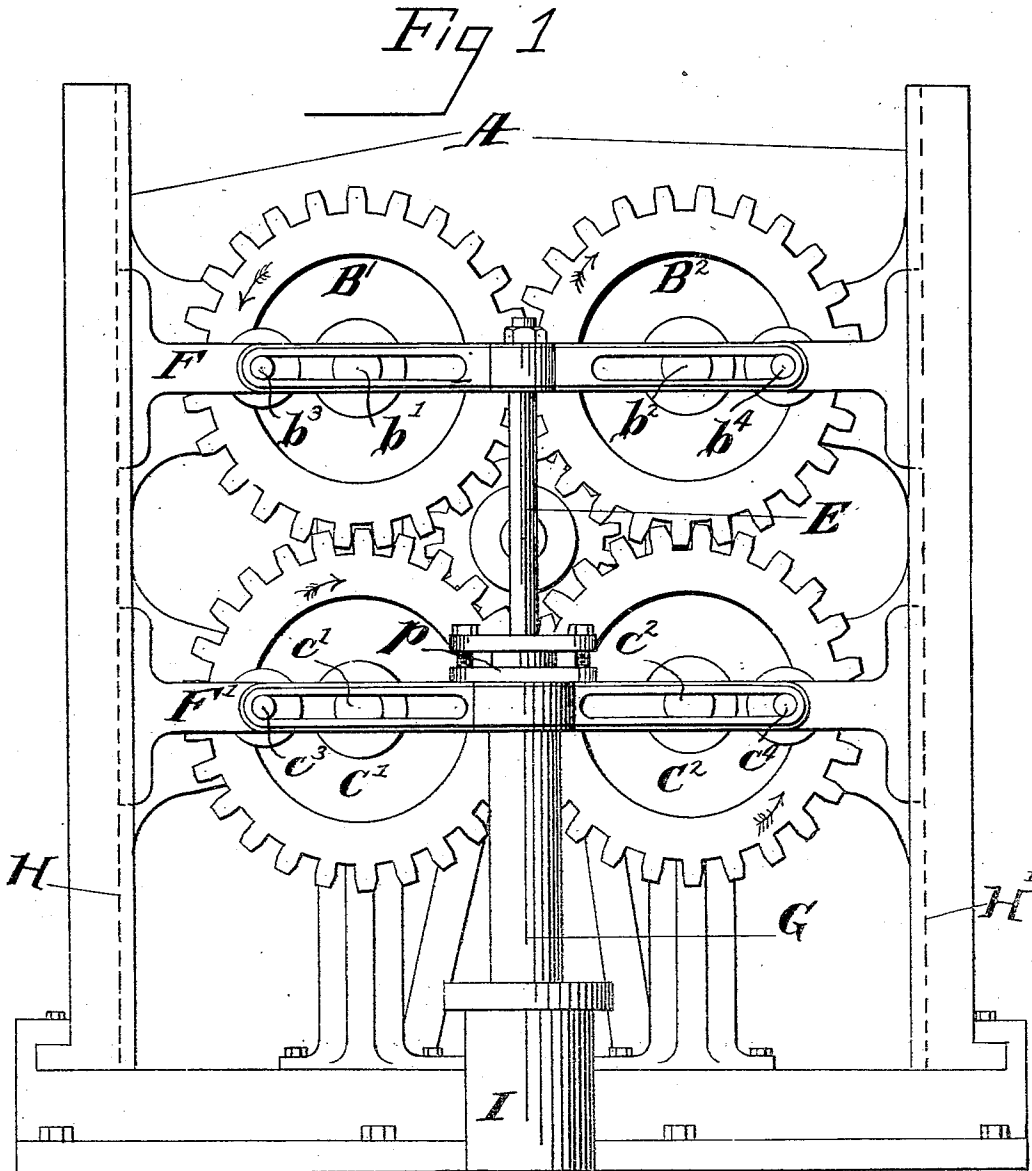


C. F. PRESLAR.
 OPERATING MECHANISM FOR DOUBLE ACTING PUMPS.
 APPLICATION FILED JUNE 16, 1908.

943,201.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.



Witnesses
Carroll H. Richards
Joseph R. Gardner

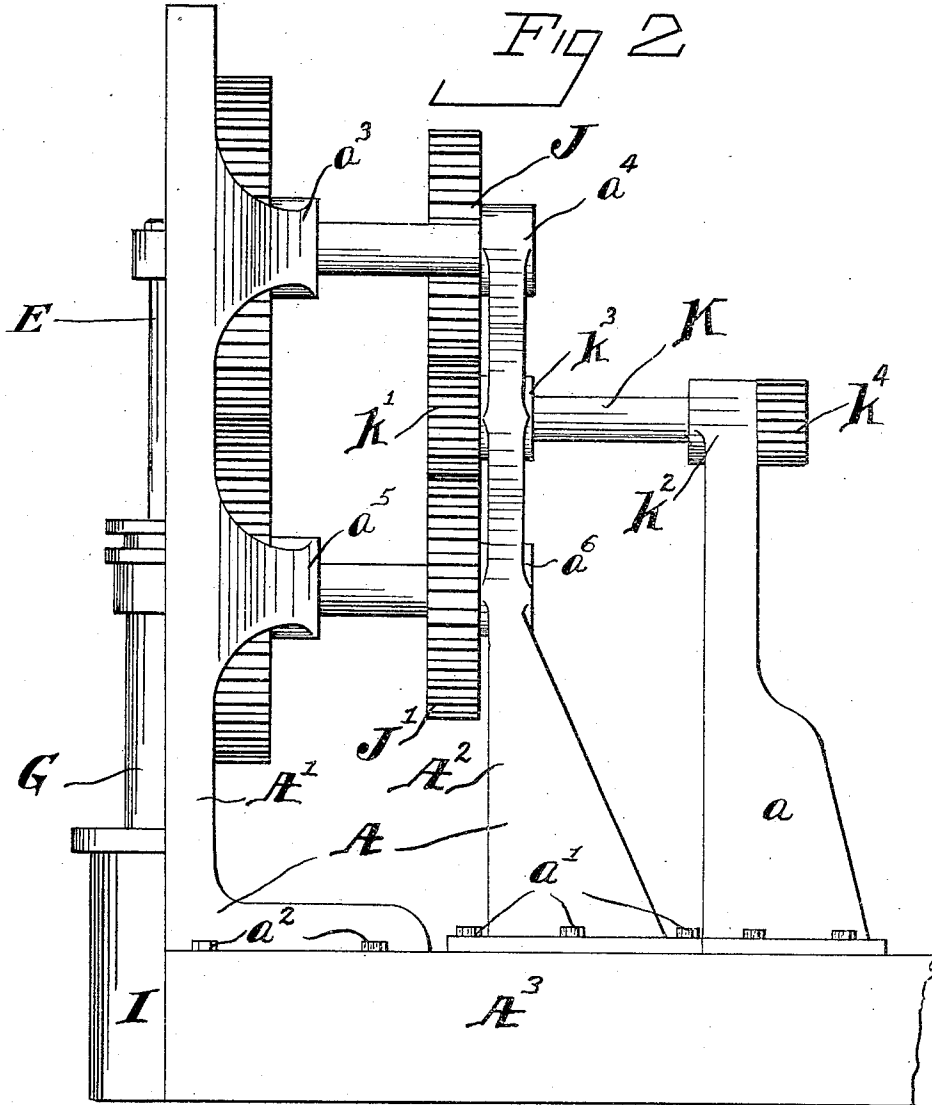
Inventor
Charles F. Preslar
by
Walter A. Knight
Attorney

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UNITED STATES PATENT OFFICE.

CHARLES F. PRESLAR, OF NORWOOD, OHIO.

OPERATING MECHANISM FOR DOUBLE-ACTING PUMPS.

943,201.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed June 15, 1908. Serial No. 438,563.

To all whom it may concern:

Be it known that I, CHARLES F. PRESLAR, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Operating Mechanism for Double-Acting Pumps, of which the following is a specification.

My invention relates to new and useful improvements in pumps, particularly of the kind known as double acting deep well pumps.

The object of this invention is to provide operating mechanism which can be easily removed from the well hole, simple and cheap in construction, and well balanced, as to structure and operation. Furthermore to be of such construction as to facilitate easy access to all working parts, without the addition of other elements of construction which afford means to make such access possible.

To this end my invention consists in a novel arrangement of gears, and bars operated by the same; and attached to the sucker rods of the pump. The gearing consists of a plurality of gears which mesh with one another and carry pins which operate in slots in the bars attached to the sucker rods. The manner of the meshing of the gearing and connection of the bars to the gears and sucker rods, is such as will cause the sucker rods to operate in opposite directions, which is the essential function of the operation of a double acting deep well pump. However, I do not expect to confine the use of my invention to double acting pumps, but will apply it to any device where such novel mechanism as that comprising my invention can be used advantageously.

My invention is illustrated in the following drawings, in which:—

Figure 1 is a front elevation of my invention shown in connection with a double acting deep well pump, and Fig. 2 is a side elevation of the same with the rear extension of the base broken away.

Referring to the drawings, A is the frame consisting of parts A¹ and A² bolted to a common base A³; and B¹, B² and C¹, C² are gears which mesh with each other and are keyed to shafts b¹, b² and c¹, c² respectively. Shafts b¹ and b², and c¹ and c² are journaled in the frame parts A¹ and A². Shafts b² and c² are journaled in journals a³, a⁴, and

a⁵, a⁶ respectively and shafts b¹ and c¹ are journaled in similar journals not shown in the drawings.

At some distance from the center of the gears B¹, B² and C¹, C² are pins b³, b⁴ and c³, c⁴ respectively carrying slotted bars F and F¹ to which are fastened the sucker rods E and G respectively. The bars F and F¹ are confined at their ends in guide slots H and H¹ formed in the frame.

The sucker rod E operates in the hollow sucker rod G and is attached to a water piston in the working barrel of the well in the usual way; the barrel and piston not shown in the drawings. The sucker rod E operates in the sucker rod G without leaking, through the stuffing box p.

Gears J and J¹ are keyed to shafts b¹ and c² respectively, and mesh with a pinion k¹ keyed to shaft K. Shaft K is journaled in the frame part A² by journal k³ and a journal k² supported by means of stand a, bolted to the base A³. Driving pinion k⁴ is also keyed to shaft K and may mesh with a pinion of the driving shaft of a motor placed on the rear extension of the base A³, or it may be replaced by a pulley to be driven by outside power or some unit power attached to the said extension of the base A³.

The whole frame A and its mechanism may be moved in a horizontal direction on the base A³, the two being slidably connected in any suitable manner such as the base A forming the shears and the frame part A¹ fitting the same, while the stand a and frame part A² may be bolted to the floor of the base A. Bolts a² and a¹ when tightened, prevent the sliding of the frame and hold it rigidly in position.

The operation is as follows: Power is transmitted from the source of power to the shaft K, through the pinion k⁴, or its equivalent. Pinion k⁴, keyed to the shaft K, transmits the power to gear J, and J¹, which are keyed to shafts b¹ and c². Gears B¹ and C² are also keyed to shafts b¹ and c² and transmit power to gears B² and C¹. Slotted bar F, attached to gears B¹ and B², will be moving upwardly when the slotted bar F¹ attached to gears C¹ and C² is moving downwardly or conversely. This is obviously the case since all the gears carrying the bars mesh together and the pins which operate in the slots in bars are so situated on the

gears as to cause the slotted bars to be in a horizontal position at all times during the operation.

What I claim as new and desire to secure
5 by Letters Patent of the United States, is:—

An improved mechanism for imparting an opposite simultaneous reciprocatory motion to pump rods, said mechanism comprising a supporting frame, two horizontal parallel
10 slotted cross heads, two pairs of spur gears, one pair of said gears being arranged in a vertical plane above the other pair of gears,

the gears of one pair being in mesh with each other and with the corresponding gears of the other pair, and crank pins carried by 15 the gears and operating in the slots of said cross heads.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES F. PRESLAR.

Witnesses:

JOSEPH R. GARDNER,
BENJAMIN H. EDWARDS.