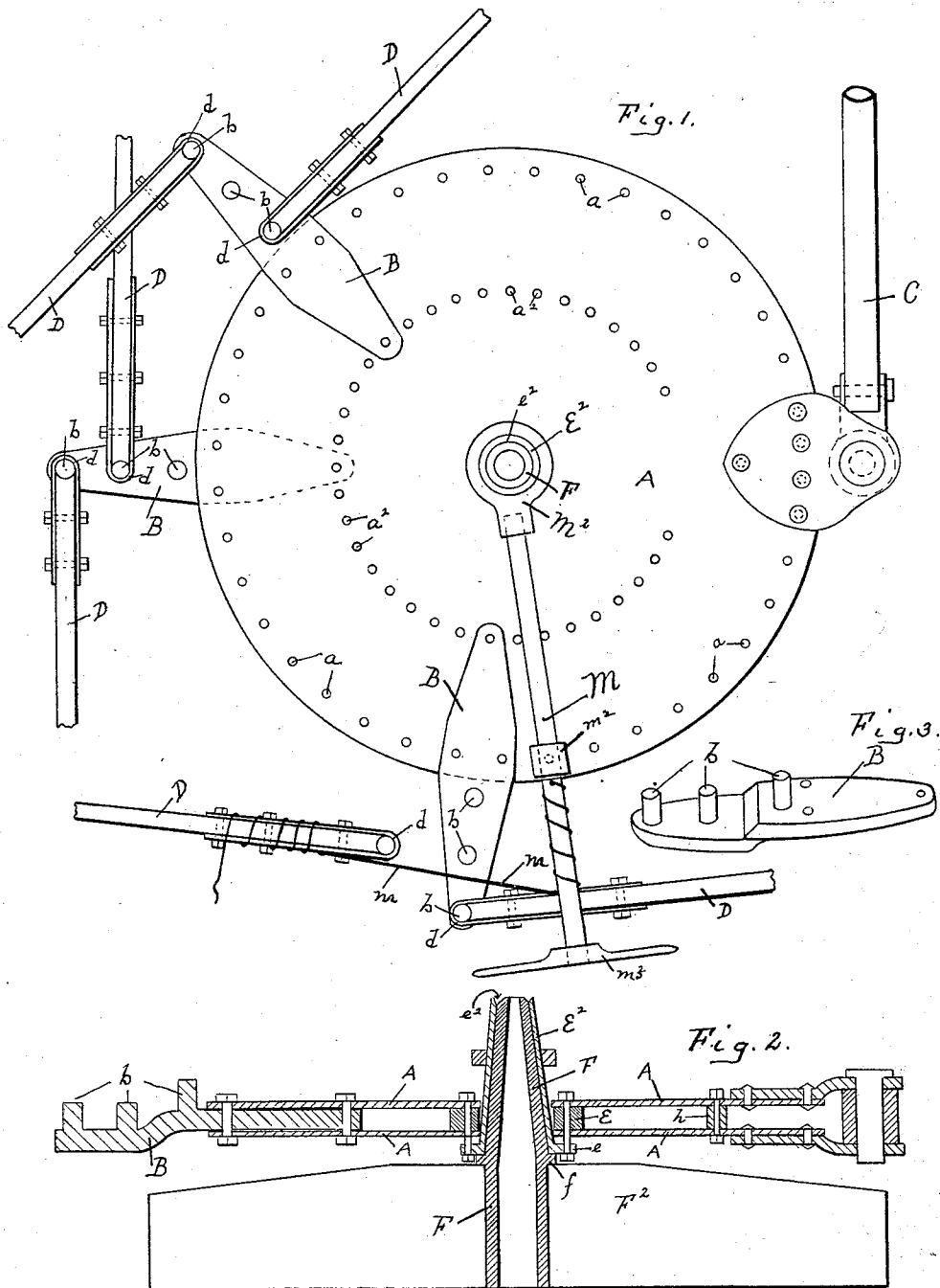


(No Model.)

C. F. LUFKIN.
DEVICE FOR DRIVING PUMPS.

No. 539,746.

Patented May 21, 1895.



Witnesses:
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DEVICE FOR DRIVING PUMPS.

SPECIFICATION forming part of Letters Patent No. 539,746, dated May 21, 1895.

Application filed April 26, 1894. Serial No. 509,063. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY F. LUFKIN, a citizen of the United States, residing at Lima, Allen county, State of Ohio, have invented certain new and useful Improvements in Devices for Driving Pumps for Oil-Well, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide a device for simultaneously operating a number of oil-well pumps from one engine or other motor power, said device being so constructed as that the driving-shaft leading to any well may be readily coupled to or uncoupled from the device, as will now fully hereinafter appear.

In the accompanying drawings, Figure 1 is a top view of a device embodying my invention, the pitman-rod leading off to the engine or other motor power being broken away, the said motor power not being shown. Fig. 2 is a diametric section taken on dotted line 2 2 of Fig. 1. Fig. 3 is a perspective view of one of the journal-blocks detached from its driving-disk.

My invention consists of a disk suitably mounted in a rotatable position, and adapted to be partially rotated alternately in opposite directions, the said disk having journals to which the connecting shafts for driving the pumps (not shown) are attached. The disk is also provided with a suitable pitman-rod, C, which latter is connected to a suitable motor power (not shown) for imparting motion to said disk, the latter being, preferably, mounted in a horizontal position, as shown.

When constructed as shown, the aforesaid driving-disk is made up of two metal plates, A, each having a series of bolt-holes *a* near the outer edge thereof and also a series of bolt-holes *a*² arranged in a circular manner inward from the holes *a*, as more clearly shown in Fig. 1. These holes are for the purpose of bolting the detachable journal-blocks, B, in any desired position around the periphery of the disk, said blocks each having one or more journals *b* attached thereto upon which are mounted one or more of the driving-shafts, D, which latter lead off to and operate the pump (not shown) of each separate well. The journal-blocks, B, may be bolted between

the plates A, or, one or more of said blocks may be bolted on top of the top plate, as shown, the latter being done when it is desired to run one shaft over another at an angle, as shown. Of course the angle at which the shafts D are located will be governed by the location of the wells in the immediate vicinity to be pumped.

The plates A may be connected together, with an intervening space between them, in any desired operative manner. In the drawings I have shown said plates bolted together with a central ring or collar E between them, the bolts extending through said plates, collar and through a circular flange *e* on the bearing E², which latter encircles and operates around the central journal F, made fast to the foundation F², said bearing resting upon the annular flange *f* of said journal, as shown in Fig. 2. The top portion of the journal and its bearing are preferably beveled, as shown in Fig. 2, which forms a chamber *e*² in which to apply the lubricating oil or grease.

If desired, suitable sleeves or collars *h* may be bolted between the plates A at suitable intervals around the outer edge thereof, to increase the rigidity of the disk as a whole, said collars being of a depth equal to the space desired between said plates.

In practice it often occurs that it is desired not to pump a certain well, in which event its coupling-shaft is disengaged from its journal *b*; and, the lowering of the piston-rod of the pump within said well will draw the shaft D some little distance from its journal. When it is desired to again couple said shaft on its journal, considerable force is required to pull said shaft up to position to be placed on its journal; and, to facilitate this operation, I have provided a windlass or reel, M, suitably mounted upon the driving-disk, said reel having a rope or chain *m* attached thereto, the opposite end of said cord being attached to the shaft, at which time the reel is rotated until said shaft is drawn up in proper position to have its bearing *d* placed over one of the journals *b*.

The operation of my improved driving-device for oil wells will be readily understood from the drawings and description already given. The intermittent movement given

the disk, through the medium of pitman C and its motor, will be transmitted to the pumps through the medium of said disk, journals *b* and shafts D. When it is desired to pump two wells located in opposite directions from the driving-device, the shafts of said two wells will be coupled to their journals *b* on one block B in such a manner as that the piston-rod of the pump in one well will be elevated, while the piston-rod of the pump in the other well will be lowered. By this arrangement, I am enabled to pump said two wells with one engine or motor, and with but little more additional power than it would take to pump one well, as the weight of one pumping apparatus on its down-stroke will lessen the power required to drive the other pumping apparatus on its up-stroke. By attaching the shafts of a number of wells, to my improved driving-device, in the manner just described, it will be seen that I am enabled to pump them all with one engine, or other motor, which is a very great saving of expense over the old and well-known method, which requires one engine or other motor for each separate well.

The advantages of my invention, in addition to that just mentioned, are apparent, being simple of construction and operation, and cheap of manufacture. The detachable journal-blocks may be connected to any desired portion of the disk around its periphery to accommodate the location of the well or wells

to be pumped, the connection being readily and quickly effected.

While I have illustrated and described the plates A as being disk-shaped, and have referred to same as being the "driving-disk," it is evident that said plates or driving device may be of any other suitable outline configuration without departing from my invention.

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

1. In a device for driving pump-shafts, the two plates A bolted together and mounted in a rotatable position, in combination with the block B adjustably connected between said plates and projecting out beyond the periphery of the latter, said block having a shaft-journal on its outer end portion, and means for imparting motion to said plates.

2. The combination of journal F suitably supporting and having a flange *f*, bearing E² having a flange *e* resting upon flange *f*, collar E encircling said bearing, plates A bolted to said collar and flange *e*, and block B adjustably attached to said plates, said block having a journal *b*, and suitable means for imparting motion to said plates for the purposes specified.

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