W. F. SIGGEL.

PUMP OPERATING MECHANISM.

APPLICATION FILED JULY 28, 1908.

919,784. **Patented Apr. 27, 1909.**

Fig. 1.

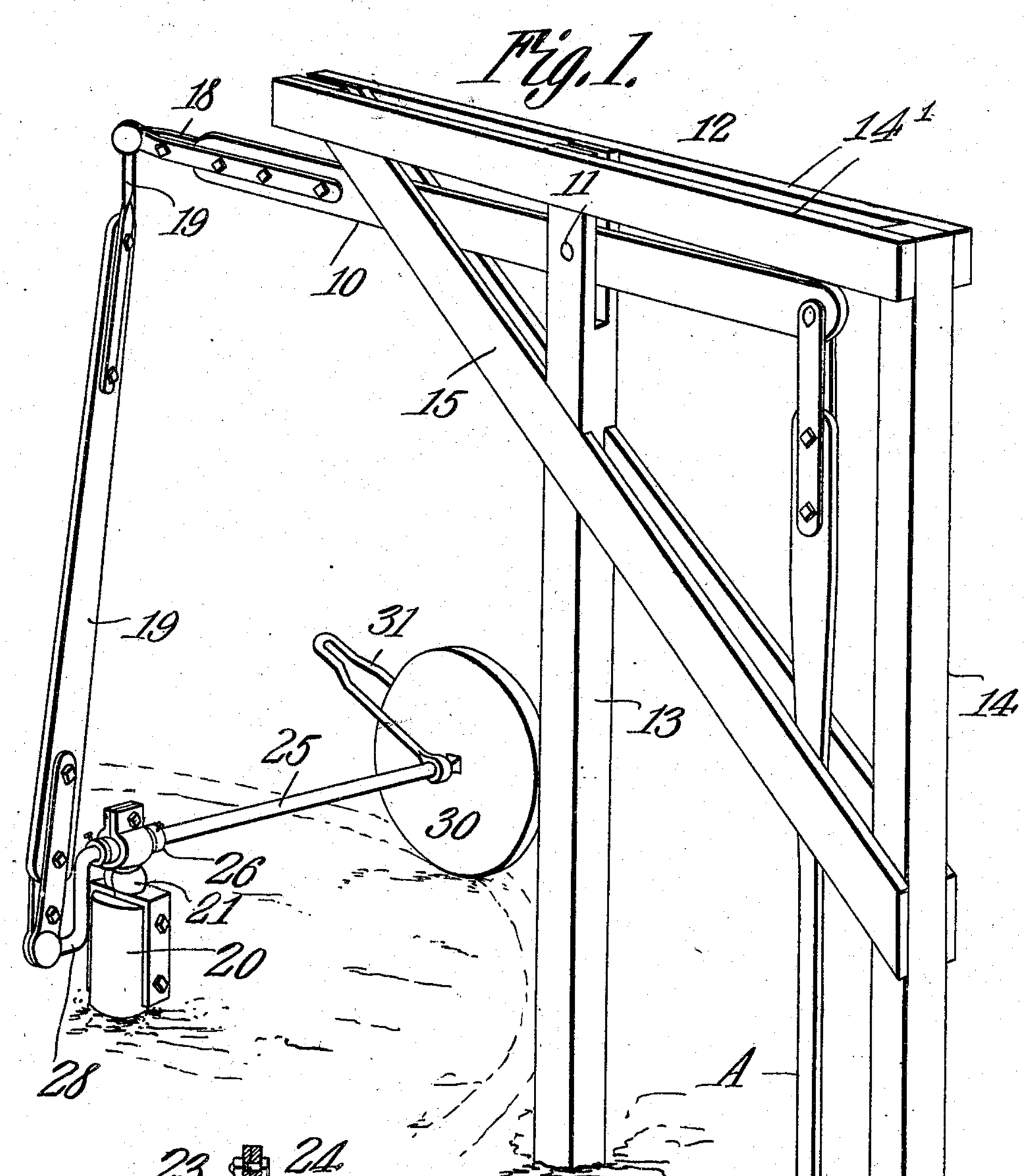

Fig. 2.

UNITED STATES PATENT OFFICE.

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PUMP-OPERATING MECHANISM.

No. 919,784. Specification of Letters Patent. Patented April 27, 1909.

Application filed July 28, 1908. Serial No. 445,801.

To all whom it may concern:

Be it known that I, WILLY F. SIGGEL, a citizen of the United States, residing at Albert P. O., in the county of Gillespie and State of Texas, have invented a new and useful Pump-Operating Mechanism, of which the following is a specification.

This invention relates to apparatus for operating pumps, well-driving mechanism and the like, and has for its principal object to provide a mechanism of simple construction wherein a horse or other animal power may be advantageously employed.

A further object of the invention is to provide a novel means for attaching a sweep to the mechanism to be operated.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a perspective view of a pump operating mechanism constructed in accordance with the invention. Fig. 2 is a detailed sectional view of sweep shaft bearing.

Similar characters of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The device forming the subject of the present invention is designed for the purpose of permitting the use of horse power in the operation of pumps and the like and in the drawings "A" indicates the plunger or piston rod of suitable pumpior other device to be operated. The rod "A" is pivotally connected to one end of a walking beam 10 that is pivoted on stud 11 carried by a frame 12. The frame comprises a pair of spaced vertical posts 13 and 14. The upper ends of which are connected by a pair of horizontal bars 14′ and the frame structure is braced by diagonal struts 15 which extend from the outer end of bars 14′ to the lower portion of the post 14, the intermediate portions of the struts being mortised in the upright 13. The struts 15 are spaced apart a distance just a trifle greater than the thickness of the walking beam 10 so that they will act as side guides or guards for the outer end of the beam and hold the latter from lateral play.

Extending from the outer end of the beam is a two part socket 18 that is arranged for the reception of a ball or sphere carried at the upper end of a pitman rod 19. Arranged below and approximately in the vertical plane of the ball and socket joint is a post or standard 20 that is firmly driven in the ground or is secured to a suitable stationary base. The post 20 carries two part socket 21 which receives a ball or sphere 22 that is arranged at the bottom of a split clamp 23 said clamp being arranged to receive and support a bearing sleeve 24.

Mounted in the bearing sleeve 24 is a sweep shaft 25 that is provided with collars 26 secured to the shaft by suitable set screws and disposed at the opposite ends of the bearing sleeve for the purpose of preventing longitudinal play of the shaft.

The inner end of the shaft is provided with a crank 28 which has ball and socket connection with the lower end of the pitman rod 19 and the three ball and socket connections described will permit free operation of all of the connections without danger of distortion or breaking. At the outer end of the sweep shaft 25 is secured a heavy wheel 30 and coupled to the shaft is a draft yoke 31 to which the horse or other driven animal may be attached. In the operation of the device the horse or other animal travels in a circular path around the post 20. The wheel 30 being in contact with the ground will be rotated and will transmit rotative movement to the cranked sweep shaft so that the pitman will be operated for the purpose of effecting oscillatory movement of the walking beam 10 and this movement is transmitted to the reciprocating plunger "A" of the pump or other device to be operated.

I claim:—

1. In combination, a frame inclosing a plurality of cross beams, a pair of diagonally disposed spaced struts, a walking beam pivoted to the frame the struts serving as side guides or guards for the outer end of the beam, a post or standard, a socket member carried thereby, a clamp having a ball fitting in said socket, a bearing sleeve mounted in the clamp, a cranked sweep shaft journaled in said bearing, collars secured to the shaft and preventing independent longitudinal movement thereof, a pitman, ball and socket

connections between the crank and pitman and between the pitman and walking beam, a wheel or disk permanently secured to the outer end of sweep shaft, and a draft yoke connected to said shaft.

2. In combination, a walking-beam serving as a power-transmitting device, a post, a socket member carried thereby, a clamp having a ball fitting in said socket, a bearing-sleeve mounted in the clamp, a cranked sweep shaft journaled in said bearing, a pitman, ball and socket connections between the crank and pitman, and between the pitman and the walking-beam, a wheel rigidly secured to the outer end of the sweep shaft, and a draft device connected to said shaft.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLY F. SIGGEL.

Witnesses:
RICHARD KOENNECKE,
ROBT. STAHMANN.