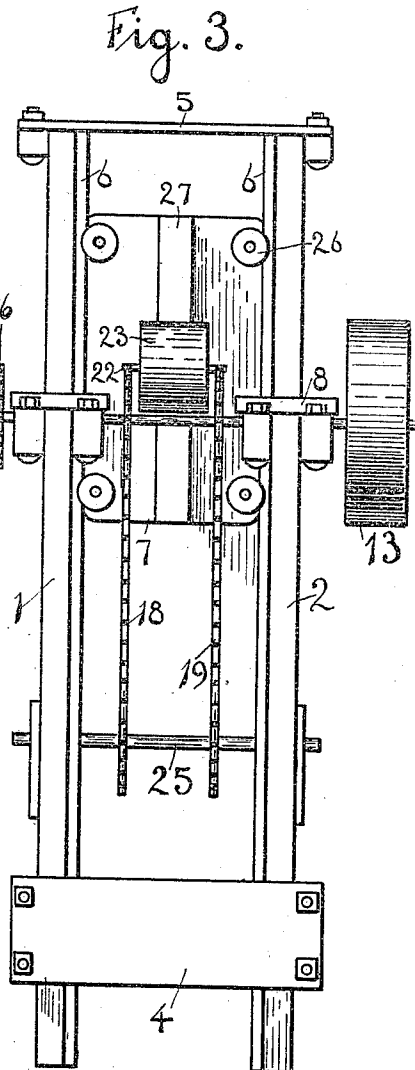
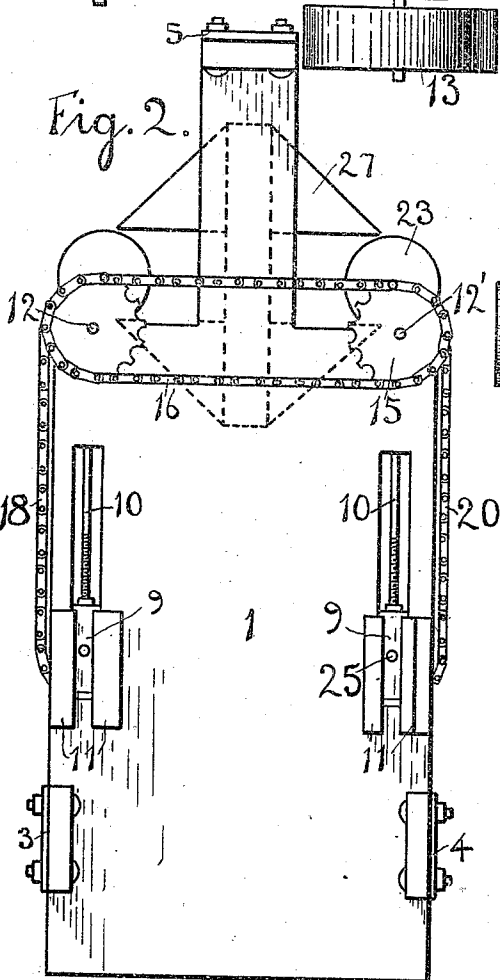
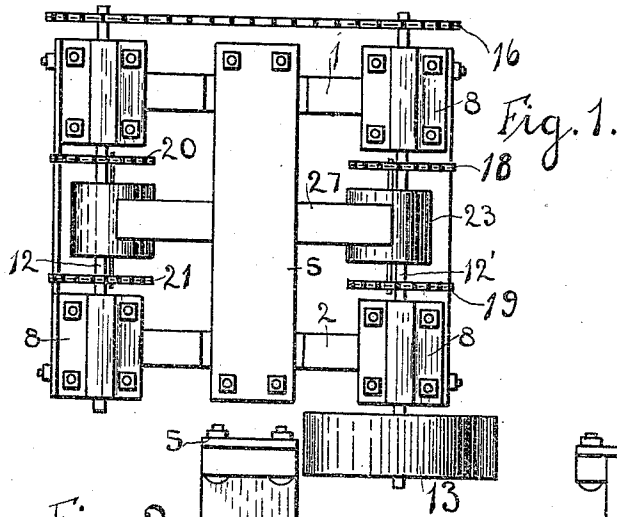


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APPLICATION FILED MAY 4, 1909.

960,936.

Patented June 7, 1910.

2 SHEETS—SHEET 1.



Witnesses.
Roswell P. Rogers.
Sidney Fletcher

Inventor.
Byron Huse. by
Carlos P. Griffin Atty.

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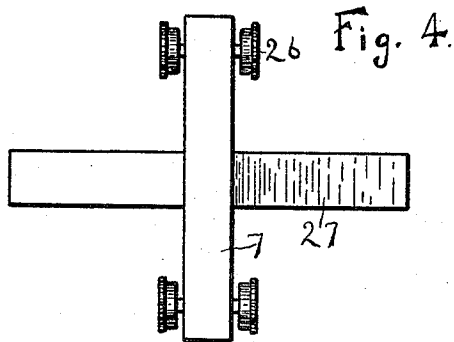
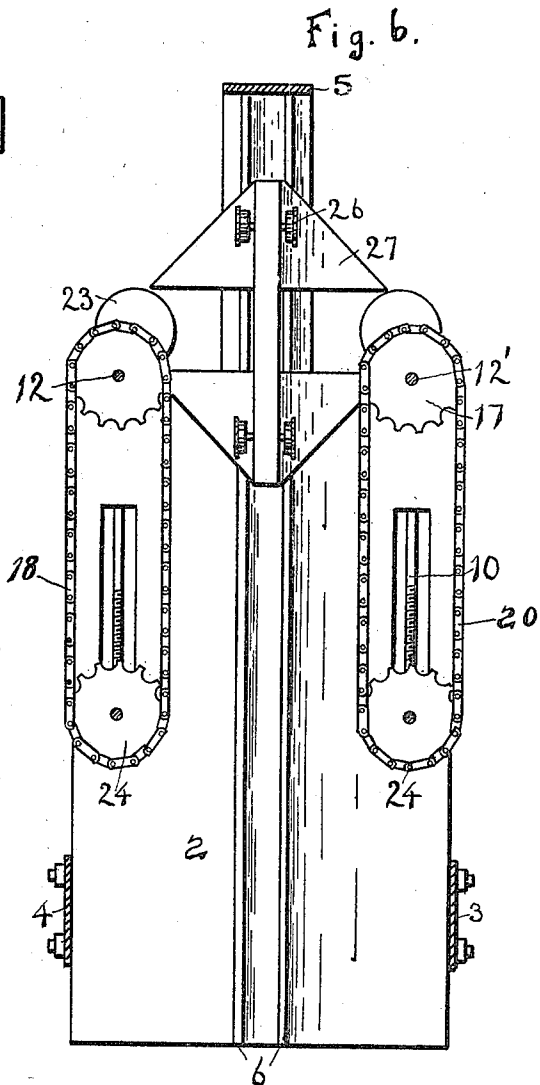
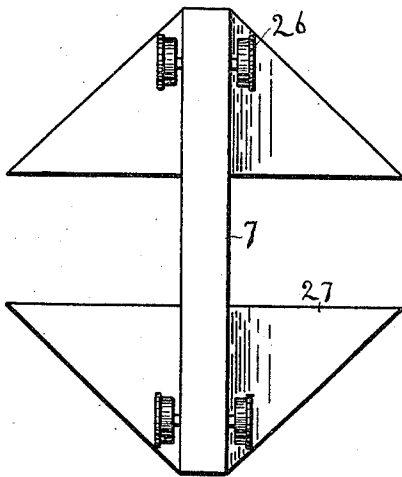


Fig. 5.



Witnesses.
Roswell P. Rogers.
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Charles P. Griffin Atty.

UNITED STATES PATENT OFFICE.

BYRON HUSE, OF PALERMO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO GEORGE M. SPARKS, OF OROVILLE, CALIFORNIA.

MECHANICAL MOVEMENT.

960,936.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed May 4, 1909. Serial No. 493,901.

To all whom it may concern:

Be it known that I, BYRON HUSE, a citizen of the United States, residing at Palermo, in the county of Butte and State of California, have invented a new and useful Mechanical Movement, of which the following is a specification in such full and clear terms as will enable those skilled in the art to construct and use the same.

This invention relates to a mechanical movement which is used for the purpose of converting a rotary movement into a reciprocating motion, and the especial object of the invention is to produce a device which will make possible the reciprocation through long distances of the moving part, as for example, the operation of mine pumps in which the stroke is often as much as ten or twelve feet.

In the drawings, in which the same numeral of reference is applied to the same portion throughout, Figure 1 is a plan view of the device, Fig. 2 is a side elevation of the device, Fig. 3 is an elevation of the device at right angles with the view shown in Fig. 2, Fig. 4 is a plan view of the pitman head, Fig. 5 is a view of the edge of the pitman head, and Fig. 6 is a side view similar to Fig. 2 except that the side support has been removed.

The device comprises the sides 1 and 2 which may be solid, as shown, or they may be made in any desired form of frame. The sides are secured together at the bottom by means of the plates 3 and 4, said plates being bolted to the sides. A like securing plate 5 is bolted to the frame at the top thereof. On each side 1 and 2 there are rails 6 which extend the entire distance, it is desired for the head 7 to move. Secured on each of the sides are two boxes 8, and lower down on each side are two adjustable boxes 9, the latter boxes moving in a slot in the sides, and being adjusted in the desired position by means of threaded bolts 10, of which there is one for each box 9. The boxes are held in place in the slots in the sides by means of the plates 11.

Journalled in each of the upper boxes are the shafts 12 and 12' on the latter of which are secured the fly wheel 13 and drive pulley 14. Each shaft has a sprocket gear 15 over which a chain 16 runs, said wheels being of the same size whereby each shaft is caused

to rotate at the same rate. Between the two sides each of the upper shafts has a sprocket wheel 17 over which pass the chains 18, 19, 20 and 21. The chains 18 and 19 are secured together by means of a pin 22 on which is journaled a large roller 23, the chains 20 and 21 being connected with each other in a like manner. The chains pass over sprocket wheels 24 at their lower ends, said wheels being journaled on shafts 25 which are adapted to rotate in the adjustable boxes.

The pitman head 7 is adapted to be moved up and down on the rails carried by the sides 1 and 2, all undue friction against said rails being eliminated by means of the set of eight rollers 26. The head is also provided with the projecting blocks 27 which act to transmit the motion from the large chain rollers to the pitman head.

The operation of the device is as follows: The drive pulley being connected with any suitable source of power the shafts are rotated and as they rotate the chains will be caused to travel at the same speed, and while one of the rollers 23 is passing between the blocks 27 on its side of the pitman head the other roller 23 will be passing out from the space between the blocks 27 on its side of the pitman. At the opposite end of the path of the pitman head the reverse operation will take place and the pitman head will be returned to the top of the frame and the reciprocation will be continued as long as the motion is imparted to the sprocket chains.

An advantage of the device is that it may be operated in either direction, a desirable feature for the reason that such devices as this are often operated by a gas engine, a motor, or possibly a steam engine in turn, and it may not be convenient to have each of the said motors run in the same direction.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. In a mechanical movement, a frame having a rail at each side thereof, a pitman head slidable between the rails, blocks projecting from said pitman head on each side thereof, and a traveling roller on each side of the pitman head, one of said rollers adapted to contact with said blocks on one side of the head to move the same in one direction while the other traveling roller contacts

with the blocks on the opposite side of the head to move the head in the opposite direction, as set forth.

2. In a mechanical movement, a frame
5 having a pair of oppositely placed guide rails therein, a pitman head slidable in said guide rails, four pairs of rollers on said head and adapted to reduce the friction of said head and rails, two sets of chains one on each
10 side of the pitman head, drive sprockets which said chains pass over, loose adjustable sprockets which the chains pass over, a roller carried by each set of chains, said rollers adapted to move said pitman head
15 alternately in opposite directions, and means to drive the chains.

3. In a mechanical movement, a frame having a pair of oppositely placed rails, a

pitman head slidable on said rails, four sets of rollers adapted to guide said head along
20 said rails whereby the friction is reduced, blocks carried on opposite sides of said head, two sets of chains on opposite sides of the head a roller carried by each set of chains and adapted to move the head in opposite di-
25 rections by contacting with the blocks carried thereby, and means to drive the chains at the same rate of speed.

In testimony whereof I have set my hand this 24th day of April A. D. 1909, in the
30 presence of the two subscribed witnesses.

BYRON HUSE.

Witnesses:

CARLETON GRAY,
ZELLA KELLY.