

No. 712,147.

Patented Oct. 28, 1902.

D. R. MYERS.
MECHANICAL POWER.

(Application filed Dec. 30, 1901.)

(No Model.)

Fig. 1

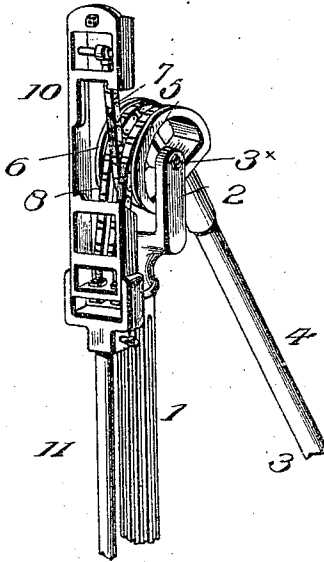


Fig. 2

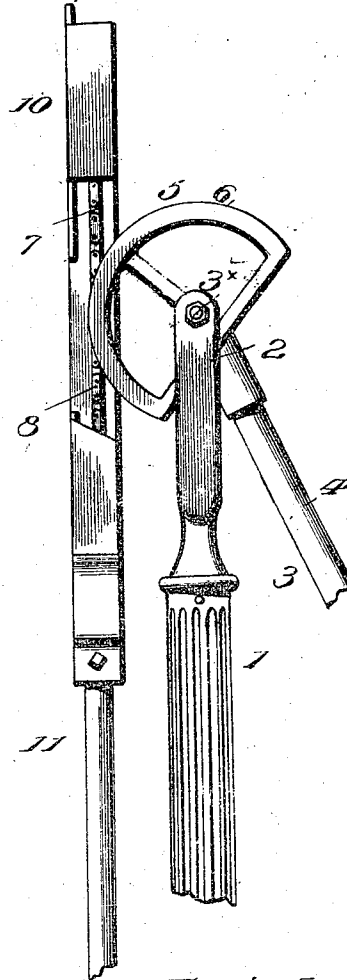


Fig. 3

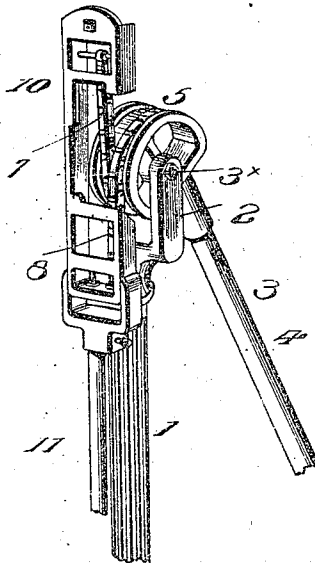
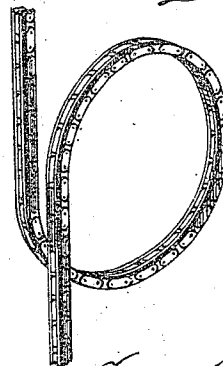


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

DEAN R. MYERS, OF MAUMEE, OHIO.

MECHANICAL POWER.

SPECIFICATION forming part of Letters Patent No. 712,147, dated October 28, 1902.

Application filed December 30, 1901. Serial No. 87,795. (No model.)

To all whom it may concern:

Be it known that I, DEAN R. MYERS, a citizen of the United States, residing at Maumee, in the county of Lucas and State of Ohio, have invented new and useful Improvements in Mechanical Power, of which the following is a specification.

The invention relates to mechanism for forcing either up or down a piston or other load; and has for its object to provide a simple and efficient double-acting device for said purposes.

The invention consists in the construction herein described and pointed out.

In the accompanying drawings, Figure 1 is a perspective of the device, a part of the chain-casing being broken away. Fig. 2 is a side elevation on a large scale. Fig. 3 is a perspective of a modification. Fig. 4 is a perspective of a single chain such as represented in Fig. 3, indicating that it may be used on a circular head instead of a partially circular head, as shown in other figures.

Numeral 1 denotes a post or other suitable support provided with arms 2, in which a lever 3 has a fulcrum 3'. The power-arm of the lever is denoted by 4 and the short arm by 5. Said short arm is a curved enlargement or head provided with flanges 6, between which work chains 7 and 8, one end of each of which is fixed by any suitable means to the head. The opposite end of the chain 7 is fixed to the upper part of what may be called the "chain-case" 10, and the opposite ends of the chains 8 are attached to the lower part of said case, which is made integral with or fixed to a piston-rod 11 or other object or load to be moved. The chain is inclosed in the case 10, as shown, and its point of attachment to the case at its upper end is in the same straight line with the rod 11. The case is provided with a lateral opening to admit a part of the periphery of the head of the short arm of the lever 4, whereby said chain is tangential to the said periphery in a straight line from the points of attachment of its opposite ends, thus avoiding a lateral strain incident to prior constructions in which both ends of the chain were attached at the side of the rod, and whereby also the bar, pin, or part of the case to which the chain is attached can be supported at both ends in said case, the construction being stronger than the lateral pin-

support heretofore used. The head may be a mutilated wheel, as shown, or it may be an entire wheel, and either form is herein included in the term "circular" head. Straps, wire, rope, or other suitable flexible connections may be used instead of chains, and these may be attached to the head in any suitable or convenient manner.

In operation the depression of the power-arm of the lever lifts the piston-rod and the raising of the lever forces down the rod, which is moved in a straight line, having an unvarying distance from the fulcrum, whereby the lever has a greatly-increased and uniform efficiency.

The device is comparatively free from friction and is also free from obstruction by ice or snow. When combined with a pump, it nearly doubles its capacity.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The lever provided with a curved head, a piston-rod, a case fixed to and movable with the rod, a flexible connection between the case and head, said connection being inclosed by the case in line with the rod, and a support disconnected from the case for the fulcrum of the lever.

2. The lever provided with a curved head, a piston-rod, a case fixed to and movable with the rod, a flexible connection between the case and head, said connection being inclosed by the case in line with the rod, and the case provided with a lateral opening for the play of the head, and a support disconnected from the case for the fulcrum of the lever.

3. The lever provided with a curved head, a piston-rod, a case fixed to and movable with the rod, and a flexible connection between the case and head, said connection being inclosed by the case in line with the rod, and the case provided with a part for the attachment of the chain supported in the case at both ends, said lever having a fulcrum independent of the case.

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

DEAN R. MYERS.

Witnesses:

SAMUEL ROBERTS,
WILLIAM H. WOOD.