

(No Model.)

2 Sheets—Sheet 1.

M. E. SMITH.
CHAIN POWER.

No. 467,059.

Patented Jan. 12, 1892.

Fig. 1.

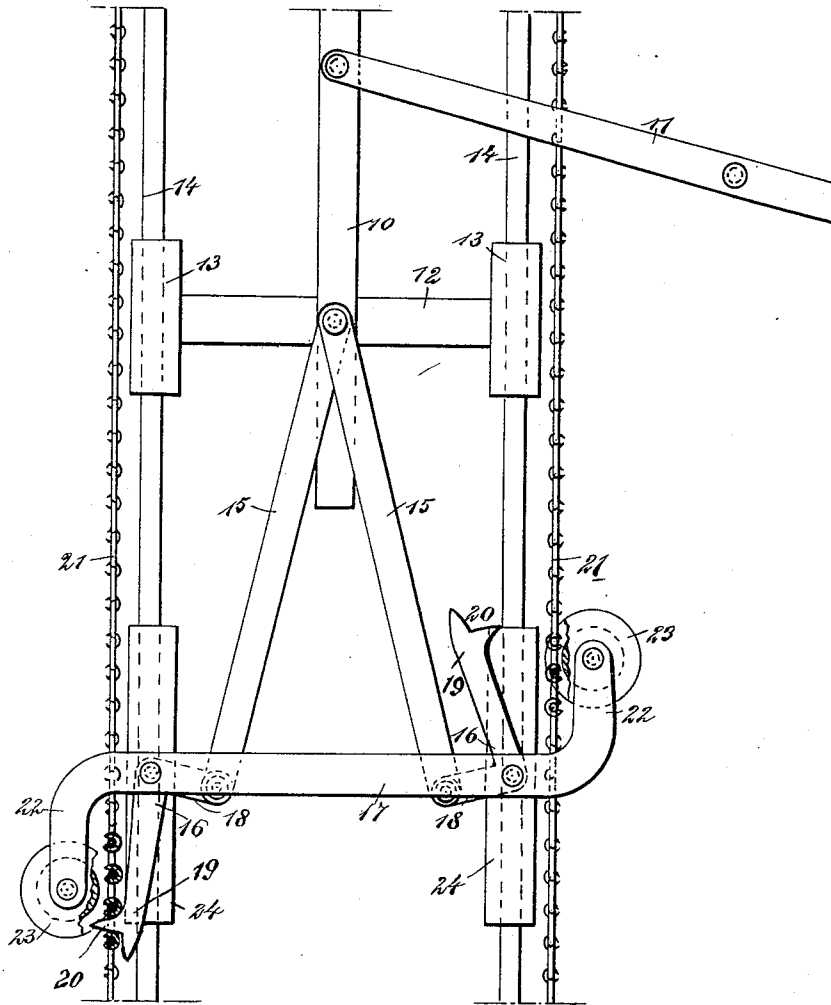
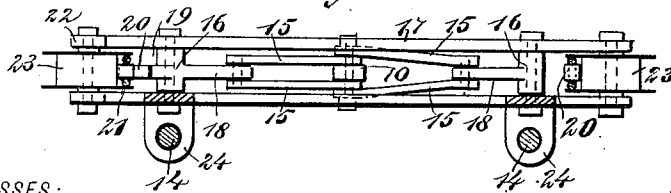


Fig. 2.



WITNESSES:

Donn Twitchell
E. M. Clark

INVENTOR

Mallo C. Smith
BY
Munn & Co
ATTORNEYS.

(No Model.)

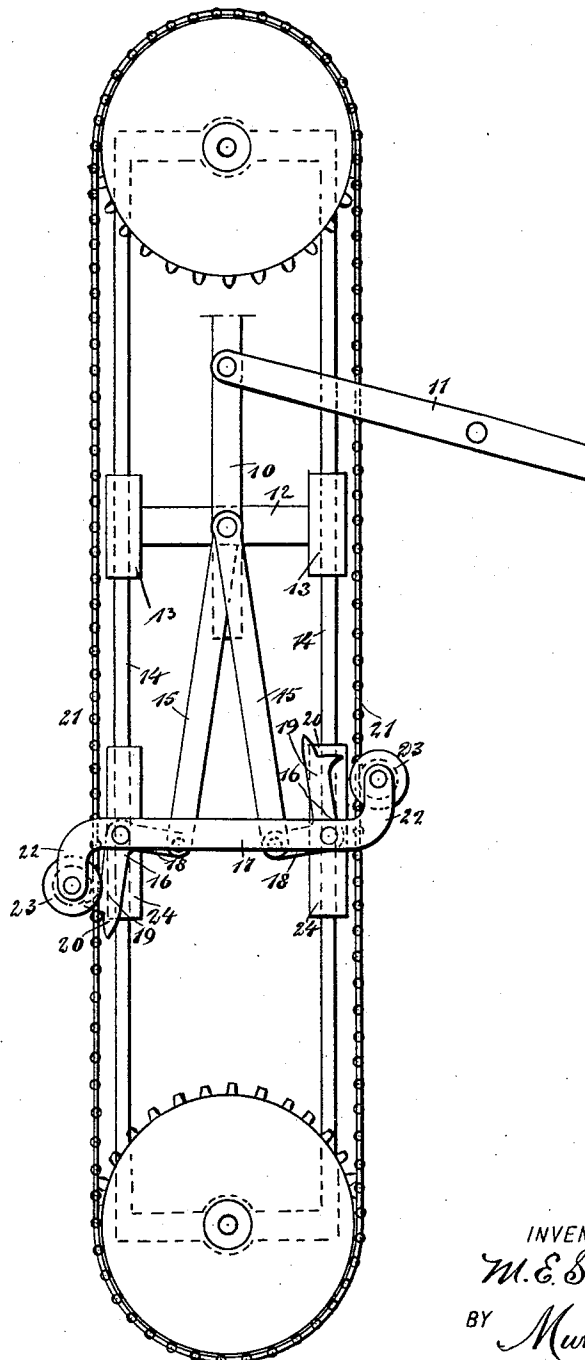
2 Sheets—Sheet 2.

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Fig. 3.



WITNESSES:

Donn Twitchell
Co. Bedgewick

INVENTOR:

M. E. Smith
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ATTORNEYS

UNITED STATES PATENT OFFICE.

MILO EUGENE SMITH, OF BRADY ISLAND, NEBRASKA.

CHAIN-POWER.

SPECIFICATION forming part of Letters Patent No. 467,059, dated January 12, 1892.

Application filed August 29, 1891. Serial No. 404,051. (No model.)

To all whom it may concern:

Be it known that I, MILO EUGENE SMITH, of Brady Island, in the county of Lincoln and State of Nebraska, have invented a new and Improved Chain-Power, of which the following is a full, clear, and exact description.

My invention relates to improvements in chain-powers; and the object of my invention is to produce a simple, convenient, and efficient device for transmitting a continuous motion to an endless chain, so as to adapt it for driving any sort of machinery.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken side elevation of the apparatus embodying my invention. Fig. 2 is an inverted sectional plan of the same, and Fig. 3 is a side elevation of the device.

A reciprocating bar 10 is moved by a lever 11, which is centrally pivoted and is operated by any usual source of power. The bar is secured to a guide-frame 12, having slide-blocks 13 at the ends, which blocks move on parallel rods 14, and the rods may be held in any convenient way. The bar is provided with double links 15, which are pivoted thereto and which diverge therefrom, the opposite ends of the links being pivoted to elbow-latches 16, which are journaled in the reciprocating frame 17. The latches 16 are pivoted at their elbows, the short arms 18 connecting with the links 15 and the longer arms 19 having notched ends 20, adapted to engage links of an endless chain 21, which chain is adapted to drive any sort of machinery and may be supported on suitable sprocket wheels or pulleys. These elbow-latches 16 are alike; but they are arranged so that their notched ends will extend from opposite sides of the frame 17, and consequently when the bar is moved in one direction one of the latches will engage one side of the chain and when the bar is moved in the opposite direction the other latch will engage the opposite side of the chain and the chain will be constantly moved in one direction.

The frame 17, which supports the latches, is provided with oppositely-bent ends 22, the ends being arranged parallel with the opposite members of the chain 21, and in each end of the frame is pivoted a flanged pulley 23, which presses lightly against the chain 21 and prevents the chain from being displaced under the pressure of the latch 16. The frame 17 is also provided with slide-blocks 24, which are mounted on the rods 14, and the frame and the parts supported thereon will thus be held to slide always in the same plane.

The operation of the device is as follows: The bar 10 is reciprocated by the lever 11, and when moved in one direction one of the latches 16 will be actuated by the links 15, connecting it with the bar, so that it will engage the chain and move the same, and when the piston or bar is returned the opposite latch will be thrown into engagement with the opposite side of the chain, the latch first in engagement will be released, and a constant and continuous movement will be imparted to the chain.

It will be noticed that the bar by means of its guide-frame and the latches by means of the frame 17 will be held to slide in the same plane, and the parts will consequently work very easily.

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

1. A chain-power comprising an endless chain, a reciprocating bar adapted to move parallel with the members of the chain, oppositely-arranged elbow-latches adapted to engage the chain members and held in a sliding frame, and a link connection between the latches and the bar, substantially as shown and described.

2. A chain-power comprising an endless chain, a reciprocating bar held to move parallel with the chain members, a sliding frame adapted to move in the same plane with the bar, said frame having flanged pulleys arranged opposite the chain, oppositely-arranged elbow-latches pivoted in the sliding frame and having notched ends to engage the chain, and a link connection between the elbow-latches and the bar, substantially as shown and described.

3. A chain-power comprising an endless

chain, parallel rods arranged between the members of the chain, a reciprocating bar secured to a guide-frame held to slide on the parallel rods, a sliding frame mounted on the
5 parallel rods and provided with flanged pulleys to press against the chains, elbow-latches mounted on a sliding frame and having

notched ends to engage the chain, and a link connection between the elbow-latches and the bar, substantially as shown and described.

MILO EUGENE SMITH.

Witnesses:

WILLIAM BEATTY,
R. C. BURKE.