(No Model.)

J. M. BERGOLD.

POWER TRANSMITTER.

No. 485,167. Patented Nov. 1, 1892.

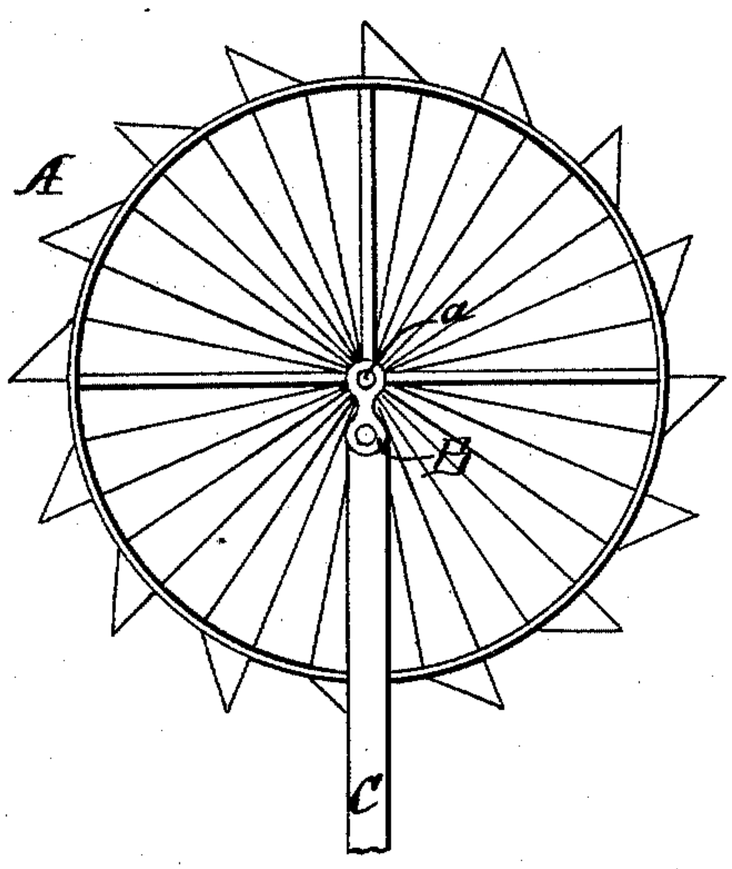

Fig. 1.

Fig. 2.

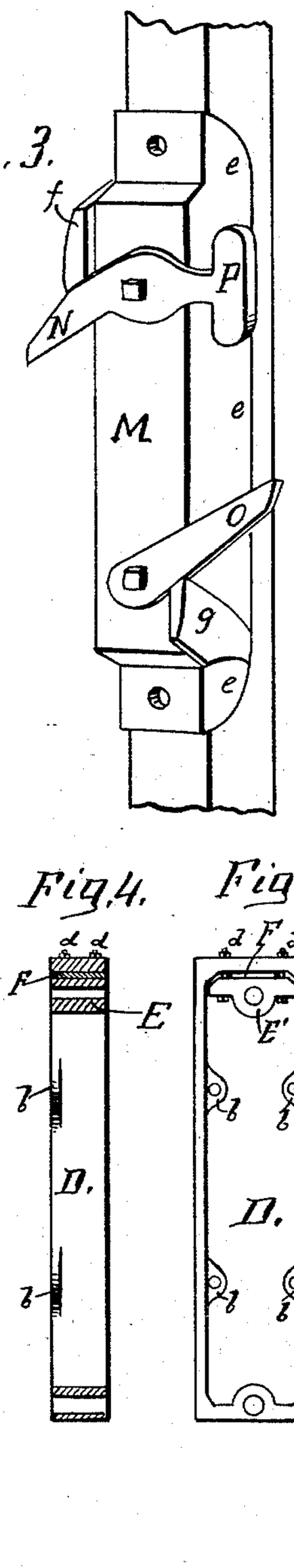

Fig. 3.

Fig. 4.

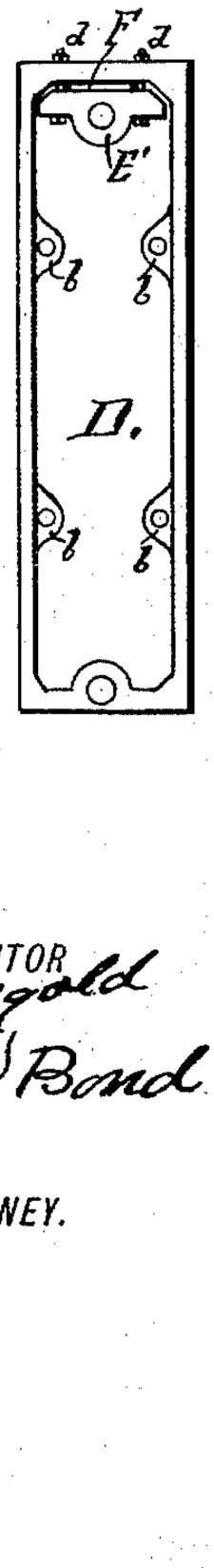

Fig 5.

WITNESSES:

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JOSEPH M. BERGOLD, OF CANTON, OHIO.

POWER-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 485,167, dated November 1, 1892.

Application filed January 30, 1892. Serial No. 419,739. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. BERGOLD, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Power-Transmitters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a view of the chain-frame, showing location of the sprocket-wheels and chain, and also showing pitman and its different attachments. Fig. 2 is an edge view of the chain-frame, showing location of the drive-chain and the power-shaft. Fig. 3 is a detached view showing a portion of pitman and the detent-bar, and also showing location of detents and their stops. Fig. 4 is a longitudinal section of the chain-frame. Fig. 5 is a side view of the chain-frame, showing location of the journal-boxes.

The present invention has relation to power-transmitters; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A refers to a wind-wheel, which may be constructed of any suitable material and of any desired form and is supported at the required height in the ordinary manner. To one side of the wind-wheel A is located an ordinary crank B, fixed to or formed integral with the wind-wheel shaft *a*, to which crank B is journaled in the ordinary manner the top or upper end of the pitman C, which pitman extends downward, and its bottom or lower end is attached to a pump in the ordinary manner. It will be understood that the pitman C should be so attached that it may be removed from the pump, when desired, to use the power-transmitter independent of the pump. The chain-frame D is securely attached to the plank E or its equivalent by means of the flanges *b* and the bolts *c* or their equivalents. The top or upper end of the chain-frame D is provided with the adjustable box E′, which is located substantially as shown in Fig. 5, said box being securely held at the desired point of adjustment by means of the clamping-bolts *d*, which clamping-bolts extend through said box E′ and the chain-frame D. For the purpose of securely holding the box E′ at the desired point of adjustment the block F is placed between the chain-frame D and said box, and for the purpose of changing the position of the box E′ different-sized blocks F may be placed between the frame and box. The sprocket-wheels G and H are located substantially as shown in Figs. 1 and 2. The sprocket-wheel G is securely attached in any convenient and well-known manner to the power-shaft I, which power-shaft is provided with the wheel J. Said wheel is made heavy, so as to form a balance-wheel, and may, if desired, be a belt-wheel, or, if desired, said wheel may be simply a balance-wheel, and a belt-wheel may be attached to the power-shaft I at any desired point. The sprocket-wheel H is located directly below the sprocket-wheel G, and is journaled to the shaft or post K, which shaft or post is located substantially as shown in the drawings. Around the sprocket-wheels G and H is located the linked chain L, and for the purpose of tightening the chain L various-sized blocks, as F, are used, thereby providing the means for adjusting the box E′ to or from the shaft or post K. To the pitman C is securely attached the detent-bar M, which bar is provided with the side flanges *e*, said flanges being so arranged that they will embrace the sides of the pitman, as illustrated in Figs. 1 and 3. To the detent-bar M are pivotally attached the detents or catches N and O, which detents or catches are located substantially as shown in Figs. 1 and 3. For the purpose hereinafter described the detent or catch N is provided with the weight or counter-balance P, said weight or counter-balance being preferably formed integral with the catch N. In use the chain L is adjusted upon the sprocket-wheels G and H, as illustrated in Fig. 1, and the pitman C centrally located adjacent the vertical members of the chain L and the detent or catches N and O so adjusted that their free ends will come in line with the links of the vertical members of the chain L, thereby carrying the chain L with its downward movement. For

the purpose of preventing the detent N from turning over its center the stop *f* is provided, which stop holds the detent or catch N in the position illustrated in Figs. 1 and 3. When the pitman has completed its downward stroke and starts upon its upward stroke, the detent N will be released by reason of said detent turning or oscillating upon its pivotal point until its free end is disengaged from the chain L, at which time the detent O will engage a link in the opposite member of chain L and carry said chain upward with the upward movement of the pitman C. For the purpose of preventing the detent O from turning downward the stop *g* is provided, which stop supports or holds the detent or catch O in the position illustrated in Fig. 3. For the purpose of preventing the detent or catch N from dropping too far the counter-balance or weight P is provided. Said counter-balance P is of such a weight that it will hold the detent in the position illustrated by the full lines in Fig. 1. As the pitman C moves downward the free end of the detent O will assume the position illustrated in Fig. 1, and when in said position its free end is disengaged from the links of the chain L.

It will be understood that if the travel of the chain L should be more rapid than the reciprocating motion of the pitman C the detents N and O will miss their connection with a link of the chain L, thereby to a certain extent governing the movement or speed of the power-shaft I.

In the drawings I have illustrated my invention applied to a wind-wheel, and it is in this connection that I desire to use my device. It will be understood that the plank E is to be attached to the timbers of the wind-wheel frame or derrick.

It will be seen that by my peculiar arrangement of the oppositely-timed detents or latches N and O a continuous movement will be given to the chain L, thereby imparting a rotary motion to the power-shaft I and to the wheel J or other wheels that may be attached to said power-shaft.

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

1. The combination, with the pitman C, the detent-bar secured thereto, and the detents N and O, pivoted to said detent-bar, of the chain-frame D, the adjustable box E′ in said chain-frame, the sprocket-wheel G, journaled in said adjustable box, the sprocket-wheel H, journaled on a post extending from the chain-frame, and the link chain L, trained over the sprocket-wheels G and H, substantially as described.

2. The combination, with the pitman C, the chain-frame D, the sprocket-wheel H, the adjustable sprocket-wheel G, and the link chain L, of the detent-bar M, secured to the pitman C, the detent N, pivoted to the pitman C and having the counter-balance P, the detent O, pivoted to the pitman C, the stop *f* for the pitman N, and the stop *g* for the pitman O, substantially as described.

3. The combination, with the pitman C, the chain-frame D, and the sprocket-wheel H, of the adjustable box E′ in said chain-frame, the sprocket-wheel G, journaled therein, the link chain L, trained over the sprocket-wheels G H, the detent-bar M, secured to the pitman C, the counterbalanced detent N, and the detent O, pivoted to the detent-bar M and extending from opposite sides thereof, and the stops *f* and *g* for said detents, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH M. BERGOLD.

Witnesses:
F. W. BOND,
CHAS. M. STANDS.