

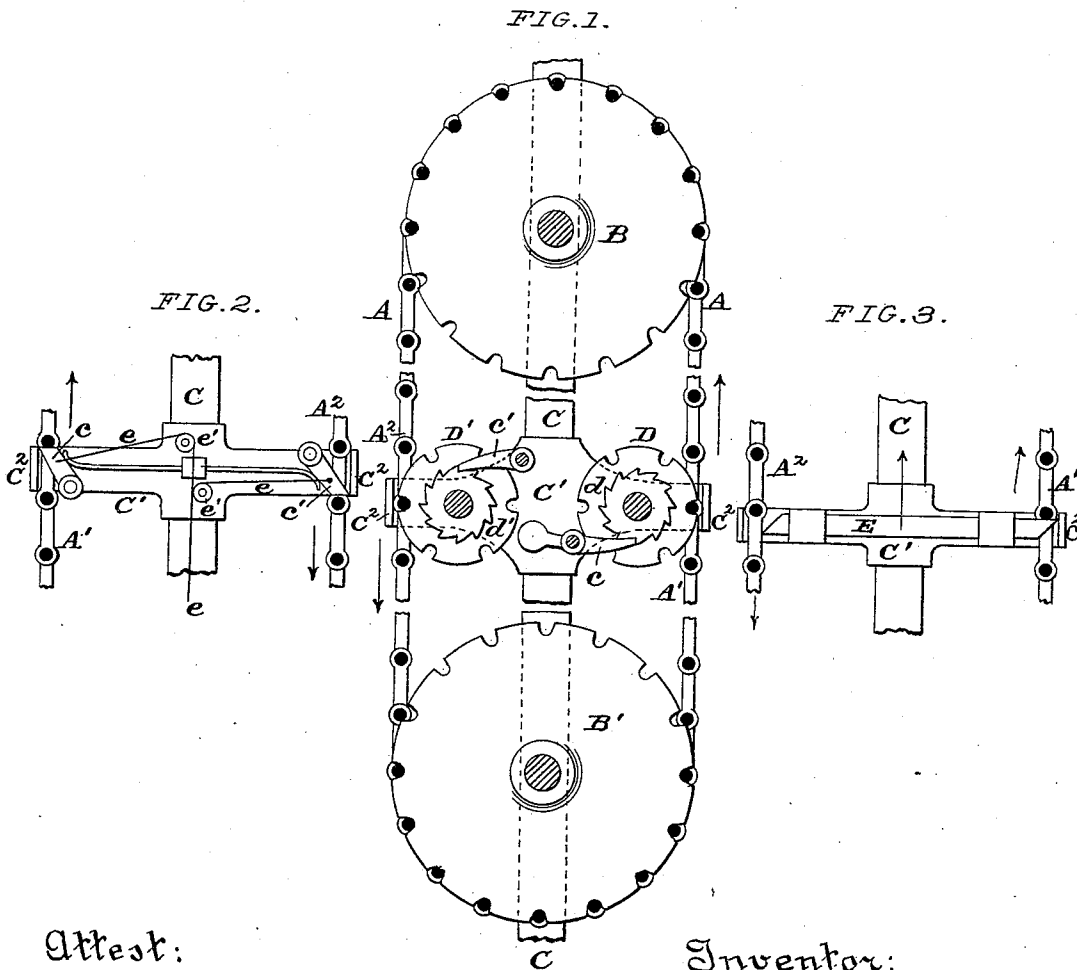
(No Model.)

T. S. PECK.

DEVICE FOR CONVERTING MOTION.

No. 307,868.

Patented Nov. 11, 1884.



Attest:

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UNITED STATES PATENT OFFICE.

TIMOTHY S. PECK, OF CHICAGO, ILLINOIS.

DEVICE FOR CONVERTING MOTION.

SPECIFICATION forming part of Letters Patent No. 307,868, dated November 11, 1884.

Application filed April 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY S. PECK, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mechanism for Converting Reciprocating into Rotary Motion, of which the following is a specification.

This invention relates to improvements in that class of mechanism employed for converting a rectilinear reciprocating into a rotary movement; and my improvement has for its objects, first, to provide a cheap, durable, and effective means for accomplishing such conversion; second, to utilize the chain or other belt used in the transmission of power as an element of the converting mechanism, and, third, to afford means for readily throwing the mechanism in and out of gear when required. I attain such objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of my preferred arrangement of parts and illustrating the employment of intermediate transmitting wheels between the endless chain and the operating ratchet mechanism. Fig. 2 is a detail sectional elevation of a modified arrangement of parts, in which the spring dogs or pawls are arranged to engage direct with the cross-bars of the chain-links composing the endless transmitting-chain; and Fig. 3 is a similar view illustrating a transversely-sliding ratchet-bar, the ends of which are adapted to alternately engage the opposite portions of the endless chain, so as to impart a continuous motion to the same in one direction.

Similar letters of reference indicate like parts in the several views.

A represents the endless chain-belt, of any required length, supported on carrying-drums B B'.

C is a reciprocating pitman, provided with a cross-head, C', that carries duplicate pawls c c', arranged in a reversed direction, and which are adapted (in my preferred arrangement, as shown in Fig. 1) to alternately engage the duplicate intermediate wheels, D D', that gear with the opposite portions, A' A², of the endless chain A. In this construction the intermediate wheels, D D', are provided with ratchet-wheels d d', with which the pawls c c' en-

gage, the arrangement being such that an upward movement of the pitman locks the wheel D from rotation through pawl c and ratchet-wheel d, and the upward movement of the pitman is consequently imparted to the portion A' of the belt A, the other wheel, D', being free to turn on its axis in unison with the downward movement of the opposite portion, A², of the endless belt. Similarly, in a downward movement of the pitman C, the wheel D' will be locked from rotation by its pawl and ratchet-wheel c' d', and the wheel D will be left free to turn on its axis, so that such downward movement of the pitman will be imparted to the portion A² of the belt, and thus a continuous rotation will be imparted to said endless belt, and through it to the wheel B', which may be connected to the machine or implement it is desired to operate. In some cases the wheels D D', with their ratchets d d', may be dispensed with, and the pawls c c' arranged to engage direct with the cross-bars of the chain-belt, as indicated in Fig. 2; or a single transverse pawl-bar, E, may be employed, as indicated in Fig. 3, the ends of which are beveled in reverse directions, so that it will be moved automatically into and out of engagement with the portions A' A² of the endless belt. Still the arrangement of parts illustrated in Fig. 1 is preferred, for the reason that wear upon the endless belt is avoided, such wear occurring almost entirely upon the pawls and ratchet-wheels c c' d d', which can be easily and cheaply renewed when worn.

C² are flanges upon the cross-head C' for retaining the endless belt in proper engagement with the wheels D D' or ratchet-pawls c c', as the case may be, and in the latter case form a stop or abutment for said pawls. In cases where only an intermittent rotation of the belt is required one of the pair of operating-pawls can be dispensed with. The mechanism is rendered inoperative by a pull-cord, e, passing over pulleys e', and connected to the pawls c c', so as to permit of the withdrawal of said pawls from engagement with the endless belt or with the ratchets on the wheels D D', as the case may be.

The description of my improvement thus far given is confined to an endless belt composed of links united together to form a chain-belt, such being my preferred construction, as

it is deemed the cheapest and most efficient for general uses; yet I do not limit myself to the employment of a chain-belt, as it is evident that with very slight modifications of the ratchet mechanism a plain endless band or cable can be employed instead to attain like results.

My improvement is specially adapted for converting the reciprocating motion of a wind-mill-pitman into rotary motion and transmitting the same to any desired location.

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

1. A mechanism for converting reciprocating into rotary motion, consisting of a reciprocating pitman, C, provided with ratchet mechanism, essentially as herein described, in combination with an endless belt, A, and carrying-drums B B', all essentially as herein described.

2. A mechanism for converting reciprocating into rotary motion, consisting of a reciprocating pitman, C, carrying a cross-head, C',

provided with duplicate pawls *e e'*, in combination with an endless belt, A, and carrying-drums B B', essentially as herein described.

3. A mechanism for converting reciprocating into rotary motion, consisting of a pitman, C, carrying a cross-head, C', that is provided with duplicate pawls *e e'*, wheels D D', and ratchet-wheels *d d'*, in combination with an endless chain, A, and carrying-drums B B', essentially as set forth.

4. In a mechanism for converting reciprocating into rotary motion, essentially as herein described, the cross-head C', provided with flanges C², for the purpose set forth.

5. In a mechanism for converting reciprocating into rotary motion, essentially as herein described, the combination, with the pawls *e e'*, of the pull-cord *e* and pulleys *e'*, essentially as set forth.

In testimony whereof, witness my hand.

TIMOTHY S. PECK.

In presence of—

ROBERT BURNS,
J. BEGG.