(No Model.)

T. C. FLEMING.

DEVICE FOR CONVERTING MOTION.

No. 322,815. Patented July 21, 1885.

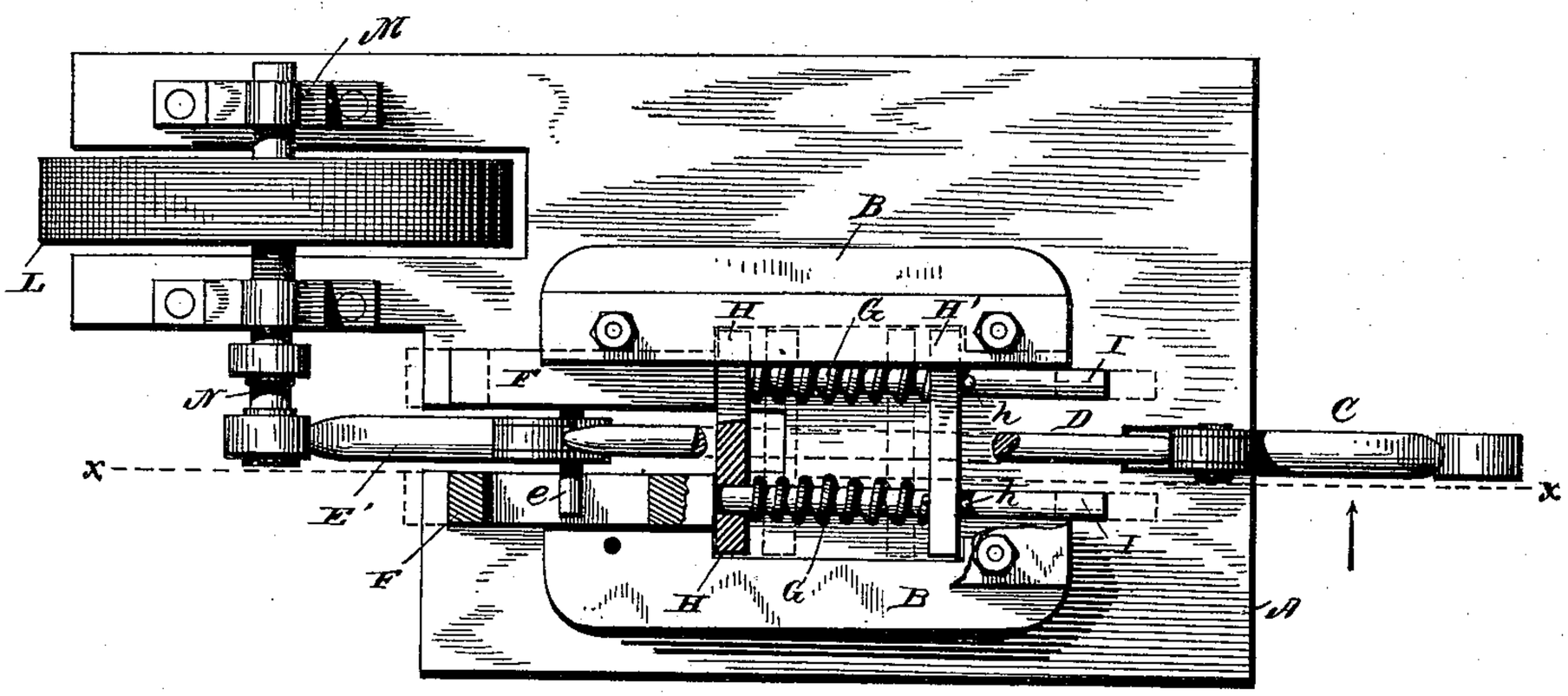

Fig. 1.

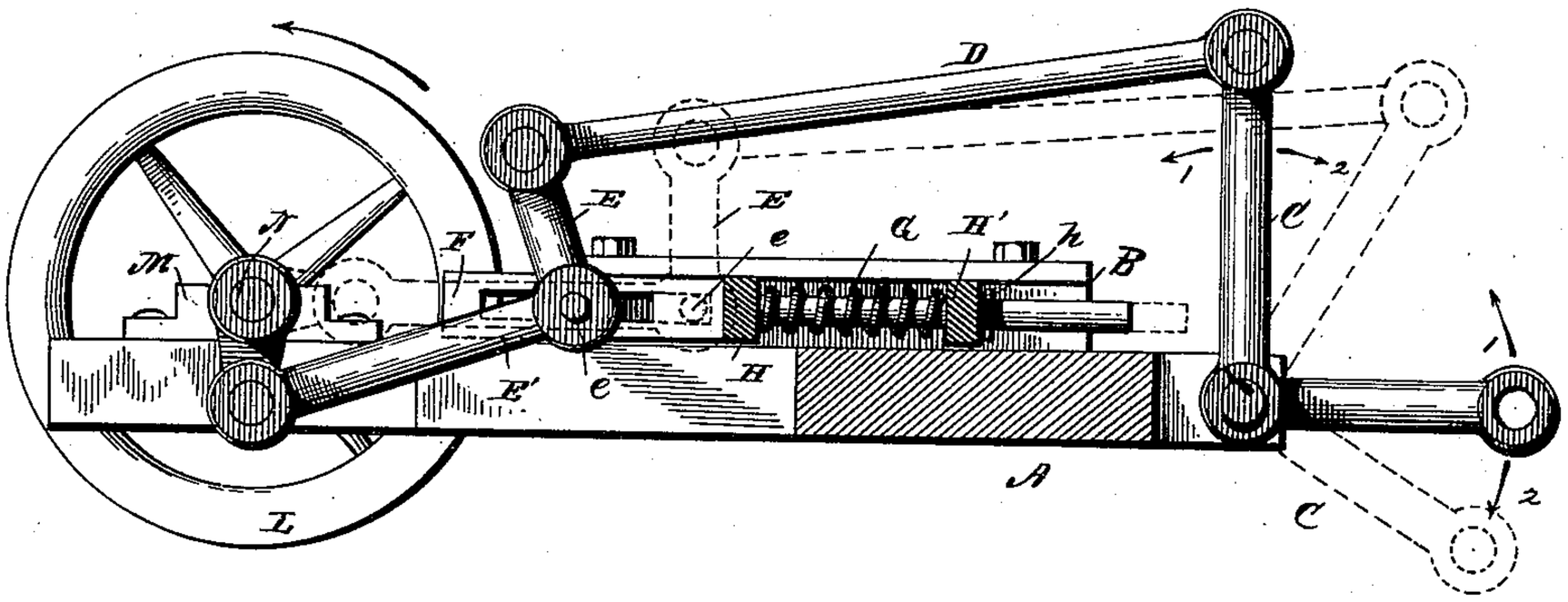

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

THOMAS C. FLEMING, OF AYER, NEBRASKA.

DEVICE FOR CONVERTING MOTION.

SPECIFICATION forming part of Letters Patent No. 322,815, dated July 21, 1885.

Application filed May 1, 1885. (No model.)

To all whom it may concern:

Be it known that I, T. C. FLEMING, a citizen of the United States, residing at Ayer, in the county of Adams and State of Nebraska, have invented certain new and useful Improvements in Devices for Converting Motion, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a device for converting direct into rotary motion; and it consists in certain details of construction and arrangement and operation of the several parts, as will be hereinafter more fully set forth in the specification, and pointed out in the accompanying drawings, in which—

Figure 1 is a plan view of my device, and Fig. 2 a section on the line *x x*, Fig. 1.

In devices of this kind it is requisite that all dead points be overcome; otherwise there is stoppage and loss of power and liability to accidents to the primary motor and to the converting mechanism. Moreover, the converter should be quick to respond to the movement of the power-transmitter, so as to avoid unusual friction. To this end my device consists in a suitable rest or support, A, provided with transverse lateral guides B, forming bearings for the movable guide-heads H H′ of the pitman E and wrist C. The wrist C, suitably journaled in support A, receives the transmitted motion from the primary motor, and is connected by means of the rod or arm D to the pitman E, which in turn is keyed to the shaft N of band-pulley L. This shaft has suitable bearings, M, in the supporting-bed. At the angular point of the pitman a pin, *e*, is inserted, and projects on either side so as to engage with the ends of the slotted draw-head F. Rods I, having coil-springs G, pass into the inner ends of the draw-head F, and pass through the movable guide-heads H H′. Pins *h* in these rods form stops for the movements of the rods.

The operation of the device is as follows: As the wrist-lever C is moved in the direction of arrow 1 it gives movement to the pitman E, (through the intervention of rod D,) and this draws back the pitman until the arm E′ approaches the horizontal, as shown in dotted lines, Fig. 2. As this approach is made, the pin *e* begins to push against head F and move the rods I forward, thus compressing spring G. The instant the movement of the wrist is completed the arm E′ tends to go downward, as shown in full lines, Fig. 2, and this action is accelerated by the reflex action of the springs. Now, when the wrist is moved back in the direction of the arrow 2, (shown in dotted lines, Fig. 2,) then the reverse movement of the heads F and H takes place, and the pin *e* commences to hold back, and the pins *h* on the rods press against the head-bar H′, again compressing the spring, which reacts to bring the head F back. Thus it will be seen that, as the wrist approaches the farthest extremity, the pin in the knee of the pitman begins to hold back, while the upper end of the knee still moves forward until the wrist is driven past the center. Then the return motion of the pitman is free to draw the wrist to the nearest extremity, passing the dead-point in the same manner.

My device is applicable for farmers' use where windmills are at hand for prime motors, and the direct power thus obtained is converted into rotary motion for use in corn-shellers, fan-blowers, feed-cutters, wood-saws, and the various applications for use in this manner.

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

1. In a device for converting direct into rotary motion, the combination, with the vibrating frame, of a wrist-lever which receives movement from the direct power, and the pitman which converts such motion into a rotary movement, substantially as and for the purpose set forth.

2. In a device for converting motion, the combination, with the wrist and pitman, of a vibrating frame reacted upon by compressed springs placed between the heads of the vibrating frame and between the wrist and pitman, substantially as and for the purpose set forth.

3. In a device for converting motion, a vibrating frame consisting of the movable head F, moved by a pin on the pitman, and the

heads H H′, having reacting-springs placed between them, substantially as and for the purpose set forth.

4. In a device for converting motion, the combination, with the wrist and pitman suitably connected, of the vibrating frame and its reacting-springs and band-pulley or suitable device for transmitting the converted motion, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS C. FLEMING.

Witnesses:
A. H. CRAMER,
JNO. J. RAYMALERE.