

(No Model.)

N. D. WELLS.

MECHANISM FOR CONVERTING MOTION.

No. 300,542.

Patented June 17, 1884.

Fig. 2.

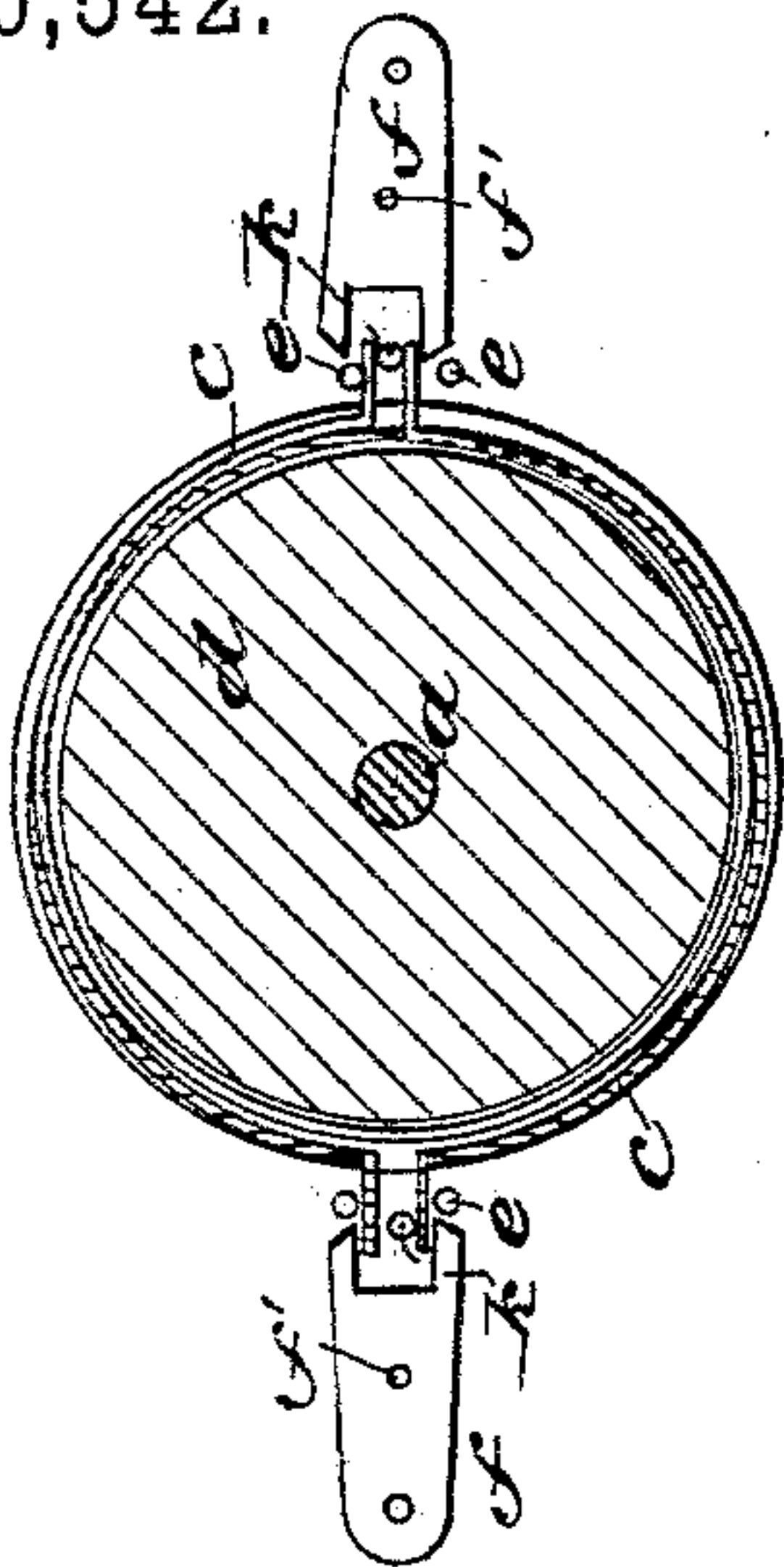


Fig. 3.

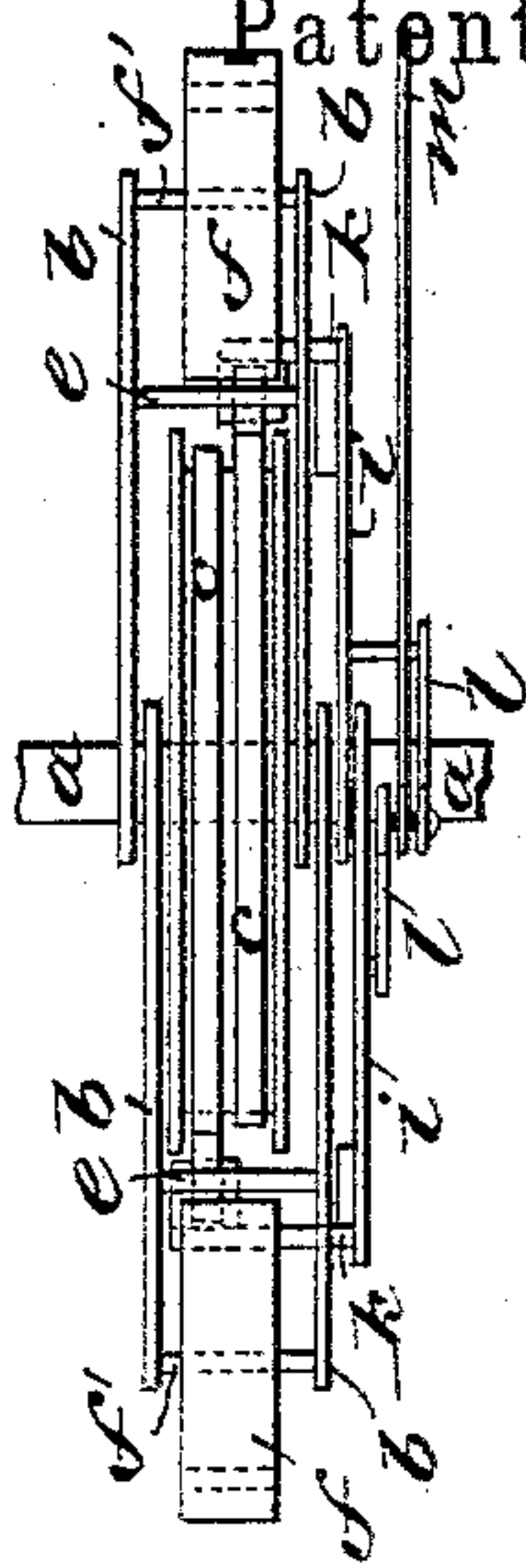
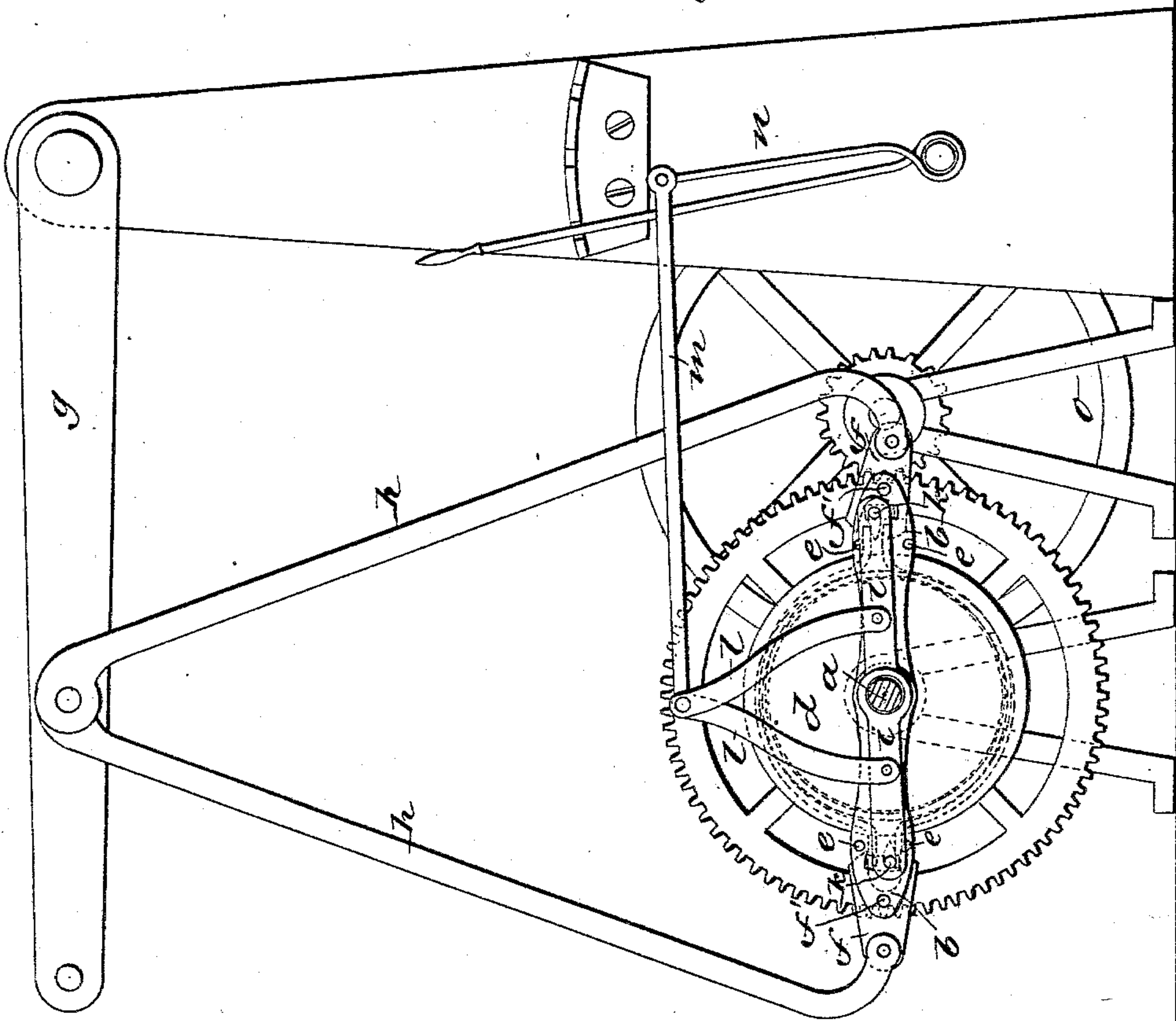


Fig. 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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MECHANISM FOR CONVERTING MOTION.

SPECIFICATION forming part of Letters Patent No. 300,542, dated June 17, 1884.

Application filed May 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, NORMAN D. WELLS, of Hastings, Dakota county, Minnesota, have invented a new and Improved Mechanism for
5 Converting Motion, of which the following is a full, clear, and exact description.

My invention relates to mechanism for converting reciprocating into rotary motion, and is adapted for operating lathes, sewing-machines, velocipedes, or for use wherever available. It consists in a novel construction of operating-pawls, arms, and friction-bands, and also in mechanism for reversing the motion,
10 all as hereinafter described and claimed.

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

Figure 1 is an elevation of my improved
20 mechanism. Fig. 2 is a detail section of the wheel, bands, and pawls; and Fig. 3 is a plan view of the same parts.

The shaft *a* to be rotated carries a wheel, *d*, which has a grooved or double-flanged periphery. *b b* are arms loose upon the shaft, and
25 forked to pass at both sides of the wheel. *c c* are friction-bands around the wheel *d*, having their ends turned outward between cross-pins *c c* on arms *b*, so that the bands are held in place each by one of the arms. *f f* are pawls
30 or dogs pivoted by pins at *f'*, between the forked or outer ends of the arms *b*, and having their inner ends recessed, to receive the ends of bands *c*. *g* is a pivoted beam, to which reciprocating motion is to be applied, and *h h*
35 are rods pivoted to the beam, and connected at their outer ends to the pawls on arms *b*, the arms being at opposite sides of the wheel. It will be seen that by this construction and arrangement the movement of beam *g* causes an
40 up-and-down movement of the arms *b* with the

dogs and the bands *c*, the swing of the dogs being limited by the bands. Now, if the pawls are held from moving on their pivots except in one direction, each will cause one band to
45 clamp when carried in one direction and not in the other. To hold the pawls, I provide arms *i i*, loose on shaft *a*, having pins *k* at their ends, that project through slots in arms *b* into the recessed ends of the pawls and between the bent-out ends of bands *c*, and the
50 arms are connected by links *l l* to a rod, *m*, from a spring-lever, *n*. By moving the lever in the one direction or the other, the arms *i* are swung and pins *k* moved in opposite directions, so that the pawls are free to compress the
55 bands, one pawl acting while the other is held. In this manner continuous rotary motion in one direction is given to wheel *d* and shaft *a*.

A fly-wheel may be used, as shown at *o*, to
60 equalize the movement. The alternate movement may be given to the rods *h* by a beam, a treadle, or by any suitable device, and in cases where motion in one direction only is desired the pins *k* may be fixtures; or equivalent devices may be used to hold the pawls.

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

1. The combination and arrangement, substantially as described, of the operating-rods
7 *h*, pawls *f*, arms *b*, bands *c c*, pins or stops *k*, wheel *d*, and shaft *a*, for operation to give a continuous rotary motion to the shaft, as specified.

2. The combination of lever *n*, rod *m*, links
8 *l*, arms *i*, and pins *k* with the pawl-arms *b*, pawls *f*, bands *c*, and wheel *d*, substantially as and for the purpose specified.

NORMAN D. WELLS.

Witnesses:

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JOHN P. MASKREY.