E. Matteson,

Converting Motion.

Nº 29,802. Patented Aug. 28, 1860.

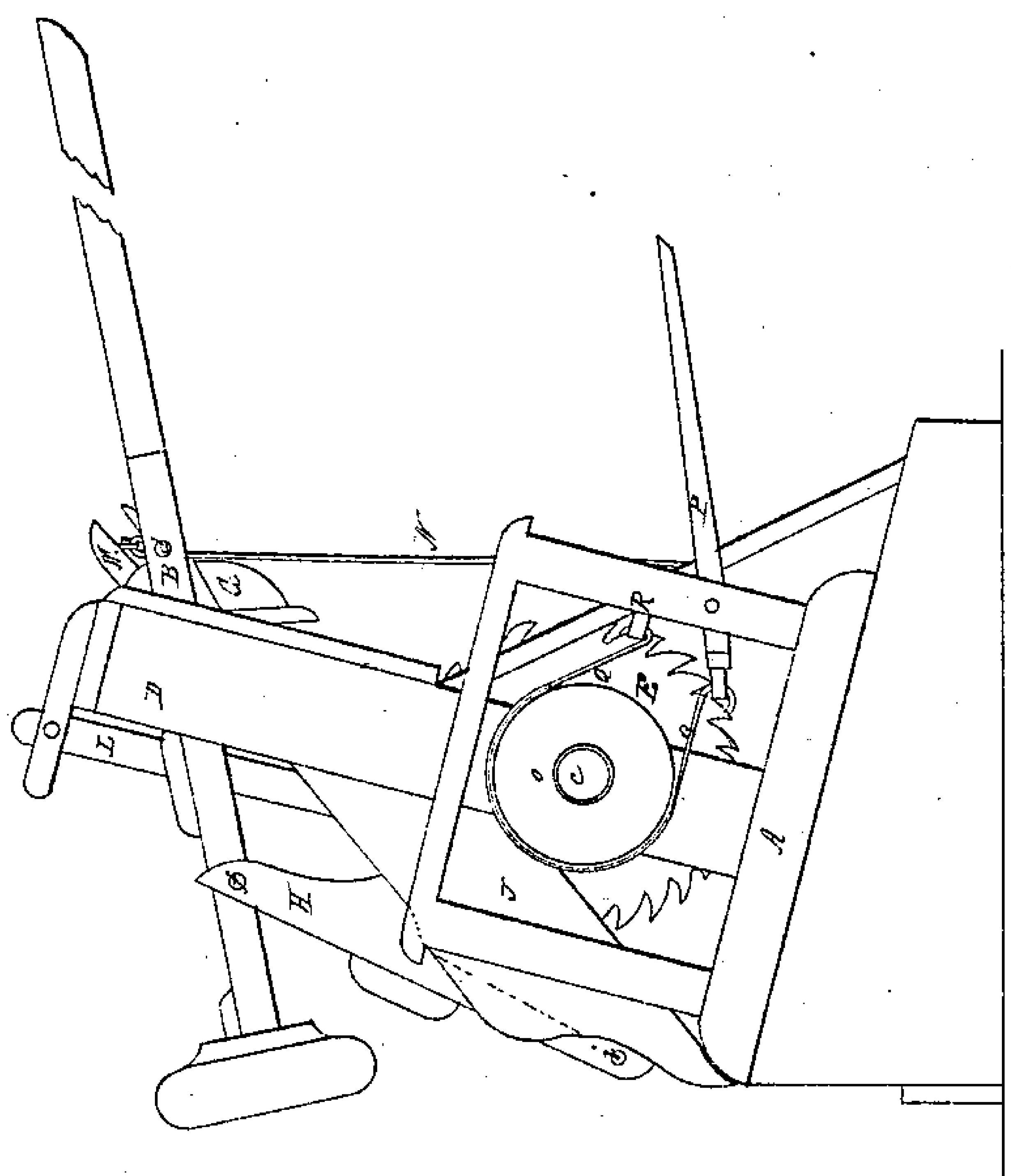

Fig. 2.

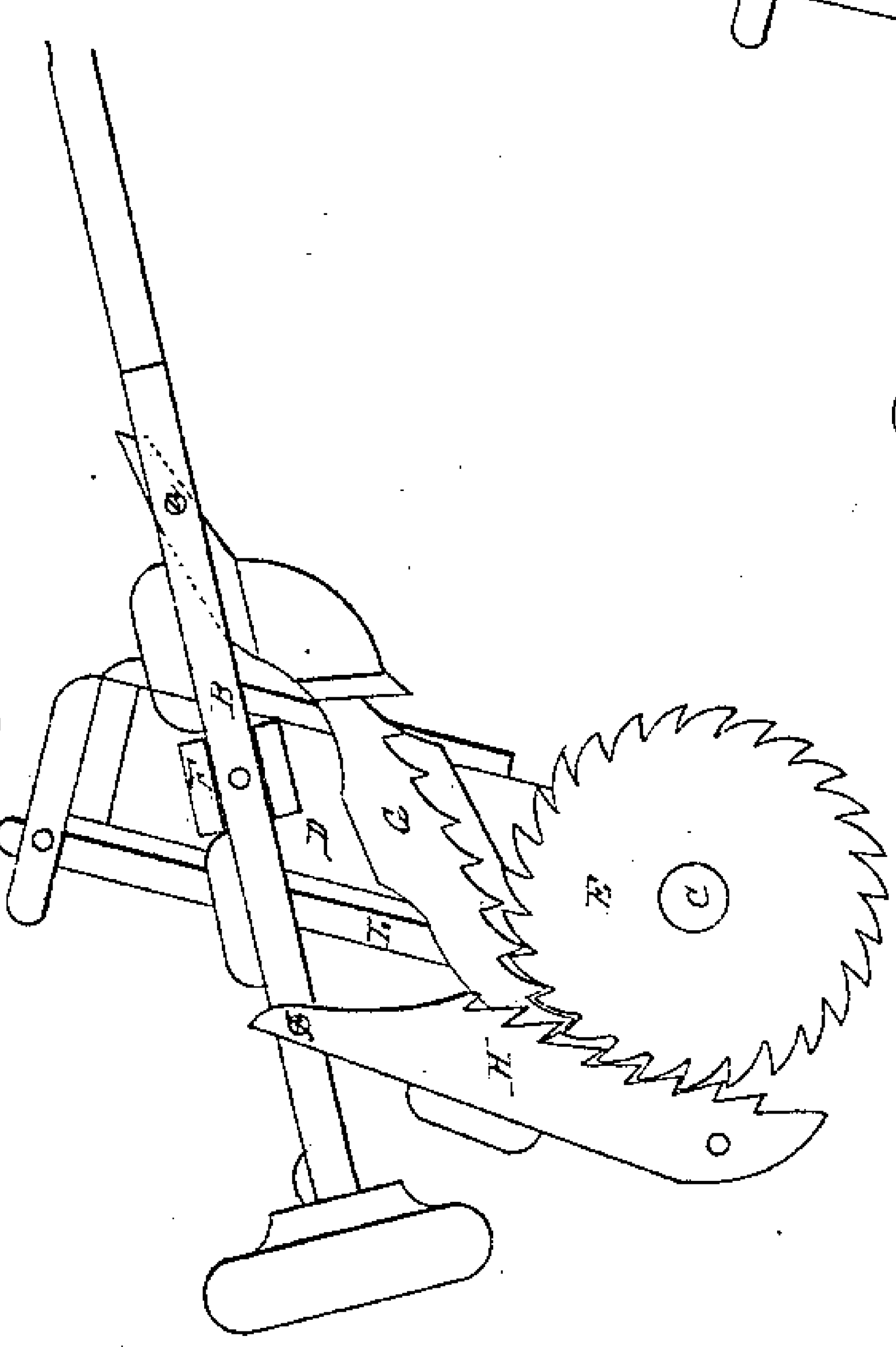

Fig. 3.

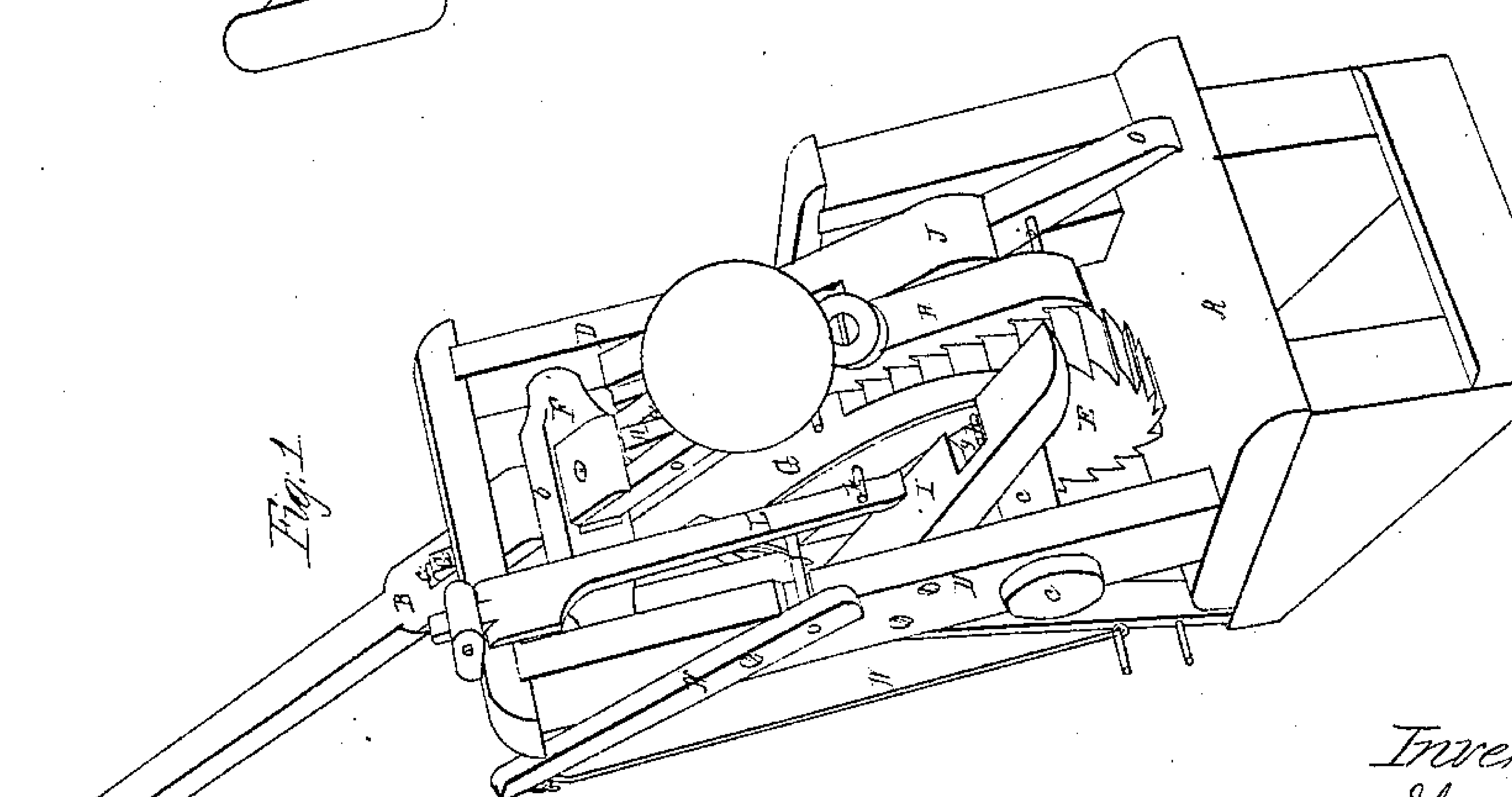

Fig. 1.

Witnesses;
J. Henry Huntington
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Inventor:
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UNITED STATES PATENT OFFICE.

ELISHA MATTESON, OF BROOKLYN, NEW YORK.

CONVERTING RECIPROCATING INTO ROTARY MOTION.

Specification of Letters Patent No. 29,802, dated August 28, 1860.

To all whom it may concern:

Be it known that I, ELISHA MATTESON, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use a new and Improved Mode of Producing Rotary by Reciprocating Motion; and I do declare the following to be a full, clear, and correct description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure I is a front edge perspective view of my improved machine, for producing rotary by reciprocating motion; Fig. II, a side elevation of the same showing the friction wheel and the brake or stop; Fig. III, a cut sectional view, showing the lever, ratchets and ratchet wheel.

Similar parts of the invention are designated by like letters of reference in the drawings.

The nature of the invention made by me, consists in the construction and operation of a machine for producing rotary by reciprocating motion, as hereinafter described.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the frame for supporting the working parts of the machine and B is a lever by which the same are operated.

C is a shaft running entirely across the machine and inserted in the side pieces D, D, and held in position by the nuts *a*, *a*, but so arranged as to revolve readily. On this shaft C, at its center I place the ratchet wheel E.

F shows a slotted cross-piece inserted in openings in the side pieces D, D, and into which the lever B is inserted and held firmly, by means of a pin *b* passing through the same.

G represents a ratchet, inserted in a slot *c*, in the back portion of the lever B, and held firmly in position by means of the pin *d*, passed through the same, and hung in such a manner that when the lever B is depressed, the ratchet G, shall drop into the teeth upon the ratchet wheel E and operate the same.

H is a ratchet, inserted in a slot *e*, in the front portion of the lever B, held firmly in position by the pin *f*, passing through the same, and hung in such a manner that as the lever B, ascends after being depressed, the ratchet H drops into the teeth upon the ratchet wheel E and operates the same.

I and J are cam guides, attached to the side pieces D, D, in any convenient manner, intended to guide and govern the operation of the ratchets G and H. This is effected by providing the cam-guide I with a slot *g*, into which the pin *h*, attached to ratchet G drops. The ratchet H is also provided with a pin *i*. Both pins *h* and *i* pass freely over the cam-guides I and J, and while passing from the upper to the under sides of the same, the ratchets are depressed and operate the ratchet wheel E.

L is a pawl, attached to the upper portion of frame A and resting between the pin *j*, attached to lever M and the pin *k* on ratchet G. This lever M is provided at its end with the rod N, which being depressed, operates the lever M and detaches by means of pins *j* and *k* the ratchets from contact with the ratchet wheel.

O shows a friction wheel placed on the shaft C, and P shows a handle operating in connection with friction wheel O and spring Q, passing over said wheel O, and one end of which is secured at that portion of the frame A, marked R, and the other end to handle P, to form a brake or check, to stop the ratchet wheel E, when desired and hold it in any required position. By this means I produce a continuous rotary motion and my improvement is applicable to many purposes among which I might mention pumping, hoisting, and for such other purposes as it may be made applicable as an assistant for hydraulic or motive power.

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

1. The reciprocating ratchets G and H in combination with the ratchet wheel E, when the same shall be arranged in conjunction with and operated by the lever B and cam guides I and J or by means substantially the same and for the purpose specified.

2. In combination with the same the lever M pawl L, rod N and pins *j* and *k*, for the purpose set forth.

3. In combination with the ratchets G and H and ratchet wheel E, the friction wheel O, handle P, and spring Q, arranged and operated for the purpose described.

ELISHA MATTESON.

In presence of—
GEO. HENDRICKSON,
A. SIDNEY DOANE.