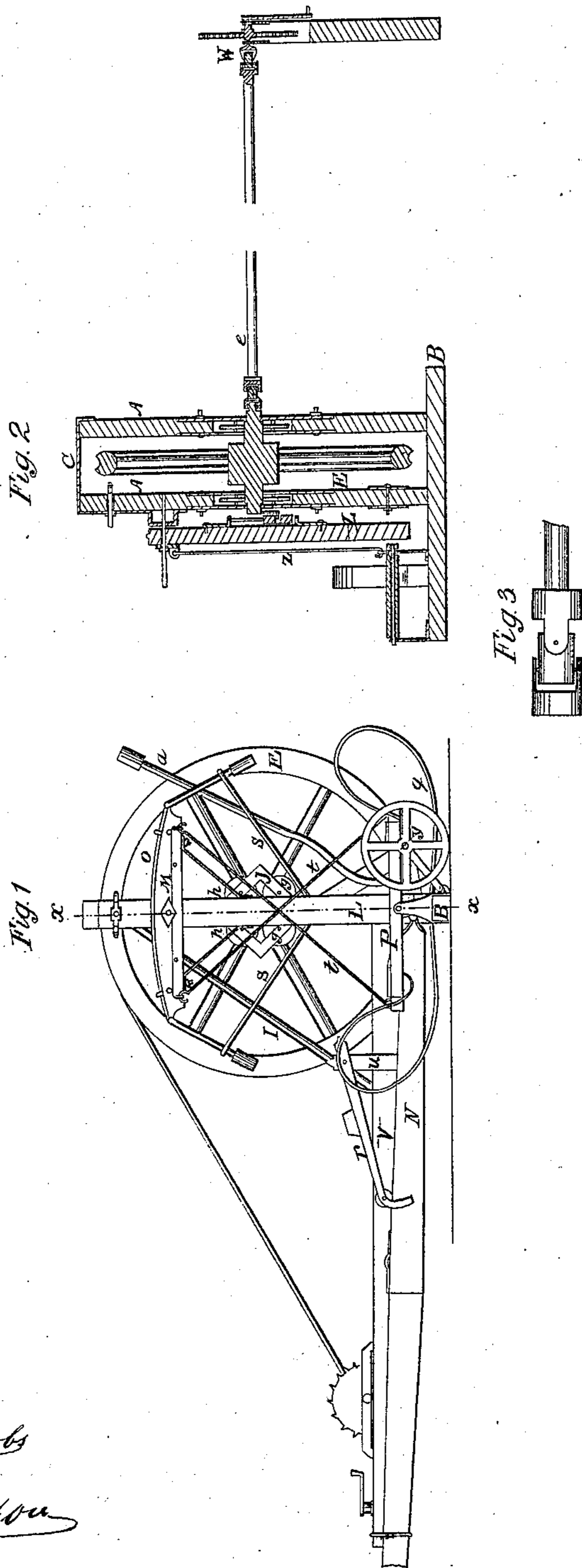


L. F. Heath,

Drag Sarr.

N^o 55,099.

Patented May 29, 1866.



Witnesses
John P. Jacobs
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UNITED STATES PATENT OFFICE.

LUMAN F. HEATH, OF LANSING, MICHIGAN.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 55,099, dated May 29, 1866.

To all whom it may concern:

Be it known that I, L. F. HEATH, of the town of Lansing, in the State of Michigan, have invented certain new and useful Improvements in Sawing-Machines; and I hereby declare that the following is a true, full, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the use of certain mechanical devices for operating crosscut and circular saws.

Figure 1 in the annexed drawings represents a longitudinal vertical section of my machine. Fig. 2 is a vertical cross-section of the same in the dotted line *xx*. Fig. 3 is a plan view of the knuckle or double joint connecting the pitman of the circular saw with the shaft of the balance-wheel.

The frame of my machine consists of the two uprights A, the sill B, and the cap-piece C. The uprights are made of two sections connected together in the manner hereinafter described. The lower sections of uprights A are mortised into the ground-sill B, and the upper sections are bound together by the cap-piece C.

E designates the balance-wheel, and F the shaft on which it is hung. The balance-wheel works between the two uprights A, and the shaft penetrates the uprights, but has its bearings on the friction-rollers *g g*, and is kept in position at the crank end of said shaft by friction-rollers *h h*. These rollers are pivoted in the rectangular metal plates J, which are bolted to the lower and upper sections of uprights A. To the crank on the end of the shaft *e* is attached by means of the knuckle, as shown in Fig. 3. The shaft *e* operates the circular saw.

M represents a cross-bar attached at its center to the lever-beam L, which is hinged at the bottom to the pitman N. The cross-bar M is made a little convex at top and has a groove cut in it to receive the iron rod *o*, which is bent downward at its ends. The object of rod *o* is to operate the lever-beam L. The beam L is firmly fastened at top to one of the uprights A, and consequently are both moved by the action of the same rod.

s designates a metal rod with loops at each

end, and through these loops rod *o* passes, and is thereby kept in position. The rod *o* is fastened at its center to the lever-beam L.

P is a platform having a rod, *t*, fastened to each end. The rods midway of their length cross each other and are attached at their upper ends to the cross-beam M. The object of this platform is to assist the rod *o* in raising the pitman N in position, which is done by the weight of the operator being placed on it. The curved spring *q* conduces to the same purpose.

r represents the pitman-guide, and consists of a bar pivoted to the upright *u*, which is fastened to beam V. The lower end of bar *r* is furnished with a curved metal fork, between the tines of which a friction-roller is pivoted, the bottom of the roller resting on the upper surface of the pitman N.

One of the uprights A is pivoted at bottom to the end of beam V. Near the outer end of V is placed a circular saw, which is operated by a band passing over the balance-wheel. Another circular saw, W, can be operated by the crank on the shaft of the balance-wheel. The beam V is kept in position by a rod, I, the lower end of which is hinged to beam V, and the upper end being made to fit in an eye on the inside of the upright A.

Immediately behind the sill B is placed the axle Y, which is secured to the sill B by two staples, and allowed to play freely in the staples. The axle Y is furnished with two wheels, intended to transport the machine to any desirable point when the frame of the machine is raised from the ground by the action of lever *a*.

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

1. The spring *q*, constructed and operating in the manner and for the purpose herein set forth.

2. The combination of the spring *q*, the platform P, the rods *t*, and cross-bar M, the four operating a saw in the manner herein described.

L. F. HEATH.

Witnesses:

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