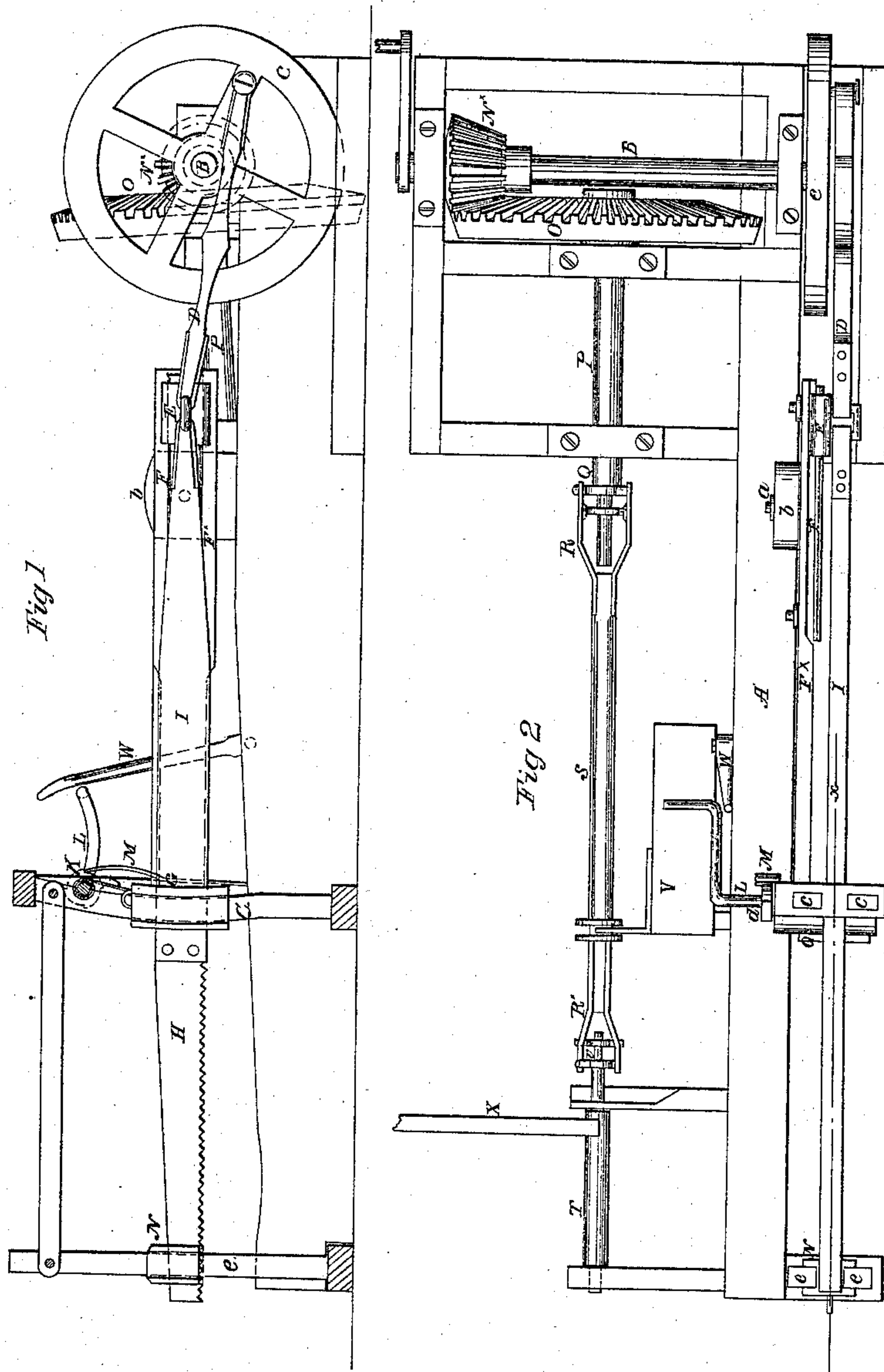


W. M. Salmon,

Drag Saw.

N<sup>o</sup> 43,431.

Patented July 5, 1864.



Witnesses:

J. W. Coombs  
G. W. Reed

Inventor.

W. M. Salmon  
per Wm. L. Allen

# UNITED STATES PATENT OFFICE.

W. M. SALMON, OF EDWARDSBURG, MICHIGAN.

## IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 43,431, dated July 5, 1864.

*To all whom it may concern:*

Be it known that I, W. M. SALMON, of Edwardsburg, in the county of Cass and State of Michigan, have invented a new and Improved Sawing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable any person skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention partly in section, as indicated by the line *xx*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved machine for sawing logs into blocks of any suitable lengths for fuel and other purposes.

The invention consists in a novel and improved arrangement for operating or driving the saw, and also in an improved feed mechanism for feeding the log underneath the saw, as hereinafter set forth, whereby a very simple and efficient machine is obtained for the purpose specified, and one which may be manipulated with great facility or little labor on the part of the attendant.

A represents a framing, which may be constructed in any proper manner, to support the working parts of the machine. B is a driving-shaft placed horizontally in the framing, and having a crank-wheel, C, at one end of it, to which a pitman, D, is attached. The outer end of the pitman D is connected to a slide, E, which is fitted on a guide, F, attached to a bar F<sup>x</sup>, the latter being secured by a pivot-bolt, *a*, to an upright, *b*, on the framing A. The pivot-bolt *a* is near the inner end of the bar F, and to the outer end of the latter there is attached a head, G, which is fitted between upright curved guides *c c*, the latter being curved so as to form parts of circles of which the pivot-bolt *a* is the center.

H is the saw, attached to one end of a bar, I, which passes loosely through the head G, and is connected at its opposite end to the slide E. The head G is connected by a strap, J, to a shaft, K, placed in the upper parts of the guides *c c*, and having a ratchet, *d*, at one end of it and a crank, L.

M is a pawl attached to one of the guides *c*, to engage with the ratchet *d*.

N is a block through which the saw H works, said block being fitted between vertical guides *e e*.

On the driving shaft B there is keyed a bevel-pinion, N<sup>x</sup>, which gears into a bevel-wheel, O, on a shaft, P, placed longitudinally in the framing A, and having a cross head, Q, on its outer end.

R is a yoke which slides loosely on the outer end of the shaft P, and is permanently attached to one end of a shaft, S, which is in line with the shaft P. The opposite end of the shaft S is provided with a yoke, R<sup>x</sup>, which is fitted loosely on a shaft, T, and engages with a cross-head, U, thereon. The shaft S is connected to a slide, V, which is operated by a lever, W, attached to the framing A. The shaft T has a chain, X, connected to it, and this chain is attached to the log to be sawed, which has a transverse position underneath the saw H.

From the above description it will be seen that when the shaft B is rotated a reciprocating motion will be imparted to the saw H, and the latter allowed to feed itself to its work by its own gravity, and it will further be seen that the saw will work perfectly free, owing to the arrangement of the pivoted bar F<sup>x</sup>, sliding bar I, and head G. The saw H may be elevated from the log at any time by turning the shaft K, and held in an elevated position by means of the pawl M and ratchet *d*. The shaft P always rotates with the driving-shaft B; but the shaft S is only rotated when its yoke R is brought in contact with the cross-head Q on shaft P, which is done by sliding shaft S through the medium of lever W. When the shaft S is rotated, motion is communicated to the shaft T, as T and S are always connected, the cross-head U never being free from the yoke R<sup>x</sup>.

In order to feed the log along underneath the saw, the operator or attendant by actuating the lever W slides the shaft S, and throws the yoke R, in connection with the cross-head Q, on shaft P, and motion is thereby communicated to shaft T, and the log moved along the desired distance under the saw, the latter having been previously elevated. When the log has been moved the requisite distance, the



yoke R is thrown out of gear with the cross-head Q, and the pawl M released or thrown out from the ratchet d, so that the saw may drop and rest upon the log.

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

The sawing-machine above described, con-

sisting of the pitman D, slide E, pivoted bar F, connecting-bar I, head G, saw H, and feeding apparatus P T S R Q V, all arranged and operating substantially as specified.

WM. M. SALMON.

Witnesses:

H. H. HEWITT,  
DETHIC HEWITT.