

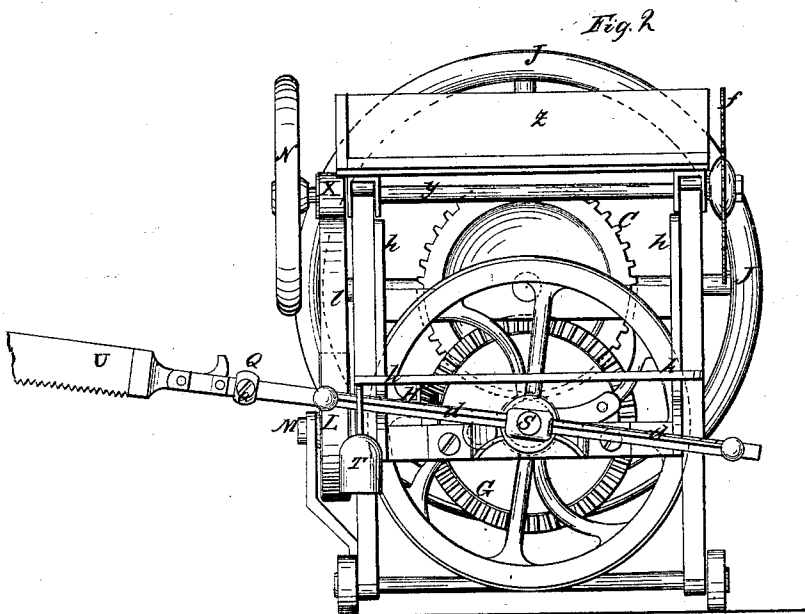
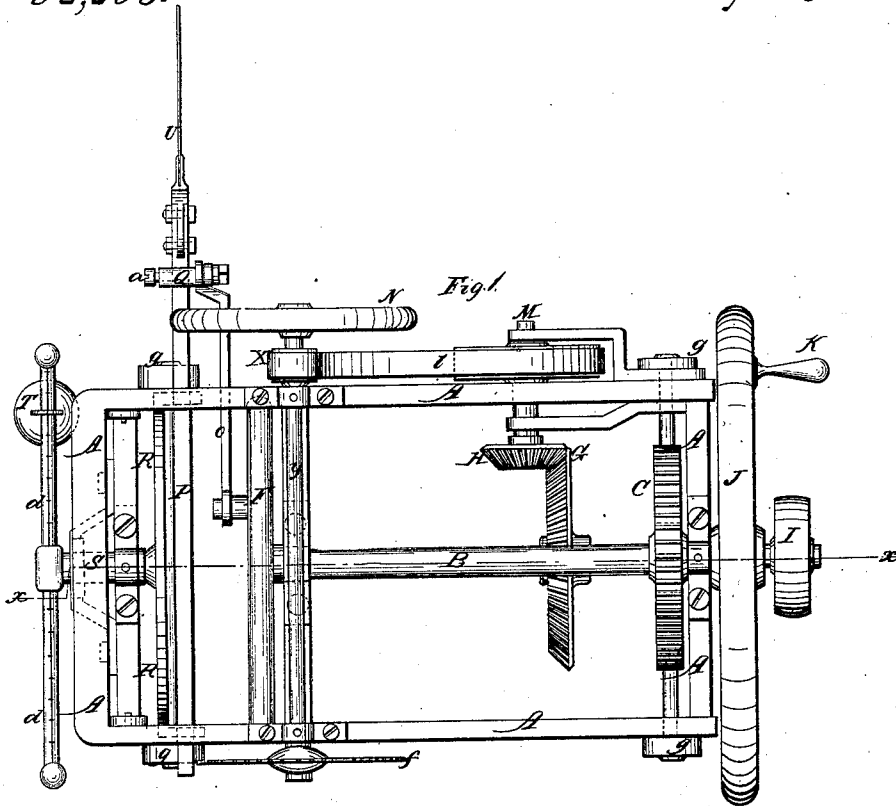
2 Sheets, Sheet 1.

S. Varion,

Drag Saw.

N^o 82,265.

Patented Sep 15, 1868.



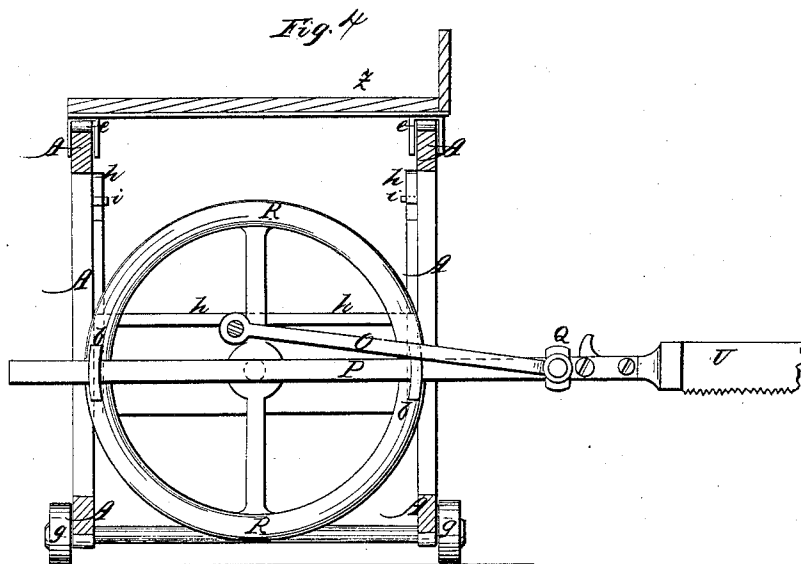
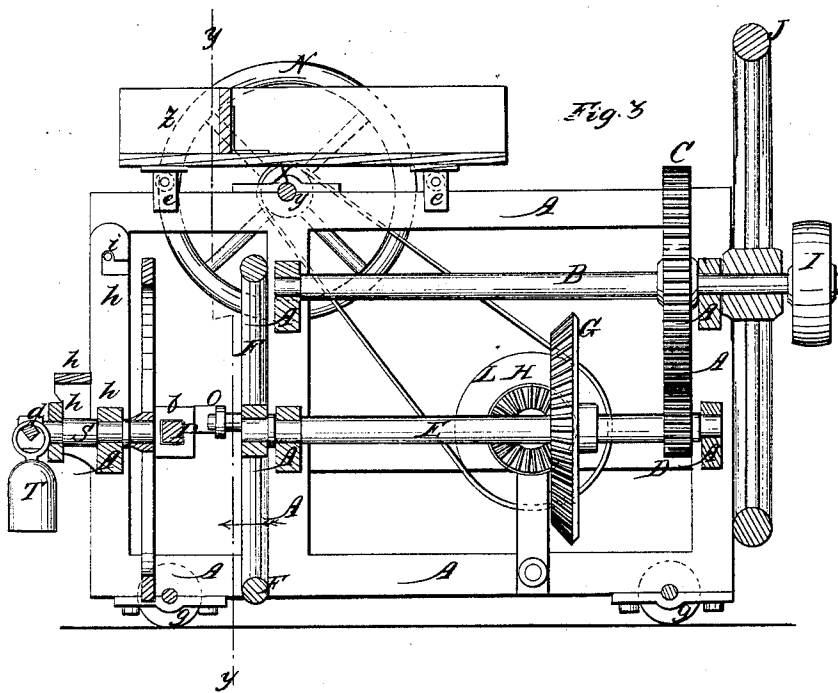
Witnesses.
H. A. Wagner
G. L. Collier

Inventor
S. Varion
per M. W. Co.
attys

S. Varion,
Drag Saw.

N^o 82,265.

Patented Sep. 15, 1868.



Witnesses.
Jm. A. Wigan
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O. H. Morse
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United States Patent Office.

OSCAR C. MOORE, OF CORUNNA, MICHIGAN, ADMINISTRATOR OF THE
ESTATE OF SAMUEL YARION, DECEASED.

Letters Patent No. 82,265, dated September 15, 1868.

IMPROVEMENT IN SAWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that SAMUEL YARION, deceased, late of Corunna, in the county of Shiawassee, and State of Michigan, did, during his life time, invent a certain new and improved Combined Circular and Drag-Saw Machine; and I, OSCAR C. MOORE, of said Corunna, administrator of the estate of said SAMUEL YARION, do hereby declare that the following is a full, clear, and exact description of said invention, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of the machine.

Figure 2 is an end view of the same.

Figure 3 is a transverse section through the line *x x*, fig. 1.

Figure 4 is a cross-section through the line *y y*, fig. 3.

Similar letters of reference indicate corresponding parts.

This invention refers to a machine designed more particularly for felling trees and cutting the same up into dimensions suitable for portability or for consumption as fuel.

It consists of the mechanism to be hereinafter described, by reference to the drawings, in which—

A is the general frame of the machine.

B is a shaft, bearing a cog-wheel, C, which engages with a pinion, D, on the lower shaft E.

This latter shaft operates the saws by means of the balance-wheel F and bevel-gear G H, as will be more fully described, the shaft B and its wheel C being for the purpose of multiplying the speed of the saws.

These shafts have bearings in the frame, substantially as shown.

On one end of the shaft E is mounted a fly-wheel, F, to which is pivoted the pitman O, connecting with the saw-staff P by a collar, Q, which fits on the said staff, and is held from slipping therefrom by a set-screw, a.

The saw-staff P works with easy contact in guides *b*, affixed to or forming part of a wheel, R, whereby the saw is permitted a vibrating motion, suitable for the action of the saw at any desired or required angle.

This wheel is mounted on a short shaft, S, which latter has bearings in the frame A, as shown.

As the wheel R is simply for the purpose of furnishing the guides *b*, it may, in practice, be substituted for a bar mounted on the shaft S, and provided with the guides *b*.

At the outer end of the shaft S is the notched bar *d*, bearing a movable weight, T, for the purpose of causing the drag-saw U to bear down upon the wood being sawed with more or less pressure, according as the weight T is set to or from the shaft S.

The saw-staff should be square, as shown, or of some uniform section, so that it can slide freely within the guides *b*, or be drawn from them and entered in the same guides in the opposite direction, if desired, so that the saw U can be operated on either side of the machine, or so that the saw can be held horizontally for felling trees, and afterward held vertically in cutting the same into suitable lengths, which can be accomplished by the means above described, for the saw-staff being a rod having uniform sides, and the guides *b* having their inner faces corresponding thereto, the saw-staff can be so entered in the guides that the saw shall be held and operated to fell trees or cut them into lengths, as circumstances require.

The circular saw S is for the purpose of cutting up the branches and smaller parts of the tree, and is driven by a belt, *l*, from the pulley L, mounted on the shaft M of the bevel-wheel H, as shown, a small pulley, X, on the saw-shaft Y, serving, with the belt, to transmit motion to the circular saw.

N is a fly-wheel on the saw-shaft Y, for the common purpose of fly-wheels.

J is a large fly-wheel on the shaft B, and the pulley I on the same shaft is for the application of the power. A handle, K, is, however, affixed to the fly-wheel J, for the purpose of operating the machine by hand, if it is desired.

When the machine is being used to cut up trees, a movable box, Z, travels on the top of the frame A, by means of rollers, *e*. This box is for the purpose of conveying the branches and smaller limbs up to the saw *f*.

The whole machine is mounted upon wheels or trucks, *g*, for the purpose of conveying the machine to different positions, as the operation of felling the tree progresses, or moving it to different positions in cutting up the fallen tree.

When the saw *U* is being used for felling a tree, the weight *T* is placed on the opposite side of the shaft *S*, for the purpose of balancing the saw, so that it shall not bear with its side upon the stump, and thereby cause friction.

A step, *h*, slotted to hook on to pins *i* in the frame, is for the purpose of holding the attendant when feeding the circular saw.

This machine is simple in its construction, and not liable to get out of repair.

I claim as new, and desire to secure by Letters Patent—

The guides *b*, affixed to or forming part of a wheel, *R*, or its equivalent, in combination with a saw-shaft, *P*, operating substantially as described, for the purpose specified.

OSCAR C. MOORE,

Administrator of the Estate of Samuel Yaron deceased.

Witnesses:

S. R. KELSEY,

JOHN N. INGERSOLL.