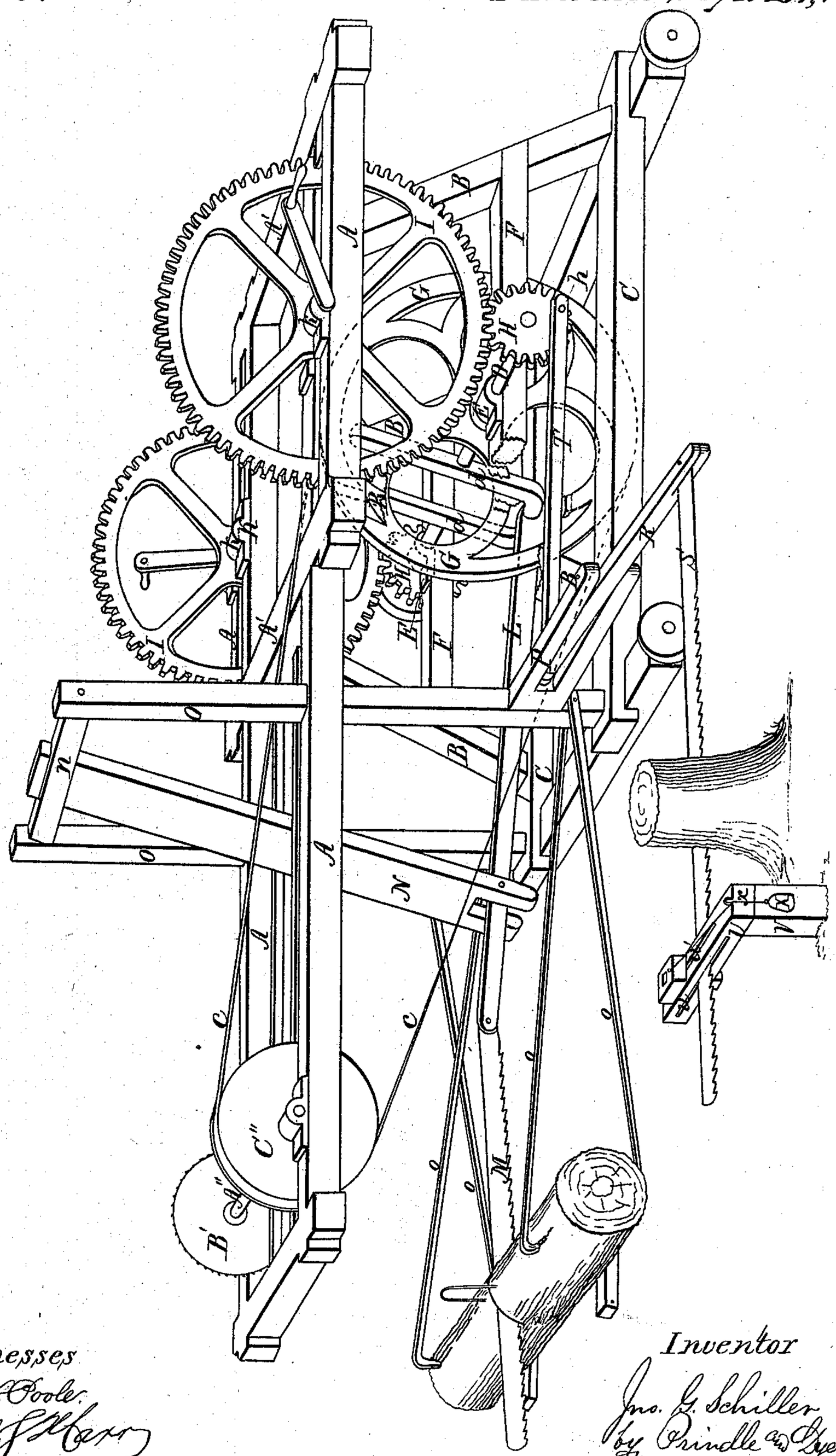
J. G. Schiller.

Sawing Mach.

No. 95,148. Patented Sept. 21, 1869.



Witnesses
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JOHN G. SCHILLER, OF NEW MIDDLETOWN, OHIO.

Letters Patent No. 95,148, *dated September* 21, 1869.

IMPROVEMENT IN SAWING-MACHINE.

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

To all whom it may concern:

Be it known that I, JOHN G. SCHILLER, of New Middletown, in the county of Mahoning, and State of Ohio, have invented a new and useful Combined Felling, Cross-Cutting, and Ripping-Machine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which is shown a perspective view of my improved device.

My invention has for its object the production of a combined machine, capable of performing the heretofore separate operations of felling, cross-cutting, and ripping trees; and to this end,

It consists in the peculiar construction and arrangement of the several parts, by means of which, when combined, a device is produced which, while capable of performing all of the before-mentioned offices, shall cost but little more than though adapted to perform but one of them.

In the annexed drawing—

A and A represent four pieces of timber, placed horizontally and parallel with each other, and secured together by means of the cross-strips A′ and A′, near the centre and at the ends of said pieces.

Extending downward, and to the front or rear, are four supporting-braces, B, having their upper ends mortised within the centre strips A, and their lower ends similarly secured within two pieces of timber, C and C, the whole forming the frame or support for the working-parts of the machine.

D represents a shaft, provided with a crank, *d*, at its centre, and suitably journalled within boxes E and E, secured upon horizontal strips F F, extending across from one brace B to the other.

A fly-wheel, G, is secured upon said shaft, near the crank, and a pinion, H, is keyed upon either end thereof, outside of the journals, which pinions mesh with and receive motion from two gear-wheels, I and I, secured upon a shaft, K, journalled in suitable boxes, *k* and *k*, upon the upper part of the frame.

A pitman, L, is journalled at one end upon the crank *d*, and pivoted at the other end to a cross-cut saw, M, which, when the shaft D is caused to revolve, is given the usual longitudinal reciprocating motion.

The pitman L is pivoted, near its outer end, within the lower end of a supporting-strip, N, having secured to its upper end a cross-bar, *n*, which is, in turn, pivoted at its ends within the uprights O and O. By this arrangement, the pitman is kept in position vertically, while allowed to move longitudinally with perfect freedom.

Four iron bars, *o o*, are pivoted at their inner ends upon the uprights O, and are each provided at their outer ends with a claw, by means of which, when driven into the tree, as shown in the drawing, the latter is firmly held in place while being cross-cut.

Secured to, and projecting outward horizontally from one of the uprights O, is a forked bar, P, having pivoted within its outer end a lever, R, which is, in turn, pivoted at its outer end to one end of the cross-cut saw S, and at its inner end to the pitman T.

The pitman T, being journalled upon a crank-pin, *h*, secured within the face of the pinion H, it will be readily seen that when the shaft D is caused to revolve, a reciprocating motion will be communicated to the saw S.

The face of the saw being in a horizontal position, it is only necessary that it shall be properly supported, and caused to press against a standing tree, when in operation, to enable it to quickly and easily fell or cut down said tree.

To accomplish this object, a guide, U, provided with a vertical and a horizontal longitudinal slot, is secured at one end to a post, V, driven into the ground, near the tree, and furnishes a support for the saw, which passes through the before-mentioned horizontal slot *u*.

A block, W, is placed upon the guide, and is provided with a tongue, which, corresponding in width with the vertical slot *u′*, passes downward through the same, immediately in rear of the saw.

A cord, *x*, is attached to said block, and, passing over the end of the guide, has secured to its outer end a weight, X, which is sufficiently heavy to cause said block to press against the back of the saw with sufficient force to give said saw the necessary cut, which pressure upon said saw is maintained as it advances through the tree.

The inner frame-timbers A extend forward of the frame, as shown, and furnish a support for a shaft, A″, which is suitably journalled thereon.

A circular saw, B′, is placed near one end of said shaft, and a pulley, C″, near the other end, which pulley, being connected with the fly-wheel G, by means of a belt, *c*, receives and communicates motion from said wheel to said shaft and saw, and enables the slitting of trees, which have been felled and cut, into suitable lengths, by the hereinbefore-described devices.

It will be seen that by this construction and arrangement of parts, a compact and convenient portable machine is produced, capable of felling, cutting up, and slitting into boards, trees of ordinary size, by which means great economy is secured in time, and the cost of the lumber correspondingly reduced.

Having thus fully set forth the nature and merits of my improvement,

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

The hereinbefore-described device, when constructed and operated substantially as and for the purpose specified.

JOHN G. SCHILLER.

Witnesses:

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