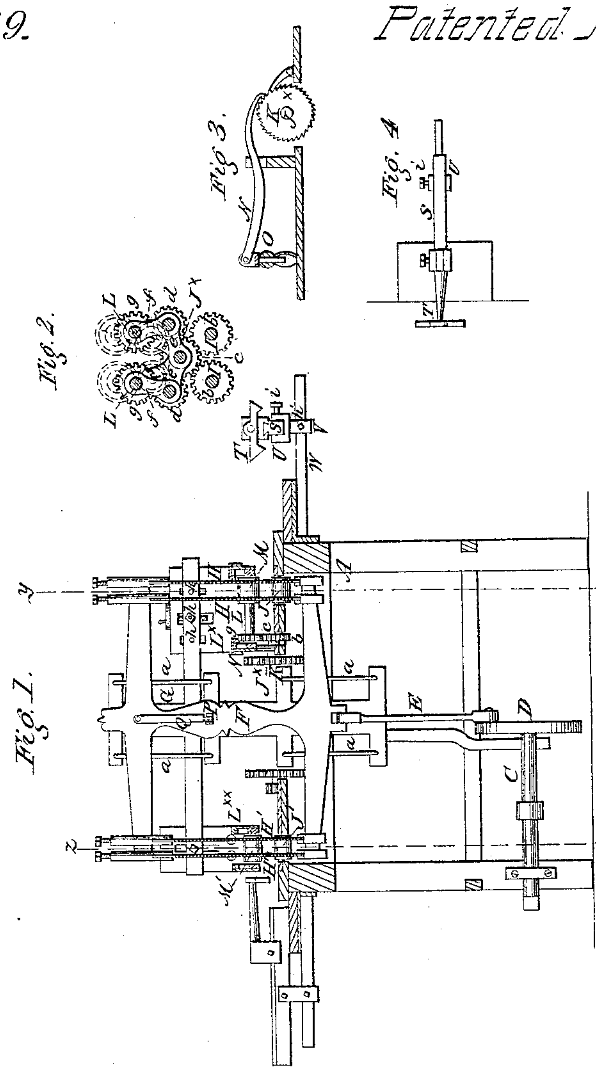
2 Sheets–Sheet 1.

J. A. Geer,

Reciprocating Saw Mill.

No 52,039. Patented Jan. 16, 1866.



Witnesses:

Theo Tusch

Wm Trevin

Inventor:

J. A. Geer

By Munn & Co

2 Sheets—Sheet 2.

J. A. Geer,

Reciprocating Saw Mill.

No. 52,039. Patented Jan. 16, 1866.

Fig. 6.

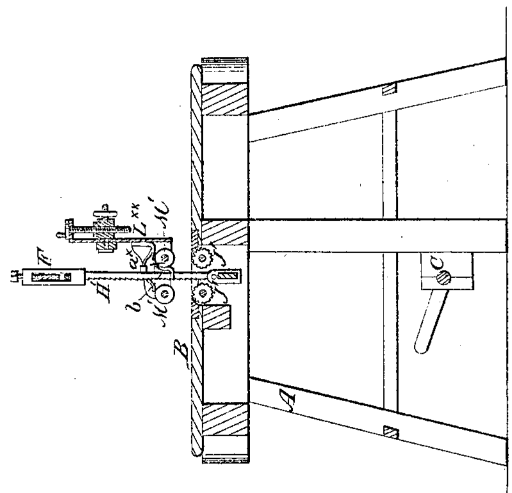
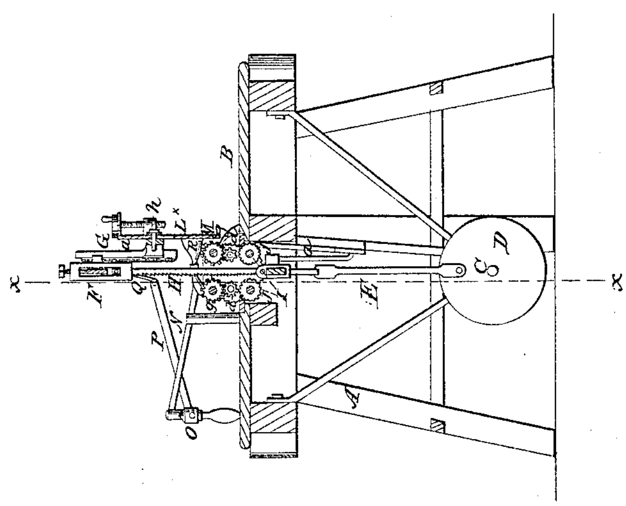


Fig. 5.



Witnesses:

Theo Tusch
Wm Trewin

Inventor:

Jno A Geer
By Munn & Co
Attys

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JOHN A. GEER, OF HADLYME, CONNECTICUT.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **52,039**, dated January 16, 1866; antedated January 10, 1866.

To all whom it may concern:

Be it known that I, JOHN A. GEER, of Hadlyme, in the county of New London and State of Connecticut, 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 others 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, Sheet No. 1, is a vertical section of my invention, taken in the line *x x*, Fig. 5; Figs. 2, 3, and 4, detached views of parts pertaining to the same; Fig. 5, Sheet No. 2, a vertical section of the same, taken in the line *y y*, Fig. 1; Fig. 6, a vertical section of the same, taken in the line *z z*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and improved sawing-machine, designed for sawing curved work, such as fellies for wheels, and other articles which are in the form of portions of circles.

The object of the invention is to obtain a simple device for the purpose specified, and one which will operate with but little friction and will admit of being manipulated or worked by an attendant with the greatest facility.

A represents a framing, on which a horizontal platform or bed, B, is secured, and C is a driving-shaft, placed in the lower part of the framing, and having a crank-wheel, D, on its inner end, to which a pitman, E, is attached, the latter operating a saw sash or gate, F, which works on guides *a*, attached to a suitable support, G. To this saw-sash there are attached two pairs of saws, H H H′ H′, the saws of each pair being at such a distance apart as to saw the stuff of the required width, as shown clearly in Fig. 1.

I I represent two shafts, which are fitted in permanent bearings, and have each a corrugated roller, J, on them, said rollers being parallel with each other and having their upper surfaces projecting a trifle above the surface of the bed B. The shafts I I have toothed wheels *b* on their inner ends, into which a wheel, *c*, gears, the latter being on a shaft, J×, which has a ratchet, K, upon it. The wheel *c* has two wheels, *d d*, gearing into it at opposite sides, and these wheels *d d* have their axes in the outer ends of bars *e e*, the inner ends of which are fitted on the shaft J×. (See Fig. 2.) The axes of the wheels *d d* have bars *f f* fitted on them, through the outer ends of which the journals of shafts L L pass, said shafts having wheels *g g* on them, which gear into the wheels *d d*.

The shafts L L have their bearings in an adjustable frame, L×, which may be adjusted higher or lower by means of set-screws *h*. The shafts L L also have corrugated rollers M on them, which are directly over the rollers J. These rollers M J constitute the feed, and they are operated by means of a pawl, N, which engages with the ratchet K, and it receives its motion from a rock-shaft, O, which is operated from the saw-sash F by means of an arm, P, connected to the saw-sash by an elastic bar, Q.

The arrangement of the gear-wheels *b b c d d g g* admits of the shafts L L rising or falling to conform to the variation of the thickness of the stuff or wood which is between the rollers M J, the bearings of the shafts L having springs R resting or bearing upon them to admit of this vertical movement or yielding of said shaft.

The stuff or wood from which the fellies or curved articles are sawed is clamped to an arm or bar, S, by means of a dog, T. This arm or bar S is fitted in a swivel-socket, U, attached to a slide, V, which is placed on a bar, W, and secured thereon at any desired point by means of a set-screw, *h′*. The bar S may be moved in the socket U, and secured therein at any desired point by a set-screw, *i*.

In consequence of the bar S working or turning from the socket U as a center, it will be seen that the wood may be sawed in the form of a curve, which will be a portion of a circle, of which the socket U is the center, and by shifting the socket U on its bar W the curve may be varied—that is to say, sawed in the form of a portion of a larger or smaller circle, as required.

Both pairs of saws are provided with a precisely similar means for feeding the stuff or wood to them; but the saws H′ H′ are shown as provided with feed-rollers J′, similar to J of the other saws. The upper free rollers, M′,

however, which correspond to the rollers M of the other pair of saws, H, are simply fitted in an adjustable frame, $L^{\times\times}$, corresponding to the frame $L^{\times}$ of the saws H, and have springs $a^{\times}$ resting on their bearings $b^{\times}$; but no gearing is employed to give the rollers M′ a positive motion. This latter plan may be used in certain cases; but the one previously described as used in connection with the saws H H is preferable.

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

1. The combination of the adjustable pivoted arms or bars S, sockets U, slide V, and clamp or dog T, arranged and operating in the manner described, and employed to feed the stuff to the saws H H′ in the arc of a circle, as and for the purpose explained.

2. The arrangement of the arms *e f*, in connection with the gearing *b c d g* and shafts I L, substantially as and for the purposes specified.

JOHN A. GEER.

Witnesses:
ALMON DAY,
ELIJAH DAY.