(No Model.) 3 Sheets—Sheet 1.

J. ALLEN & M. L. JONES.

MACHINE FOR SAWING LOGS.

No. 606,041. Patented June 21, 1898.

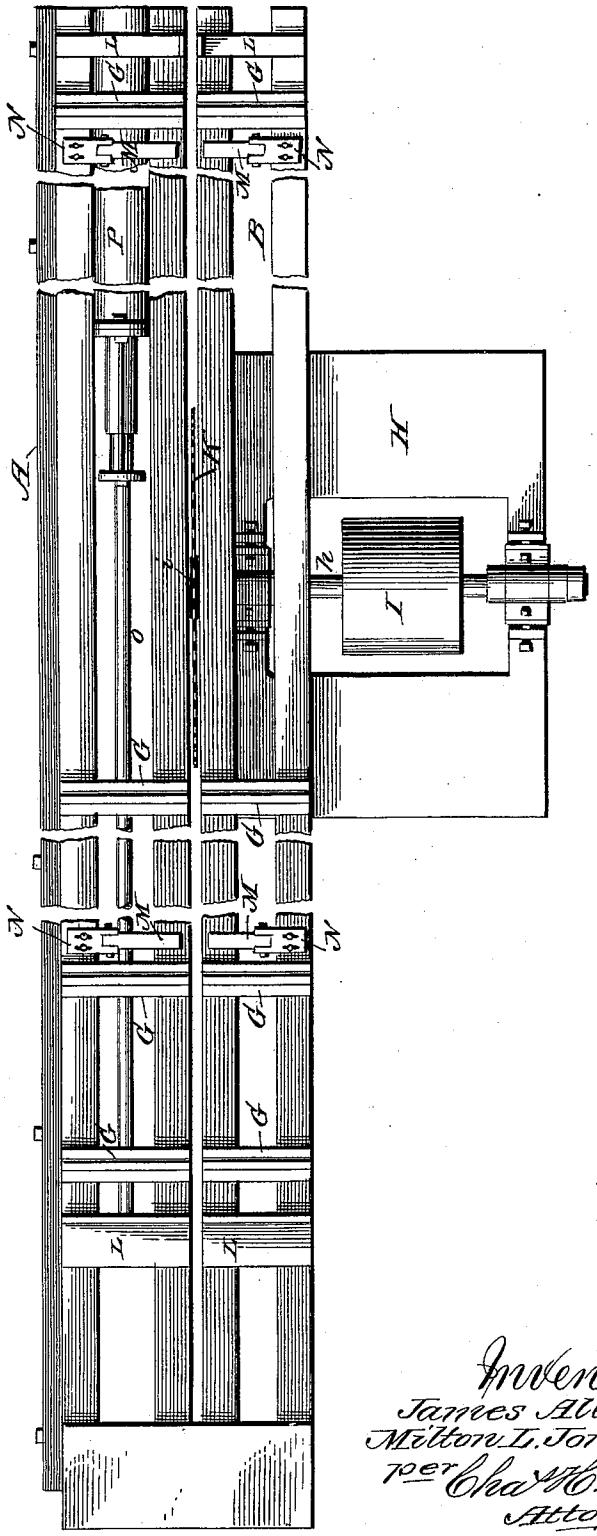


Fig. 1.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

J. ALLEN & M. L. JONES.

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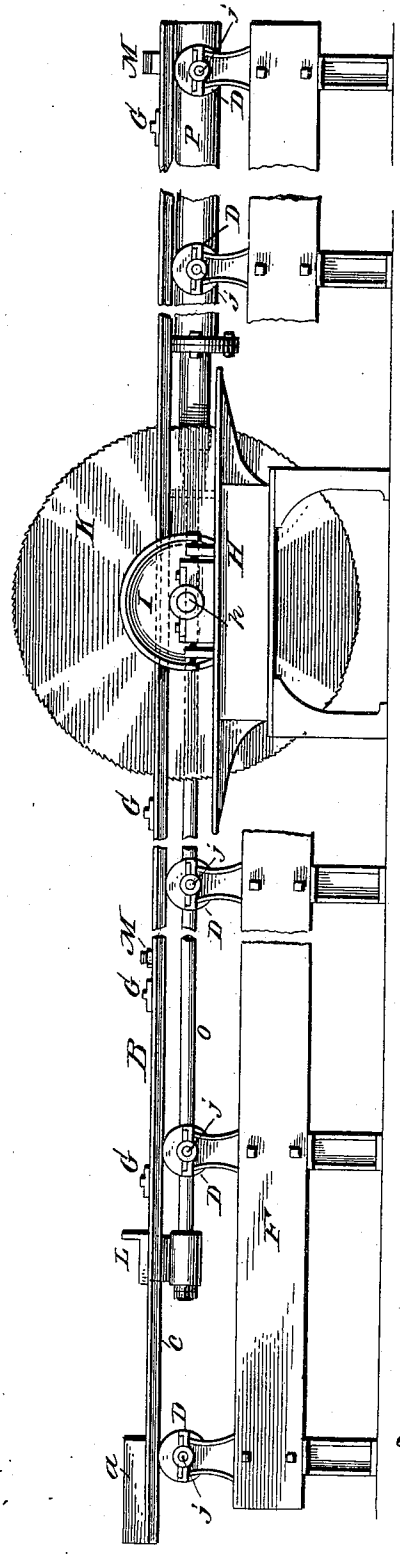


Fig. 2.

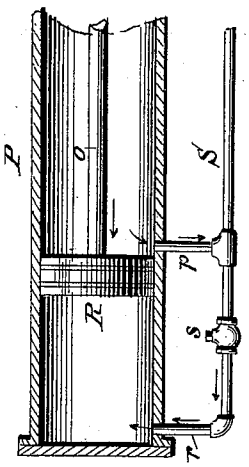


Fig. 7.

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(No Model.) 3 Sheets—Sheet 3.

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Fig. 3.

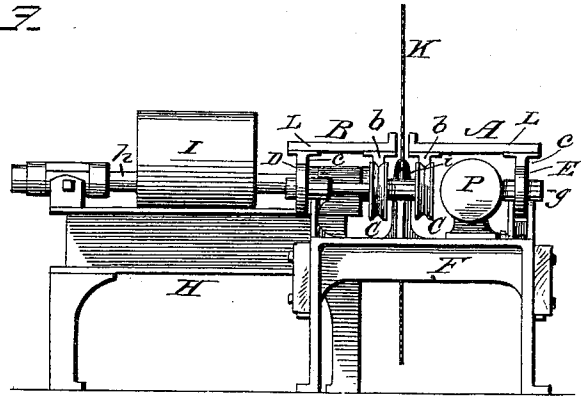


Fig. 4.

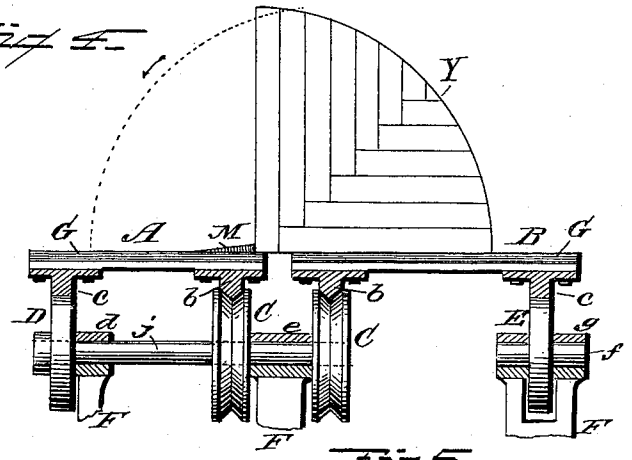


Fig. 5.

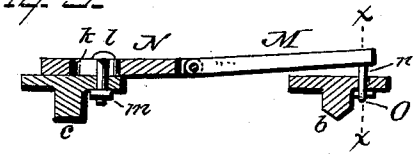
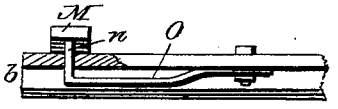


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES ALLEN, OF WILMINGTON, AND MILTON L. JONES, OF TROY, NORTH CAROLINA.

MACHINE FOR SAWING LOGS.

SPECIFICATION forming part of Letters Patent No. 606,041, dated June 21, 1898.

Application filed February 10, 1898. Serial No. 669,869. (No model.)

To all whom it may concern:

Be it known that we, JAMES ALLEN, residing at Wilmington, in the county of New Hanover, and MILTON L. JONES, residing at Troy, in the county of Montgomery, State of North Carolina, citizens of the United States, have invented certain new and useful Improvements in Machines for Sawing Logs; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to that class of sawing-machines designed for cutting logs into rift and quarter-sawed lumber by first quartering the log in an ordinary sawmill, then cutting each quarter into plank by cutting from one flat side of the quarter, and afterward reversing and taking another cut from the opposite side and continuing in this manner until the entire quarter is cut up.

It is the object of the present invention to provide such a machine that will be simple in construction and effective in operation and in which a double table is used for cutting the quarters into rift that accurately gages the cutting and allowing the quarter to be turned from one straight side of the saw to the other.

The invention therefore consists in a machine constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a top plan view of a sawing-machine constructed in accordance with our invention; Fig. 2, a side elevation thereof; Fig. 3, an end view of the machine; Fig. 4, an end view, partly in section, of the tables and rollers, showing one-quarter of the log in position on the tables. Fig. 5 is a side elevation, partly in section, of the automatic stop, showing it connected to the supporting and guide rails; Fig. 6, a sectional view taken on line *x x* of Fig. 5. Fig. 7 is a detail view of the steam cylinder, piston, and pipe connections, the cylinder being shown in section and the direction of the steam being shown by arrows.

In the accompanying drawings, A B represent two parallel tables of any preferred construction and formed of iron and steel to prevent the liability of the tables warping or shrinking, as would be the case were they constructed of wood. These double tables are connected together at one end only by a suitable transverse brace *a* or by any other preferred means, the opposite end of the tables being left open or unattached, so as to admit of the tables being run past the saw, thereby rendering it easy to change saws, an advantage which is considered of material importance in this class of sawing-machines. These tables A B, being connected, move together over a suitable track of any desirable length, said track comprising the guide-rails *b* and the supporting-rails *c*, connected in any suitable manner to the under side of the tables.

The guide-rails *b* are connected to the tables at or near their inner edge, while the rails *c* are connected at or near the outer edge of said tables.

The rails *b* are V shape in cross-section, as shown in Fig. 4 of the drawings, and engage with correspondingly-formed grooves in the guide-rollers C, while the rails *c* have a flat bearing to correspond with the smooth-faced supporting-rollers D E.

A transverse shaft *j* carries the grooved rollers C and smooth-faced roller D, said shaft being supported in suitable bearings *d e*. The smooth-faced roller E engages the rail *c* at or near the outer edge of the table B, said roller having a short shaft *f*, supported in a bearing *g*. Any number of these grooved and smooth-faced rollers may be used throughout the length of the track to give proper support to the tables and render the tables easy of operation.

The several bearings of the rollers herein referred to are supported upon a suitable stand or framework F of any preferred construction found best adapted to the purpose.

Transverse rests G for the logs are bolted or otherwise secured to the tables A B and may be of any desirable construction, and extending at right angles to the tables is a stationary saw-frame H, which may be of any of the usual forms. This saw-frame supports

the mandrel *h*, to which a belt-pulley I is suitably keyed, and upon the inner end of said mandrel is the circular saw K, which is held thereon by the usual collar *i*.

The tables being very narrow, the operator is enabled to stand within a short distance of the saw-line, the tables being just the height necessary to enable the operator to stand by in an upright position and conveniently and easily turn the quarter-logs from one side to the other.

The double tables A B enable a cut to be made from each side of the quarter-log, said tables moving together along the track, the rails of the track being upon the under side of the tables, at or near each edge thereof, and, in connection with the grooved guide-rollers and the smooth-faced supporting-rollers, form a perfect support for the tables while in motion and prevent any lateral movement thereof, thereby causing the table to move in a perfectly straight line and the saw to make a perfectly straight cut through the quarter-log.

At each end of the tables A B are suitable stops L, which extend transversely thereof and are for the purpose of preventing the quarter-log from moving endwise and holding it in position on the tables.

For conveniently and accurately gaging the thickness of the lumber there is provided a series of gages connected to the upper side of each of the tables and arranged opposite each other, said gages being spring-actuated or automatic in their action as well as adjustable to regulate the thickness to which the lumber is to be cut. Any number of these gages may be employed, and consist of a pivoted gage-arm M, pivotally connected to an adjustable carrier N upon the track-rail *c*. To render this carrier adjustable, the same is provided with slots *k*, extending lengthwise of the carrier, through which bolts *l* extend, and having nuts *m* engaging the screw-threaded ends thereof, whereby the carrier is held in its adjusted position.

Any suitable and well-known means may be employed to render the carrier adjustable, so that the gage may be adjusted, this being left discretionary with the manufacturer.

The gage M is not only adjustable, as above described, but it is spring-actuated or automatic in its action, and to secure this action of the gage there is provided a suitable spring O, having one end secured to the rail *b* and its opposite or free end extending upward to form a support *n* for the end of the gage, as shown in Figs. 5 and 6 of the drawings. Any well-known form of spring may be substituted for that shown so long as the gage is rendered spring-actuated or automatic in its action.

As previously stated, the adjustability of the gage controls the thickness of the lumber to be cut, the position of the quarter-log, as indicated by Y in Fig. 4 of the drawings, being shown in relation to the gage M.

After the cut in the quarter-log has been completed the log is turned over onto the opposite table A in order to cut from the opposite side of the log and back on the opposite table until the log is all converted into lumber.

When the log rests upon the table, as in Fig. 4 of the drawings, the gage M under the log will be forced down even with the table by the weight of said log, the gage upon the opposite table A being brought into operating position by the action of the spring O to gage the thickness of the lumber being cut, thus bringing the gage into position as the quarter-log is turned from one table to another.

To operate the tables by carrying them back and forth upon the track hereinbefore described, it is preferred to use steam-power, and to provide for this there is shown a suitable steam-cylinder P, of any suitable size and length, upon the under side of the table A, in which a suitable piston R, connected to a piston-rod *o*, works. A steam-pipe S connects with the cylinder P by branch pipes *p r* to allow the steam to pass in between the cylinder-head and piston to form a cushion.

Any suitable and well-known means may be employed whereby the tables may be propelled or moved by steam-power, that shown being only one in many that may be used to attain this end.

The pipe S is provided with the usual check-valve *s* to prevent the steam between the cylinder-head and piston from escaping back into the pipe.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A machine for sawing logs, consisting of two longitudinal and parallel tables connected so that they will move together upon a suitable track one upon each side of the saw, each table near its inner edge having a series of gages normally presenting a rigid gaging-surface toward the plane of the saw but mounted so as to yield downward under the weight of the log, substantially as and for the purpose set forth.

2. A machine for sawing logs, consisting of two longitudinal and parallel tables connected so that they will move together upon a suitable track, each table near its inner edge having a series of adjustable and automatically-operating or spring-actuated gages arranged opposite each other, and a circular saw located between the tables, substantially as and for the purpose described.

3. In a machine for sawing logs, a suitable traveling table upon which the log is supported, and a series of gages to regulate the thickness of the sawed lumber, consisting of a carrier adjustable toward and from the plane of the saw, a gage-arm pivotally connected thereto, and a suitable spring supporting the free end of the arm and adapted to operate substantially as and for the purpose specified.

4. A machine for sawing logs, consisting of two longitudinal and parallel tables connected together at one end only so that they will move as one table and allow the same to run past the saw, adjustable and automatically-acting gages connected to the tables near their inner edges and located opposite each other, V-shaped guide-rails and flat bearing-supporting rails connected to the under side of the tables near their inner and outer edges respectively, and grooved guide-rollers and smooth-faced supporting-rollers with which the rails engage, and a circular saw located between the tables, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JAMES ALLEN.
MILTON L. JONES.

Witnesses for James Allen:
GEO. F. ALLEN,
JOHN P. HALE.

Witnesses for Milton L. Jones:
WM. H. DE LACY,
JAMES GORDON.