T. J. ALEXANDER.

CIRCULAR SAW MILL.

No. 10,023. Patented Sept. 20. 1853.

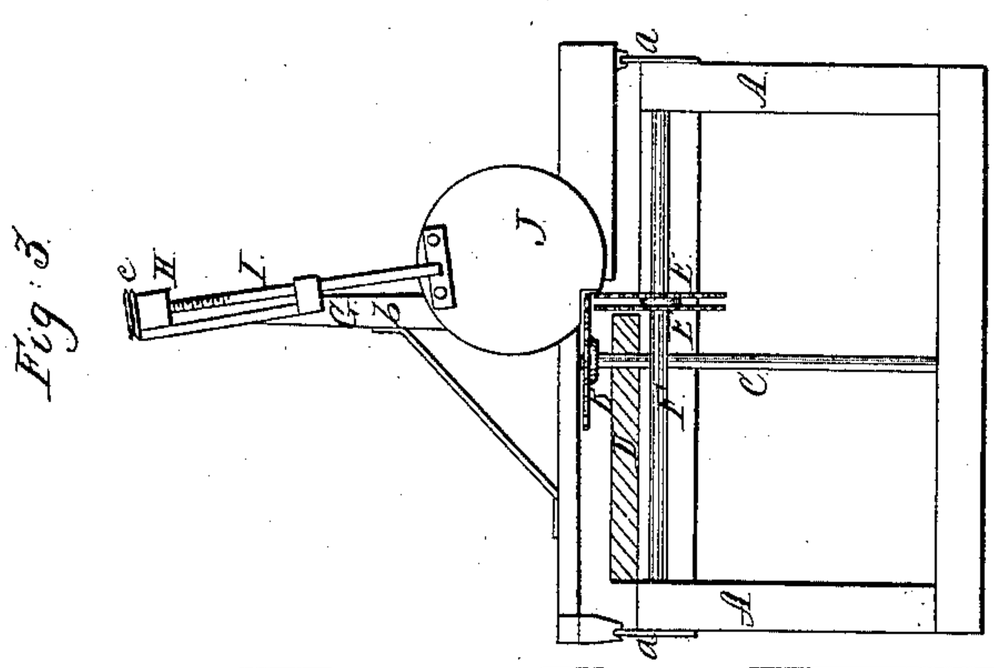

Fig: 3

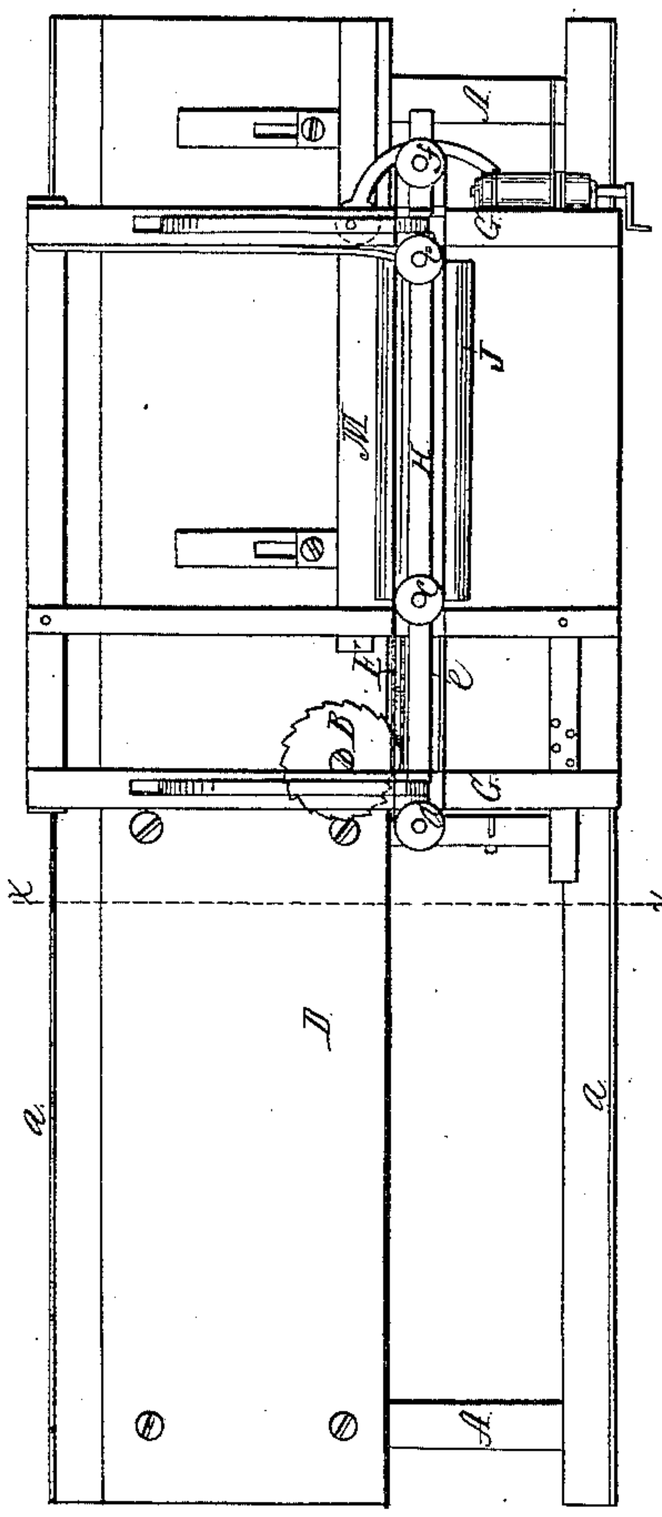

Fig: 2

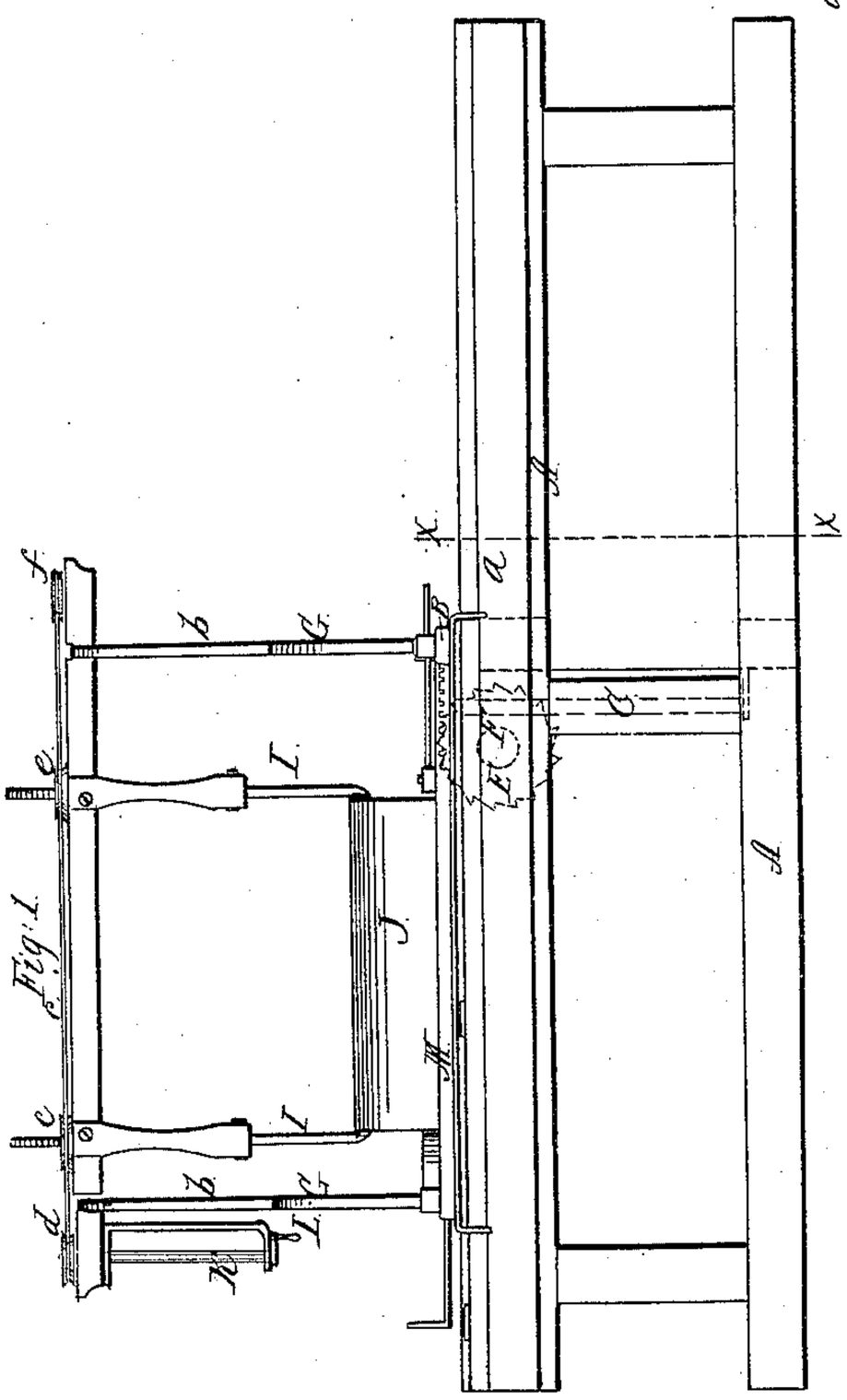

Fig: 1

Hartnett.

UNITED STATES PATENT OFFICE.

THOMAS J. ALEXANDER, OF WESTERVILLE, OHIO.

MACHINE FOR SAWING STICKS FOR BROOM-HANDLES.

Specification of Letters Patent No. 10,023, dated September 20, 1853.

To all whom it may concern:

Be it known that I, THOMAS J. ALEXANDER, of Westerville, in the county of Franklin and State of Ohio, have invented a new and Improved Machine for Sawing Sticks for Broom-Handles, Chair-Rounds, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side elevation of the machine. Fig. 2, is a plan or top view of the same. Fig. 3, is a transverse vertical section of the same, taken at the line, X X, in Figs. 1, and 2.

Similar letters of reference indicate corresponding parts, in each of the several figures.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, represents a rectangular frame, constructed in any suitable manner; and B, is a horizontal saw, placed on a vertical shaft, C; the saw, B, extending a short distance above the bedpiece, D, on the upper part of the frame, A.

E, E, are two vertical saws, hung on one and the same shaft, F, which is placed transversely in the frame, A, the bearings being in the side rails of the frame. The vertical saws are under the horizontal saw, B, and are so placed that their tops nearly touch the horizontal saw; the edge of the saw, B, extending over both saws, E, E; this is clearly seen in Fig. 3. The three saws may be driven in any proper manner.

G, represents a frame, which is placed on ways (*a*) (*a*) on the upper part of the frame, A. This frame, G, has a reciprocating motion communicated to it, in any proper manner. The top crosspiece, H, of the frame, swings or turns on the upright, (*b*), (*b*). Through the crosspiece, H, two screw-rods, I, I, pass, having circular nuts, (*c*), (*c*), upon them, above the crosspiece. Between the screw-rods, and at their lower ends, is secured the log, J, which is to be sawed into sticks. The log, J, may be secured between the lower ends of the screw rods, in any proper manner. The lower ends of the screw-rods may be provided with spurs, which may be driven into the ends of the log.

K, (see Fig. 1,) is a vertical shaft, attached to the frame, G. This shaft, K, has a crank, L, at its lower end, and a pulley, (*d*), on its upper end, above the cross-piece, H. A rope or cord, (*e*) passes around the pulley, (*d*,) and also around the circular nuts, (*c*), (*c*), and a pulley, (*f*). Now, it will be seen that, by turning the crank, L, the pulleys, (*d*), and (*f*), and also the circular nuts will be turned; and the screw rods, I, I, and the log, J, will consequently be elevated or depressed according to the direction in which the crank is turned.

The operation of the machine will be readily understood. The log, J, being secured between the lower ends of the screw-rods, the frame, G, is moved toward the saws; the log J, having been previously adjusted the proper height by operating the crank, L. When the log, J, comes in contact with the saws, a square stick is sawed from it, as will readily be seen by referring to the position of the saws, as seen in Fig. 3. When the frame, G, is moved back, the log is moved or swung toward the saw; it being recollected that the crosspiece, H, turns on the upper parts of the uprights, (*b*), (*b*); the frame, G, is then again moved forward, and a second stick is sawed from the log; and so on. When one tier or course is sawed from the log, the log is depressed by operating the crank, L, and a second tier or course is sawed from the log. A gage, M, is attached to the bedpiece, D, against which the log rests, in order to regulate the size of the sticks and allow the log to be properly placed as regards its position with the saws.

By the specified combination and arrangement of the elevated swinging frame with the clamping screws forming long radius rods and coupled and operating as described, great facility is afforded for lifting and setting the log to its work, as, by bearing laterally on the handle (L) while turning it to run down the screws, the latter are swung outward and lowered simultaneously so that they may be hitched expeditiously to the log whatever its lateral position on the table of the machine and, by turning the handle (L) so as to elevate the screws, the log made to swing itself to its required position against the gage and the log from time to time adjusted laterally and vertically to give it its proper position in relation to the saws for the performance of the several cuts by bearing laterally on the handle simul-

taneously with the turning of it, whereby the time and labor usually consumed in lifting or sliding the heavy log laterally on the bed and adjusting it to its several sets, by vertical and lateral movements separately performed, are obviated. This easy and expeditious handling of the log is of much practical importance in the operation of these machines.

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

The method herein described of handling and adjusting the log to its place and to its various positions for the several cuts, by means of the radius rods or clamping screws coupled and operated as specified and suspended by a swinging frame from above arranged and operating together as herein set forth, so that, by bearing laterally on the screw lever or handle while turning it, the clamping screws are swung laterally and raised or lowered, simultaneously, to approach the log on the table and convey it with facility to the gage, and to adjust the log expeditiously, when under operation, to its various sets, laterally and vertically, as shown and described.

THOS. J. ALEXANDER.

Witnesses:

HENRY MULLEN, Jr.,

ALANSON CARREL.