P. Weiler,

Cutting Veneers,

No. 27,326. Patented Feb. 28, 1860.

Fig. 3.

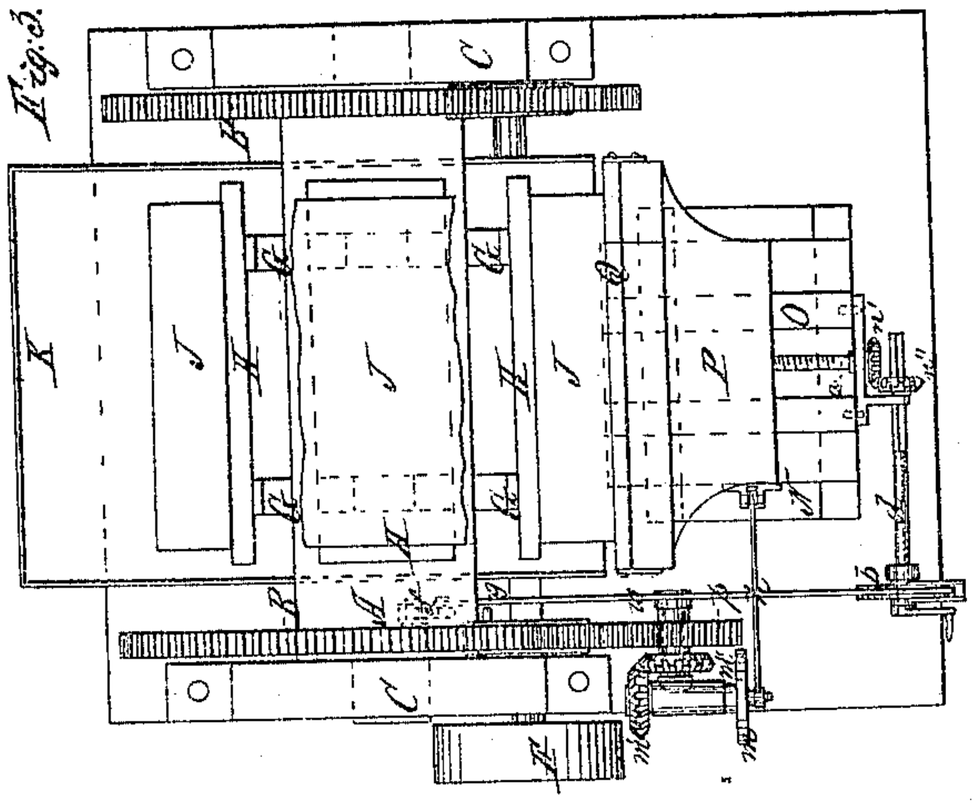


Fig. 1.

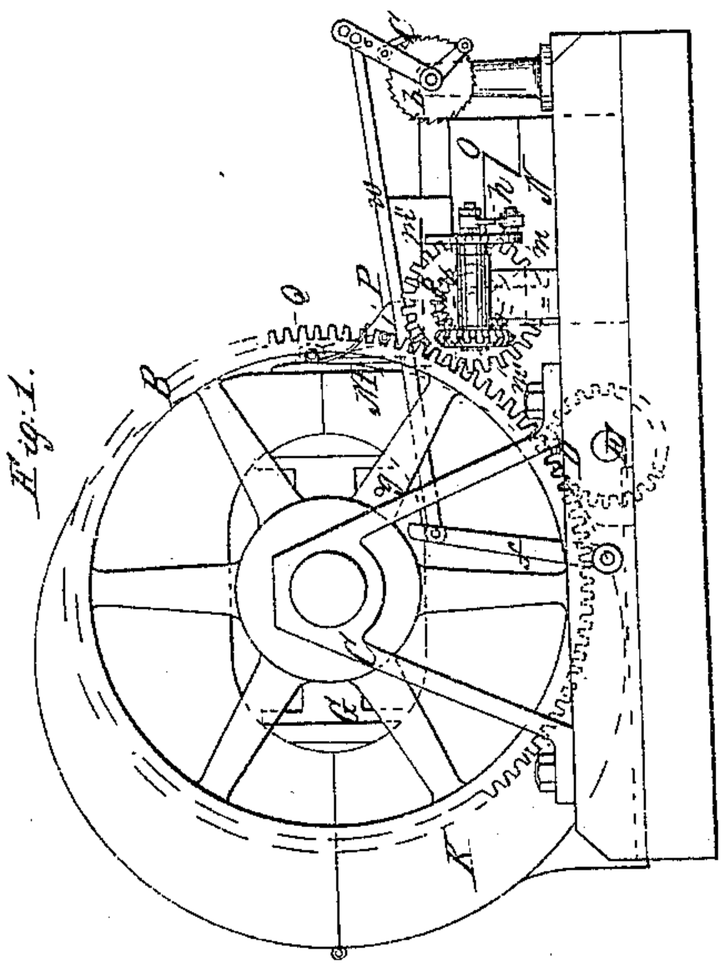
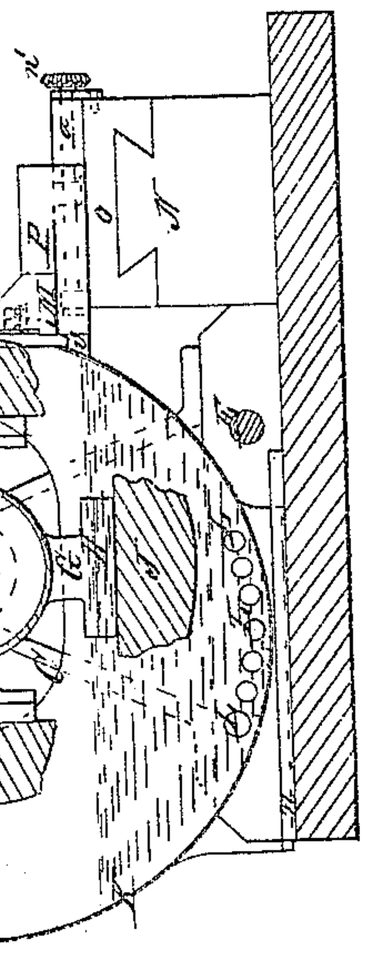


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

PETER WEILER, OF NEW YORK, N. Y.

MACHINE FOR CUTTING VENEERS.

Specification of Letters Patent No. 27,326, dated February 28, 1860.

To all whom it may concern:

Be it known that I, PETER WEILER, of New York, in the county and State of New York, have invented a new and Improved Machine for Cutting Veneers; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

Figure I represents an outside side view of the machine. Fig. II shows a longitudinal vertical section of the same, and Fig. III is a plan or top view of the machine.

Similar letters indicate corresponding parts.

The nature of my invention consists in the arrangement of a rotary log carrier with the knife or cutting tool in such a manner, as to produce a simultaneous vertical and longitudinal or drawing cut during the whole time which the knife or tool takes to pass through the log, for the purpose of facilitating the cutting operation, and further in combining with a rotary log carrier a tank containing a suitable fluid and capable of being heated, and so arranged that the logs shall pass through the heated liquid, during the revolution of the log carrier.

The log carrier consists of a hollow tube A in which spur wheels B are placed, and running in bearings in the frames, C. The pinions, D, gear into the wheels, B, which said pinions are fast on the shaft, E, which latter carries likewise a pulley F and receives motion from the engine, producing thereby a rotary motion to the log carrier. The hollow tube or shaft A is provided with two or more sets of brackets G, made with projecting flanches to which the plates H are attached, upon which the logs or timber, J, from which the veneers are to be cut are fastened. Instead of the hollow tube provided with brackets which arrangement gives great stability, a solid shaft may be used provided with two or more polygon wheels firmly secured to said shaft and united by plates rigidly attached to the faces of said wheels, and which form the platforms to which the logs or timber are secured.

K is a tank, which surrounds or partly surrounds the log carrier as well as the logs attached to the same, and running in rails or guides, *n*, which support and guide the same, and capable of being moved backward and forward. This tank is made in two parts the upper part being hinged on or otherwise fastened to the lower part, so as to move with the same, to confine the heat and moisture, which will be communicated to the logs or timber, as much as possible.

L are pipes situated in the bottom of the tank for the purpose of heating the liquid in said tank, or the bottom of the tank may be made double, and steam introduced between for the same purpose. The pipes L are connected with the boiler or steam generator, in such a manner as to allow to the tank the required backward and forward motion. On the front part of the tank next the knife or cutting tool an opening is made sufficiently large to allow a free action of the knife against the logs or timber. On the knife support, P, a projection, Q, is provided, which comes against the tank K, so as to push said tank, K, backward as much as the knife support, P, and consequently the knife is moved forward, so as to keep always the relative distance between the tank and the end of the wood or log, as well as the knife, and allow the log carrier to rotate freely in said tank.

N is a support fast to the bedplate or foundation of the machine. Upon this support N, a slide, O, is fitted capable of moving parallel to the shaft or tube A, backward and forward. Upon the slide, O, another slide P is fitted capable of moving at right angle to the motion of the slide P or toward the center of the machine. This slide P has a projection or shoulder on its top surface, on the side next the shaft A to which the knife or cutting tool M is firmly attached.

The slide P, and consequently the knife M, after each revolution of the shaft or log carrier or after a veneer has been cut off from each of the logs attached to the log carrier, is moved the required thickness of a veneer toward the center of the machine by means of the screw, *a*, worked by bevel wheels, *n'*, *n''*, which latter is attached to the shaft, *d*, and receives its motion through the action of the pawl, *c*, on the ratchet wheel, *b*.

The pawl, *c*, is operated through the lever, *f*, which is connected with the pawl, *c*, through the rod, *w*, and the lever *f* is acted upon by the pin *z* fast to the spurwheel B. By changing the point of connection of the rod, *w*, the amount of motion communicated to the shaft, *d*, and consequently to the slide P can be regulated. The pin, *g*, is placed in

such a position on the wheel B (or on the shaft A) that the motion of the slide P and consequently of the knife M will only take place during the time the knife is out of the wood, and is not cutting.

The slide, O, is moved backward and forward, but parallel with the log carrier, by means of the connecting rod, *h*, attached to the disk, *m*, operated through the bevel wheels *m'*, *m''*, the latter of which receives motion from the pinion, *p*, which gears into the wheel B. This gearing is so arranged that the slide O, and consequently the slide P with the knife M attached, moves one way while the knife cuts off a veneer from one log, J, and moves the other way or backward, while the knife passes from one log to the other, and consequently does not cut. The longitudinal or drawing motion is consequently combined with the vertical motion or cutting resulting from the rotation of the log carrier, and facilitates very much the cutting operation.

Instead of operating the slide, O, and consequently the knife M in the direction parallel with the log carrier as above described, the same may be done by means of a screw shaft made to revolve first in one direction and then in the opposite direction and acting upon a nut attached to the slide O. The amount of this longitudinal reciprocating motion communicated to the knife M as above described may easily be changed so as to increase or diminish the same according to the quality of the timber which is to be cut in veneers or thin wood by changing the point of connection of the rod, *h*, on the disk, *m*, or the same may be stopped altogether by disconnecting said rod.

In the above described machine the log carrier is supported in frames firmly attached to the bedplate or foundation and has only a rotary motion communicated while the knife or cutting tool is moved toward the wood or log carrier having at the same time a longitudinal motion in combination and simultaneously with its lateral action given, to produce the required diagonal drawing cut, upon the wood, for the purpose of facilitating the cutting off of the veneers from the logs or timber.

Instead of arranging the machine as thus described, the same may be so made, that the knife or cutting tool, is firmly secured, to a frame, which remains stationary while the log carrier is made to move toward the knife or cutting tool, and combining with said motion of the log carrier toward the knife, as well as with the rotary motion of the log carrier, a longitudinal motion, to this rotary log carrier, whenever one of the logs comes in contact with the knife, and during the whole time, which it takes the knife to pass through the log, thereby producing the required diagonal drawing cut, to facilitate the cutting operation.

Q, is a gage bar, made the same length as the knife and situated only a short distance above the cutting edge of the knife attached to the sides of the knife supporter P, and arranged so as to press against the log or wood to protect the knife being drawn into the wood and to press, at the same time the veneer against the knife or cutting tool to prevent the veneer from tearing or splitting, while being cut off. This gage bar Q is attached to the side of the knife supporter P in such a manner as to be easily regulated to any thickness the veneers are desired to be cut.

What I claim as my invention and desire to secure by Letters Patent is—

1. The use and employment of a rotary log carrier, for the purpose of cutting veneers substantially as specified.

2. The combination of a rotary log carrier with a knife in such a manner that the knife may either be moved toward the rotary log carrier, or the knife remain stationary and the rotary log carrier moved toward the knife for the purpose specified.

3. I claim the combination of a rotary log carrier and the knife, when a lateral motion is given to the knife or a lateral motion is given to the rotary log carrier, to produce a drawing cut upon the wood, for the purpose of facilitating the cutting operation.

4. I claim the arrangement and combination of a rotary log carrier with a tank, or its equivalent, containing a suitable fluid and capable of being heated and kept hot, and causing the logs to pass through said heated liquid during their revolution in the manner and for the purpose described.

5. I claim combining with the knife the gage bar Q in the manner and for the purpose substantially as described.

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Witnesses:
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