

J. N. SEIB.
Machines for Cutting Veneers.
 No. 150,622. Patented May 5, 1874.

Fig. 1.

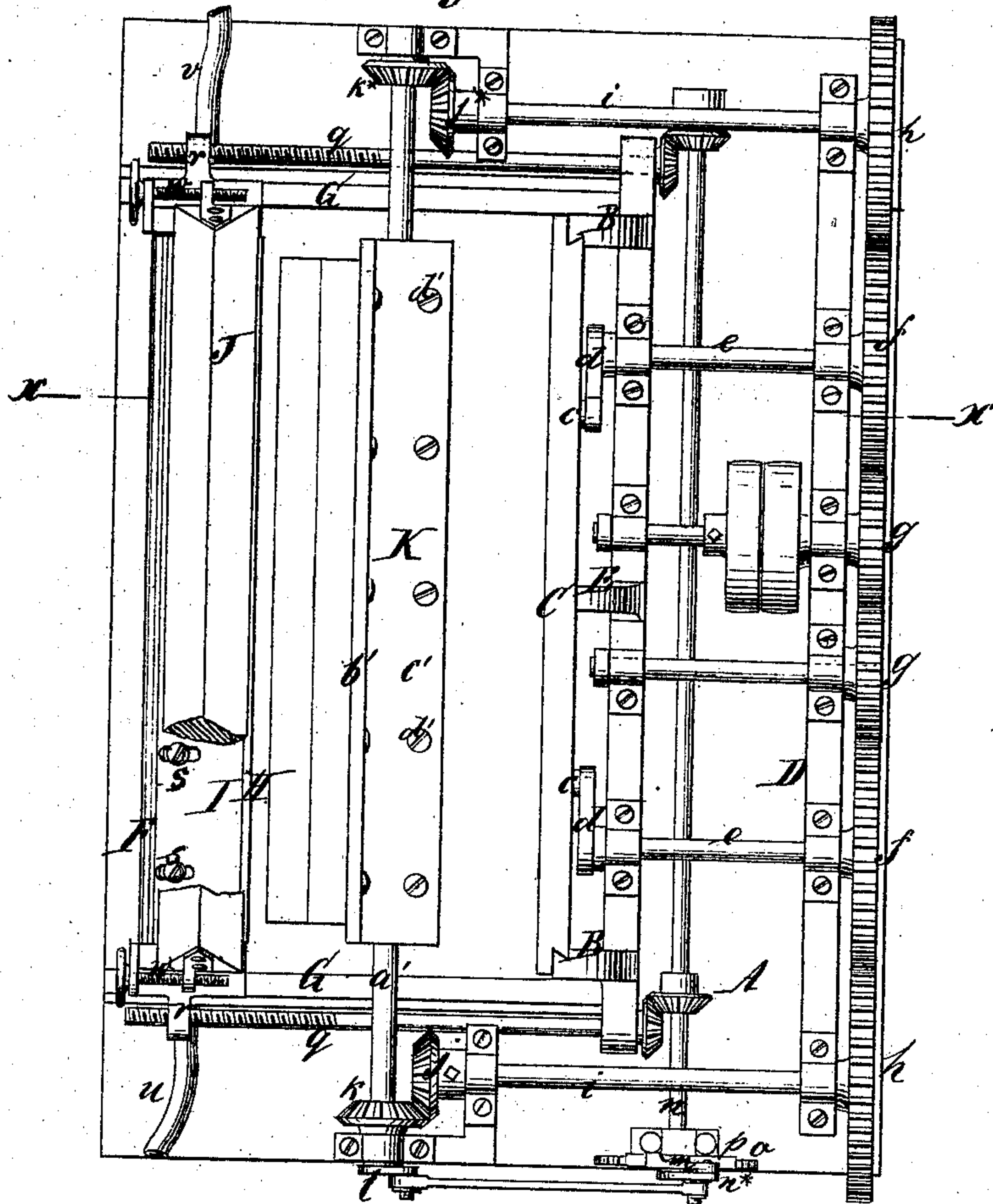


Fig. 2.

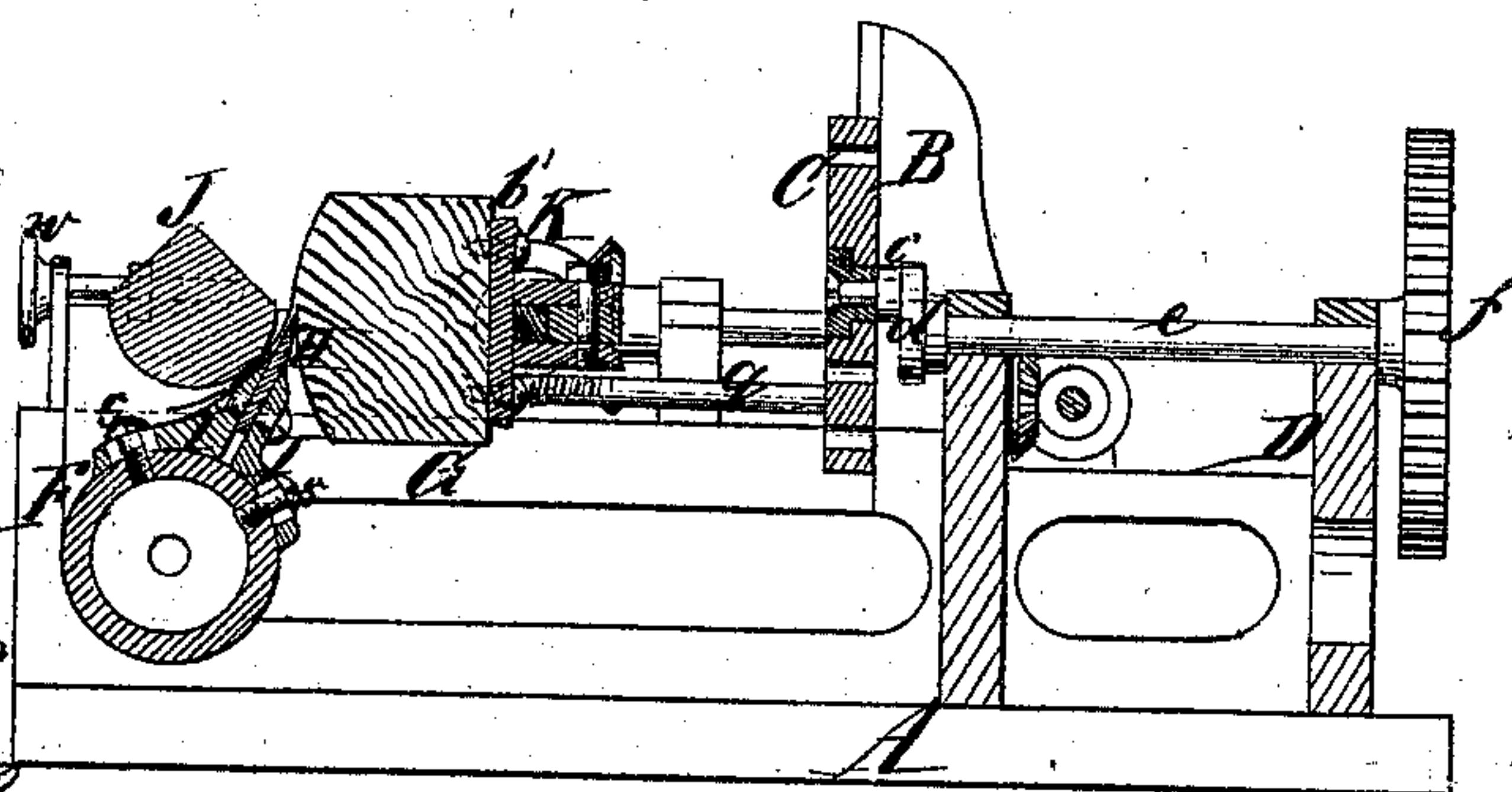
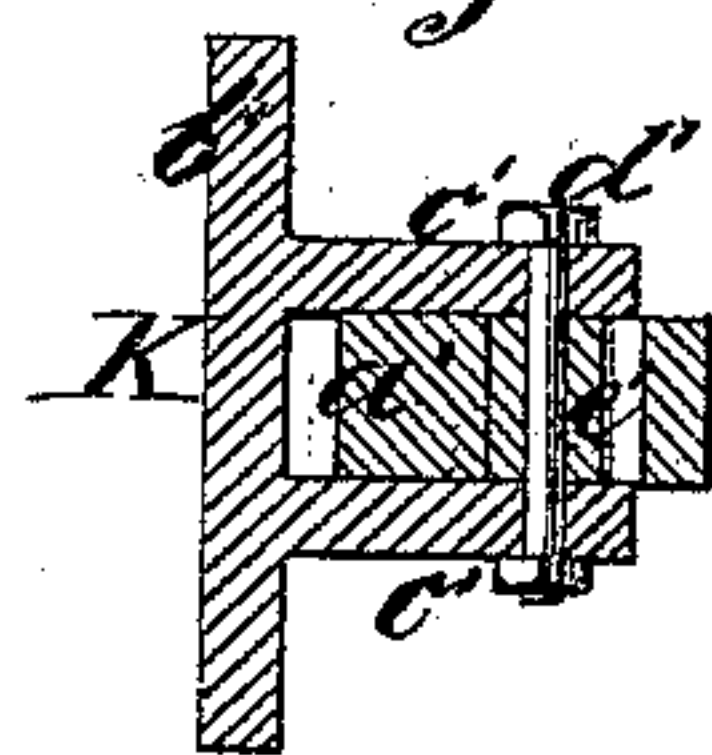


Fig. 2.*



Witnesses:
 Henry Centner

Inventor:
 J. N. Seib
 by Van Santmond & Huff
 his attys

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Fig: 3.

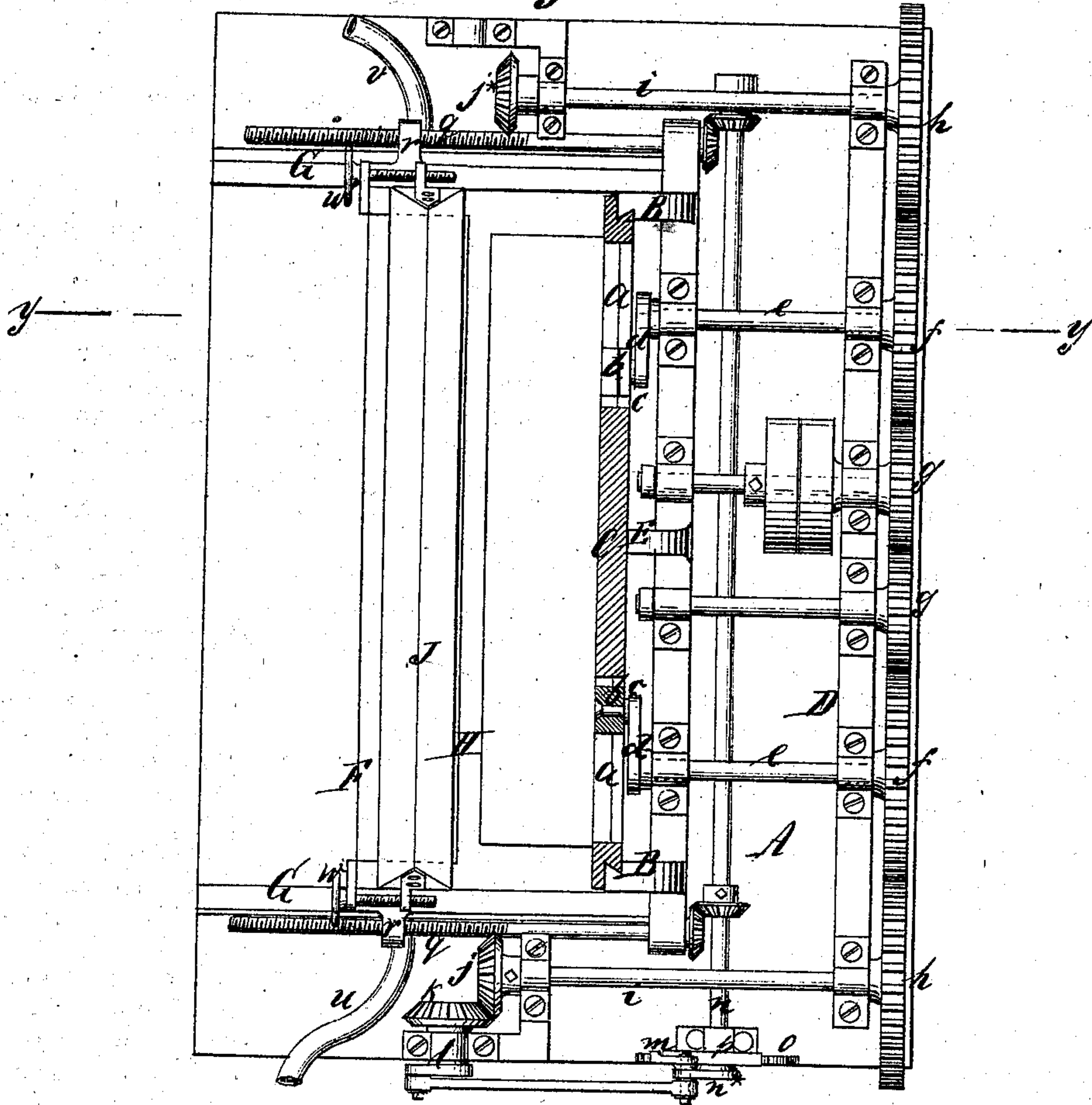
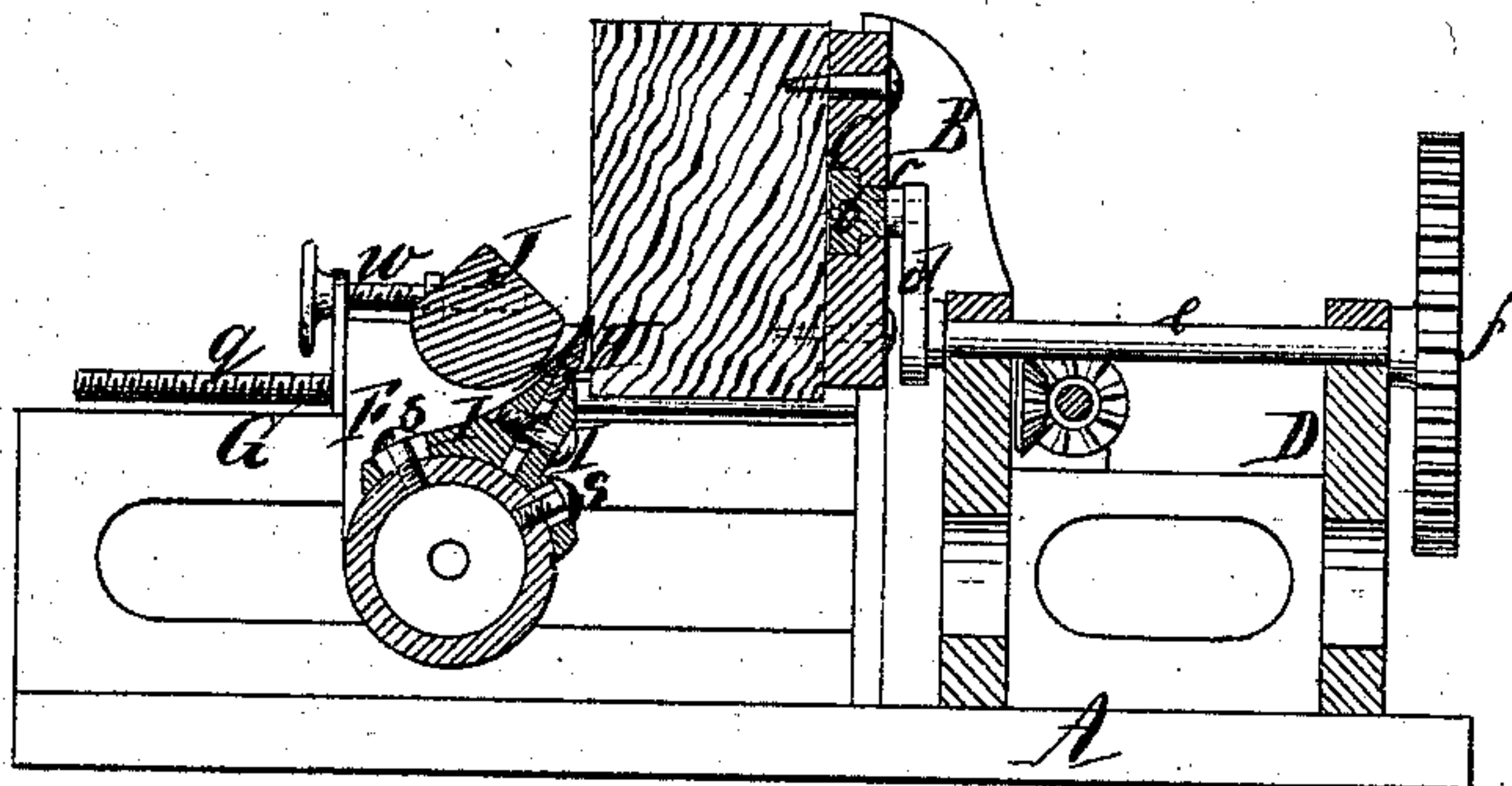


Fig: 4.



Witnesses:
 Ernst Bilhiler
 Henry Gentner

Inventor:
 John N. Seib
 by VanSantvoord & Hauff
 his attys

UNITED STATES PATENT OFFICE.

JOHN N. SEIB, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING VENEERS.

Specification forming part of Letters Patent No. **150,622**, dated May 5, 1874; application filed February 19, 1874.

To all whom it may concern:

Be it known that I, JOHN N. SEIB, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Machines for Cutting Veneers; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention when arranged to cut from a revolving log. Fig. 2 is a transverse vertical section of the same in the plane *x x*, Fig. 1. Fig. 3 is a plan or top view of the same when arranged to cut from a reciprocating log. Fig. 4 is a transverse vertical section of the same in the plane *y y*, Fig. 3.

Similar letters indicate corresponding parts.

This invention relates to certain improvements on veneer-cutting machines, and is intended to improve upon the machines set forth in the several Letters Patent granted to me August 20, 1872, April 1, 1873, August 5, 1873, and December 2, 1873, and numbered, respectively, 130,754, 137,489, 141,596, and 145,246.

My present improvement consists in the arrangement of the circular stay-log in front of the reciprocating stay-log, and between the latter and the knife-carriage, so that in cutting from a circular or semicircular log the reciprocating stay-log can remain undisturbed; also, in a stay-log provided with two jaws, which straddle a revolving shaft, and can be clamped to the same at any desired position, so that the face of the stay-log can be moved toward and from the center of motion; further, in the arrangement of a heater in the knife-carriage, whereby the moisture of the veneer is prevented from causing rust on the knife, and the veneers are partially dried and preserved from injury; also, in combining, with the knife-retaining clamp, a cylindrical support, for the purpose of facilitating the operation of adjusting the knife at the required inclination; also, in the combination of two crank-shafts with slides fitting in guide-grooves in the reciprocating stay-log, for the purpose of imparting to said stay-log a reciprocating motion, which becomes gradually

slower toward each end of the stroke, and thereby the veneers are prevented from tearing off at the edges of the logs.

In the drawing, the letter A designates the bed which forms the support for my machine. From this bed rise two standards, B B, the edges of which are dovetailed and form the guides for the stay-log C, to which a flat or rectangular log is secured, as shown in Figs. 3 and 4. Said stay-log is provided with two oblong slots, *a*, which form the guides for slides *b*, that are connected to the wrist-pins *c* of cranks *d*, and these cranks are secured to shafts *e*, which have their bearings in a frame, D, rising from the bed A. By turning the shafts *e* the stay-log C receives a reciprocating motion, the velocity of which is gradually reduced toward either end of the stroke, so that at the moment when the knife passes either edge of the log the velocity of the log is reduced to a minimum, and the danger of breaking the edges of the veneer is prevented. Between the standards B B are placed one or more braces, E, which are secured to the frame D, and bear against the back of the stay-log, so as to prevent the same from springing inward under the pressure of the knife during the operation of cutting. The shafts *e e* are geared together by cog-wheels *f f* and intermediate pinions *g g*, so that they revolve slowly in the opposite direction, one of the pinions *g* being mounted on the driving-shaft of the machine. The cog-wheels *f f* gear in cog-wheels *h h*, mounted on the ends of the shafts *i i*, on the inner ends of which are secured bevel-wheels *j j**, one of which gears in a pinion, *k*, on the shaft of which is secured a crank, *l*, that imparts motion to the feed-dog *m*. This dog is pivoted to a lever, *n**, that swings loosely on the shaft *n*, on which is mounted the feed-wheel *o*. A portion of the periphery of this feed-wheel is protected by a shield, *p*, so that the dog can act on said feed-wheel only after it has passed this shield. By applying shields of different length, or by adjusting the shield *p*, the feed-motion can be regulated. The shaft *n* of the feed-wheel is geared together with the feed-screws *q*, which are tapped into lugs *r*, secured to the knife-carriage F. This knife-carriage slides on the side rails G, extending from the frame D; and it consists

of a cylindrical body, to which the knife H is secured by two clamping jaws or plates, I I. These jaws fit the cylindrical body F, and they are fastened on it by set-screws s s, while clamping-screws t serve to press the same up against the sides of the knife. The set-screws s pass through slots in the jaws I I, so that when the same are loose the jaws can be moved up or down on the cylindrical body F, and thereby the inclination or rake of the knife can be adjusted to suit the material to be cut. The body F of the knife-carriage is made hollow, of cast-iron or other suitable material, so that it can be heated by means of steam or heated air, the heating medium being introduced at one end through a flexible pipe, u, and discharged at the opposite end through a flexible pipe, v.

By heating the knife-carriage I prevent the veneers from receiving black spots caused by rust formed on the surface of the knife by the action of the moisture of the veneers. When the knife-carriage is heated the moisture is evaporated, and the formation of rust on the knife is avoided. Another advantage is, that by the heat of the knife-carriage the veneers are dried on their surfaces, and sensitive veneers, such as maple, are prevented from turning yellow, or from losing their natural color, when piled upon each other.

The cap J slides on the side rails of the knife-carriage, and it is adjusted toward and from the knife by screws w. The lower surface of said cap is convex, or otherwise so formed that it fits the corresponding surface of the knife-retaining clamp I I. By these means the veneers, as the same are cut, are compelled to pass through the channel left between the corresponding surfaces of the clamp I and the cap J, and they are prevented from breaking, or from curling up, so that the operation of taking them off from the machine is materially facilitated.

For cutting from a semicircular log, the shaft a' of the pinion k is carried clear across the frame D, (see Figs. 1 and 2), and a pinion, k*, is secured on its opposite end, which gears in the bevel-wheel j*, so that such shaft receives a uniform revolving motion simultaneously from both ends.

On the shaft a' is secured the stay-log K, and said shaft is situated in front of the reciprocating stay-log C, and at such a distance from the same that a log can be fastened on it, and made to swing round without coming in contact with the stay-log C. The advantage of this arrangement is, that if I desire to change my machine from a straight to a circular or semicircular cut, the stay-log C can remain undisturbed, and when straight work is to be performed the rotary log-carrier is removed. Of course for cutting from a circular log

suitable screw-chucks must be substituted for the shaft a'. The stay-log K, Fig. 2*, is provided with a face-plate, b', to which the log is secured, and with jaws c' along its whole length, which straddle the shaft a', and are compressed upon it by screws d', said shaft being flattened and provided with a flange, e', which is perforated with two or more series of holes for the reception of the screws d', so that the face-plate of the stay-log can be moved toward and from the center of motion, and the arc described by the log can be increased or diminished to suit circumstances. By this arrangement I am enabled to cut up a log to the best possible advantage, and when a log has been partially cut upon the reciprocating log-carrier I can remove it therefrom and secure it to the revolving stay-log, the shaft of which is inserted in its bearings without disturbing the reciprocating stay-log.

I am aware that veneer-cutting machines have been supplied with stay-logs to provide for the adjustment of the log relative to its axis of revolution, and such, broadly, I disclaim.

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

1. A veneer-cutting machine, having a revolving stay-log, K, in front of the reciprocating stay-log C and between the same and the knife-carriage F, to be used substantially as shown and described.

2. The stay-log K provided with two jaws, c', in combination with the shaft a', and the flange e' projecting therefrom, all constructed to operate substantially as and for the purpose set forth.

3. The knife-carriage of a veneer-cutting machine, constructed hollow so that it can be heated, substantially as and for the object herein set forth.

4. The cylindrical knife-carriage of a veneer-cutting machine, having the slotted clamps I I secured thereto by set-screws s s, and the knife confined between the clamps by a screw, l, all constructed and combined substantially as described, for adjusting the inclination of the knife, as set forth.

5. The stay-log C of a veneer-cutting machine, having the oblong slots a a, in combination with the slides b b arranged in said slots, wrist-pin c, crank d, and shaft e, all constructed to operate substantially as described.

6. In combination with the feed-dog m, lever n*, and feed-wheel o, of a veneer-cutting machine, the shield p, adjustable by a set-screw, for regulating the feed-motion of the knife-carriage, substantially as described.

JOHN N. SEIB.

Witnesses:

A. A. BENNETT,
P. W. PRIEST.