

C. W. SPURR.

Machines for Cutting Veneers.

No. 134,012.

Patented Dec. 17, 1872.

Fig. 1

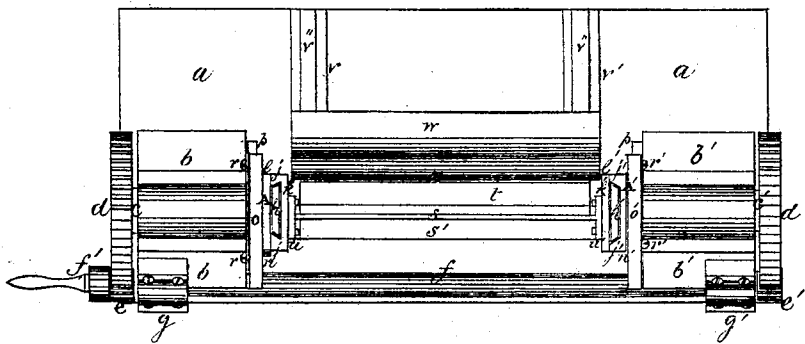


Fig. 2

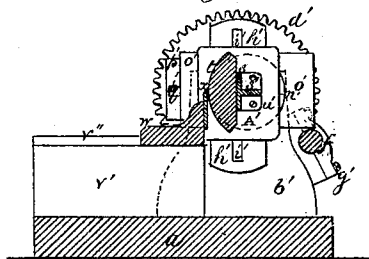
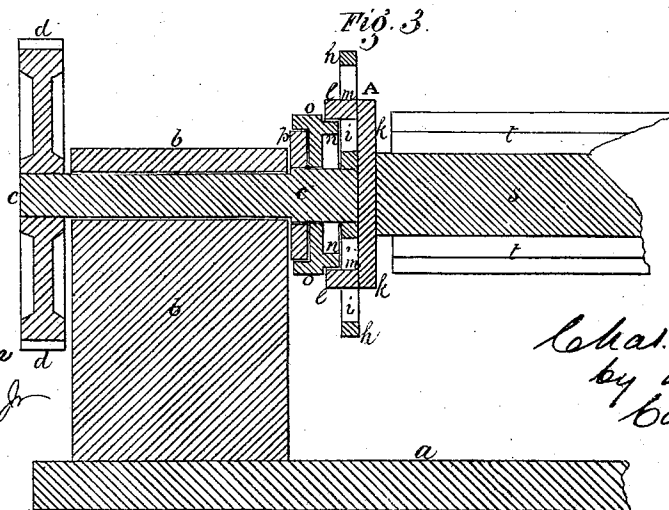


Fig. 3



Witnesses
Sam. H. Barton
Nath. Brewer Jr

Inventor
Chas. W. Spurr
by his atty.
Cano. D. Wright.

UNITED STATES PATENT OFFICE.

CHARLES W. SPURR, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING VENEERS.

Specification forming part of Letters Patent No. 134,012, dated December 17, 1872.

To all whom it may concern:

Be it known that I, CHARLES W. SPURR, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Machines for Cutting Veneers, of which the following is a specification:

Figure 1 of the accompanying drawing is a top view; Fig. 2 is a central transverse vertical section of my invention; and Fig. 3 is an enlarged, central, longitudinal, vertical section of a portion of the same.

The present invention relates to certain new and useful improvements in machines for cutting veneers and in turning various objects, its principal objects being to cut veneer so as to conform to the shape of the outer surface of the log in order to save the greatest and most valuable portion of the wood; and to turn posts, columns, balusters, &c., in a longitudinal direction. My improvements consist mainly in two adjustable chucks, arranged and operated, as will be hereinafter more fully described, in connection with or independent of an adjustable revolving "stay-log," so as to revolve a log or a segmental portion of the same in the direction of its length against a longitudinal cutter, in such a manner as to cause the veneers to be cut in conformity with the outer periphery of the log, &c., or to revolve a post, column, or baluster, &c., against a cutter so as to turn it longitudinally.

In the drawing, *a* represents a platform, provided with vertical standards *b b'* at each end, supporting arbors *c c'*, having on their outer ends gear-wheels *d d'* that engage with small gears *e e'* attached to and revolved by a connecting-rod, *f*, provided with a crank, *f'*, or belt-pulleys, &c., and supported in bearings *g g'* connected with the standards *b b'*; or the arbors *c c'* may be supplied with and revolved by any other suitable mechanism that may be preferred. Attached to the inner ends of and revolved by the arbors *c c'* are adjustable chucks *A A'*, each formed by a plate, *h h'*, provided with central longitudinal slots *i i'*, and having beveled or other suitably formed sides which engage in beveled or other suitably formed ways *j j'*, forming the sides of an outer plate, *k k'*, to the inside of which, at top and bottom, are attached transverse bars *l l'*, having central projections or dogs *m m'*, engaging in the slots *i i'*, so as to support and

allow of the sliding of the plate *k k'* on the revolving plate *h h'*. The bars *l l'* extend over so as to impinge against and revolve over the outer periphery of a ring or disk *n n'*, formed on or connected with a transverse plate, *o o'*, having at top and bottom suitable projections or ways to receive and allow its adjustment on a plate, *p p'*, formed with slots *q* to receive screws *r r'*, so as to hold the plate *o o'* in the desired position. Between and connecting the two plates *k k'* is a "stay-log" formed by a plate or bar, *s*, to which a segment of a log, *t*, is attached by screws or otherwise, and a central bar, *s'*, projecting at a right angle and extending lengthwise, the ends of the "stay-log" having plates *u u'*, formed with screw-threads provided with screws, or otherwise suitably arranged, to be readily attached to or released from the plates *k k'*. Extending transversely and partly across the platform *a* are standards *v v'*, provided with suitable rails *v''*, on which is arranged to travel back and forth a longitudinal frame, *w*, connected with suitable feeding mechanism, and having attached to it a suitable cutter, *x*.

The operation of my invention is as follows: Power being imparted to the arbors *c c'* by the operation of the gears *d d' e e'*, rod *f*, and crank *f'*, or by any other suitable mechanism, so as to revolve them at the same time and at the same rate of speed, the plates *h h'* attached to the ends of the arbors *c c'* are, consequently, revolved, thereby carrying with them the sliding plates *k k'* and "stay-log" *s s'*, containing the segment of the log *t* from which the veneer is to be cut, the plates *k k'* in their revolution sliding on the plates *h h'*, and revolving over the outer periphery of the rings or disks *n n'*, which, by means of the adjustable plates *o o'*, are moved forward or backward laterally, so as to vary the center of the plates *k k' h h'*, and stay-log *s s'*, and thus causing the log, &c., connected with the latter to describe in its revolution either a circular or elliptical curve, according as the disks or rings *n n'* are adjusted.

By the above description, reference being had to the drawing, it will readily be seen that the sliding plates *k k'* are in their revolution on the disks or rings *n n'* thrown out and in on the plates *h h'*, so as to describe the smaller and larger curves of an ellipse, which

are lessened and increased until a circular curve is formed according as the center is varied by the adjustment of the disk-plates $o o'$, thereby bringing the outer surface of the log, whether of an elliptical or circular shape, against the cutter x , which is brought to bear upon it by the operation of any suitable arrangement of mechanism to feed the frame w back and forth, so as to cut the veneer in conformity with the outer periphery of the log, where it is most valuable and without waste.

By adjusting the "stay-log" at different angles or in different positions on the plates $k k'$, so as to receive a log cut with a diagonal axis, or an elliptical log cut across its shorter diameter, any section of a log may be cut in the desired manner; or the stay-log may be entirely removed, and the plates $k k'$ may be arranged to hold a log or post, &c., which is revolved in the manner hereinbefore described, against a suitable cutter or cutters for cutting veneers or turning; or any ordinary lathe may be arranged with two chucks. $A A'$, one attached to the "head" and the other to the "tail-stock" for the purpose of eccentric turning.

In cutting veneers, particularly for wood hangings, it is very necessary to cut as nearly as possible to the outer surface of the log in order to obtain the most beautiful and serviceable portion of the wood as well as to avoid waste. The processes heretofore in use of cutting the log by a circular or by a horizontal action are objectionable, in the first case, on

account of the irregular form of the logs, which are oftener more of an oval or elliptical than a circular shape, and necessitates the cutting down and waste of the log until it receives its circular form from the action of the machine. In the horizontal process, the curved surface is planed or cut off and entirely wasted, and the veneers are formed into the center of the wood, which is of little value.

By my improvements it will be observed that the log or its segmental portion being revolved in an elliptical as well as in a circular direction, in the manner above described, is brought against the cutter in such a manner that the veneer is taken from the outer surface or periphery in conformity with the shape of the log, so that there is little or no waste of its valuable portion.

Having thus fully described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The combination of chucks $A A'$, stay-log s , and cutting-tool x , arranged in a machine for cutting veneers, to secure the cutting of veneers from an elliptical surface, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. W. SPURR.

Witnesses:

CARROLL D. WRIGHT,
SAML. M. BARTON.