

(No Model.)

2 Sheets—Sheet 1.

D. W. WILLIAMSON, F. J. MILHOLLAND &
C. A. KESSLER.

PRESSURE PLATE FOR VENEER CUTTING MACHINES.

No. 537,514.

Patented Apr. 16, 1895.

Fig. 1.

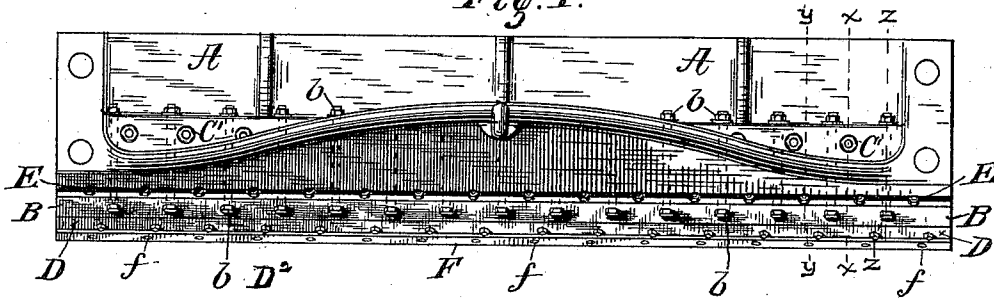


Fig. 2.

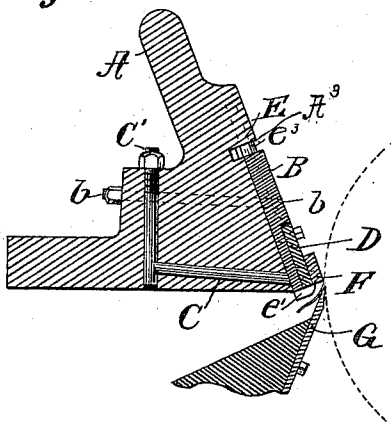


Fig. 3.

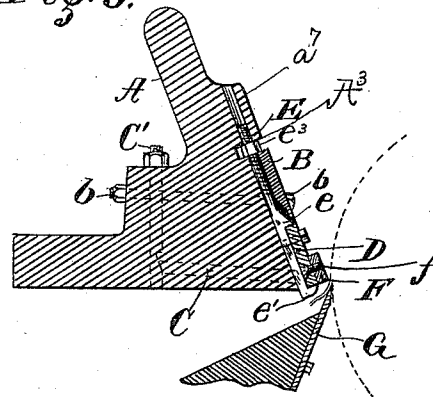
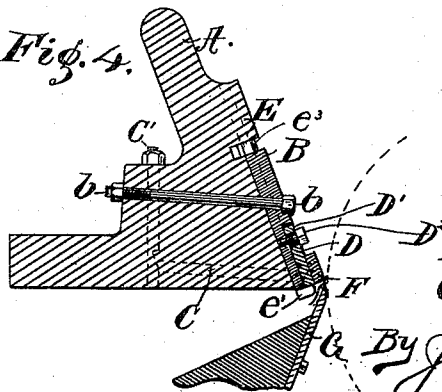


Fig. 4.



Witnesses.
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Fig. 5.

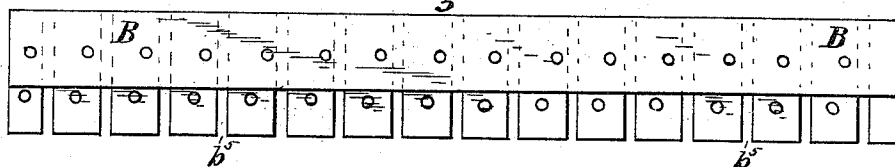
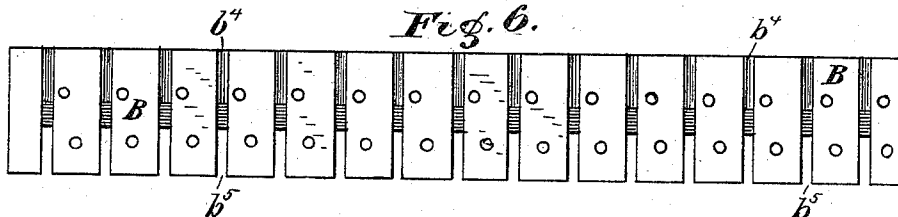


Fig. 6.



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UNITED STATES PATENT OFFICE.

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PRESSURE-PLATE FOR VENEER-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 537,514, dated April 16, 1895.

Application filed August 18, 1894. Serial No. 520,677. (No model.)

To all whom it may concern:

Be it known that we, DWIGHT W. WILLIAMSON, FRANK J. MILHOLLAND, and CLARENCE A. KESSLER, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Pressure-Plates for Veneer-Cutting Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the construction and operation of pressure plates for veneer-cutting machines, and has for its objects, first, the construction of a pressure plate that can be adjusted to conform to the irregularities of the knife edge by means of set screws and without requiring the pressure plate to be filed or the knife to be bent or sprung; second, to provide an adjustment of the pressure plate whereby the space between the plate and the edge of the knife can be regulated and the consequent thickness of the veneer controlled; third, to afford facilities for the proper adjustment of the pressure plate from the upper side of the cap where the controlling mechanism will be readily accessible, and, fourth, to provide a plate that can be readily removed for the purpose of grinding out the imperfections caused by the unequal wear usually resulting from use, and that can be readily replaced and owing to the small dimensions of the plate can be replaced at small expense. These objects are attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of the top plate or cap of a veneer machine with our attached device; Fig. 2, an enlarged sectional view on the line *xx*, Fig. 1, showing the position of the cutting knife, the log being shown in dotted lines; Fig. 3, a similar view on the line *yy*, Fig. 1; and Fig. 4, a similar view on the line *zz*, Fig. 1. Fig. 5 is a top or plan view of the adjustable metal plate which rests directly upon the cap of the machine, but is shown in this figure as removed from the machine and with all of the accompanying parts

removed, and Fig. 6 is an under-side view of same.

Similar letters refer to like parts throughout the several views of the drawings.

A represents the top plate or cap, which is bolted to the machine in the usual manner.

B, is an adjustable plate of metal running longitudinally of the cap and secured to the upper front side of said cap by means of the bolts *b* as shown in Fig. 4. Slotted openings for the bolts will preferably be provided through the plate B to allow a limited adjustment of the plate.

C, are steel pins loosely inserted within approximately horizontal openings in the cap A so the outer ends of the pins will abut against the inner side of the plate B, near its lower edge, as shown in Fig. 2, and C' are vertical bolts passing through the cap opposite the inner ends of the pins C. The bolts C' are each provided with a notch C² having a gradually sloping side which contacts with the correspondingly sloping end of the pin C. The bolts C' are threaded and provided with threaded nuts on their upper ends outside the cap whereby a longitudinal movement of the bolts may be secured by rotating the nuts. An upward movement of the bolts C' will give an outward movement to the pins C against the plate B, and enable an outward adjustment of the lower edge of the plate to be made by said mechanism.

The lower front face of the plate B is recessed longitudinally the entire length of the plate to receive the metal plate D. The plate D is provided with a series of transverse slots D' through which the screw-bolts D² are inserted and by which the plate D is secured to the plate B, as shown in Fig. 4.

The face plate F which comes in direct contact with the log will be secured to the lower outer face of the plate D, and being thus reinforced by the plate D to which it is fastened, the plate F may be less in cross section than would otherwise be permissible. The plate D with its attached plate F occupies the lower front, recessed portion of the plate B and has a vertical adjustment within said recess. In addition the plate B and all

of said overlying plates, have a swinging horizontal adjustment. The slots D' allow an upward adjustment of the plate D and this adjustment will be controlled by the bolts E.

5 Transverse grooves or channels b^4 are formed on the inner face of the plate B of sufficient depth to admit the bolts E, so the outside of the bolt when in the groove, will be flush with the inside face of the plate B.
10 The lower ends of the grooves will extend entirely through the reduced lower portion of the plate B, thereby forming slots b^5 in said reduced portion and causing the plate to rest directly upon the bolts E where they are exposed through said slots.

15 The spurs or lugs e , and e' , are integral with the bolts E and engage the upper and lower edge respectively, of the plate D, as shown in Fig. 3. The upper ends of the bolts E are threaded and are provided with nuts e^3 .

20 The cap A is provided with a longitudinal groove or channel a , of sufficient depth to form a seat for the nuts and to allow them to be turned upon the bolts, and that portion of the cap immediately above the nuts e^3 is projected in a forward direction to form a ledge A^3 which contacts with the nut and holds it from upward vertical movement. The ledge A^3 is provided with openings a' , to
25 receive the ends of the bolts e^3 as said bolts are moved upward by the rotation of the nuts. It will thus be seen that the raising and lowering of the plate D can be effected by the rotation of the nuts e^3 in the proper
35 direction.

40 F, represents the face-plate and is formed of a thin strip of metal, preferably steel, which is secured by the screw-bolts f , to the plate D as shown in Fig. 3. The plate F is the part which comes in direct contact with the log from which the veneer is cut.

G represents the knife, of usual construction, which will be secured to the bed-plate of the machine in the usual manner.

45 In practice the thickness of the veneer will be regulated by the width of the space between the pressure plate F and the knife edge G and the perfect working of the machine requires that the space between the edge of the knife and the plate be of uniform width
50 throughout the entire length of the knife. This careful adjustment will be secured by adjusting the position of the pressure plate in the following manner: first, by turning the nut on the bolt C' so as to move the bolt C' in an upward direction thereby forcing the pin C against the plate B and forcing out the lower edge of the plate B; or should the plate be already out too far at any point the
60 bolt C' will be lowered so as to loosen the pin C and then the plate will be drawn in toward the cap by tightening up the nut on the bolt b . The duplication of these bolts and pins enables the plate B to be sprung into parallel
65 alignment with the edge of the knife.

It will be apparent that a horizontal swing-

ing adjustment of the lower edge of the plate B is secured by the above mechanism.

By the construction of the pin C having its end bearing against the sloping side of the notch in the bolt C', a positive lock is secured which will hold the plate B from displacement by the constant jar of the machine. The vertical adjustment of the pressure plate is secured by the longitudinal movement of the bolt e by which the plate D will be sprung vertically and in the direction to or from the knife, according as the requirements of the case may demand. Both vertical adjustments will be secured by turning the nut e^3 in the proper direction and by duplicating the bolts the plate can be forced into shape conforming with the shape of the knife edge. The great advantage of this feature of our invention lies in the accessibility of the adjusting bolts enabling the vertical adjustment to be made at any stage of the work without removing the log and without running back the cap. Both upward and downward movements of the plate are secured by the same nut and from the top of the cap.

We are aware that veneer machines have been constructed in which the face plate F has been secured to a heavy bar and the bar in turn bolted to the cap of the machine but no attempt so far as we are aware has been made to adjust the bars to the knife and in fact the thickness and rigidity of the bar would prevent such adjustment. In such constructions the knife has always been sprung to conform to the bar. In our invention we have obviated the necessity of springing the knife, by making the bar in two longitudinal parts one of which, to which the face plate is secured, can be sprung. This is one of the important features of our invention.

We claim—

1. A cap for veneer cutting machines having a plate secured to its outer face by means of bolts passing through the cap and through the plate, near the upper edge of the plate, means such as a pin bearing against the inner face of the plate and a bolt with a sloping side bearing against the end of the pin, whereby, a swinging adjustment of the lower edge of the plate, about the fixed upper edge of same, may be secured, substantially as described.

2. In a pressure plate for veneer cutting machines, the combination with the cap of a plate secured to the cap by bolts, means for adjusting the lower edge of the plate, said means consisting of pins bearing against the inner face of the plate near its lower edge, and a longitudinally adjustable bolt having a sloping side bearing against the other end of the pin, a flexible plate having a pressure strip secured thereto and having transverse slots in said plate, bolts for securing the flexible plate to the plate next to the cap, and means consisting of a bolt with lugs to engage the flexible plate, whereby the flexible

plate may be adjusted vertically, substantially as and for the purposes specified.

3. In a veneer-cutting machine the cap A, plate B secured to the front face of the cap
5 by means of the bolts *b*, said plate having its outer face recessed near its lower edge, the pin C bearing against the inner face of the plate B and bolt C' having a sloping side to bear against the inner end of the pin C for
10 the purposes described, the flexible plate D having the transverse slot D' and bolts D² by which the plate D is secured to the plate B within the recessed portion of said plate, the bolt E having the lugs *e* and *e'* to engage
15 the plate D, in combination with a cutting knife secured to the bed-plate of the machine substantially as shown and described.

4. The combination, with the cap of a veneer machine, and a cutting knife secured to
20 the machine, of a plate secured to the outer

face of the cap and having a swinging adjustment of the lower edge of the plate about the fixed upper edge of same, a flexible plate secured to said first plate and means consisting of adjusting bolts, whereby the flexible
25 plate may be sprung, substantially as described and for the purposes specified.

5. In a veneer machine, an intermediate plate between the face plate F and the cap A, constructed in two longitudinal sections
30 B and D, in the manner substantially as described and for the purposes specified.

In testimony whereof we affix our signatures in presence of two witnesses.

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