

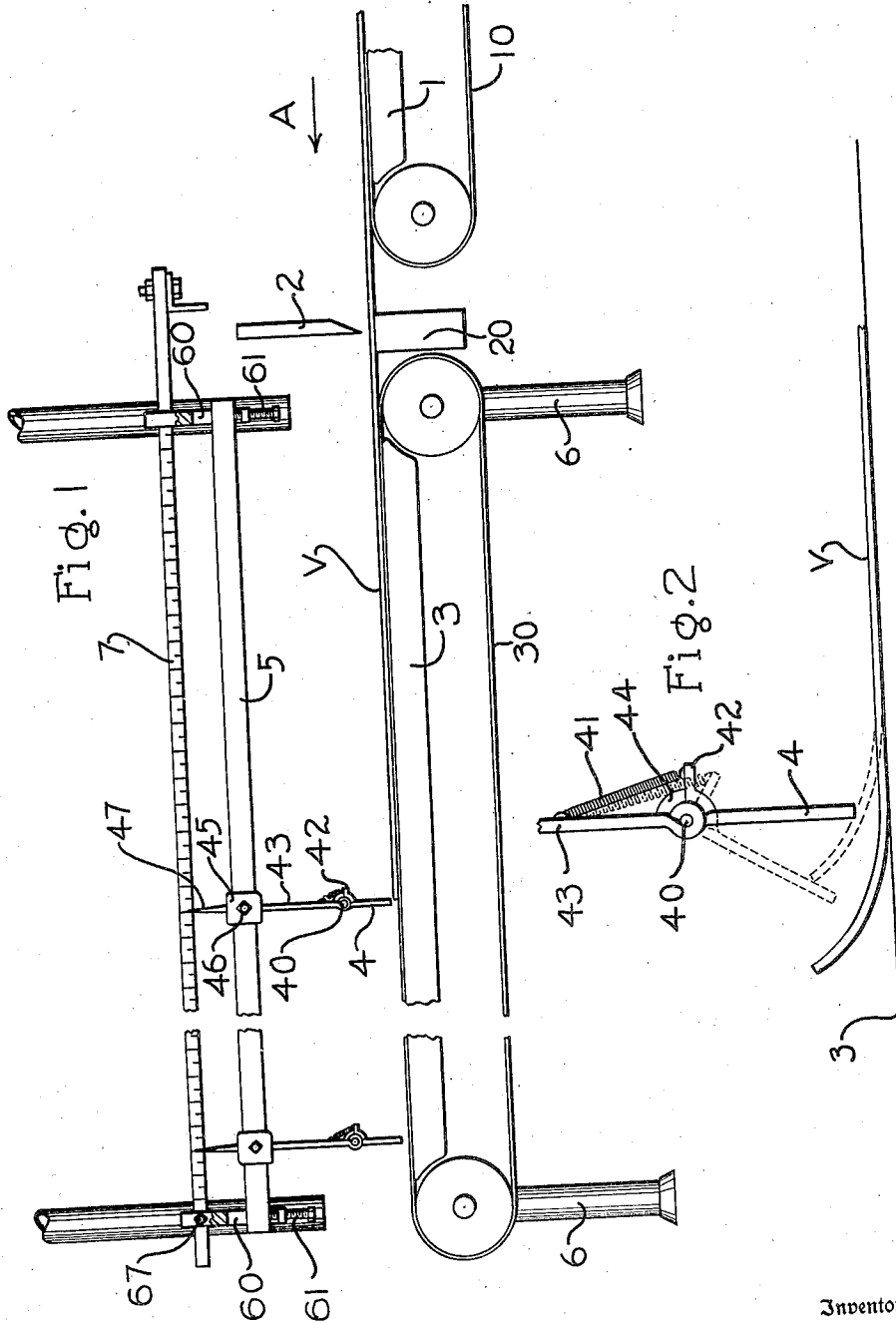
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VENEER GAUGE FOR CLIPPERS

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VENEER GAUGE FOR CLIPPERS

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Rotary veneer is manufactured in sheets or strips of considerable and indeterminate lengths. It is necessary to cut these strips into widths suitable for incorporation in plywood, and this is done by clippers or knives which sever it along lines generally lengthwise of the grain.

In order to avoid wastage of material, and to standardize the sizes of the facing strips which are incorporated in the plywood, so that ensuing steps in manufacture can be easily and economically carried out, it is necessary that the width cut off be measured with reasonable exactness, yet without stopping the operation of the veneer cutting knife, nor of the handling and conveying mechanism which takes away the veneer as it is formed. The operation of measuring must therefore be done with rapidity, yet also with accuracy.

If the veneer were substantial in character and rigid, this would be a comparatively simple matter to accomplish, but the veneer is flimsy. It may tend to curl and warp, either at an advancing edge or intermediate its edges, so that it is not practicable to bring an advancing edge against a stop mechanism to gauge its width.

It is an object of the present invention to provide a gauge mechanism for use in clipping veneer, which will be accurate, rapid, and which will not be affected by the flimsy character of the material which is being measured.

It is a further object to provide such mechanism which shall be simple in character, and which may be adjusted either for different thicknesses and types of veneer, or for greater accuracy with relation to the distance from the clipping knife, and which is readily incorporated in the mechanism now used in the handling and clipping of such veneer.

This invention comprises the novel parts, and the novel combination and arrangement of such parts, constituting a gauge for veneer and like flimsy material, as shown in the accompanying drawing, described in this specification, and as more particularly defined by the claims which terminate the same.

In the accompanying drawing I have shown in a largely diagrammatic manner an operative embodiment of my invention in association with a veneer clipping and handling device.

Figure 1 is an elevation of my device in association with a veneer handling table and a clipping device.

Figure 2 is an enlarged elevation of the gauge finger, showing the manner in which the same

will yield under the influence of a curled or warped edge of the flimsy veneer.

The veneer is fed in the direction of the arrow A from a feed table 1 past a clipping knife 2 and cooperating shear plate 20 onto a clipping table 3. Suitable conveyor means, indicated at 10 and 30, which may be in the form of belts, chains or the like, are employed upon the feed table and clipping table, respectively, to advance the veneer, which is shown as a strip V of indeterminate length.

Supported in position immediately above the table 3, and at a known distance from the clipping knife 2, is a gauge finger 4. This finger depends from a pivotal support 40, the axis of which is parallel to the surface of the table 3, and transverse to the direction of advance of the veneer indicated by the arrow A. The lower end of the gauge finger 4 is spaced above the table and above the path of the veneer sufficiently that the veneer will pass beneath it, preferably without any contact whatsoever, at least so long as the veneer lies close to or flat upon the table, but for accuracy of measurement the gauge finger should be sufficiently close to the table that an operator, controlling the operation of the clipping knife 2, can determine when the advancing edge of the veneer comes into registry with the gauge finger 4, and at this time, by mechanism which is not illustrated but which is common in the art, he actuates the clipping knife 2 to sever the desired width of veneer from the advancing strip.

It will be evident that the veneer, being occasionally or somewhat curled or warped, will engage the gauge finger 4 at some points, but by reason of the pivotal connection of the latter the gauge finger may be swung aside, as indicated in dash lines in Figure 2, thereby permitting the veneer to pass freely beneath it with no impedance of the veneer and with no damage to the latter. In order to return the gauge finger accurately and promptly to its gauging position, following such a deflection, a light spring 41 may be employed, connecting an arm 42 on the gauge finger 4 with a point on the support for the gauge finger, indicated at 43. Stop means, illustrated as consisting of the arm 42 and a cooperating stop 44, in conjunction with the light tension of the spring 41, holds the gauge finger 4 precisely in gauging position.

To accomplish adjustment of the gauge finger relative to the clipping knife 2, the gauge finger's support includes a slide 45, slidable upon a bar 5 disposed lengthwise of the path of movement

of the veneer strip. This bar 5 may carry several such slides with their accompanying gauge fingers, or a single gauge finger may be adjusted to different positions, where it is held in adjusted position, lengthwise of the bar, by means such as the set screw 46. To adjust the gauge finger of fingers vertically, that is, with relation to the surface of the table 3, the bar 5 is held in vertical guides, such as the slots 60 formed as part of the frame 6 of the machine, and is adjustable vertically by jack screws 61 or equivalent means.

Each slide 45 carries an index pointer 47 which cooperates with a scale or rule 7, likewise held in the frame 6, and extending parallel to the bar 5. For accurate adjustment of the finger 4 with relation to the clipping knife 2 the scale 7 is adjustable lengthwise, that is, in the direction of the movement of the veneer strip, and is held in adjusted position by a set screw 67.

As will now be evident, the gauge finger 4, which may swing in the direction the veneer strip is advancing, is positioned closely adjacent the path of movement of the veneer, but normally sufficiently above it that it will not be contacted and swung aside by minor irregularities in the veneer strip. It is adjusted for spacing, that is, to gauge the width of the veneer strip to be cut off, with relation to the scale 7 and by movement of the slide 45 along the bar 5, and it may be adjusted vertically by means of the set screws 61. Now as the advancing edge of the veneer strip reaches a point in vertical registry with the gauge finger 4 the clipping knife 2 is operated to sever the veneer strip at this width, and unless the veneer strip is curled or warped it passes on beneath the gauge finger 4 without contacting nor affecting the latter. Should the veneer strip, either at its advancing edge or intermediate its edges, be warped or curled, it will engage the veneer strip, which will be swung aside in opposition to the light tension of the spring. This does not occur during any gauging operation, only after the gauging operation has been completed. The finger 4, being short in length and light in weight, has no effect upon the veneer and does not retard it nor curl it further. Upon passage of the interfering portion of the veneer strip beyond the gauging finger the latter swings back to its gauging position, where it is accurately positioned by the spring and stop means, such action occurring well in advance of any further need for the gauge finger engaging the width of the veneer strip. Thus the gauging operation is conducted accurately, rapidly, and with no interference nor damage to the veneer strip.

It will be observed that the operation of the gauge finger is due primarily to the fact that it is light and resiliently mounted.

What I claim as my invention is:

1. A gauge for use in gauging the width of a

strip of veneer or like flimsy material as it moves lengthwise of a table, preparatory to clipping such strip, comprising a bar above and extending lengthwise of the table, a scale disposed parallel to said bar, a member mounted on said bar for sliding adjustment lengthwise of the bar, and carrying an index cooperating with said scale, a finger pivotally depending from said member and having its lower tip lying above the normal level of veneer upon the table, said finger being swingable in the direction of movement of the veneer, whereby it may be swung aside by a warped portion of the veneer, as the latter passes, and means to adjust said bar vertically, to adjust the clearance of the finger's tip above the table.

2. A gauge for use in gauging the width of a strip of veneer or like flimsy material as it moves lengthwise of a table preparatory to clipping such strip, comprising a bar above and extending lengthwise of the table, a scale disposed parallel to said bar, a member mounted on said bar for sliding adjustment lengthwise of the bar, and carrying an index cooperating with said scale, a finger pivotally depending from said slide, its lower tip lying above the normal level of veneer upon the table, said finger being swingable in the direction of movement of the veneer, whereby it may be swung aside by a warped portion of the veneer, as the latter passes, means to adjust said bar vertically, to adjust the clearance of the finger's tip above the table, and means mounting the scale for lengthwise adjustment to accurately position same relative to the veneer clipping means.

3. A gauge for use in gauging the width of a strip of veneer or like flimsy material as it moves lengthwise of a table, preparatory to clipping such strip, comprising a bar above and extending lengthwise of the table, a member mounted on said bar for adjustment therealong, a gauge finger depending from said member and having its lower end lying above the normal level of veneer upon the table, said gauge finger being swingable in the direction of movement of the veneer so that it may be swung aside by a warped portion of the veneer to permit the veneer to pass by the same, and means for vertically adjusting said bar to adapt the gauge finger for use to gauge veneers of different thicknesses.

4. A gauge for use in gauging the width of a strip of veneer or like flimsy material as it moves lengthwise of a table, preparatory to clipping such strip, comprising a bar above and extending lengthwise of the table, a scale disposed parallel to said bar, a member carried by said bar and adjustable therealong, a gauge finger depending from said member, an index carried by said member for cooperation with said scale, and means mounting said scale for lengthwise adjustment to accurately position same relative to the veneer clipping means.

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