

May 19, 1931.

A. A. DENNIS

1,805,907

VENEER TAPING MACHINE

Filed Aug. 18, 1930

6 Sheets-Sheet 1

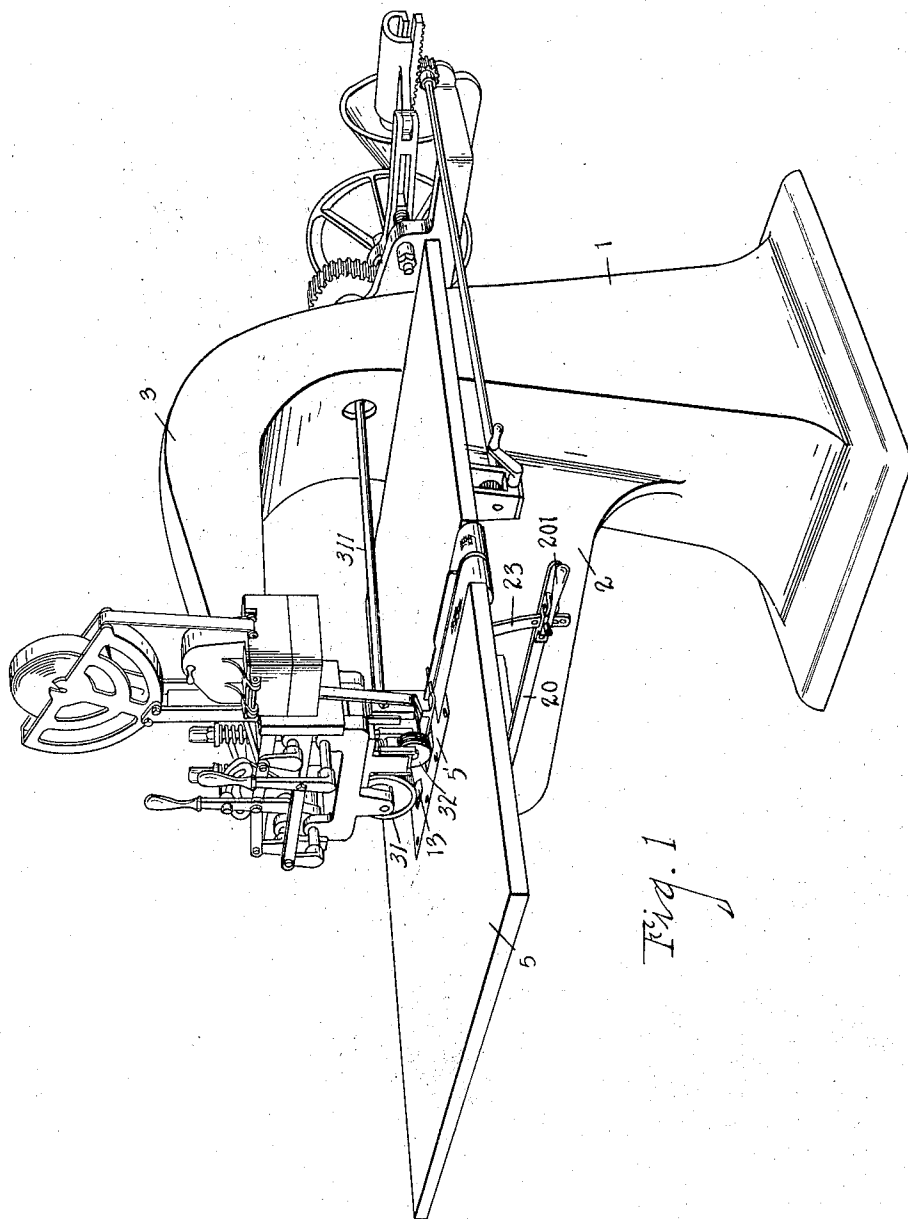


Fig. 1

BY

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VENEER TAPING MACHINE

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6 Sheets-Sheet 2

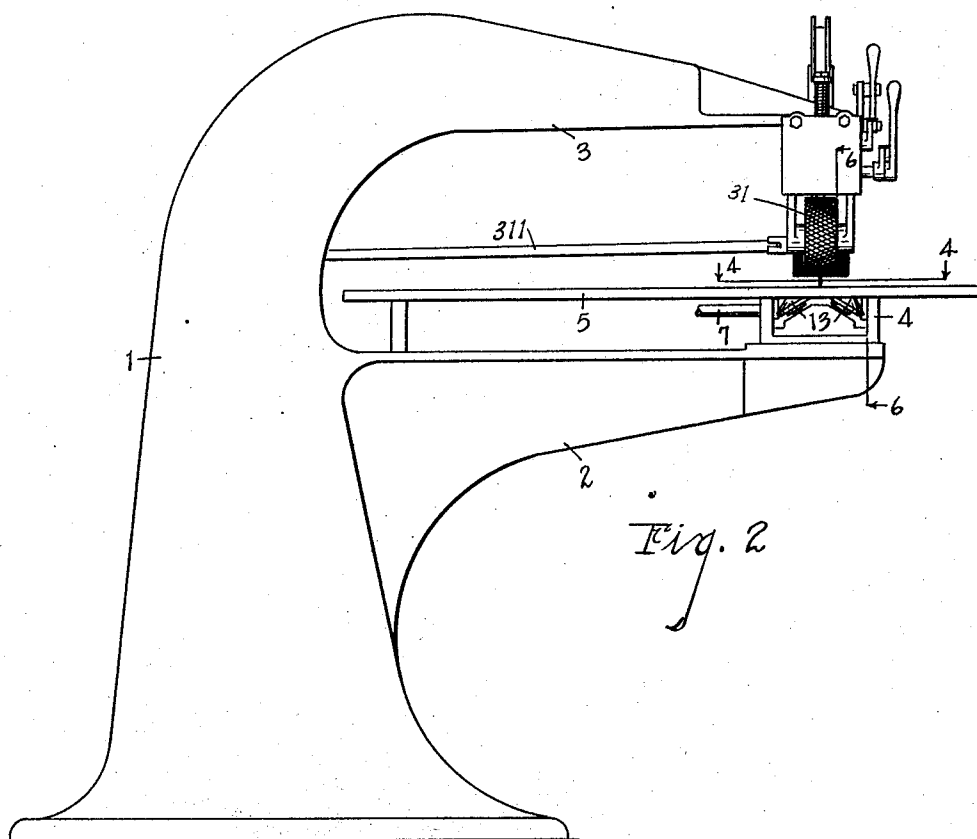


Fig. 2

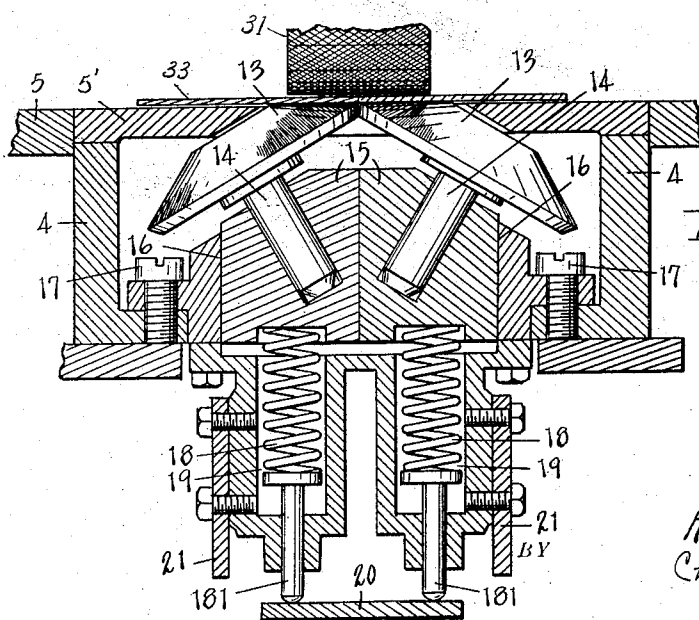


Fig. 10

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VENEER TAPING MACHINE

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6 Sheets-Sheet 3

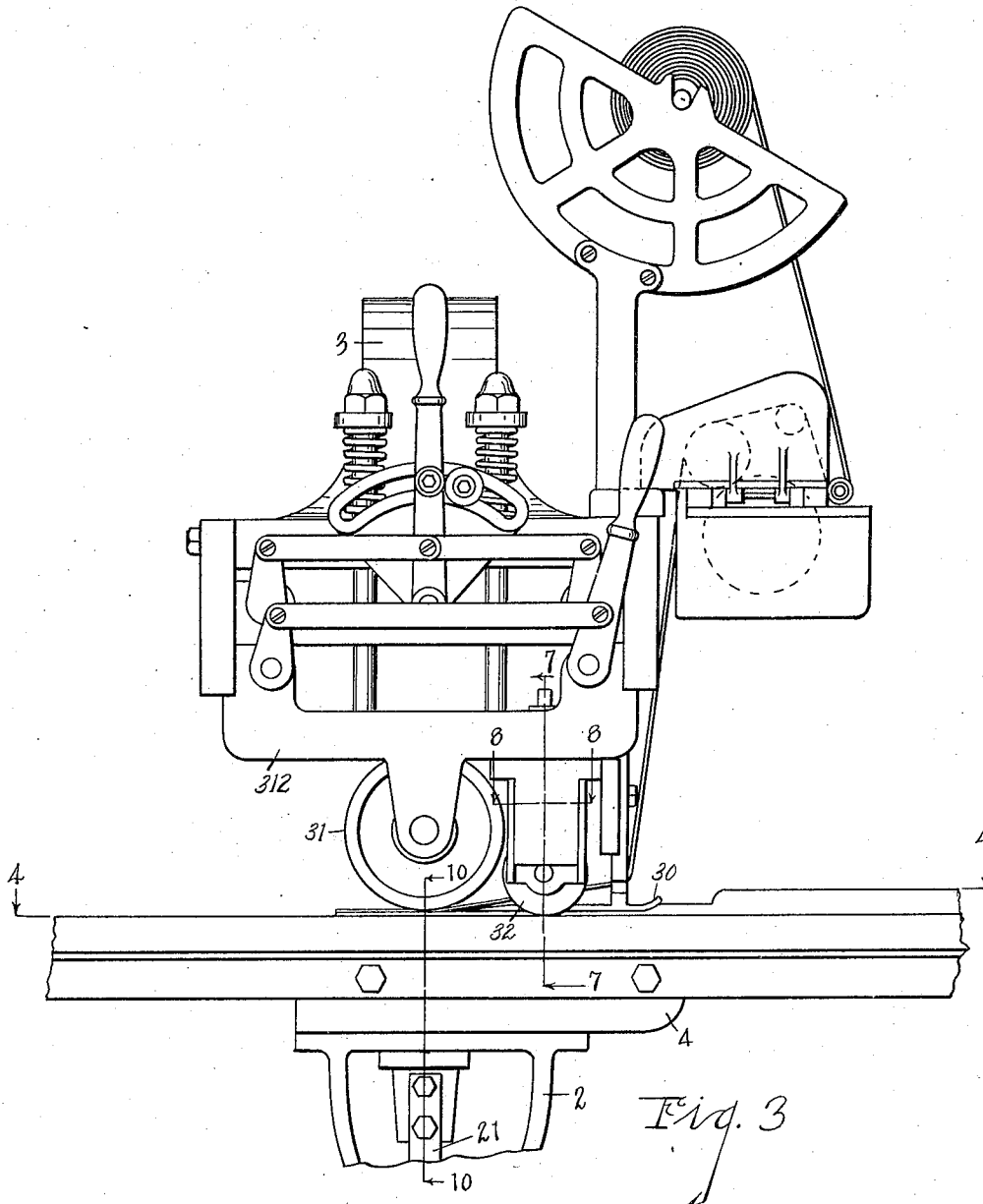


Fig. 3

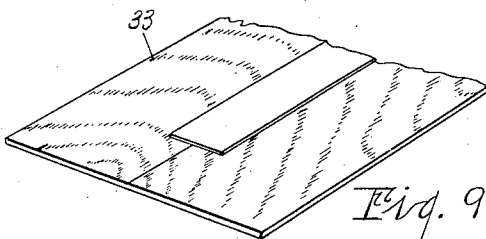


Fig. 9

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VENEER TAPING MACHINE

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6 Sheets-Sheet 4

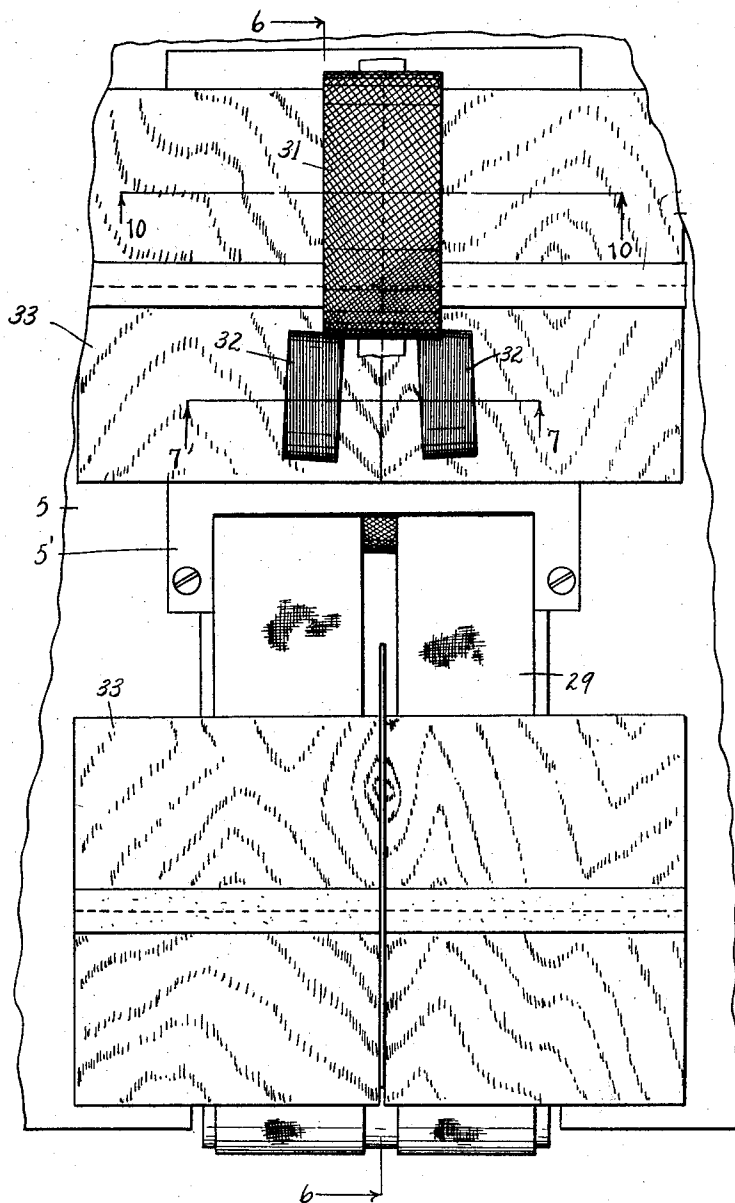


Fig. 4

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1,805,907

VENEER TAPING MACHINE

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Fig. 5

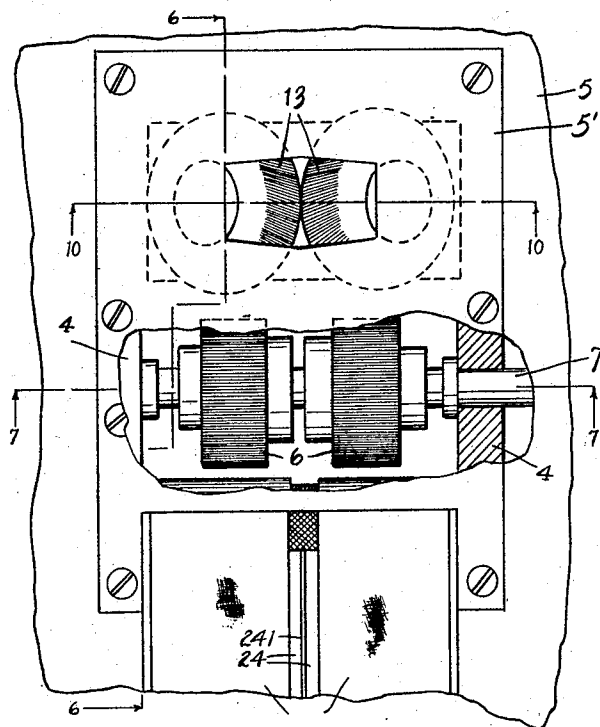
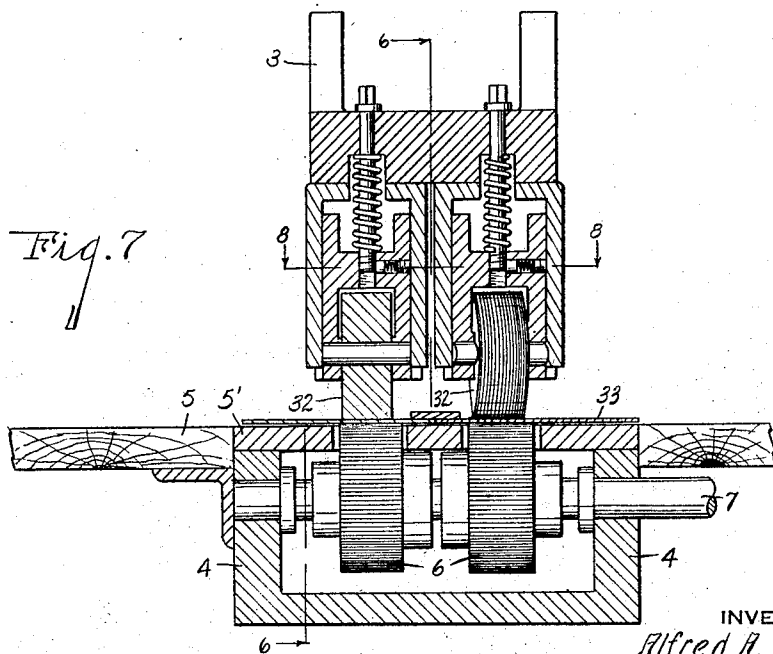


Fig. 7



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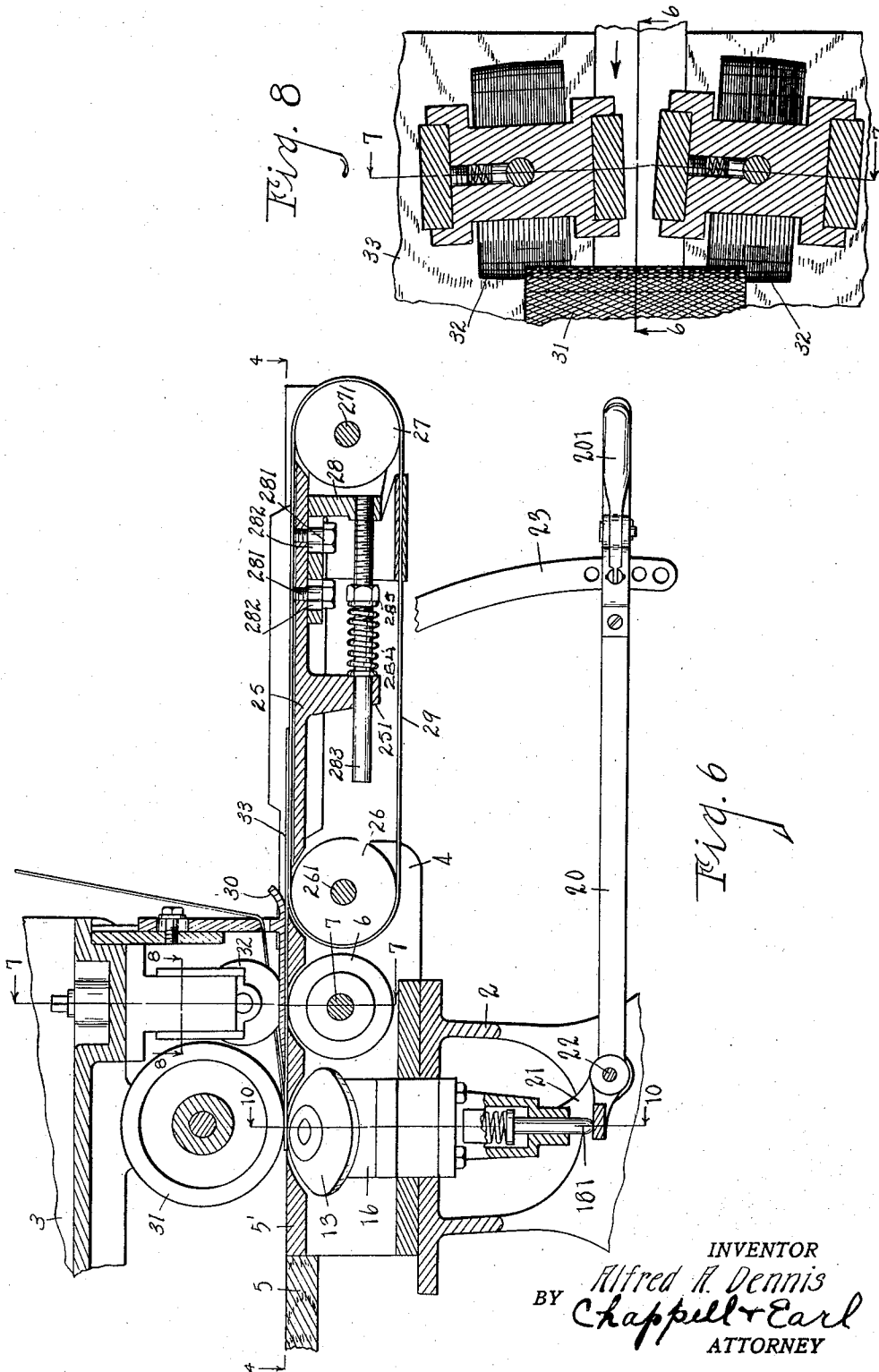
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Filed Aug. 18, 1930

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UNITED STATES PATENT OFFICE

ALFRED A. DENNIS, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO VENEER MACHINERY COMPANY, OF GRAND RAPIDS, MICHIGAN

VENEER TAPING MACHINE

Application filed August 18, 1930. Serial No. 475,969.

This invention relates to improvements upon the machine illustrated and appearing in my Patent #1,012,609, of Dec. 26, 1911, for veneer taping machines.

5 The objects of this invention are:

First, to provide an improved arrangement of feed rollers for such a taping machine to insure a perfect joint.

10 Second, to provide an improved construction of feed bed that facilitates the matching of veneers.

Third, to provide improved means of adjusting the tension on the feed bed presser rolls.

15 Objects pertaining to details and economies of construction and operation will appear from the description to follow.

Preferred embodiments of my invention are illustrated in the accompanying drawings, in which:

20 Fig. 1 is a perspective view of a machine embodying the features of my invention.

Fig. 2 is a rear elevation view of the main parts of the machine, the driving gear being omitted and the driving shafts only being illustrated.

25 Fig. 3 is an enlarged detail elevation view from the right hand of Fig. 2 of the taping machine mechanism, the main parts of the machine being broken away.

30 Fig. 4 is a detail plan view taken on section line 4—4 of Figs. 2, 3 and 6 showing the appearance of the machine with matched veneers being introduced, the top feed rolls and presser being in position with their supports omitted, and the forward auxiliary feed bed being shown in full lines, the novel oblique converging arrangement and disposition of the top presser rolls clearly appearing.

35 Fig. 5 is an enlarged detail plan view of the parts appearing in Fig. 4, the veneers and top feed rolls being omitted and the front of the forward auxiliary feed bed being broken away.

40 Fig. 6 is an enlarged detail longitudinal sectional view through the mid part of the machine taken on the irregular plane indicated by lines 6—6 of Figs. 2, 4, 5, and 7, showing details of the feed bed presser rolls

tension adjusting lever means and of the forward auxiliary feed bed.

Fig. 7 is an enlarged detail transverse sectional elevation through the driving feed rolls and the upper presser rolls taken on the irregular section plane indicated by section lines 7—7 of Figs. 3, 4, 5, 6 and 8, the feed rolls being shown in full lines except the upper left hand presser roll.

Fig. 8 is an enlarged detail sectional plan through the upper presser rolls, showing their proximity to the main upper feed roll and their converging disposition and action, taken on the plane of line 8—8 of Figs. 3, 6 and 7.

65 Fig. 9 is a detail of the taped matched veneers.

Fig. 10 is an enlarged detail transverse sectional view on line 10—10 of Figs. 3, 4, 5 and 6 showing the details of the improved tension adjusting means for the conical presser feed rolls in the feed bed.

The parts will be identified by their numerals of reference which are the same in all the views.

1 is a heavy cast iron base having a lateral supporting arm 2 which carries the bottom portion of feed and guide devices as well as the table 5. A laterally projecting arm 3 is above the said arm 2 and carries the tape feeding mechanism and other cooperating parts of the feed and guide means for the tape and veneer.

On the outer end of the arm 2 are supported side pieces 4, 4 carrying a top plate 5' at the level of the table 5, see Figs. 2 and 10. A pair of feed rolls 6, 6 are carried on the shaft 7 which is journaled in the side pieces 4. The said shaft extends back of the base 1 where it is driven by any suitable connection, for example like that appearing in my said former patent or my improvement thereon.

Beveled friction pressure roller disks 13, 13 are supported each on a journal 14, 14 which journals converge downwardly toward each other and are carried on the independently yielding block 15, 15, the said journals being seated in suitable journal bearings therein as clearly appears in Fig. 10.

The blocks 15 are in vertical ways 16, 16

which ways are adjustable by means of set screws 17, 17 for controlling the exact position thereof. Springs 18, 18 are in the sockets 19, 19 underneath the same and urge the blocks 5 yieldingly upward. The tension on the springs 18, 18 is adjusted by means of the lever 20 which is fulcrumed at 22 on bracket 21. The short end of the said lever 20 is broad and disposed to act upon the plungers 10 181 underneath the said springs 18. The adjusting segment 23, suitably perforated, co-operates with pin 201 on the said lever 20 to hold the said lever and springs in adjusted position.

15 A guide 24 is provided with a vertical central guiding blade 241 to deliver the matched veneer to the machine. Auxiliary endless conveyor feed bed means are provided to carry the veneer forward along the said guide. 20 This consists of a main support 25 suitably joined to the table top 5. The front roll 26 of the endless conveyor is carried on shaft 261, journaled in extensions of side plates 4. The forward roll 27 is carried on the shaft 271. 25 Shaft 271 is carried on the adjustable bracket 28 which is adjustably attached by the set screws 281 in slots 282 as seen in Fig. 6. The bracket 28 is provided with bolt 283 which extends through a lug 251 on the support 25. 30 The bolt 283 is screw threaded on its inner portion and carries compression spring 284 which reacts on adjustable nut 285 and against lug 251 to force the conveyor roll 27 yieldingly into the endless conveyor belts 29. A 35 pair of endless feed bed conveyor belts 29, 29 are carried on the rolls 26, 27. The rolls are continuous between the two conveyors and are preferably knurled so that conveyors 29, 29 are operated exactly equal and parallel. This 40 makes it possible to arrange matched veneers on the same and on merely pressing the same forward they will advance evenly to the point where the feed rolls will engage and advance and pass the same on to the gluing apparatus.

45 Guide shoe 30, adjustably carried on the arm 3, is disposed in front of the vertical blade 241. Presser feed roll 31 driven from shaft 311 is carried in an adjustable frame 312 which also carries the shoe 30. Presser feed 50 roll 31 is tangent to the feed bed press roll 13 at a point a little in advance of the center plane of their axes so that there is a tendency to slightly deflect the veneer strip 33 upwardly at its discharge end. This insures 55 edge to edge contact and compression of the joint.

Press rolls 32 are like the press rolls 42 of my former patent except that they are disposed at an angle to converge inwardly. 60 They serve to compress the strips of veneer toward each other as they are engaged by the driven feed roll 6 in the feed bed. They are disposed a considerable distance apart as is clearly seen in Figs. 4 and 8 and engage the 65 veneers each side of the tape.

The mechanism for controlling their elevation is very simple and is precisely like that illustrated in my said former patent, and does not need to be further detailed here.

I have shown my invention added as improvements to my said former patent. It is clear that the structures can be considerably modified in detail without departing from my invention.

I desire to claim the invention in its specific form as illustrated and also broadly as pointed out in the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a veneer taping machine, the combination of a feed bed, a driven feed roll therein, feed bed presser rolls conical in form and disposed on converging shaft axles, spring pressed blocks therefor disposed in suitable sockets in the said frame, an adjusting lever for the springs of said blocks extending to the front of the said machine, an upper driven feed roll disposed in tangent relation to the spring pressed feed bed rolls in advance of the center line of their axes, presser rolls in advance of the said feed rolls, having screw thread spiral grooves thereon disposed diagonally to converge toward the feed roll and disposed to engage the veneers each side of the tape, an auxiliary feed bed in advance of the said veneer taping machine, comprising a bed having a central dividing guiding rib, continuous conveyor rollers at front and rear of the means for adjusting the same, and a pair of continuous feed belts disposed at opposite sides of the said central dividing rib to operate in unison to advance veneers evenly and in matched relation to the said taping machine.

2. In a veneer taping machine, the combination of a feed bed, a driven feed roll therein, feed bed presser rolls conical in form and disposed on converging shaft axles, spring pressed blocks therefor disposed in suitable sockets in the said frame, an adjusting lever for the springs of said blocks extending to the front of the said machine, an upper driven feed roll disposed in tangent relation to the spring pressed feed bed rolls in advance of the center line of their axes, and presser rolls in advance of the said feed rolls, having screw thread spiral grooves thereon disposed diagonally to converge toward the feed roll and disposed to engage the veneers each side of the tape.

3. In a veneer taping machine, a main veneer taping means, an auxiliary feed bed in advance of the said veneer main taping machine, comprising a bed having a central dividing guiding rib, continuous conveyor rollers at front and rear of the means for adjusting the same, and a pair of continuous feed belts disposed at opposite sides of the said central dividing rib to operate in unison

to advance veneers evenly and in matched relation to the said main taping machine.

4. In a veneer taping machine, the combination of a feed bed, a driven feed roll therein, feed bed presser rolls conical in form and disposed on converging shaft axles, spring pressed blocks therefor disposed in suitable sockets in the said frame, an adjusting lever for the springs of said blocks extending to the front of the said machine, and an upper driven feed roll disposed in tangent relation to the spring pressed feed bed rolls in advance of the center line of their axes.

5. In a veneer taping machine, the combination of a feed bed, a driven feed roll therein, feed bed presser rolls conical in form and disposed on converging shaft axles, spring pressed blocks therefor disposed in suitable sockets in the said frame, an upper driven feed roll disposed in tangent relation to the spring pressed feed bed rolls in advance of the center line of their axes, and presser rolls in advance of the said feed rolls, having screw thread spiral grooves thereon disposed diagonally to converge toward the feed roll and disposed to engage the veneers each side of the tape.

In witness whereof I have hereunto set my hand.

ALFRED A. DENNIS.