

March 8, 1932.

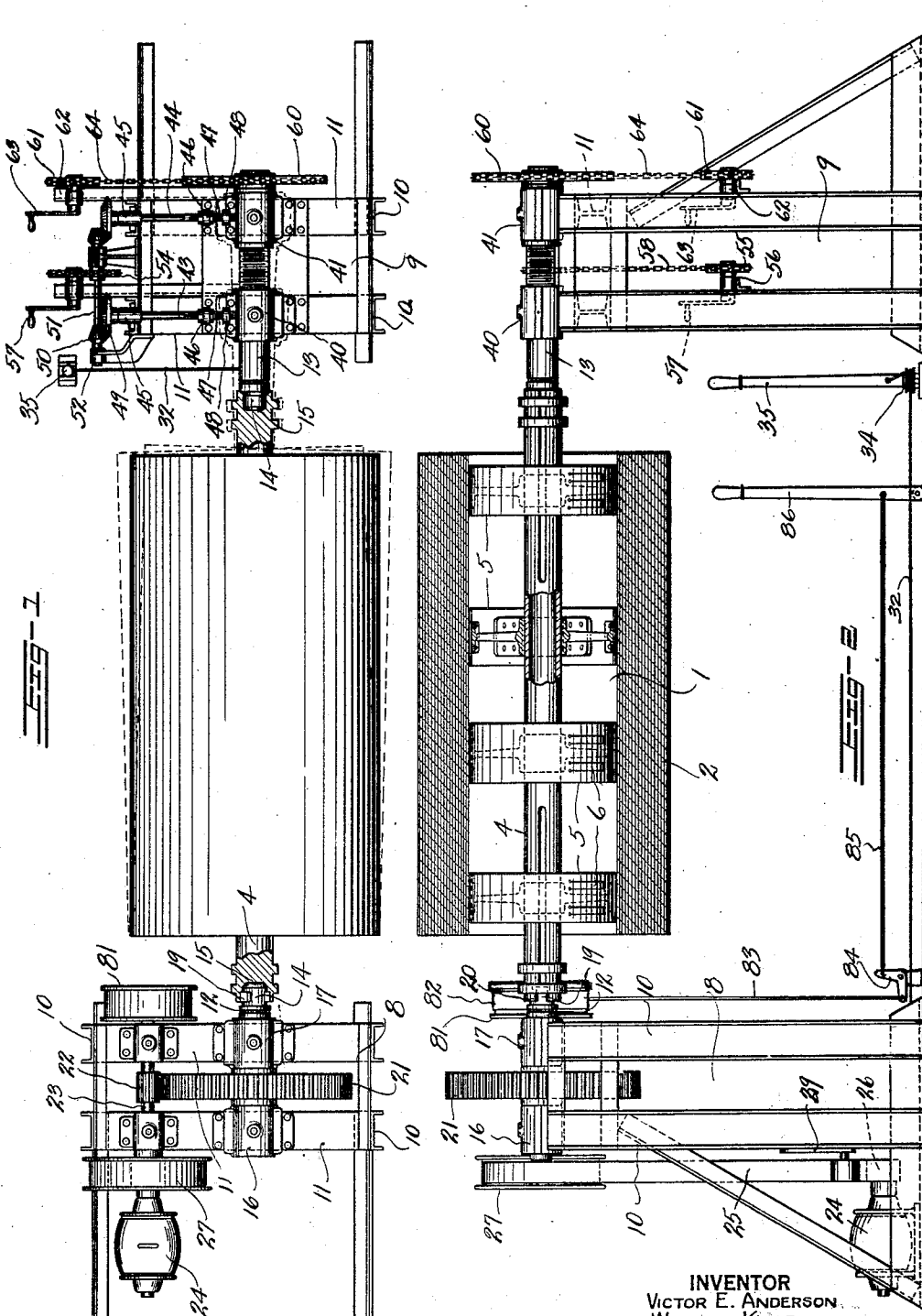
V. E. ANDERSON ET AL

1,848,299

VENEER WINDING MACHINE

Filed Oct. 16, 1929

2 Sheets-Sheet 1



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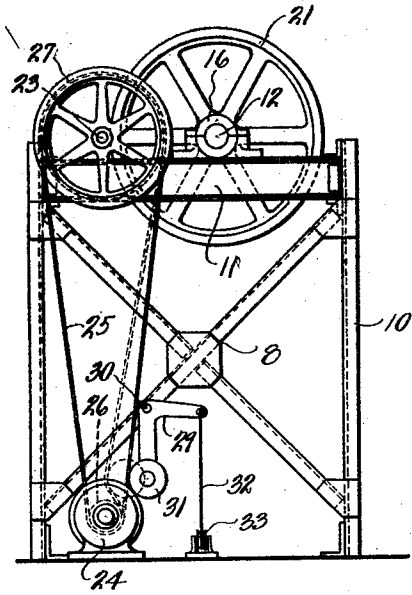


FIG-3

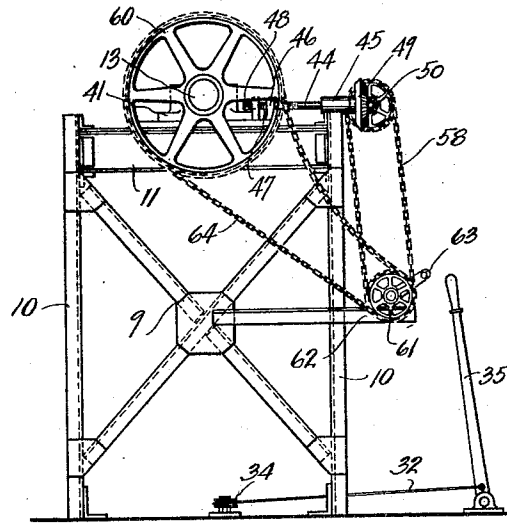


FIG-4

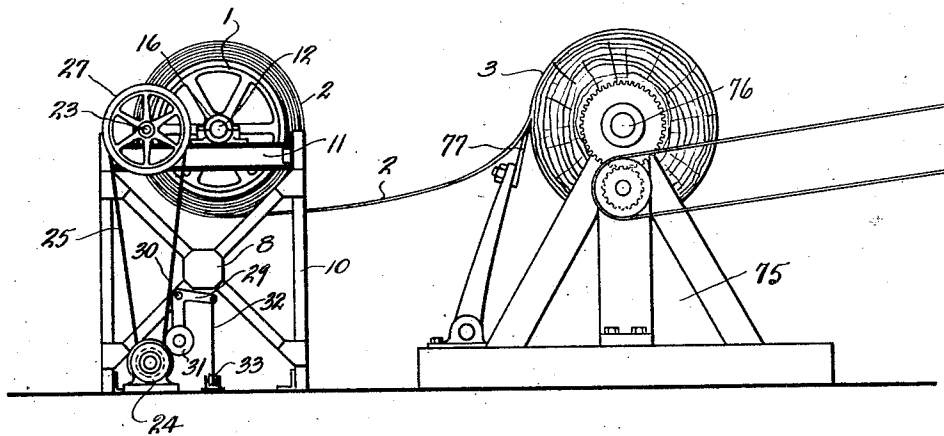
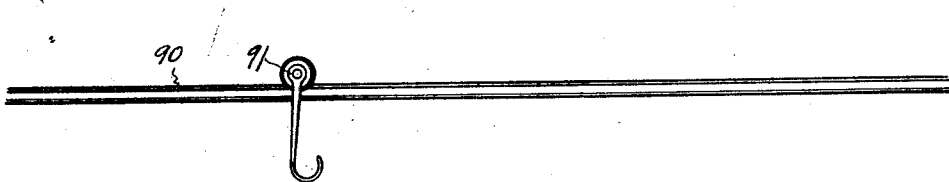


FIG-5

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# UNITED STATES PATENT OFFICE

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## VENEER WINDING MACHINE

Application filed October 16, 1929. Serial No. 399,978.

This invention relates to improvements in spooling machines, and particularly to machines for spooling veneer, or the like.

Explanatory to the invention, it will be first stated that it is now common practice in the manufacture of veneer, to transfer the strip as it is peeled from the log onto a belt conveyer operating over tables of considerable length, sometimes arranged in multiples of from four to six decks, each from one to several hundred feet long. Later the strips are removed from the tables to cutting and trimming machines and because of the brittleness of the product much waste of material occurs in handling due to cracks, splits, etc., which must be cut out. Also, there is much delay necessitated because of the care required in the handling of the long and fragile strips.

In view of the above and other disadvantages encountered in the usual way of handling veneer, it has been the object of this invention to provide means whereby they may be avoided; whereby the handling of the veneer strip may be expedited and the material safely and more satisfactorily transferred from the lathe or peeler to the trimming machines.

More specifically, the invention resides in the provision of a spooling machine adapted to operate in conjunction with the peeler for winding up the strip of veneer as it comes from the log; there being winding spools adapted to be removably mounted in the machine and onto which the veneer strips are wound, and means is provided for regulating the rate of winding so as to take up the strip as it comes from the peeler and there being means for adjusting the spool to correct any unevenness that might occur in the winding operation.

Other objects reside in the various details of construction and in the combination of parts and in their mode of operation, as will hereinafter be described.

In accomplishing these and other objects of the invention, we have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of a veneer spooling machine embodied by the present invention.

Figure 2 is an elevation, showing the winding spool in longitudinal section.

Figure 3 is an end view of the machine, showing the driving mechanism.

Figure 4 is an opposite end view illustrating the control mechanism.

Figure 5 is an end view showing the device as assembled with the peeler.

Referring more in detail to the drawings—

The present mechanism consists of the spool 1, onto which the veneer strip 2 is wound as it is peeled from the log, designated at 3 in Figure 5. This spool, in a preferred form, consists of a supporting, or central shaft 4, with a plurality of cylindrical frames 5 fixed coaxially thereto, as in Figure 2, and about which the veneer strip is wound; these frames being of equal diameter and each having spring clips 6 fixed thereto for attaching the inner end of the strip to the spool at the start of a spooling operation. The outer frames 5 are slidably keyed to the shaft and are adjustable thereon to accommodate strips of different width.

The spool is supported at its opposite ends from frames designated in their entirety at 8 and 9; each of which comprises suitable upright members 10 and horizontal cross beams 11, all of which are suitably connected and braced to form rigid and substantial frames. Mounted horizontally on these supporting frames in coaxial alinement, are spindle shafts 12 and 13 which have end portions 14 projected into end sockets 15 in the ends of the spool axle to support the spool.

The spindle 12 is designated as the driving spindle and it is revoluble in bearings 16 and 17 fixed on the cross beams 11 of the frame 8. It has lugs 19 at its inner end adapted to seat in notches 20 in the spool shaft to form a driving connection and it is equipped, between the bearings 16 and 17, with a relatively large gear wheel 21 which meshes with a smaller driving gear wheel 22 on a shaft 23 adapted to be driven by an electric motor 24 through the intermediacy of a belt 25 which operates about belt wheels 26 and 27 fixed, respective-

ly, on the motor shaft and on the shaft 23. A belt tightener consisting of a bell crank lever 29 pivotally mounted by a bolt 30, as in Figures 3 and 4, carries a wheel 31 at the end of one arm adapted to be pressed against the belt to tighten the latter to produce driving action. A cable 32 connects with the other arm of the bell crank and extends over suitable guide pulleys 33 and 34 to a pivotally mounted control lever 35 adjacent the other end of the machine. Manipulation of this lever, whereby the wheel 31 will be pressed against the belt, tightens the latter and the spool will then be driven. When the belt is loose no driving action takes place.

A speed control brake drum 81 is keyed or otherwise fixed on the shaft 23 and about this a brake band 82 is fitted. A rod 83 connects the band with one arm of a bell crank 84 which has its other arm connected by a rod 85 with a control lever 86. Preferably the lever 86 would be located near the lever 35 and the two are manipulated together to control the speed of winding.

The inner end of the spindle shaft 13 revolvably supports the end of the spool shaft. This spindle shaft is threaded through supporting bearings 40 and 41 that are slidably adjustable on the supporting frame 9 in a direction lengthwise of the supporting beams 11. This sliding adjustment is made in order to provide for shifting that end of the spool from or toward the peeler to correct any tendency of uneven winding of the veneer strip.

Adjustment of the bearings is accomplished by a pair of shafts 43 and 44 which are revoluble in supporting bearings 45 and 46 and have their inner ends threaded, as at 47, through lugs 48 formed on the bearings. Bevel gear wheels 49 are fixed to the outer ends of the shafts and these are adapted to be rotated together by bevel pinions 50 on a cross shaft 51 mounted in bearing brackets 52 and 53. A sprocket wheel 54 is fixed to shaft 51 in alinement with a sprocket wheel 55 supported at one side of the frame by a bracket 56 and adapted to be rotated by a crank 57 and a chain belt 58 extends about the sprockets. The construction is such that rotation of shaft 51, by means of the sprocket chain connection with crank 57, causes rotation of the shafts 43 and 44 and since they have no longitudinal movement and are threaded into lugs 48, they cause the shifting of bearings 40 and 41 to move that end of the spool accordingly. This adjustment is indicated in dotted lines in Figure 1. By this adjustment, tendency of the veneer strip to run toward one end or the other of the spool may be corrected and even winding maintained.

For adjusting the end of the spindle shaft 13 lengthwise into and from the end of the spool, we have fixed a sprocket wheel 60 at

the outer end of the shaft in alinement with a smaller sprocket wheel 61 supported from a bracket 62 at one side of the frame 9. This latter sprocket has a turning crank 63, and a chain belt 64 is extended about the sprockets 60 and 61 so that, by rotation of crank 63, the shaft 13 will be rotated and thereby threaded inwardly or outwardly.

In use, the spooling machine is located adjacent the peeler, as designated in its entirety at 75 in Figure 5. This machine embodies log mounting means 76 whereby the log is rotated against a knife 77 held adjustably against the log. The strip of veneer cut from the log is wound onto the spool by rotation of the latter through the driving connection with motor 24, and the rate of winding or the winding action is governed by the manipulation of the belt tightener by lever 35, and the brake by lever 86. Should the strip wind unevenly on the spool, correction is made by shifting of the bearings 40-41 which moves that end of the spool closer to or away from the peeler. When the spool is filled, it is released by withdrawing the end of shaft 13 from the spool end. A suitable track, as at 90 in Figure 5, and carriages 91 may be employed for transporting the filled spool to the clippers or trimming machine.

While we have not so described it, it is quite apparent and it is intended that machines of this same construction be employed also in connection with the clippers to unwind the roll as the strip of veneer is fed to these machines.

It is quite apparent that, in this way, a great saving in space is provided with a much easier and less expensive operation. It also provides for a great saving in veneer as this eliminates the cracking or splitting of dried sheets that occurs when the lengths of strips are limited to the length of the transfer tables or decks.

It is also to be noted that all the adjusting devices, viz., the cranks 57 and 63 and lever 35 are adjacent the same end of the machine, easily accessible to the operator, and that there is a perfect control of the winding operation at all times.

It is also to be understood that various details of construction may be changed without departing from the spirit of the invention.

Having thus described our invention, what we claim as new therein and desire to secure by Letters-Patent, is:

1. In a spooling machine for veneer or the like, a frame structure, a set of bearings fixed to the frame, another set of bearings spaced therefrom and slidably adjustable on the frame, a spindle shaft revolubly mounted in the fixed bearings, a spindle shaft threaded through the adjustable bearings and arranged substantially in axial alinement with

the revoluble spindle, a spool disposed between adjacent ends of said spindles and having end sockets receiving the spindle ends and having a driving connection with the revoluble spindle, means for driving the revoluble spindle to rotate the spool, means for bodily shifting the adjustable bearings laterally to vary the angular relation of the spool with respect to the line of delivery of veneer there-  
5 to and means for rotating the threaded spindle to adjust it endwise to release or retain the spool.

2. The combination with a veneer peeler, of a spooling machine comprising spool supporting and driving means, a spool mounted  
15 therein for receiving the veneer sheet from the peeler, a brake mechanism for controlling the speed of the driving means to take up the sheet as delivered, and means for adjusting  
20 the angular relation of the spool with respect to the line of delivery to maintain even winding and means for controlling the brake mechanism.

Signed at Tacoma, Washington, this 7th  
25 day of September, 1929.

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