

No. 703,079.

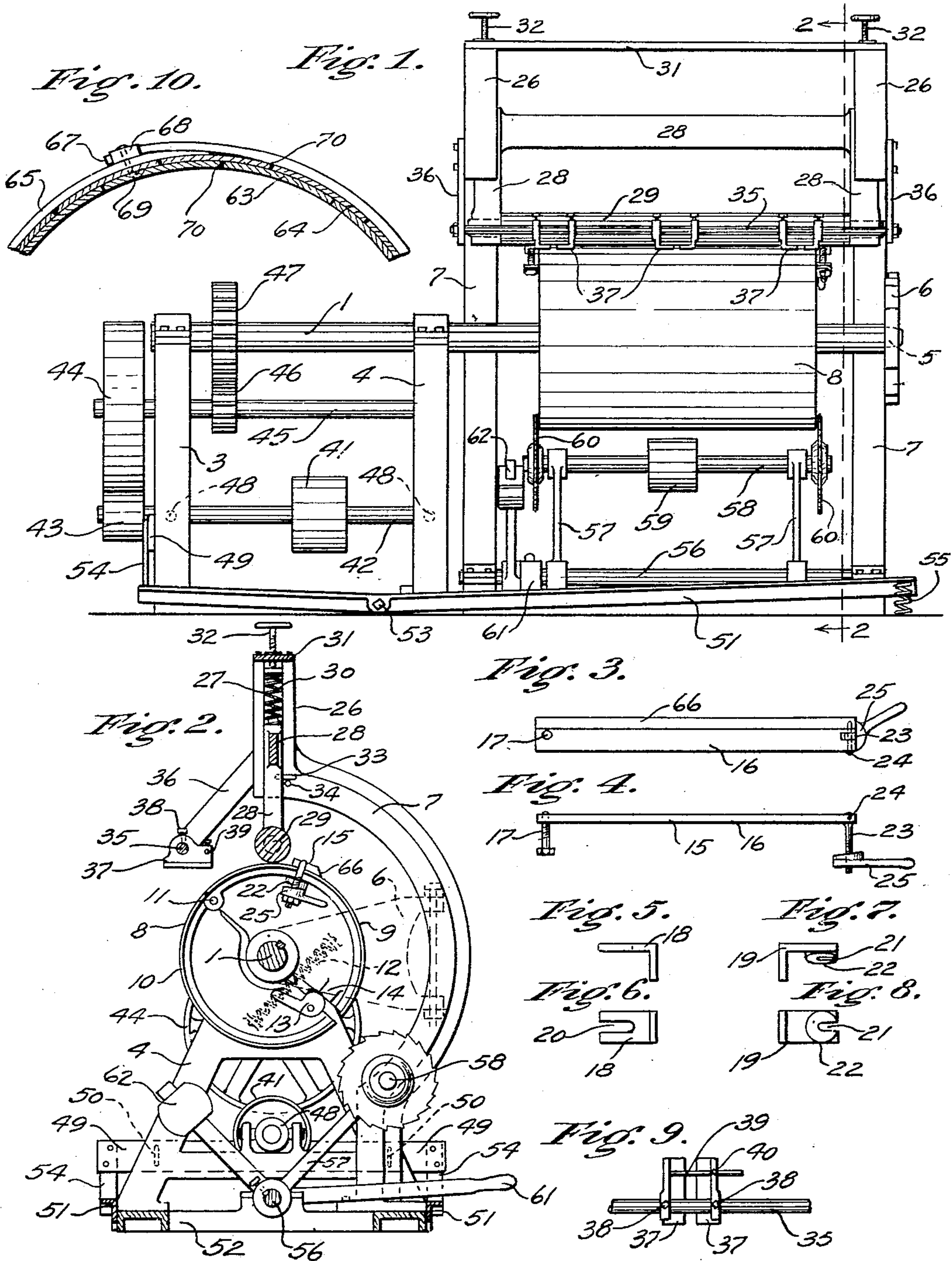
Patented June 24, 1902.

W. J. OTT.

DOUBLE STAVE VENEER BARREL MACHINE.

(Application filed Mar. 21, 1902.)

(No Model.)



Witnesses:
 Blanche Michael.
 Ray Rust.

Inventor,
 Willard J. Ott
 by Rummel & Rummel,
 his Attorneys.

UNITED STATES PATENT OFFICE.

WILLARD J. OTT, OF CHICAGO, ILLINOIS, ASSIGNOR TO VENEER BARREL MACHINE CO., OF CHICAGO, ILLINOIS.

DOUBLE-STAVE-VENEER-BARREL MACHINE.

SPECIFICATION forming part of Letters Patent No. 703,079, dated June 24, 1902.

Application filed March 21, 1902. Serial No. 99,326. (No model.)

To all whom it may concern:

Be it known that I, WILLARD J. OTT, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Double-Stave-Veneer-Barrel Machines, of which the following is a specification.

My invention relates to veneer-package-forming machines in which the veneering is wound upon a collapsible drum coacting with an outer compression-roller.

The main object of my invention is to provide an improved machine which is particularly adapted for constructing double-stave veneer barrels and which includes improved means for securing veneering to a revoluble drum and for properly feeding stiffening-hoops to said veneering while same is being wound about said drum.

Other objects of the different features of my invention will be understood by the following description, with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of a machine constructed according to my invention. Fig. 2 is a vertical section of the same along the line 2 2 of Fig. 1. Fig. 3 is a top plan of a clamping member adapted for securing veneering to the revoluble drum. Fig. 4 is a side elevation of the same. Figs. 5, 6, 7, and 8 are detail views of the lugs to which the clamping member shown in Figs. 3 and 4 is secured. Fig. 9 is a top plan of one of the hoop-guides. Fig. 10 is a transverse section, partly broken away, of a veneer package of the type which is to be made by the machine herein described.

In the construction shown the drum-shaft 1 is journaled in one end of the members 3 and 4 of the supporting-frame and is supported near its other end by a bearing 5 in the gate 6, which is hinged to one of the members 7 of the supporting-frame. A collapsible drum 8 is keyed to the shaft 1. The drum 8 consists of two semicylindrical sections 9 and 10, hinged together at 11, the part 9 being secured to the shaft 1 and the part 10 being movable about the hinge 11. A spring 12 normally urges the two parts 9 and 10 toward

each other. The cam 13 is pivoted to the part 10 and is adapted to bear upon the lug 14 of the part 9. As shown in Fig. 2, the drum is expanded, so that its periphery is in the form of a true cylindrical surface.

The package-forming material is secured to the drum 8 by means of the clamping member 15, which consists of the bar 16, which is somewhat longer than the drum 8 and which is movably secured to the part 9 of the drum 8. Tapped into one end of the bar 16 is a bolt 17, which engages a slotted lug 18, which is secured to one end of the drum 8. A similar lug 19 is secured to the other end of the drum 8 at a point directly opposite to the lug 18. The lug 18 is provided with a slot 20 and the lug 19 is provided with a similar slot 21. The inner face of the lug 19 is beveled, as shown, to form the wedge-shaped cam 22. A bolt 23 is pivoted at 24 to the bar 16 and engages the screw-threaded cam 25, which is adapted to coact with the cam 22 on the lug 19, and thereby draw the bar 16 toward the drum 8.

The members 7 are preferably curved, as shown, to permit the removal endwise of a package from the drum 8. The upper parts 26 are provided with vertically-extending ways 27, within which is slidably mounted a cross-head 28. A roller 29 is journaled in the cross-head 28 and is disposed in parallel relation to the drum 8. Springs 30, seated in each of the ways 27 and bearing upon the cross-head 28 and the cross-bar 31 of the supporting-frame, normally urge the roller 29 against the drum 8. Adjusting-screws 32 are provided for varying the tension of the springs 30. Downward movement of the compression-roller is limited by means of the stops 33, which engage the pins 34 on the members 7.

A shaft 35 is secured against rotation in the depending arms 36, which are in turn secured to the members 7 of the frame. The hoop-guides, which consist of pairs of angle-pieces 37, are mounted upon the shaft 35 and are adjustable to any angular inclination and also to any position along the shaft 35. The angle-pieces 37 are secured against movement on the shaft 35 by means of set-screws 38, and the members of each pair of angle-pieces

are kept in alinement by means of a bar 39, which is rigidly secured to the other by means of the set-screws 40.

Power is transmitted to the machine by a belt engaging the pulley 41, which is mounted on a shaft 42 and which connects with the main shaft 1 by means of the friction-wheels 43 and 44, the shaft 45, and the gears 46 and 47 in the order mentioned. The shaft 45 is journaled in fixed bearings in the members 3 and 4 of the frame. The shaft 42 is mounted in pivoted bearings 48, one of which is secured to the member 4 and the other of which is secured to the horizontal bar 49. The bar 49 is provided with vertically-disposed slots 50, by which it is bolted to the member 3 of the supporting-frame. A lever 51 is provided at each side of the bed-plate 52 of the supporting-frame and is fulcrumed thereto at 53. Each end of the bar 49 is provided with an upright 54, which engages one end of one of the levers 51. The other end of each of the levers 51 is normally raised by the spring 55, and the weight of the shaft 42 and its connecting parts normally holds the friction-wheels 43 and 44 out of contact with each other.

A shaft 56 is journaled in the lower part of the frame and has secured thereto a pair of arms 57, to which is journaled a shaft 58. Keyed to the shaft 58 is a pulley 59, which connects with a belt and shafting (not shown in the drawings) and by means of which power is supplied to the shaft 58. This shaft 58 carries at each end a circular saw 60. A lever 61 is keyed to the shaft 56 and provides means whereby the shaft 56 may be rocked on its axis. The counterweight 62 serves to balance the saws 60 and their driving mechanism.

The operation of the device shown is as follows: Assume that the drum is expanded, as shown in Fig. 2, and that the clamping member 16 has been previously removed. The angle-pieces 37 of the hoop-guides are adjusted to conform with the width and desired location of the stiffening-hoops of the veneer package. One of the levers 51 is forced down by the foot of the operator. This brings the friction-wheels 43 and 44 into contact with each other and causes the drum 8 to revolve. Material for stiffening-hoops is passed through each pair of the angle-pieces 37, and two layers of staves are fed alternately between the compression-roller 29 and the periphery of the drum 8. The relative position of the layers of staves and the hoops is shown in Fig. 10, in which 63 and 64 are respectively the inner and outer layers of staves and 65 is a stiffening-hoop surrounding said staves. The joints between the staves in the inner and outer layers are staggered, as shown in Fig. 10. As soon as a sufficient length of veneering has passed the compression-roller 29 pressure is released from the lever 51, and the drum 8 stops. The clamping member 15 is now secured over the veneering by bringing the bolt 17 into engagement with the lug

18 and swinging the bolt 23, together with the cam 25, into engagement with the lug 19. The length of the bolts 17 and the position of the cam 25 on the bolt 23 having been previously adjusted, a half-turn of the cam 25 tightly clamps the bar 16 and secures the veneering against the drum 8. It is preferable to clamp the bar 16 into such position that the veneering projects somewhat beyond the beveled edge 66 of the bar 16. Pressure is again exerted on one of the levers 51, and the staves are fed to the drum, as hereinbefore described. When the clamping-bar 16 has arrived at a position at the front of the compression-roller 29, the end of the veneering extending beyond the clamping-bar will have passed under the compression-roller 29. The rotation of the drum is now stopped and the bar 16 removed. The overlapping ends 67 of the hoops 65 are wrapped with sheet metal 68 and securely nailed in place, as indicated at 69 in Fig. 10. Nails are now driven through the hoops 65 and the adjacent veneering at their joints around the periphery of the drum 8 until all parts are properly secured. The drum is now collapsed, and the gate 6 is thrown open and the package removed toward the right of Fig. 1. The stops 33 prevent the compression-roller 29 from bearing on the package after the drum has been collapsed.

It will be seen by reference to Fig. 10 that in the package constructed by this machine the additional thickness and projecting edges due to overlapping joints in the veneering is avoided, since two layers of veneering are employed and the staves comprising each layer are butted edge to edge, as at 70, and the joints of the two layers are respectively staggered. This permits a perfectly-circular head to be used and avoids apertures at the side of said head through which fine grain material will sift out of the package.

It will be seen that numerous details of the construction shown may be altered without departing from the spirit of my invention. I therefore do not confine myself to such details, except as hereinafter limited in the claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a veneer-barrel machine, the combination of a frame; a revoluble collapsible drum journaled therein; a clamping member extending across the face of the drum parallel with its axis and adjustable toward and away from the periphery of said drum; said clamping member being arranged to permit a sheet of veneering to be passed between same and the periphery of the drum, being revoluble with said drum, and having at each end of the drum an arm extending toward the axis of said drum, and one of said arms being provided with a cam; a lever fulcrumed on said drum, having thereon a cam adapted to cooperate with the cam on said arm for urging said clamping member toward the face

of the drum; and means for rotating, collapsing and expanding said drum.

2. In a veneer-barrel machine, the combination of a frame; a revoluble collapsible drum journaled therein; a clamping member extending across the face of the drum parallel with its axis and adjustable toward and away from the periphery of said drum; said clamping member being arranged to permit a sheet of veneering to be passed between same and the periphery of the drum, and being revoluble with said drum; a depending member rigidly supported by the upper part of the frame and extending near the upper surface of said drum, a rod supported by said depending member and extending parallel with the axis of the drum; a plurality of hoop-guides, each having rigidly secured at its upper part a collar mounted on said rod, and

provided with securing means adapted to permit said hoop-guides to be adjusted longitudinally of said rod and tilted on said rod to different inclinations; said hoop-guides being suitably arranged to guide, toward the drum, hoops passed under said rod; said frame being free from obstructions immediately under said guides to permit sheets of veneering of the full width of the drum to be passed under said guides toward and upon the drum; and means for rotating, collapsing and expanding said drum.

Signed at Chicago this 19th day of March, 1902.

WILLARD J. OTT.

Witnesses:

EUGENE A. RUMMLER,
WM. R. RUMMLER.