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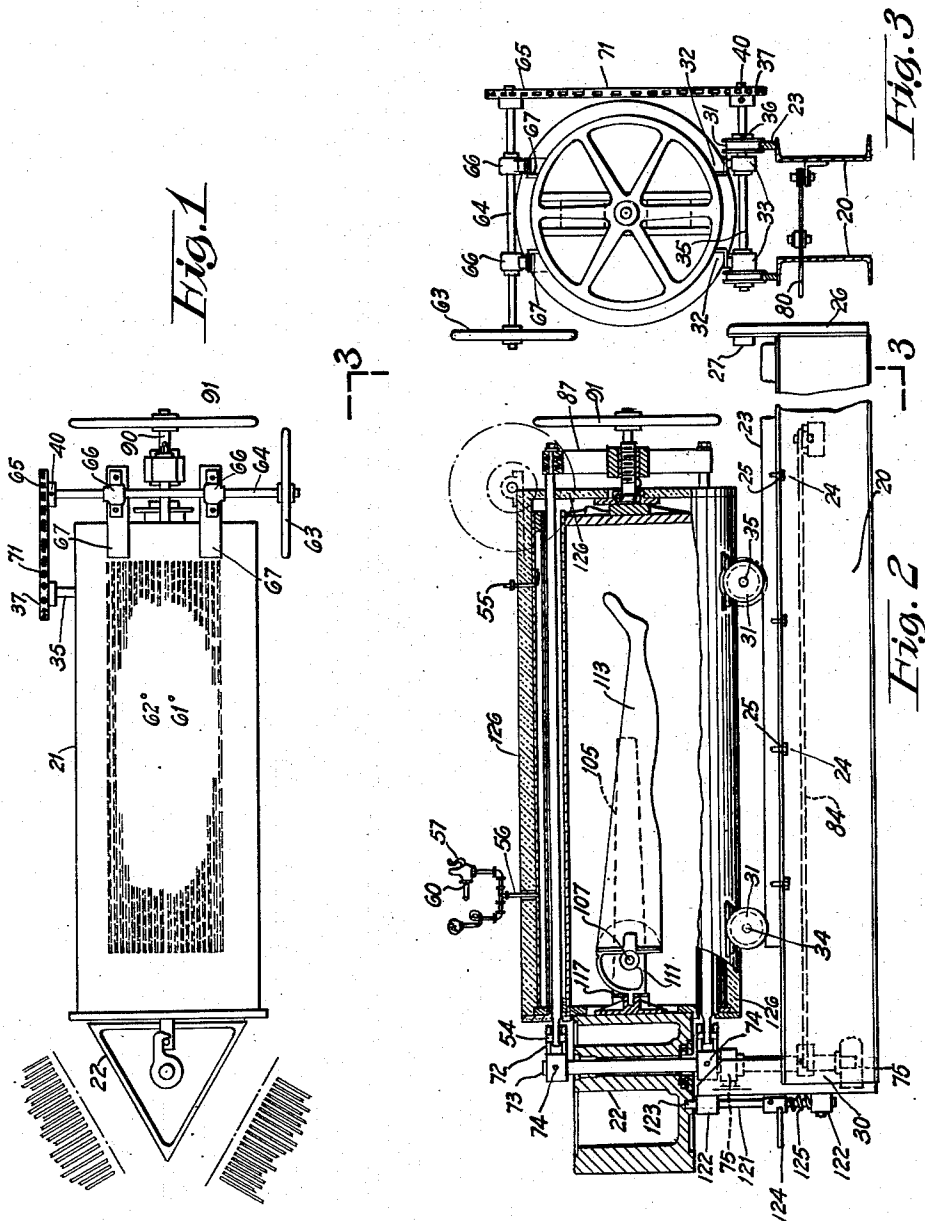
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2,244,472

MACHINE FOR BOARDING FABRIC ARTICLES

Filed Nov. 24, 1939

5 Sheets-Sheet 1



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June 3, 1941.

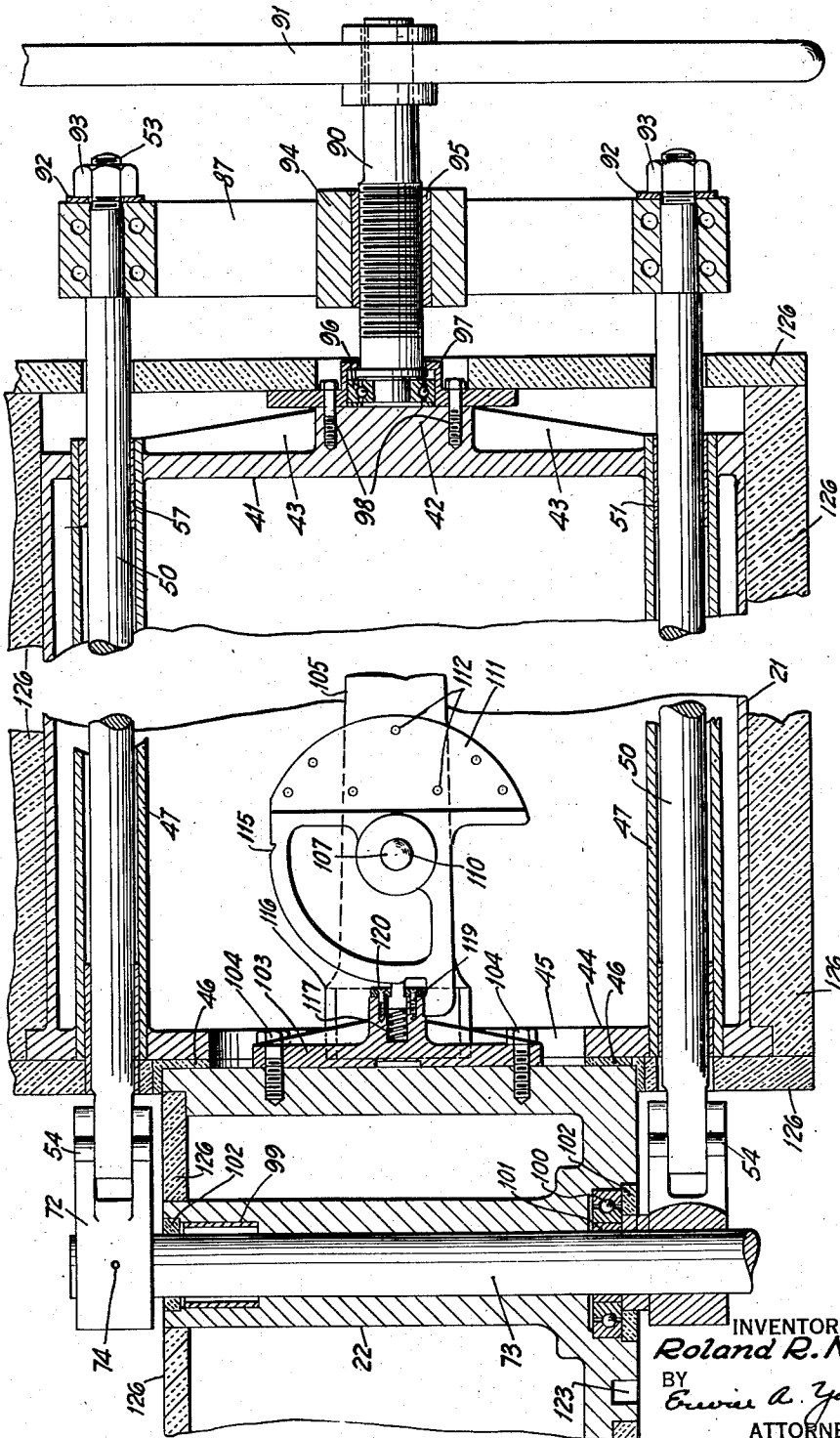
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MACHINE FOR BOARDING FABRIC ARTICLES

Filed Nov. 24, 1939

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June 3, 1941.

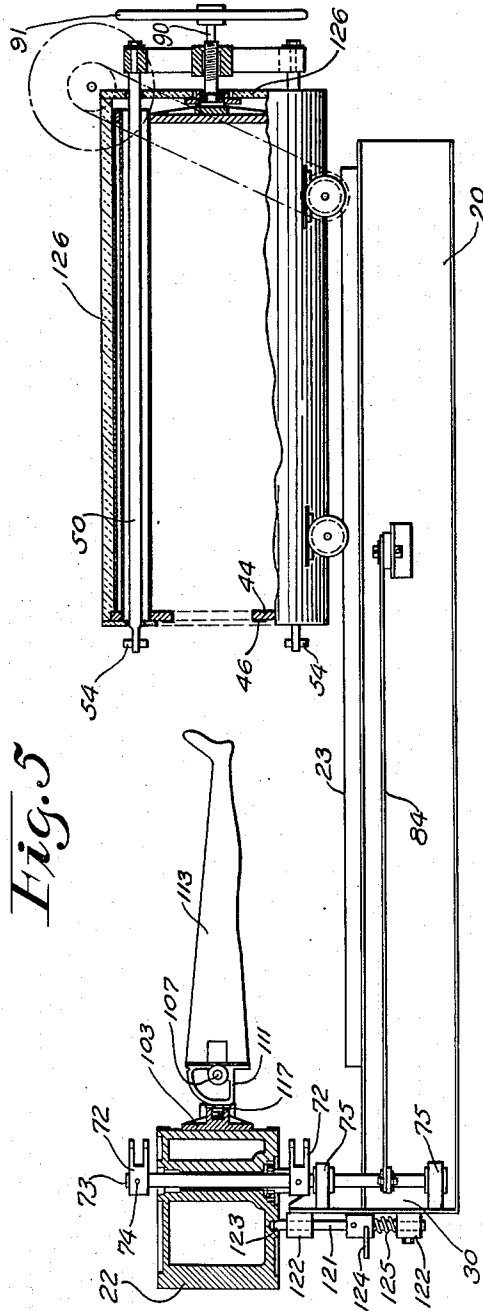
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2,244,472

MACHINE FOR BOARDING FABRIC ARTICLES

Filed Nov. 24, 1939

5 Sheets-Sheet 3



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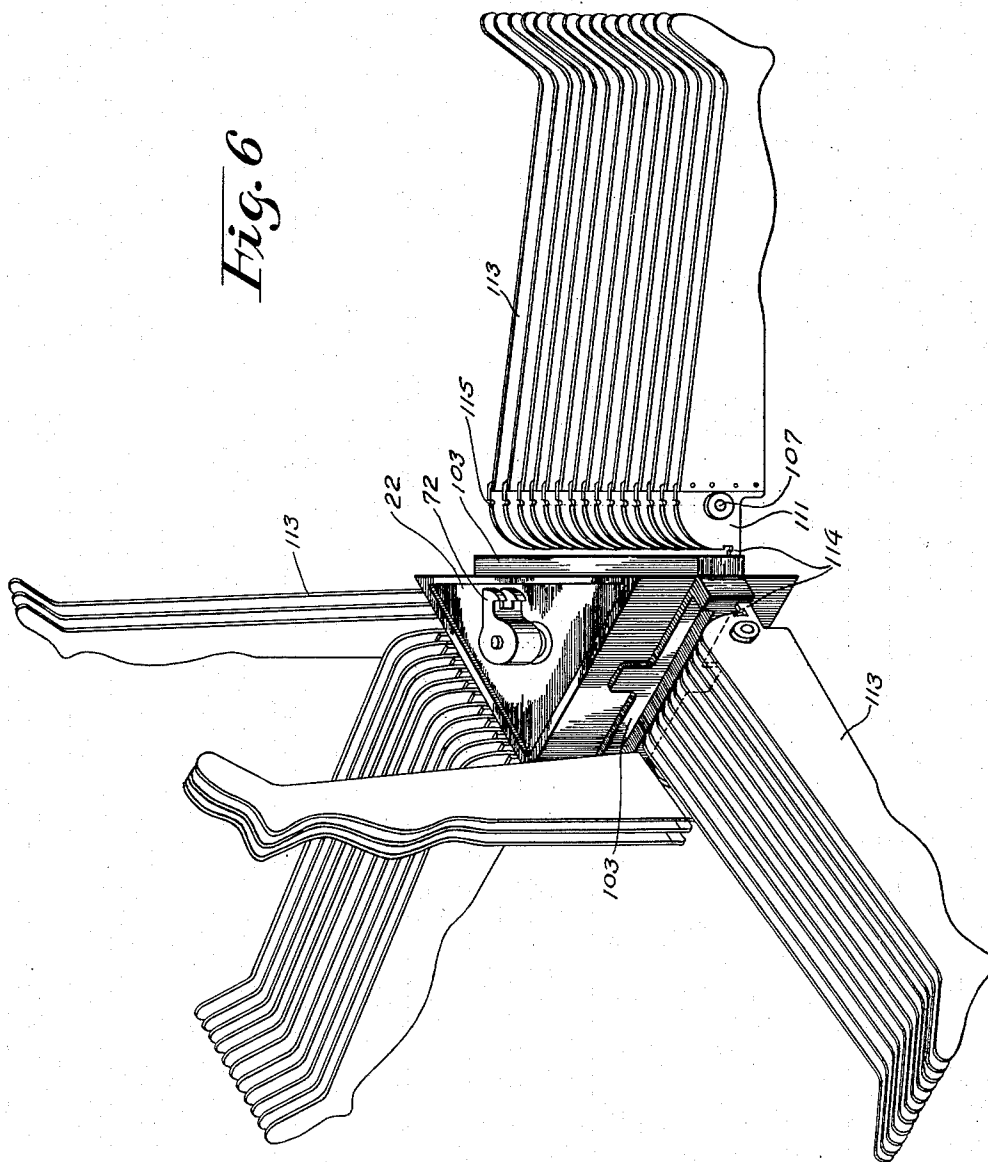
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MACHINE FOR BOARDING FABRIC ARTICLES

Filed Nov. 24, 1939

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Fig. 6



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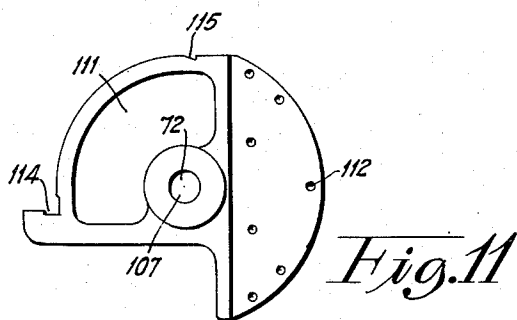
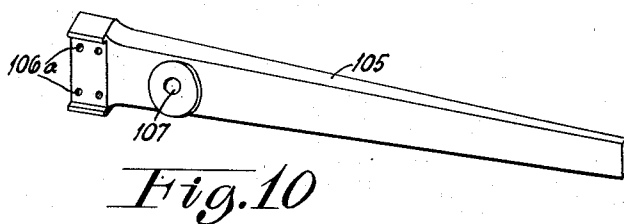
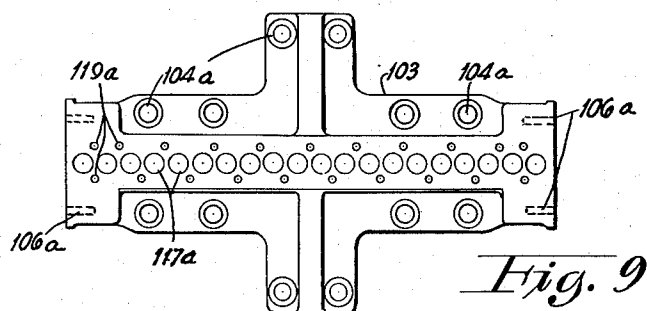
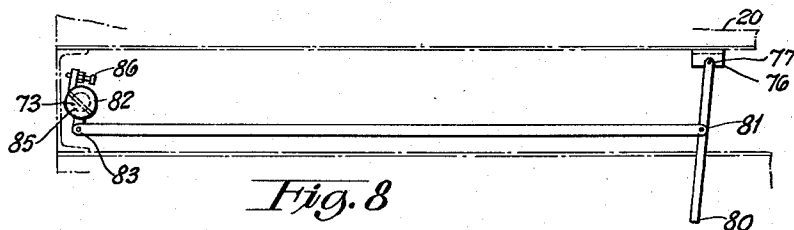
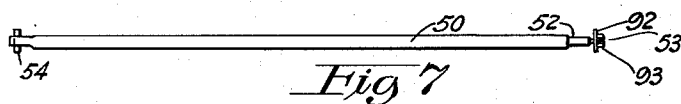
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MACHINE FOR BOARDING FABRIC ARTICLES

Filed Nov. 24, 1939

5 Sheets-Sheet 5



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UNITED STATES PATENT OFFICE

2,244,472

MACHINE FOR BOARDING FABRIC
ARTICLES

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Application November 24, 1939, Serial No. 305,947

11 Claims. (Cl. 223—76)

This invention relates to apparatus for treating textiles which are capable of being set. More particularly, this invention relates to apparatus for treating textiles comprising synthetic filaments or fibers which are capable of being set.

Hollow or tubular textile products, such for example as hosiery and the like, especially those knit from natural silk or artificial cellulosic fibers, in order to be readily marketed, must, in addition to having a desirable finish, an evenness of sheen, and a soft touch, be free of any creases or wrinkles. Heretofore, wrinkle-free hosiery could be obtained by subjecting the article, as a final processing step, to a boarding treatment. This, in most instances, consisted of positioning the hosiery in a moist condition on shaping boards under tension and drying same. The drying sets the hosiery to the shape of the board and is accomplished by either internally heating the shaping board or by applying heat externally to the hosiery. Textile articles composed of natural silk or artificial cellulosic fibers, when subjected to such a treatment, were freed from wrinkles and creases caused by the dyeing and other preceding process steps, and the articles exhibited an excellent appearance for sales purposes.

The sequence of operations in the previously known commercial manufacture of hosiery comprises knitting, dyeing, and boarding. In order to dye hosiery composed of natural silk or artificial cellulosic fibers or filaments, it is necessary to subject them to a hot-wet treatment. During this and the preceding operations, the stockings will, in all probability, be creased or wrinkled. Subjecting creased or wrinkled hosiery composed of natural silk or artificial cellulosic fibers or filaments to the hot-wet treatment necessary for dyeing does not permanently set the creases or wrinkles therein, and such creases or wrinkles that occur during this and the preceding operations will be removed therefrom by the subsequent boarding operation.

However, in the treatment of products knit from threads composed of synthetic filaments or fibers, such for example as synthetic linear polyamides, the prior art methods hereinbefore described cannot be employed commercially. Knit products comprising synthetic linear polyamides once creased or wrinkled prior to or during a hot-wet treatment, such for example as occurs in the dyeing operation, will not readily be freed of such creases and wrinkles, and it is only after an extremely long and more drastic hot-

wet treatment that the creases or wrinkles present in such products will be removed therefrom. Such extremely long and drastic treating steps are most uneconomical, and when employed, increase the cost of the finished product.

It has been discovered that textiles, such as stocking, comprising filaments or fibers of synthetic linear polyamides should preferably be set before any creases or wrinkles are present therein. Such a set may be obtained by subjecting wrinkle-free hosiery positioned on a form, board, or the like under tension to a hot-wet treatment. Textile products comprising synthetic linear polyamides so treated will remain free from permanent or semi-permanent wrinkles or creases, even though subsequently subjected to the conventional hot-wet dyeing operation.

This invention has as an object a new apparatus for treating textile products which are capable of being set. A further object is a new apparatus for setting knit textile products comprising synthetic fiber or filaments which are capable of being set. A still further object is a new apparatus for setting textile products comprising fibers or filaments of synthetic linear polyamides. Another object is a new apparatus for preventing the formation of permanent creases or wrinkles in knit textile products comprising synthetic fibers and filaments. Another object of this invention is a new apparatus for preventing the formation of permanent creases or wrinkles in knit textile products comprising synthetic filaments or fibers, such for example as synthetic linear polyamides. Another object is a new apparatus for setting a plurality of textile products comprising synthetic filaments or fibers simultaneously. A still further object is a new apparatus for setting a plurality of stockings comprising synthetic linear polyamides simultaneously. Other objects will appear hereinafter.

These objects are accomplished in the present invention by the discovery of a new and improved board-setting apparatus.

The invention fully comprehends the foregoing and other objects all of which will be explained in detail and more readily understood when read in conjunction with the accompanying drawings which illustrate one practical embodiment thereof; it being therefore obvious that other arrangements and applications of the invention may be resorted to without departing from the spirit and scope of the concluding claims.

In the drawings:

Figure 1 represents a plan view of the apparatus locked in position (insulation omitted);

Figure 2 is a front elevation of Fig. 1 partly in section (insulation shown);

Figure 3 is a section on line 3—3, Fig. 2;

Figure 4 is an enlarged elevation of the tank and part of the mounting plate locked in position partly in section (insulation shown);

Figure 5 is an elevation of the extended apparatus partly in section;

Figure 6 is a perspective view of the mounting plate and stocking board;

Figure 7 is a front elevation of a locking bar;

Figure 8 is a plan view of the remote control mechanism;

Figure 9 is a plan view of the mounting base;

Figure 10 is an elevation of a side bar, and

Figure 11 is a plan view of a swing plate.

Like numerals of reference refer to like parts in the several figures.

Referring more in detail to the drawings, one embodiment of the invention is shown. The apparatus comprises essentially three parts: that represented generally by 20 which is any suitable supporting base, that represented generally by 21 which is a movable tank of sufficient strength and tightness to withstand superatmospheric pressures, and that represented generally by 22 which is a rotating mounting plate.

Attached to the top of the supporting base 20 (Figs. 2, 3, and 5) by any suitable means are tracks 23. In the present embodiment of the invention, the tracks are fastened to the top of the supporting base by bolts 24 (Fig. 2) and lock washers 25. Fastened to the rear end of the supporting base is a bumper support 26, and attached to the bumper support are bumpers 27. The head end of the supporting base has attached thereto a mounting plate shaft support 30 (Figs. 2 and 5), said member supporting the weight of the rotating mounting plate and the parts attached thereto.

Tank 21 is horizontally movable on tracks 23 by means of wheels 31 (Figs. 2, 3, and 5), said wheels being fastened to the underside of the tank by tank pillow block supports 32 (Fig. 3), tank pillow blocks 33, and axles 34 and 35 (Fig. 2). The flanges of the wheels 31 fit over the tracks 23 and prevent the tank from becoming derailed. Bumper support 26 (Fig. 2) and bumpers 27 prevent the tank from rolling off the tracks at the rear end of the supporting base. Wheels 31 are attached to the axles 34 and 35 by pins 36 and are made to rotate therewith. The rear end axle 35 is made longer than the head end axle and has attached thereto, at one end, a sprocket 37 (Figs. 1 and 3), said sprocket being attached to said axle by a sprocket pin 40 so that both axle and sprocket rotate together.

The rear end of tank 21 is provided with a circular head plate 41 (Fig. 4 for enlarged detail), the diameter of which is substantially the same as the inside diameter of the tank. This plate is fitted into the cylindrical shell of the tank substantially close to the end and is welded thereto so that it forms a pressure-tight joint between the cylindrical shell of the tank and the rear end plate. Welded to the plate 41 are a retainer support 42 and reinforcing ribs 43.

The head end of the tank 21 is provided with a head plate 44 (Fig. 4 for enlarged detail), said plate being circular and substantially larger in diameter than the outside diameter of the cylindrical body of the tank. This plate is welded to

the end of the tank and has a rectangular opening 45 cut therein. A gasket 46 is fastened to the head plate around the opening 45 and provides a means for forming a tight joint between the movable tank 21 and one face of the mounting plate 22.

Circular hollow tubes 47 (Fig. 4), the length of which are substantially the same as the length of the tank 21, are fitted into the tank. These tubes are in the same vertical plane and are supported at their ends by plates 41 and 44. Locking bars 50 (Figs. 4 and 7), substantially longer than the tubes, are placed therein. Bushings 51 (Fig. 4) are fitted inside the tubes 47 and provide a support for the locking bars 50. The outside diameter of the locking bars is substantially smaller than the inside diameter of the bushings so that the bushings may slide thereon. This construction enables the tank 21 to move in a horizontal direction along the locking bars 50. One end of the locking bar (Fig. 7) has a shoulder 52 and thread 53 cut thereon, while the other end is flattened at the top and bottom and has fastened thereto, by means of a heavy force fit through the flattened section, a locking pin 54.

The setting agent for treating the products while positioned inside of the tank is admitted into the tank through an inlet connection 55 (Fig. 2) and is exhausted therefrom at the outlet connection 56 by means of hand valve 57 and discharge drain 60. In order to facilitate the heating of the inside of the tank 21 so as to speed up the treating operation, a heating element, such for example as steam coils, may be installed therein. Temperature and pressure recorders for the tank are provided at connections 61 and 62 (Fig. 1).

In order to admit the stocking forms or boards into the inside of the tank for treatment and remove same therefrom after the setting operation is completed, it is necessary to have the tank readily movable. Such movement takes place, in the present embodiment of this invention, on tracks 23 and is provided by handwheel 63 (Figs. 1 and 3), said wheel being connected to a handwheel shaft 64 and made to rotate therewith. A sprocket 65 is attached rigidly to one end of the shaft 64 so that both sprocket and shaft rotate together. Shaft 64 is supported in shaft pillow blocks 66, said pillow blocks being attached to shaft pillow block supports 67 which are in turn welded to the top of tank 21. Sprocket 65 is in the same vertical plane as sprocket 37 and is made to rotate therewith by the travel of a sprocket chain 71.

In order to lock the mounting plate 22 to the movable tank 21, a locking device is provided. This mechanism consists of locking hooks 72 (Figs. 2, 4, and 5) which are fastened to a mounting plate shaft 73, said hooks being attached to said shaft by pins 74 so that the locking hooks rotate with the mounting plate shaft 73. The mounting plate is supported by and rotates in pillow blocks 75 (Figs. 2 and 5), said pillow blocks being fastened to the mounting plate shaft support 30. Rotation of the mounting plate shaft is obtained by means of a remote control mechanism. This mechanism is shown in detail in Fig. 8 and consists of a support 76 fastened to the supporting base 20 at any convenient location, a pivot pin 77, a control lever 80, a control lever pin 81, a mounting plate shaft bushing 82, a mounting plate shaft bushing pin 83, and a connecting rod 84. The mounting plate shaft bushing 82 is rigidly attached to the mounting plate

shaft 73 by pins 85 and is further provided with an adjustable stop 86. When the control lever 80 is moved horizontally about the pivot pin 77, the remote control mechanism causes the mounting plate shaft 73 to turn in the pillow blocks 75, and as this shaft rotates, the locking hooks 72 rigidly fastened thereto, also rotate. In order to lock the tank 21 to the mounting plate 22, the tank is moved horizontally along tracks 23 by means of handwheel 63 until the locking pins 54 in the locking bars 50 are substantially in line with the locking hooks 72. Movement of the control lever 80 causes the locking hooks 72 to become engaged around the locking pins, thus securely holding the tank in place. In order to provide a tight connection between the head end of the tank 21 and one of the faces of the mounting plate 22 so that superatmospheric pressure may be maintained in the tank, a final adjustment is provided. This adjustment, in the present embodiment of this invention, is shown in detail in Fig. 4 at the rear end of the tank and comprises a beam 87, a screw 90 and a handwheel 91.

The beam 87 is attached to the rear end of the locking bars 50, said beam being rigidly attached thereto by lock washers 92 and nuts 93. A bushing support 94 is fastened to the beam 87 substantially in the center thereof, and fitted into the bushing support is a threaded bushing 95. The threads on the screw 90 fit into and co-operate with the thread in the bushing 95. One end of the screw 90 has the handwheel 91 attached thereto so that any rotation of the handwheel causes rotation of the screw. The head end of the screw has fitted thereon the inner race of a ball bearing 96. The outer race of said ball bearing is fitted to a ball bearing retainer 97, said retainer being attached to the retainer support 42 by bolts 98. Final adjustment for maintaining pressure in the tank is obtained by rotating handwheel 91. This causes the tank 21 to slide along the locking bars 50 and forces a tight joint between the gasket 46 and the face of the mounting plate 22.

In order that the cycle of operation for treating the textile products may be economically carried out, a mounting plate with three equal faces, each face supporting 20 stocking forms or boards, is provided. This gives the operator time to load and remove the treated stockings during the treating period so that one operator is continuously kept busy. Such a procedure necessitates a readily rotatable mounting plate. This movement is accomplished in the present embodiment by the rotation of the mounting plate 22 about the mounting plate shaft 73 (Fig. 4) on multi-roller bearing 99 and ball bearing 100. The inner race of the ball bearing 100 is attached to bushing 101 which is in turn fitted onto the mounting plate shaft 73, while the outer race of the bearing is fitted onto the mounting plate 22. These bearings are provided with oil retainers 102.

Attached to each face of the mounting plate 22 is a mounting plate base 103 (Figs. 4 and 9), said base being attached thereto by means of mounting plate bolts 104 which engage in mounting plate bolt holes 104a (Fig. 9). Fastened to each end of the mounting plate base 103 are side bars 105 (Figs. 2, 4, and 10), said bars being rigidly attached thereto by side bar bolts which fit into side bar bolt holes 106a (Figs. 9 and 10). These side bars 105 provide supports for the swing plate shafts 107 (Figs. 2, 4, and 5) and also

provide a means for rotating the mounting plate 22 about the mounting plate shaft 73. Rotation of the swing plate shaft 107 in the side bars 105 is prevented by side bar pin 110 (Fig. 4). Attached to the swing plate shafts 107 and supported thereon are swing plates 111 (Figs. 4 and 11). In the present embodiment, 20 such plates are supported on each swing plate shaft. Fastened to each swing plate by means of socket shoulder screws 112 (Fig. 4) are stocking forms or boards 113 (Figs. 2 and 6), one for each swing plate. The stocking forms or boards and swing plates are free to rotate on the swing plate shaft 107 and can assume either a horizontal or vertical (upward) position. The stocking boards in their horizontal position are prevented from assuming a lower position by means of a stop 114 (Figs. 6 and 11) on the swing plate which comes in contact with the mounting plate base 103. The stocking boards may be maintained in a vertical position by rotating the stocking boards about the swing plate shaft 107 until the notch 115 (Fig. 4) in the swing plate 111 is engaged in the latch 116, said latch being forced outward into said notch by a spring 117 (Figs. 2, 4, and 5) which is positioned in the recess 117a (Fig. 9) of the mounting plate base 103. Latch retainer 120 holds the latch in place. In the present embodiment of the invention, the latch retainers 120 are rigidly fastened to the mounting plate base 103 by means of latch retainer screws 119 (Fig. 4) which fit into threaded holes 119a (Fig. 9).

The mounting plate 22 is locked into position by means of an index pin 121 (Figs. 2 and 5) and index pin guides 122. The bottom face of the mounting plate 22 is provided with index pin stops 123 spaced 120° apart, into which the index pin engages. These holes are so spaced that, when the index pin is engaged in one of the index pin stops, one face of the mounting plate is parallel to the head plate 44, so that the tank may be brought in contact with the face of the mounting plate. In order to rotate the mounting plate 22 about the mounting plate shaft 73, a downward force is applied to an index pin lever 124. This disengages the index pin from the index pin stop. The mounting plate is then rotated, usually by means of a force against one of the side bars 50 until the index pin becomes engaged in the next index pin stop. A spring 125 maintains the index pin 121 against the lower face of the mounting plate 22, and when the index pin 121 is over the index pin stop in the mounting plate, it engages therein and locks the mounting plate so that further rotation will not take place. In order to prevent excessive radiation of heat during the treating operation, the apparatus may be insulated with any suitable lagging 126.

From the foregoing disclosure, it is believed that the operation of the stocking board setting machine herein described will be readily understandable, but briefly, by way of repetition, the following explanation is given: Stockings which preferably have not been subjected to a hot-wet treatment are mounted on stocking forms under tension, the stocking forms being maintained in a vertical position while loading. The loaded stocking forms are then adjusted to a horizontal position. This may be accomplished by applying a downward force to the end of the stocking form, said form being free to rotate about the swing plate shaft 107 (Figs. 2, 4, and 5). The stop 114 on the swing plate 111 comes in contact with the mounting plate base and positions

the stocking boards in substantially a horizontal position.

The mounting plate 22 is then rotated about the mounting plate shaft 73 through 120° until the loaded stocking boards are parallel to the center line of the tank. Rotation of the mounting plate is accomplished by releasing the index pin 121 (Figs. 2 and 5) from the index pin stop 123 and applying a force in the direction of rotation to one of the side bars 105 (Figs. 2 and 4). The mounting plate is properly centered by means of the index pin 121 and the next index pin stop.

The tank 21 is next moved horizontally from its extended position, as shown in Fig. 5, to its closed position, as shown in Figs. 1 and 2. The tank is properly positioned when the locking pins 54 are substantially in line with the locking hooks 72. This movement of the tank is accomplished through the rotation of the handwheel 63 (Figs. 1 and 3), the rotation of the sprockets 37 and 65, the travel of the sprocket chain 71, and the rotation of the tank wheels 31. Control lever 80 (Figs. 3 and 8) is then pivoted about the pivot pin 77, and this movement causes the locking hooks 72 to engage about the locking pins 54, as hereinbefore described. Final adjustment between the head end of the tank 21 and a face of the mounting plate 22 is made by rotating handwheel 91 (Fig. 4). This causes the tank 21 to slide horizontally along the locking bars and makes a tight joint between the gasket 46 and one face of the mounting plate. This final adjustment prevents the escape of the setting agent from the tank.

Moisture-containing vapors under superatmospheric pressure are then admitted into the tank and the stockings uniformly wetted and heated. In the preferred embodiment of this invention, wet steam is used as the setting agent. Other setting agents such, for example, as wet alcohol vapors, etc., may be employed. During this treatment, the next section of stocking forms are loaded and dropped into a horizontal position. After the setting treatment is completed, the setting agent is released from the tank by opening the hand valve 57 (Fig. 2). The tank 21 is then moved from its locked or closed position, as shown in Figs. 1 and 2, to its extended position, as shown in Fig. 5. This adjustment is made by unscrewing handwheel 91 (Fig. 4), disengaging the locking hooks from the locking pins by the remote control mechanism, and rotating handwheel 63 (Figs. 1 and 3) until the tank takes up the position as shown in Fig. 4.

The mounting plate 22 is then rotated so that the treated stockings are at an angle of 120° with the center line of the tank, and the loaded mounting forms are parallel to the center line of the tank. The tank is again moved into place against the face of the mounting plate, as hereinbefore described, and the operation repeated. The hosiery which has thus been set is removed from the forming boards and other hosiery placed thereon. Since the set in textile products comprising filaments or fibers of synthetic linear polyamides is obtained during the hot-wet treatment and not during the drying, as is the case where natural or artificial cellulosic fibers are being treated, it is not necessary to retain the hosiery on the forming board until they are dried, but said hosiery can be removed therefrom immediately after the setting operation is completed. However, should dry hosiery be desired, they can be had by allowing same to be retained on the forming boards for a short inter-

val of time after the setting operation. The high temperatures to which both the forming boards and the stockings are subjected during the setting operation supply sufficient heat to quickly dry the stockings.

In the apparatus shown, 20 stocking forms are mounted on each face of the mounting plate. It is not intended, however, to restrict the present invention to a machine in which 20 stockings may be simultaneously treated, but any apparatus of the type hereinbefore disclosed wherein the number of stocking forms mounted on one face of the mounting plate is substantially more or less than 20 is considered within the scope of this invention.

Further, while the apparatus has been described with reference to a horizontally movable tank with wheels attached thereto, the invention is not to be limited to this particular embodiment, but any device wherein either the tank or the mounting plate may be readily adjustable against each other so as to form a closed chamber wherein the products may be treated is to be considered within the limitation of this invention. Furthermore, the tank or the mounting plate may be vertically adjustable and still be within the scope of this invention. This is readily apparent from a view of the drawings.

Still further, the locking device for maintaining superatmospheric pressures in the inside of the tank are illustrative only and in no way to be considered as a limitation upon the present invention. Other means, while not specifically described, are to be considered within the scope of this invention.

While the present embodiment of the invention has been described with particular reference to a hand operated board-setting apparatus, it is not intended to limit the invention thereto.

While the stocking forms or boards described in connection with this invention are solid forms preferably of a metal such as stainless steel and of substantially the shape desired in the finished stocking, they may, if desired, be hollow and heated from the interior by the circulation of hot liquids or vapors, or heated electrically, thus decreasing the time required to bring the articles to be treated to the proper temperature. Many advantages, however, result from the use of forms made from metal wire having an outline of the desired shape. (See U. S. Patent No. 2,087,319). The use of wire forms facilitates the passage of the hot vapors to all parts of the stockings, making it possible to place them much closer together during treatment than is possible with solid forms, since, with the latter, it is necessary to allow space for the passage of the vapors between the forms. Improvement in penetration also makes possible a decrease in treatment time. The decreased surface of the wire forms in contact with the stocking facilitates mounting of the stockings on the forms and their removal therefrom, and decreases the tendency of the stocking to stick to the form. Likewise, the movement of parts of the stocking fabric relative to one another are not inhibited by complete contact with a solid surface. This results in a product having an improved appearance and a natural and pleasing hand. Finally, wire forms are very much cheaper than solid forms because of the ease of their fabrication, reduction in material required, and the reduction of the surface which must be carefully finished. Likewise, the reduction in weight of the wire forms lends to ease in their manipulation.

The hereinbefore described method of operation of the stocking board setting machine has been with reference to the treating of a single stocking on one form or board. While this is the preferred mode of operation, more than one stocking, if desired, may be positioned on a single form for treatment at one time, and stockings so treated have been found to compare favorably in appearance with stockings that are treated singly. The treatment of stockings in this manner possesses several important advantages in that the production of such stockings can be materially increased, the size of the machine can be made smaller for a given production rate, the initial cost of the machine can be reduced, and floor space can be conserved.

While the apparatus has been described with particular reference to the treating of stockings, it is not intended to limit the invention thereto, but any textile products which are capable of being set when subjected to a hot-wet treatment are considered within the limitations of this invention.

Knit textile products comprising filaments or fibers of synthetic linear polyamides can be quickly and efficiently set in the apparatus hereinbefore described. Furthermore, wrinkle-free textile products so set will remain free from permanent creases or wrinkles even though subsequently subjected to the conventional hot-wet treatment necessary in the dyeing operation.

The apparatus is so constructed that a large number of textile products may be set simultaneously. The floor space required for this apparatus is not great. The time required for treating the products is extremely short, especially when compared with the method formerly employed, that is, when the products were first dyed and then set.

Since it is obvious that many changes and modifications can be made in the above-described details without departing from the nature and spirit of the invention, it is to be understood that the invention is not to be limited thereto except as set forth in the appended claims.

I claim:

1. A board-setting apparatus for treating textile products with a moisture-containing vapor comprising a mounting plate, a form upon which the textile products may be positioned for treatment pivotally attached to said mounting plate, a tank mounted in co-operative relationship with the mounting plate and capable of forming therewith a pressure-tight chamber wherein the textile products may be positioned for treatment, means for moving the mounting plate and the tank into and out of sealed co-operative relationship with each other, and means for sealing the tank and the mounting plate into sealed co-operative relationship with each other.

2. A board-setting apparatus for treating textile products with a moisture-containing vapor comprising a mounting plate with a plurality of faces, a form upon which the textile products may be positioned for treatment pivotally attached to each face of said mounting plate, a tank mounted in co-operative relationship with the mounting plate and capable of forming with each face of said mounting plate a pressure-tight chamber wherein the textile products may be positioned for treatment, means for moving the tank and any one face of said mounting plate into and out of sealed co-operative relationship with each other, and means for sealing

the tank and a face of the mounting plate into sealed co-operative relationship with each other.

3. A board-setting apparatus for treating textile products with a moisture-containing vapor comprising a rotatable mounting plate with a plurality of faces, adjustable forms upon which the textile products may be positioned for treatment attached to each face of said mounting plate, a tank mounted in co-operative relationship with the mounting plate and capable of forming with each face of said mounting plate a pressure-tight chamber wherein the textile products may be positioned for treatment, means for moving the tank and any one face of the mounting plate into and out of sealed co-operative relationship with each other, and means for sealing the tank and a face of the mounting plate into sealed co-operative relationship with each other.

4. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base, a mounting plate supported by said supporting base, a plurality of boards upon which the textile products may be positioned for treatment, pivotally attached to said mounting plate, and a movable tank adjustable on said supporting base, said tank capable of being positioned so as to form with the mounting plate a pressure-tight chamber wherein the products may be treated.

5. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base, a rotating mounting plate supported by said supporting base, a plurality of swing plates pivotally connected to said mounting plate, boards upon which the textile products may be positioned for treatment, attached to said swing plates, and a movable tank adjustable on said supporting base, said tank capable of being positioned so as to form with the mounting plate a pressure-tight chamber wherein the products may be treated.

6. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base, a rotating mounting plate with a plurality of faces supported by said supporting base, a plurality of swing plates pivotally connected to each face of the mounting plate, boards upon which the textile products may be positioned for treatment, attached to said swing plates, and a movable tank adjustable on said supporting base, said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the products may be treated.

7. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base with tracks mounted thereon, a rotating mounting plate with a plurality of faces supported by said supporting base, a plurality of swing plates pivotally connected to each face of the mounting plate, boards upon which the textile products may be positioned for treatment, attached to said swing plates, a movable tank with wheels attached thereto, said wheels being supported on said tracks, means for rotating said wheels, and said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the products may be treated.

8. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base with tracks mounted thereon, a rotating mounting plate with a

plurality of faces supported by said supporting base, means for rotating said mounting plate about said supporting base, means for locking said mounting plate to said supporting base, a plurality of swing plates pivotally connected to each face of the mounting plate, boards upon which the textile products may be positioned for treatment, attached to said swing plates, a movable tank with wheels attached thereto, said wheels being supported on said tracks, means for rotating said wheels, and said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the products may be treated.

9. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base with tracks mounted thereon, a rotating mounting plate with a plurality of faces supported by said supporting base, means for rotating said mounting plate about said supporting base, means for locking said mounting plate to said supporting base, a plurality of swing plates pivotally connected to each face of the mounting plate, boards upon which the textile products may be positioned for treatment, attached to said swing plates, a movable tank with wheels attached thereto, said wheels being supported on said tracks, said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the product may be treated, means for rotating said wheels, and means for sealing said tank to one face of said mounting plate.

10. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base with tracks mounted thereon, a rotating mounting plate with a plurality of faces supported by said supporting base, means for rotating said mounting plate

about said supporting base, means for locking said mounting plate to said supporting base, a mounting base attached to each face of the mounting plate, a plurality of swing plates pivotally connected to the mounting base, boards upon which the textile products may be positioned for treatment attached to said swing plates, a movable tank with wheels attached thereto, said wheels being supported on said tracks, said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the products may be treated, means for rotating said wheels, and means for sealing said tank to said mounting plate.

11. A board-setting apparatus for treating textile products with a moisture-containing vapor, comprising a supporting base with tracks mounted thereon, a rotating mounting plate with a plurality of faces supported by said supporting base, means for rotating said mounting plate about said supporting base, means for locking said mounting plate to said supporting base, a mounting plate base attached to each face of the mounting plate, side bars attached to each side of the mounting plate base, swing plate shafts attached to the side bars, a plurality of swing plates pivotally connected to the swing plate shafts, boards upon which the textile products may be positioned for treatment attached to said swing plates, a movable tank with wheels attached thereto, said wheels being supported on said tracks, said tank capable of being positioned so as to form with one face of the mounting plate a pressure-tight chamber wherein the products may be treated, means for rotating said wheels, and means for sealing said tank to said mounting plate.

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