Nov. 8, 1949 T. W. PROSSER 2,487,764

NYLON PROCESSING APPARATUS

Filed May 31, 1946 3 Sheets-Sheet 1

Fig. 1

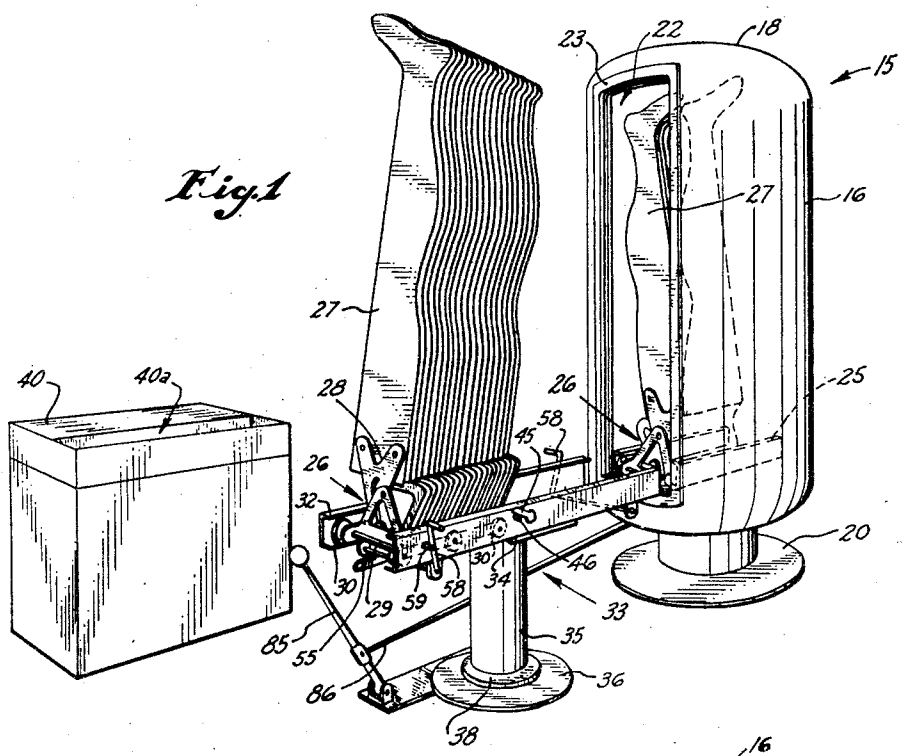


Fig. 2

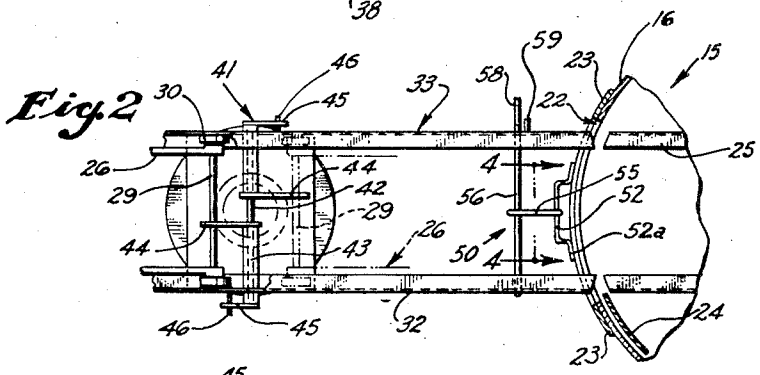


Fig. 3

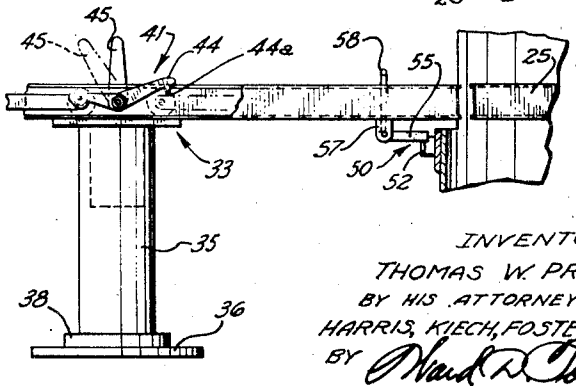
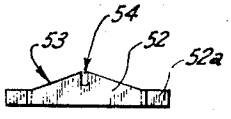


Fig. 4



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NYLON PROCESSING APPARATUS

Filed May 31, 1946 3 Sheets-Sheet 2

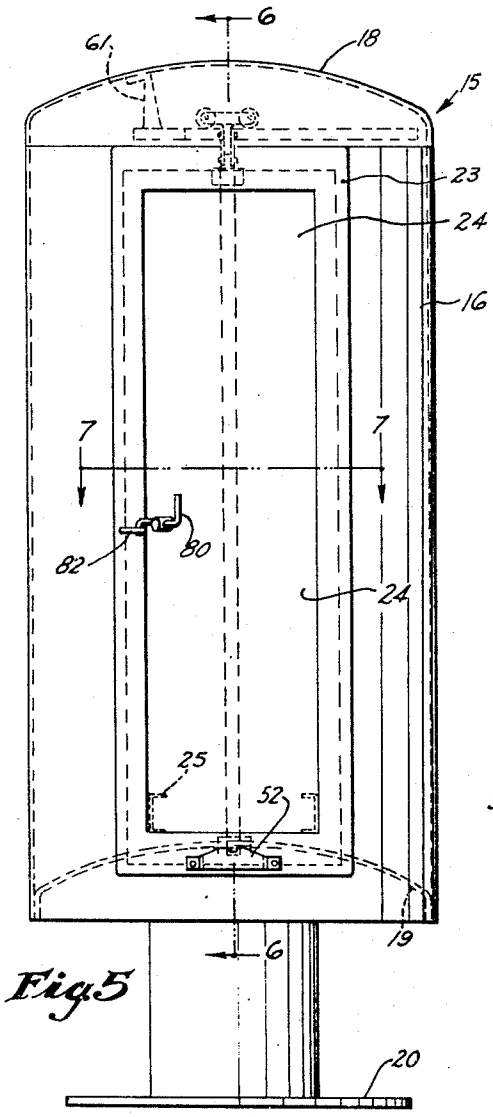


Fig. 5

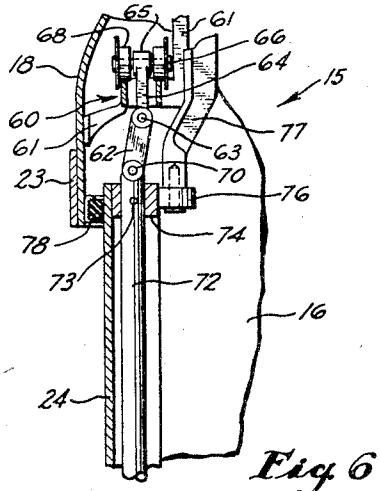
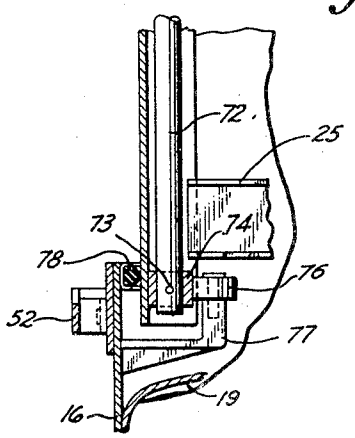


Fig. 6



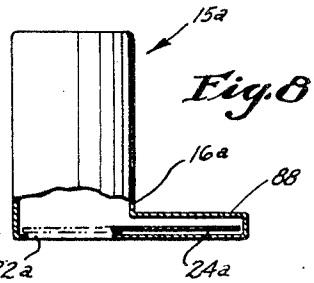
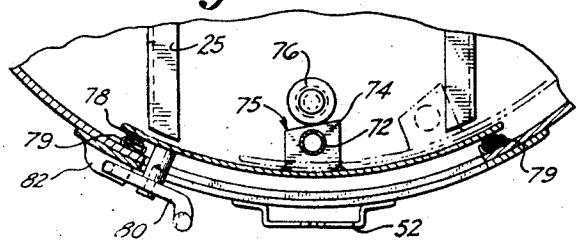


Fig. 8

Fig. 7



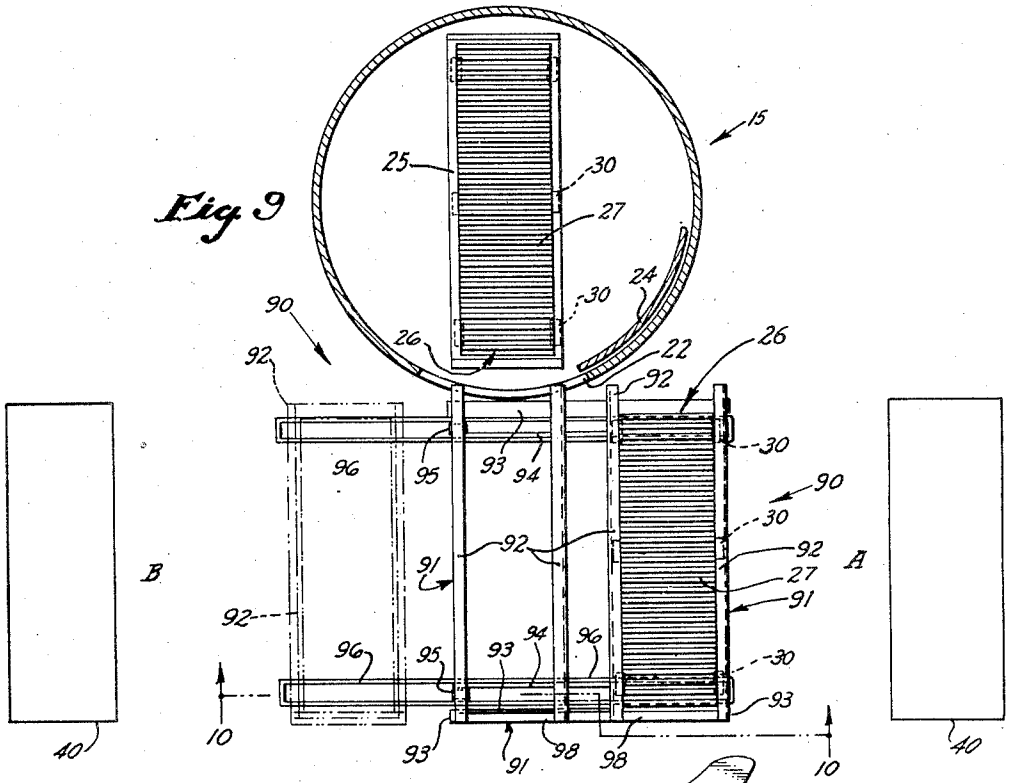
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Nov. 8, 1949 T. W. PROSSER 2,487,764

NYLON PROCESSING APPARATUS

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Fig 9



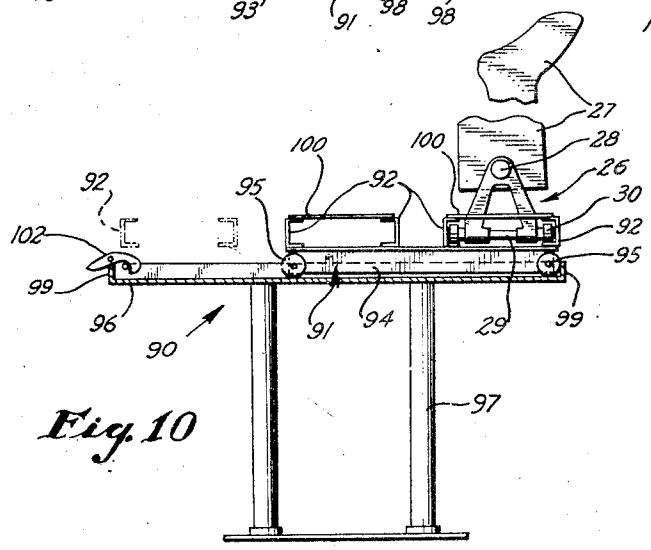


Fig. 10

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UNITED STATES PATENT OFFICE

2,487,764

NYLON PROCESSING APPARATUS

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Application May 31, 1946, Serial No. 673,438

28 Claims. (Cl. 223—76)

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This invention relates to apparatus for treating textile articles, the particular forms herein disclosed having been developed especially for the treatment of such goods as women's hosiery formed from textile yarns which require setting when in a somewhat stretched or smoothed condition in order that the fabrics when set may be free from wrinkles and "stitch distortions."

Fabrics prepared from certain types of synthetic threads or yarns are conventionally set by the action of wet steam at temperatures in the order of 240° F., especially when exposed thereto under low super-atmospheric pressure, such as 10 pounds to 25 pounds gauge. Under these conditions the setting time is relatively brief, for example, somewhere between about one and three minutes. Such synthetic yarns are well illustrated by that commonly known as nylon. It is common practice to set articles knitted from such yarns by first smoothing out the fabric under slight tension to eliminate all wrinkles and "stitch distortions" which would otherwise endure throughout the life of the articles.

It is a general object of this invention to provide apparatus including an individual wet steam retort which will occupy a minimum of space and will be easy to manipulate, whereby to relieve an operator of all but a minimum of labor, and which will, incidentally, improve efficiency and increase the operating capacity of the apparatus.

Another object of the invention is to provide a vertical retort into which hosiery to be processed may be introduced while in a vertical position. During this operation the hosiery is carried upon forms to which it is applied by operators and from which it is subsequently removed by the operators. Since the hosiery is applied to the form and removed therefrom while at a small angle to the vertical, it is desirable that any retort in which the setting operations takes place be vertical.

A particular object of the invention is to provide a retort having a door which may be easily moved by the operator to and from sealing position and which will require substantially no additional space for such movements. A further object is to locate such a door within the retort and provide means which will automatically seal the door as it is moved into closed position. In one embodiment, a specific object is to provide a sliding door movable within the retort and occupying so little space that a treating chamber of minimum size for a given number of hosiery-carrying forms is rendered possible.

Obviously, many advantages are obtained by

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this provision of a vertical retort so that the forms may always be in an upright position and of a sliding door which the operator may easily actuate.

A further object is to provide a door mounting suspending the door from the top and of such nature that the door may oscillate more or less freely, this feature being combined with means for automatically moving the door outwardly into sealing position as it is slid by the operator toward closed position.

A further object of the invention is to provide adjacent the door of the retort and immediately in front thereof appropriate supporting means adapted to receive a pair of carriages upon which two sets of forms are mounted, one carriage being adapted to be moved into the retort for the setting operation while goods are being removed from and placed upon the forms of the other carriage, these supports being so arranged as to occupy a minimum of space and to require a minimum of walking by the operator. According to one form of the invention, such a support is a turntable which may be rotated to present either end thereof to the retort.

Another object of the invention is to provide a structure of the type indicated such that the forms remain vertical while the goods are being processed, and only a single short simple movement is required to present a carrier for each set of forms to the doorway of the retort or shift it away from the doorway.

Other features and objects of the invention will become apparent to those skilled in this art upon reference to the accompanying drawings wherein various specific embodiments of the generic invention are disclosed by way of illustration.

In these drawings,

Figure 1 is a perspective view indicating the relationship between a retort and a turntable of this invention by which two carriers of hosiery forms are received and moved to and from various operative positions;

Fig. 2 is a fragmentary top plan, parts being shown in cross section, of a portion of the apparatus of Fig. 1;

Fig. 3 is a fragmentary side view of the structure shown in Fig. 2;

Fig. 4 is an elevational detail taken from the line 4—4 of Fig. 2 and showing a portion of the indexing means for the turntable;

Fig. 5 is a front elevation of the retort seen in Fig. 1, the door being closed;

Fig. 6 is a fragmentary vertical section taken from the line 6—6 of Fig. 5;

Fig. 7 is a fragmentary horizontal section taken on the line 7—7 of Fig. 5;

Fig. 8 is a view taken partially in top plan and partially in horizontal section showing a modified form of retort construction and arrangement;

Fig. 9 is a view showing the retort of Figs. 1 and 5 in horizontal section, the retort door being open, and also showing in top plan modified supporting structure for the form carriers in front of the retort; and

Fig. 10 is principally a vertical elevation of the supporting structure of Fig. 9, forward portions being broken away.

The form of the invention as shown in Figs. 1 to 7 comprises a vertically disposed retort 15 having a cylindrical wall 16, a top 18, a bottom wall 19, and an appropriate supporting base 20. The forward portion of the cylindrical wall 16 is provided with an elongated narrow vertical doorway 22, a reinforcing frame 23 being externally secured to the retort around the doorway 22. Internally disposed in the retort 15 is a laterally sliding vertically elongated arcuate door 24. The door 24 is adapted to be opened to expose horizontally positioned channel shaped tracks 25 suitably fixed in the lower portion of the retort as by being secured in any appropriate manner to the bottom wall 19 and a rearward portion of the cylindrical wall 16. The tracks 25, which are parallel, are adapted to receive carriers 26 for hosiery forms 27 mounted at 28 for limited swinging movement, according to a known construction forming no part of the present invention. The carriers 26 are provided with axles 29 and these axles receive wheels 30 which travel within the channels of the tracks 25.

The wheeels 30 of the carriers 26 are adapted to travel between the channel tracks 25 and similar channel tracks 32 constituting a portion of a turntable 33 disposed immediately in front of the retort 15 in position so that the channel tracks 32 will be aligned with the channel tracks 25 in order that the carriers 26, their forms 27 and their wheels 30 may travel between a treating position within the retort 15 and an operating station on the tracks 32 of the turntable 33.

The turntable 33 comprises, in addition to the tracks 32, a cross supporting plate 34 to which the undersides of the tracks 32 are attached, and this cross plate 34 is in turn supported upon a rotary post 35 carried upon a suitable base 36 as through the medium of any appropriate rotary mounting 38. Through such a medium, the tracks 32 may be swung around to position the carriers 26 as required.

As illustrated in Fig. 1, two carriers 26 and their respective forms 27 are employed. One of the carriers 26 is to be placed within the retort 15 for setting of hosiery upon its forms 27 while the other carrier 26 and its forms 27 are positioned on the remote ends of the tracks 32 of the turntable 33 for removal and replacement of hosiery by an operator. When an operator has supplied the last named set of forms with hosiery to be set, the retort 15 is opened and the carrier 26 therein is withdrawn therefrom and placed upon the adjacent ends of the tracks 32 of the turntable 33, whereupon the turntable 33 is rotated through an angle of 180° to bring the treated hosiery to the operator's station and to present the carrier bearing the untreated hosiery to the doorway 22 so that it may be moved into the retort 15.

When using the apparatus shown in Fig. 1, the operator's station is between the carrier 26 and forms 27 positioned on the outer end of the turntable 33, and a conventional or other suitable work table 40 located nearby so that treated hosiery may be removed from the forms 27 and placed upon the table 40. Untreated hosiery is taken from any convenient supply, such as from a pocket 40a, in the table 40, and placed upon the forms 27 one by one. This placing operation, which is commonly known as "boarding" is facilitated by the fact that the usual form of carrier 26 and mounting 28 permits the forms 27 to be swung forward selectively by the operator through a small angle to the "boarding" position which is at the same time the "stripping" position in which the hosiery is removed from the forms.

In order that a carrier 26 upon the turntable 33 may be retained in operative position, a latching mechanism generally indicated at 41, Figs. 2 and 3, is provided. This mechanism 41 comprises a transverse retaining shaft 42 projecting through the sides or main webs of the tracks 32, and a sleeve 43 mounted upon each end of the shaft 42 and also extending through the main webs of the tracks 32. On the inner end of each sleeve 43 is secured a latch finger 44 which is adapted to engage over an axle 29 of the respective carrier 26 so that the carrier cannot slip off the turntable 33 accidentally. For the purpose of releasing the respective carriers 26, the outer exposed end of each sleeve 43 has a latch-release arm 45 secured thereto. When a carrier 26 is to be run into the retort 15, the respective release arm is raised by the operator so that the latch finger 44 is lifted from the respective axle 29 to release the latter. After the carrier has been moved into the retort and the release arm freed by the operator, a stop pin 46 secured on the adjacent track below the respective arm 45 limits descent of the latch finger 44 and positions it so that a beveled edge 44a at the end of the respective latch finger 44 will lie in the path of the axle 29 when the respective carrier 26 is subsequently moved back onto the turntable 33 whereby again to latch the carrier 26 in position.

For the purpose of retaining the turntable 33 in position properly to align the tracks 32 with the tracks 25 in the retort 15, an indexing mechanism 50 is employed; see Figs. 2 and 3. This indexing mechanism comprises an indexing bracket 52 secured to the front of the retort 15 below the doorway 22, the middle portion of the bracket being offset forwardly and its end portion 52a being affixed to the retort wall. The upper edge of the bracket 52 is provided with two cam portions 53 which rise as they extend toward the middle of the bracket to an upwardly opening notch 54. The notch 54 is adapted to receive indexing fingers 55 located on the opposite ends of the turntable 33. Each finger 55 is affixed to a rock shaft 56 which is journaled in ears 57 secured to the undersides of the tracks 32, the end of each rock shaft 56 having a handle 58 to actuate the respective indexing finger 55. In order that, when the respective indexing finger 55 is removed from the notch 54 while the turntable 33 is rotated, the finger 55 may not fall out of the path of the cam portions 53, a stop pin 59 is positioned on the side of the adjacent tract 32 to limit return movement of the handle 58 and hence to limit descent of the indexing finger 55. Thus, when rotation of the turntable 33 brings an indexing finger 55 to the indexing bracket 52, the respective finger 55 will ride up along the respective cam portion 53 until it falls into the notch 54.

Since the elongated sliding door 24 is to be opened when a carrier 26 and its hosiery laden forms 27 are to be removed from the retort, and the door 24 is to be closed after one of the carriers 26 has been moved into the retort 15, the door 24 is suspended by mechanically operating means facilitating its opening and closing and also facilitating its sealing against the inner wall of the retort 15 whereby to retain steam by which the hosiery is treated.

This door suspension means is illustrated in Figs. 5, 6, and 7. In the form shown, an overhead track 60 is used which consists of two spaced upstanding rails supported from the top 18 of the retort 15 by means of any suitably located brackets 61, the rail of the track 60 adjacent the side wall of the retort 15 being supported by laterally extending brackets 61, and the inner rail being supported by brackets 61 depending from the top of the retort. The overhead track 60 supports the sliding door 24 through the medium of a pivoted suspension link 62 which is carried through a pivot 63 from a depending arm 64 of a truck frame 65 having at its ends shafts 66 upon which are mounted flanged wheels 68 travelling on the arms of the overhead track 60. The lower end of the suspension link 62 is pivotally connected by a pivot 70 to the upper end of a sustaining post 72 which extends downward the full length of the door 24 and is secured, as by means of pins 73, to lugs 74 affixed to the inner wall of the door 24 at its top and bottom and in a median position, whereby the door 24 is automatically balanced and may swing slightly inward and outward by reason of the mounting of the suspension link 62 on the pivots 63 and 70.

For the purpose of automatically forcing the door 24 into sealing position when drawn by the operator to closed position, the inwardly directed faces 75 of the lugs 74 are beveled as shown to act as cam faces and provide cam means to engage respectively inwardly disposed upper and lower fixed rollers 76 which are mounted upon upper and lower brackets 77 carried by the retort walls. During the last portion of the closing movement of the door along the overhead track 60, engagement of the cam faces 75 with the rollers 76 results in forcing the door 24 outward (with consequent swinging of the suspension link 62) until the edges of the door 24 are bound in sealing contact against a rubber sealing ring 78 disposed around the doorway 22 on the inside of the retort walls. Any retaining means 79 is employed to position the sealing ring 78. The positive mechanical seal effected by the action of the beveled cam faces 75 of the lugs 74 is operative to insure a complete sealing contact between the door 24 and the sealing ring 78 to prevent loss of pressure fluid entirely independently of the pressure within the retort, whether such pressure be high or low.

Any handle 80 may be provided upon the door 24 for manipulation and this handle may cooperate with any matching catch means 82 for accurately holding and locking the door 24 in sealing position.

It will be observed that, when this improved apparatus is in use, the location of the form 27 on the outer end of the turntable 33 in the position shown in Fig. 1 provides a cool and convenient station for an operator at the end of the turntable farthest from the hot retort. The operator employs a minimum number of steps in moving along the bank of forms during stripping and boarding operations, and his station is conveniently located for easy manipulation of the respective latch release arm 45 and the respective index-releasing handle 58. When the latter is released, rotation of the turntable 33 may be accomplished with little effort. A control lever 85, which actuates a control rod 86, is also conveniently located near the operator's station and adjacent the outer end of the turntable 33 when the latter is in operative position. The rod 86 serves to actuate interconnected steam inlet and relief valves such as conventionally employed. The movement of the carriers 26 and their forms 27 to and from the turntable 33 is accomplished in a manner similar to present operations employing trucks pushed across the floor by an operator and upon which the carriers 26 are mounted; but, with this improvement, floor trucks are eliminated and the alignment of the form carriers with the tracks 25 is automatically, instead of manually, accomplished.

It is apparent that, with this apparatus, an operator, after introducing one carrier 26 and its forms 27 into the retort 15 and closing the door 24, may then shift the lever 85 to introduce steam or other fluid under pressure into the retort 15 so that hosiery on the respective forms 27 may be treated while other hosiery is being stripped from and boarded upon the forms 27 carried by the turntable 33. It is necessary for the operator to move only between the doorway 22 of the retort, when the door is being opened and closed, and the outer end of the turntable 33 when the latter is being rotated. Rotation of the turntable may be effected in either direction as best suits the operator.

A modified form of retort is shown in Fig. 8. Here the vertically elongated retort 15*a* is rectangular in horizontal section, and has side walls 16*a* and an internal, sliding flat door 24*a* which may be suspended like the door 24. The door 24*a* is movable from a position closing its doorway 22*a* into a laterally disposed extension 88 of the retort 15*a*, whereby the door when being closed, will be moved into sealing relation by the wedge means described in connection with the retort of the other form disclosed.

In the construction of Figs. 9 and 10, the same vertical retort 15 is shown as in Figs. 1 to 7, the same elongated, narrow door 24 and tracks 25 being illustrated along with the same carriers 26 and sets of hosiery forms 27. However, in this form of the invention a comparatively short, transversely disposed supporting structure in the form of a track unit 90 is positioned in front of the narrow doorway 22, instead of the turntable 33 of the other form. With this construction, the two carriers 26 are adapted to be received side by side upon a single truck 91 which comprises two pairs of channel tracks 92, like the tracks 32, adapted to receive the respective wheels 30 of the carriers 26. These channel tracks 92 are secured to side beams 93 and to bars 94 which in turn carry truck wheels 95 received in spaced trough-shaped tracks 96 provided at the opposite sides of the track unit 90 for travel of the truck 91 transversely of the doorway 22 and from end to end of the unit 90. The trough-shape tracks 96 are respectively supported upon pairs of standards 97 carried by fixed bases 98 as seen in Fig. 10.

When operating the structure of Figs. 9 and 10, the truck 91 is moved to one end of the track unit 90, thereby placing one of the carriers 26 and its forms 27 to one side of the retort 15 and adjacent a work station adjacent a work table 40, such as the work station indicated by

the letter A. Endwise movement of the truck 91 is limited by stops 99 in the ends of the trough tracks 96, and outward movement of the carriers 26 from the retort 15 is limited by stop bars 100 secured on the upper faces of the outer ends of the channel tracks 92. Latch means 102, like the latch means 41 of Figs. 1 to 3, may be provided at each end of the tracks 96 to engage and retain the truck 91 at the respective stations. When one carrier 26 and its forms 27 are located at the respective station, such as the station A, the other carrier 26, its channel tracks 92 and the tracks 25 in the retort 15 are aligned so that such other carrier may be moved to and from treating position within the retort.

Stripping and boarding operations on the forms 27 at the station A, for example, are conducted while treatment of hosiery on the other forms 27 takes place in the retort 15. These steps having been completed and the door 24 opened, the carrier 26 in the retort is pulled out on to the empty tracks 92 of the truck 91 and the truck 91 is moved to the opposite end of the track unit 90 to bring the freshly treated and set hosiery and the respective carrier 26 to an opposite station B. The proportions of the truck 91 and trough tracks 96 are such that the carrier 26 bearing the newly boarded hosiery is aligned with the tracks 25 in the retort when the freshly set hose is positioned at station B. In this new position the previous operations are repeated upon the second set of forms 27. Access to the door 24 by the operator and movement of the carriers 26 to and from the retort 15 are made easy by reason of the small dimensions of the track unit 90.

Since the forms 27 are always substantially vertical, both when hosiery is being treated and during stripping and boarding operations, the stations A and B are actually very close together. This is because the carriers 26 are very narrow, being even narrower than the narrow doorway 22. As a consequence the length of the truck 91 is only about twice the width of the doorway 22 and scarcely as great as the diameter of the retort 15. Similarly, the total length of the supporting structure provided by the track unit 90 is very little greater than the diameter of the retort 15. For example, the track unit 90, when the standard 24-form carriers are used, need be only about 42 inches long and about 24 inches deep, the doorway being about 14 inches wide.

Thus, with both forms of the invention as illustrated in Fig. 1 and in Fig. 9, there is unusual conservation of floor space, while at the same time satisfactorily cool stations for the operators are provided because of sufficient removal from the retort. These compact structures require a minimum of parts, are simple and economical to build, and improve operator efficiency inasmuch as time and effort are saved in moving the carriers and operating the doors. By maintaining the forms in substantially vertical position at all times except during the boarding and stripping steps, certain "moves" heretofore required are eliminated and other "moves" are shortened and simplified. As a consequence, much more time is made available for useful boarding and stripping operations, and the operating capacities of both the workers and the apparatus are correspondingly increased.

Other variations of the generic invention herein disclosed will, no doubt, occur to those skilled in this art. It is intended, therefore, to cover all modifications falling within the scope of the claims.

I claim as my invention:

1. In combination in a machine for treating nylon hosiery and other elongated articles; a retort providing a vertically disposed treating chamber adapted to receive a treating fluid under pressure, said chamber having a vertically elongated doorway adapted for the passage of said hosiery and articles to and from said vertically disposed chamber while in vertical position; a door movably disposed within said chamber and proportioned to close said doorway; means mounting said door for bodily movement edgewise within said chamber; means for sealing said door against loss of fluid under pressure when said door closes said doorway; a plurality of groups of forms normally vertically disposed to receive the articles being treated; and carriers supporting the respective groups of forms for selectively moving the respective groups of forms between treating position within the chamber and an outside work station adjacent said doorway.

2. A combination as in claim 1 wherein said door is slidably mounted to move laterally in a vertical position between a location alongside a portion of the inner wall of the retort and a doorway-closing location.

3. A combination as in claim 1 wherein said door is suspended at its top, means being provided for carrying said door laterally between its doorway-closing location and a location in which the doorway is open.

4. A combination as in claim 1 including: supporting means positioned immediately forward of said doorway and having a plurality of means for respectively receiving carriers simultaneously.

5. A combination as in claim 1 including: a turntable disposed immediately in front of said doorway, the opposite ends of said turntable being provided with means for respectively receiving said carriers both singly and simultaneously whereby said carriers may be selectively introduced into and removed from said chamber.

6. A combination as in claim 1 including: a single track unit extending transversely in front of said retort and its doorway; a single truck means movable lengthwise of said single track unit; a pair of supporting means carried by said single truck means and adapted selectively to be aligned with said doorway and treating chamber and adapted to receive said carriers simultaneously.

7. Apparatus for processing elongated textile articles such as nylon hosiery comprising in combination: a vertically disposed retort adapted to receive such articles in a vertical position and to receive a treating fluid, said retort having an elongated vertically disposed doorway adapted to pass said elongated articles while in a vertical position; a vertical door internally disposed and mounted to move edgewise within said retort and adapted to be opened to pass said articles and to be closed while said articles are being treated; a plurality of carriers for supporting said articles in vertical position and adapted to be alternately introduced into said retort with said articles in vertical position; and a supporting structure disposed closely adjacent said retort and adapted to carry simultaneously said plurality of carriers for selective introduction to and withdrawal from said retort of said carriers and articles.

8. A combination as in claim 7 wherein said supporting structure comprises a turntable having opposite ends adapted to be aligned with said doorway to support said carriers for presentation thereof to said retort, and to receive said carriers

from said retort, said carriers having article supports permanently disposed in substantially vertical position thereon for supporting said articles in such vertical position.

9. In combination: a pressure vessel adapted for the treatment of elongated textile articles while in vertical position, said vessel having a vertical doorway adapted to pass said articles while in said vertical position; a door disposed within said vessel and movable edgewise to and from sealing relation with respect to said doorway; means for moving said door edgewise; gasket means for sealing said door upon said vessel at said doorway; means supporting said door for movement of the door to and from sealing position; means for moving the door to closed position; and mechanical means for automatically urging the door into sealing position against said gasket means as the door is closed.

10. A combination as in claim 9 including means for automatically withdrawing said door from said sealing position against said gasket means as said door is moved edgewise from closed position.

11. A combination as in claim 9 wherein the door is carried upon a freely moving supporting joint, the door being bodily movable radially to insure sealing against said gasket means.

12. A combination as in claim 9 including: track means extending along the inner wall of said vessel from said doorway to a location remote from said doorway, said track means supporting said door, said track means being disposed slightly out of alignment with the sealing portion of said door, whereby said door may be moved from its open position along a path approximately paralleling the vessel wall and then moved radially outward to sealing position against said gasket means.

13. A combination as in claim 9 wherein said means for supporting said door includes a curved track and said pressure vessel provides a similarly curved wall.

14. A combination as in claim 9 wherein the wall of said vessel having said doorway is a flat wall, said door is a flat sliding door, and said vessel is provided with an extension aligned with said flat wall to receive the door when the door is in open position.

15. In combination: a retort having a fixed mounting and providing a treatment chamber having a doorway; a door for closing said doorway; a turntable disposed in front of said doorway and having a fixed mounting spaced a fixed distance from said retort mounting; means for rotating said turntable; a plurality of circumferentially spaced means on said turntable adapted to be selectively presented to said doorway by rotation of the turntable; a plurality of article-receiving carriers movable radially on said spaced means and adapted to be received selectively from said retort upon said spaced means and to be discharged selectively from said spaced means into said retort, said turntable being adapted to carry more than one of said carriers simultaneously.

16. A combination as in claim 15 including elongated article supports mounted upon said carriers for disposition permanently in approximately vertical positions, said chamber and doorway being mounted in a vertical position and adapted to receive said carriers with said article supports and their articles in an approximately vertical position.

17. A combination as in claim 15 including means to latch said turntable in position suitably aligning one of said spaced means with said doorway, and latch means for securing the respective carriers on said turntable.

18. A combination as in claim 15 wherein said retort is disposed vertically and said door and doorway are relatively long vertically, said carriers including vertically extending forms adapted to carry elongated articles for movement of said articles in vertical position between said chamber and said turntable.

19. In combination: a pressure vessel adapted for the treatment of elongated textile articles, said vessel having a doorway adapted to pass said articles; a door disposed within said vessel and movable to and from sealing relation with respect to said doorway; gasket means for sealing said door upon said vessel at said doorway; and means slidably supporting said door in said pressure vessel for bodily sliding movement to move to and from doorway closing position.

20. A combination as in claim 19 wherein said means slidably supporting said door includes means for moving said door edgewise to and from its closed position.

21. A combination as in claim 19 wherein said door is mounted for bodily radial movement into sealing engagement with said gasket means when adjacent closing position.

22. A combination as in claim 19 wherein said means slidably supporting said door is a curved track and said pressure vessel is similarly curved in approximate parallelism with said curved track.

23. A combination as in claim 19 wherein the vessel wall having said doorway is a flat wall, and said vessel is provided with an extension aligned with said wall to receive said door when in open position.

24. A combination as in claim 19 wherein said door is mounted for bodily radial movement into sealing engagement with said gasket means when adjacent closing position, and wedge means is provided to urge said door into said sealing engagement.

25. A combination as in claim 19 including mechanical means for moving said door radially outward into sealing position against said gasket means.

26. In combination: an elongated vertically disposed pressure vessel adapted to receive elongated textile articles in vertical position, said vessel having an elongated vertically extending doorway adapted to pass said articles when in said vertical position; a door disposed within said vessel to close said doorway and movable to and from position for closing said doorway, said door being movable edgewise along a path approximately uniformly spaced from a wall of said vessel; gasket means for sealing said door at said doorway; means for supporting said door for movement in said path, said means including means for movement of the door bodily radially outward into sealing engagement with said gasket means; and positive mechanical means engageable with said door to force said door radially outward into said sealing engagement with said gasket means.

27. In combination in a machine for treating elongated articles: a retort providing a vertically disposed treating chamber adapted to receive a treating fluid under pressure, said chamber having a vertically elongated doorway adapted for the passage of said articles to and from said vertically disposed chamber while in vertical position;

a door movably disposed within said chamber and proportioned to close said doorway; means for sealing said door against loss of fluid under pressure when said door closes said doorway; carriers for said articles for moving said articles between treating positions within the chamber and outside work stations adjacent said doorway; a plurality of groups of elongated forms for said articles; means mounting said forms upon said carriers for disposition in approximately vertical positions at all times; and means for limiting the positions of said forms at all times to such approximately vertical positions and presenting said articles and forms to said chamber in an approximately vertical position.

28. In combination in apparatus for treating hosiery and similar articles: a retort having a doorway and providing a treatment chamber; a door for closing said doorway; a turntable disposed in front of said doorway and having a

plurality of circumferentially spaced means adapted to be selectively presented to said doorway upon rotation of the turntable; a plurality of article-receiving carriers removably mounted upon said spaced means and adapted respectively to be removed bodily from said spaced means into said retort and to be returned bodily from said retort to said spaced means; and means mounted in said retort to receive and support said carriers.

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REFERENCES CITED

The following references are of record in the file of this patent:

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