Dec. 7, 1926. 1,610,098

P. P. LA MONTAGNE

HOSIERY DRYING APPARATUS

Filed Oct. 20, 1924 3 Sheets-Sheet 1

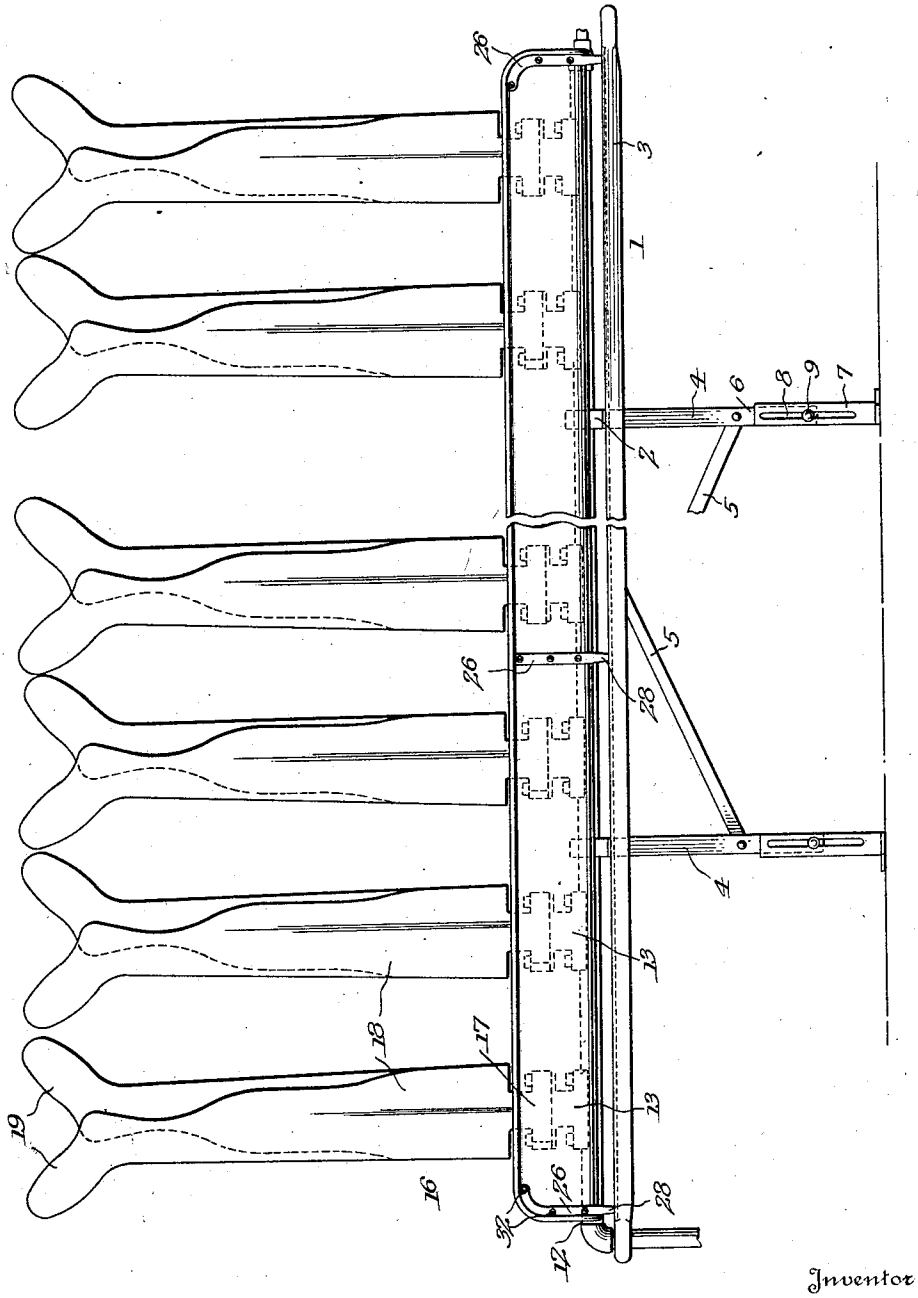


Fig. 1.

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Fig. 2.

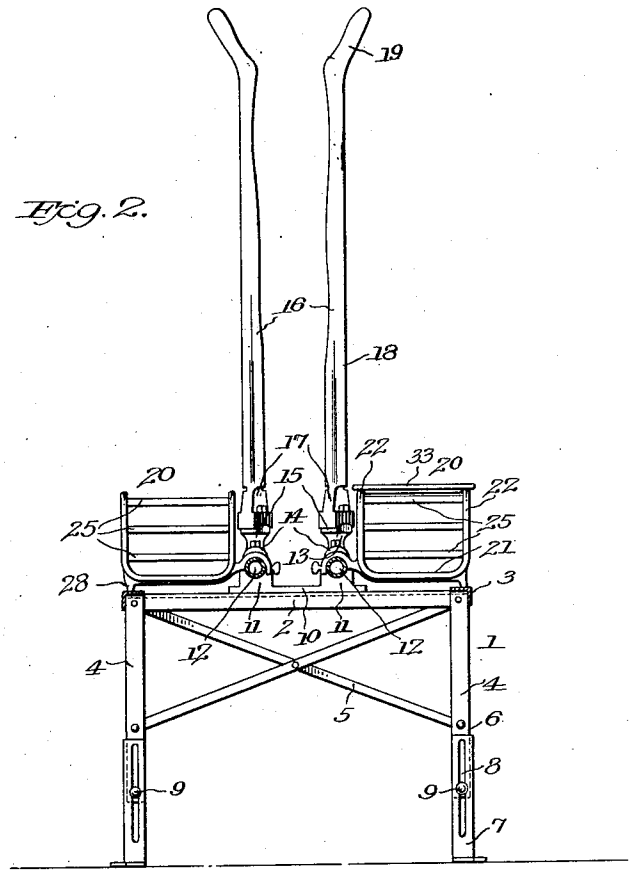
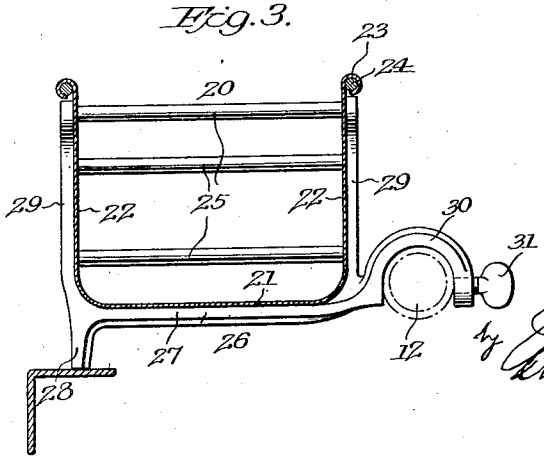


Fig. 3.



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Fig. 5.

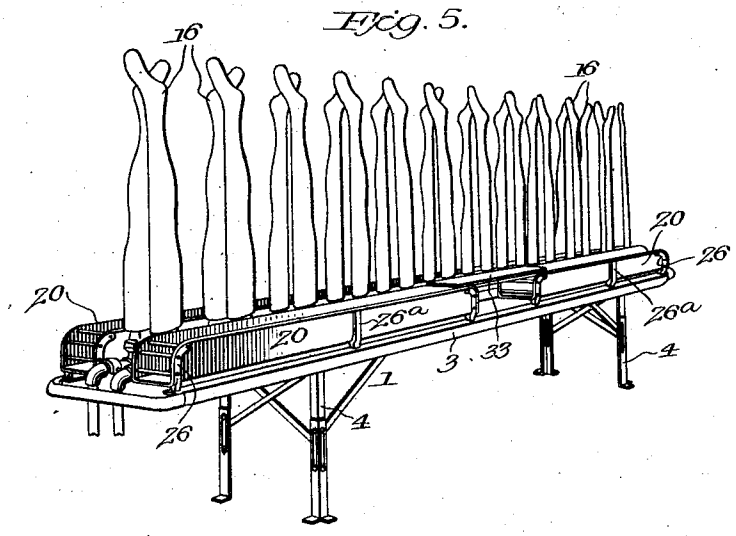


Fig. 4.

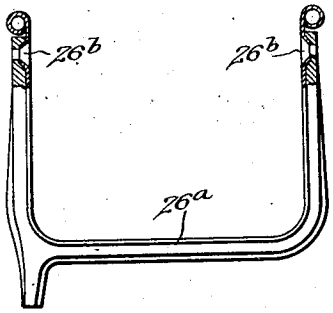
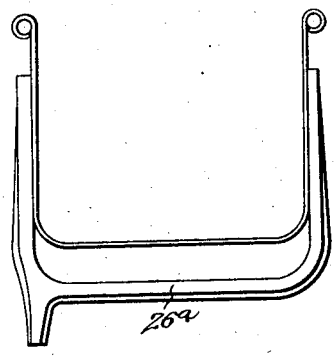


Fig. 6.



Inventor

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Patented Dec. 7, 1926. 1,610,098

UNITED STATES PATENT OFFICE.

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HOSIERY-DRYING APPARATUS.

Application filed October 20, 1924. Serial No. 744,674.

This invention relates to hosiery drying apparatus; it primarily involves a table structure; and it contemplates a structure of an all-metal character.

The object of my inventive-concept is to provide a table constructed of metal and more or less skeletonized in its make-up, whereby the table, in general, is comparatively simple in its structural elements, is readily assembled, and is easily maintained in a clean and sanitary condition. By reason of the fact that certain of the parts are formed without corners, rough edges or rough surfaces, danger of injury to articles being treated on the table is reduced to a minimum.

Heretofore the practice in hosiery mills in the finishing department thereof has been to provide tables on which are mounted heated forms adapted to simultaneously dry and shape hosiery. By reason of the fact that the troughs or hosiery-sustaining containers on these tables are, for the most part, constructed of wood or similar material, and liable to splinter or be roughened in use, the hosiery—and especially silk goods—is liable to catch on the rough portions or splinters and be rendered into "seconds" with a resultant loss in the value thereof. Moreover, by reason of the arrangement of the steam-supplying pipes on which are mounted the hosiery-drying forms, the height of the forms—and particularly ladies' forms—is sometimes objectionable and thus renders the boarding operation more or less difficult and fatiguing to the operator or so-called boarder.

The primary desideratum of my construction is to provide a table in which the supporting troughs and associated parts shall be of metal, the corners and edges of these shall be smooth and round, and the surfaces be so formed as not to present corners, recesses or other dirt or dust collecting pockets.

Another feature which characterizes my invention is the disposition of the steam-supplying pipes in respect to the walls of the troughs such that the contents of the troughs are more or less protected by those walls from the heat of the pipes, so that hosiery articles are not unduly dried while in the troughs and before being "boarded" on the forms.

The invention is characterized by other features with consequent advantages, all as will be more or less apparent from the following description of the structure which I prefer to employ.

My inventive-concept is susceptible of several embodiments and utilizations; but in the accompanying drawings I have shown a preferred type thereof, it being understood, however, that these drawings are merely illustrative and that the embodiment thus shown is susceptible of a wide range of modification and variation without departing from the salient features of the invention or sacrificing any of the underlying details and principles thereof.

In these drawings:

Figure 1 is a view in elevation of a table constructed in accordance with a preferred embodiment of my invention, and on which table are mounted two sets of hosiery drying forms occupying an angular position one to another;

Fig. 2 is a view in end elevation thereof and partly in section;

Fig. 3 is a view in vertical section, on an enlarged scale, of a trough supporting bracket constituting one component of the structure;

Fig. 4 is a detail view of one of the trough-supporting brackets;

Fig. 5 is a view, in perspective, of the table; and

Fig. 6 is a fragmentary view, in vertical section, of a modification.

Referring to these drawings, the reference-character 1 designates a table comprising cross-members 2 and side-members 3, supporting legs 4 connected to the cross-members 2, and brace-members 5—5 connected to the legs and cross and side members. The cross and side members and the supporting legs are, in this instance, formed of angle-iron. Preferably and as shown, means are provided for vertically adjusting the table, as an entity, such means involving the making of the legs 4 in two parts 6 and 7, the latter being provided with an elongated slot 8 to receive a screw 9 and by which the parts 6 and 7 may be secured together at any required adjustment of the table.

Mounted on the cross-members 2 are base-members 10 comprising upstanding sections 11—11 adapted to support a pair of pipes 12—12 arranged in substantial parallelism

with each other and in a position slightly above the plane of the table as fixed by the cross-members 2. The pipes connect with any suitable supply of steam (not shown). Upstanding from and detachably connected to each of the pipes 12 is a coupling 13 comprising two portions 14 and 15 angulated to each other, as shown in the pending application of Thomas W. Prosser, Serial No. 677,243, filed November 27, 1923. Mounted on each of the couplings and upstanding therefrom is a hosiery drying form or "board" 16 comprising a base-portion 17, a leg-portion 18 and a foot-portion 19, and which forms are of the general construction and type disclosed in United States Patent No. 1,207,496, dated December 5, 1916, on the invention of Walter D. Butz.

At opposite sides of the two pipes 12 and sets of forms 16 are troughs 20, these being, in cross-section, substantially U-shaped and comprising a bottom-portion 21 and two upstanding sides 22, the sides being substantially parallel to each other so that they, with the bottom-portion, are substantially U-shaped and present no dust-collecting corners or recesses. Each of the troughs is constructed of a thin sheet of metal, preferably aluminum, and has its upper edges 23 bent to receive a reinforcing wire or rod 24 (Fig. 3) whereby these edges are round and smooth. As shown in Fig. 5, for instance, there are two alined, but unconnected, troughs on each side of the table. These are spaced apart at their ends. It is manifest that they may be connected and, also, that only one trough to a side may be employed. The details of construction already described apply to each of the troughs.

Preferably and as shown, each trough 20 is disposed parallel to but spaced from the pipe 12 and also from the vertical plane of each form 16, so that there is an air space between the inner side wall of the trough and the pipe and form. In consequence, radiation of heat from the pipe and form to the trough is materially reduced if not entirely prevented, with the result that the trough remains substantially cool and, thus, does not itself effect any consequential drying of the hosiery contained therein preliminary to being boarded on the forms.

Preferably and as shown, in Figs. 2 and 3, for instance, the angle-iron side-members occupy a position somewhat beyond the plane of the outside wall of each trough and constitute a sort of buffer to prevent injury to the trough, as by a truck contacting therewith.

Preferably and as shown, the troughs are open-ended, but adjacent the ends thereof are cross-rods or elements 25—25—25 spaced apart and so arranged in respect to the bottom-portion 21 as to permit dirt, lint or the like to be removed from the trough and yet prevent the hosiery articles from being displaced from the trough.

At opposite ends of each trough are substantially U-shaped brackets 26—26 comprising a horizontal section 27, a pendant section 28, and upstanding sections 29, and a pipe-engaging section 30 (Figure 3). Threaded into the section 30 is a screw 31 and by which the bracket may be secured to the section 12. The trough is secured to the upstanding sections 29 of the bracket by means of screws 32. Intermediate of these is a somewhat similar bracket 26^a (Figure 4), likewise U-shaped but secured to the troughs by means of countersunk rivets 26^b, so formed as to present no thread-catching head.

It is to be understood that by reason of the fact that each trough is secured to a plurality of these brackets, and because of the fact that the brackets are detachably secured to the pipes 12, the brackets and trough, as an entity, may be removed from the pipes at will. Thus, it is possible to detach either or both of the troughs from the table whenever desired, and this is advantageous whenever it becomes necessary or desirable to change the forms on the pipes or to bolt them thereto. However, I may elect to make the troughs detachable from the brackets so that such troughs may be lifted out of the table without disturbing the brackets. Such a modification is shown in Figure 6 and involves disposing the troughs in the brackets 26 and 26^a without riveting or otherwise attaching the brackets to the troughs.

It is to be understood that the various components of the table comprising the cross and side members, the legs, and the base-members 10, as well as the brackets 26 and the troughs 20, are made entirely of metal and in such skeletonized form as to be easily fabricated, readily kept clean and sanitary, and easily dismantled for shipment in a compact form and within small compass.

It will be noted that the pipes 12 occupy a position relatively near to the cross-members 2 and also considerably below the plane of the edges 23 of the troughs. This enables the mounting of the forms in a lower plane than has heretofore been possible. In addition, the means provided for adjusting the table vertically enables the positioning of the forms in any desired elevation and likewise that of the troughs 20. Moreover, the forms, by reason of the angular shape of the coupling 13, occupy an angular relation to the longitudinally-extending walls of the trough. This arrangement contributes to the convenience of the operator during the boarding operation. In other words, the distance in height which the operator's hand must travel is by this arrangement appreciably decreased, this being accomplished by changing the relative position of the form-

carrying pipes to the table and to the troughs superposed thereon. Moreover, by reason of the position of the pipes in relation to the troughs, the inner wall 22 of the troughs prevents the heat from the pipes 12 from effecting a drying of the hosiery in the troughs, it being understood that such hosiery, when in the troughs, is more or less damp as the result of having come from the dyeing or bleaching baths, and necessarily so to facilitate the shaping and creasing of the articles by the steam-heated forms.

Preferably and as shown, all edges of the trough are round and smooth so that there is no liability of pulling threads or tearing the fabric; and there are no square inside corners in the trough to collect dirt and lint. What little lint does collect in the bottom of the trough can readily be removed with a damp cloth, the trough being open at the ends to permit this.

The rods 25 extending between the walls 22 of the trough prevent the metal of the troughs from springing together, while the brackets 26—to which the troughs are secured—prevent the walls of the troughs from springing out.

By reason of the brackets being detachable from the pipes 12, the troughs to which the brackets are secured may readily be removed; it being only necessary to loosen the wing screws on the brackets to permit removal of the trough. The advantage of making the troughs removable are, first, that the pipes 12 are made accessible so that the forms—or the gaskets (not shown) between the pipes and the couplings—may readily and conveniently be changed; and, secondly, by removing both of the troughs, the table is less cumbersome and is lighter to handle, and this makes for great convenience in installing the apparatus, and especially where it is necessary to carry the table through narrow doors or up elevator shafts in a mill. In addition, the removability of the troughs makes a more convenient and less bulky unit to crate for shipment. The entire structure being of metal, it is fireproof and, besides, is much more durable than the wooden trough construction heretofore utilized.

Movably mounted on the edges 23 of each trough is a slide or supporting-member 33, this being adapted to be moved by the operator along the table and to receive hosiery stripped from the forms after the same has been dried and shaped thereon.

From the foregoing, it will be observed that I have provided a unique type of drying apparatus, one of simple construction, and one involving comparatively few components.

What I claim is:

1. Hosiery drying apparatus including a pipe, a bracket attachable thereto, a metallic trough carried by the bracket, the bracket and trough constituting a unit, and means for detachably mounting the bracket on the pipe.

2. Hosiery drying apparatus including a table comprising a support, a pipe thereon, a bracket removably carried thereby, and a trough carried by the bracket, the bracket and trough being removable as a unit from the pipe.

3. Hosiery drying apparatus including a table comprising a support, a pipe mounted on the support, a bracket removably attached to the pipe, and an approximately U-shaped trough attached to the bracket, the bracket and trough constituting a unit which, as such, may be removed from the pipe at will.

4. Hosiery drying apparatus including a table comprising a support, a pipe mounted on the support, a bracket removably attached to the pipe, an approximately U-shaped trough attached to the bracket, the bracket and trough constituting a unit which, as such, may be removed from the pipe at will, and means for securing the bracket to the pipe.

5. Hosiery drying apparatus including a table comprising supporting uprights, a supporting base on the table, a pipe mounted on the base, a U-shaped bracket attachable to the pipe, and a substantially U-shaped trough carried by the bracket having smooth-surfaced side and bottom portions, curving into each other.

6. Hosiery drying apparatus including a table, a supporting base mounted on the table, a plurality of pipes mounted on the supporting base and arranged in substantial parallelism, a plurality of brackets attachable to each of the pipes, and U-shaped, metallic troughs, each having their inside surfaces smooth and joined by unangular corners, carried by the brackets at one side of the pipes and in substantial parallelism with each other.

7. Hosiery drying apparatus including a table comprising supporting uprights, a base-member mounted on the table, a plurality of pipes carried by the base-member and arranged in substantial parallelism, brackets attachable to each of the pipes, and troughs attached to the brackets and upstanding from the table, said troughs comprising substantially parallel upstanding side-walls, and a bottom joined thereto by curved corners, and the pipes occupying a plane a substantial distance below the plane of the tops of the troughs.

8. Hosiery drying apparatus including a metal table comprising legs, a supporting base-member on the table, a pair of pipes mounted on the base-member and adjacent the table, a set of brackets attachable to each pipe and extending upwardly therefrom, and a metal trough mounted in each

set of brackets and comprising side-walls and a bottom integral therewith and joined thereto by curved corners, the pipes occupying a position below the plane of the upper edges of the troughs.

9. Hosiery drying apparatus including a metal table comprising legs, a supporting base-member on the table, a pair of pipes mounted on the base-member and adjacent the table, a set of brackets detachably connected to each pipe and extending upwardly therefrom, a metal trough mounted in each set of brackets, the pipes normally occupying a position below the plane of the upper edges of the troughs, and a set of hosiery drying and shaping forms mounted on each pipe and upstanding therefrom, the trough and its respective brackets being detachable, as a unit, from its respective pipe and, thus, separable from the forms mounted thereon.

10. Hosiery drying apparatus including a table comprising legs and cross-members extending between the legs, a base-member mounted on the cross-members and comprising two upstanding sections, a pipe mounted in each section of the cross-members, metallic U-shaped brackets detachably connected to each pipe, and a metallic trough carried by the brackets and upstanding a substantial distance above the plane of the pipes, and having upstanding, substantially parallel walls and a bottom joined thereto by curved corners whereby the inside surface of the trough is approximately smooth and unangular at the point of juncture between the bottom and the sides.

11. Hosiery drying apparatus including a table comprising legs and cross-members extending between the legs, a base-member mounted on the cross-members and comprising two upstanding sections, a pipe mounted in each section of the cross-members, metallic U-shaped brackets attachable to each pipe, a metallic trough carried by the brackets and upstanding a substantial distance above the plane of the pipes, and having upstanding, substantially parallel walls and a bottom joined thereto by curved corners whereby the inside surface of the trough is approximately smooth and unangular at the point of juncture between the bottom and the sides, and hosiery drying and shaping forms mounted on the pipes and each comprising a base occupying a position below the plane of the upper edges of the trough and a foot-portion occupying a position above the plane of those edges.

12. Hosiery drying apparatus including a table comprising legs and cross-members extending between the legs, a base-member mounted on the cross-members and comprising two upstanding sections, a pipe mounted in each section of the cross-members, metallic U-shaped brackets attachable to each pipe, a metallic trough carried by the brackets and upstanding a substantial distance above the plane of the pipes, and means for detachably connecting the brackets to the pipes.

13. Hosiery drying apparatus including a table comprising legs and cross-members extending between the legs, a base-member mounted on the cross-members and comprising two upstanding sections, a pipe mounted in each section of the cross-members, metallic U-shaped brackets attachable to each pipe, and a metallic trough carried by the brackets having its side-walls joined by curved corners, the surfaces thereof being approximately smooth, said trough upstanding a substantial distance above the plane of the pipes, a series of forms mounted on each pipe, the foot and leg portions of each form being angular to the longitudinal axis of the pipe, whereby the toe-portion extends toward its proximate trough to facilitate the boarding operation.

14. Hosiery drying apparatus including a table comprising cross-members, legs connected with the cross-members, and means associated with the legs for adjusting the table vertically, base-members mounted on the cross-members and comprising two upstanding sections, a pair of pipes mounted in the upstanding sections of the base-members, brackets attachable to the pipes and substantially U-shaped, a U-shaped trough of metal mounted in the brackets and occupying a position at opposite sides of the pipes and comprising an open-ended metal container, and a plurality of spaced-apart rods at each end of the trough, the plane of the pipes being a substantial distance below the upper edges of the troughs, and hosiery drying and shaping forms mounted on each pipe and comprising base-portions occupying a position below the plane of said upper edges of the troughs, and a coupling between the base-portions and the pipes for connecting the forms to the pipes.

15. Hosiery drying apparatus including a table comprising cross-members, legs connected with the cross-members, and means associated with the legs for adjusting the table vertically, base-members mounted on the cross-members and comprising two upstanding sections, a pair of pipes mounted in the upstanding sections of the base-members, brackets attachable to the pipes and substantially U-shaped, a U-shaped trough of metal mounted in the brackets and occupying a position at opposite sides of the pipes and comprising an open-ended metal container and a plurality of spaced-apart rods at each end of the trough the plane of the pipes being a substantial distance below the upper edges of the troughs, and hosiery drying and shaping forms mounted on each pipe and comprising base-portions occupying a position below the plane of said upper

edges of the troughs and leg and foot portions occupying an angular position with relation to the sides of the troughs, the foot-portion of each form extending toward its proximate trough, and a coupling between the base-portions and the pipes for connecting the forms to the pipes, said coupling-members comprising two portions angularly arranged with respect to each other, whereby the forms carried by the couplings on the respective pipes occupy an angled position to each other and to each trough, whereby the boarding operation is facilitated.

16. Hosiery drying apparatus including a pipe, brackets detachably mounted thereon, and a trough attached to the brackets and supported thereby on the pipe, the brackets and trough being detachable from the pipe as an entity.

17. Hosiery drying apparatus including a table, a steam supplying pipe extending longitudinally thereof, and a plurality of removable troughs attachable to the pipes and sustained thereby.

18. Hosiery drying apparatus including a table, a steam-supplying pipe thereon, a plurality of sets of brackets detachably connected to the pipe, and a plurality of metallic troughs arranged in alinement, each trough being attached to a set of brackets and detachable therewith, as a unit, from the pipe and independently of another trough.

In testimony whereof I affix my signature.

PATRICK P. LA MONTAGNE.