Jan. 1, 1924 1,479,039

F. J. GREENE

METHOD OF MAKING WARDROBE TRUNK TROLLEYS

Filed Jan. 15, 1923

Fig. 1.

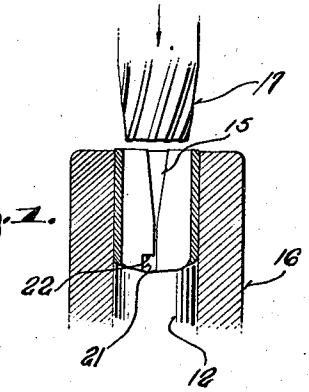


Fig. 2.

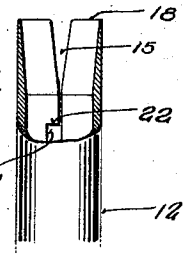


Fig. 3.

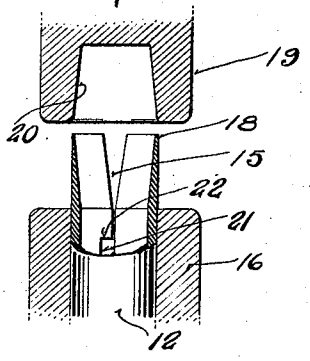


Fig. 4.

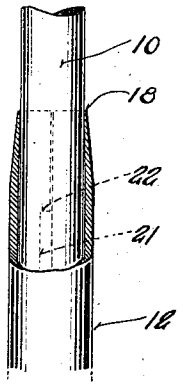
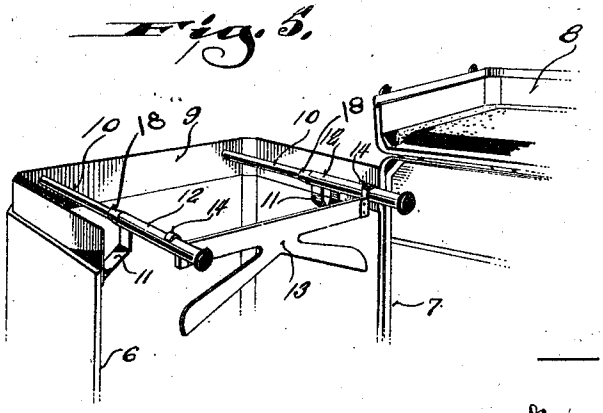


Fig. 5.



Inventor:

Frederick J. Greene

By Ira M. Jones.

Attorney

Patented Jan. 1, 1924. 1,479,039

UNITED STATES PATENT OFFICE.

FREDERICK J. GREENE, OF RACINE, WISCONSIN, ASSIGNOR TO GREENE MFG. CO., OF RACINE, WISCONSIN, A CORPORATION OF WISCONSIN.

METHOD OF MAKING WARDROBE-TRUNK TROLLEYS.

Application filed January 15, 1923. Serial No. 612,819.

To all whom it may concern:

Be it known that I, FREDERICK J. GREENE, a citizen of the United States, and resident of Racine, in the county of Racine and State of Wisconsin, have invented new and useful Improvements in Methods of Making Wardrobe-Trunk Trolleys, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to certain new and useful improvements in wardrobe trunk trolleys and the method of manufacturing the same, and refers more particularly to that type of trolleys comprising one or more supports each including a fixed part or rod member and a tubular part or rod member in telescopic relation thereto to provide an extension.

The supports are usually provided in sets with the fixed part or rod member of each set secured to and projected forwardly from the rear wall of the trunk in a suitable manner, the tubular part or rod member being extensible to project beyond the trunk section when open or movable to telescope with the fixed part or rod member preparatory to closing the trunk, the clothes hangers having their ends resting on the supports so that when the trunk is open and the supports extended they may be drawn forward to separate the various garments and facilitate removal of the desired garment.

When the trunk is to be closed, the supports are contracted and, in the event of any garment hangers are resting on the fixed rod members, it is desirable that means be provided to insure the movement of the tubular rod members thereunder. Heretofore this has been accomplished by obliquely beveling the inner ends of the tubular rod members as illustrated in Letters Patent No. 1,370,667, granted March 8, 1921, to August Petrie.

The Petrie structure, while performing the functions imparted thereto, is costly from a manufacturing standpoint in that a tension means is required to resist the too free telescoping of its parts.

It is, therefore, an object of my invention to provide a trunk trolley of that type comprising one or more sets of telescoping parts or rod members in which the means for insuring the movement of the tubular rod members under the hangers also provide tension means for restraining too free movement of the parts of the trolley with respect to each other.

Another object of my invention is to provide a trunk trolley comprising one or more sets of telescoping rods in which the inner end of the outer tubular rod of each set is tapered and has a snug fit with the fixed rod to produce a tension and tend to restrain too free a movement of the tubular rod on the fixed rod and, at the same time, provide means to insure the easy movement of the tubular rod under any garment hanger or other article supported from the fixed rod when the trolley is contracted.

Another object of this invention resides in the provision of an improved method of constructing the tubular part or rod member whereby its inner end has an external bevel ending at a substantially feather edge without disturbing the smooth finish of its exterior surface to facilitate the movement of the tubular rod member under hangers or other articles supported on the fixed rod of the support.

In the manufacture of trunk trolleys, it is essential that the surface thereof be polished to give an attractive appearance, and in order to reduce the cost of manufacture it is customary to construct the same of material that has been previously finished, as for instance, a material having its outer face previously nickeled. In view of this it is impractical to produce the external bevel on the inner end of the slide support tubular part by grinding or cutting the exterior thereof and it is, therefore, a further object of this invention to provide an improved method of constructing the tubular part of the support by forming a blank of expansible material into a tube, reaming out the inner end of the tube thus formed on a taper and then contracting the exterior of the tapered portion of the tube to produce an external bevel thereon.

And a still further object of this invention resides in the provision of an improved method of constructing the tubular rod part of sliding supports which consists in forcing the previously reamed end of the tubular part inwardly so that its inside diameter at its extreme inner end is less than that inwardly of the tapered part, whereby a tension is

applied to the fixed rod of the support and too free sliding of the tubular part over the fixed part restrained.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a fragmentary view, partly in section and partly in elevation, illustrating the first step employed in my improved method to taper the inner end of the tubular part after the blank has been formed into a tube;

Figure 2 is a view, partly in section and partly in elevation, of the inner end of the tube after the same has been reamed out on a taper;

Figure 3 is a fragmentary view, partly in section and partly in elevation, illustrating the manner of reducing the outside diameter of the inner end of the tubular part after the same has been reamed to produce a taper on the outer face thereof;

Figure 4 is a fragmentary view, partly in section and partly in elevation, illustrating the finished inner end of the tubular rod or part telescoped over the fixed rod part, and

Figure 5 is a fragmentary perspective view illustrating the conventional manner of applying my improved trolley to a wardrobe trunk.

Referring now more particularly to the accompanying drawings, in which like numerals designate like parts throughout the several views, 6 represents the wardrobe section of a trunk, 7 the drawer section and 8 the hinged top or cover which is adapted to close the wardrobe section when both sections of the trunk are closed.

The trunk trolley, which provides means for supporting the clothes hangers in the wardrobe section may be secured in place by a metallic member or brace 9 secured to the walls of the wardrobe section adjacent its top to provide a guide flange over which the cover 8 may telescope. The trolley generally includes a pair of extensible supports each comprising a fixed part or rod member 10 and a tubular part or rod member 12 adapted to telescope over the fixed part, which has its inner end secured to brace 9 near one side wall of the trunk section and its outer end braced against lateral movement and held parallel with the adjacent wall by an arm 11, one end of which is secured to the part 10 and the other to the member 9.

The parts 12 provide extensible slide supports for garment hangers or other articles 13 having suitable means 14 for engaging the trolley supports as illustrated in Figure 5.

Each part 12 is formed from a blank cut from a sheet of expansible material and rolled into a tube, the meeting edges, at its outer end, being cut away to provide a V, as at 15, for the purpose hereinafter described. After being formed, the tube inner end is inserted through a die or holding member 16 and its inner end reamed out on a taper by a suitable tool 17 to produce a substantially feather edge at its extreme inner end 18.

The inner end is then projected from the die or holding member 16 to position its reamed part outwardly thereof and a forming die 19 having a tapered recess 20 forced thereover to contract the part of the tube projecting above die 16 and produce an external bevel as depicted in Figure 4, the cut away part 15 accommodating the contracting of the tube end, as will be obvious.

The shape given the tube inner end by the forming die is such that the inside diameter of the end at the feather edge 18 is less than that inwardly of said end and the outside diameter of the part 10 so that when telescoped over the part 10 a snug fit is provided having sufficient tension to restrain the too free sliding of the tubular part over the other part. This construction eliminates the necessity of tension means such as the usual ball and spring, thus materially simplifying the construction. The arms 11 pass through slots 21 in the tubular rods and the inner ends of said slots are closed, as at 22, to provide means for limiting the extension of the tubular rods and preventing their accidental detachment.

When it is desired to separate the hangers 13, to facilitate the removal of any particular garment, the extension sections 12 are moved outwardly to the positions illustrated in Figure 5. When the trunk is to be closed, the extension sections are telescoped over the fixed parts 10 and the inner ends 18 of the extension sections will readily slide under any hanger that may be supported directly from the fixed parts.

With this construction and method it will be readily apparent to those skilled in the art to which an invention of this character appertains that the tubular parts or extensible sections 12 may be manufactured of previously finished material without marring the same, that the extensible sections readily ride under any hanger supported

directly on the fixed parts when said sections are contracted and that the provision of an independent tension device to restrain free movement of the extensible sections on the fixed rods is eliminated.

What I claim as my invention is:

1. The hereindescribed method of forming a tubular member having a tapered end, which consists in reaming the bore of a tube to a thin edge at one end, and in contracting the reamed end of the tube to produce an external bevel thereon.

2. The hereindescribed method of forming a tubular member having a tapered end, which consists in reaming the bore of a tube to a thin edge at one end, and in contracting the reamed end of the tube to produce an external bevel thereon and bring the thin edge to a diameter smaller than the normal inside diameter of the tube.

3. The hereindescribed method of forming a tubular member having a tapered end, which consists in reaming the bore of a tube to a thin edge at one end having a split therein, and contracting the reamed end of the tube to substantially close the split and produce an external bevel thereon.

4. The hereindescribed method of forming a tubular member having a tapered end from previously finished material, which consists in reaming the bore of a tube to a thin edge at one end, and contracting the reamed end of the tube to produce an external bevel thereon having its original finished surface.

5. The method of forming the tubular member of an extensible support for hangers, which consists in reaming the bore of a split and expansible tube to a thin edge at one end, and contracting the reamed end of the tube to produce an external beveled edge thereon and bring the thin expansible edge to a diameter smaller than the normal diameter of the tube.

6. The hereindescribed method of forming trolley members, which consists in forming a cut away portion in the end of a tubular member, and in contracting the end of the tubular member to substantially close the cut away portion and taper the exterior of the member end.

7. The hereindescribed method of forming trolley members, which consists in forming a cut away portion in the end of the tubular member, in contracting the end of the tubular member to substantially close the cut away portion and taper the exterior of the member end, and in reaming the interior of the member end to provide a thin edge.

FREDERICK J. GREENE.