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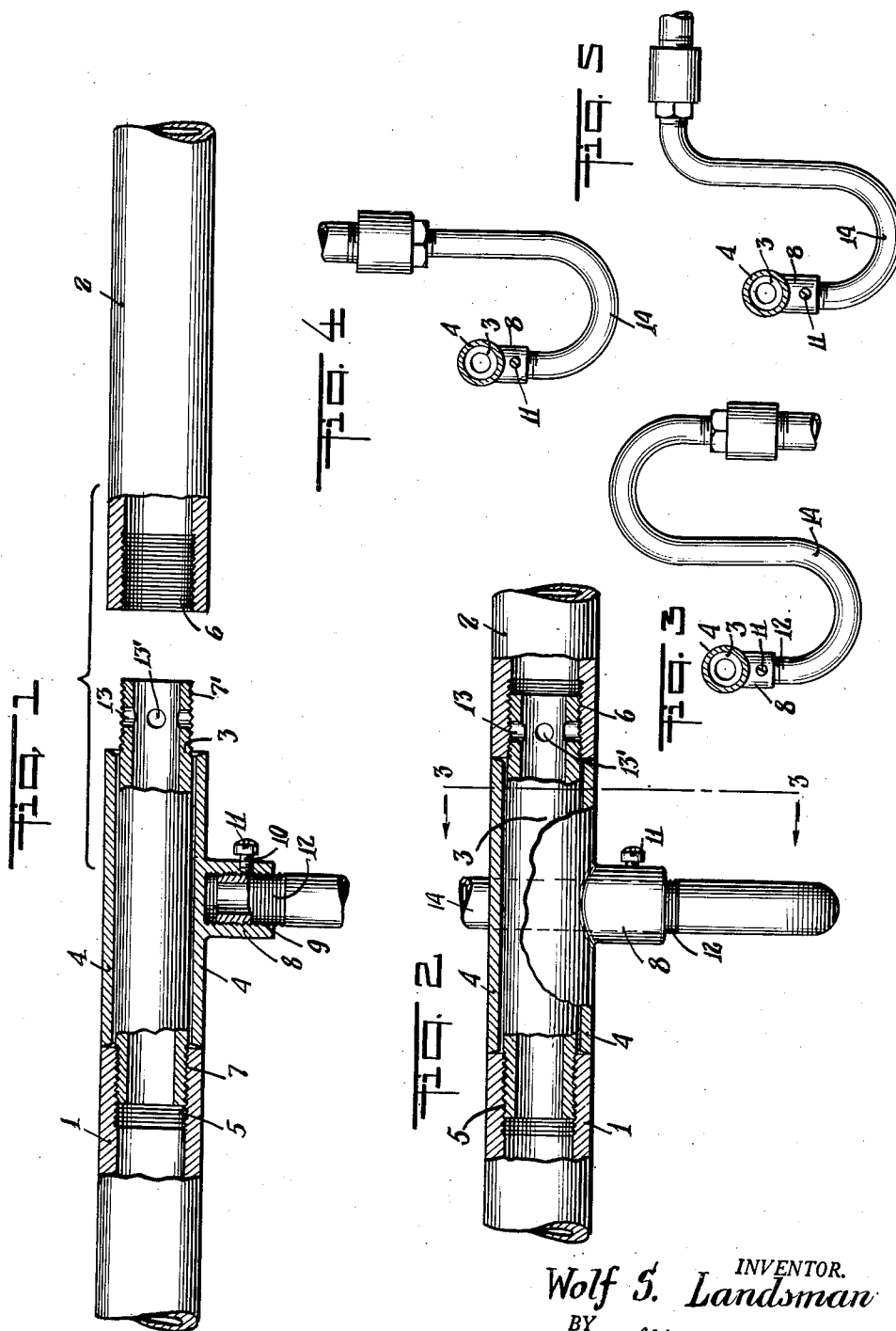
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2,581,032

COUPLING MEANS FOR GARMENT HANGER RACKS

Filed Nov. 17, 1945

3 Sheets-Sheet 1



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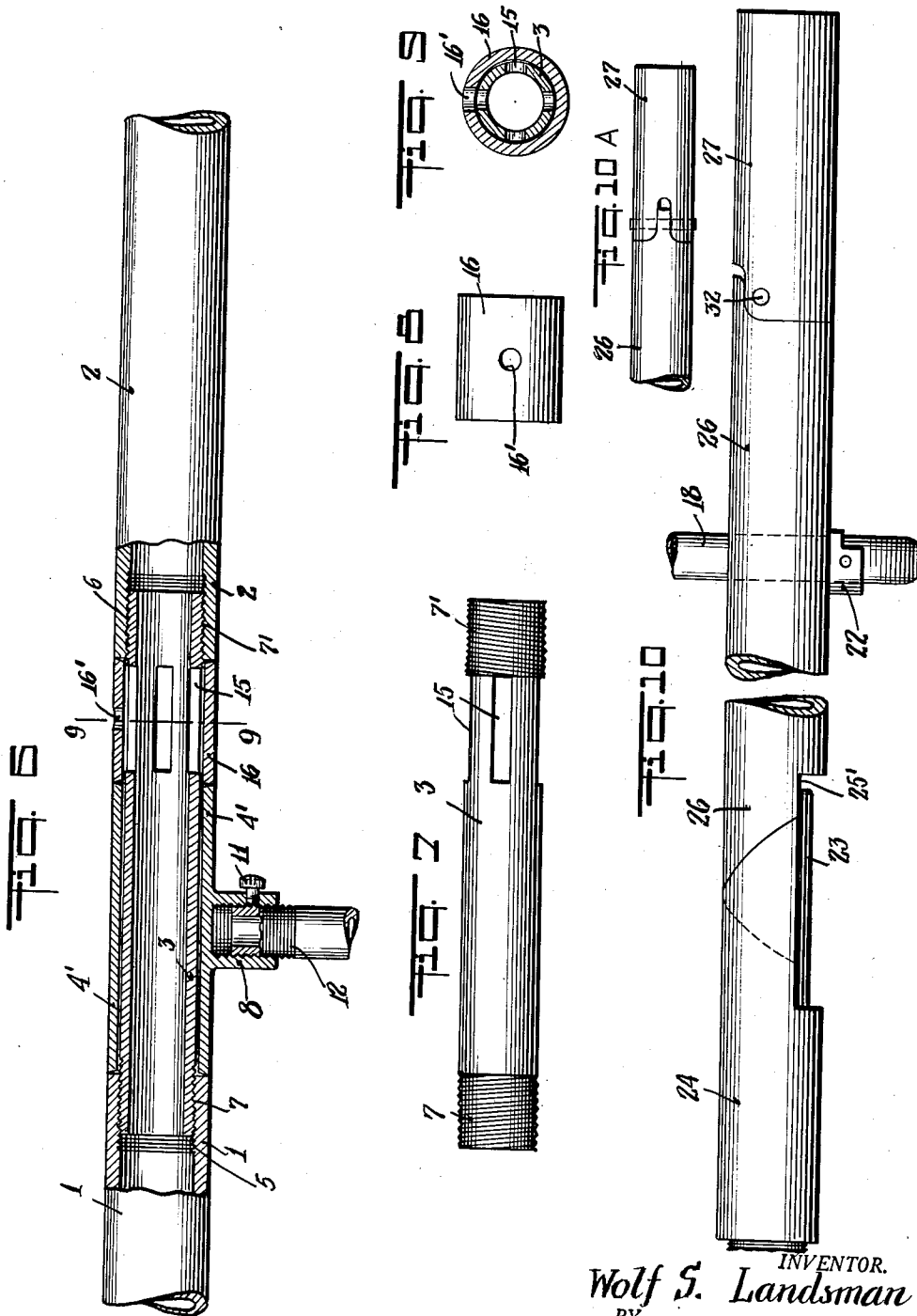
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3 Sheets-Sheet 2



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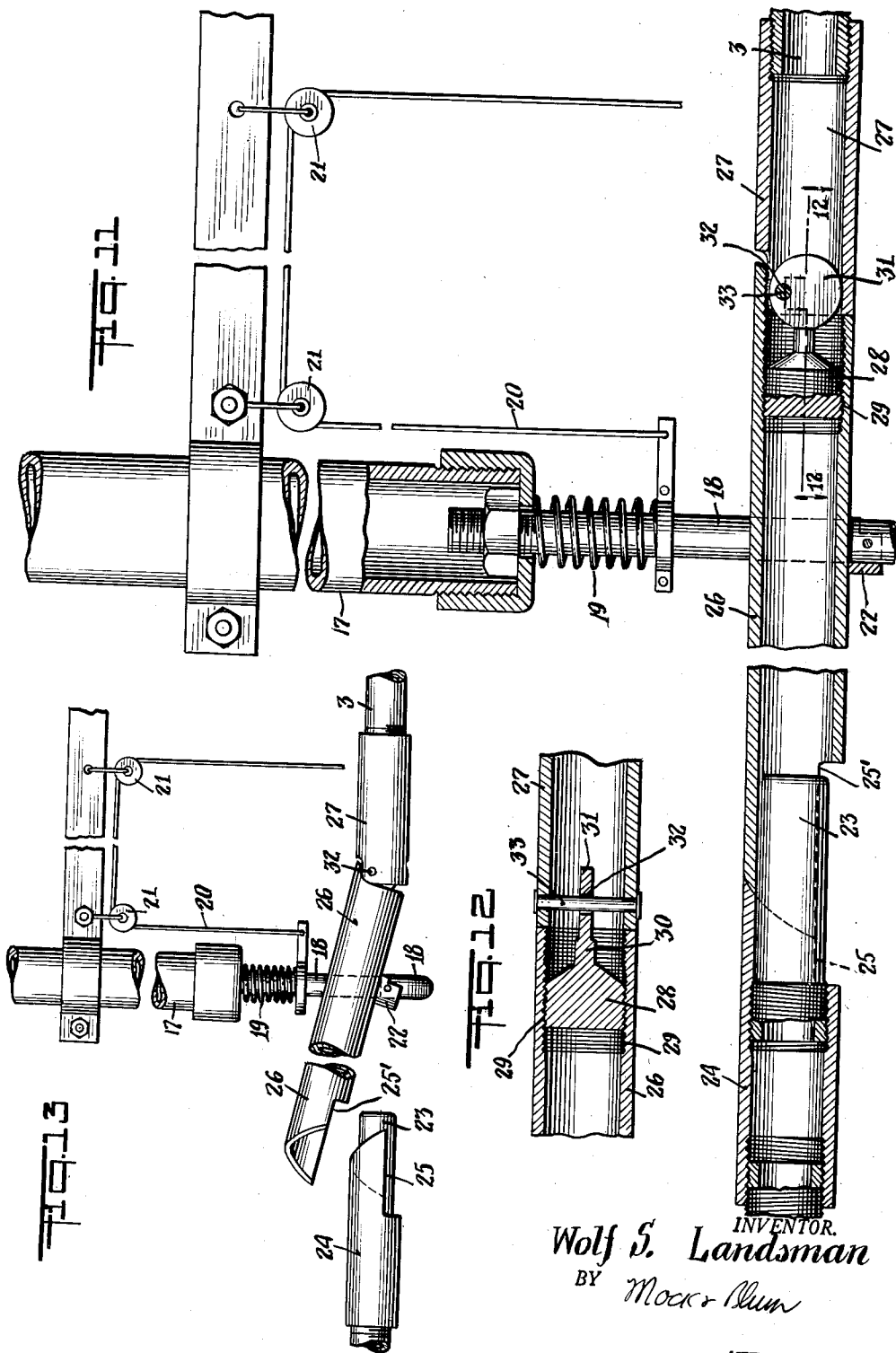
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COUPLING MEANS FOR GARMENT HANGER RACKS

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3 Sheets-Sheet 3



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COUPLING MEANS FOR GARMENT HANGER RACKS

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3 Claims. (Cl. 287-2)

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This invention relates to improvements in continuous supports for garment hangers adapted to carry wearing apparel. It has particular relation to supports of this type, which consist of two or more tubular sections connected to each other by means of improved coupling means.

The main object of my present invention is to provide a continuous rack or support consisting of several tubular sections having substantially equal outer and inner diameters and adapted to be assembled to a continuous rack or support having a substantially unbroken outer surface of substantially uniform cross-section, by means of my improved unobstructed coupling means.

Another object of my present invention consists in providing a continuous rack or support of the above mentioned type, in which the individual sections can be easily assembled and taken apart.

Still another object of my invention is to provide a rack or support of this type, the dimensions and shape of which may be easily changed by inserting or eliminating tubular sections in the rack or support.

Still another object of my invention is to provide a new and improved construction for supports or racks for garment hangers, which permits an easy change over and conversion from existing structures that employ obstruction couplings, by means of my improved coupling.

It is also an object of this invention to provide a rack or support of the aforementioned type, which contains one or more pivotally arranged sections adapted to be lifted in order to permit removal and diversion of garment hangers from the rack.

Other objects and the advantages of my invention will appear from the following specification and claims, and the appended drawings which show, by way of example, some preferred embodiments of my invention, and in which:

Figure 1 is a longitudinal, sectional view showing my improved coupling, and two tubular rack sections, one of which is assembled with the coupling, while the other is separated therefrom;

Figure 2 is a similar view of the elements shown in Figure 1, the second rack section being also assembled with the coupling;

Figure 3 is a sectional view along line 3-3 in Figure 2 on a reduced scale, showing an S-shaped supporting bracket connected to the coupling;

Figures 4 and 5 show two further modifications of the supporting bracket;

Figure 6 is a sectional view of two rack sections assembled by means of a coupling of somewhat modified structure;

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Figure 7 shows the internal coupling element, and Figure 8 an external ring element of the coupling shown in Figure 6, while Figure 9 is a sectional view along line 9-9 in Figure 6;

Figures 10-13 illustrate another embodiment of my invention, in which one section of the continuous rack or support may be lifted, said rack section being shown in Figure 11 in axially aligned, and in Figure 13 in lifted position, while Figures 10, 10A and 12 show certain parts of the rack structure illustrated in Figures 11 and 13.

Referring now particularly to Figures 1-5, the continuous rack or support according to my invention consists of tubular cylindrical rack sections of substantially equal outer and inner shape and diameters, two of these sections, 1 and 2, being shown in Figures 1 and 2. The right end of section 1 is provided with internal thread 5 and the left end of section 2 with internal thread 6. Sections 1 and 2 may be connected by means of internal coupling element 3, provided at its both ends with external threads 7 and 7', registering with internal threads 5 and 6, respectively. The right end of member 3 is provided with bores 13, 13', through which a rod or the like may be slipped in order to conveniently turn member 3. Coupling element 3 fits into coupling sleeve 4, which may be slid over element 3, and the outer surface of which forms a substantially unbroken surface with the outer surfaces of sections 1 and 2. Sleeve 4 is provided with a relatively short right angle branch piece 8, provided with a threaded bore 9, adapted to receive the threaded end portion 12 of a supporting bracket 14. The other end of said supporting bracket may be fastened, for example, to the ceiling (not shown). A threaded hole 10 is provided in the wall of branch piece 8, and is adapted to receive a fastening screw 11. The length of coupling element 3 is greater than the length of sleeve 4, so that both ends of element 3 project longitudinally from sleeve 4 in the position shown in Figures 1 and 2. In order to assemble the parts shown in Figures 1 and 2, section 1 is aligned and brought in abutting relation with sleeve 4 which is fixed to a suitable stationary support (not shown) by means of bracket 14, and houses internal coupling member 3. The latter is now turned and screwed into the right end portion of tubular section 1. At the point where thread 5 is interrupted, the internal surface of section 1 provides a stop and limits the insertion of coupling member 3 into tubular section 1. Tubular section 2 is now screwed upon the threaded right end portion of member 3, until section 2 is in tightly

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abutting relation with the end of sleeve 4. By using a series of similar couplings consisting of an internal coupling member (3) and a sleeve (4), the pipe rack may be built up to any desired length and design. As shown in Figures 1-5, the means for fastening the rack to a stationary support are applied in such a manner as to leave the top and front of the rack unobstructed and not to interfere with the hangers.

In the modification illustrated in Figures 6-9, the internal coupling member 3 is provided with several slots 15 and the external coupling member, which houses member 3, consists of two pieces, i. e. a somewhat shorter sleeve 4' and a ring member 16 (best shown in Figure 8) provided with a bore 16'. Members 4' and 16 have the functions of sleeve 4, shown in Figs. 1 and 2. The division of the external coupling member into a shorter sleeve and a ring member of registering shape and dimensions, facilitates assembling of the rack parts and is particularly useful if the rack includes bent sections, which must maintain a fixed position with relation to the other sections.

One of the important features of the embodiment of Figures 6 to 9 resides in the fact that the external threads 7 and 7' of coupling member 3 are respectively right and left threads. Internal thread 5 of tubular section 1 (which receives thread 7) and internal thread 6 of section 2 (which receives thread 7') are correspondingly threaded, so that there will be a proper threaded engagement when sections 1 and 2 are connected to coupling member 3. By so threading coupling member 3 and sections 1 and 2, the embodiment of Figures 6 to 9 is especially useful when the rack includes bent sections.

While Figures 1-9 show two rack sections to be assembled, it will be obvious that any desired number of rack sections may be assembled by means of the coupling means shown, in the above described manner. Bent tubular sections may also be assembled with straight tubular rack sections in substantially the manner described.

In the embodiment illustrated in Figures 10 to 12, tubular rack section 24 is provided with a cut-out at 25, and coupling member 23 is provided at its left end portion with a thread and screwed into the threaded right end portion of rack section 24. Tubular rack section 26, which is also provided with a cut-out 25', is pivotally connected to tubular rack section 27 and may be raised to the position shown in Fig. 13 by pulling rope 20, passed over pulleys 21, of a conventional lifting device 17. This device includes a rod 18 provided with a pivotally connected lifting element 22, and a spring 19 which automatically forces rack section 26 back into the position shown in Figure 11 when the pull exerted on rope 20 is relieved. Pivotal connection between tubular section 26 and the adjacent section 27 may be effected by means of a threaded rod-like member 28 which is screwed into tubular section 26 at 29, and is provided with a pin-like extension 30, and a disc-like portion 31, having a perforation 32, through which pin 33 is passed. Tubular sections 24 and 26 have registering end portions cut along the lines shown in Figures 11 and 13. Rack sections 24 and 27 may be coupled with adjacent sections in the manner illustrated in Figures 1-9.

Instead of using a tubular coupling member 3, a solid rod-like member of corresponding design

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may be used and instead of the cylindrical shape, the rack sections and coupling elements may be of other suitable outer cross-section, if desired. It will be understood that these and other changes in the constructions herein described may be made without departing from the spirit of my invention as defined in the appended claims.

What I claim is:

1. Coupling means for aligned axially spaced tubular sections of a support or rack for garment hangers, said tubular sections having an outer surface of substantially equal design and dimensions, and threaded end portions, said coupling means comprising an internal coupling member and a sleeve and adjacent ring slidably housing the middle portion of said internal coupling member, the end portions of said internal coupling member being threaded and projecting from said sleeve and ring, and being adapted to be screwed into the threaded end portions of the adjacent tubular sections, the outer surfaces of the sleeve and ring forming a substantially continuous surface with the outer surface of the tubular sections.

2. Coupling means for aligned axially spaced tubular sections of a support or rack for garment hangers, said tubular sections having an outer surface of substantially equal design and dimensions, and right and left threaded end portions, said coupling means comprising an internal coupling member, and a sleeve and adjacent ring slidably housing the middle portion of said internal coupling member, the end portions of said internal coupling member being threaded and projecting from said sleeve and ring respectively, and being adapted to be screwed into the threaded end portions of the tubular sections, the outer surfaces of the sleeve and ring forming a substantially continuous surface with the outer surface of the tubular sections, said coupling member being provided with at least one recess, said ring being provided with a recess positioned to register with the recess in the coupling member, said coupling member being rotatable in said sleeve.

3. Coupling means according to claim 2, in which the said threaded end portions of the coupling member are right and left threaded respectively.

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