

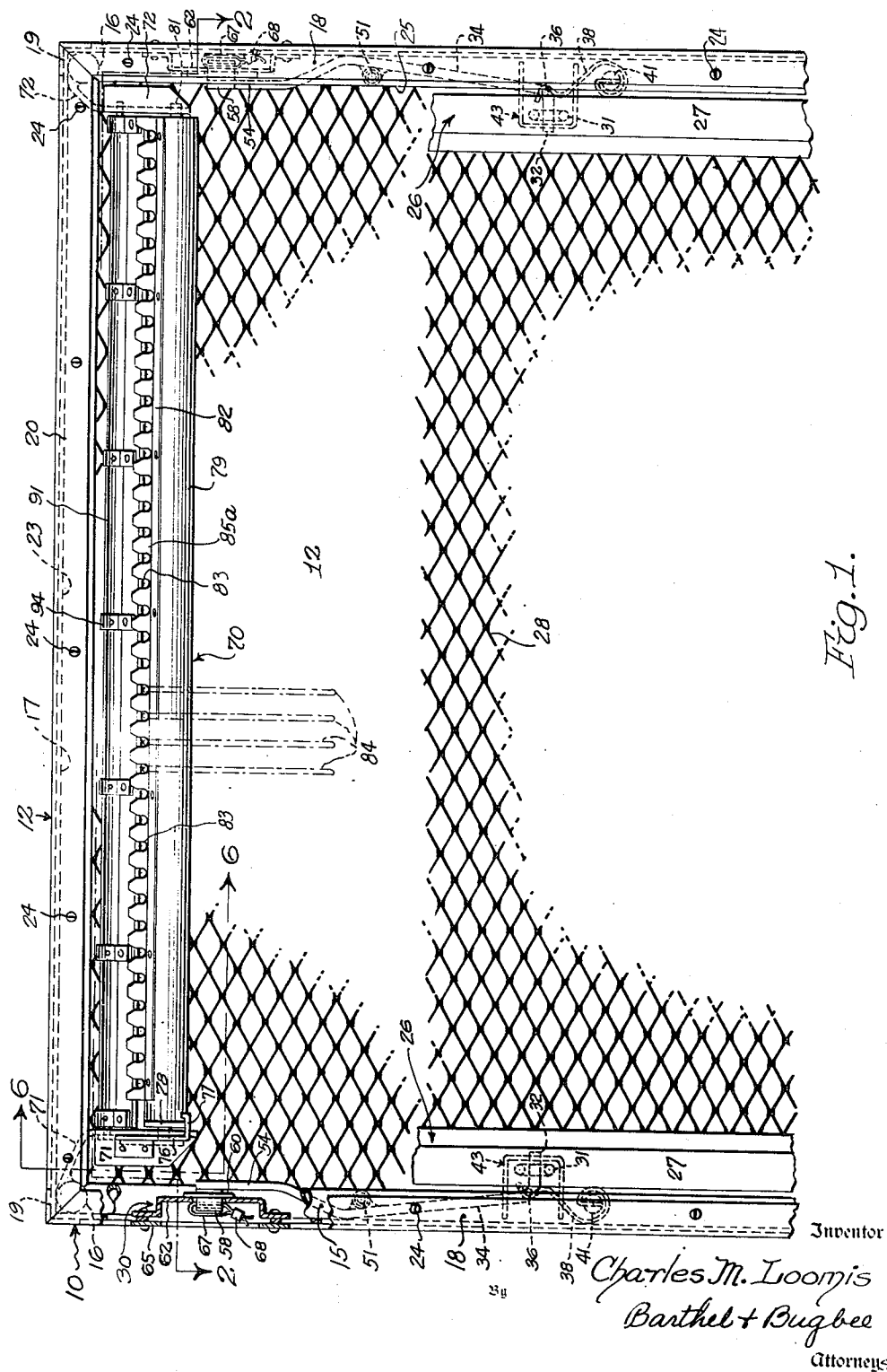
May 17, 1955

C. M. LOOMIS
GARMENT TRUCK

2,708,522

Filed March 12, 1952

3 Sheets-Sheet 1



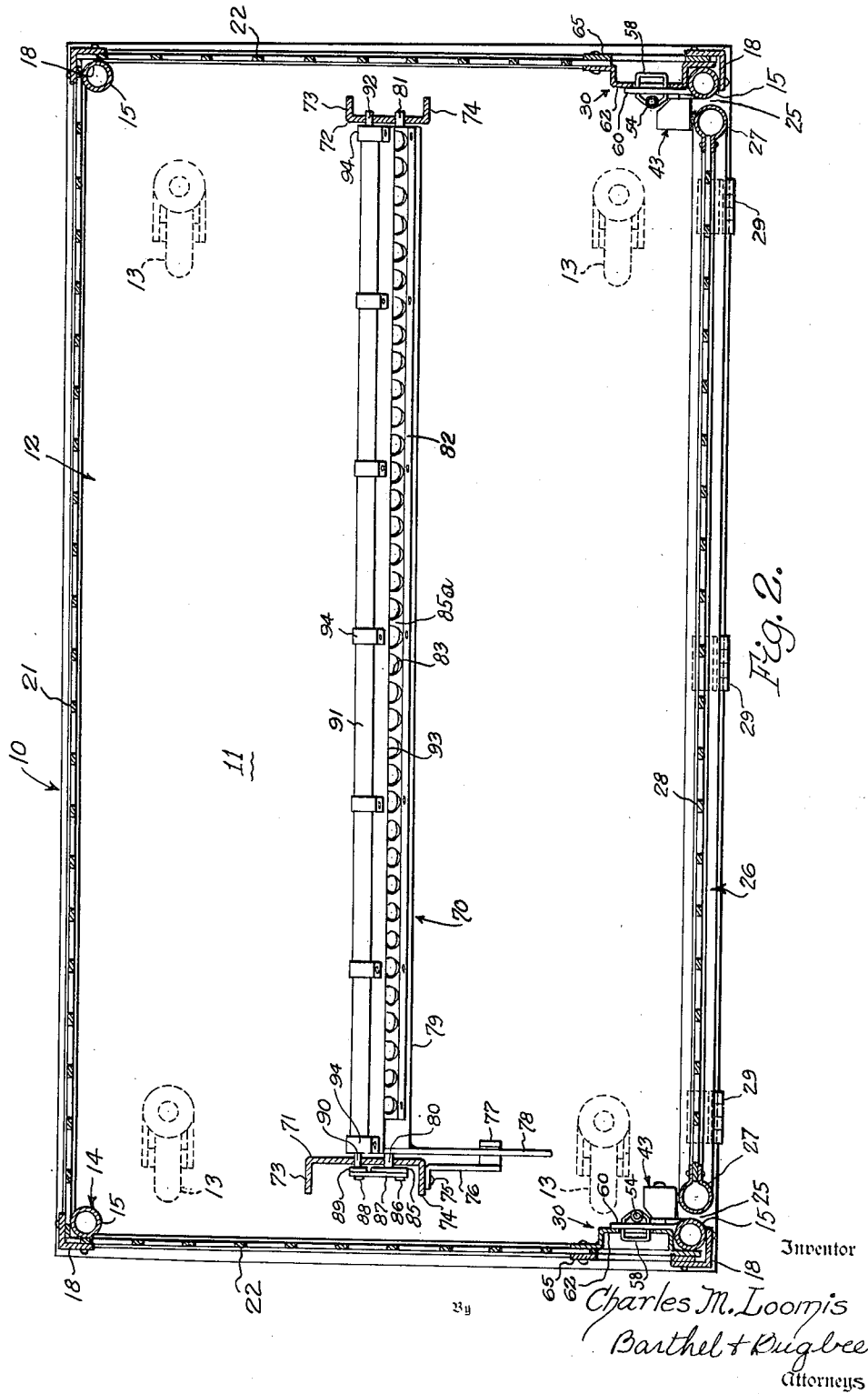
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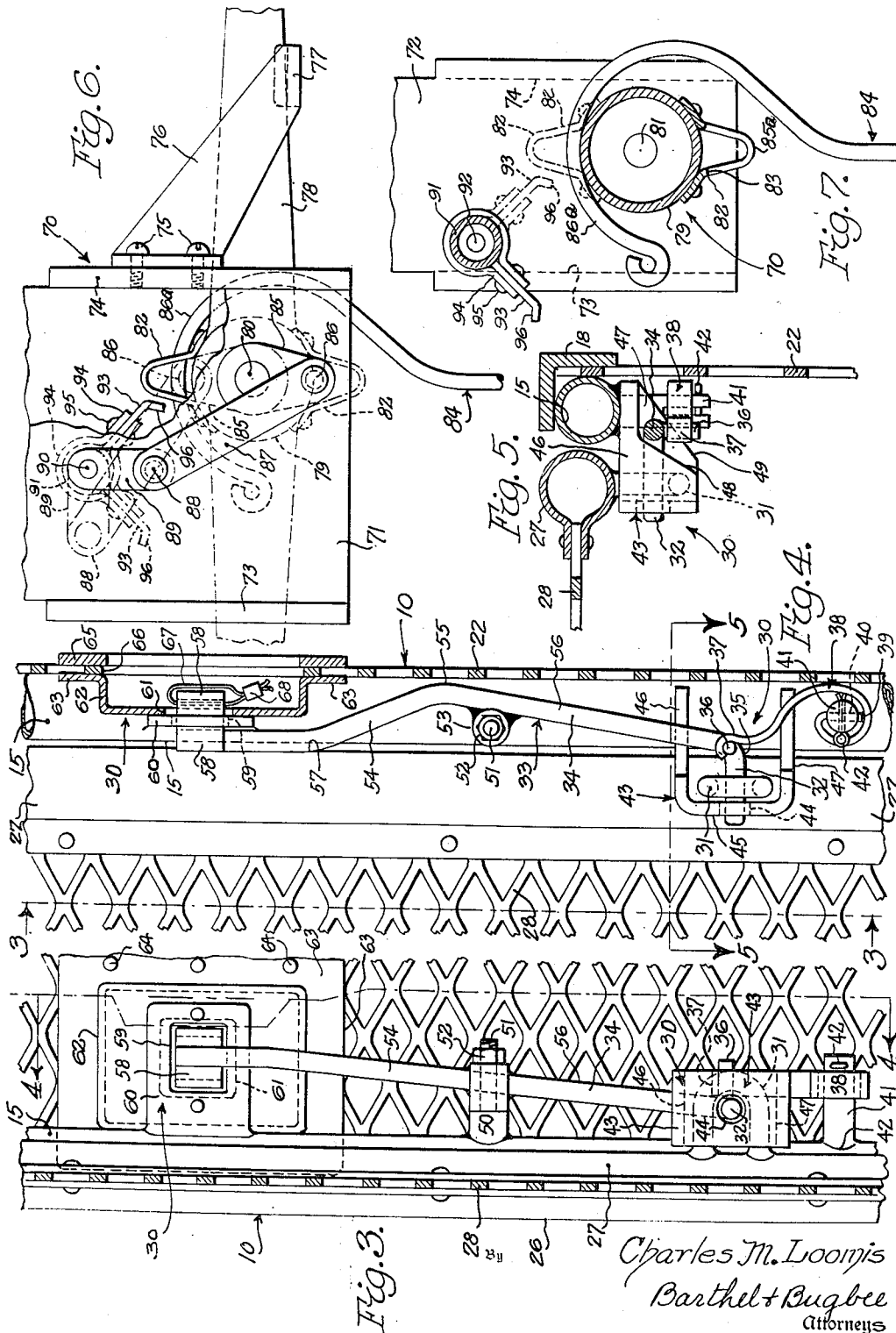
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GARMENT TRUCK

Charles M. Loomis, Arkansas City, Kans.

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5 Claims. (Cl. 211-7)

This invention relates to stock trucks, and, in particular, to garment trucks.

One object of this invention is to provide a garment truck wherein the hangers on which the garments are carried are maintained in spaced relationship without the possibility of dislodgment or sliding, regardless of the amount of jolting to which the garment truck is subjected during transportation.

Another object is to provide a garment truck of the foregoing character wherein the garment hangers are quickly and easily locked in their spaced positions and unlocked therefrom for removal, by simple yet effective mechanism.

Another object is to provide a garment truck of the foregoing character wherein the garment hangers are suspended from a rotatable carrying member which has hanger spacers thereon and which also is operatively connected to a rotatable retaining member in such a manner that rotation of the carrier member to bring the hanger spacers into action also rotates the retaining member to lock the garment hangers in the spaced positions in which they are held by the carrying member.

Another object is to provide a garment truck having an enclosure with an access door equipped with a locking and sealing device of an improved character which effectively prevents tampering with or theft of the contents of the truck.

Other objects and advantages of the invention will become apparent during the course of the following description of the accompanying drawings, wherein:

Figure 1 is a side elevation, partly in section, and partly broken away, of the upper portion of a garment truck according to one form of the invention;

Figure 2 is a horizontal section taken along the line 2-2 in Figure 1, showing the garment carrying and retaining members in top plan view and in their garment-retaining and spacing positions;

Figure 3 is an enlarged fragmentary end elevation of Figure 1, showing the locking and sealing device of the invention;

Figure 4 is a vertical section taken along the line 4-4 in Figure 3;

Figure 5 is a horizontal section taken along the line 5-5 in Figure 4;

Figure 6 is an enlarged fragmentary vertical section taken along the line 6-6 in Figure 1 and partly broken away to show the garment carrying and retaining members in their locked positions; and

Figure 7 is a view similar to Figure 6, but wholly in vertical section and with the garment carrying and retaining members swung into their unlocked positions.

Hitherto, the transportation of garments in factories, stores, warehouses and the like and their transportation between such establishments has been a source of loss to owners of such establishments due to theft of the garments and also due to damage to or soiling of the garments by their being dislodged from their positions as a result of the jolting of the truck. The present inven-

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tion provides an improved garment truck which is equipped with an enclosure having a door with an effective locking and sealing device which prevents tampering and theft or, if merely sealed, indicates instantly the occurrence of tampering. Furthermore, the invention provides an elongated garment carrying member supported within the enclosure and equipped with spacers for spacing the garment hangers apart from one another. Operatively connected to the garment carrying member is an adjacent retaining member which is movable into and out of retaining position while the garment carrying member is rotated into and out of locking position.

Referring to the drawings in detail, Figures 1 and 2 show a garment truck, generally designated 10, having a bottom or base 11 on which is mounted an enclosure, generally designated 12. Mounted on the lower side of the base 11 are swivel casters 13 in order to enable the truck 10 to be rolled from place to place. Rising from the base 11 is an open or skeleton framework, generally designated 14, of metal pipe or tubing including uprights 15 interconnected by cross members 16 and longitudinal members 17. Mounted outside each of the uprights 15 is a vertical angle member 18. The vertical angle members 18 are interconnected by angle cross members 19 and angle longitudinal members 20 (Figure 1). Arranged in the open space between the members 15, 16 and 17 of the framework 14 and held in position by the angle members 18, 19 and 20 are side and end panels 21, 22 and a top panel 23 of metal mesh material, such as the well-known expanded metal, these panels being held in place by screws, rivets or other fasteners.

One side of the enclosure 12 is provided with an access opening 25 closed by a door, generally designated 26 (Figures 1 and 2). The door 26 is provided with an approximately rectangular tubular peripheral frame 27 which is open in the center, the central opening being closed by a metal mesh panel 28 similar in construction to the panels 21, 22 and 23 previously described. Secured to the lower edge of the door 26 are spaced hinges 29 (Figure 2) whereby the door 26 may be swung downward from the top of the opening 25.

The door locking and sealing device, generally designated 30 (Figures 3 to 5 inclusive) includes U-shaped hasps or keepers 31 welded or otherwise secured to the opposite sides of the door frame 27 and extending inwardly in parallel relationship and perpendicular to the plane of the door 26. Each of the hasps or keepers 31 (Figures 3 and 4) is engaged by the end portion 32 of a swinging bolt 33 which is provided with an operating portion 34 at right angles to the end portion 32, the junction or bend 35 thereof being provided with a horizontally-projecting pin 36 which is engaged by the hooked upper end 37 of a spiral spring 38 (Figure 4). The lower end 39 of the spiral spring 38 is seated in a slot 40 of a short rod 41 (Figure 5) and held in position by a cotter pin 42 inserted through the outer end of the rod 41 and crossing the slot 40 thereof. The slotted rod 41 is welded or otherwise secured as at 42 to the tubular upright 15 nearest it (Figure 3). By reason of this construction, the spiral spring 38 constantly urges the end portion 32 of the bolt 33 upward and through the U-shaped hasp or keeper 31. In order to provide additional support for the end portion 32 of the bolt 33, a U-shaped bracket 43 is mounted in alignment with the hasp or keeper 31 and provided with a hole 44 in its connecting portion or bridge portion 45 for reception of the end portion 32 (Figure 4). The upper and lower arms 46 and 47 of the bracket 43 are cut away as at 48 and 49 to permit free swinging of the bolt 33 and spring 38, and the ends of the arms 46 and 47 are

welded or otherwise secured to the adjacent tubular upright 15 (Figure 5).

Welded or otherwise secured to the aforesaid tubular upright 15 immediately above the bracket 43 is a boss 50 from which a pivot stud 51 projects (Figure 3) and is threaded at its outer end to receive a retaining nut 52. Welded or otherwise secured to the operating portion 34 of the bolt 33 adjacent the stud 51 is a pivot collar or sleeve 53 by which the bolt 33 is pivotally mounted on the stud 51 and held in position by the nut 52. The upper portion 54 of the bolt 33 is suitably bent as at 55 relatively to the lower portion 56 thereof and is bent again as at 57 (Figure 4) into parallelism with the upright member 15. Secured to the upper end of the upper portion 54 is a rectangular eye 58 which projects through a correspondingly rectangular opening 59 in a plate 60, the side edge of which is welded or otherwise secured to the previously mentioned tubular member 15 (Figure 3). The eye 58 also projects through a rectangular opening 61 in a cupped or recessed member 62 having an edge flange 63 which is secured as by fasteners 64 to the inner side of the expanded metal or metal mesh panel 22, an open-centered rectangular border member 65 being secured by the same fasteners 64 to the outer surface of the panel 22, which is provided with an opening 66 at this point for the insertion of the hand or fingers (Figure 4). In order to detect tampering, the loop 67 of a seal 68 is inserted through the eye 58 (Figure 4) within the recessed member 62 and clinched or otherwise compressed to secure the seal 68.

The garment holding unit, generally designated 70 (Figures 1 and 2) is supported by a pair of inverted L-shaped brackets 71 and 72 having their upper ends welded or otherwise secured to the cross members 16 and having lower ends of U-shaped cross-section extending downwardly substantially parallel to one another and provided with outwardly-extending flanges 73 and 74 respectively (Figure 2). Secured as at 75 to one of the flanges 73 is an angle arm 76 having a transversely extending rest 77 for the outer portion of an operating lever 78 which is of resilient material, such as steel, in order to swing sidewise. The inner end of the lever 78 is welded or otherwise secured to one end of a rotatable tubular carrier member 79 having pivot pins 80 and 81 projecting from its opposite ends, the brackets 71 and 72 being bored to receive the pivot pins 80 and 81. Riveted or otherwise secured to the carrier member 79 and extending substantially from end to end thereof is an elongated spacing member 82 of approximately V-shaped cross-section (Figure 7) having longitudinally-spaced notches 83 therein for receiving the garment hangers 84, the projections 85a between the notches 83 forming teeth which space the hooks 86a of the garment hangers 84 apart from one another.

Secured to the pivot pin 80 on the outer end thereof is a crank arm 85 (Figures 2 and 6) pivoted as at 86 to the outer end of which is a link 87, the opposite end of which is pivoted as at 88 to a shorter crank arm 89, the inner end of which is welded or otherwise secured to a pivot pin 90 on one end of a rotatable retaining rod 91, the opposite end of which carries a pivot pin 92. The brackets 71 and 72 are bored to receive the pivot pins 90 and 92 (Figure 2) and are arranged in such a manner that the axes of rotation of the carrier member 79 and retaining rod 91 are parallel. The retaining rod 91 like the carrier member 79 is of tubular construction (Figure 7).

Secured lengthwise along the rotary retaining rod 91 is a bent retaining bar 93 which is held in position by clamps or clips 94 encircling the rod 91 and riveted or otherwise secured as at 95 to the bar 93. The bar 93 has a bent contact edge 96 which prevents the hooks 86a of the garment hangers 84 from being withdrawn

from the notches 83 when the device is in its locked position (Figure 6). The ratio of lengths of the crank arms 85 and 89 is such that rotation of the carrier member 79 by the lever 78 through a given angle, for example 180°, will rotate the retaining rod 91 through a lesser angle so as to swing the retaining bar 93 through a lesser angle than the angle through which the teeth 85a swing (Figure 7), for example, 90°.

In the operation of the invention, let it be assumed that the door 26 is open and swung downward around its hinges 29. Let it also be assumed that the lever 78 is in its forward or locked position (Figure 6). To unlock the garment holding unit 70, the operator lifts the lever 78 upward and at the same time swings it to the right (Figure 2) to clear the rest 77, then swings it downwardly and rearwardly through an angle of approximately 180° into the dotted line position shown in Figure 6. The consequent rotation of the tubular carrier member 79 around its pivot pins 80 and 81 swings the spacing member 82 with its teeth 85a from its upper position (Figure 6) to its lower position (Figure 7). At the same time, the consequent swinging of the crank arm 85 in a clockwise direction and the resultant swinging of the crank arm 89 in a similar direction to the action of the connecting link 87 swings the retaining bar 93 rearwardly out of the way and into approximately the position shown in Figure 7. The garment holding unit 70 is now in its unlocked or open position, ready to receive the garments.

The garments on their hangers are then inserted through the door opening 25 into the interior of the enclosure 12 and the hooks 86a of their garment hangers 84 hooked over the carrier member 79. The garments are spaced apart from one another along the carrier member 79 at the desired intervals, such as, for example, the intervals between the notches 83 (Figure 1).

To close the garment holding unit 70, the operator grasps the lever 78, which is now in its dotted line or rearward position of Figure 6, and swings it counterclockwise into its solid line position, at the same time swinging it sidewise in order to clear the rest 77 on the bracket 76. This action swings the spacing member 82 with its notches 83 and teeth 85a from a position beneath the carrier member 79 (Figure 7) to a position thereabove (Figure 6), at the same time swinging the retaining bar 93 from its rearward position to its forward position with its bent edge 96 adjacent the retaining member 82 and closing the notches 83 so as to prevent withdrawal or dislodgment of the hooks 86a of the garment hangers 84.

To close the enclosure 12, the operator swings the door 26 upward to close the opening 25, whereupon the hasps or keepers 31 swing into line with the holes 44 of the U-shaped brackets 43. It will be assumed, of course, that there are no seals 68 yet attached, and that the bolts 33 have been swung around their pivot studs 51 by pushing inward upon the rectangular eyes 58 to pull the lower ends 32 out of the way of the inwardly moving hasps 31. The operator then releases the eyes 58, whereupon the springs 38 (Figure 4) force the bolt end portions 32 inwardly through the hasps 31 and holes 44 in the brackets 45, locking the door. Meanwhile, the opposite swinging of the upper portions 54 of the bolts 33 projects the eyes 58 through the openings 59 and 61 in the plates 60 and recessed members 62 respectively. The operator now inserts the loops 67 of the seal 68 through each of the eyes 58 (Figures 1 and 4) and clinches the seal 68 in position. Alternatively in place of the seals 68, padlocks may be applied to the eyes 58 in the same manner, positively locking the door 26 at its opposite edges. Furthermore, in place of the linkage 85, 87, 89 drivingly connecting the carrier member 79 to the retaining member 91, it will be evident that a gear train may alternatively be used to transmit the same motion.

What I claim is:

1. A holder for garments on garment hangers, comprising a supporting structure, an elongated carrier member mounted on said structure and adapted to receive the garment hangers, an elongated garment hanger retaining member mounted on said structure and disposed substantially parallel to said carrier member and in spaced relationship thereto, and a multiplicity of garment hanger spacers mounted on said carrier member and disposed at intervals therealong, said carrier member being rotatably mounted on said supporting structure for moving said spacers into and out of spacing engagement with said garment hangers.

2. A holder for garments on garment hangers, comprising a supporting structure, an elongated carrier member mounted on said structure and adapted to receive the garment hangers, an elongated garment hanger retaining member mounted on said structure and disposed substantially parallel to said carrier member and in spaced relationship thereto, one of said members being mounted on said structure for movement toward and away from the other member, a multiplicity of garment hanger spacers mounted on said carrier member and disposed at intervals therealong, and mechanism for moving the movable member into close proximity to the other member, said carrier member being rotatably mounted on said supporting structure for moving said spacers into and out of spacing engagement with said garment hangers.

3. A holder for garments on garment hangers, comprising a supporting structure, an elongated carrier member mounted on said structure and adapted to receive the garment hangers, an elongated garment hanger retaining member mounted on said structure and disposed substantially parallel to said carrier member and in spaced relationship thereto, one of said members being mounted on said structure for movement toward and away from the other member, a multiplicity of garment hanger spacers mounted on said carrier member and disposed at intervals therealong, and mechanism for moving the movable member into close proximity to the other member, said retaining member being rotatably mounted on said structure and having a retaining portion swingable into close proximity to the other member in response to the rotation of said retaining member, said carrier member being rotatably mounted on said supporting structure for moving said spacers into and out of spacing engagement with said garment hangers.

4. A holder for garments on garment hangers, comprising a supporting structure, an elongated carrier member mounted on said structure and adapted to receive the garment hangers, an elongated garment hanger re-

taining member mounted on said structure and disposed substantially parallel to said carrier member and in spaced relationship thereto, one of said members being mounted on said structure for movement toward and away from the other member, a multiplicity of garment hanger spacers mounted on said carrier member and disposed at intervals therealong, and mechanism operatively interconnecting said members for simultaneously rotating said carrier member and moving the movable member into close proximity to the other member, said retaining member being rotatably mounted on said structure and having a retaining portion swingable into close proximity to the other member in response to the rotation of said retaining member, said carrier member being rotatably mounted on said supporting structure for moving said spacers into and out of spacing engagement with said garment hangers.

5. A holder for garments on garment hangers, comprising a supporting structure, an elongated carrier member mounted on said structure and adapted to receive the garment hangers, an elongated garment hanger retaining member mounted on said structure and disposed substantially parallel to said carrier member and in spaced relationship thereto, one of said members being mounted on said structure for movement toward and away from the other member, a multiplicity of garment hanger spacers mounted on said carrier member and disposed at intervals therealong, and mechanism including a linkage operatively interconnecting said members for simultaneously rotating said carrier member and moving the movable member into close proximity to the other member, said retaining member being rotatably mounted on said structure and having a retaining portion swingable into close proximity to the other member in response to the rotation of said retaining member, said carrier member being rotatably mounted on said supporting structure for moving said spacers into and out of spacing engagement with said garment hangers.

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