I. LEVIN.

COLLAPSIBLE GARMENT FORM STAND.

APPLICATION FILED NOV. 8, 1915.

1,204,038.

Patented Nov. 7, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

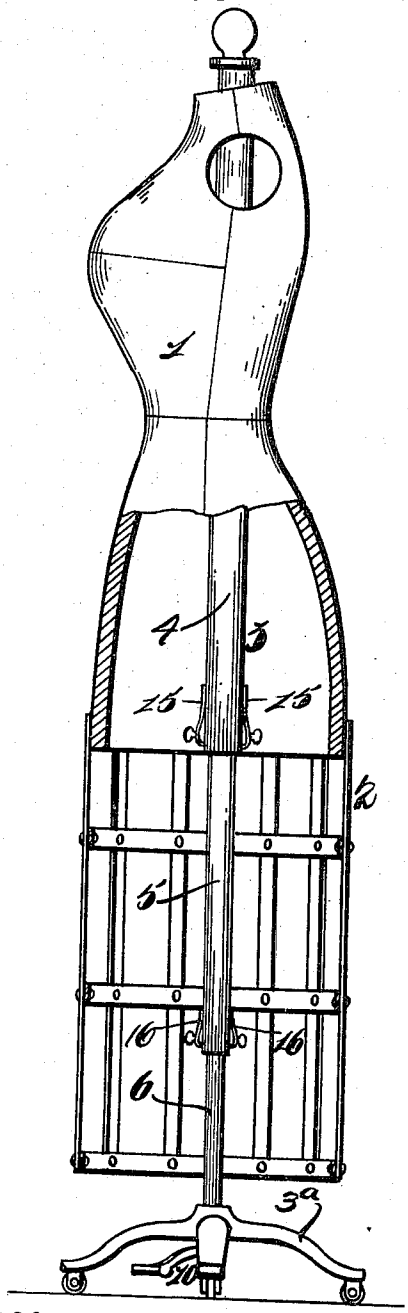


Fig. 2.

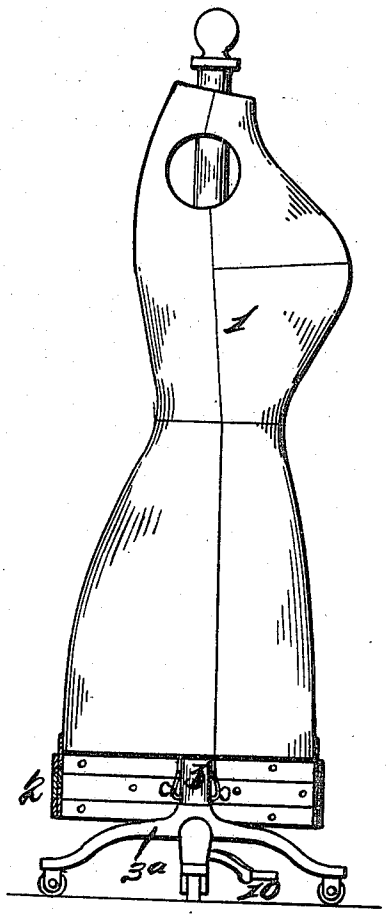
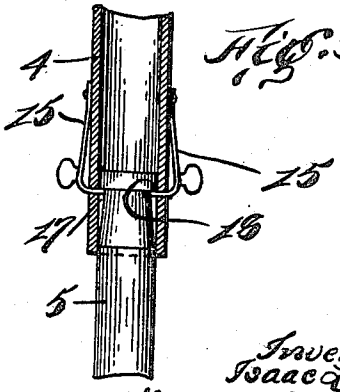


Fig. 3.



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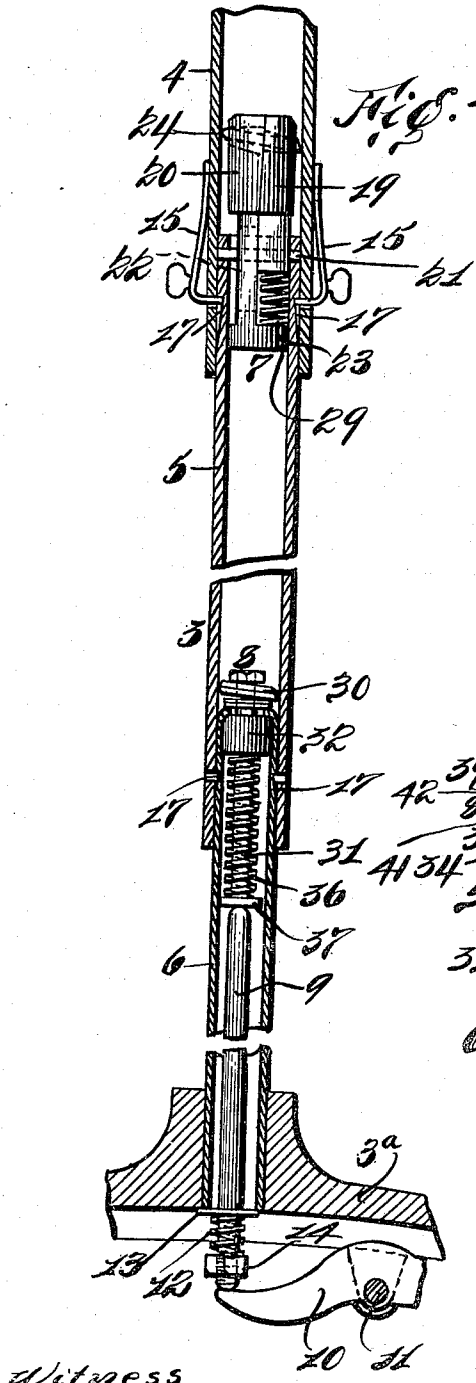


Fig. 4.

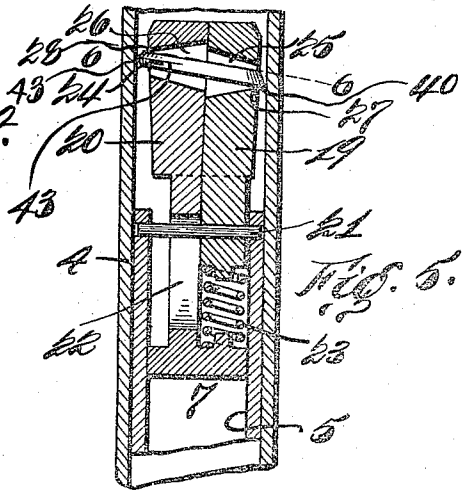


Fig. 5.

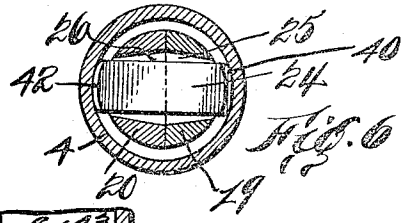


Fig. 6.

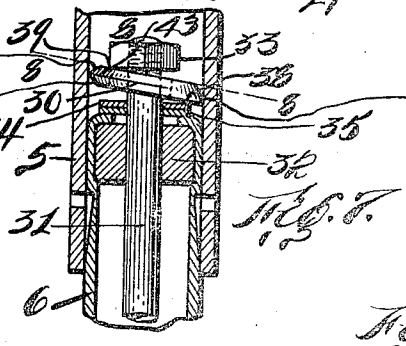


Fig. 7.

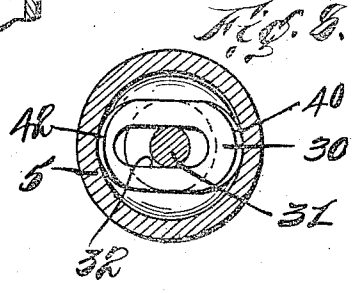


Fig. 8.

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3 SHEETS—SHEET 3.

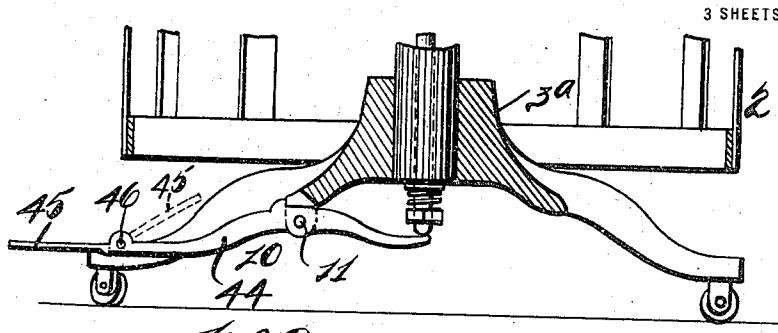


Fig. 9.

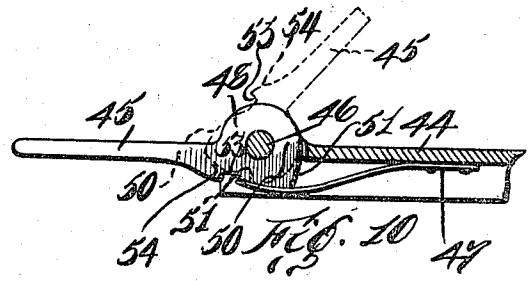


Fig. 10

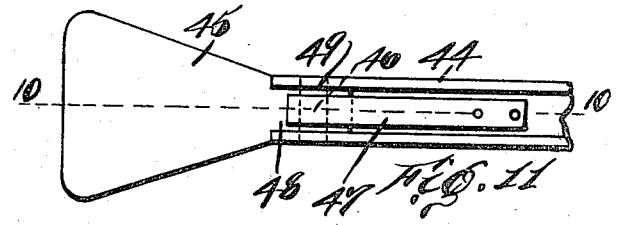


Fig. 11

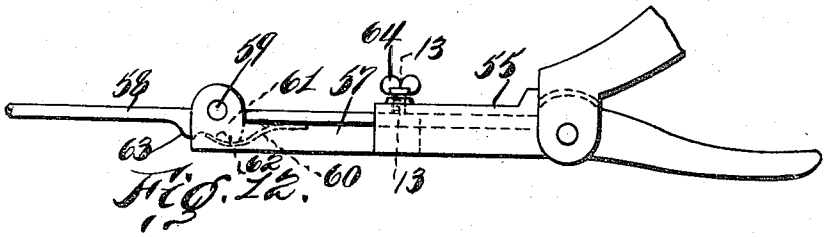


Fig. 12.

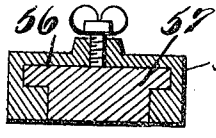


Fig. 13.

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ISAAC LEVIN, OF BROOKLYN, NEW YORK.

COLLAPSIBLE GARMENT-FORM STAND.

1,204,038. Specification of Letters Patent. Patented Nov. 7, 1916.

Application filed November 8, 1915. Serial No. 60,222.

To all whom it may concern:

Be it known that I, ISAAC LEVIN, a citizen of the United States of America, residing at Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Collapsible Garment-Form Stands, of which the following is a full, clear, and exact description.

This invention relates to improvements in garment-forms, but pertains more particularly to the construction of the standards or supports therefor.

My present invention is an improvement on the construction set forth in my Letters Patent No. 1,153,634 dated September 14, 1915, and one feature pertains more particularly to improved forms of clutches or locking devices for the slidably connected standard members. The clutches which form part of my present invention are designed to firmly lock the standard members together by the wedging action of a plate arranged transversely of the standard members, suitable means being employed to support said plate and permit it to freely move.

A further feature of my improvement comprises a novel form of pedal or lever by which means the clutches are caused to release to permit the standard members to collapse.

My improved pedal is arranged to be folded or reduced in length when the form is to be packed.

I will now proceed to describe my invention in detail, the essential features of which will be summarized in the appended claims, reference being had to the accompanying drawings, forming part hereof; wherein—

Figure 1 is a side elevation, partly in section, of a garment form embodying my improvements; Fig. 2 is a similar view of the form illustrating the standard as collapsed; Fig. 3 is an enlarged fragmentary sectional view illustrating my improved automatic stop to limit the extension of the standard members; Fig. 4 is an enlarged vertical sectional view of the standard members, the clutches being shown in elevation; Fig. 5 is an enlarged vertical sectional view of the upper clutch; Fig. 6 is a sectional plan view, the section being taken on a line 6—6 in Fig. 5; Fig. 7 is an enlarged vertical sectional view of the lower clutch; Fig. 8 is a sectional plan view, the section being taken on a line 8—8 in Fig. 7; Fig. 9 is an enlarged sectional detail view of the lower portion of the standard showing the foldable pedal; Fig. 10 is an enlarged fragmentary sectional view of the outer end of the pedal; the section being taken on a line 10—10 in Fig. 11; Fig. 11 is a plan view thereof; Fig. 12 is a fragmentary side elevation of another form of foldable pedal; and Fig. 13 is a cross sectional view thereof, the section being taken on a line 13—13 in Fig. 12.

Figs. 1 and 2 of the drawings illustrate a bust form 1 having a collapsible skirt portion 2, the whole form being supported by a standard 3 carried by a base portion 3^a. The standard 3 consists of a plurality of slidably connected members 4, 5 and 6 (in this instance tubular) which are locked in extended position by clutches or locking devices 7 and 8. To permit the standard members 4, 5 and 6 to collapse, or rather to cause the locking devices to release, I provide an operating rod 9 which is raised or elevated by a pedal 10 pivoted to the base 3^a by a pivot-pin 11. The rod 9 is returned to normal position, after being raised, by a spring 12 carried by the rod 9 and located between a washer 13 and adjusting nut 14.

To limit the outward movement of the standard members 4, 5 and 6, I provide latches 15, 15 and 16, 16 (see Fig. 1, the latches 16, 16 having been omitted in Fig. 4), each pin of which will engage an annular recess 17 provided in the adjacent end of the coöperating standard members. Each recess is tapered to provide a shoulder 18 (Fig. 3) against which the latches will impinge when the standard members are extended to the full extent, thereby preventing the said members from being pulled apart.

While the two clutches 7 and 8 are herein illustrated as differently constructed, they are essentially two forms embodying the same idea, as both of said clutches operate in the same manner. The upper clutch 7 comprises a plurality of movably connected blocks 19 and 20, one of which (the block 19) is secured to the standard member 5 by a pin 21, said pin passing through a slot 22 in the block 20. To normally press the movable block 20 downwardly, I employ a spring 23, the downward pressure of the spring 23 causing the clutch 7 to lock the members 4 and 5 together.

The locking element of the clutch 7 consists of a plate 24 which is loosely supported by the blocks 19 and 20. The plate 24 is located in pockets 25 and 26 in the blocks 19 and 20. As will be seen in Fig. 5, the pockets 25 and 26 are tapering in formation in order to permit the plate to have free movement. The length of the plate 24 is slightly greater than the diameter of the standard-member 4; hence the said plate will lie at a slight angle relatively to the axis of the standard. It will also be seen, by referring to Fig. 5, that the plate 24 at one end rests in contact with the edge 27 of the pocket 25, while the other end of said plate contacts with the edge 28 of the pocket 26. The point or edge 27 constitutes a pivot or fulcrum point for the plate 24 to move upon. At the point 28 pressure is applied to the plate to cause it to jam or lock, the pressure being supplied by the spring 23. Any downward movement of the block 20 will jam the plate 24 while an upward movement will release or unlock said plate, said upward movement being caused by the base 29 of the block 20 coming in contact with the clutch 8, when said clutch 8 is released, to permit the standard member 5 to drop.

The clutch 8 consists of a plate 30 loosely mounted on a pin 31. To guide the pin 31, I provide a block 32 which is securely fastened in the upper end of the standard member 6. To permit the plate 30 to freely move, I provide the same with an elongated slot 32 through which the pin 31 passes. The upper end of the pin 31 carries a nut 33 which bears upon the plate 30. Washers 34 and 35 are interposed between the plate 30 and end of standard member 6.

The plate 30 is forced downwardly by a spring 36 carried by the pin 31, said spring surrounding the pin and being located between the guide-block 32 and head 37 of said pin 31. The head 37 rests in contact with the upper end of the operating rod 9, but is not secured thereto. As the pin 31 is rotatably supported by the block 32, and is not connected to the rod 9, the standard member 5 is free to rotate, rotating the clutch 8 with it. As the clutch 7 locks the members 4 and 5 together, the whole form can be rotated, even though the standard members are extended and locked. The form can be rotated whether the standard is extended or collapsed. The edge 38 of the washer 34 constitutes a pivot point for the plate 30, while the point 39 of the nut 33 is the point at which pressure is applied, the pressure being supplied by the spring 36.

Each plate 24 and 30 is provided with a tapered end 40, adjacent its pivot point to permit the plates to be tilted upwardly. The opposite end of each plate is reversely tapered as at 41 and 42, the said tapering portions meeting at a relatively sharp edge 43, which will eat or dig into the wall of its coöperating standard-member.

To collapse the standard-members, the pedal 10 will be depressed, thereby raising the rod 9, and also the pin 31, which action will compress the spring 36.

When the pin 31 is raised, pressure will be taken off the plate 30 leaving it free within the member 5. As the plate 30 lies at an angle relatively to the axis of the standard it will cease to grip the wall of its member when the pressure is taken off and consequently the standard member 5 will drop. As soon as the block 20 of the clutch 7 comes in contact with the pin 31 the said block will rise and tilt the plate 24 upwardly, thereby releasing the standard member 4, which will then drop. During the collapsing of the standard members the pedal 10 will remain depressed. Whenever the pedal 10 is released, after being depressed, to wholly or partly collapse the standard, the plates 24 and 30 will lock, due to the action of their springs 23 and 36.

To extend the standard members, it is not necessary to depress the pedal 10, as the plates 24 and 30 will automatically release or tilt when the standard member 4 is pulled upwardly. The standard member 4 carries the bust-form 1.

To render the pedal accessible, it is made to extend beyond the outer surface of the skirt portion, as shown in Fig. 9; hence a packing box would have to be made considerably larger than would be necessary if the pedal was not present. To obviate this difficulty I form the pedal 10 to fold up, as can be seen in Fig. 9. The pedal 10 comprises a lever 44 having a plate 45 pivotally secured thereto, as at 46, a spring 47 being employed to hold the plate either in a folded or extended position. The wing 48 of the pedal, which is located in the jaw 49 of the lever 44, carries a cam 50 which when the plate 45 is swung upwardly, will force the free end of the spring 47 downwardly, thereby placing it under increased tension. The heel 51 of the cam 50 rests in the curved end of the spring 47 when the plate 45 is moved all the way back, as shown by dotted lines Fig. 10.

When the plate 45 is extended the spring 47, or rather the outer end of it, will rest in a recess 53 between the cam 50 and stop 54 on the plate 45. The stop 54 limits the extent of movement of the plate 45 and also acts as an abutment to force the arm 44 down when the plate 45 is depressed. The spring 47 will firmly hold the plate 45, so that the arm 44 can be depressed when the plate 45 is vertically disposed relatively to the arm 44.

The form of pedal illustrated in Figs. 12 and 13 consists of an arm 55 having a guideway 56, in which a bar 57 will slide. The

outer end of the bar 57 carries a plate 58, similar to the plate 45, pivoted to the bar 57 at 59, a spring 60 acting to hold the plate 58 in an extended or folded position. The plate 58 carries a wing 61 having a cam 62 and a stop or abutment 63. The spring 60 and cam 62 perform the same function in this form of pedal as in the form illustrated in Fig. 9. In the last described form of pedal, the bar 57 can be moved in or out to vary the length of the pedal and also to reduce its length for packing purposes. A set-screw 64 acts to hold the bar 57 in any adjusted position or in its closed position.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. An adjustable standard for garment-forms, comprising a base, a fixed post carried thereby, a tubular post slidably supported by said fixed post and adapted for rotation thereupon, a clutch carried by said fixed post, consisting of a vertically movable pin, a plate carried by said pin and contacting with the inner surface of the tubular post, said plate being angularly disposed relative to the axis of said post, the length of said plate being greater than the diameter of the tubular post, and means to actuate said pin.

2. An adjustable standard for garment-forms, comprising a base, a fixed post carried thereby, a tubular post slidably supported by said fixed post and adapted for rotation thereupon, a clutch carried by said fixed post, consisting of a vertically movable pin, a plate carried by said pin and contacting with the inner surface of the tubular post, said plate being angularly disposed relative to the axis of said post, the length of said plate being greater than the diameter of the tubular post, and means to actuate said pin, said means normally contacting with but not secured to said pin.

3. An adjustable standard for garment-forms, comprising a plurality of telescoping posts, a plurality of clutches to lock the posts in adjusted positions, each of said clutches consisting of a fixed member, a movable member, and a plate actuated by the movable member arranged to contact with the inner surface of its coöperating post, each plate being angularly disposed relative to the axis of the standard, means to actuate the movable member of the lower clutch, the movable member of the upper clutch being arranged to release its plate when its movable member comes in contact with the lower clutch.

4. In an adjustable standard for garment-forms, a plurality of slidably connected tubular posts, a clutch carried by one of said posts consisting of a block secured to one of said posts, and a movable block adjacent said fixed block, together with a plate passing loosely through said blocks and contacting at each end with the inner surface of the other of said posts, said plate being angularly disposed relative to the axis of the standard, and means to actuate said movable block.

5. An adjustable standard for garment-forms comprising a plurality of slidably connected tubular posts, a clutch, consisting of a plate contacting with the inner surface of one of said posts and angularly disposed relative to the axis thereof, means carried by the other of said posts arranged to loosely support said plate, said supporting means consisting of a fixed member and a movable member, and means to actuate said movable member.

6. An adjustable standard for garment-forms, comprising a plurality of slidably connected tubular posts, a clutch carried by one of said posts consisting of a fixed block secured to said post, a movable block adjacent thereto, each of said blocks being provided with a pocket, a plate loosely mounted in said pockets, and extending beyond the outer surface of said blocks so as to contact with the inner surface of the coöperating post, said plate being angularly disposed relative to the axis of the standard, a spring interposed between the fixed block and the movable block, arranged to exert pressure upon said plate, and means to move said movable block against the tension of said spring to release said plate.

7. In an adjustable standard for garment-forms, a plurality of slidably connected tubular posts, a clutch to lock said posts in adjusted positions, said clutch consisting of a plate, the length of which is greater than the inner diameter of its coöperating tubular post, said plate being angularly disposed relative to the axis of the standard, a fixed support contacting with one end of said plate, and means to move the opposite end of said plate.

8. In an adjustable garment-form, a plurality of slidably connected tubular posts, a plurality of clutches to lock said posts in adjusted position, the upper clutch consisting of a plate angularly disposed relative to the axis of the standard and arranged to contact with the inner surface of its coöperating post, means to pivotally support one end of said plate, a movable block to actuate the opposite end of said plate, said lower clutch consisting of a plate also angularly disposed relative to the axis of its coöperating post and arranged to contact with the inner surface of its coöperating post, a stationary support for one end of said plate, means to exert a downward pressure on the opposite end of said plate, the plate of the lower clutch being arranged for automatic release when the pressure is removed thereupon, the plate of the upper clutch being arranged for release when said movable block

comes in contact with the lower clutch, and means to actuate the pressure exerting device for the lower clutch.

9. In combination with a garment-form standard consisting of a plurality of slidably mounted tubular posts, a fixed tubular post supporting the slidable post, a clutch mechanism carried by the fixed post, a rod within the fixed post to actuate said clutch mechanism, a pedal to actuate said rod consisting of a pivotally mounted lever portion, and a plate foldably secured to the outer end of said lever, said plate being adapted to form an extension of and rest in substantially a plane with its connected lever to provide a foot-piece.

10. In combination with a garment-form standard consisting of a plurality of slidably mounted tubular posts, a fixed tubular post supporting the slidable post, a clutch mechanism carried by the fixed post, a rod within the fixed post to actuate said clutch mechanism, a pedal to actuate said rod consisting of a pivotally mounted lever portion, a plate at the outer end of said lever, a wing carried by said plate pivotally secured to said lever, and a spring bearing against said wing.

11. In combination with a garment-form standard consisting of a plurality of slidably mounted tubular posts, a fixed tubular post supporting the slidable post, a clutch mechanism carried by the fixed post, a rod within the fixed post to actuate said clutch mechanism, a pedal to actuate said rod consisting of a pivotally mounted lever portion, a plate at the outer end of said lever, a wing carried by said plate pivotally secured to said lever, a cam carried by said wing, and a spring bearing against said cam.

12. In combination with a garment-form standard consisting of a plurality of slidably mounted tubular posts, a fixed tubular post supporting the slidable post, a clutch mechanism carried by the fixed post, a rod within the fixed post to actuate said clutch mechanism, a pedal to actuate said rod consisting of a pivotally mounted lever portion, provided with a guideway, a slide fitted to said guideway, means to lock said lever and slide in adjusted positions, and a plate pivotally secured to said slide at the outer end thereof.

13. In combination with a garment-form standard consisting of a plurality of slidably mounted tubular posts, a fixed tubular post supporting the slidable post, a clutch mechanism carried by the fixed post, a rod within the fixed post to actuate said clutch mechanism, and a pedal to actuate said rod consisting of a plurality of foldably connected members, one of said members being connected to the other so as to adapt it to be extended in substantially a plane with its connected member to provide a foot-piece.

Signed at New York city, N. Y., this 4 day of November, 1915.

ISAAC LEVIN.

Witnesses:
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EDWARD A. JARVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."