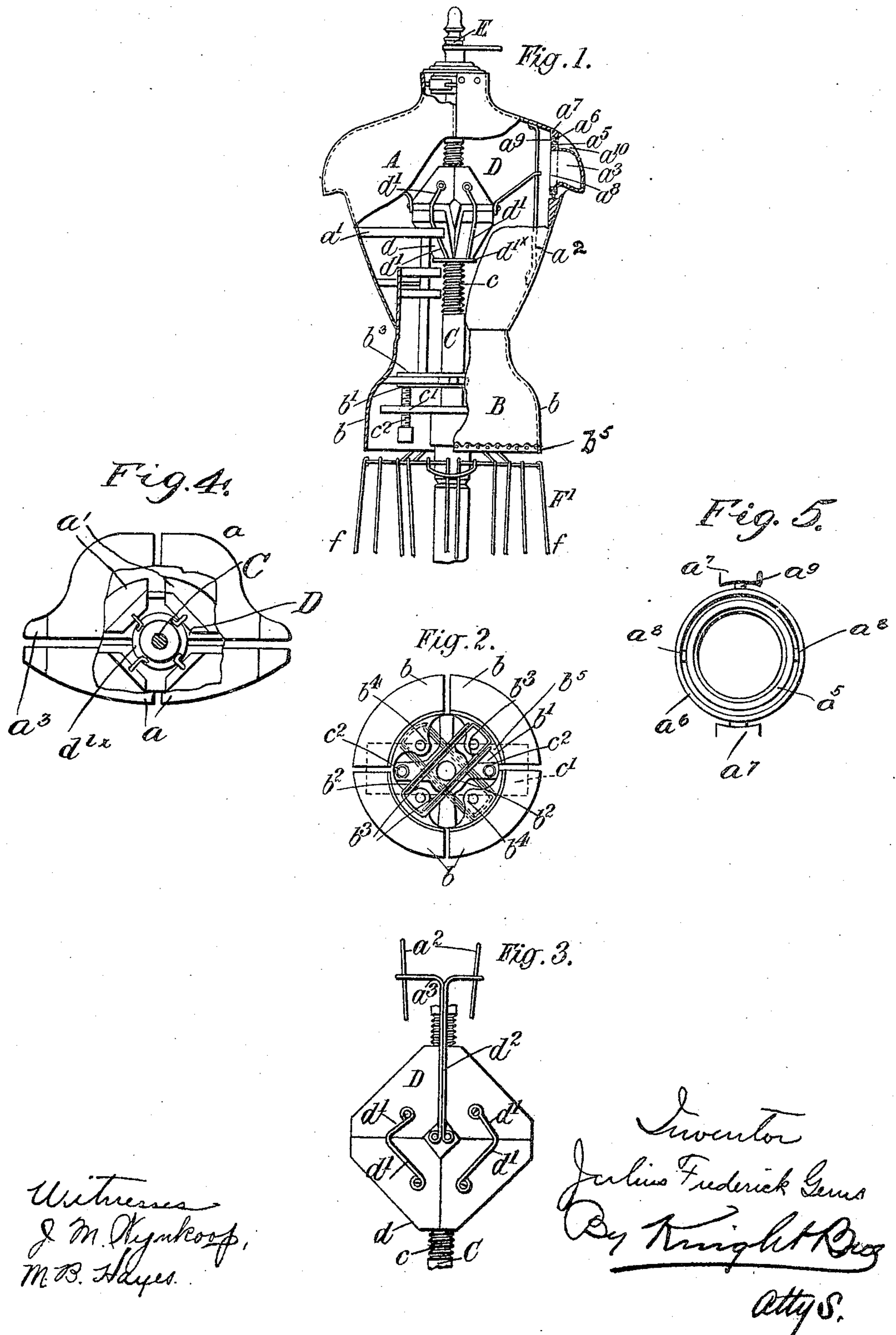


LAY FIGURE AND SKIRT STAND.  
APPLICATION FILED OCT. 18, 1904.

Patented Dec. 14, 1909.





# UNITED STATES PATENT OFFICE.

JULIUS FREDERICK GEMS, OF LONDON, ENGLAND.

LAY FIGURE AND SKIRT-STAND.

943,069.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Original application filed September 18, 1903, Serial No. 173,706. Divided and this application filed October 18, 1904. Serial No. 228,996.

*To all whom it may concern:*

Be it known that I, JULIUS FREDERICK GEMS, a subject of the King of Great Britain, residing at Windmill Hill House, Hampstead, in the county of London, England, manufacturer, have invented certain new and useful Improvements in and Relating to Lay Figures and Skirt-Stands, of which the following is a specification.

10 This invention relates to lay figures and skirt stands and has especial reference to adjustable devices of the kind in which the upper and lower part of the body can be expanded or contracted horizontally and the  
15 said body lengthened or shortened vertically for the purpose of adjusting said body to the size or cut of the garments they are intended to support.

20 The main objects of the present invention are to simplify and strengthen apparatus of the kind to which it relates, to provide improved means for guiding and controlling the movements of the various adjustable parts, and to furnish the figure with a covering which will hide its unsightly parts without interfering materially with its adjustability.

30 The body of the figure is divided vertically into sections or portions that are adapted to be moved in an approximately radial manner relatively to a vertical screw-threaded rotary spindle forming a continuation of a post or pedestal by which they are supported, said body being also divided horizontally, at or near the waist, in such manner that the lower portion or abdomen is capable of vertical movement relatively to the upper portion or bust. The horizontal expansion and contraction is effected by  
40 means of an internally screw threaded traveler upon the rotary spindle. Said traveler has inclined converging rails or runners that slidably engage with internal lugs carried by the bust for effecting the contraction and expansion of the body. The traveler  
45 also carries fixed outwardly extending arms adapted to cooperate with suitably inclined rails with which the various portions of the bust are provided for the purpose of guiding their radial movements. The hips or abdominal sections are mounted in a radially movable manner upon a vertically adjustable table or support, this adjustability of the hips enabling the figure to have its waist  
55 length varied as desired.

The body of the figure is provided with an elastic covering having the parts thereof that are intended to cover or conceal the openings caused by the expansion or elongation of said body more highly elastic than  
60 the other parts of said covering. This enables the covering to offer only slight resistance to expansion or elongation while closely and neatly embracing the figure at all times. In some cases the shoulders carry  
65 universally adjustable arm dummies.

In order that my said invention may be clearly understood and readily carried into effect I will now describe the same more fully with reference to the accompanying  
70 drawings in which:

Figure 1 is a front elevation, partly broken away, of a lay figure embodying the features of my invention. Fig. 2 is a sectional plan taken approximately through  
75 the waist of Fig. 1. Fig. 3 shows a modified detail of the bust-expanding mechanism. Fig. 4 is a top plan view with parts broken away to show the interior. Fig. 5 is a detail view showing the mounting of the arm  
80 dummies.

A is the bust, B the hips or abdomen, C the post or pedestal, D the traveler, and F' the wire frame of the skirt stand. The hollow bust, A, hips or abdomen B and skirt  
85 frame F are each divided vertically into four sections *a a*, *b b* and *f f* respectively, in the usual way.

The traveler D is mounted on a rotary spindle *c* that constitutes part of the post or  
90 pedestal C; and the said traveler in the example shown in Figs. 1 and 3 has its lower part *d* somewhat in the form of an inverted pyramid, the four sides of which are provided with the rails or runners *d' d'* passing  
95 through holes in the lugs *a' a'* that extend inwardly from the four sections of the bust. In the example illustrated in Fig. 1 the lower ends of said rails are secured to a metal plate *d''* on the lower apex of the  
100 traveler; in the example shown in Fig. 3 their lower ends are secured directly to the sides of the traveler. The sides of the pyramid are preferably lined smoothly with sheet metal and are in contact with the inclined edges, or wedge surfaces, of the lugs  
105 *a' a'*. As the traveler rises, when the spindle *c* is turned in one direction, the rails *d' d'* pull the bust sections *a a* inwardly by means of the lugs *a' a'*; when the spindle is turned  
110



in the other direction the traveler descends and the rails force the sections outwardly and expand the bust. In either case the traveler is incapable of rotating relatively to the bust. It will be obvious that the lower part of the traveler D may be of any appropriate shape other than pyramidal if desired.

Securely fastened to the traveler on either side and intermediate of the height thereof, are the outwardly extending arms  $d^2$ , which fork at  $a^3$ , and come into engagement at the ends of their tines or branches, with the rails  $a^2$   $a^2$ . These rails  $a^2$   $a^2$  being attached in two places to the bust-sections  $a$ , will thus be caused to assume an inclination corresponding to the horizontal movements of the upper and lower ends of said bust-sections when they are expanded or contracted. In consequence of this construction, the vertical movements of the traveler block will cause the various parts to expand in their proper proportion relatively to each other.

The particular construction of the bust expanding means is not herein specifically claimed as it forms the subject-matter of my application #173,706, filed September 18, 1903, of which this application is a divisional.

A traveler of any other suitable shape may be employed for the bust instead of the double pyramid shaped traveler shown in Figs. 1 and 3.

$a^3$ , are the arm dummies or shoulder extensions, which are carried by rings  $a^5$  mounted within other rings  $a^6$  carried by brackets  $a^7$  on the bust. The rings  $a^5$  are pivotally connected to the rings  $a^6$  by horizontal trunnions  $a^8$ , and the rings  $a^6$  are capable of turning on vertical trunnions  $a^9$ . In this manner universal adjustability of the arm dummies is obtained, said dummies being capable of being shifted in their sockets into any desired position. The shoulders and arm dummies are covered over by means of a piece of elastic material  $a^{10}$  which by reason of its elasticity does not impair the freedom of movement of said arm dummies.

In Figs. 1 and 2,  $b'$  is an adjustable table or spider upon the under and upper surfaces of which are slidably mounted the substantially U-shaped rods or guides  $b^3$ ,  $b^3$ . Supported on the bends of said U-shaped rods are four segmental supports adapted to bear against and support the abdominal sections  $b$ ,  $b$ . Said table is in the form of an X or star and is supported upon a cross-piece or platform  $c'$  on the pedestal by screw threaded spindles  $c^2$   $c^2$  connected to the table  $b'$  and passing through screw threaded holes in the platform  $c'$ . When it is desired to

lengthen or shorten the waist the spindles  $c^2$   $c^2$  are turned in one or the other direction, whereby the table  $b'$  is lowered or raised, taking with it the abdomen B.

The lower edge of the abdomen may be protected from wear or injury by strips  $b^5$  (Fig. 1) of sheet metal or the like, which may if desired be made ornamental.

The covering of the figure preferably comprises pieces of stockinet connected together at their vertical edges by means of strips or webs of a more elastic material such as insertion, or sheet caoutchouc, the elasticity of the stockinet or its equivalent preventing the strain of the expanding force being entirely transmitted to the strips or webs. Or, the covering may be woven or otherwise constructed in one or more pieces in such a manner that some portions thereof are more close fitting, or more elastic, than others.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a garment form, the combination with the abdominal sections, radial U-shaped slides connected to the sections, a support for the slides, a platform, and screw spindles passing through the platform and engaging the support for the slides to adjust the sections vertically.

2. The combination with the sections, of a support, slides rigidly secured to the sections and slidably engaging the support, a platform, and screws passing through the platform and engaging the support to adjust the sections vertically.

3. In a garment form the combination of a body, movable arm dummies thereon, a pivot for each arm dummy to enable it to be turned in one plane, and another pivot therefor for enabling said arm dummy, to be turned in a plane at an angle to the aforesaid plane all of said pivots being arranged in the same plane.

4. In a lay-figure, the combination with a body, of a universal coupling for connecting an arm to said body, said coupling consisting of two rings, one of said rings being trunnioned within the other and the other being trunnioned between parts rigid with the body of said lay-figure in such manner as to maintain all of the trunnions within the same plane.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses this seventh day of June, 1904.

JULIUS FREDERICK GEMS.

Witnesses:

T. SELLY WARDLE,  
WALTER J. SKERTEN.