March 26, 1940. M. A. HEIMANN 2,194,460

DISPLAY FORM

Filed April 19, 1939 2 Sheets-Sheet 1

Fig. 1.

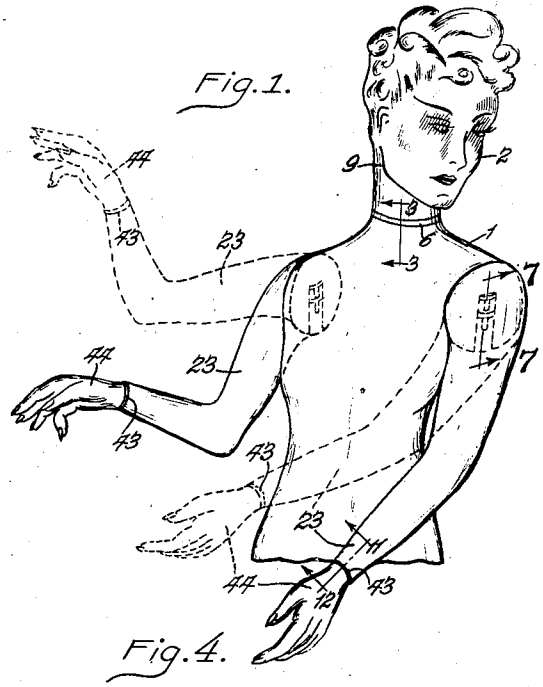


Fig. 2.

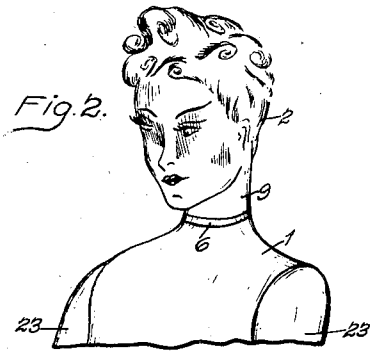


Fig. 3.

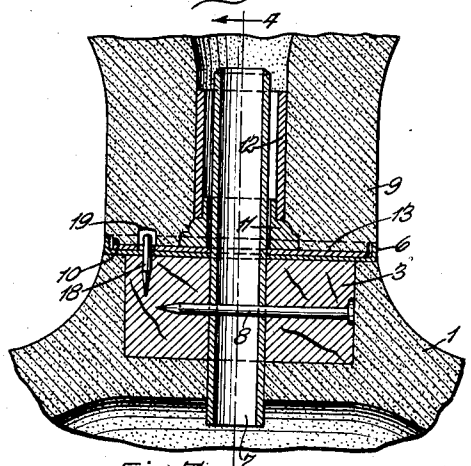


Fig. 4.

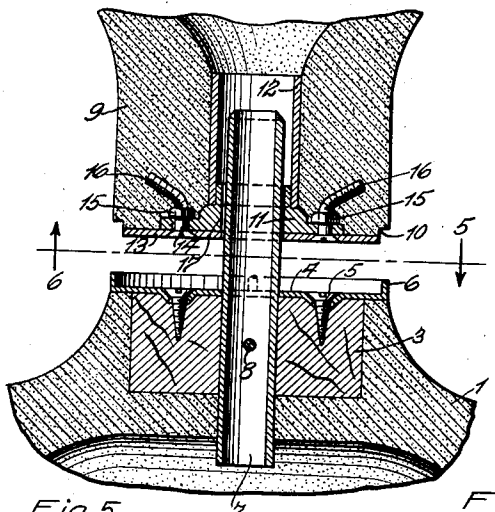


Fig. 7.

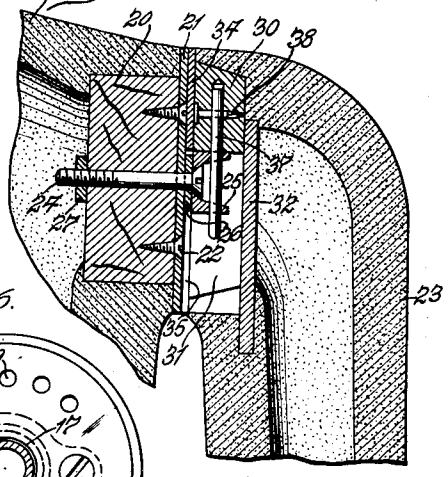


Fig. 5.

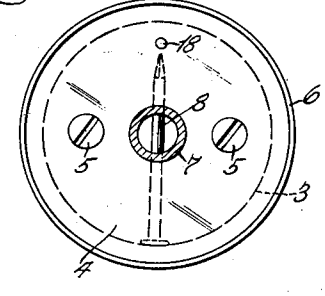
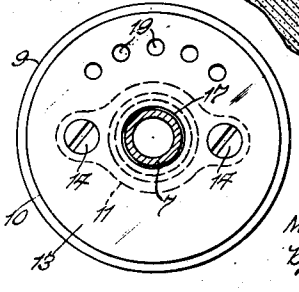


Fig. 6.



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Fig. 8.

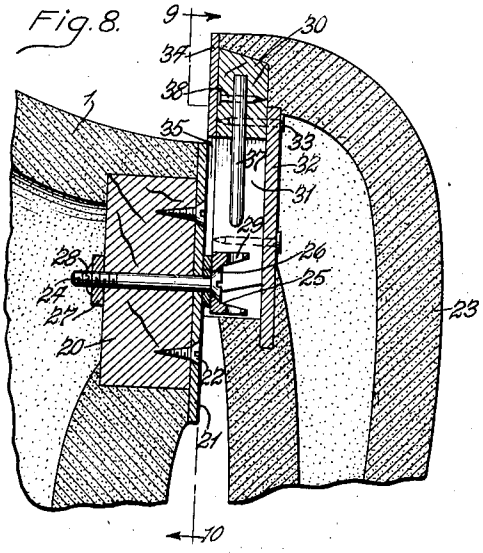


Fig. 9.

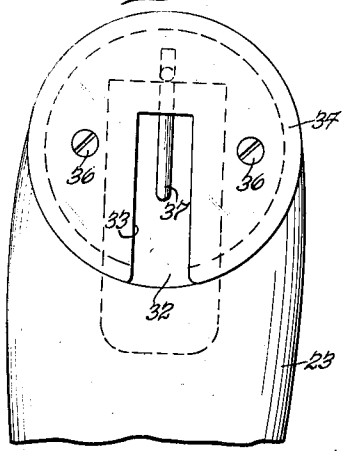


Fig. 10.

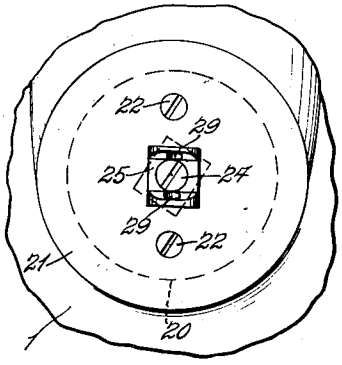


Fig. 11.

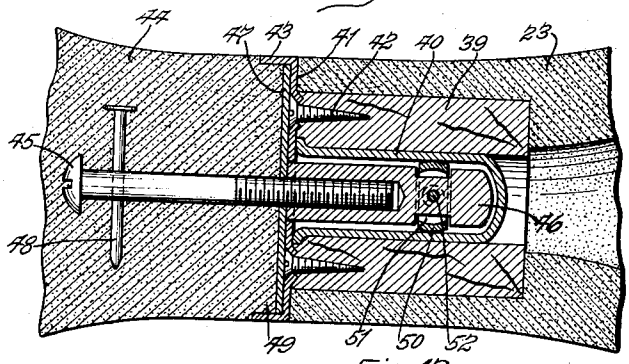


Fig. 12.

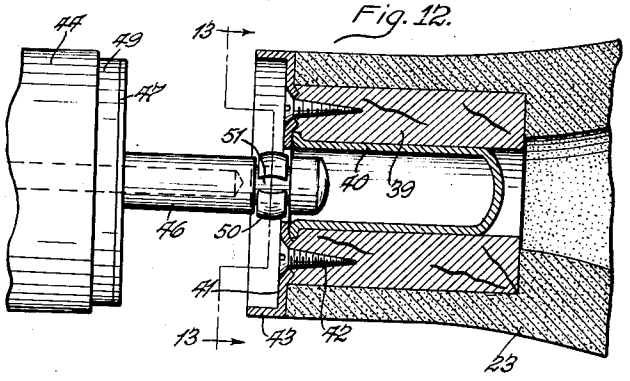
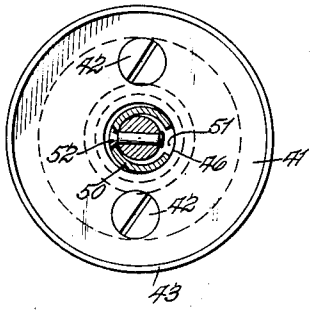


Fig. 13.



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UNITED STATES PATENT OFFICE

2,194,460

DISPLAY FORM

Morris A. Heimann, St. Louis, Mo.

Application April 19, 1939, Serial No. 268,705

13 Claims. (Cl. 46—173)

This invention relates to adjustable display forms.

Objects of the invention are to provide an improved display device resembling generally the human form and having means for holding the head in different adjusted positions with respect to the body or torso to simulate more closely different postures of a person wearing the articles of apparel, etc. arranged on the form for display; to provide adjustable pivotal connections securing the arms to the form and permitting the arms to be moved to and retained in different adjusted positions and thereby produce a more pleasing effect than can be obtained by use of display forms having rigid arms; to provide means whereby the arms may be adjusted relatively and secured in different relative adjusted positions for the purposes indicated; and to provide means for securing the hands to the arms in different adjusted positions in order to permit better and more pleasing adjustments of the device for display purposes.

Various other objects and advantages of the invention will be apparent from the following description, reference being made to the annexed drawings, in which—

Fig. 1 is an elevation of a portion of a display form made in accordance with the present invention, and showing the head and the arms and the hands in selected adjustments.

Fig. 2 is an elevation showing the head in a different adjustment.

Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1 showing an embodiment of means for holding the head in different adjusted positions with respect to the body or torso.

Fig. 4 is a sectional view on the line 4—4 of Fig. 3 showing the parts separated to an extent permitting the head to be turned to different adjustments.

Fig. 5 is a sectional view on the line 5—6 of Fig. 4 looking in the direction of the arrow 5.

Fig. 6 is a sectional view on the same line looking in the direction of the arrow 6.

Fig. 7 is an enlarged sectional view approximately on the line 7—7 of Fig. 1 showing the adjustable pivotal connections securing the arms to the form.

Fig. 8 is a similar sectional view showing the arm partially detached from the form.

Fig. 9 is an elevation of that end of the arm that is secured to the shoulder, on the line 9—10 of Fig. 8 looking in the direction of the arrow 9.

Fig. 10 is an elevation on the same line looking in the direction of the arrow 10, showing the attaching means on the shoulder.

Fig. 11 is an enlarged sectional view on the line 11—12 of Fig. 1, showing the means for attaching the hand to the arm in different adjusted positions.

Fig. 12 is a sectional view on the same line, showing the attaching devices disconnected.

Fig. 13 is a sectional view on the line 13—13 of Fig. 12.

The display form may be made of solidified plastic material molded or otherwise shaped as desired. The body or torso 1 and the head 2 are separate and may be connected by parts of the present invention to hold the head in different adjusted positions on the body or torso in simulation of different postures of a person wearing different articles of apparel. As shown, a block 3 of wood or analogous penetrable material is embedded within the upper end of the body or torso 1 and rigidly retained therein by adhesive union with the material forming the body 1; or the block 3 may be secured to the body 1 by glue or cement or other fastening means. A metallic plate 4 is attached to the block 3 by removable and replaceable fasteners 5. The plate 4 is formed with an integral upwardly extended circumferential flange 6, the outer surface of which is in continuation of the outer surface of the adjacent portion of the body 1. A pivot 7 extends upwardly through the center of the block 3 and is attached thereto by a nail 8 or the like driven into the block 3 and through a hole in said pivot. The pivot 7 extends upwardly substantially beyond the plate 4 and beyond the upper end of the body 1. As shown, the pivot 7 is a section of a metallic tube, but may be varied in this particular.

The lower end of the neck 9 made in integral connection with the head 2 is of the same diameter as the outside diameter of the flange 6, and includes a downwardly extended portion 10 of reduced diameter adapted to extend into the space enclosed by the flange 6. A fitting comprising a metallic block 11 and a tube 12 having its lower end attached to said block by welding or otherwise is embedded in the lower portion of the neck 9. A plate 13 is attached to the block 11 by a number of fasteners 14 extending through said plate 13 and said block 11 and having clamping nuts 15 screwed thereon to clamp said block and said plate together. The fasteners 14 may be formed with angularly extended portions 16 embedded in the neck 9 and preventing detachment of the parts 11, 12, and 13 from the

display form. The plate 13 is of the same diameter as the extended portion 10 and as the inside diameter of the flange 6 so as to fit closely within said flange when the parts are brought together as in Fig. 3. In such assembly, the outside diameter of the neck 9 is flush with the outer surface of the flange 6 so that all of said parts cooperate properly. The plate 13 and the block 11 are formed with an axial hole 17 through which the pivot 7 extends when the head 2 is assembled on the body or torso 1.

A detent 18 which may be in the form of a pin driven through a hole in the plate 4 and into the block 3 projects upwardly above said plate 4 at a distance from the flange 6 and from the pivot 7 (Fig. 3). An arcuate series of holes 19 is formed through the plate 13 and into the lower end of the neck 9 to receive the detent 18 in the different adjusted positions of the head about the axis of the neck. Thus, the head will be prevented from turning accidentally from any adjusted position in which it may be placed; and the head may be easily turned to different adjusted positions, as desired, by simply raising the head out of engagement with the detent 18, turning the head to the selected position, and then reengaging the head with the detent 18.

The adjustable pivotal connections for securing the arms to the form and permitting the arms to be moved to and retained in different adjusted positions to produce a more pleasing effect than would be obtainable by use of a form having rigid arms, are illustrated in Figs. 7 to 10, inclusive. As shown, a block 20 of wood or other appropriate material is embedded in the body or torso 1 at the side of each shoulder. The block may be rigidly secured in position by glue or cement or other fastening means. A metallic plate 21 is attached to the outer side of the block 20 by removable and replaceable fasteners 22 and covers, guards, and protects the adjacent portion of the shoulder of the body or torso 1, and has its edges flush with the slightly extended portion of the shoulder for which the arm 23 is provided. A screw bolt 24 extends through a bracket 25, spring washer 26, and through the block 20, and is screwed through a threaded hole in a bar or nut 27 attached to the block 20 by fasteners 28. The screw bolt 24 clampingly holds the bracket 25 in any adjusted position to which said bracket may be turned, and may be loosened to permit the bracket to be turned to different adjustments, and then tightened to hold the bracket in such adjustments. The arms of the bracket 25 are formed with alined holes 29.

The shoulder attaching end of the arm 23 has a block 30 embedded therein and attached by any appropriate attaching means. The block 30 has a slot 31 therethrough closed at the inner side by a strip 32 of wood or the like attached to the block by fasteners 33. A plate 34 having a slot 35 therein registering with the slot 31 in the block 30 is attached to said block by removable and replaceable fasteners 36. An attaching pin 37 is secured to the block 30 by a fastener 38 (Fig. 8) and projects into the slot 31 in position to pass through the holes 29 in the bracket 25 when the arm is applied to the body or torso 1, as shown in Fig. 7. Thus, the angle of inclination of the arm 23 will be determined by the position of the bracket 25, as should be understood by reference to Fig. 1.

It is now apparent that the brackets 25 are independently and relatively adjustable so as to support the arms 23 in different adjustments relative to each other and with respect to the body or torso 1 of the display form. These arms may be adjusted also to conform to the posture of the head 2. When the arms are attached, the margins of the plates 21 and 34 are even with each other, irrespective of the positions to which the arms are turned. This is because of the relationship of the attaching parts, the screw bolt 24 being mounted axially or centrally with respect to the plate 21.

The arms and hands are provided with means for attaching the hands to the arms in different positions to permit better and more pleasing adjustments of the device for display purposes. As shown, a block 39 is embedded in the wrist end of each arm and retained therein by glue or cement or other appropriate fastening means. A tube 40 is embedded in the center of the block 39 and has its outer end open adjacent to a hole through the center of a plate 41. The plate 41 is attached to the block 39 by removable and replaceable fasteners 42, and has an outwardly extended circumferential flange 43 the outer surface of which is even with and in continuation of the outer surface of the adjacent wrist portion of the arm 23 to which it is attached.

The wrist end of the hand 44 has a screw bolt 45 embedded therein and projecting axially or centrally beyond the end thereof and screwed into a plug 46 which clamps a plate 47 against the wrist end of the hand 44. The bolt 45 is held from turning by a pin or nail 48 extending through a hole therein and embedded in the wrist end of the hand 44. The plug 46 slides through the hole in the plate 41 that opens into the tube 40; and, when the parts are properly assembled, a reduced extension 49 on the wrist end of the hand 44 and the plate 47 fit within the flange 43 so that said flange is flush and even with adjacent outer surfaces of the arm 23 and the wrist of the hand 44. A resilient split ring 50 is mounted in a circumferential groove 51 in the plug 46, and is compressible and expansible. As shown, the ring 50 is attached to the plug 46 by a rivet 52 which prevents detachment of the ring 50 from said plug. When the ring 50 is within the tube 40, it expands and frictionally engages against said tube 40 with sufficient pressure to support the hand 44 in proper connection with the arm 23 and to hold the hand in any position to which it is turned about the axis of the bolt 45. This connection permits the hand to be turned about the axis of the wrist thereof and about the axis of the adjacent end of the arm 23 to positions required for graceful postures of the display form. The hand may be entirely detached from the arm if desired (Fig. 12).

It should now be apparent that this invention and the different parts thereof attain all of their intended objects and purposes efficiently, satisfactorily and economically. The construction and arrangement of the parts and the materials composing said parts may be varied as desired without departure from the nature and principle of the invention defined by the appended claims.

I claim:

1. In an adjustable display form comprising a body, a head, and a neck for attaching the head to the body and supporting the same thereon; devices in connection with adjacent portions of the neck for holding the head in different adjusted portions about a vertical axis with respect to the body and leaving the head free for vertical movement from the body.

2. In an adjustable display form comprising a

body having an upwardly extended neck portion, and a head having a downwardly extended neck portion adapted to be connected with the neck portion of the body to support the head upon the body; means for alining said neck portions when they are placed together, and devices in connection with said neck portions for holding the head in different adjusted positions about a vertical axis with respect to the body and preventing accidental turning of the head from any of said positions and leaving the head free for vertical movement from the body.

3. In an adjustable display form comprising a body having an upwardly extended neck portion, and a head having a downwardly extended neck portion; cooperating means attached to said neck portions for alining the same and holding their adjacent outer surfaces even with each other, and a detent in connection with one of said neck portions arranged to engage the other neck portion and thereby hold the head in any one of several adjusted positions about a vertical axis and for preventing the head from turning accidentally therefrom and leaving the head free for vertical movement from the body.

4. In an adjustable display form comprising a body having an upwardly extended neck portion, and a head having a downwardly extended neck portion adapted to be connected with the neck portion of the body to support the head upon the body; a device attached to one of said neck portions for enclosing the adjacent end of the other neck portion and thereby alining said neck portions, and devices in connection with said neck portions for holding the head in different adjusted positions about a vertical axis with respect to the body and preventing turning of the head from any of said positions and leaving the head free for vertical movement from the body.

5. In an adjustable display form comprising a body having an upwardly extended neck portion, and a head having a downwardly extended neck portion for connection with the neck portion of the body to support the head upon the body; means attached to one of said neck portions for enclosing the adjacent end of the other neck portion and having its outer surface in alinement with the outer surfaces of said neck positions, means for preventing the head from tilting with respect to the body, and devices in connection with said neck portions for holding the head in different adjusted positions about a vertical axis with respect to the body and preventing turning of the head from any of said positions and leaving the head free to be detached from the body by unrestrained vertical movement therefrom.

6. In an adjustable display form comprising a body having a laterally extended shoulder portion, and an arm having an attaching end portion; a bracket, means attached to said shoulder portion of said body for holding said bracket in different adjusted positions about an approximately horizontal axis, an element attached to said end portion of said arm having a slot for receiving said bracket, and means attached to said arm for interlocking with said bracket to prevent lateral movement of said arm from said body.

7. In an adjustable display form comprising a body having a laterally extended shoulder portion, and an arm having an attaching end portion adapted to contact closely with said shoulder portion; a plate rigidly attached to and covering the end of said shoulder portion, a bracket having outwardly extended arms, means attaching said bracket to said plate, an element attached to said end portion of said arm having a slot for receiving said bracket, and a pin attached to said arm in said slot for interlocking with said bracket and thereby preventing lateral movement of said arm away from said body and leaving said arm free to be moved longitudinally in one direction and detached from said body.

8. In an adjustable display form comprising a body having a laterally extended shoulder portion, and an arm having an attaching end portion adapted to contact closely with said shoulder portion; a plate rigidly attached to and covering the end of said shoulder portion, a bracket, a device attaching said bracket to said plate and holding said bracket in different adjusted positions about an approximately horizontal axis, an outwardly extended portion rigid with said bracket and having a hole therein, an element attached to said end portion of said arm having a space for receiving said outwardly extended portion of said bracket, and a projection rigid with said arm adapted to be extended into and withdrawn from said hole in said bracket.

9. In an adjustable display form comprising a body having a laterally extended shoulder portion, and an arm having an attaching end portion adapted to contact closely with said shoulder portion; a bracket having an outwardly extended portion provided with a hole, means attached to said shoulder portion of said body for holding said bracket in different adjusted positions about an approximately horizontal axis, an element attached to said end portion of said arm having a slot for receiving said outwardly extended portion of said bracket, a pin attached to said arm and extending into said slot for extension into said hole in said outwardly extended portion of said bracket to prevent lateral movement of said arm from said body and permit longitudinal movement of said arm for detachment from said body.

10. In an adjustable display form comprising a body, an arm having a wrist end portion, and means for supporting said arm in connection with said body at different angles of inclination; a hand having a wrist end portion, and friction means for attaching the wrist end portion of said hand to the wrist end portion of said arm in different positions about a longitudinal axis and leaving said hand free for longitudinal movement from said arm.

11. In an adjustable display form comprising a body, an arm having a wrist end portion, and means for supporting said arm in connection with said body at different angles of inclination; a hand having a wrist attaching portion, means attached to one of said wrist portions for enclosing the adjacent end of the other wrist portion and having its surface in alinement with the outer surfaces of said wrist portions, and friction means for holding said hand in connection with said arm in different positions about a longitudinal axis through said arm and leaving said hand free for longitudinal disengagement from said arm.

12. In an adjustable display form comprising a body, an arm having a wrist end portion, and means for supporting said arm in connection with said body at different angles of inclination; a hand having a wrist attaching portion, a device for alining said wrist attaching portions, and resilient means for holding said hand in connection with said arm in different positions about a longitudinal axis and leaving said hand free for longitudinal disengagement from said arm.

13. In an adjustable display form comprising a body, an arm having a wrist end portion, and means for supporting said arm in connection with said body at different angles of inclination; a hand having a wrist attaching portion, a device for alining said wrist attaching portions, and resilient means for holding said hand in connection with said arm in different positions about a longitudinal axis and preventing lateral displacement of said hand with respect to said arm and leaving said hand free for longitudinal withdrawal from said arm.

MORRIS A. HEIMANN.