



## UNITED STATES PATENT OFFICE

2,489,591

BRASSIÈRE

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Original application July 6, 1945, Serial No.  
603,451. Divided and this application March  
18, 1946, Serial No. 655,079½

1 Claim. (Cl. 2—42)

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This application is a division of my earlier application filed July 6, 1945, Serial No. 603,451.

The object of my invention is to provide a brassière which can be made from plastic material and which may be accurately fitted to the wearer.

A further object of my invention is to provide a series of graduated measuring cups so that the prospective wearer may be accurately measured for size.

Still a further object is to provide a series of breast cups which correspond in size to the measuring cups so that when the proper size measuring cup has been selected then a proper size breast cup may be selected.

Still a further object of my invention is to accurately fit the garment to the wearer in case the breasts are of different sizes or in a relatively different position on the body of the wearer.

Still a further object of my invention is to provide means of tailoring the finished article so it will exactly correspond both as to size and position of the breast of the wearer.

Still a further object is to provide a mechanism whereby the preselected cups may be secured together permanently in their properly spaced vertical and horizontal positions.

Other objects of my invention will be apparent from the claims and description, and the accompanying drawings in which:

Figure 1 shows a series of measuring cups.

Figure 2 shows the same series in vertical central sectional form.

Figure 3 shows a series of the breast cups in plan view.

Figure 4 shows a series of forms corresponding to the cups and on which the cups are mounted when they are permanently secured together.

Figure 5 shows a perspective view of the completed garment.

Figure 6 shows a top or plan view of the device on which the cups are mounted in order to secure them together.

Figure 7 is a longitudinal sectional view through the device shown in Figure 6.

Figure 8 is a sectional view taken on the line 8—8 of Figure 6.

Figure 9 is a plan view of the device shown in Figure 6 in one of its adjusted positions.

Figure 10 shows a sectional view indicating the procedure followed in case it is necessary to fix the cups some distance apart.

Referring to the drawings in Figure 1, I have shown a series of measuring cups 10, which will be approximately the shape of the average breast and which will be graduated both in diameter and in

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height. It is proposed to make these perhaps in a series of four diameters and with a cup of lesser medium and greater heights for each diameter. This arrangement is merely used as illustrative, as it may be desirable to have more diameters and more heights.

In Figure 2 the four cups shown in Figure 1 are shown in vertical section. It will be understood that when a prospective wearer desires to be fitted that the attendant will select a cup which appears to be of approximately the correct size and then try various cups until one is found which is comfortable and comes nearest to a fit. Each cup is marked as "A," "B," "C," or "D" to indicate the diameter and cups of lesser or greater height are indicated as A—, A or A+ for each diameter. It is understood that this marking is merely illustrative and the system may be either enlarged or restricted.

Breast cups 11, having the same dimensions as the measuring cups, are provided and stored in the order of their marking in a convenient manner such as on a rack. These breast cups are shown in Figure 3 and are formed from a pliable plastic substance which may or may not be perforated for ventilation purposes. At the top and one side harness tabs 12 are secured to the cup and at the one side a fastening tab 13 is secured. It will be understood that these cups are provided in two series, namely, right and left, and that the harness tab at the side and the fastening tab will be reversed in the right and left hand series.

In Figure 4 I have shown a series of forms which are of any rigid material. These forms 14 corresponding in size to the sizes of the cups. These forms are provided with a pair of extending pins 15 on their larger or flat side. The fixture for securing together the cups which have been selected is shown in Figures 6, 7, 8 and 9. In this fixture a base 16 is provided. This base 16 has a slide member 17 mounted therein designed to slide in a direction corresponding to the vertical on the wearer of the garment. In this slide 17 a second slide 18 is provided which slides in a direction perpendicular to the direction of slide 17. Scales 19 and 20 are provided on the base and slide 17 to indicate the movement of these slides. The base 16 is provided with a pair of recesses designed to receive the pins of a form 14. The slide 18 has a similar pair of recesses designed to receive the pins of another form 14. It will be understood that these pairs of pins position the forms relative to the slides and base when the form is set on the base and slide.

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In the fitting of a proposed wearer for one of these garments, the first step is to select a measuring cup 10 of the proper size and then to select a corresponding breast cup 11. It will be understood that breasts are often of different sizes so the measuring cups selected may be of different sizes and consequently the breast cups, so that care must be taken that the proper cup is placed on the proper side, especially in connection with the use of the fixture shown in Figure 6, 7, 8 and 9. When the cups have been selected, then the prospective wearer is measured to determine the distance between the breasts and the slide 13 on the fixture is set by means of the scale 23 to the proper position. The distance from each collar bone to the corresponding breast is then measured and the slide 17 is set by means of the scale 19 to a corresponding position.

The forms 14 corresponding to the cups 11 which have been chosen are then placed on the base 16 and the slide 18, and held in position by the pins 15. The cups 11 are then placed on the corresponding moulds with the attaching tabs facing toward each other and the harness tabs placed in what corresponds to a vertical and horizontal position. It will be noted that the attaching tabs 13 are relatively wide so that any variation in the height of the cups relative to each other will still permit a substantial portion of the attaching tabs 13 to overlap each other.

In case the distance between the cups should be greater than a substantial part of the length of the tabs 13, then an extra strap 21 of the same material as the cups is placed between the tabs in what would correspond to a horizontal position as shown in Figure 10. The tabs 13 are then sealed permanently together by means of heat. It will be noted that the tabs 13 are fairly wide so that it is quite probable that there will be an extending corner of the tabs after they have been sealed. These extended corners will be trimmed off with scissors or other cutting tool. The tabs 13 are sealed together with any ordinary heat sealer, one of which is illustrated by the dotted lines 22 in Figure 6. The tabs are overlapped and then the heat sealer pressed down on them to press the tabs together and heat them so that they will seal themselves to each other. If there is substantial distance between the tabs, then the intermediate strip 21 is sealed at each end to the tabs to give the proper spacing. When these cups have been sealed in proper relation, the harness straps 23 shown in Figure 5 are attached and the garment is ready for wear. It will be understood that these harness straps come with adjusting buckles so that they can be made to properly fit the wearer. These are not shown as they are well-known in the trade.

The breast cups may be made from fabric woven from a plastic thread such as that known to the trade as "nylon." The thread may be of the heat sealing type or be coated with a heat

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sealing material whereby the fabric may be woven to shape or woven flat and heat formed to shape in a mould. The edges are heated to form a selvage and the tabs heat sealed to the edge. This results in an attractive seamless cup. A satisfactory material of a similar nature is a cotton fabric impregnated with a substance known to the trade as "Koroseal." This is particularly desirable because it is a heat sealing material and because it can be woven so that it does not stretch in one direction but is elastic in the other direction. This is particularly desirable because it prevents distortion of the material by the weight of breasts and at the same time provides flexibility.

It is desirable that the material from which the breast cups are made should be reasonably flexible. It is also possible that it will be found desirable to make the body of the breast cups of material which is not heat sealable and then to coat the material so that it will become heat sealable only where it is desirable, for instance, as to form a hem or to secure the tabs thereto.

Some changes may be made in the construction here shown without departing from the spirit of my invention and I desire to cover by my claim such variations as may reasonably be included within the scope of my invention.

I claim as my invention:

The method of assembling an individually tailored brassiere consisting of first ascertaining the size of each breast by comparison with a rigid cup selected from a size graduated set of similar cups serially marked, then selecting flexible breast cups of the correct size from a supply source comprising a set of similar cups graduated and marked the same as the size cups, said flexible cups being formed from a thermoplastic and having two spaced harness tabs and a wider attaching tab, then selecting two breast forms to fit the breast cups from a set of forms graduated and marked same as the size cups, measuring the distance between the breasts and from the collar bone to each breast and then fixing the forms in position relative to each other corresponding to the measurements taken, then placing the breast cups on the form and then connecting the cups together in relatively fixed position by applying heat to the attaching tabs.

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