April 3, 1956

F. V. GRAF

2,740,122

STRAPLESS BRASSIERE

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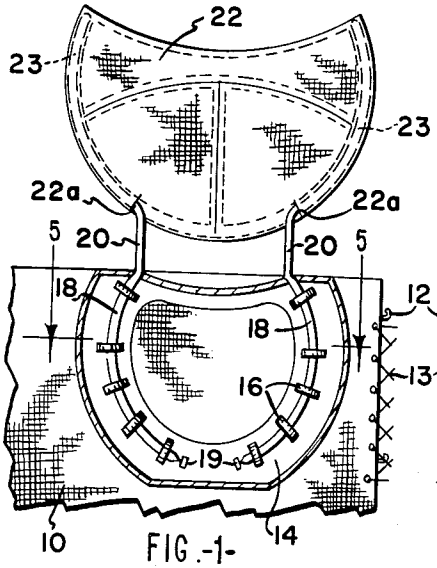


FIG.-1-

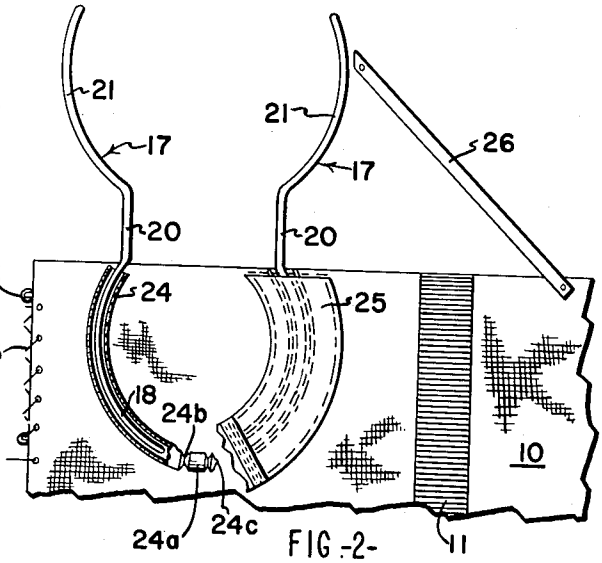


FIG.-2-

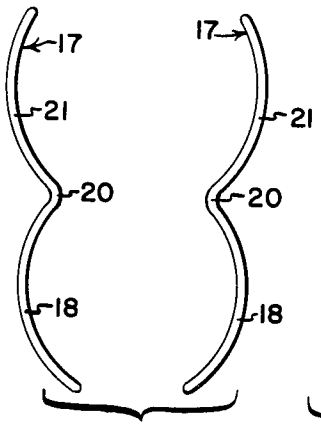


FIG.-3-

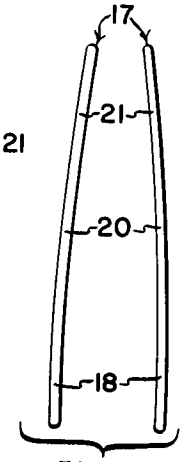


FIG.-4-

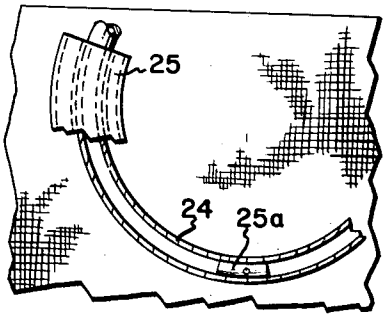


FIG.-7-

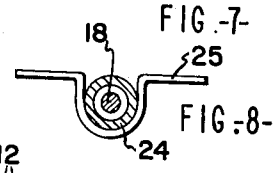


FIG.-8-

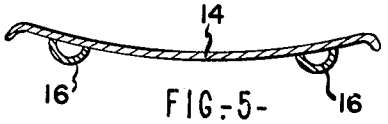


FIG.-5-

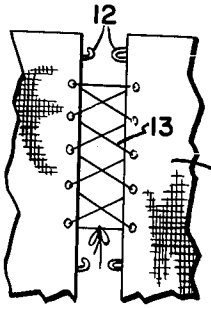


FIG.-9-

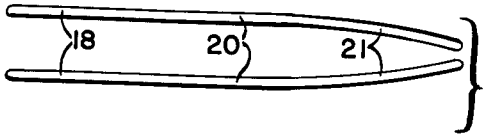


FIG.-6-

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STRAPLESS BRASSIERE

Fred V. Graf, Los Angeles, Calif.

Application March 26, 1954, Serial No. 418,925

4 Claims. (Cl. 2—42)

This invention relates to a strapless brassiere and more particularly to an improvement over the structure shown in my copending application Serial No. 361,112, filed June 2, 1953, now Patent No. 2,721,324.

It is an object of my invention to provide a strapless brassiere having breast supporting wires which are so scientifically designed as to give the wearer less wire to cope with and still comfortably support the breasts.

Another object of my invention is to mount a removable breast cup on two wires which are independent of each other.

With my invention, a belt is provided which extends around the body of the wearer, directly above the hips. The belt is equipped with a pair of metallic mounting members having arcuate tunnel paths which are adapted to removably receive the correspondingly arcuate lower ends of a pair of wires. Each of the wires has an additional arcuate section at the upper end which is inserted into an arcuate tubular seam extending along the edge of a breast cup, all of which parts are exchangeable and made in various sizes.

It is among the objects of my invention to provide a strapless brassiere in which the wires can easily be attached to and detached from both the belt and the breast cups and to provide a strapless brassiere in which the length of the belt may be varied and in which the size, shape and positioning of the breasts of the wearer may be accommodated by making proper adjustments of the wires supporting the breast cups.

It is a further object of my invention to provide a strapless brassiere in which the breast cups mounted on the wires cannot possibly twist, turn or be altered from their correct positions, thus assuring the proper positioning of the breasts at all times.

My invention also comprises such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompanying drawings preferred embodiments of my invention, it should be understood that the same are susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawings, Fig. 1 is a front elevational view of my strapless brassiere, showing a complete assembly of one embodiment of my invention in which a metal member having punched lace portions provides a mounting for the wires.

Fig. 2 is a front elevational view of another embodiment of my invention in which a tubing provides a mounting for the wires.

Fig. 3 is a front elevational view of a pair of mounting wires adaptable for use with a shorter waisted person than the wires shown in Fig. 1.

Fig. 4 is a side elevational view of the pair of wires shown in Fig. 3.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 1.

Fig. 6 is a side elevational view of the breast cup wires shown in Fig. 1.

Fig. 7 is a plan view, mostly in section of an embodiment of my invention in which only one length of tubing is used as the mounting for the wires.

Fig. 8 is a sectional view of the same, showing a wire inserted in the tube.

Fig. 9 is a plan view of the rear of the belt, showing the lacing used to join the sections of the belt together.

One embodiment which has been selected to illustrate my invention comprises a belt **10**, which is preferably formed of foundation garment webbing or other suitable material. Belt **10** is adapted to be worn so that it encircles the body of the wearer just above the hips, with the bottom of belt **10** resting on the hips. An elastic insert **11** is provided on each side of belt **10** to permit belt **10** to stretch slightly in use.

Belt **10** is provided with two sections, which may be joined together at the back and/or front, as the wearer desires. The means of joining may be hooks and eyes **12** or lacing **13**. The use of lacing **13** permits the size of belt **10** to be adjusted to the wearer for separation and body size.

In the embodiment shown in Fig. 1 of the drawings, a plate **14**, which may be formed of aluminum, steel, plastic or other suitable material is attached to belt **10** by sewing or other fastening means extending through a plurality of openings **15**.

Plate **14** has convex sides and is concaved to fit against the body. The center of plate **14** is preferably open, to lessen its weight. Each side of plate **14** is provided with a plurality of projections **16**, which are punched from the bottom of plate **14** to provide a plurality of small loops and tunnels which are disposed in an arcuate path along each side of plate **14**.

Breast cup mounting means is provided in the form of a pair of breast cup wires **17**, each of which has a lower arcuate mounting portion **18** which corresponds to the curve of the arcuate path formed by projections **16** of plate **14**. The ends of mounting portions **18** are adapted to be inserted beneath projections **16** in the manner shown in the left half of Fig. 1. Stop means **19** are provided adjacent the end of each of the paths of projections **16**.

Each of wires **17** is provided with a straight portion **20** of different lengths, which extends upwardly from the top of mounting portion **18**, and a connecting convex breast cup portion **21**. A breast cup **22** is provided with a pair of convex channels **23** adjacent the sides thereof, corresponding to the arcuate curve of wire portions **21** or wires **17**. The ends of wire portions **21** are inserted into slots **22***a* of the lower ends of breast cup channels **23**. The upper ends of breast cup channels **23** of breast cup **22** are closed to hold the breast cups **22** from slipping down.

Another embodiment of my invention which is shown in Fig. 2 of the drawing comprises tubular members **24**, each of which comprises approximately a half circle and which are attached to belt **10** by an overlay **25**, which is formed of a double layer of cloth and which extends over tubular members **24**. Overlay **25** is attached to belt **10** by stitching or other suitable fastening means, with the top of tubular member **24** open to permit the ends of wire **17** mounting portions **18** to be inserted.

A pair of tubular members are shown in the embodiment illustrated in Fig. 2. In the embodiment shown in Fig. 7, a single tubular member **24** is shown, having mounted therein midway between its ends a stop **25***a*. This single tubular member is equivalent to a pair of separate tubular members.

A solid aluminum stop member **24***a* is attached to belt **10** by stitching which extends around a pair of grooves **24***b*. Stop member **24***a* is provided with a pair of pins **24***c* at the opposite ends thereof which guide tubular

members **24** into the proper position and act as a stop for the ends of wires **18**.

This embodiment of my invention works in the same manner as the one previously described above, with the arcuate lower mounting portions **18** of wires **17** corresponding to the curve of tubular member **24** and adapted to be removably inserted therein. A strap **26** may be attached at one end to the belt **10** and at its opposite end to the side of the breast cup.

By changing the shape of breast cup portions **21** of wires **17**, provision may be made for smaller or larger breast cups placed closer or further from belt **10** to accommodate different sizes and proportions which may be needed. For example, Fig. 3 shows the wires **17** which would be used for a short waisted woman.

It should be noted that the lower mounting portions **18** of wires **17** when once mounted cannot twist or turn and must always remain in the same position. This provides a more rigid form of construction for a strapless brassiere than has previously been possible. It may also be noted that my brassiere rests on the hips and shifts the weight of the breasts to the hips, where such weight can best be carried.

In order to permit adjustment of the separation of the breast cups, I may provide a pair of plastic members which are attached to the belt **10**. Such plastic members would be provided with top and bottom tracks. The plates **14** would be slidably mounted in the tracks, so that they could be moved closer together or farther apart, with means for preventing such movement after the proper separation has been established.

With my invention, different shapes of breast cups and different positioning of the breast cups may be accomplished by merely changing the shape of the upper half of the mounting wires and the shape of the breast cups as desired.

It is preferred that the tubular members **24** used in my brassiere be removably mounted beneath the overlay **25**. In this way, they can be removed for laundering of the brassiere. Tubular members **24** may comprise extension springs as well as ordinary tubing.

I claim:

1. A strapless brassiere comprising an elongated belt adapted to encircle the body, two pairs of substantially rigid tunnnel paths fixedly attached to said belt adjacent the top edge thereof, each pair of said tunnel paths comprising two oppositely disposed arcuate segments of a circle, each of said arcuate tunnel paths having an open upper end and a closed lower end, two pairs of breast cup wires, each pair of said wires having a substantially hourglass shape, with lower arcuate mounting portions corresponding to the arcuate shape of said tunnel paths and integral upper similarly shaped breast cup portions, the lower mounting portions of said wires being slidably and removably mounted in said arcuate tunnel paths through the open upper ends thereof, said wires being held from twisting movement with respect to said belt by said rigid arcuate tunnel paths, the breast cup portions of said wires extending directly upwardly from the top edge of said belt, a pair of breast cups formed of textile material, each of said breast cups having a pair of arcuate channels stitched in the outer opposite side edges thereof, each of said channels having a closed upper end and an open lower end, said wires being removably and slidably mounted into said arcuate channels through said open lower ends, said breast cups being rigidly mounted and held above the top edge of said belt.

2. A brassiere as defined in claim 1, each of said wires having a straight portion between its mounting portion and breast cup portion to space said breast cups upwardly from the top edge of said belt.

3. A brassiere as defined in claim 1, each of said tunnel paths comprising a piece of hollow metal tubing, each of said pieces of tubing being attached to said belt by a cloth overlay, each of said cloth overlays comprising a double layer of cloth overlying said tubing, said overlays being stitched to said belt on both sides of said tubing.

4. A brassiere as defined in claim 1, said tunnel paths comprising the opposite ends of a single piece of hollow metal tubing, said tubing having a stop member mounted therein midway between its opposite ends, said stop member adapted to limit the insertion of said wires into said tubing.

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