

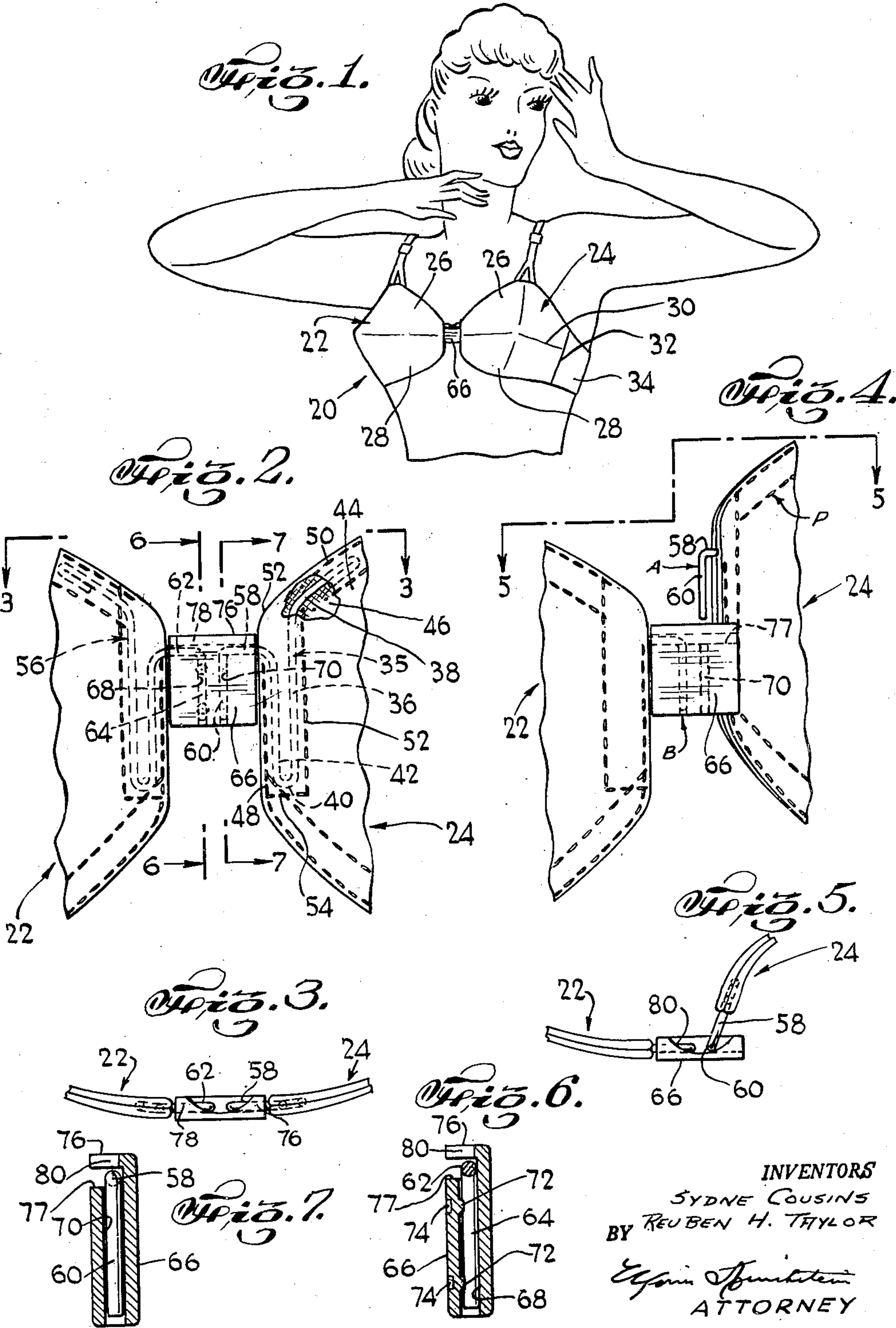
Oct. 25, 1949.

S. COUSINS ET AL
BRASSIÈRE

2,485,572

Filed May 26, 1948

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BRASSIÈRE

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Fig. 8.

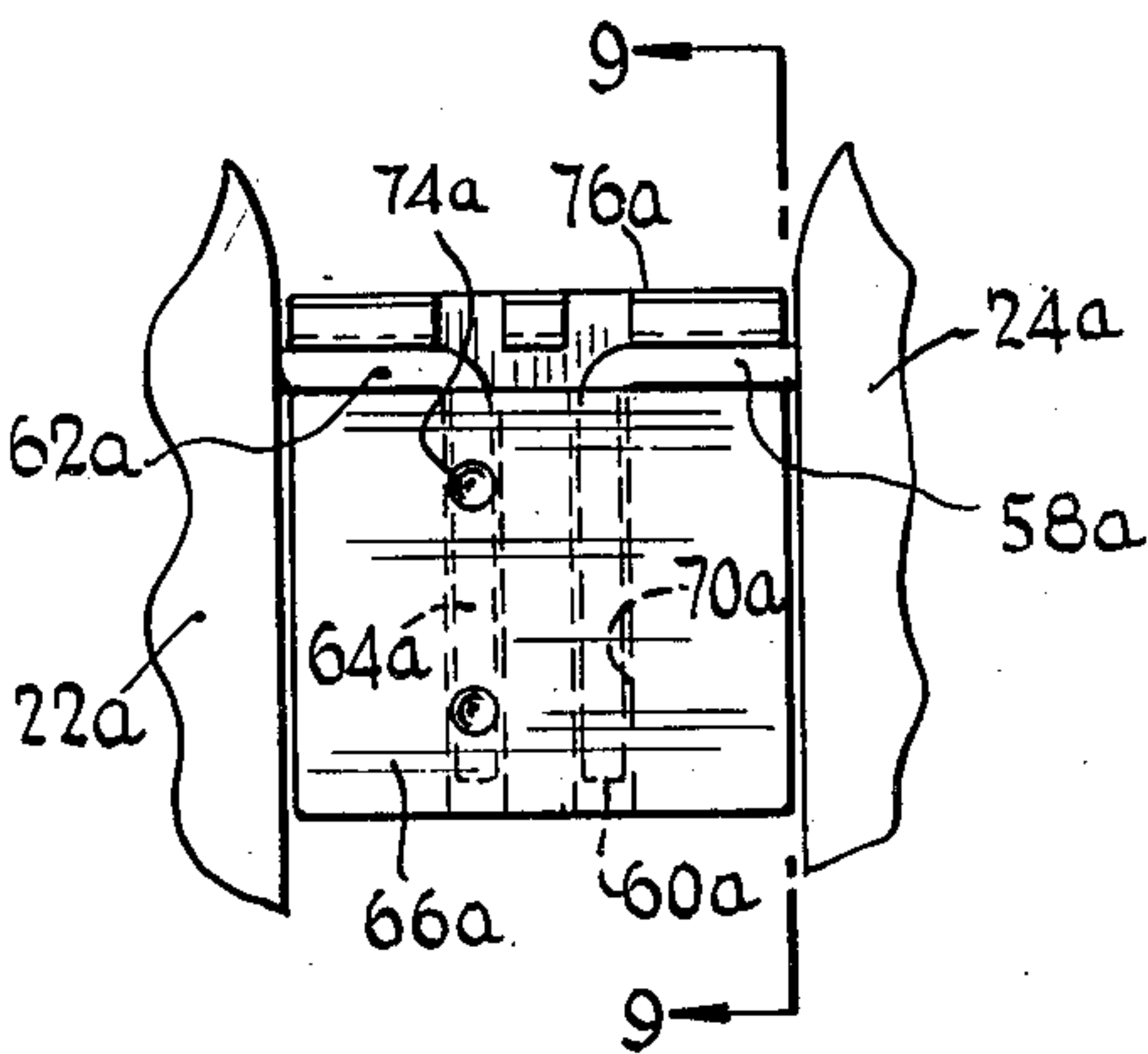


Fig. 10.

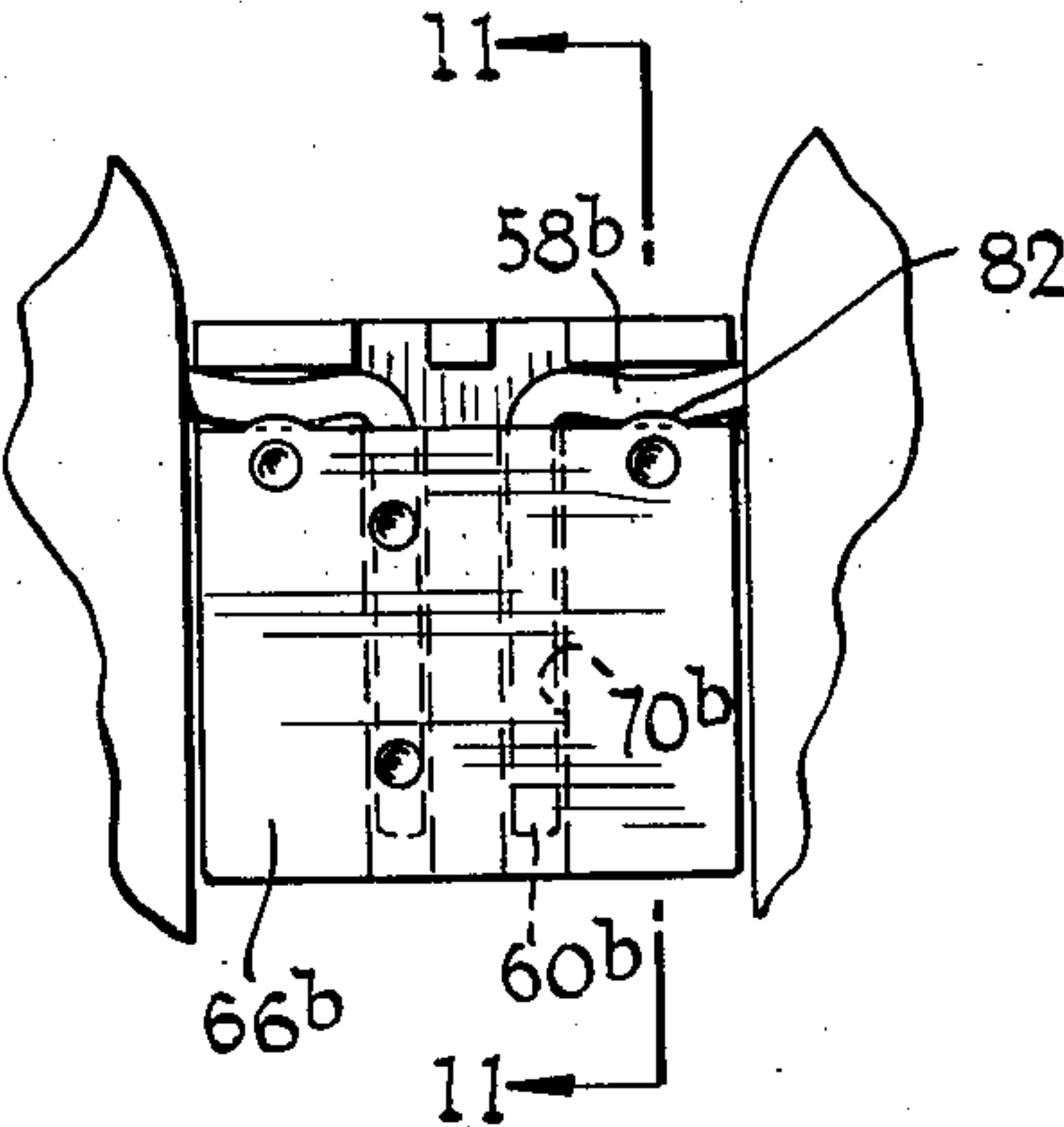


Fig. 9.

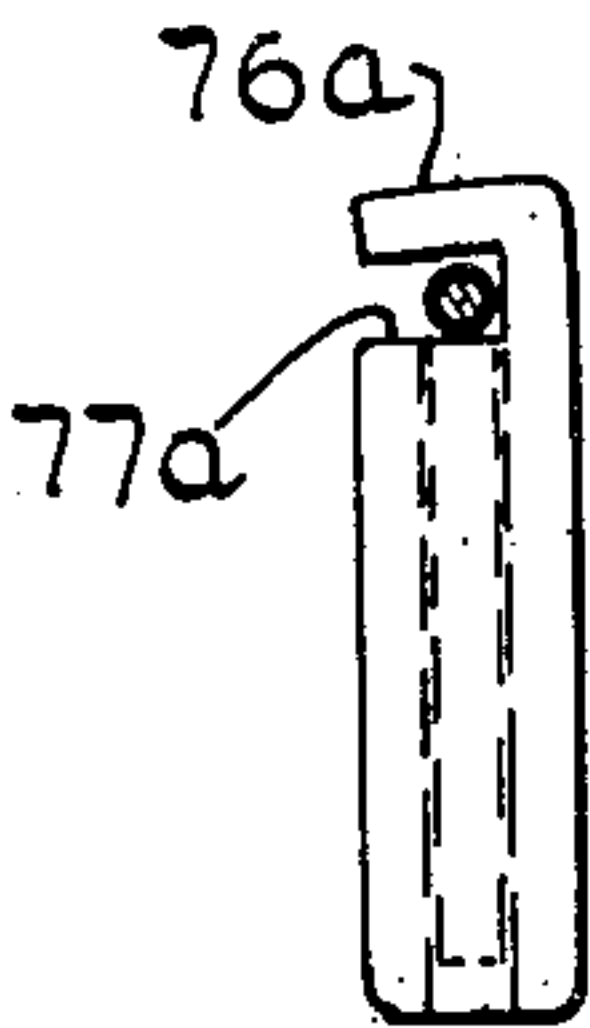


Fig. 11.

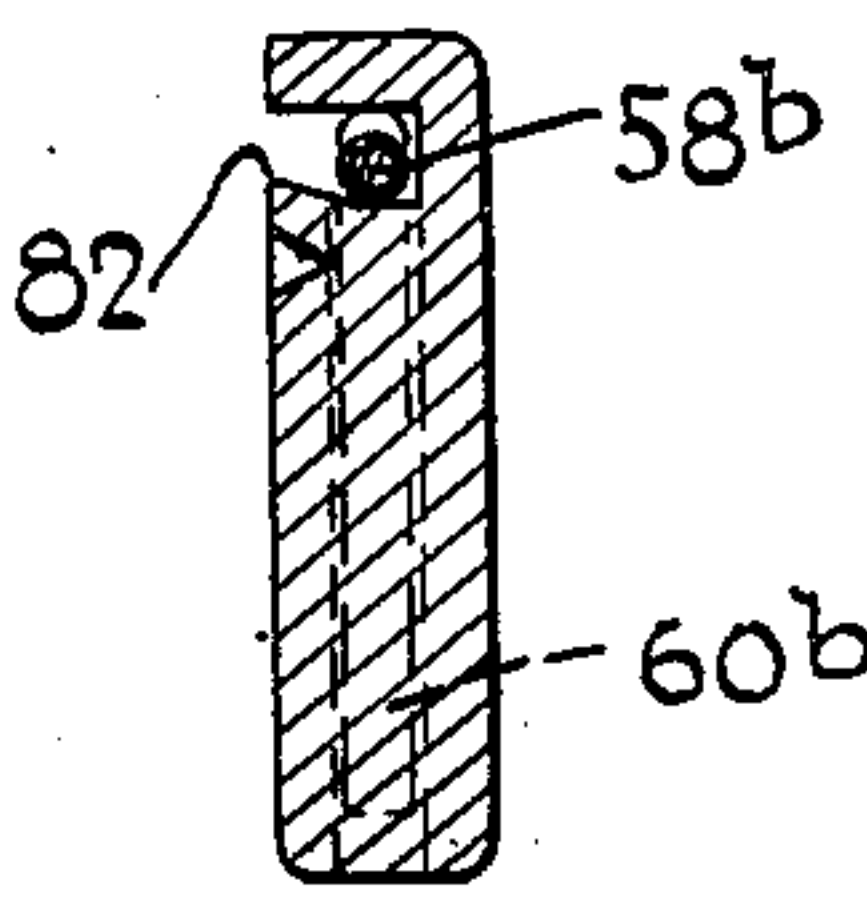


Fig. 12.

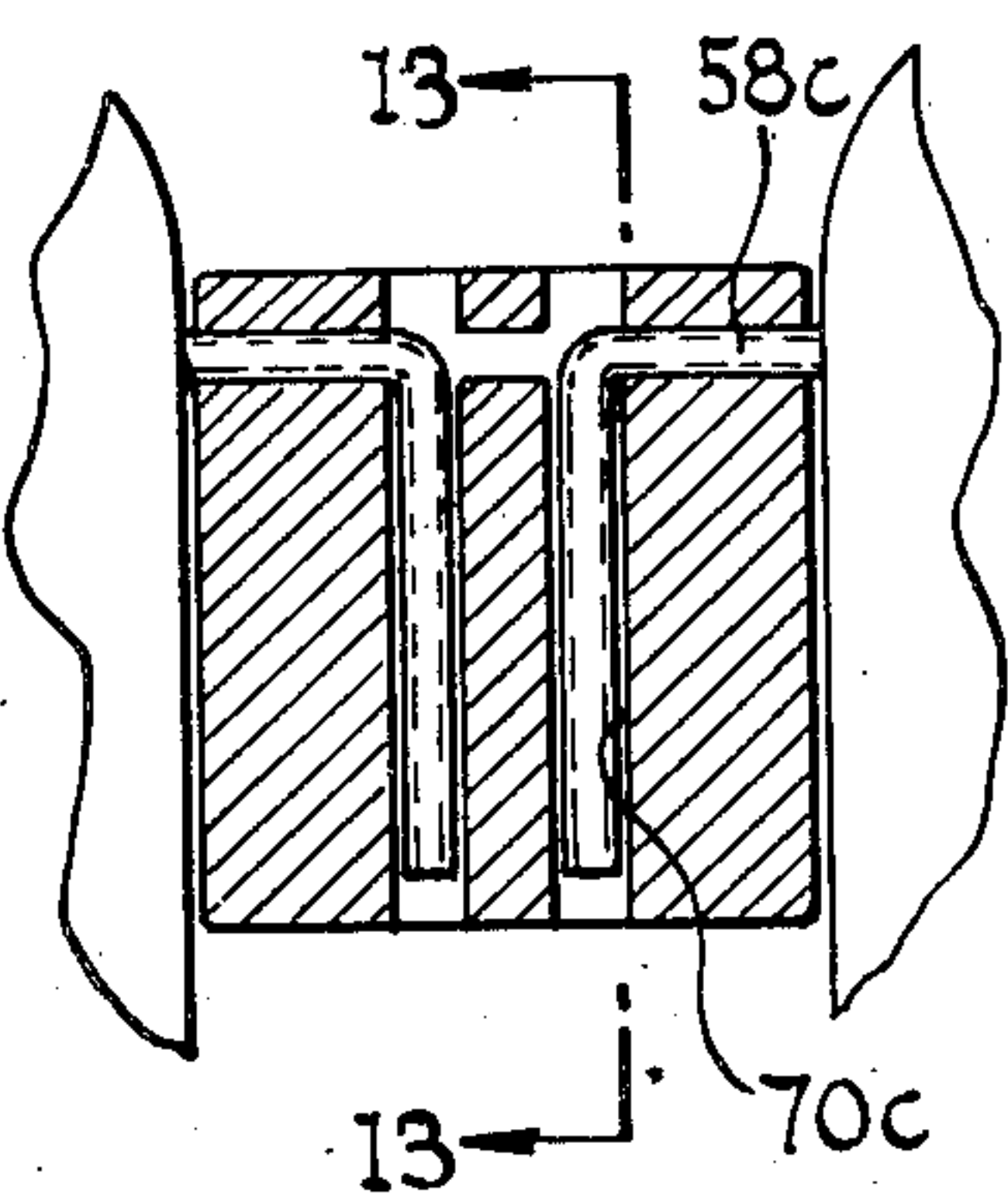
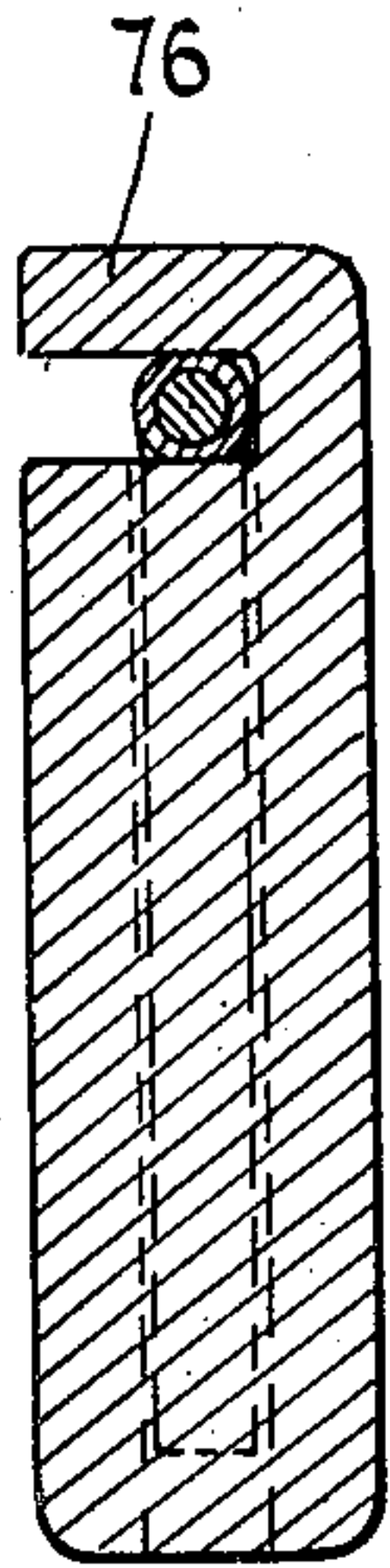


Fig. 13.



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2,485,572

BRASSIÈRE

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6 Claims. (Cl. 2—42)

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This invention relates to garments for molding and supporting the breasts, and which will, for convenience be referred to as "brassières," it being understood that they may comprise undergarments, parts of undergarments, outer garments or parts of outer garments.

More specifically, our invention relates to brassières in which the bust cups have reinforcing elements associated therewith. Even more particularly, the present invention is concerned with brassières of the type shown and described in the copending applications of Sydne Cousins, Serial No. 720,335 for Breast supporting garments, filed January 6, 1947, and Serial No. 771,282 for Brassières, filed August 29, 1947.

In general, a brassière of this type is characterized by the presence in each of its bust cups of a reinforcing frame made from any suitable self-form-maintaining material, as for example, metal wire, plastic covered metal wire or synthetic plastic, which frame extends around at least a portion of the periphery of the bust cup and has a part disposed adjacent the inner side edge of the bust cup, this being the edge of the bust cup adjacent the sternum. Each frame carries one half of a rapidly detachable interengaging means which either is formed in one piece with the frame, or is integrally connected thereto in some suitable manner. The two halves of the interengaging means thus are adapted to be coupled to one another over the sternum of the wearer, whereby to hold the two bust cups together at the front center of the wearer.

It is necessary to so construct a brassière of this type that the interengaging means will not readily come apart except when deliberately opened by the user. To this end, the interengaging means itself may be specially fashioned, or additional parts may be provided to function as locking means associated with the interengaging means.

The present invention is concerned with the construction of such locking means, and it is an object thereof to provide in a brassière of the character described a locking means of extremely simple, inexpensive and sturdy construction.

It is another object of the invention to provide a locking means of the character described which is very easy to close or open, and does not require undue constriction of the torso when manipulating the same.

It is a further object of the invention to provide a locking means of the character described which has no auxiliary moving parts capable of being accidentally moved, and which might, by

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such accidental movement, permit the locking means to open.

It is an additional object of the invention to provide a locking means of the character described which locks by virtue of the tensed position of the parts of the interengaging means when the brassière is worn whereby not only is the locking means automatically made secure but said locking means can be opened and closed with little effort when the brassière is not on.

It is still another object of the invention to provide a locking means of the character described which is compact and attractive in appearance.

An ancillary phase of the invention pertains to the interengagement of the reinforcing frames and the bust cups, it being an object of our invention to enable said frames to be firmly secured to the bust cups and yet readily removable therefrom when the brassière is to be laundered.

Other objects of our invention will in part be obvious and in part be pointed out hereinafter.

Our invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts which will be exemplified in the constructions hereinafter pointed out, and of which the scope of application will be indicated in the appended claims.

In the accompanying drawings wherein are shown various possible embodiments of our invention:

Fig. 1 is a perspective view of a brassière constructed in accordance with the invention as it appears on a lay figure;

Fig. 2 is an enlarged fragmentary view of the front central portion of the brassière shown in Fig. 1, the interengaging means being shown coupled;

Fig. 3 is a top view of the portion of the brassière illustrated in Fig. 2;

Fig. 4 is a view similar to Fig. 2, but showing the interengaging means uncoupled;

Fig. 5 is a top view of the portion of the brassière shown in Fig. 4;

Figs. 6 and 7 are enlarged sectional views taken substantially along the lines 6—6 and 7—7, respectively, of Fig. 2;

Fig. 8 is a view similar to Fig. 2 of a brassière embodying a modified form of our invention;

Fig. 9 is a sectional view taken substantially along the line 9—9 of Fig. 8;

Fig. 10 is a view similar to Fig. 2 showing the brassière embodying another modified form of our invention;

Fig. 11 is a sectional view taken substantially along the line 11—11 of Fig. 10;

Fig. 12 is an enlarged fragmentary view in partial section of the front central portion of a brassière embodying still another modified form of our invention; and

Fig. 13 is a sectional view taken substantially along the line 13—13 of Fig. 12.

Referring now in detail to the drawings, and more particularly to Figs. 1 through 7, the reference numeral 20 denotes a brassière embodying our invention. Said brassière comprises two bust cups 22, 24 of conventional construction, each consisting, by way of example, of a pair of upper and lower fabric panels 26, 28, stitched together along a medial seam 30, and so constructed as to impart the requisite dome shape to the bust cups.

The outer side edges 32 of the bust cups are permanently connected, as by stitching, to the opposite ends of an elongated fabric strip 34 of circumferentially resilient material. If desired, only the center of said strip at the back of the brassière need be of such circumferentially elastic material.

Each bust cup has incorporated therein a reinforcing element which carries one half of a rapidly detachable interengaging means, whereby the brassière is separable at the front of a wearer so that the joining or detaching of the two ends thereof can be performed far more conveniently than at the back.

The reinforcing element 35 associated with the bust cup 24 is fabricated from metal wire, e. g., steel wire which preferably is rustproof. To this end the wire may be coated with plastic or enamel, or plated, for instance with nickel or chrome, or alternatively the wire may be a rustproof alloy such as stainless steel. Although a reinforcing element is necessary to the practice of our invention, its actual construction does not affect the operation of the locking means and the specific construction thereof is given below only by way of example and in connection with the detachable attachment of said element to its associated bust cup.

Said reinforcing element constitutes a vertical reach 36 whose upper portion 38 is curved outwardly away from the front center of the brassière. The bottom of the reach 36 is connected by an integral return bend 40 to a second shorter vertical reach 42, parallel to the reach 36 and closer to the center of the brassière.

The reinforcing element is located in a pocket P formed on the inner side and upper edges of the bust cup 24, said pocket constituting an outer panel 44 and an inner panel 46. The two panels are secured to each other along the inner, i. e., center, side of the bust cup by a line of stitching 48. The two panels also are secured to each other along the upper edge of the bust cup by a line of stitching 50. However, as will be observed in Fig. 2, the line of stitching 48 is spaced from the line of stitching 50 at the zone 52 where the inner side edge of the bust cup runs into the upper edge of the bust cup. In addition, the two panels are connected by a line of stitching 52 having a portion running approximately parallel to the stitching 48 and another portion running approximately parallel to the stitching 50. This latter line of stitching need and preferably is not broken adjacent the zone 52. If desired, the lower end of said line of stitching 52 can be joined, as by a line of stitching 54, to a corresponding end of the line of stitching 48. However, no similar stitching joins the associated

ends of the lines of stitching 50, 52. These various lines of stitching form a pocket having two angularly disposed legs whose relative orientation approximately conforms to the relative angular disposition of the upper and lower portions of the reach 36, at least one of the legs being longer than the corresponding portion of said reach.

This construction of the reinforcing element and its pocket enables said element to be detachably secured to the associated bust cup. To insert the element in the bust cup, the upper inclined portion 38 of the reach 36 is thrust into the space between the two lines of stitching 48, 50 at the upper arm of the pocket. The pocket then is forced down onto the lower reach enough to enable the return bend 40 to enter the pockets. After this, the pocket is pulled back up to its normal position. The reinforcing element cannot be disengaged accidentally from the pocket inasmuch as there is no tendency during normal wear or handling to pull the brassière downwardly parallel to the inclined upper portion 38 of the reach 36.

The other bust cup 22 has a reinforcing element 56 which is a mirror image of the reinforcing element 35 and is detachably secured to the bust cup 22 by a pocket such as that just described.

In accordance with the characteristic nature of the brassière, each reinforcing element is provided with one half of a detachable interengaging means, this means being generally of the type shown and described in the aforesaid copending application of Sydne Cousins, Serial No. 771,282. More specifically, one of the reinforcing elements carries a pin, and the other a socket designed to receive said pin. Thus, the reinforcing element 35 is provided with a pin A and the reinforcing element 56 with a socket B. More specifically, the upper end of the inner reach 48 of the reinforcing element 35 runs into a horizontal portion 58 which terminates in a downwardly extending vertical portion or pin 60.

Likewise, the reinforcing element 56 has its inner vertical reach running into a horizontal portion 62 which terminates in a downwardly depending portion 64. The interengaging means also includes a medallion or block 66 having two vertical bores 68, 70. One of these bores, e. g., the bore 68, receives the pin 64. Said pin 64 and the medallion are permanently and preferably rigidly fastened together in any conventional fashion. This may be done by welding or, as shown, by forming the pin 64 with a pair of notches 72 (Fig. 6) and forcing metal from the medallion into these notches, as by indenting the rear surface of the medallion, for instance at the dimples 74. The other bore 70 is designed to freely receive the pin 60.

As thus far described, the interengaging means constitutes a pin and socket basically similar to the pin and socket illustrated in copending application Serial No. 771,282. However, the instant pin and socket connection differs from that of the copending application in that in said copending application, the pin and socket are of non-circular transverse cross-section, whereas in the present application, the pin and socket are of matching circular transverse cross-section. This distinction is essential inasmuch, as will soon be appreciated, it is necessary to oscillate the pin in the socket in order to operate the locking means.

The locking means in part constitutes the horizontally extending portion 58, in part constitutes the construction of the pin and socket which

permits relative oscillation of these parts, and in part comprises a member carried by the socket or medallion, which member has a horizontally extending portion with an undersurface above and near, but not directly over, i. e., slightly offset from the mouth of the socket or bore 70. Said member comprises a shelf 76 whose undersurface is spaced above the top of the socket a distance slightly in excess of the diameter of the wire constituting the horizontal portion 58 whereby to define a horizontal groove 77 at the rear of the medallion for the reception of the portion 58. With this arrangement, the reinforcing element associated with the pin 60 and bust cup 24 can be swung about the axis of relative rotation of the pin and socket from a position (shown in Figs. 2 and 3) in which the horizontal portion 58 is beneath the shelf, to a position (shown in Figs. 4 and 5) in which said horizontal portion is angularly clear of the shelf. In this latter position, the pin either can be inserted in or removed from the bore 70.

For the sake of appearance and symmetry, a second shelf 78 may be provided above the horizontal portion 62 of the reinforcing element 53. However, this shelf performs no operative function. The space between the two shelves 76, 78 is open, constituting an indentation 80 which permits the pin 60 to be vertically moved relative to the shelves at such time as the horizontal portion 58 is angularly disaligned with the shelf 76.

In use of the brassière, the garment is placed in its normal position on a torso with the two ends of the interengaging elements close to one another at the front of the wearer. Then, the two halves of the interengaging elements are so angularly and spatially positioned that the pin 60 is directly above the socket 70, and the horizontal portion 58 is disaligned with the shelf 76. At this time the two halves of the interengaging means occupy the relative angular position indicated in Fig. 5. Thereupon, the pin is thrust into the socket. When coupling the halves of the interengaging means, it is necessary to draw the two ends of the brassière very slightly together constricting the torso a little more tightly than in normal use in order to obtain the requisite angular relationship shown in Fig. 5. However, as soon as the interengaging means is manually released, the tension under which the brassière is held will straighten out the two halves of said means and bring them into the relative position shown in Fig. 3, wherein the horizontal portion 58 is under the shelf 76. Thereafter, as long as the brassière is worn, no possible movement of the user's torso can cause the two halves of the interengaging means to reassume the relative positions shown in Fig. 5, and, therefore, the interengaging means cannot open accidentally.

It will be appreciated that, because the shelf 76 extends rearwardly (in a direction toward the wearer's torso), even if the medallion should be pressed from the front, the two halves of the interengaging means will not be forced to their disengaging position.

It may be mentioned that, in order to prevent the pin from experiencing any appreciable vertical shifting when locked, the height of the groove 77 may be barely sufficient to accommodate the horizontal portion 58 as illustrated, or, alternatively, the socket 70 may be provided with a bottom which limits downward movement of the pin 70 to the extent desired.

It also will be observed that with the foregoing construction, the front of the medallion is un-

broken, and therefore of attractive appearance, although, if desired, for esthetic purposes, suitable ornamentation may be placed thereon.

It is desired to point out that, although the reinforcing elements described hereinabove are shown as being of substantial extent, the same may be much smaller in size and yet function in accordance with our invention, such smaller reinforcing elements being illustrated in the first described form of copending application Serial No. 771,282.

In the form of our invention just described, the locking means is maintained effective simply by the natural tensed position of the two parts of the interengaging means when constituting an operative member of a donned brassière. However, pursuant to an ancillary feature of our invention, auxiliary means may be provided to detain the locking means in effective position regardless of whether the brassière is worn. Various types of such auxiliary means may be provided and three different means are illustrated in Figs. 8 through 13, wherein parts similar to the parts shown in Figs. 1 through 7 will be denoted by the same reference numeral followed by different reference letters. In these modified forms of the invention, the bust cups and reinforcing means are identical with the bust cup and reinforcing means shown in Figs. 1 through 7.

In Figs. 8 and 9 the interengaging means constitutes a medallion 66a which is permanently and rigidly connected to a pin 64a depending from a horizontal wire portion 62a which is in one piece with the reinforcing frame connected to the bust cup 22a. The other bust cup 24a has a reinforcing frame including a horizontal wire portion 58a terminating in a downwardly extending pin 60a which is oscillatably received in a bore or socket 70a formed in the medallion. The medallion also includes a ledge 76a which, like the ledge 76, is disposed above the horizontal portion 58a when the interengaging means occupy their normal tensed position on a torso. However, the ledge 76a does not have a horizontal undersurface parallel to the upper surface of the portion of the medallion adjacent the mouth of the socket, as in Figs. 1 through 7. Rather, the ledge 76a slopes downwardly from its point of support, as best shown in Fig. 9. Said ledge 76a is so positioned that its free edge is located slightly below the path of travel of the uppermost part of the horizontal portion 58a as the latter swings with the pin 60a in the bore 70a. Thus, the ledge 76a constitutes an obstruction preventing free swinging of the horizontal portion 58a. However, said horizontal portion is slightly bowed upwardly and, since it is made of wire, is resilient. The distance from the free edge of the ledge 76a to the lower side of the groove 77a is sufficient to pass the diameter of the wire constituting the horizontal portion 58a, so that, by exertion of slight pressure, the bow in said portion can be straightened out sufficiently to enter the space beneath the ledge. As the rear of this space is reached, the bow will be reassumed, and thus provide a detent which prevents the horizontal portion 58a from swinging accidentally to an unlocking position wherein said horizontal portion is clear of the ledge 76a.

In Figs. 10 and 11, the auxiliary locking means constitutes a downward bow in the horizontal portion 58b which cooperates with an upwardly extending projection 82 on the medallion 66b adjacent the mouth of the bore 70b in which the pin 60b is rotatably received.

In Figs. 12 and 13 the horizontal portion 58c normally is bowed either upwardly or downwardly a very slight extent, e. g., 0.005 inch. The undersurface of the ledge 76c is horizontal and parallel to the upper surface of the medallion at the top of the bore 70c. However, the distance between these two surfaces is substantially equal to the diameter of the wire constituting the horizontal portion 58c. With this arrangement said horizontal portion can be squeezed into the space under the ledge 76c and will remain there unless forced out.

It thus will be seen that we have provided brassières which achieve the several objects of our invention and are well adapted to be employed successfully on a commercial scale.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above described, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a brassière comprising a pair of bust cups and means extending across the back of a wearer to connect the outer side edges of the bust cups to one another, a pair of separate wire reinforcing frames, means to incorporate each of said frames in a different one of said bust cups, each said frame extending around at least a portion of the periphery of the bust cup, one of said frames rigidly carrying a vertical socket and the other of said frames rigidly carrying a vertical pin, said pin and socket being constructed to permit relative oscillation thereof about the longitudinal axis of the pin when the pin is in the socket, said pin including a portion movable therewith and extending transversely of the axis of rotation thereof, and said socket including a member so positioned that it overlies the pin-carried-portion when the pin is in the socket and the pin and socket are tensed in a direction transverse to the axis of rotation of the pin whereby to prevent retraction of the pin from the socket in such position of the brassière, the position of said member associated with the socket being such that such member can be cleared by the pin-carried-portion upon oscillation of the pin.

2. A combination as set forth in claim 1 wherein the member associated with the socket is slightly offset from the mouth of the socket.

3. A combination as set forth in claim 1 wherein the member associated with the socket constitutes a substantially horizontal ledge.

4. A combination as set forth in claim 1, wherein the member associated with the socket constitutes a substantially horizontal ledge and wherein the free edge of the ledge is slightly lower than the uppermost part of the pin-carried-portion.

5. A combination as set forth in claim 1 wherein the member associated with the socket constitutes a substantially horizontal ledge and wherein a second member is associated with the socket, said member being located on the opposite side of the pin-carried-portion when the pin and socket are tensed in the manner mentioned, the space between the free edges of said two members being slightly less than the corresponding dimension of the pin-carried-portion and said members diverging from one another away from the free edges thereof.

6. A combination as set forth in claim 1 wherein the member associated with the socket constitutes a substantially horizontal ledge and wherein a second member is associated with the socket, said member being located on the opposite side of the pin-carried-portion when the pin and socket are tensed in the manner mentioned, the space between said members being arranged to snugly receive the pin-carried-portion.

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