

Sept. 2, 1958

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2,849,723

PLASTIC SHOULDER STRAPS FOR UNDERGARMENTS

Filed July 6, 1955

2 Sheets-Sheet 1

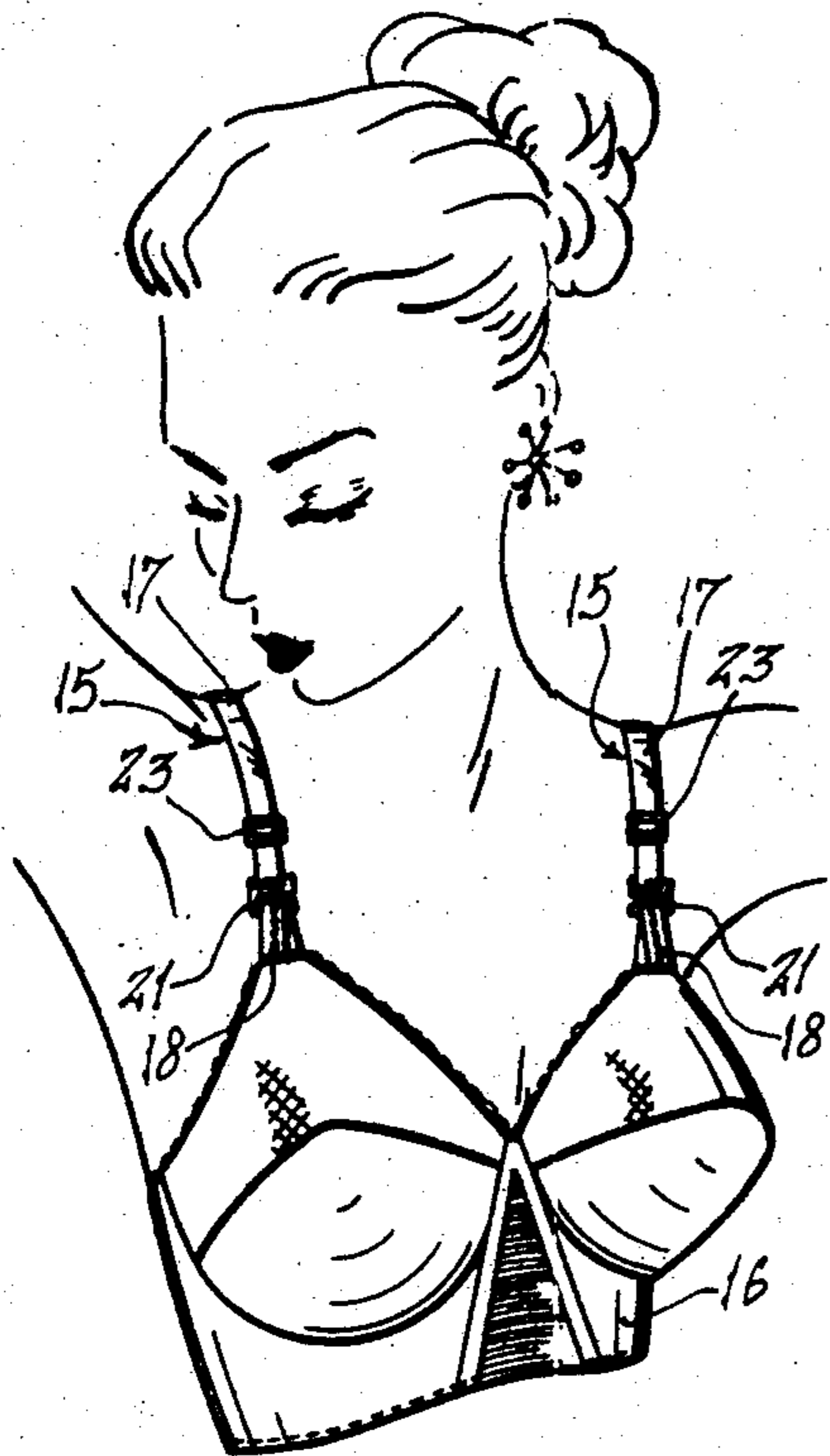


FIG. 1

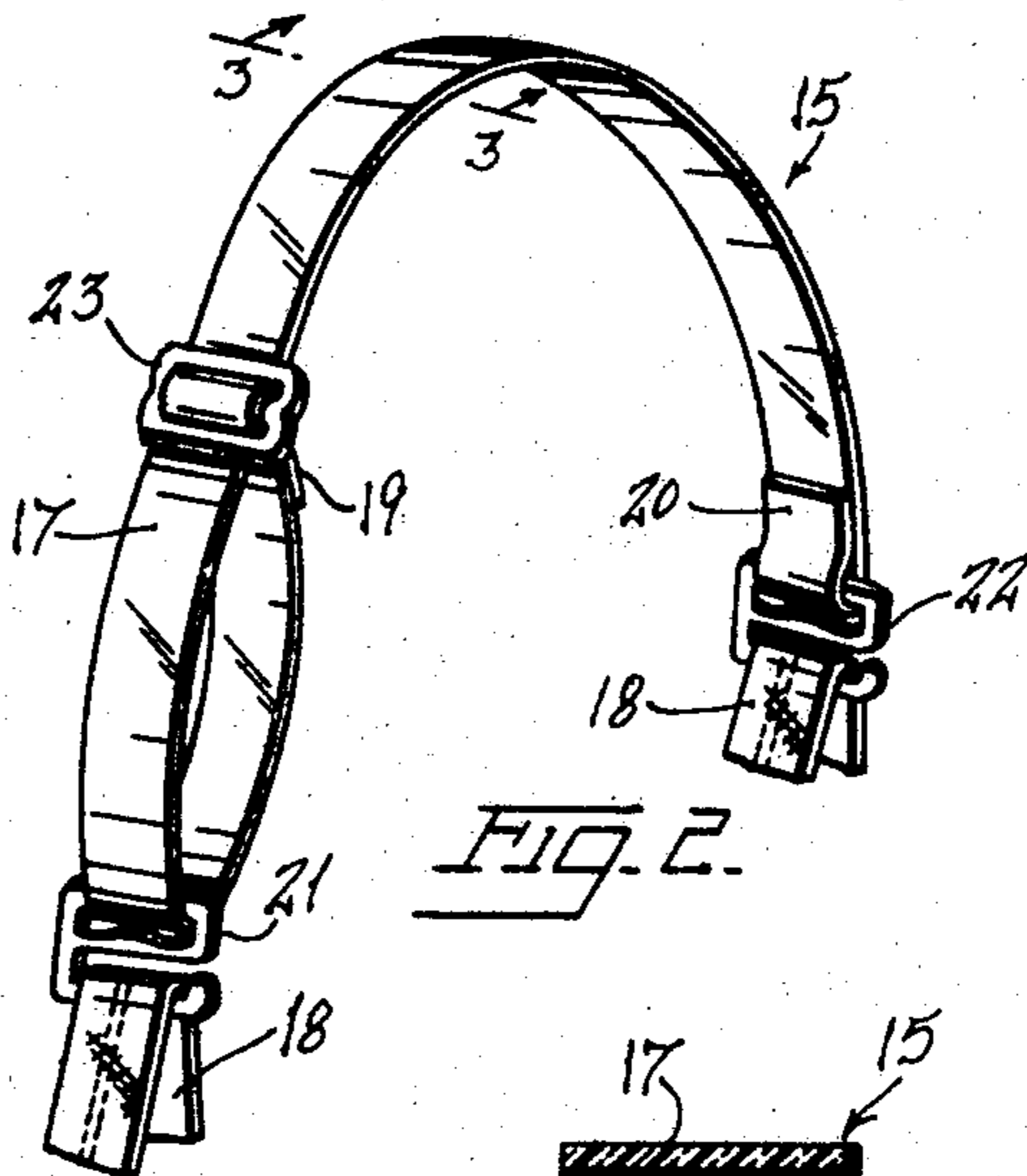


FIG. 2

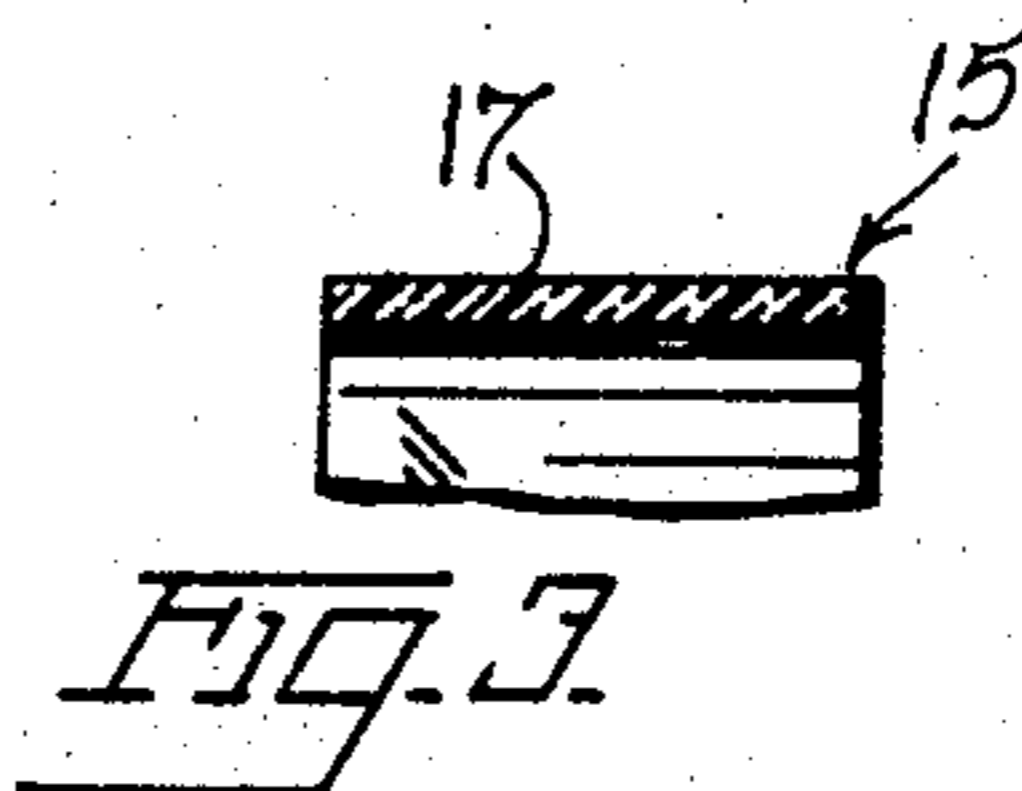


FIG. 3

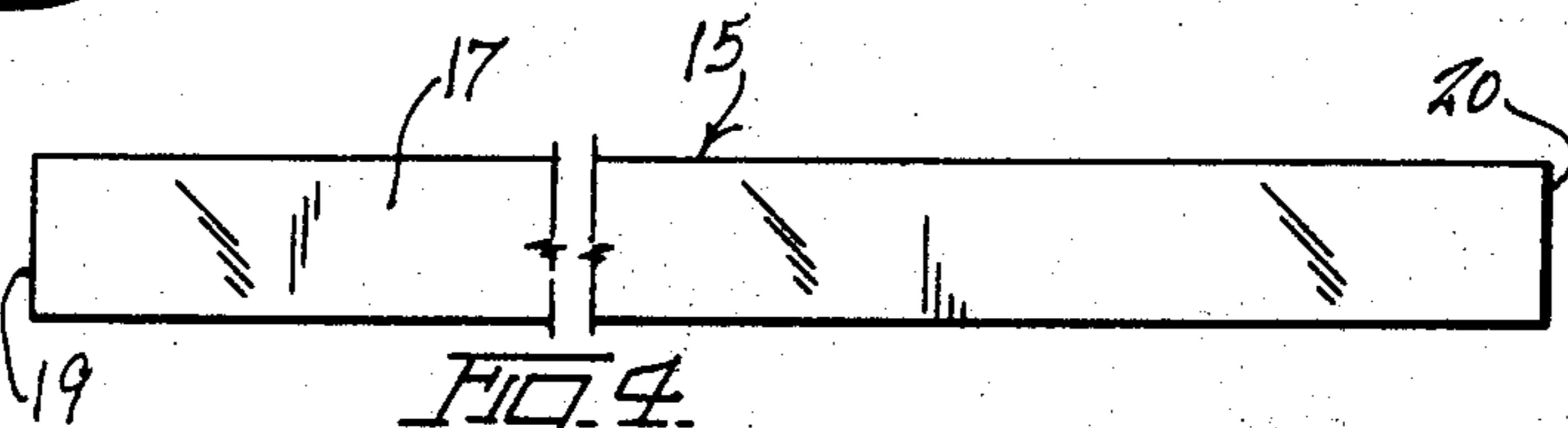


FIG. 4

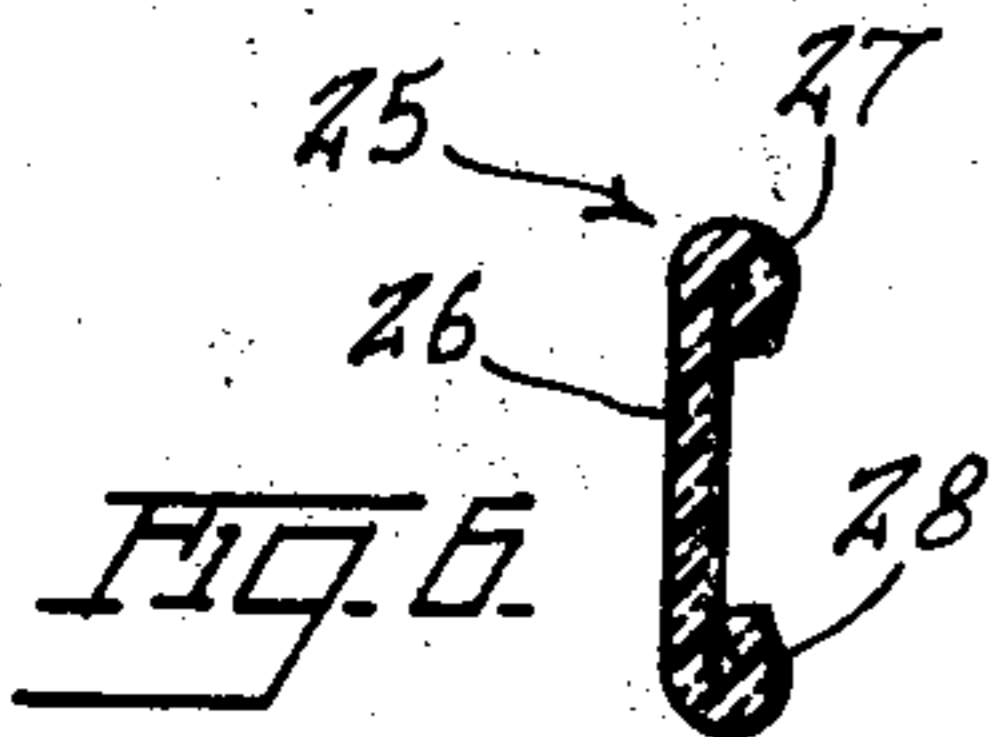


FIG. 5

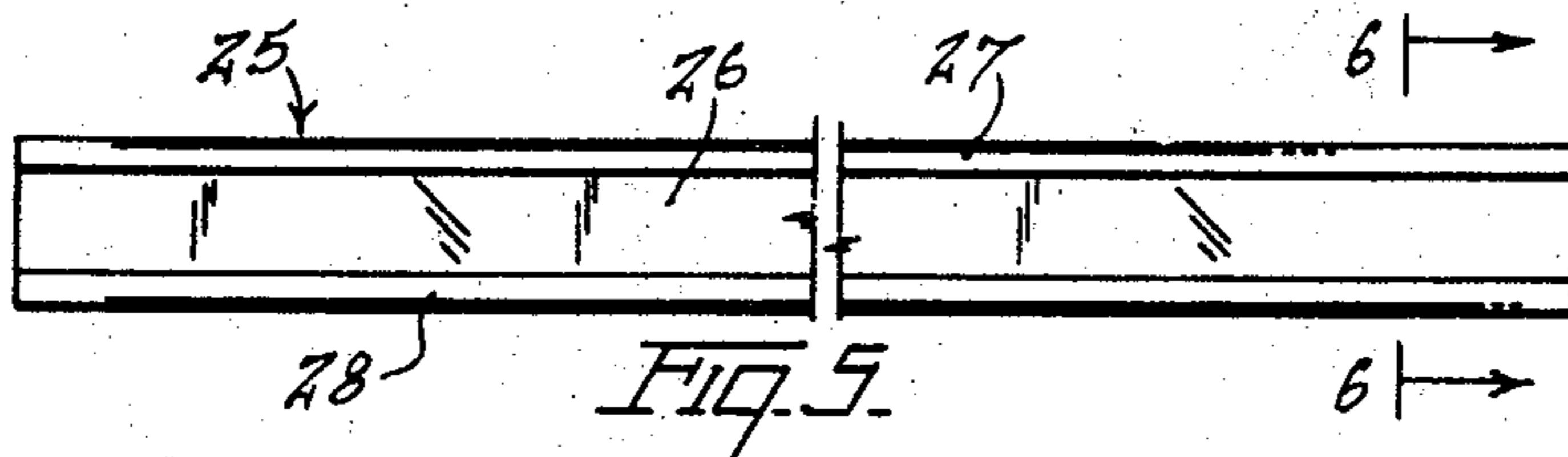


FIG. 6

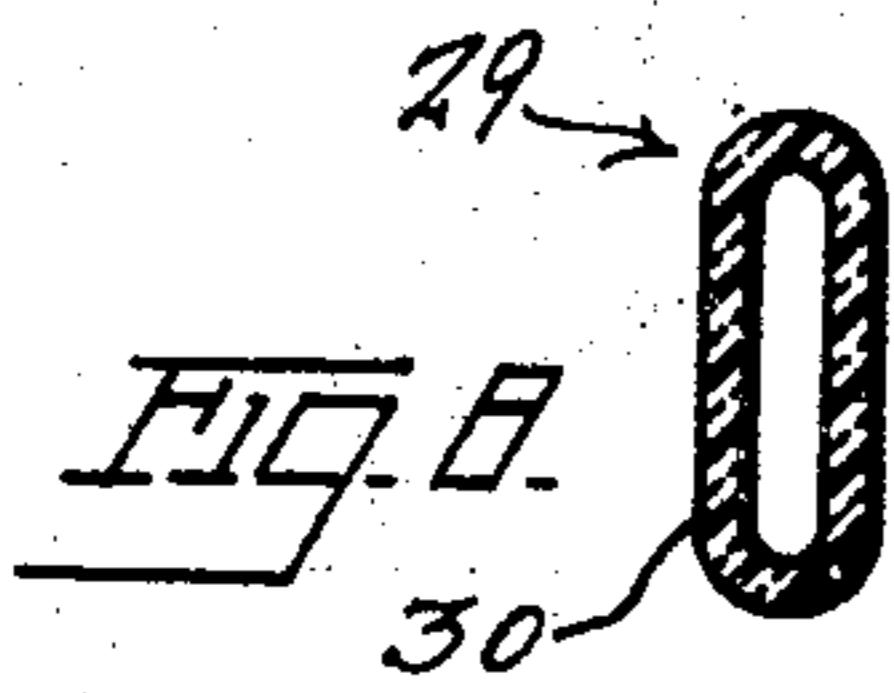


FIG. 7

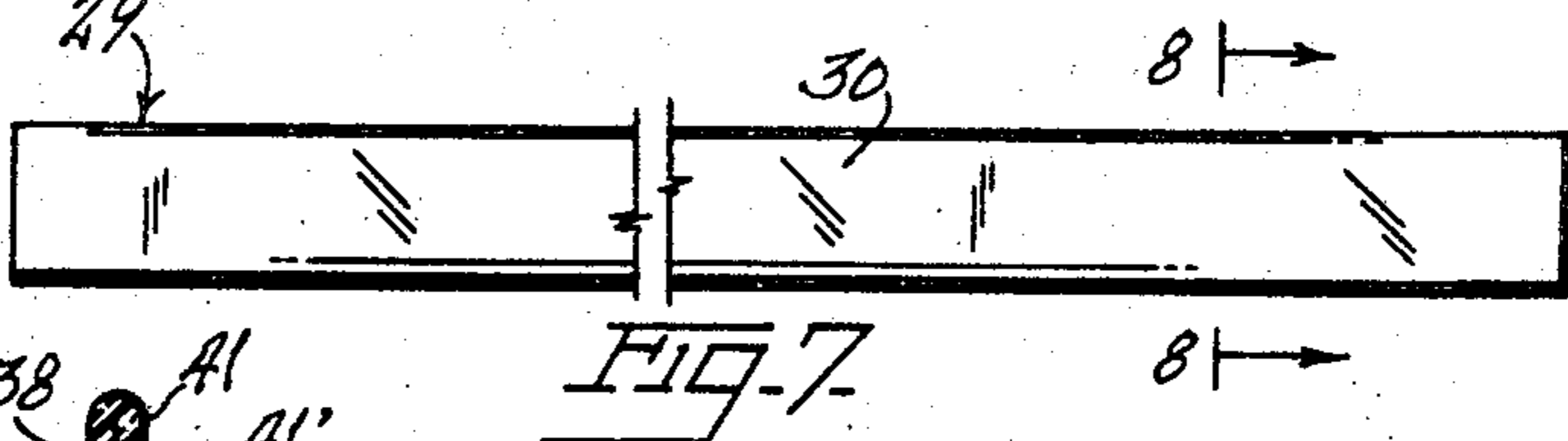


FIG. 8

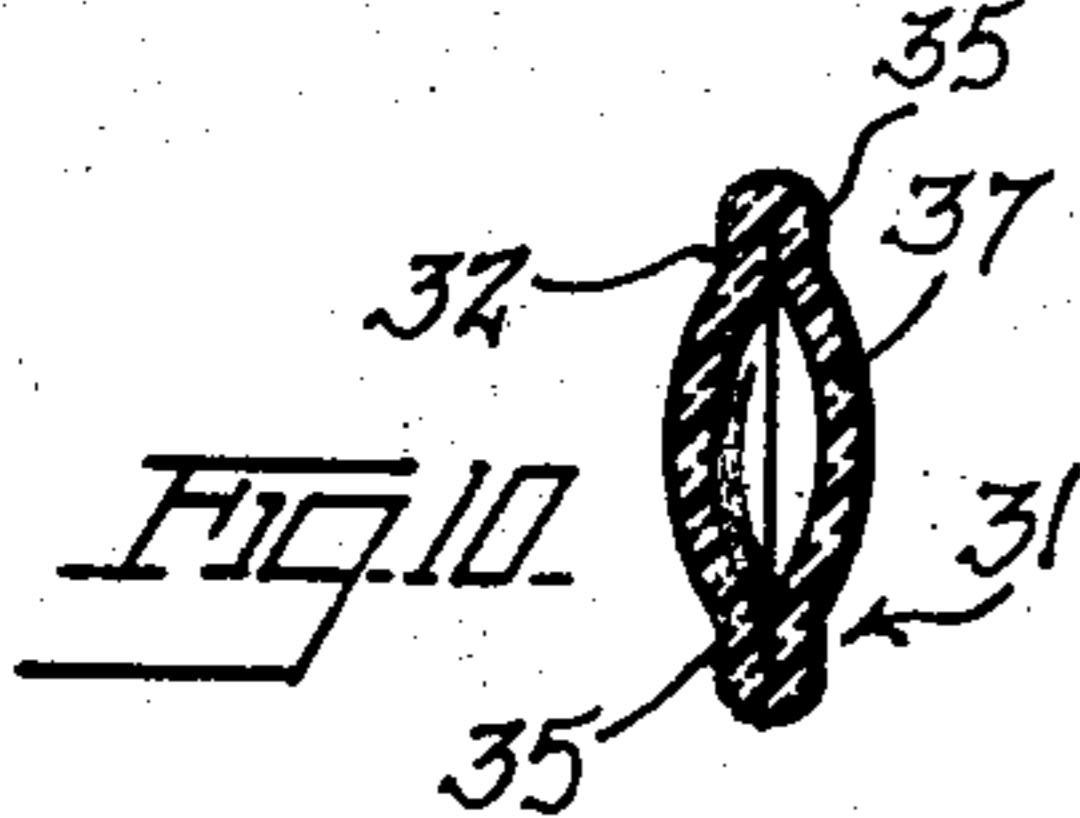


FIG. 9

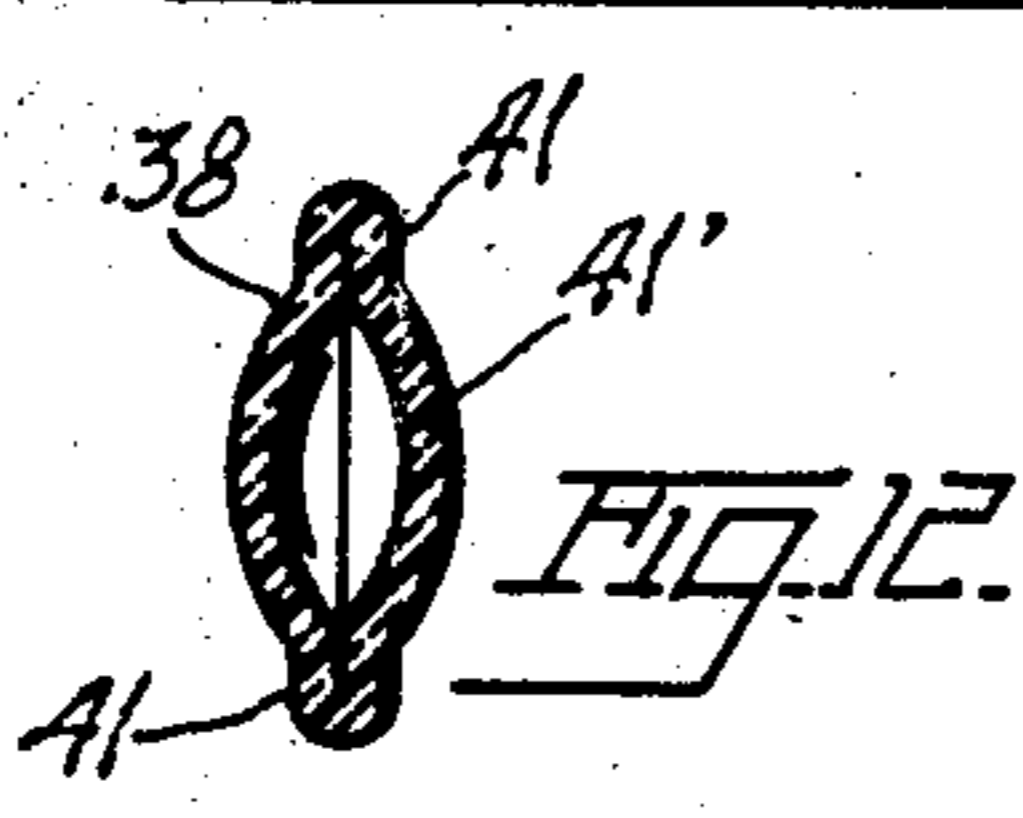


FIG. 10

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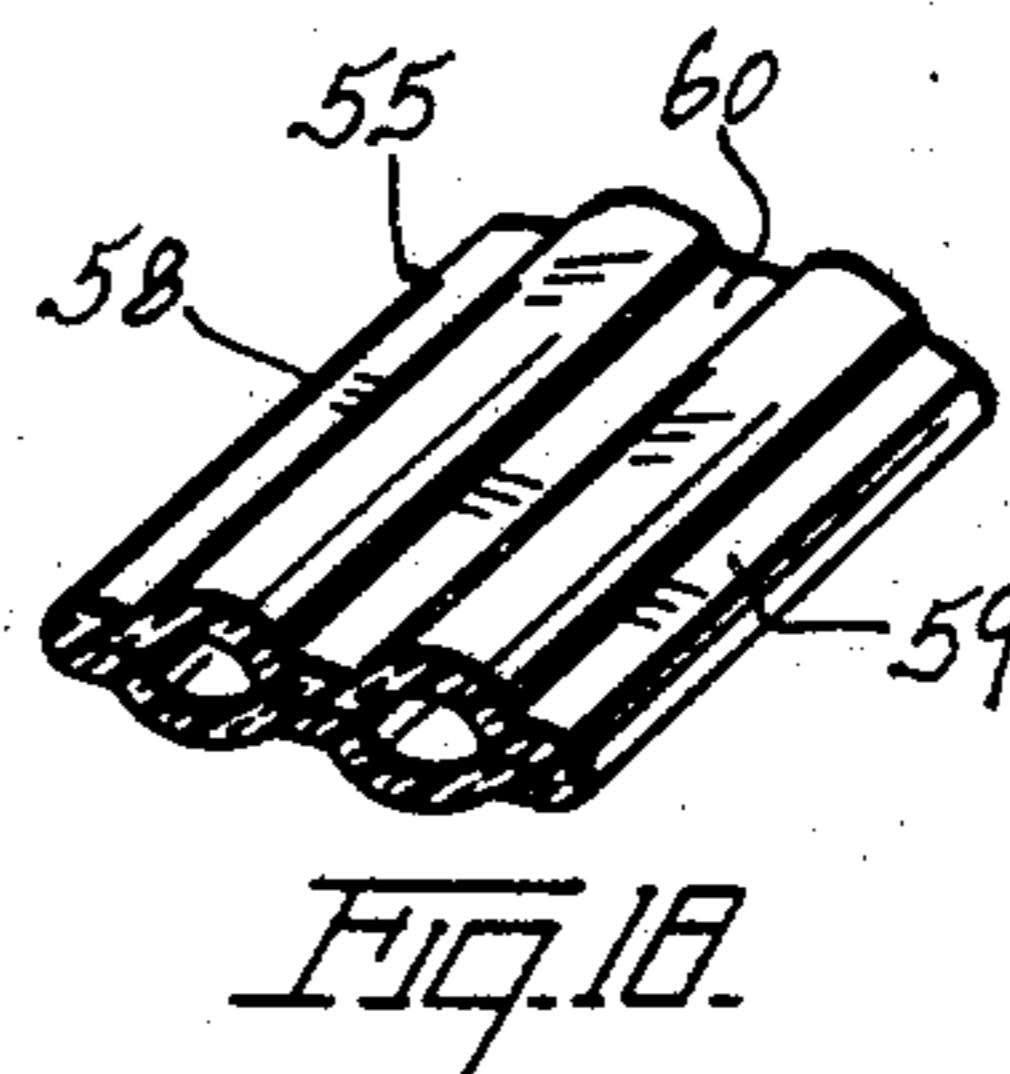
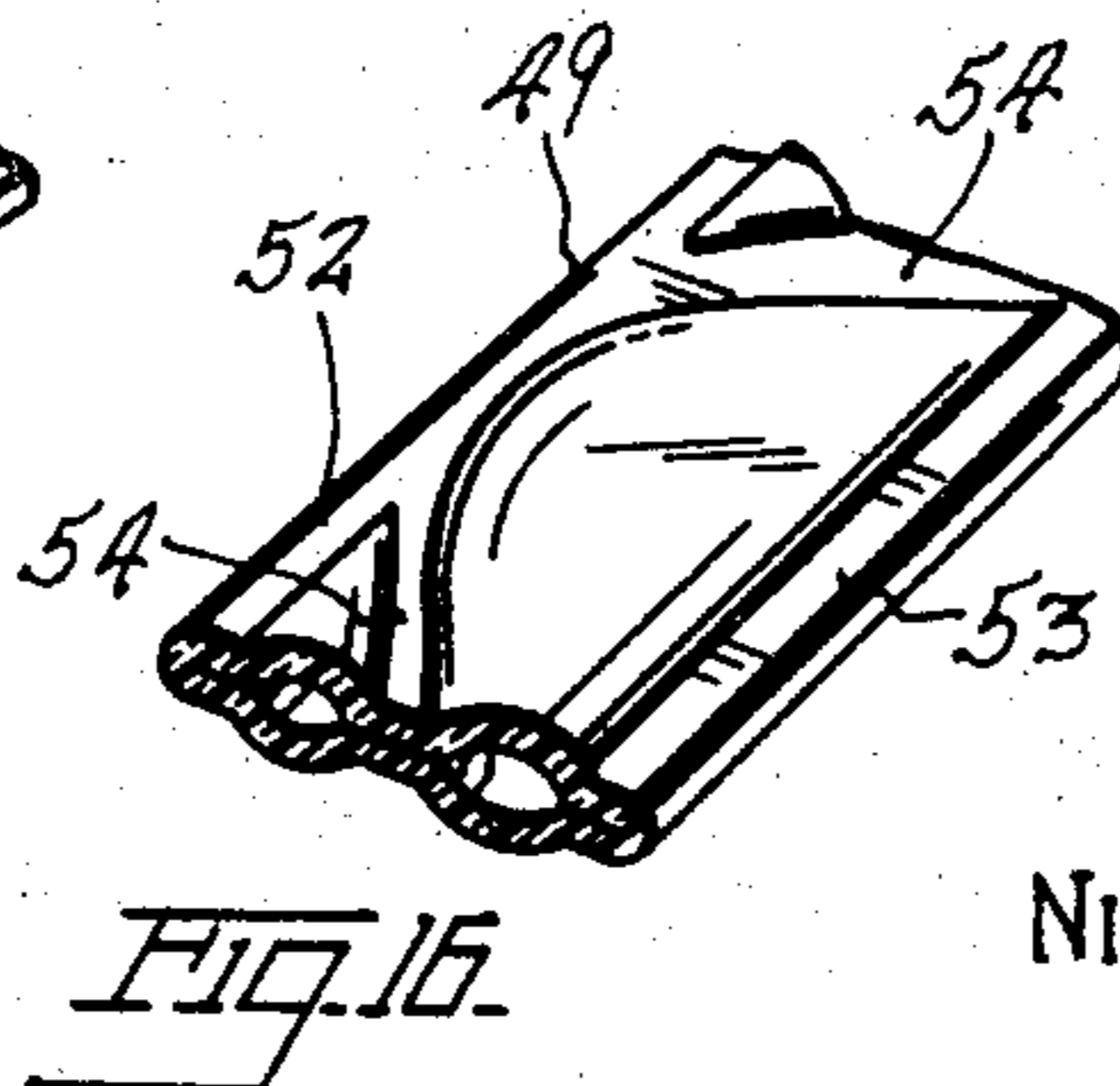
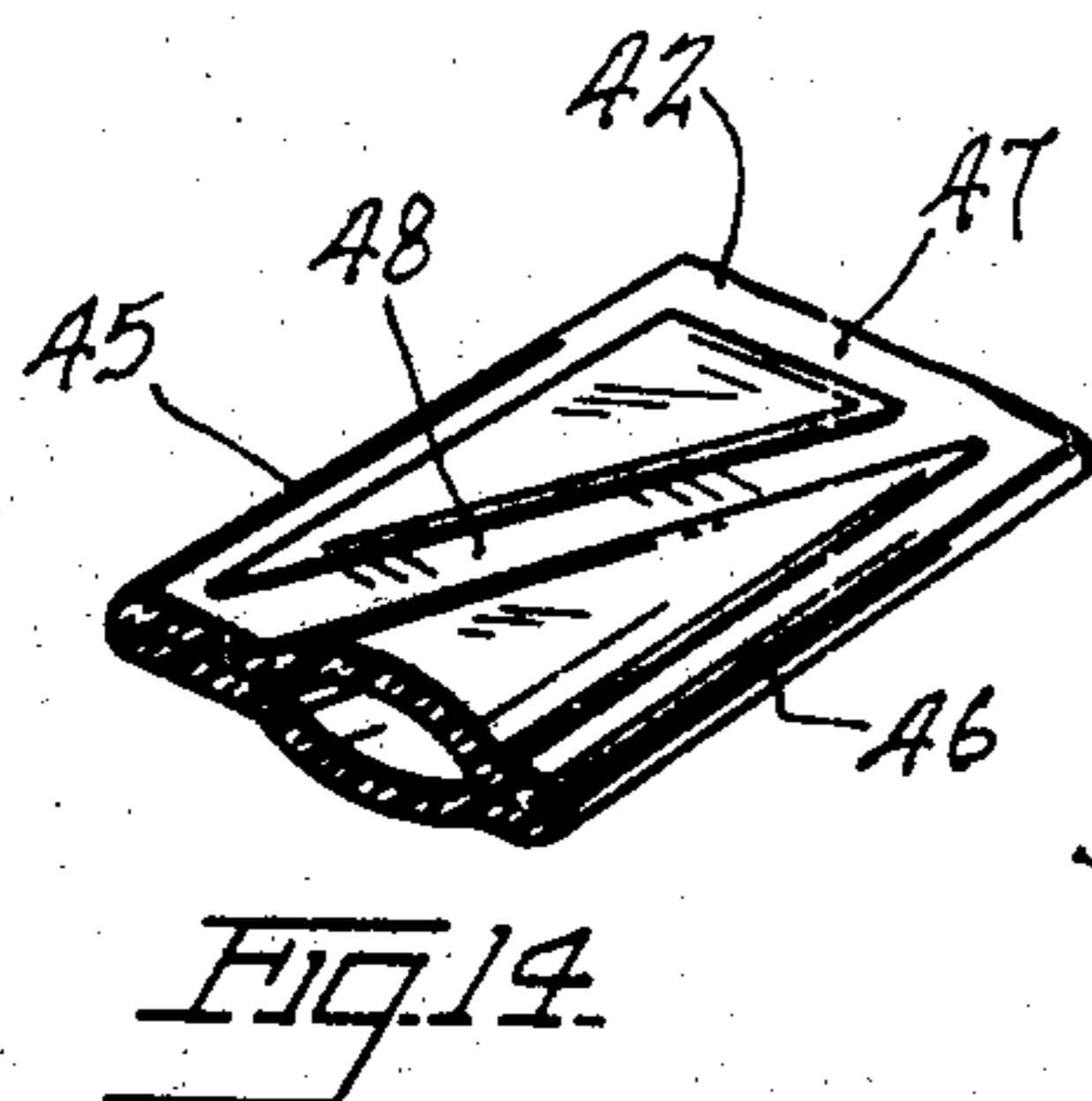
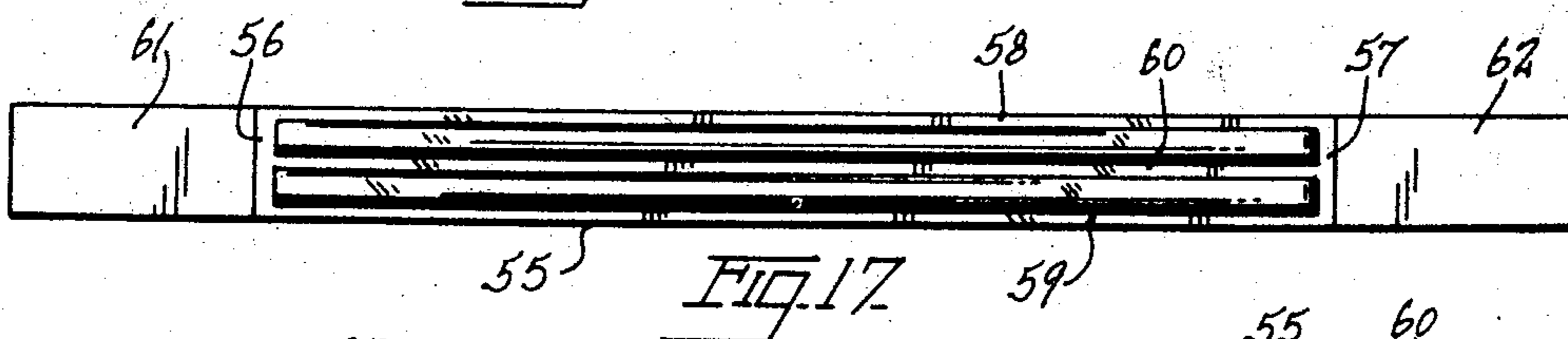
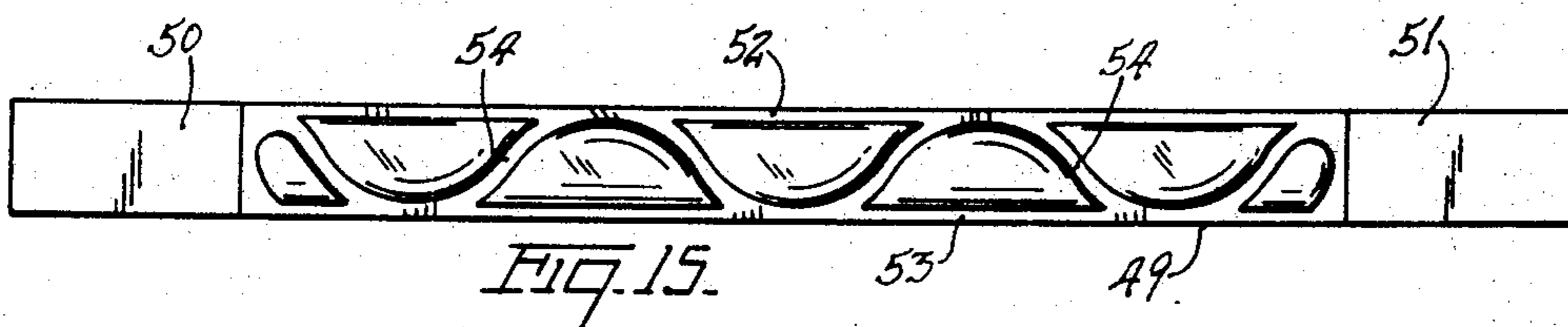
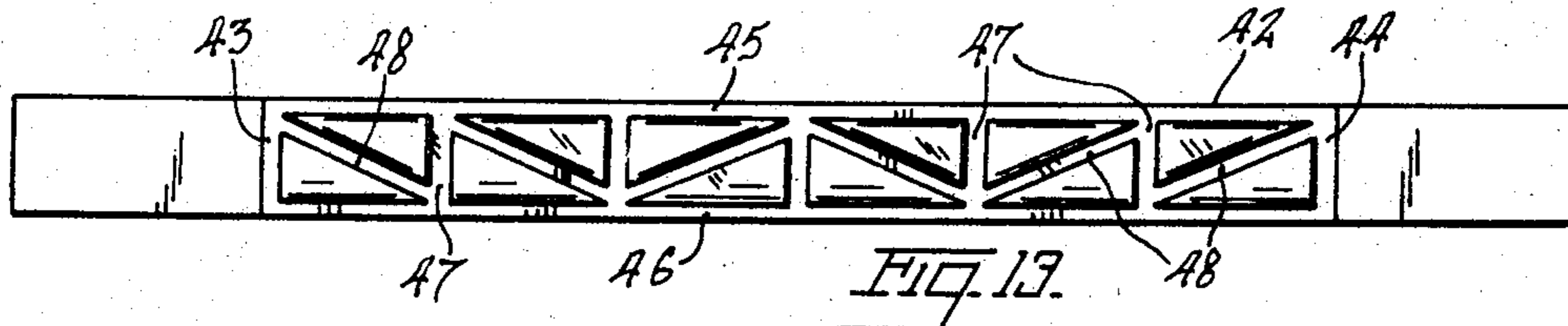
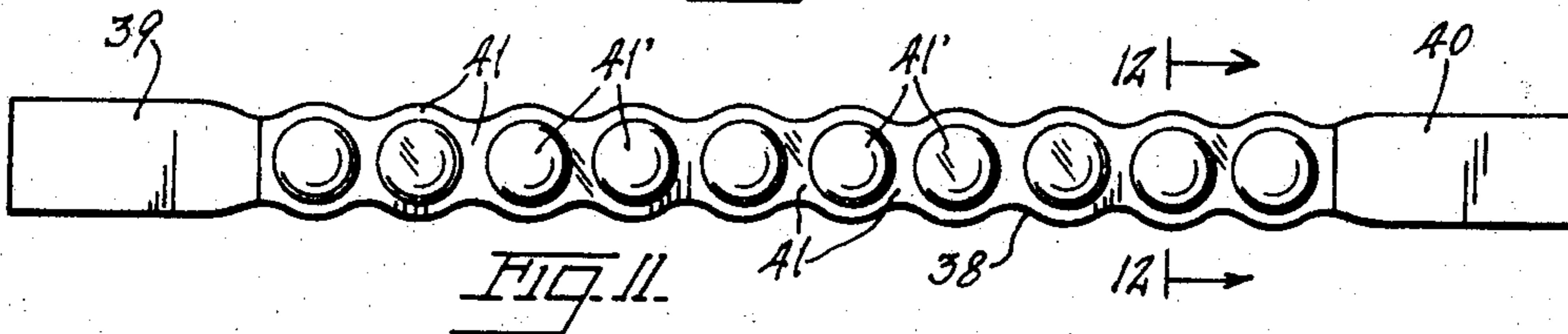
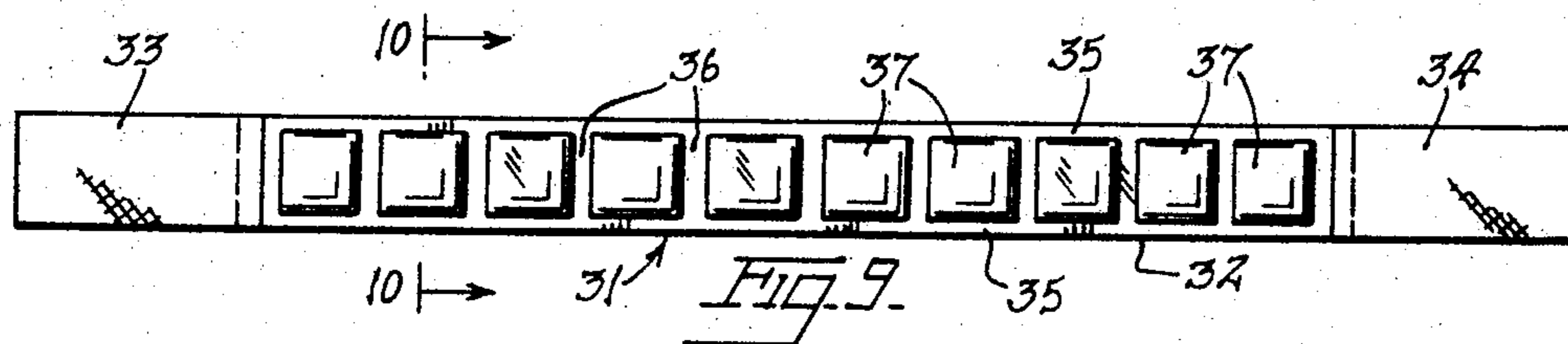
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PLASTIC SHOULDER STRAPS FOR UNDERGARMENTS

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2 Sheets-Sheet 2



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## PLASTIC SHOULDER STRAPS FOR UNDERGARMENTS

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Application July 6, 1955, Serial No. 520,322

1 Claim. (Cl. 2—323)

This invention relates to new and useful improvements in shoulder straps for brassieres and other undergarments.

More particularly, the present invention proposes the construction of an improved clear plastic whole or partial shoulder strap for brassieres and other undergarments which can be used attractively and comfortably either as a regular brassiere strap or as a strap for combination brassieres commonly called "three-way" brassieres.

As a further object the present invention proposes forming the strap with a central portion having spaced heat-sealed inflated segments or pockets to act as cushions when the strap is in place.

Still further, the present invention proposes constructing the strap with its cushion segments or pockets formed in one of a number of different ways so as to provide the best possible action for any particular application.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a pictorial view showing a brassiere with straps constructed and arranged in accordance with the present invention.

Fig. 2 is an enlarged view of one of the straps shown in Fig. 1 with parts of the brassiere and part of the strap broken away.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a plan view partly broken away of the strap shown in Figs. 1, 2 and 3.

Fig. 5 is a view similar to Fig. 4 but illustrating a modification of the present invention.

Fig. 6 is a sectional view taken on line 6—6 of Fig. 5.

Fig. 7 is a view similar to Figs. 4 and 5 but illustrating another modification of the present invention.

Fig. 8 is a sectional view taken on line 8—8 of Fig. 7.

Fig. 9 is a plan view illustrating another modification of the present invention.

Fig. 10 is a sectional view taken on line 10—10 of Fig. 9.

Fig. 11 is a view similar to Fig. 9 but illustrating a modification of the present invention.

Fig. 12 is a sectional view taken on line 12—12 of Fig. 11.

Fig. 13 is a view similar to Fig. 11 but illustrating another modification.

Fig. 14 is a fragmentary, partly sectional view of the structure shown in Fig. 13.

Fig. 15 is a view similar to Fig. 13 and Fig. 11 but illustrating still another modification.

Fig. 16 is a fragmentary, partly sectional view of the structure shown in Fig. 15.

Fig. 17 is a view similar to Figs. 15, 13 and 11 but illustrating yet another modification.

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Fig. 18 is a fragmentary, partly sectional view of the structure shown in Fig. 17.

The shoulder strap, in accordance with the first form of the present invention illustrated in Figs. 1 to 4, inclusive, is designated generally by the reference numeral 15.

Shoulder strap 15 may be made for any type of undergarment and as shown in Figs. 1 and 2 is used as the shoulder strap for a brassiere 16, which may be either of the regular type or of a combination type commonly called "three-way" because the brassiere can be worn either strapless, with shoulder straps or with a neck halter.

When used for a regular brassiere shoulder strap 15 preferably is about seventeen and three-quarters inches in length and about five-eighths of an inch in width.

When used for a combination or "three-way" brassiere, the shoulder strap 15 is preferably about twenty-five inches long and one-half an inch wide.

Strap 15 consists of a strip 17 of clear or colored heavy thermoplastic material, such as heavy gauge vinyl and is transparent and may have the usual fabric strap extensions 18 secured to each of the strip ends 19 and 20 for connecting these ends with the brassiere 16 or undergarment. Buckles or clasps 21, 22 and 23 may be used to secure the strip. As shown best in Fig. 2, the ends 19 and 20 are folded around the buckles 21 and 22, respectively, and sealed to the adjacent portions of the strip as by dielectric sealing.

Strip 17 may be made entirely of thermoplastic or it may have fabric end portions. In any event, the center portion of the strip and shoulder strap will be transparent plastic so as to hug and rest upon the shoulder of the wearer in a comfortable and inconspicuous manner. The use of vinyl or a similar thermoplastic results in a strap that does not slip off the shoulder during wear and which does not need continuously to be hidden. The strap when of transparent clear plastic is difficult to detect and when of colored transparent plastic, although more easily detected, is just as attractive to view.

The modification of the invention illustrated in Figs. 5 and 6 is characterized by the provision of a shoulder strap 25 in which a clear plastic strip 26 of heavy gauge vinyl or the like has turned over side edges 27 and 28 which are sealed to the adjacent portions of the strip as by dielectric sealing or other heat sealing.

The modification shown in Figs. 7 and 8 is characterized by the provision of a shoulder strap 29 having a flattened tubular clear plastic strip 30.

The modification of the invention illustrated in Figs. 9 and 10 is characterized by the provision of a shoulder strap 31 having a strip 32 of clear plastic material such as heavy gauge vinyl with end fabric extensions 33 and 34 secured as by stitching, heat sealing or other well known connecting means.

Preferably the fabric end extensions 33 and 34 are about five and three-quarters inches long for a regular brassiere strap and the plastic center strip 32 is about six and one-quarter inches long.

Center strip 32 is made by joining two separate pieces of vinyl or other like thermoplastic at the ends or by using a tubular piece of such plastic in the same width as the desired strap width. The center strip is inflated after it is in the shape of a flexible collapsible thin wall tube with sealed ends. The center strip has spaced sealed places 35 extending along both edges of the strip and cross seal places 36 at spaced intervals across the strip to provide a plurality of inflated pockets or cushion segments 37. These air cushions 37 allow permanent pillow action and shape.

The modification of the invention illustrated in Figs. 11 and 12 is characterized by a clear plastic tubular strip

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38 inflated and having sealed ends 39 and 40. Sealed annular places 41 are interconnected to provide a plurality of disc-shaped inflated cushion segments 41'.

The modification of the present invention illustrated in Figs. 13 and 14 is characterized by the provision of a clear plastic tubular strip 42 inflated and having sealed ends 43 and 44 and sealed side edges 45 and 46. Spaced cross seals 47 are provided at intervals and diagonal seals 48 are provided diagonally between the sides and cross seals.

The modification of the invention illustrated in Figs. 15 and 16 is characterized by the provision of a clear plastic tubular strip 49 inflated and having sealed ends 50 and 51 with sealed sides 52 and 53. In addition a seal 54 is provided spiralled along the strip between the sealed sides and ends.

The modification of the invention illustrated in Figs. 17 and 18 is characterized by the provision of a clear plastic tubular strip 55 which is inflated and has sealed ends 56 and 57 and side seals 58 and 59. In addition a center seal 60 extends down the center of the strip between the side and end seals. Fabric or plastic end extensions 61 and 62 are connected to the sealed ends of the strip 55.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as

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new, and desire to secure by United States Letters Patent is:

A clear plastic shoulder strap for brassieres and other undergarments comprising a strip of heavy gauge thermo-plastic material having one fabric end portion adapted to be connected with one portion of an undergarment and another fabric end portion adapted to be connected with another portion of the same undergarment, and a transparent center portion adapted to extend over the shoulder of the garment wearer, said strip being a flexible collapsible flat thin walled tube with sealed ends, and having a pneumatically inflated central portion with spaced sealed places dividing the inflated central portion into inflated air-cushioned segments, said sealed places being along each side of the strip and at spaced intervals across the strip.

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