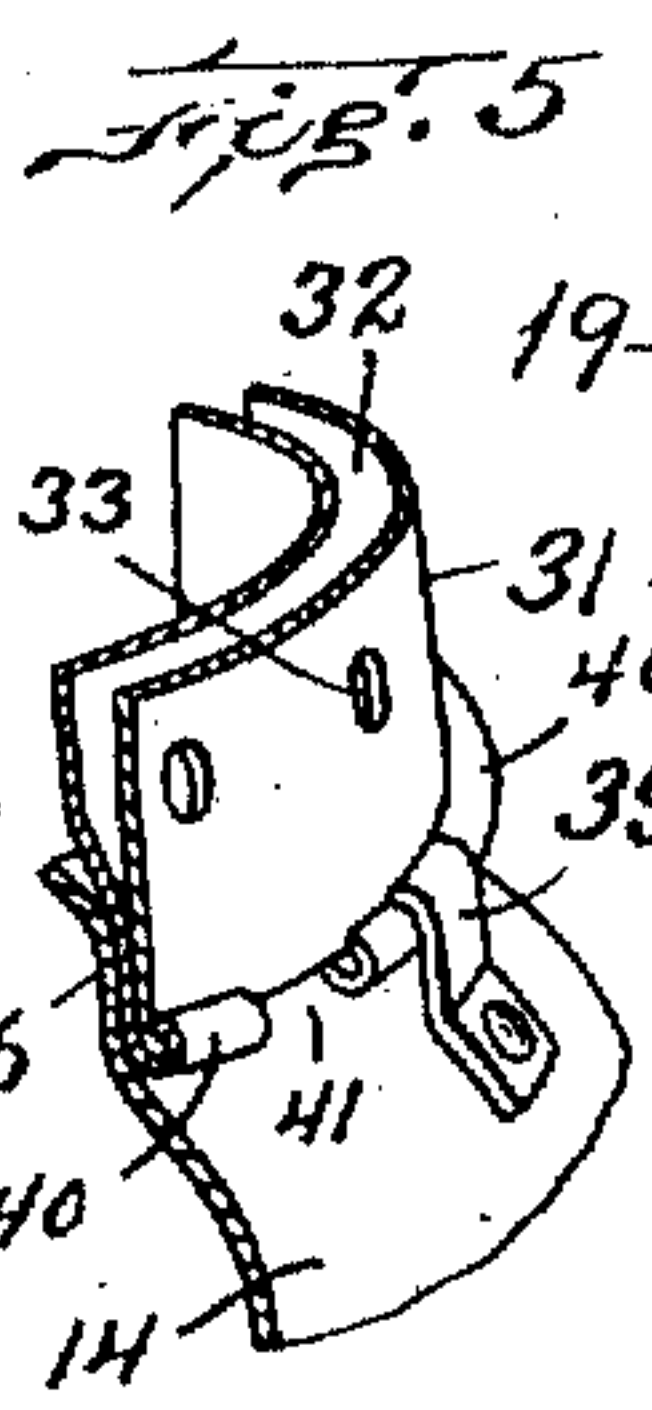
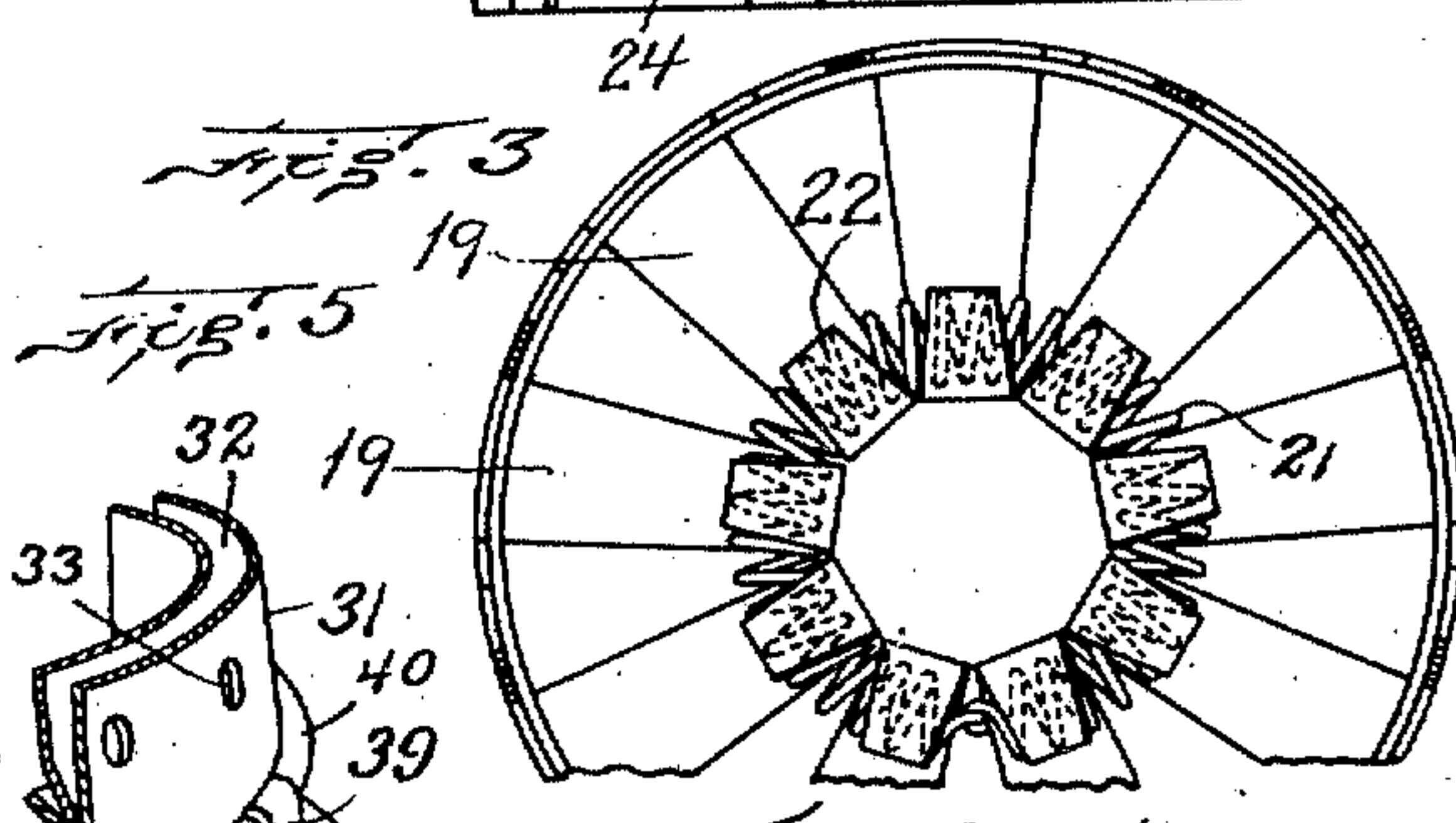
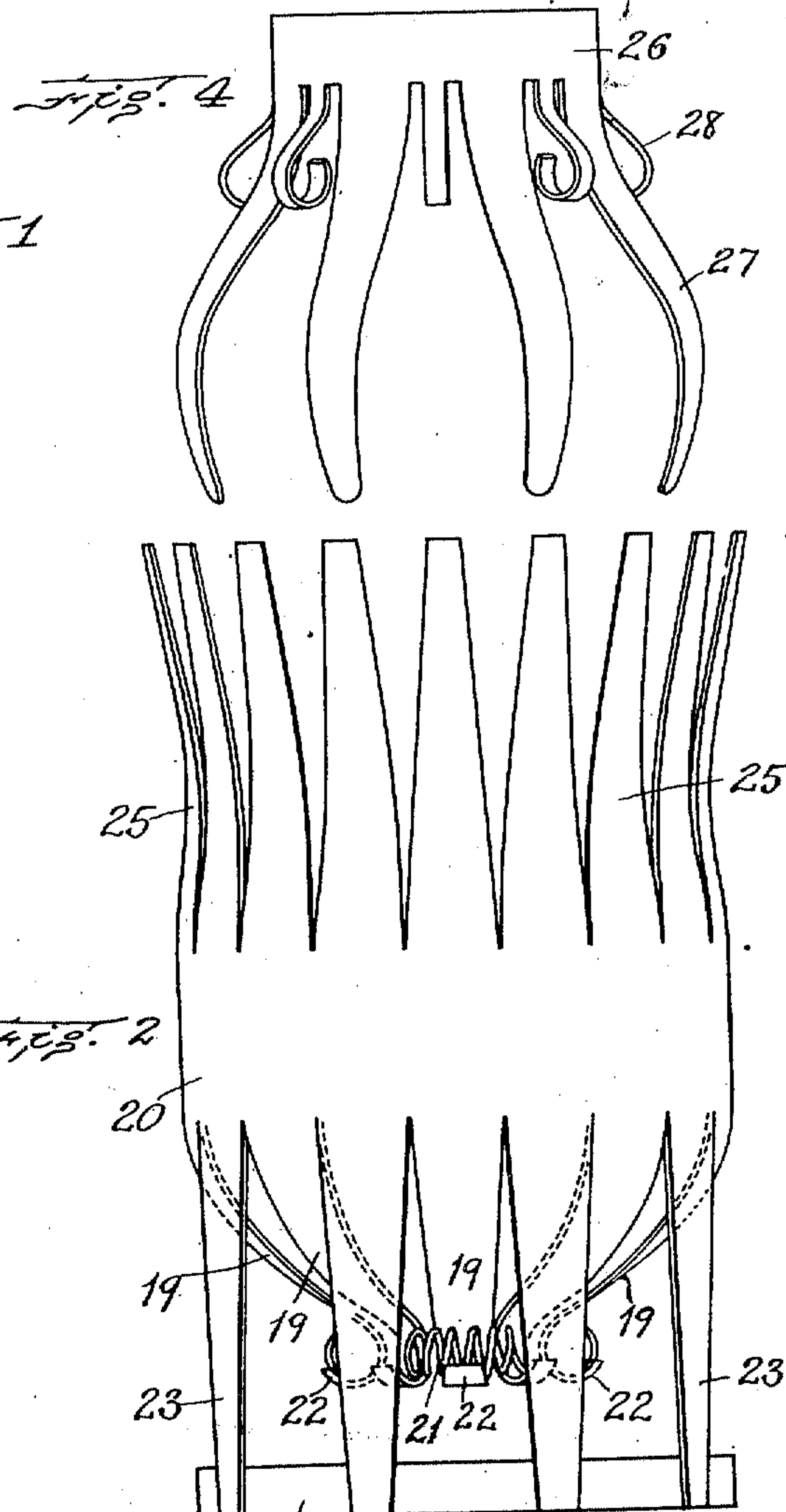
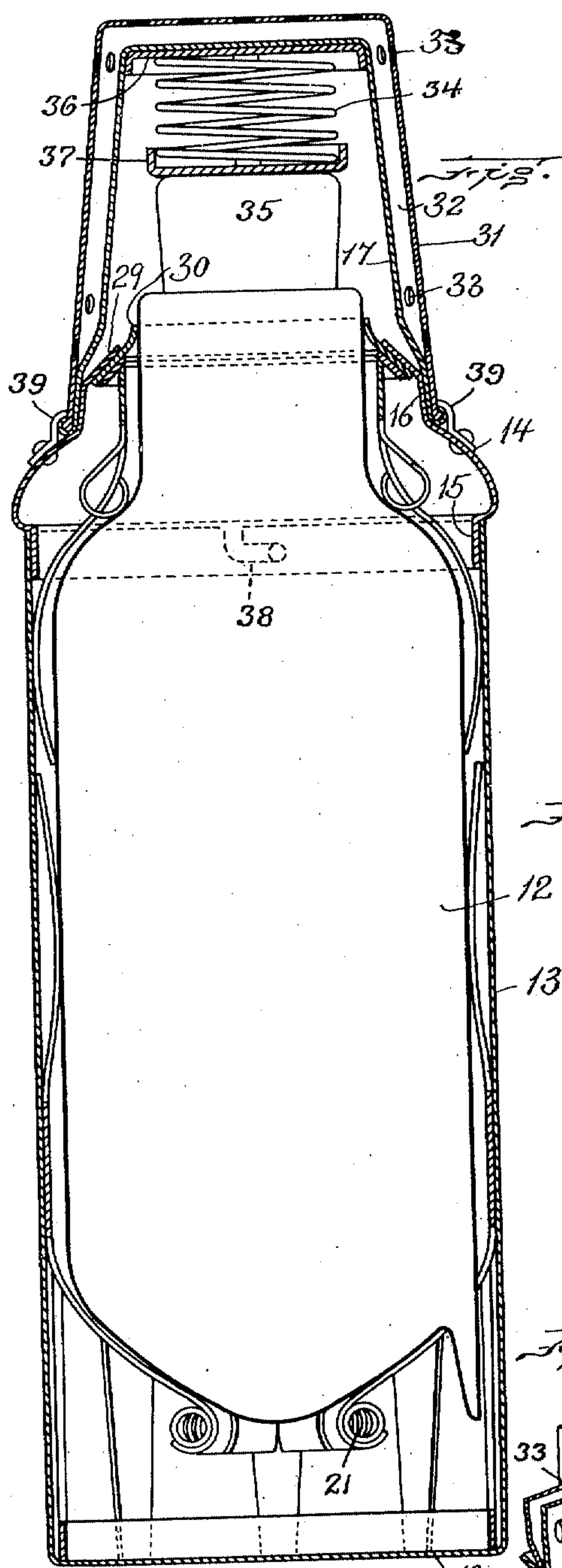


E. C. BALDWIN.  
BOTTLE CASE OR CARRIER.  
APPLICATION FILED FEB. 18, 1909.

985,320.

Patented Feb. 28, 1911.



Witnesses:  
F. R. Roulestone  
P. A. Pizzetta

Inventor  
Edward C. Baldwin  
by *Wm. L. Lundy & May*  
Attorneys



# UNITED STATES PATENT OFFICE.

EDWARD C. BALDWIN, OF BOSTON, MASSACHUSETTS.

## BOTTLE CASE OR CARRIER.

985,320.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed February 18, 1909. Serial No. 478,647.

### *To all whom it may concern:*

Be it known that I, EDWARD C. BALDWIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Bottle Cases or Carriers, of which the following is a specification.

This invention has for its object to provide a case or carrier for double-walled bottles, the inner and outer walls of which are separated by a space from which air is exhausted.

The particular object of the invention is to provide a case or carrier for bottles of this description, adapted to yieldingly support the bottle in all directions, and absorb shocks and jars tending to break the bottle, the walls of which are fragile and easily broken, owing to the fact that they are necessarily quite thin, and that their surfaces, forming the exterior and interior of the bottle, are subjected to unbalanced atmospheric pressure.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a longitudinal section of a bottle casing embodying my invention, a bottle being represented in side elevation within the case. Fig. 2 represents a side elevation of the part hereinafter referred to as the spider forming the seat for the inner end of the bottle. Fig. 3 represents an end view of the parts shown in Fig. 2. Fig. 4 represents a side view of the part hereinafter referred to as the outer annular cushion. Fig. 5 represents a fragmentary perspective view showing portions of the case and cap.

The same reference characters indicate the same parts in all the figures.

In Fig. 1, I have represented a case adapted to receive a so-called vacuum bottle 12, the case being preferably of sheet metal, and so formed that its walls are separated from all parts of the bottle, when the latter is in place, by a space which contains yielding supports for the inner end portion, the body portion, and the shoulder portion of the bottle. The case, as here shown, includes a main or body section 13, and a neck section 14, the latter being detachably engaged with the mouth of the body section by means of a flange 15 having a close frictional fit on

the interior of the outer end of the body section. The neck section 14 includes a seat 16 for a closing cap or cover 17 which, as hereinafter described, is preferably formed for use as a drinking cup. The case, which has a closed bottom or inner end 18, is provided at its inner end portion with a normally contracted expansible seat for the inner end of the bottle, said seat being supported above the bottom of the case and being shaped to conform to the general contour of the inner end of the bottle, which is ordinarily convex or crowning, as indicated in Fig. 1, the seat being of such construction that it is adapted to be expanded by a longitudinal inward movement of the bottle, and thus yieldingly resist such movement, as well as any lateral movements of the inner end portion of the bottle toward the wall of the case. In this embodiment of the invention, the said seat is composed of a series of inwardly curved resilient arms 19, forming a part of a sheet metal shell or spider, represented as a whole in Fig. 2, said spider having a body portion 20 adapted to closely fit the interior of the case. Said body portion may be rigidly and permanently secured to the case in such position as to hold the lower ends of the arms 19 above the bottom of the case, or said body and the spider, as a whole, may be removably inserted in the case, the spider being provided with a support adapted to bear on the bottom 18 of the case and hold the arms 19 above said bottom.

The arms 19 project from the body 20 toward the inner end of the case and are inclined inwardly, so that they collectively form a tapered contracted throat or seat on which the inner end of the bottle is adapted to bear. The resilience of the arms enables them to yield outwardly to pressure exerted on them by the bottle, whether such pressure be lengthwise or crosswise of the bottle.

While the resilience of the arms 19 may be relied upon to afford the desired yielding support for the inner end of the bottle, I prefer to supplement the resilience of the arms by an annular reinforcing spring 21, which as here shown, is of helical form, and surrounds the inner end portions of the arms, and is engaged therewith by hooks 22 formed by bending said inner ends outwardly.

When the described seat forms a part of



a spider which is detachably engaged with the case, I provide the spider with supporting means adapted to engage the bottom of the case, said means, as here shown, including a series of legs 23 which are integral with the body 20, and alternate with the spring arms 19, and are adapted to bear on the bottom of the case. The inner ends of said legs may be laterally supported by a ring or band 24 affixed thereto.

An annular cushion for the body portion of the bottle is provided, said cushion, as here shown, being composed of a series of curved spring arms 25 projecting outwardly from the body 20, and integral therewith, said arms being adapted to bear simultaneously on the body of the bottle, and on the interior of the case, as shown in Fig. 1. It will be seen that the curvature of the arms 25 enables the portions of the arms which bear on the bottle to yield laterally, and thus afford a yielding support for the body of the bottle.

An annular outer cushion is provided for the outer portion of the bottle body, and for the shoulder portion thereof between the body and neck of the bottle. Said outer cushion, which is represented in Fig. 4, is here shown as composed of a sheet metal neck portion 26 formed to surround the bottle neck, and of considerably greater diameter than the latter, curved primary spring arms 27 projecting inwardly from the neck, and integral therewith, said arms being adapted to bear simultaneously on the outer portion of the bottle body, and on the outer portion of the interior of the case, as shown in Fig. 1, and a series of secondary spring arms 28 integral with the neck 26, and adapted to bear on the shoulder portion of the bottle, and yieldingly support the latter. The said outer cushion is detachable from the case, so that it may be removed with, or prior to the removal of the bottle from the case. The neck portion of the outer cushion projects from the body section 13 of the case into the neck section, so that it is exposed by the removal of the neck section.

The neck section 14 of the case is provided with an inwardly projecting flange 29 to which is attached an inwardly projecting flexible packing ring or washer 30, preferably of rubber, adapted to bear yieldingly on the neck of the bottle and form a liquid tight joint around the neck, so that liquid flowing over the end of the neck cannot find its way into the interior of the case. The flange 29 and packing ring 30 are preferably inclined, as shown in Fig. 1, so that it guides liquid outwardly and downwardly from the bottle neck, the flange being of frusto-conical form, and having its base attached to the flange 29.

The cap 17, which, as above stated, is preferably formed to serve as a drinking cup, has

an outer wall or casing 31 which is separated from the inner wall or body of the cup by an air space 32, said outer wall having orifices 33 in its inner and outer end portions which permit a circulation of air to keep the outer wall or casing cool when a hot liquid is contained in the body portion of the cup.

34 represents a spring which is seated on the interior of the cap 17 and is adapted to bear yieldingly on a stopper 35 of the bottle to hold said stopper in place and prevent it from being dislodged by steam pressure within the bottle, the spring yielding to extreme pressure until the pressure is relieved, and then returning the stopper to its seat. As here shown, the spring is attached at one end to a plate 36 adapted to bear on the interior of the cap, the other end being attached to a plate 37 and adapted to bear on the outer end of the stopper. To prevent the displacement of the cap with the stopper by steam pressure in the bottle, I provide means for interlocking the neck section 14 with the body section 13, said means comprising a suitable number of bayonet joints 38, shown by dotted lines in Fig. 1, and ears 39 attached to the neck section 14 and adapted to engage the bead or flange 40 at the mouth of the cap, said bead being interrupted by recesses 41 through which the ears 39 are adapted to pass, so that the cap may be interlocked with the neck section by applying it when the recesses 41 are in alinement with the ears 39, and then partially rotating the cap to separate the recesses from the ears as indicated in Fig. 5. The walls 17 and 31 of the cap meet at the outer end or mouth of the cap and form a mouth of ample strength to support the strain on the mouth due to the engagement of the ears 39 therewith.

The term "inner end" used in connection with the bottle, means, in the case of a so-called vacuum bottle, the inner end of the outer wall or shell of the bottle.

It will be seen that the various resilient attachments or appliances contained within the case collectively constitute a resilient support adapted to yieldingly hold a bottle in suspension within the case. In the present embodiment of the invention, the resilient support forms a cushion for the bottom, body, shoulder, and neck of the bottle, and includes a plurality of resilient bottle rests arranged to bear yieldingly on a bottle at a plurality of points, and holds all parts of the bottle out of contact with the case. The rests are preferably arranged in a plurality of groups, with provisions for permitting both a limited endwise movement and a limited sidewise or lateral movement of the bottle relatively to the case without contact therewith, each group bearing on a different portion of the bottle. The removability of the groups of rests from the case enables the parts of the case to be readily separated,



and the groups of rests which engage the outer portions of the bottle to be removed from the body of the case. Another advantage in my improved device is that when the

5 case is opened, the bottle and its protecting shell may be entirely removed and the bottle can be safely either stood up or laid upon its side without risk of its becoming broken. This is because the shell is formed with re-

10 siliant fingers which extend in opposite directions from its longitudinal center, each group of fingers presenting at its outer end a cushion which possesses a greater diameter than the intermediate or central diameter.

15 As shown in Fig. 2, the shell when removed presents the tips of the arms 25 as a cushion having a considerably greater diameter than the ring or band 24, so that a straight line

20 from the outer surface of the band 24 to the outer end of either arm 25 would not touch the middle portion of the shell. Therefore the shell, and a bottle inclosed by it, may be laid upon its side on any table or other support without risk of the bottle being broken.

25 Of course the shell and a bottle inclosed within it can be stood upon one end, the tips of the legs 23 or the edge of the band 24 resting upon a table or other support. When so stood upright, the bottle itself is support-

30 ed against downward movement in the shell by the contracted expansible bottle-seat provided by the spring arms 19 and the reinforcing spring 2.

I claim:—

35 1. A bottle case having at its inner portion a normally contracted expansible bottle seat supported above the bottom of the case and formed to limit endwise movement of a bottle in one direction.

40 2. A bottle case having at its inner end portion a series of resilient inwardly inclined arms constituting a normally contracted expansible bottle seat formed to limit endwise movement of a bottle in one

45 direction.

3. A bottle case having at its inner end portion a series of resilient inwardly inclined arms constituting a normally contracted expansible bottle seat formed to

50 limit endwise movement of a bottle in one direction, and an annular reinforcing spring engaged with and connecting the inner ends of said arms and yieldingly confining them in their movement-limiting relation.

55 4. A bottle case having at its inner portion a normally contracted expansible bottle seat supported above the bottom of the case, and formed to limit endwise movement of a bottle in one direction, and an elastic annu-

60 lar cushion located between the inner and outer ends of the case and adapted to bear simultaneously on the case and on the body of the bottle.

5. A bottle case having at its inner por-

65 tion a normally contracted expansible bottle

seat supported above the bottom of the case, and a series of outwardly projecting resilient curved arms located between the inner and outer ends of the case and adapted to bear simultaneously on the bottle and the inte-

70 rior of the case, said arms collectively constituting an annular cushion for the body of the bottle.

6. A bottle case having at its inner portion a normally contracted expansible bottle

75 seat supported above the bottom of the case and having at its outer portion an annular elastic cushioning means adapted to bear simultaneously on the body and shoulder of the bottle and on the interior of the case, 80 said cushioning means being removable from the case.

7. A bottle carrier comprising a case, and a spider having a body portion fitting the interior of the case, a normally contracted

85 expansible bottle seat, projecting inwardly from the body portion, and formed to limit endwise movement of a bottle in one direction, and a support projecting below said seat and adapted to bear on the bottom of

90 the case, and hold the bottle seat above the said bottom.

8. A bottle carrier comprising a case, a spider having a body portion formed to

95 closely fit the interior of the case, resilient inwardly inclined arms projecting from the inner end of the body portion toward the bottom of the case, said arms constituting a normally contracted expansible seat formed to support the inner end of a bottle, and limit

100 the endwise movement thereof in one direction, and means for supporting said seat above the bottom of the case.

9. A bottle carrier comprising a case, a spider having a body portion formed to

105 closely fit the interior of the case, resilient inwardly inclined arms projecting from the inner end of the body portion toward the bottom of the case, said arms constituting a normally contracted expansible seat formed

110 to support the inner end of a bottle, and limit the endwise movement thereof in one direction, an annular reinforcing spring connecting the inner ends of said arms, and means for supporting said seat and spring

115 above the bottom of the case.

10. A bottle carrier comprising a case, a spider having a body portion formed to

120 closely fit the interior of the case, resilient inwardly inclined arms projecting from the inner end of the body portion toward the bottom of the case, said arms constituting a normally contracted expansible seat for the inner end of a bottle, an annular reinforcing spring connecting the inner ends of said

125 arms, and means for supporting said seat and spring above the bottom of the case, the arms being provided with hooks engaged with the spring.

11. A bottle carrier comprising a case, a

130



- spider having a body portion formed to closely fit the interior of the case, resilient inwardly inclined arms projecting from the inner end of the body portion toward the bottom of the case, said arms constituting a normally contracted expansible seat for the inner end of a bottle, and legs projecting from the inner end of the body and adapted to bear on the bottom of the case.
12. A bottle carrier comprising a case, a spider having a body portion formed to closely fit the interior of the case, resilient inwardly inclined arms projecting from the inner end of the body portion toward the bottom of the case, said arms constituting a normally contracted expansible seat for the inner end of a bottle, legs projecting from the inner end of the body, and a band attached to the inner ends of the legs, said legs and band constituting a support adapted to bear on the bottom of the case.
13. A bottle carrier comprising a case, a sheet metal spider having a body portion closely fitting the interior of the case, inwardly inclined resilient arms integral with the body portion and projecting inwardly therefrom toward the bottom of the case, said arms constituting a seat for the inner end of a bottle, and legs integral with the body portion and alternating with the said arms and adapted to support the seat above the bottom of the case.
14. A bottle carrier comprising a case, a spider having a body portion closely fitting the interior of the case and having at its inner portion a normally contracted expansible bottle seat, and a support adapted to hold the seat above the bottom of the case, and at its outer portion an annular elastic cushion adapted to bear simultaneously on the body of the bottle and the case.
15. A bottle carrier comprising a case, a spider having a body portion closely fitting the interior of the case and having at its inner portion a normally contracted expansible bottle seat, and a support adapted to hold the seat above the bottom of the case, and at its outer portion a series of outwardly projecting resilient curved arms adapted to bear simultaneously on the body of the bottle and the interior of the case, said arms collectively constituting an annular cushion for the body of the bottle.
16. A bottle carrier comprising a case, a sheet metal spider having a body portion closely fitting the interior of the case, inwardly inclined resilient arms integral with the body portion and projecting inwardly therefrom toward the bottom of the case, said arms constituting a seat for the inner end of a bottle, legs integral with the body portion and alternating with the said arms and adapted to support the seat above the bottom of the case, and a series of outwardly projecting curved resilient arms integral with the body and adapted to bear simultaneously on the body of the bottle and the interior of the case.
17. A bottle carrier comprising a case having means at its inner portion for yieldingly supporting the inner portion of a bottle, and an annular outer cushion composed of a neck adapted to surround the neck of the bottle, and curved spring arms projecting inwardly from the neck and adapted to bear simultaneously on the body of the bottle and the interior of the case.
18. A bottle carrier comprising a case having means at its inner portion for yieldingly supporting the inner portion of a bottle and an annular outer cushion composed of a neck adapted to surround the neck of the bottle, curved spring arms projecting inwardly from the neck and adapted to bear simultaneously on the body of the bottle and the interior of the case, and secondary spring arms projecting inwardly from the neck and adapted to bear on the shoulder portion of the bottle.
19. A bottle case comprising a body section having means for yieldingly supporting a bottle, and a neck section detachably engaged with the body section and provided with a flexible packing ring of frusto-conical form engaged at its base with the neck section and inclined inwardly and upwardly therefrom to the neck of the bottle and adapted to exclude liquid from the interior of the case.
20. A bottle-protecting shell having resilient arms extending in opposite directions from its longitudinal center and presenting resilient end cushions of greater diameter than the central portion, whereby said shell may protect an inclosed bottle either when in a case or removed therefrom.
21. A bottle-protecting shell having resilient arms extending in opposite directions from its longitudinal center and presenting resilient end cushions of greater diameter than the central portion, whereby said shell may protect an inclosed bottle either when in a case or removed therefrom, the said shell having also a normally contracted expansible bottle-seat adapted to prevent the bottle from moving downwardly in the shell when the latter is stood upright.
22. A bottle case comprising a body section having means for yieldingly supporting a bottle, a neck section having a cap seat and removably connected with the body section, a closing cap adapted to engage said seat, and a stopper-holding spring seated on the cap, means being provided for interlocking the neck section with the body section, and the cap with the neck section.
23. A bottle case provided internally with a plurality of resilient bottle rests supported by the case and adapted to bear yieldingly on a bottle at a plurality of points, said rests



including groups arranged to permit a limited endwise movement of the bottle and other groups arranged to permit a limited sidewise movement of the bottle.

- 5 24. A bottle case having a cap seat and a cap formed as a double-walled cup, adapted to detachably engage said seat, the outer walls being perforated to permit of a circulation of air, said walls meeting at the

outer end of the cup, and the meeting portions being provided with means for interlocking the cup with the case. 10

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD C. BALDWIN.

Witnesses:

ROBERT H. LOMEMAN,  
WILLIAM BLASIE.