

April 17, 1951

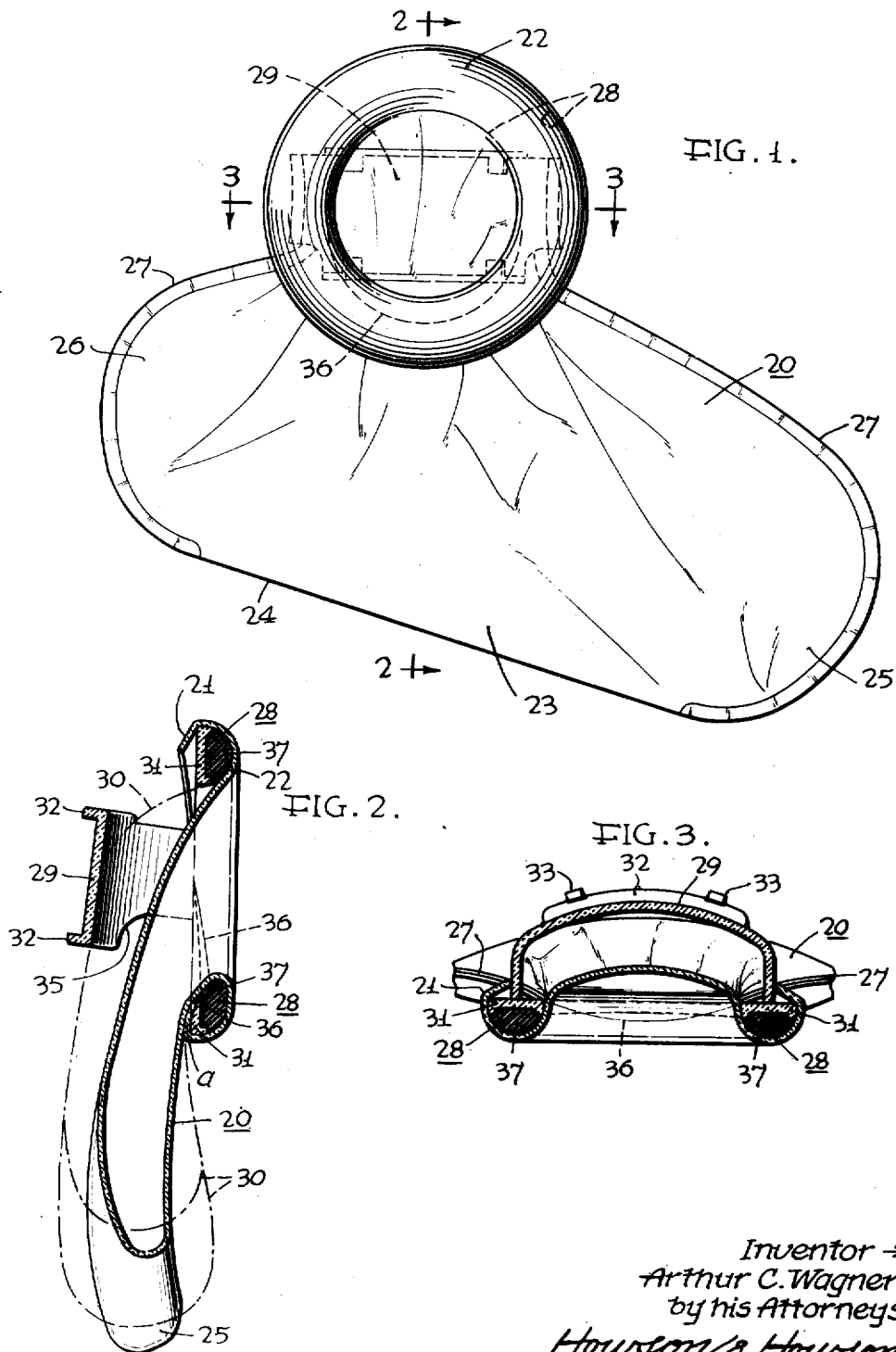
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COLOSTOMY POUCH AND PROTECTOR

Filed Dec. 24, 1947

3 Sheets-Sheet 1



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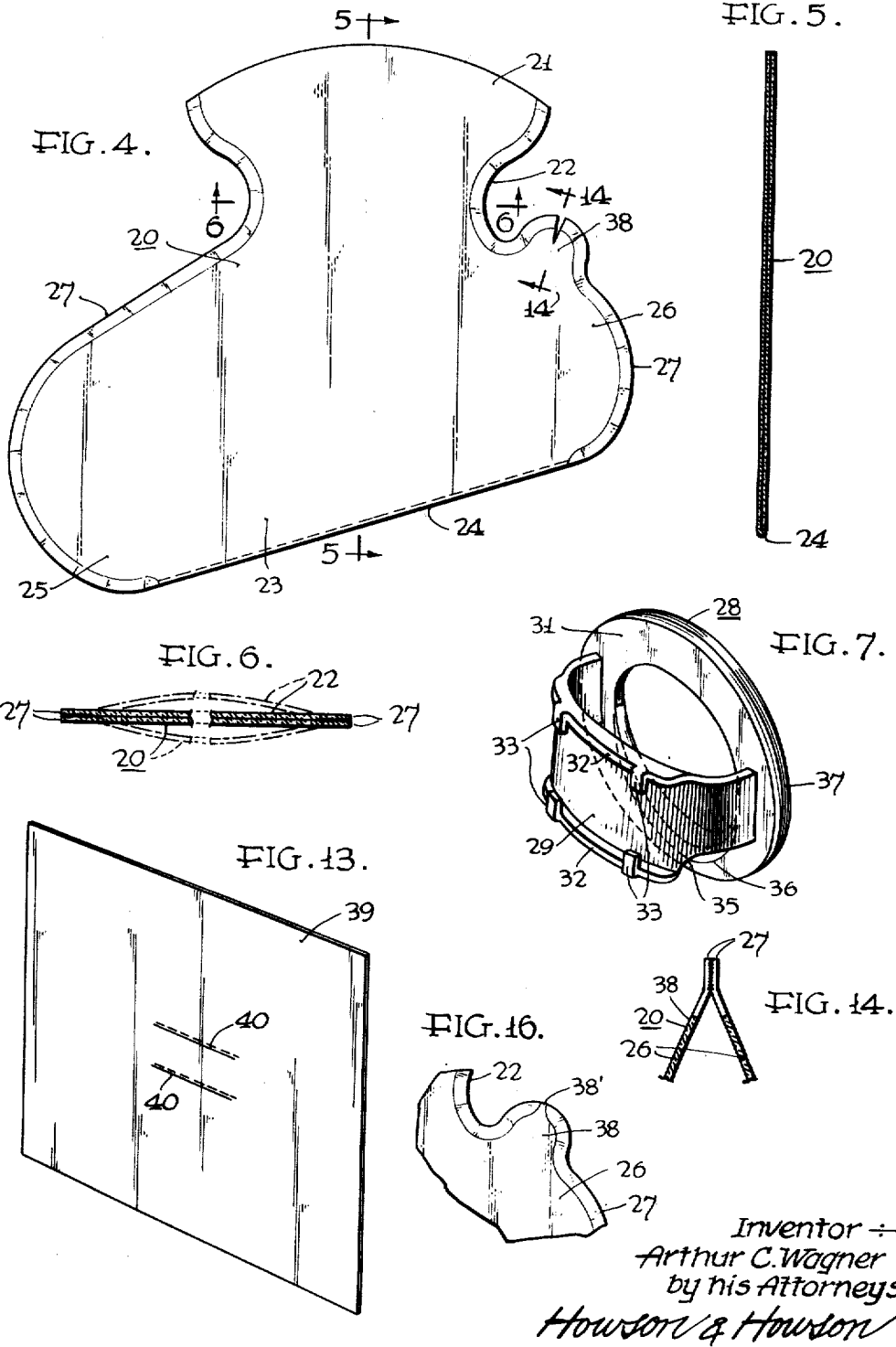
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FIG. 10.

FIG. 11.

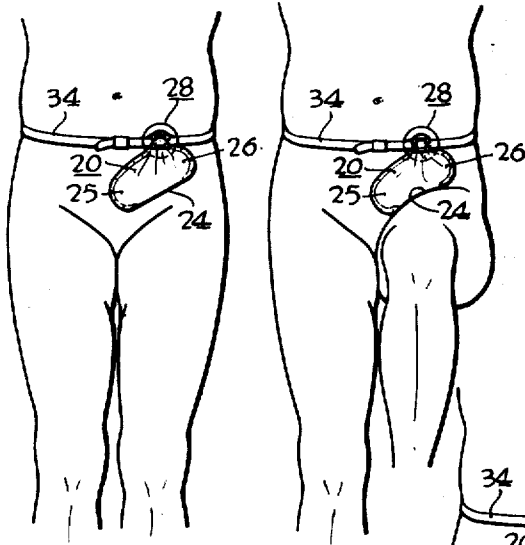


FIG. 8.

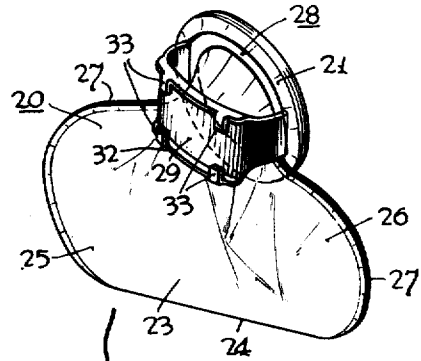


FIG. 12.

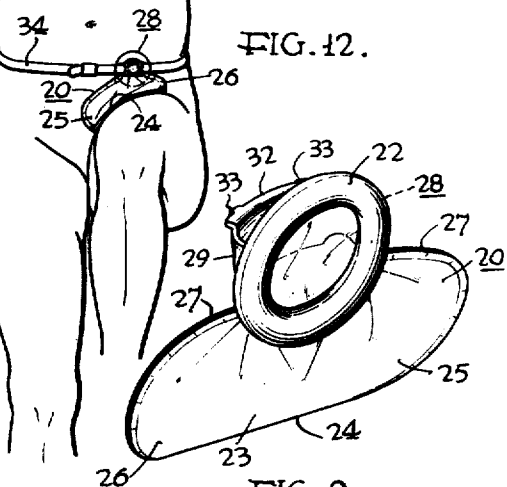


FIG. 9.

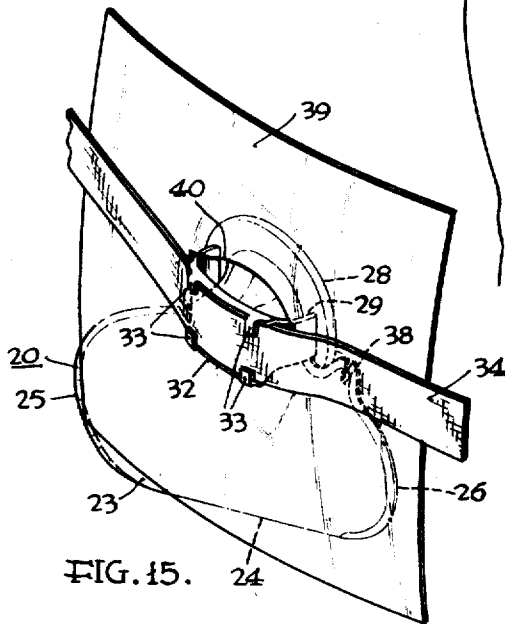


FIG. 15.

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## UNITED STATES PATENT OFFICE

2,549,348

## COLOSTOMY POUCH AND PROTECTOR

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Application December 24, 1947, Serial No. 793,661

3 Claims. (Cl. 128—283)

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This invention relates to surgical apparatus and more particularly to a protector adapted to be used by persons who have undergone a colostomy operation.

The present invention represents an improved colostomy protector pouch construction and a modified ring member for the pouch and is intended for the same use as the colostomy protector disclosed in my copending application bearing Serial Number 777,774 and filing date of October 3, 1947, now abandoned.

A primary object of the invention is to provide a pouch construction for a colostomy protector which is inexpensive and readily disposable and which is so shaped and constructed to afford maximum utility and minimum interference with normal activities of the wearer.

A further object of the invention is to provide a pouch for a colostomy protector especially adapted for normal day-time use and a modified pouch construction adapted for overnight wear.

A still further object of the invention is to provide an improved colostomy pouch ring.

Further objects will be apparent from the specification and drawings in which:

Fig. 1 is a rear elevation of my improved colostomy protector showing the pouch in place on the supporting ring;

Fig. 2 is a vertical sectional view taken along the line 2—2 of Fig. 1;

Fig. 3 is a horizontal sectional view taken along the line 3—3 of Fig. 1;

Fig. 4 is an elevation of the pouch member before insertion in the ring;

Fig. 5 is a vertical sectional view taken along the line 5—5 of Fig. 4;

Fig. 6 is a horizontal sectional view taken along the line 6—6 of Fig. 4;

Fig. 7 is a perspective of the supporting ring;

Fig. 8 is a perspective showing the front of the protector with the pouch installed in the supporting ring;

Fig. 9 is a perspective showing the back of the protector with the pouch installed in the supporting ring;

Fig. 10 is a perspective showing the protector strapped in place on the wearer's body;

Fig. 11 shows the position of the protector when one leg of the wearer is partially elevated;

Fig. 12 shows the position of the protector when the leg is farther elevated;

Fig. 13 is a perspective of an additional protective sheet adapted to be used at night;

Fig. 14 is a fragmentary somewhat vertical sectional view along the line 14—14 of Fig. 4;

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Fig. 15 is a perspective showing the sheet in place on the protector assembly; and

Fig. 16 is an enlarged detail of a modified form of vent.

In order that individuals who have undergone a colostomy operation can live a normal life and pursue all their previous normal activities such as working, driving a car, athletics, social functions, etc., it is essential that the colostomy protector be constructed in such a manner that it will retain bowel excretion and gas without leakage or odor, and it must present a minimum of interference when the body or legs are flexed. This is especially true when the torso is bent, or the legs raised as will occur in many activities. In addition, the entire protector must be inexpensive, light in weight and close fitting to prevent its showing when the individual is wearing it.

Referring now to the drawings, the pouch member 20 is constructed of a pliable self-supporting film of thin synthetic plastic material such as rubber hydrochloride, nylon, polyvinyl chloride, and the co-polymer of vinyl chloride and vinyl acetate. The desired characteristics of the pouch are that it should be non-irritating, non-toxic, waterproof, strong, light in weight and inexpensive to manufacture.

The preferred method of fabricating the pouch 20 is to fold a thin film or sheet of the plastic material, as shown in Fig. 5, and then cut it in the shape indicated in Fig. 4 in order to provide a flared mouth 21, a narrow neck portion 22 parallel to the mouth and an elongated downwardly sloping chamber 23 formed by a biased edge 24, a lower curved end 25, and an upper (as seen in Fig. 4) curved end 26. I have found that the shape of the pouch is extremely important, not only in securing a non-leaking fit, but also in providing a construction which will not irritate the wearer due to sharp corners, nor interfere with the normal flexing of the wearer's body, and it is for this reason that the lower edge 25 of the pouch 20 is biased with respect to the neck portion 22. The edges of the pouch including ends 25 and 26 are heat sealed at 27, 27 as shown in Fig. 4 to complete the fabrication of the pouch member.

In use, the mouth 21 of the pouch is inserted through a hollow ring member 28, Fig. 7, and folded back over the ring so that along the bottom portion of the ring, the neck 22 overlaps the mouth 21 of the pouch as shown at *a* in Fig. 2. The diameter of mouth 21 when opened is smaller than the outside diameter of the ring to

provide a tight fit when the mouth is stretched over the ring, thereby preventing slipping or displacement of the pouch with respect to the ring.

A bridge 29 on the back of the ring serves as a guard for the pouch and prevents the neck from becoming closed due to pressure of the wearer's clothing. In this way the neck of the pouch is at all times capable of expanding to the dotted line position 30 (Fig. 2) thereby eliminating any obstruction at the neck.

The ring 28 is constructed of an annulus having a plano-convex cross-section, the convex side of the ring being adapted to press against the wearer's abdomen. Bridge 29 is disposed diametrically across the flat side 31 of the ring as shown in Fig. 7. In the preferred form, the vertical plane of the transverse portion of the bridge 29 as seen in Fig. 2 is at a slight angle to the plane of the side 31 and is provided with a pair of lateral flanges 32, 32 extending centrally along the edges of the bridge. Ears 33 project inwardly from the flanges and provide a channel in which a belt 34 is retained and in which it may slide horizontally as seen in Fig. 15 of the bridge 29. This construction provides constant pressure of the protector and ring against the abdomen but at the same time eliminates the danger of displacement of the protector when the body is flexed or twisted.

The bridge 29 may be cut away at 35 (Fig. 2) in order to provide greater clearance for the neck of the pouch. In order to avoid an undesirable pocket between the wearer's body and the ring 28, the lower half of side 31 is slightly chamfered at 36 so that the pouch hangs closer to the body as shown in Fig. 2.

The ring 28 may be fabricated entirely of synthetic plastic material, or if desired, may be provided with a soft rubber convex face 37 cemented to the plastic side 31 as shown in Fig. 2.

The pouch member 20 may be supplied in various sizes depending upon the requirements of the individual, and it has been found that a somewhat larger pouch may be used to advantage overnight. In previous constructions considerable annoyance and soiled clothing has been caused by leakage of excrement due to gas pressure when in a reclining position. In this case, however, it may be necessary to provide a vent for the pouch and where the pouch is intended to be worn for extended periods of time, such vent may be made by slitting the bulge 38 on the upper rounded edge 26 of the slightly modified pouch construction shown in Figs. 4 and 15. Fig. 16 illustrates a prefabricated form of vent in which the continuous seal around bulge 38 is interrupted at 38' to provide an unslitted vent construction. The angular shape of the various pouches permits excretory matter to fall into the lower portion 24 when the wearer is in an erect position, and in addition, is such that when the wearer flexes the leg or torso, the contents will not be forced upwardly toward the mouth 21 (a condition which has caused leakage in previous pouch constructions), but will settle in lower end 25 as shown in Fig. 12.

Additional protection, especially when a vented pouch is worn, is provided by means of a thin sheet 39 of synthetic plastic material, similar to that used in the fabrication of the pouch. The sheet 39 is provided with a pair of parallel slits 40, 40 (Fig. 13) adapted to fit under ears 33 on bridge 29. The protector sheet 39 prevents any seepage which might occur from vent 38 from soiling the wearer's clothes or the bed.

I have thus provided a colostomy protector assembly with disposable pouches that is light in weight (complete assembly with large pouch weighs less than two ounces), comfortable to wear, and which affords maximum protection under conditions of all normal activity as well as during sleep.

I claim:

1. A colostomy protector assembly comprising a ring member having a plano-convex cross-section having a flat side, a bridge diametrically secured to the ring member across said flat side, a belt adapted to support the protector on the wearer's body, a pair of flanges on the bridge, a plurality of inwardly disposed ears on said flanges, the flanges and ears so constructed and arranged that the belt is slidably retained on the bridge, and a pouch comprising a pair of flat sides of pliable synthetic plastic sheet material partially sealed to each other around the respective peripheries thereof to form a chamber substantially flat when empty, and having: a flared mouth portion, a neck portion contiguous to said mouth portion, and a chamber portion opposite to and contiguous to said neck portion.

2. A colostomy protector assembly in accordance with claim 1 on which the ring has a chamfer on the lower portion of the flat to receive the lower portion of the pouch neck and to provide a continuous downward slope from the wearer's body to the bottom of the chamber.

3. A colostomy protector assembly in accordance with claim 1 in which the pouch is constructed with a lower edge biased with respect to the bridge.

ARTHUR C. WAGNER.

#### REFERENCES CITED

The following references are of record in the file of this patent:

|           |         |               |
|-----------|---------|---------------|
| 584,204   | Bowles  | June 8, 1897  |
| 1,656,328 | Le Cras | Jan. 17, 1928 |
| 1,922,763 | Gricks  | Aug. 15, 1935 |
| 2,048,392 | Koenig  | July 21, 1936 |
| 2,129,054 | Geisler | Sept. 6, 1938 |
| 2,294,537 | Carhart | Sept. 1, 1942 |
| 2,341,984 | Graves  | Feb. 15, 1944 |
| 2,437,019 | Eich    | Mar. 2, 1948  |

#### OTHER REFERENCES

"Surgery," volume 10, No. 5, page 833, November 1941.

"An Improved Colostomy Outfit," by G. F. Archer and J. G. Riley. (A copy is in Division 5 of the Patent Office.)