

Jan. 20, 1970

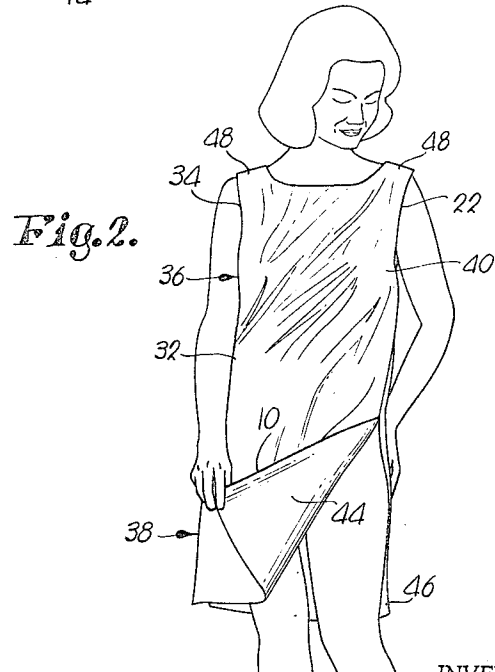
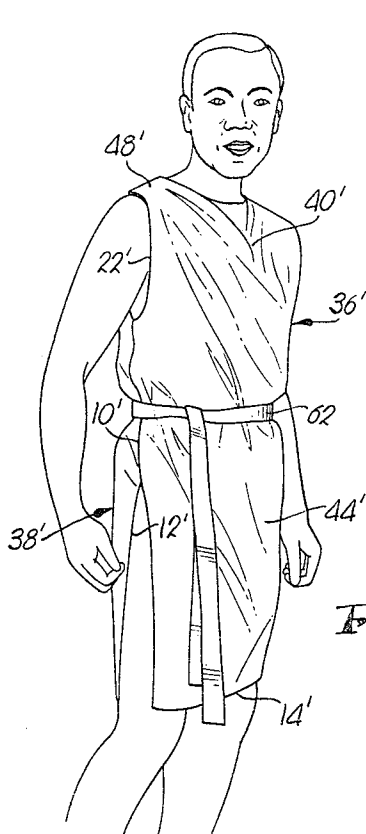
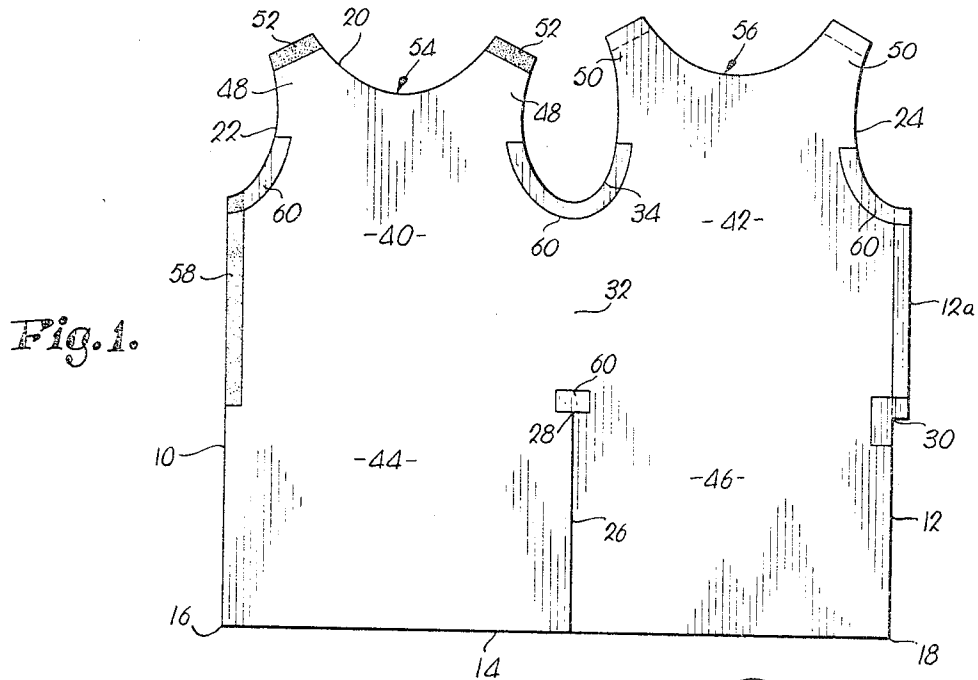
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3,490,072

MEDICAL PATIENT'S GOWN

Filed Aug. 3, 1967

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

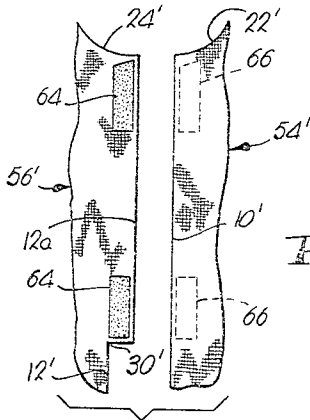


Fig. 8.

Fig. 3.

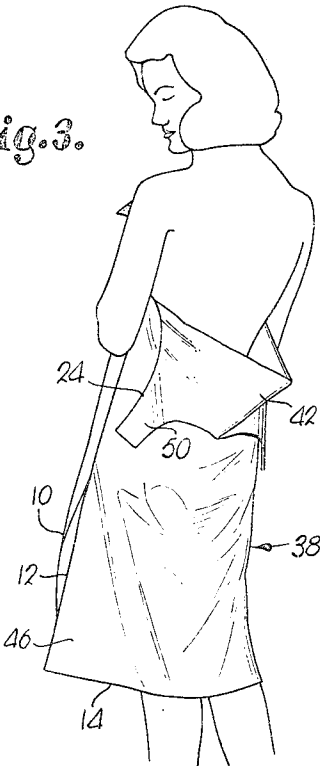


Fig. 4.

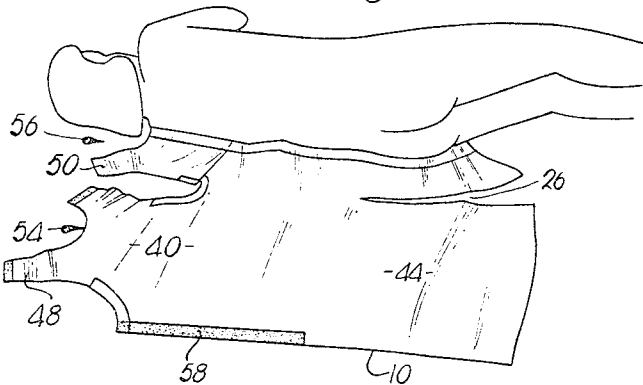


Fig. 5.

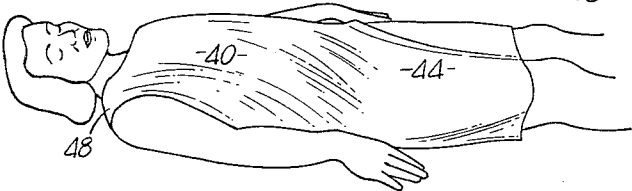
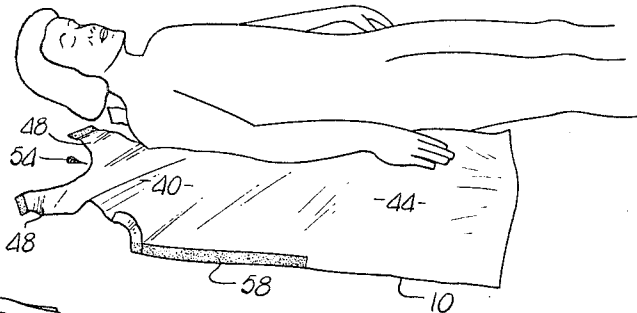


Fig. 6.

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MEDICAL PATIENT'S GOWN

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U.S. Cl. 2—114

1 Claim

ABSTRACT OF THE DISCLOSURE

An examination or hospital gown has selectively positionable blouse panels and skirt flaps to provide the physician access to an area of the body under examination while preventing exposure of regions foreign to such area. The blouse section of the gown is of sleeveless design and the entire gown is separation-free below the arm openings except for side slits defined by the skirt flaps. One side of the gown is closed by a solid stretch of fabric, while the other side is closed by pressure-sensitive fastening means that, when released, communicates the slit at that side with the arm opening thereabove.

Medical doctors must frequently examine the normally clothed areas of patients in the usual course of their practice. Commonly, prior to examination, a patient disrobes and puts on an examination gown, which is beneficial both from the standpoint of the patient's modesty and ease of examination by the physician.

Examination and hospital gowns in widespread use at the present time, however, have three significant disadvantages. First, the gown, by virtue of its design, usually unnecessarily exposes areas of the body foreign to the area under examination. Secondly, access to the region examination is usually provided by front or back, central vertical openings which oftentimes gap badly when the wearer is seated or walking during non-examination periods causing patient embarrassment. Thirdly, because of the usual shoulder and sleeve design, it is very difficult to change gowns on comatose or bedfast patients.

It is, therefore, the primary object of this invention to provide an examination gown for a medical patient which is not characterized by the aforesaid disadvantages.

As a corollary to the foregoing object, it is an important aim of the instant invention to provide such a gown which is equally suitable for use in a physician's office or for patient wear in a hospital or nursing home and, in addition, equally suitable for an ambulatory patient or for a comatose, bedfast or immobile patient, and which may be easily changed on the bedfast patient.

A further and important object of the invention is to provide a gown as aforesaid, either for use in a hospital or a doctor's office, which permits selective access to the normally clothed areas of a male or female patient without unnecessary exposure.

Still another important object is to provide a gown as aforesaid which is also an attractive garment to substantially improve the appearance of the wearer as compared with examination and hospital gowns of the prior art.

Yet another important object of the invention is to provide an examination or hospital gown which may be made of either cloth or synthetic fabric for repeated wear or of a paper material for disposable use, and which utilizes pressure-sensitive fastening means with either type of material to eliminate buttons, snaps or the like.

In the drawings:

FIGURE 1 is a plan view of a female-styled gown of paper fabric composition, the gown being shown open and laid flat with its inside facing the viewer;

FIG. 2 is a front view of the gown of FIG. 1 shown

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on a model and illustrating the selectively positionable front skirt flap;

FIG. 3 is a rear and left side view of the gown of FIG. 1 showing the same on a model and illustrating the back blouse panel in an open position to permit examination of the patient's back;

FIGS. 4, 5 and 6 illustrate the various stages of dressing a comatose, bedfast or immobile patient;

FIG. 7 is a front and right side view of a male version of the gown made of cloth fabric and illustrated on a model; and

FIG. 8 is an enlarged, exploded, detail view of the right side of the gown of FIG. 7 showing the pressure-sensitive textile fasteners.

The configuration of the article when removed from a wearer and laid open is illustrated in FIG. 1. The outline of the article of FIG. 1 represents the pattern from which the gown would be cut during manufacture. The article is shown in FIG. 1 with its inside face up, and comprises a unitary, paper fabric sheet having a periphery defined by a pair of parallel side edges 10 and 12, a straight end margin 14 perpendicular to edges 10 and 12 and forming square corners 16 and 18, and an irregular end margin 20 having a pair of opposed, inwardly curved segments 22 and 24 merging with edges 10 and 12 respectively.

A slit 26 in the sheet is disposed approximately midway between edges 10 and 12 in parallelism therewith and communicates with the straight margin 14. Slit 26 extends inwardly to its termination 28 which is in lateral alignment with an inside corner point 30 formed by an offset portion 12a of edge 12. A central, separation-free stretch 32 of the sheet extends from the termination 28 of slit 26 to a generally oval-shaped opening 34 in the sheet aligned with slit 26 and defining a portion of the irregular margin 20.

Noting FIGS. 2 and 3, the article of FIG. 1 forms a gown when edge portion 12a and the corresponding part of edge 10 are brought together, stretch 32 being disposed at the right side of the female patient (FIG. 2). Opening 34 provides an opening for the right arm of the patient, while the marginal segments 22 and 24 define an opening for the left arm of the patient. It may be appreciated that an upper and a lower examination garment are effectively formed by a sleeveless blouse section 36 and a skirt section 38, the blouse section 36 including a front blouse panel 40 and a back blouse panel 42, while the skirt section 38 includes a front skirt flap 44 and a back skirt flap 46.

The front blouse panel 40 is provided with a pair of shoulder straps 48 which cooperate with a pair of shoulder straps 50 forming a part of the back blouse panel 42. A pressure-sensitive, adhesive coating 52 is applied to the back side of straps 48 at the ends thereof, each coating 52 being brought into contact with a similar coating on the outside of the corresponding shoulder strap 50 to secure the straps together. The coating material may comprise rubber cement or any other suitable material which adheres to a surface that is also coated with the material upon pressure contact, but which preferably is not tacky to the touch or adherent to other non-adhesive coated surfaces.

It will now be appreciated that front blouse panel 40 and front skirt flap 44, being formed from a single length of fabric, present a continuous robe front 54 and that, similarly, the back blouse panel 42 and the back skirt flap 46 present a continuous robe back 56. The waist portion of the gown is entirely separation-free, the only separations below the arm openings being provided by the slit 26 at the right side between the skirt flaps 44 and 46, and the side slit at the left side defined by approximately the lower one-half of side edges 10 and 12.

A coating 58 of adhesive material is applied to the inside of robe front 54 along approximately the upper one-half of edge 10, such material being of the pressure-sensitive type as discussed above with respect to coatings 52. Similarly, the offset edge portion 12a of robe back 56 has a similar coating of adhesive material applied to its outer face so that, when the gown is put on, offset edge portion 12a may be slipped into underlying relationship to the coating 58 and the two coated surfaces pressed together to close the left side of the gown. Since the gown shown in FIGS. 1-3 is made of a paper fabric, preferably an absorbent, soft, fibrous composition similar to paper toweling, the gown is intended as a disposable item for use only once by an individual patient. Suitable reinforcing strips may be utilized at critical points and glued in place, as illustrated at 60. The female gown could also be made of cloth fabric with the design the same as for the paper gown shown except for certain reinforcements and seams, and would then be a reusable item, just as the cloth male gown shown in FIGS. 7 and 8 to be described hereinafter.

The length of rise of the slit 26 and the slit defined by edges 10 and 12 is important to the efficient utilization of the instant invention. Each slit preferably has a length equal to or slightly greater in length than one-half the distance between margin or hem 14 and the arm opening thereabove. For example, a length of approximately 16 inches for the slit and 13 inches for the distance between the termination of the slit and the arm opening thereabove is suggested for women of normal height. Of course, in order to impart the improved appearance to the individual which will be gained through the use of the gown of the instant invention, gowns of various sizes for children and adults would be provided in various colors to enhance their appearance and to enable more rapid selection of the proper size by color coding. The objective of the length of the slits in the skirt is to locate the terminations 28 and 30 of the slits at the proper height to allow adequate examination of the back or abdomen when the skirt flaps are selectively raised and yet when the skirt flaps are in their normal positions, to provide a gown which is comfortable and attractive for the wearer. The terminations 28 and 30 will normally be at the level, or slightly above, of the maximum breadth of the hips of the wearer. This will usually be at the level, or slightly above, of the heads of the femurs.

From a study of FIGS. 2 and 3, it may be seen that the two panels 40 and 42 and the two flaps 44 and 46, by selective positioning thereof, permit access to normally clothed areas of the body without undue exposure of the patient. For example, referring to FIG. 2, the front skirt flap 44 may be raised while the other flap and the panels remain in place; similarly, as illustrated in FIG. 3, the back blouse panel 42 may be lowered by releasing the shoulder straps 48, 50 while the patient holds the front blouse panel 40 in place and the skirt flaps remain undisturbed. Manifestly, this selective positioning feature applies to each of the panels and flaps and, additionally, the left side of the gown may be opened if desired to expose the entire front or back for examination. In such case, however, it should be understood that it is not necessary to completely remove the gown since one or both of the shoulder straps may remain attached while the examining physician moves the robe front 54 or the robe back 56 aside. Therefore, it is not required that the gown be slipped off over the head or dropped from the shoulders.

The important and necessary features of the instant invention which permit its use on comatose, bedfast or immobile patients are a solid side (the central, separation-free stretch 32), an open side (closed by the pressure-sensitive edges 10 and 12a), and the releasable shoulder straps. These features enable the changing of gowns just as bed sheets are commonly changed. A fresh gown is laid over the comatose, bedfast or immobile patient and by selectively turning the patient the clean gown is put

on as the soiled gown is removed, without exposing the unclothed body of the patient. The releasable shoulder straps also permit the putting on or removing of the gown from a patient receiving intravenous fluids or wearing upper extremity casts or traction devices. This usually is not possible with gowns with the customary shoulder and sleeve design.

Particularly with respect to the dressing of a comatose patient, FIGURES 4-6 illustrate a second method of putting the gown on such a patient. A female patient is shown and she initially rests on her left side. The outer side portion of the robe back 56 is folded in an accordion manner and is slipped partially under her, and then she is rolled upon her back and/or right side onto the robe back 56, which is then pulled properly under her, as shown in FIG. 5. Next, she is covered with the robe front 54, this being readily effected since the sleeveless blouse design enables the shoulder straps 48 to be brought beneath the right arm of the patient onto her chest, and then connected to the straps 50 of the robe back 56. Dressing is completed by pressing the adhesive coating 58 against the coated surface along edge portion 12a to close the left side of the gown.

In FIG. 7, a male version of the gown is illustrated and is styled similar to a Roman toga. The male gown is cut from a pattern quite similar to that illustrated in FIG. 1, except that the shoulder straps are broader and a belt 62 is added to provide a more masculine appearance. The belt, while not an essential part of the invention, also allows both the front and back portions of the blouse to be dropped to waist level, exposing the upper portion of the body, yet allowing the lower half to be securely covered. The same reference characters are utilized to designate components of the male gown identical in function to components of the female gown previously illustrated, with the addition of the prime notation.

The male gown of FIG. 7 is shown made of cloth, which may be cotton, a synthetic, or a combination thereof, or a similar fabric which enables the gown to be laundered and reused. The cloth would preferably be treated with a process to reduce wrinkling and to eliminate the need for ironing after laundering. The male gown could also be made of a paper material for disposable use, just as for the female gown.

It is preferred that, when using paper material, the entire gown be cut from a single sheet of paper to provide the added strength of unitary construction. However, in the cloth materials the robe front and robe back may be cut separately and sewn together. In either case, the separation-free stretch 32 would functionally be a solid portion completely closing one side of the gown.

It should be noted that the side edges 10' and 12' of the male gown appear at the right side thereof rather than the left as in the female gown. This reversal is for purposes of styling only and has no effect on the functional characteristics of the gown. Thus, it should be understood that, in viewing FIG. 1, for a male gown the robe front and robe back would be interchanged.

FIGURE 8 illustrates the means of closing the right side of the cloth, male-styled garment of FIG. 7. A pair of textile strips 64 are spaced along edge 12a' on the outside of robe back 56', and a pair of textile strips 66 are located opposite strips 64 on the inside of robe front 54' adjacent edge 10'. The strips 64 and 66 are sold under the trademark Velcro and are composed of a synthetic resin textile material made in accordance with the teachings of De Mestral, U.S. Letters Patent No. 2,717,437, granted Sept. 13, 1955.

Each of the strips has raised pile threads which interlock with the pile threads of the opposite strip upon pressure contact therewith. Thus, the wearer aligns edge 10' with edge 12', thereby placing strips 66 directly over strips 64 and then presses the strips together to close the side of the gown. This secures edges 10' and 12a' in overlapping relationship to each other; the strips are released

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by simply pulling the same apart by a stripping motion.

The strips 64 and 66 are particularly advantageous in that, besides providing a fast and convenient means of closing the side opening, they are unaffected by repeated washings and are not susceptible to fracture or other damage as would be the case with buttons or similar fasteners. In addition they do not visualize on X-ray films and are, therefore, an advantage for patients receiving these studies over metal fasteners and certain buttons. With respect to the shoulder straps of the cloth garment, the Velcro strips would also be utilized and positioned in the same locations as illustrated for the adhesive coatings of the paper gown.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A medical patient's gown comprising a generally rectangular, single sheet of flexible material having in combination:

a pair of free side edges, each provided with an inwardly curved, arm-receiving segment at the uppermost end thereof;

a straight bottom margin perpendicular to said side edges and spanning the distance between the latter; an irregular upper margin spanning the distance between said segments;

a slit midway of and parallel to said side edges, presenting a front skirt flap on one side of the slit and a back skirt flap on the opposite side of the slit,

said upper margin having a pair of spaced concavities and a central, oval-shaped, notch-like, arm-receiving opening midway between the concavities, aligned with the slit and extending downwardly toward the slit, presenting a central, separation-free area between the opening and the slit and extending from one side edge to the other side edge, a front blouse panel on one side of said opening, and a back blouse panel on the opposite side of said opening,

said slit extending upwardly from the bottom margin approximately half the distance between the opening and bottom margin;

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a first pair of spaced shoulder straps at the upper end of said opening adjacent proximal concavities; and a second pair of spaced shoulder straps at the uppermost and outermost extremities of said blouse panels between proximal segments and concavities,

said straps and said area having releasably securable pressure-sensitive fastening means thereon,

the fastening means on said area being adjacent said side edges and disposed between each segment and a point approximately half the distance between the respective segment and said bottom margin,

one of said side edges having an offset portion upon which the fastening means of said area is disposed, said portion extending between the respective segment and said point therebelow,

said fastening means being secured whereby said sheet presents a gown provided with continuous robe front and a continuous robe back having a sleeveless blouse section and being open at the outside of one leg of a wearer along said slit and at the outside of the other leg of a wearer along said side edges below said offset portion.

References Cited

UNITED STATES PATENTS

1,489,046	4/1924	Thompson	2—114
2,768,383	10/1956	De Witt	2—114
3,154,789	11/1964	Lewis	2—104
3,156,927	11/1964	Grimm et al.	2—114 X
3,276,036	10/1966	Cater	2—114
3,343,537	9/1967	Graham	2—114 X
3,359,569	12/1967	Rotanz et al.	2—114

OTHER REFERENCES

Cheri Lamb, Inc. Brochure, Nov. 21, 1966 (Copy Available Group 365).

RICHARD J. SCANLAN, JR., Primary Examiner