Nov. 9, 1943. B. BERKMAN 2,334,061

VENTILATED CAPE

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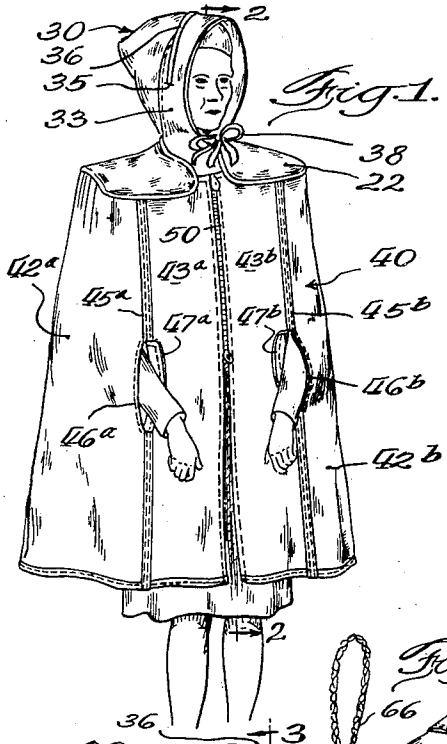


Fig. 1.

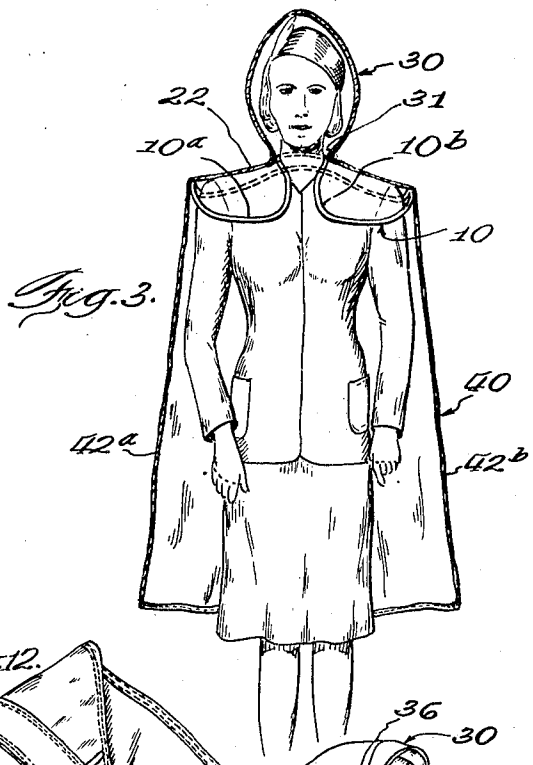


Fig. 3.

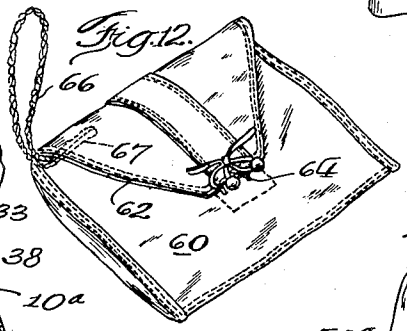


Fig. 12.

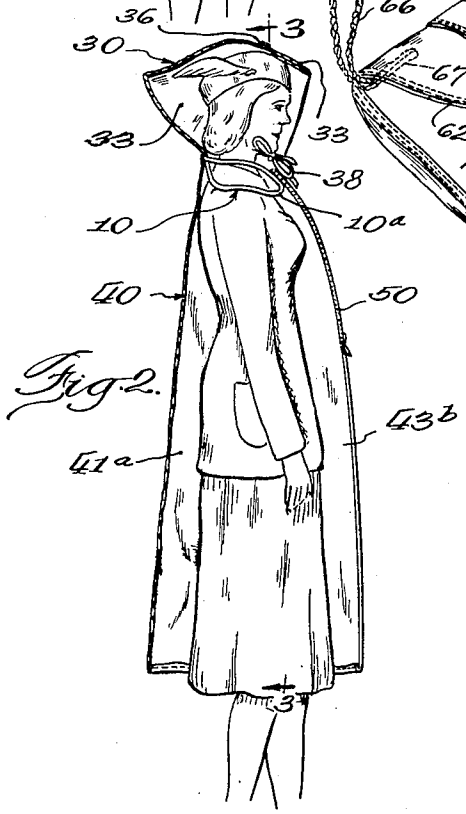


Fig. 2.



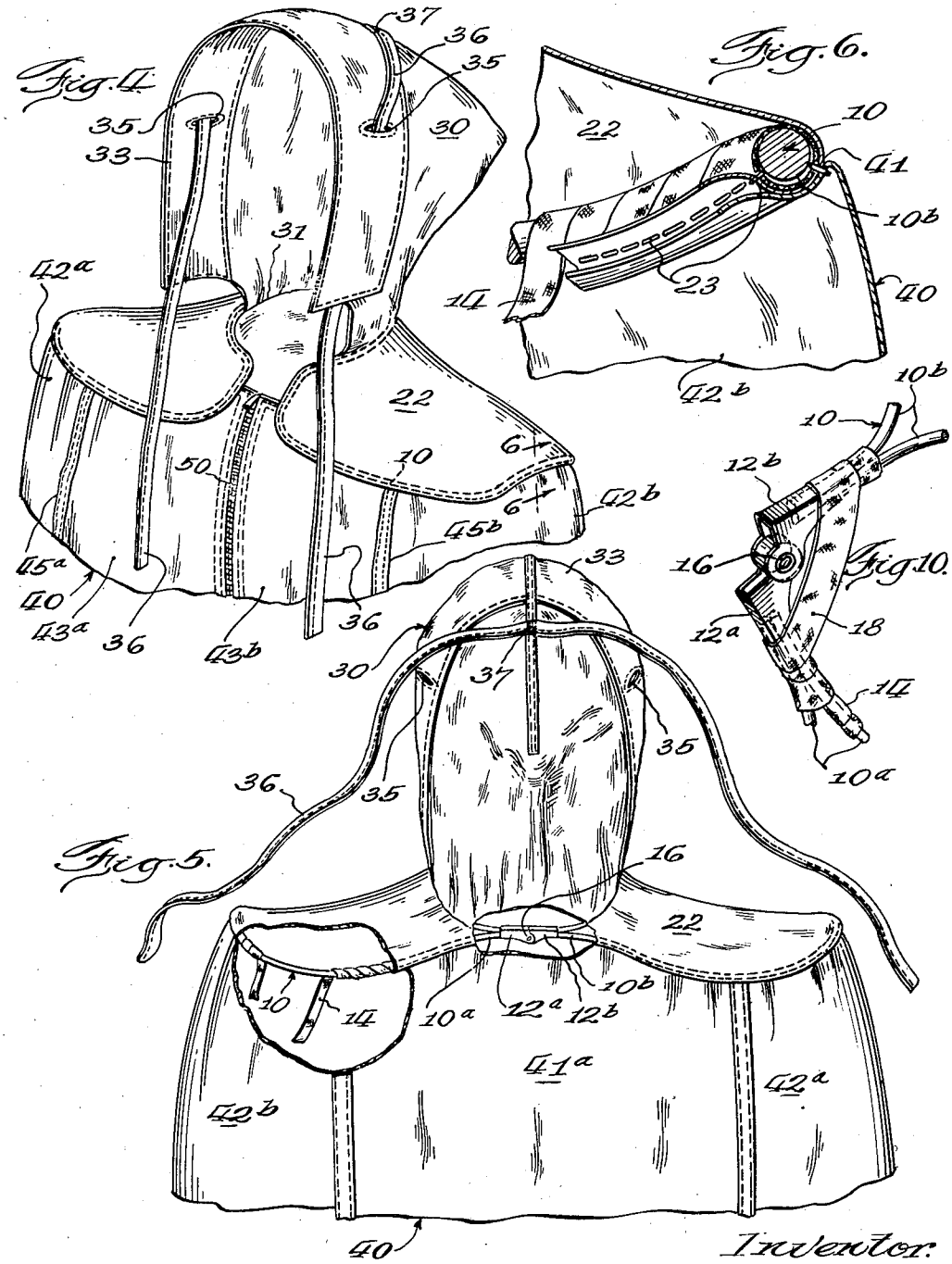
Fig. 11.

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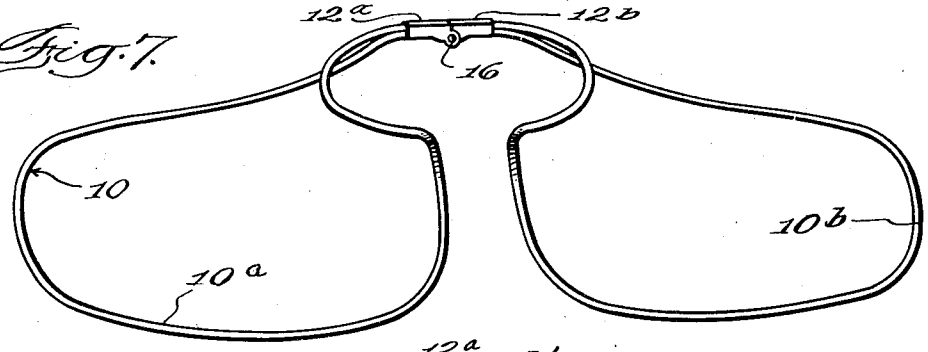
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Fig. 7.



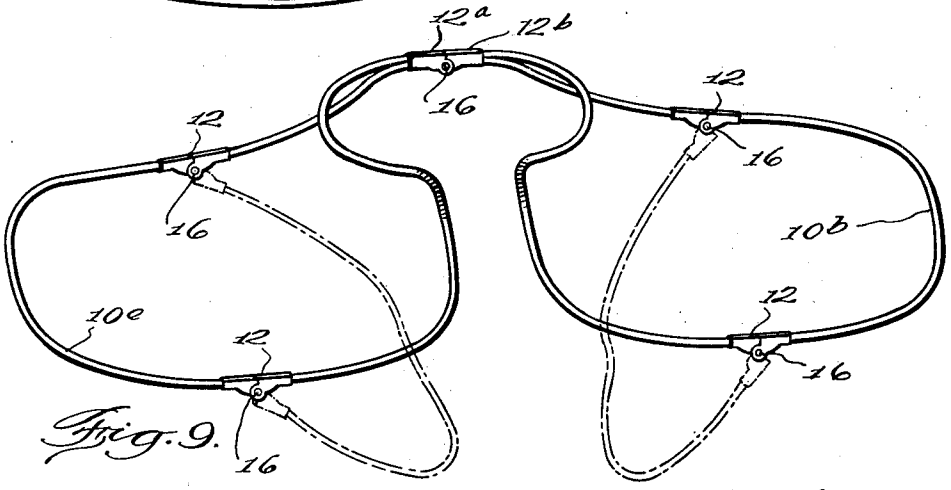


Fig. 9.

Fig. 13.

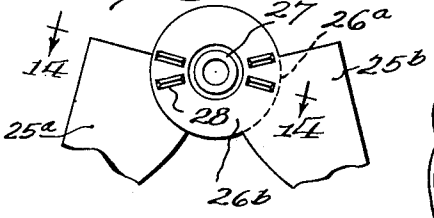


Fig. 8.

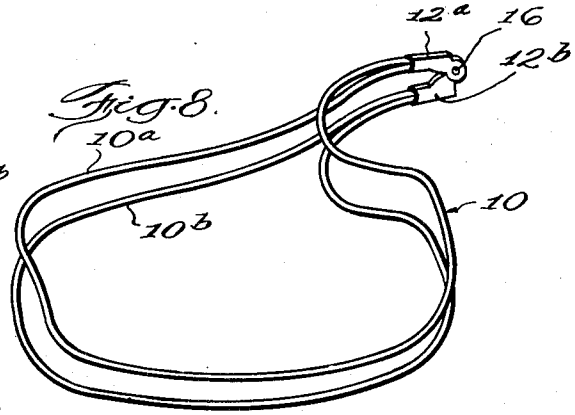
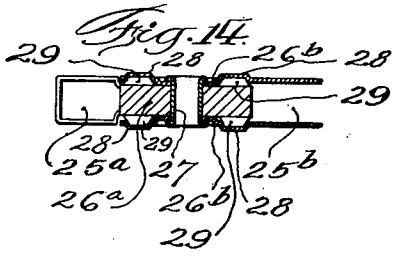


Fig. 14.



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Fig. 15.

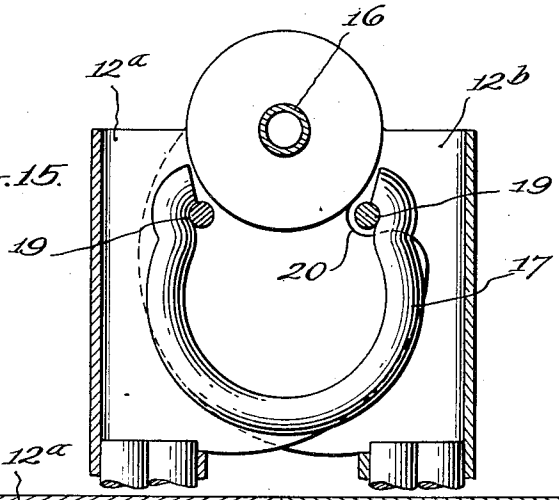


Fig. 16.

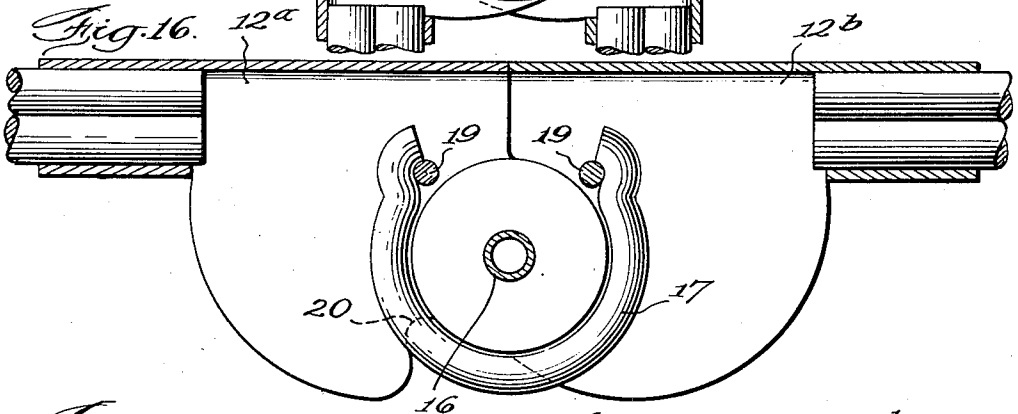


Fig. 18.

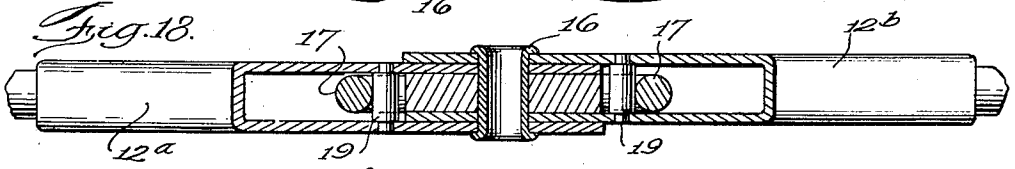
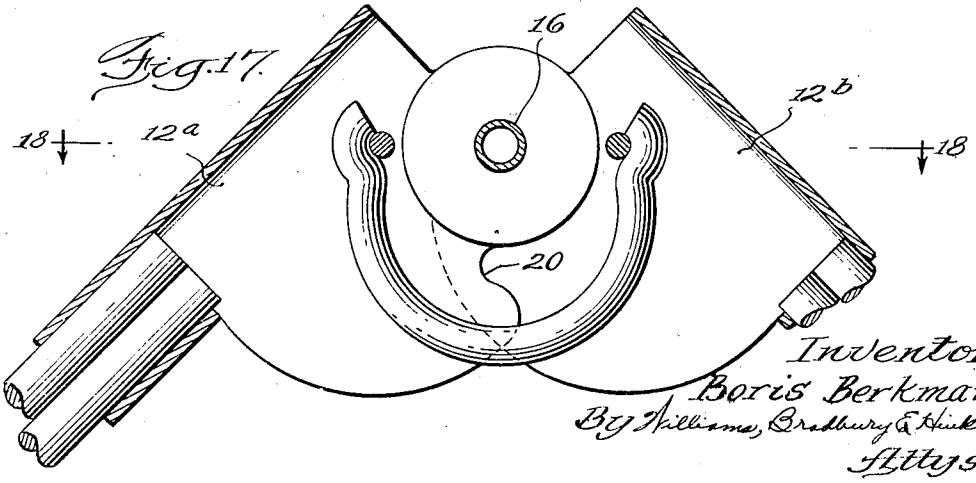


Fig. 17.



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UNITED STATES PATENT OFFICE

2,334,061

VENTILATED CAPE

Boris Berkman, Chicago, Ill.

Application May 13, 1940, Serial No. 334,727

7 Claims. (Cl. 2—88)

My invention relates to ventilated capes, which may be worn over the outer garments for protection from the rain or as beach wear over bathing apparel as a protection against excessive exposure to the sun. My garment is especially suitable for women's and misses' wear.

It has long been an undesirable characteristic of rainproof garments, as well as of other protective garments such as beach coats, that because of their impervious nature, these garments caused excessive perspiration from lack of sufficient ventilation therebeneath. These prior garments tended closely to drape themselves about the wearer so that she became uncomfortably warm even during mild weather. Because of the non-porous nature of the materials employed in the manufacture of rain protective garments, perspiration and moisture tended to accumulate in the garments worn therebeneath, with very objectionable results.

Protective garments which have hitherto been available have often been rather unattractive, bulky, and inconvenient to dispose of while not in use.

The chief object of my invention is to provide a ventilated protective garment so disposed upon the shoulders of the wearer that the garment is displaced from the body of the wearer by some considerable distance at all points, thereby permitting adequate ventilation and preventing the formation of excessive heat under the garment due to the impact of the rays of the sun thereupon.

Another object of my invention is to provide a ventilated garment which may readily and compactly be folded into a relatively small space when not in use.

Another object of my invention is to provide a garment suspended from a wire framework carried upon the shoulders and extending beyond the contours thereof.

Another object of my invention is to provide a garment consisting of a combined hood and cape which may be compactly folded into a small bundle carried in a special receptacle provided thereby.

Further objects and advantages will become apparent upon reading the following specification taken in conjunction with the attached drawings in which:

Fig. 1 is a front perspective of a garment according to my invention;

Fig. 2 is a side elevation of such garment;

Fig. 3 is a section taken along the lines 3—3 of Fig. 2;

Fig. 4 is an enlarged perspective view of the hood and shoulder construction of my garment;

Fig. 5 is an enlarged rear elevation of the hood and shoulder construction of my garment with portions thereof partly in section;

Fig. 6 is a section taken along the lines 6—6 of Fig. 4;

Fig. 7 is a front perspective of the wire shoulder piece of my garment;

Fig. 8 is a perspective of the shoulder piece of my garment when folded;

Fig. 9 is a front perspective of a modified shoulder piece, illustrated in its partially folded position by means of phantom;

Fig. 10 is an enlarged detail of one form of the rear hinge of my shoulder piece;

Fig. 11 is a view of a modified garment according to my invention, provided with sleeves instead of arm hole slits;

Fig. 12 is a perspective of a purse or bag useful for carrying my garment when properly folded;

Fig. 13 is a side view of a modified hinge construction applicable to my invention;

Fig. 14 is a section taken along the lines 14—14 of Fig. 13;

Figs. 15, 16 and 17 are sections through the preferred form of hinge in closed, open and partially closed positions respectively.

Fig. 18 is a section of the hinge on the line 18—18 of Fig. 17.

In order to attain my chief object of providing a protective cape or garment which is adequately ventilated and which does not permit the accumulation of excessive humidity and heat therebeneath, I suspend each garment from a wire yoke 10 (Fig. 7), conforming generally to the shape of the wearer's shoulders and composed of two loops 10*a* and 10*b* each two ends of which terminate in a hinge member 12*a* or 12*b* respectively.

In order to avoid chafing by the metal yoke 10, I prefer spirally to wrap the same with strips of cloth tape 14 (Fig. 6), which also serve as the base to which may be sewn the material of the cape and hood.

The hinge members 12*a* and 12*b* are pivotally joined by a hollow rivet 16 and resiliently tensioned by means of a C spring wire 17 (Figs. 15 to 18) or an elastic band 18 (Fig. 10) which holds the hinge members in their opened or their folded position depending upon whether the tension of the spring 17 or rubber band 18 is over or under the center of the rivet 16.

The hinge of Figs. 15 to 18 has fins 19 extending between the two opposing walls of each half

12a and 12b, one wall of each half being cut away at 20 to receive the fins 19 when the hinge is closed. The washer 21 separates the halves and adds rigidity to the structure. The C spring 17 is preferably of such size that its inner edge will not protrude beyond the margins of the walls of the halves 12a and 12b as the hinge is opened or closed. Instead of the toggle movement described, I may use other forms of self-locking hinges utilizing various mechanical snap action arrangements. For example, the hinge may consist of two hinge members 25a and 25b, (Figs. 13 and 14), the first of which terminates in a relatively heavy flat centrally apertured disc 26a, and the second of which terminates in a similar apertured disc 26b, fastened together by means of a hollow rivet 27. The discs 26b are stamped with outwardly projecting niches 28 interlocking with corresponding projections 29 located upon both faces of the disc 26a. The niches and projections are spaced to engage each other when the hinge is in its fully opened or in its closed position.

In order to provide a garment suspended from a wire yoke carried upon the shoulders and extending a substantial distance beyond the contours of the upper portions of the body, and at the same time to achieve extreme compactness, I have devised a wire yoke collapsible across the central portions of the shoulder loops 10a and 10b as well as at the neck by means of two pairs of hinges 12 dividing each loop 10a and 10b into inner and outer halves (Fig. 9). One may with equal facility place the hinges at other points along the loops 10a and 10b, e. g., to divide them into front and rear halves. However, I have found that the arrangement depicted (Fig. 9) is superior to most others because of the ease with which it may be collapsed and because of the small volume occupied by it.

The wire yoke 10 is covered with a cloth yoke 22 whose edges are secured to the tape 14 by means of stitching 23. The cloth yoke 22 rests upon the shoulders of the wearer and is the only portion of the protective cape in close contact with the body of the wearer, the depending portion of the cape being spaced a substantial distance from the body of the wearer.

I prefer to provide my garments with a hood 30, which is useful as a protection against the rain, or alternately, when applied to beach capes, as protection from prolonged exposure to the sun. The lower edge 31 of the hood 30 is sewn against the inner edge of the collar portion of the wire yoke 10 (Fig. 4). The front edge of the hood 30 is turned over to form a brim 33 of variable width provided with two grommets or eyelets 35 through which are threaded the ends of two draw strings 36 sewed to the hood 30 at their origin 37. The ends of the draw strings 36 pass underneath the folded brim 33 and may be tied in a bow knot 38 (Figs. 1, 2 and 11). It is to be noted that the width of the brim 33 is adjustable so that a greater or less degree of protection against the elements is obtainable by varying the width of the brim 33 and adjusting the draw strings 36.

The cape 40 is suspended from the wire yoke 10 by its upper edge which is attached to the spiral protective wrappings 14 by means of stitching 41 (Fig. 6). The cape may be of any desirable fashionable and attractive design, with or without sleeves (Figs. 11 and 1). The sleeveless cape illustrated (Fig. 1) consists of a back panel 41 (Fig. 5), two side panels 42a and 42b which may advantageously be pleated at the shoulders, and two frong wing panels 43a and 43b. The seams 45a and 45b between the side and wing panels are interrupted by two arms slits 46a and 46b normally covered by flaps 47a and 47b. The edges of the frong wing panels 43a and 43b each bear one half of a zipper closure strip 50 which serves as a secure waterproof closure. If sleeves are preferred to arm slits, it is possible to insert sleeves 52a and 52b in the side panels 42a and 42b (Fig. 11).

I consider the success of my invention to be the result of the air space between the body of the wearer and the suspended cape. It is well known that confining garments tend to induce overheating and perspiration to a much greater extent than loose fitting garments. This is true partly because confining garments restrict freedom of motion, but chiefly because free circulation of air underneath the garment is prevented, resulting in accumulation of moisture from perspiration. Perspiration cannot be avoided; it is a natural function of the human organism, designed to protect it against internal temperature fluctuations. For hygienic and aesthetic reasons, however, it is essential that perspiration be dissipated as rapidly and as completely as possible. This can be accomplished only by adequately ventilating the wearer's garments. I have found that by suspending protective garments, such as a raincoat or beach coat, from the body at some distance, say an inch or two, adequate air space is provided for free circulation of the air beneath the protective garment, which circulation of air evaporates and carries away the moisture due to perspiration. In the case of beach coats, an added advantage of suspending the garment at some distance from the wear's body is the reduction of friction between the garment and the often severely sunburned skin of the wearer. After prolonged exposure to the sun, this advantage is highly regarded by the purchaser of my garments. In order to adduce scientific proof of the theoretical advantages alluded to above, I have had hygrometric tests performed with both the garment of my invention and other available protective garments. From the nature of the investigation, accurate and consistent results could not be expected from the experiments. However, measurements of the humidity under the garment of my invention and under other available protective garments gave consistent indications that the humidity underneath my ventilated garment normally does not materially exceed the humidity of the air surrounding the garment, whereas the air underneath other available protective garments, especially under the armpits, tended usually to be completely saturated with moisture. These hygrometric observations were made with the well known wet and dry bulb thermometer. It may be added that the dry bulb temperature under ordinary protective garments was always higher than the temperature beneath my ventilated garment.

The garment, whether it be a raincoat or beach cape, after being folded into its most compact arrangement, is most conveniently carried within a purse especially provided for that purpose. The purse (Fig. 12) may be made of material harmonizing with the garment, and it is preferably made out of waterprof material, whether it be used with a raincoat or a beach coat.

The purse 60 is provided with a flap 62, the end of which is attached to the purse by means of an effective and decorative fastening means 65. The

purse may conveniently be carried by means of a strap 66, the end 67 of which is sewn beneath the flap 62.

Although I have described only two embodiments of my invention, it will be understood from the above remarks that I do not wish to be limited to any specific embodiment of my invention but desire broadly to claim the conception of providing garments spaced from the body of the wearer and depending from a shoulder yoke, to provide ventilation and insulation against heat.

Accordingly I claim:

1. A garment of the class described comprising a relatively stiff shoulder yoke including two shoulder pieces and a snap action hinge joining the same at the rear of the neck, and a cape depending from the said yoke.

2. A garment of the class described comprising a relatively stiff shoulder yoke including two shoulder pieces and a snap action hinge joining the same at the rear of the neck, a hood upwardly extending therefrom, and a cape downwardly depending therefrom.

3. In a garment of the class described, a yoke comprising two symmetrical wire frames conforming generally to the shape of the shoulders and the curve of the neck, and a hinge joining the said two frames at the back of the neck and including means for maintaining itself in its open position.

4. In a garment of the class described, a yoke comprising two symmetrical wire loops conforming generally to the shape of the shoulders and the curve of the neck, but extending beyond the contours of the shoulders, hinge members fastened to the two ends of each of said wire loops, pivot means joining the two hinge members, and means for maintaining the hinge members in their extended position.

5. A garment of the class described, having a pair of hinged metallic loops from which the body of the garment depends, a C spring forcing the loops either to their closed or open position, the hinge for the loops having parallel side walls confining the C spring between them to protect the fabric of the garment from being pinched between the C spring and the hinge.

6. A garment of the class described comprising a shoulder yoke including a pair of symmetrical wire frames, said frames conforming to the contour of the shoulders and the neck, a covering for said frames adapted to rest on the shoulders of the wearer, and a cape depending from said yoke.

7. A garment of the class described comprising a shoulder yoke including a pair of symmetrical wire frames, said frames conforming to the contour of the shoulders and the neck, a covering for said frames, and means adapted to maintain said frames in position on the shoulders of the wearer, said means also permitting said frames to be folded together.

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