Oct. 16, 1956 F. WIELANDT 2,766,457

RAIN PROTECTIVE HEAD GEAR

Filed June 1, 1954

2 Sheets-Sheet 1

Fig. 1

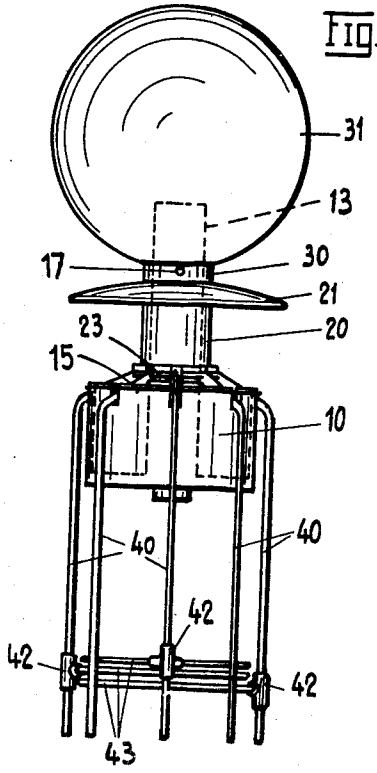


Fig. 2

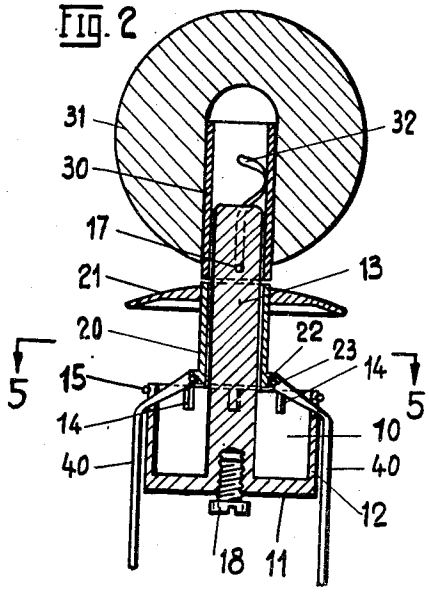


Fig. 3

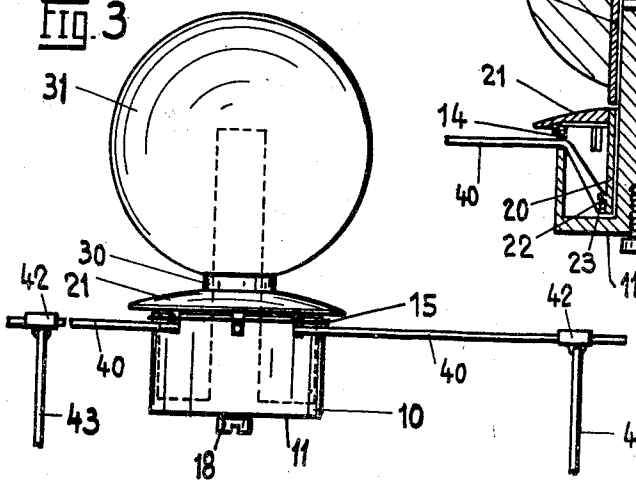
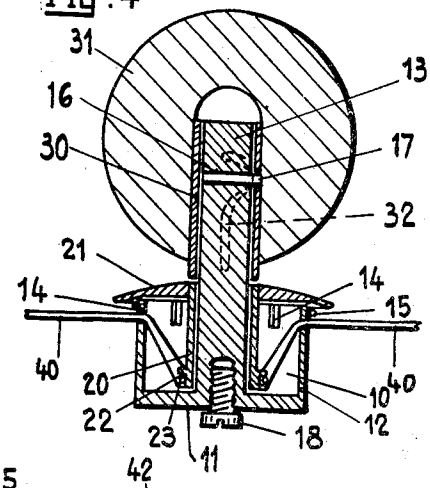


Fig. 4



WITNESS :

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2,766,457

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Fig. 5

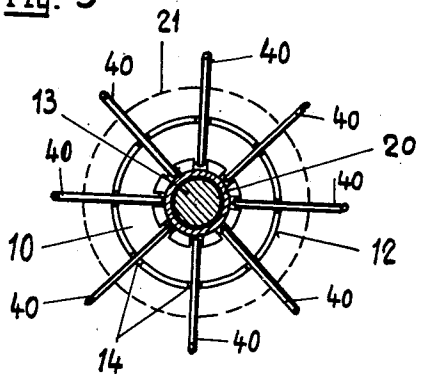
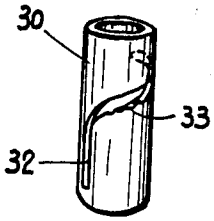


Fig. 6



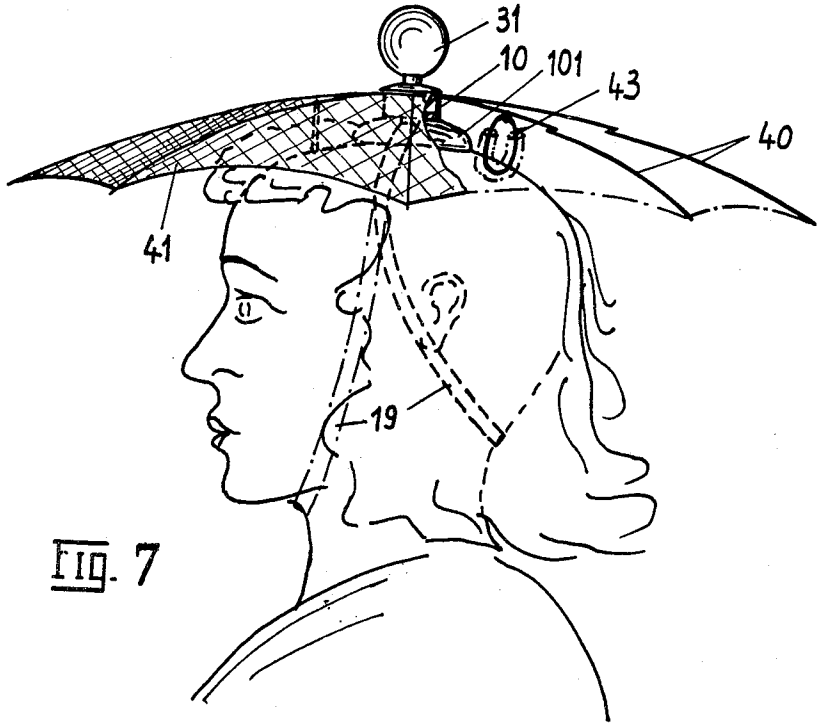


Fig. 7

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RAIN PROTECTIVE HEAD GEAR

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7 Claims. (Cl. 2—177)

The present invention relates to a head gear affording protection from rain, and has the principal object of providing a head gear, which in the operative condition can be readily attached to the head of a person, and in the inoperative position can be folded so as to occupy little space.

With this and other objects in view I provide a head gear comprising in combination: a foldable umbrella frame, a covering attached to the said frame, attachment means adapted to secure the said umbrella frame in the spread-out condition to the head of a person, the said umbrella frame including ribs, a flanged sleeve to which the said ribs are articulated at their inner ends, a cup shaped member having a bottom, a fixed pivot pin projecting centrally upward from the bottom thereof and having a plurality of spaced apart slots on the upper rim portion thereof, the said ribs passing star-shape through and being bent downwardly immediately outside slots of the said slotted rim and resting in collapsed position on the lower wall portions of the said slots, the said sleeve being mounted on the said pivot pin shiftable up and down thereon, the said sleeve when moved downwardly carrying with it the inner ends of said ribs and turning the said ribs about the lower wall portions of the said slots in the rim of said cup shaped member their fulcrums and thus opening the umbrella frame.

A rosette may be fixed concentrically to the free end of the said sleeve and covering the said cup shaped member in the spread-out position of the said umbrella ribs. A second sleeve may be slidably and rotatably mounted on the free end of the said pivot pin and abutting on the outer end of the said flanged sleeve, a hand grip mounted on the outer end of the said second sleeve, and operative connecting means connecting the said second sleeve to the said pivot pin may be provided converting a rotary motion imparted on the said grip into an axial motion thereof. For example the said second sleeve may have a helical slot into which engages a lateral projection of the said pivot pin, recesses being provided in the lower wall of the said slot, the said lateral projection being adapted to be positioned in any of the said recesses, and a grip being mounted on the outer end of the said second sleeve, the inner end of the said second sleeve abutting on the outer end of the said flanged sleeve.

The said attachment means may be mounted on at least some of the said umbrella ribs, or alternatively to the said cup shaped member. In the latter case they may be ribbons fixed to the bottom of the said cup shaped member, adapted to tie the said head gear to the head of a person.

In order that the invention may be clearly understood and readily carried into effect, an embodiment thereof will now be described by way of example with reference to the accompanying drawings, in which:

Fig. 1 is a lateral elevation of the umbrella frame structure in the closed position, with the fabric covering omitted;

Fig. 2 is a longitudinal section of the said frame structure, partly broken off, in the closed position;

Fig. 3 is a lateral elevation of the said structure in the unfolded condition.

Fig. 4 is a longitudinal section of the said frame structure, partly broken off, in the unfolded condition;

Fig. 5 is a transverse section along the line 5—5 of Fig. 2;

Fig. 6 is a perspective view of the said upper sleeve on a larger scale;

Fig. 7 shows the head gear according to the invention in the position for use, on a smaller scale.

The head gear according to the invention comprises a cup-shaped member **10** open on top and having a bottom **11**, a circumferential wall **12**, and a central pivot pin **13** projecting upwardly from the said bottom **11**.

On the said pivot pin **13** two cylindrical sleeves **20** and **30** are arranged slidably, one above the other. The lower sleeve **20**, the height of which is slightly larger than that of the wall **12** of the cup **10**, carries at its upper edge a rosette **21**, the diameter of which is slightly larger than that of the cup **10**. The lower end of the said sleeve **20** has a flange with an annular groove **22**, open outwardly, into which an annular wire clip **23** is inserted which is drawn through holes in the inner ends of angularly bent umbrella ribs **40**. This flange having the annular groove **22**, forms an inner crown of the umbrella structure from which the umbrella ribs **30** project star-shape, emerging through axial slots **14** on the upper edge of the wall **12** of the cup **10**, which accordingly forms the cup-shaped member of the umbrella structure. Outside the cup **10** the umbrella frame ribs **40** are bent downwardly at an obtuse angle.

In order to prevent the umbrella frame ribs **40** from leaving the said slots **14** in the wall **12** of the cup **10** in the upward direction, an annular wire clip **15** is attached around the upper margin of the cup.

The upper sleeve **30** is covered almost over its entire length by a grip body **31**, for example of spherical shape. The said sleeve **30** has a slot **32** which in its lower portion runs along a generatrix, and in its upper portion is formed helically. The lower wall of the said helical slot portion is provided with rest recesses **33** (Fig. 6).

In a radial bore **16** of the pivot pin **13** there is mounted a lateral projection **17**, which engages into the slot **32** of the upper sleeve **30**.

In the position of the components according to the Figs. 1 and 2, i. e. with the grip **31** pulled up, the outer portions of the umbrella ribs **40** extend downwardly in the direction parallel to the pivot pin **13** past the cup **10**. To this umbrella ribs **40** an umbrella fabric **41** is stitched (Fig. 7).

By depressing and turning the grip **31** fixed to the upper sleeve **30**, the aforesaid components assume the position according to Figs. 3 and 4 so that the umbrella fabric **41** is stretched out. According to the tension desired the lateral projection **17** may be positioned in one of the recesses **33** of the slot **32**. In the position according to Figs. 3 and 4 the rosette **21** rests on the rim of the cup **10** and overlaps the same so that no rain water can penetrate into it.

By turning the grip **31** in the opposite direction and pulling the same and the sleeve **30** upwards, the umbrella ribs **40** are again tilted downwardly into the position according to the Figs. 1 and 2, the sleeve **20** with the rosette **21** being again pushed off the said cup **10**.

The device described is moreover provided with means which allow the attachment of the spread-out umbrella frame as a head gear on the head of a person. For this purpose the attachment members may either be fixed to the umbrella ribs **40** by means of holders **42** (Fig. 1),

or on the bottom **11** of the cup **10** by means of a screw **18** (Fig. 3).

The attachment means fixed to at least some of the umbrella ribs **40** by the aid of the holders **42** are rings of spring wire **43**, by the aid of which the arrangement illustrated can be attached for example to a hat or to the head proper.

According to Fig. 7 the said attachment means are ribbons **19** fixed to the bottom of the cup-shaped member **10** by means of the said screw **18** and adapted to tie the said head gear to the head of a person. On the supporting rings **43** as well as at the underside of the cup **10**, pads may be provided in order to prevent any painful pressure when wearing the device.

The guide slot **32** closed at both ends of the upper sleeve **30** for the transverse pin **17** could be replaced, if desired, by a helical slot of another shape or by a high-pitch thread connection between the axle pin **13** and the sleeve **30**.

The supporting rings **43** could be replaced by supporting or attachment members of a different kind, for example by stays or spring clamps.

By the aid of the screw **18** the whole appliance could be mounted on another carrier, if desired, as an auxiliary umbrella. Preferably the ribs of the umbrella portion can be constructed telescope-shape in order that they may be shortened in the condition of non-use.

The appliance described accordingly forms a head gear giving protection from rain, which can be attached as an umbrella on the head. The fabric may be replaced by artificial plastic sheet material, if desired.

While I have herein described and illustrated in the accompanying drawings what may be considered a typical and particularly useful embodiment of my said invention, I wish it to be understood that I do not limit myself to the particular details and dimensions described and illustrated, for obvious modifications will occur to a person skilled in the art.

What I claim is:

1. A head gear affording protection from rain, comprising in combination a foldable umbrella frame, a covering attached to the said umbrella frame, attached means adapted to secure the said umbrella frame in the spread out condition to the head of a person, the said umbrella frame including ribs, a flanged sleeve to which the said ribs are articulated at their inner ends, a cup-shaped member having a bottom, a fixed pivot pin projecting centrally upward from the bottom thereof and having a plurality of spaced apart slots on the upper rim portion thereof, the said ribs passing star-shape through

and being bent downwardly immediately outside slots of the said slotted rim and resting in collapsed position on the lower wall portions of the said slots, the said sleeve being mounted on the said pivot pin shiftable up and down thereon, the said sleeve when moved downwardly carrying with it the inner ends of said ribs and turning the said ribs about the lower wall portions of the said slots in the rim of said cup-shaped member as their fulcrums and thus opening the umbrella frame.

2. A head gear as claimed in claim 1, comprising in addition: a rosette concentrically fixed to the outer end of the said sleeve and covering the said cup shaped member in the spread out position of the said umbrella ribs.

3. A head gear as claimed in claim 1, comprising in addition: a second sleeve slidably and rotatably mounted on the outer end of the said pivot pin and abutting on the outer end of the said flanged sleeve, a hand grip mounted on the outer end of the said second sleeve, and operative connecting means connecting the said second sleeve to the said pivot pin, converting a rotary motion imported on the said grid into an axial motion thereof.

4. A head gear as claimed in claim 1, comprising in addition: a second sleeve having a helical slot, slidably and rotatably mounted on the said pivot pin, a lateral projection of the said pivot pin engaging into the said slot, recesses being provided in the lower wall of the said slot, the said lateral projection being adapted to be positioned in any one of the said recesses, and a grip mounted on the outer end of the said second sleeve, the inner end of the said second sleeve abutting on the outer end of the said flanged sleeve.

5. A head gear as claimed in claim 1, wherein the said attachment means are mounted on at least some of the said umbrella ribs.

6. A head gear as claimed in claim 1, wherein the said attachment means are mounted on the said cup shaped member.

7. A head gear as claimed in claim 6, wherein the said attachment means are ribbons fixed to the bottom of the said cup shaped member, adapted to tie the said head gear to the head of a person.

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