Dec. 20, 1938. M. D. MYERS 2,140,647

UMBRELLA TO BE WORN ON HEAD

Filed May 27, 1937

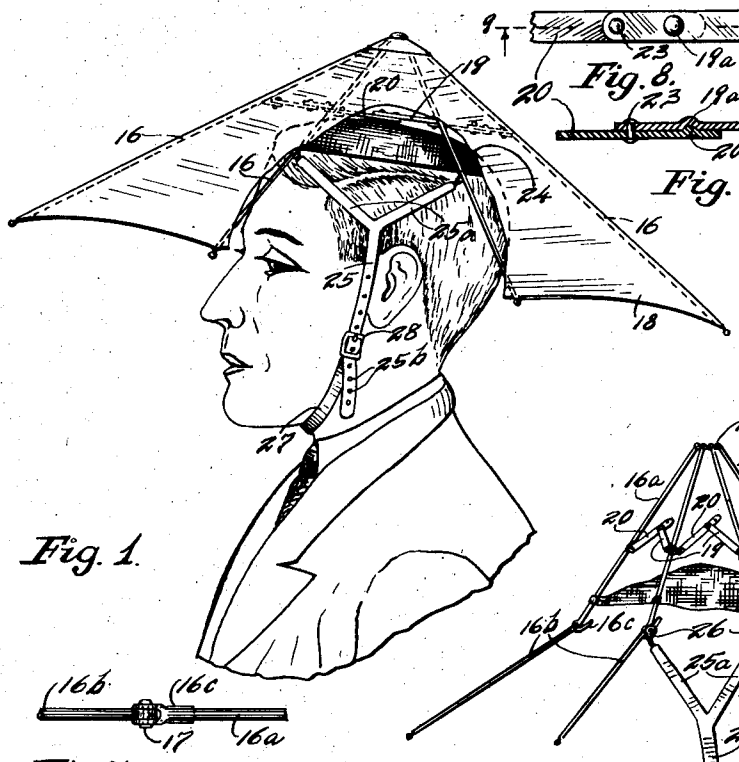


Fig. 1.

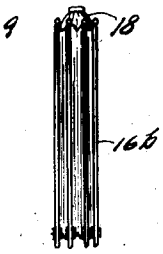


Fig. 4.

Fig. 8.

Fig. 9.

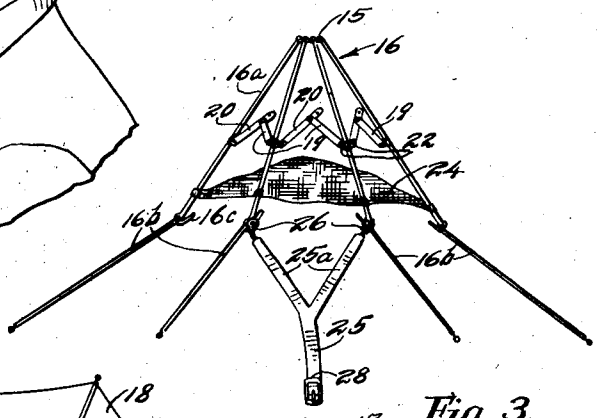


Fig. 3.

Fig. 7.



Fig. 6.

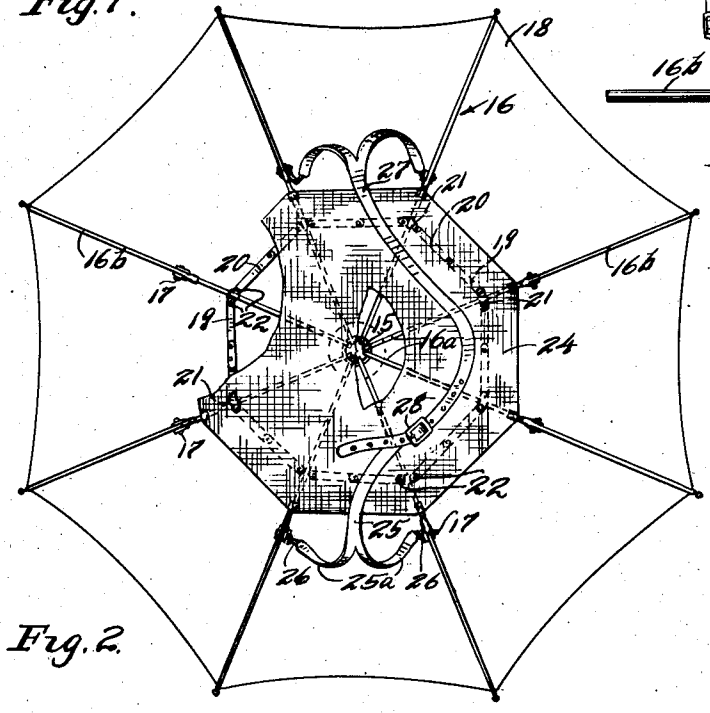


Fig. 2.

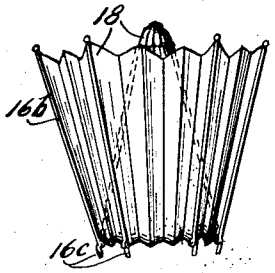


Fig. 5.

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Patented Dec. 20, 1938 2,140,647

UNITED STATES PATENT OFFICE

2,140,647

UMBRELLA TO BE WORN ON HEAD

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Application May 27, 1937, Serial No. 145,076

6 Claims. (Cl. 2—177)

This invention relates to a device forming a rain and sun shield of the umbrella type, and while the invention may have various applications it particularly is directed to a device adapted to be worn on the head of the wearer.

Many people do not like to carry an umbrella on account of its bulk. It is a common occurrence for people to be caught in the rain when there is no umbrella available. On many occasions it is desirable to have a rain or sun shield of the umbrella type when it would not be convenient or comfortable to hold an umbrella over the head. Such occasions occur when people are viewing various games or contests in uncovered places, and when they are out on the water in small boats which have no covering. It is desirable therefore, to have some small compact device which can be easily and quickly extended and used as a rain and sun shield or as an umbrella.

It is an object of this invention, therefore, to provide a simple and efficient device which can be folded into very small space and which can be easily and quickly extended to form a shield or umbrella, and be conveniently and comfortably worn upon the head.

It is another object of the invention to provide a device forming a shield or umbrella adapted to be worn upon the head, the same comprising a collapsible and extensible frame and covering therefor, means for holding the frame extended, means for engaging the head of the wearer, and means extending under the chin of the wearer for holding the device in position.

It is a further object of the invention to provide a device forming a shield or umbrella, the same having a plurality of radially extending ribs secured to a common member at one end, a covering for said ribs, means for holding said ribs in diverging relation with the upper surface of the cover in convex form, said ribs being foldable upwardly at points substantially midway of their ends so that said device may be folded into a package having a length substantially equal to one half the length of one of said ribs.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawing in which like reference characters refer to similar parts throughout the several views and in which:—

Fig. 1 is a perspective view of the device shown in place on the head of the wearer, some parts being broken away;

Fig. 2 is a bottom plan view of the device in extended position;

Fig. 3 is a view in front elevation of the frame of the device in partly folded condition with some other parts;

Fig. 4 is a view of the device in folded condition;

Fig. 5 is a partial view of the device in elevation in partly folded condition;

Fig. 6 is a view in side elevation of one of the rib joints;

Fig. 7 is a top plan view of said rib joint;

Fig. 8 is a top plan view of one of the toggle link joints; and

Fig. 9 is a vertical section taken on line 9—9 of Fig. 8.

Referring to the drawing, a device is shown comprising a frame having a central member 15 having a circular outline and which is illustrated as an annular member or ring of small diameter and made of a small rod or wire. A plurality of ribs 16 are provided, and these have one of their ends apertured and member 15 passes through said apertures in all of said ribs so that said ribs have one of their ends connected to member 15 in circumferentially spaced relation, and as shown in Figs. 2 and 3, ribs 16 are arranged to extend from member 15 in radial diverging relation. Each rib 16 is arranged to fold at a point substantially midway of its ends and for this purpose is provided with a joint comprising a pivot 17 connecting the divided portions of said rib. One portion 16*a* of the rib has a bifurcated end 16*b* between the portions of which is received the end of the other portion 16*b* of the rib pivot 17 extending through both portions and being shown as a headed rivet. Portion 16*b* has an extension 16*c* thereon which engages one side of portion 16*a* when the rib is in rectilinear form and limits further movement of portions 16*a* and 16*b*. The portions 16*a* are apertured at their other ends and a cover 18 is provided which will be secured to the ends of the portion 16*a* and to member 15. Cover 18 will be of some strong yet light and waterproof material, and if desired, may be fastened at other points to the ribs 16. A pair of toggle links 19 and 20 are disposed between each pair of adjacent ribs 16, the same being connected to portions 16*b*. Each portion 16*b* has an equal oblong clip or link 21 secured thereto and the ends of links 19 and 20 are pivotally connected to link 21 by the headed rivets 22. Links 19 and 20 are pivotally connected together by pivots 23. Link 19 extends some distance beyond pivot 23 and is formed

with a projection 20a at one side adapted to be received in a snap into a depression 19a in link 19 when the toggle links are straightened. There will be some resiliency in said links so that when they are thus moved to straightened position they will be so held by engagement of portions 19a and 20a. It will be apparent that when all of the toggle links are in straightened position that the frame will be in extended position. At this time the upper surface of the ribs and the upper surface of cover 18 will be in convex form as shown in Fig. 1. A fabric member 24 of polygonal form is secured to the ribs 16 and preferably to portions 16b some distance below the toggle links 19 and 20. Member 24 will be of strong net or some strong open work material. A strap 25 has branch portions 25a connected by suitable clips 26 to the ribs 16 and said clips 26 may be secured by some of the rivets 17. Strap 25 is provided with a plurality of holes 25b. A similar strap 27 is likewise secured to the pair of ribs 16 opposite this to which strap 25 is secured. Strap 27 is provided with a buckle 28, which buckle is engaged by strap 25. Straps 25 and 27 are adapted to pass under the chin of the wearer, and along the sides of his head as shown in Fig. 1.

In operation, wnen the device is to be carried or transported and not in use, it will be folded into small form by breaking and folding the toggle links 19 and 20. Rib portions 16a can then be moved into close relation swinging about their connection with member 15. The rib portions 16b will then be folded upwardly to lie closely adjacent to portions 16a. The cover 18 will fold in between the ribs as will also the member 24. The straps 25 and 27 will also be folded inside of said ribs. When so folded the device occupies very small space and will appear substantially as shown in Fig. 4. It can then be carried in a pocket of the wearer's clothing if desired. When the device is to be used the ribs 16 will be folded into rectilinear positions and the toggle links 19 and 20 will be straightened. As above described, toggle links 19 and 20 snap into their straightened position and are resiliently maintained in this position. The device can then be placed over the head and member 24 will contact the head of the wearer and support the device. The device can be further firmly held in position by engaging the strap 25 with buckle 28 and drawing the same to fairly tight position. The wearer may have member 24 contact his head, or if he prefers, said member can engage the top of his hat. This will depend largely of course, on the type of hat being worn. When the device is in the position shown in Fig. 1 it forms a very efficient umbrella or shield for deflecting the rain, and can also be used as a sun shield.

From the above description it is seen that applicant has provided a very simple and efficient device, and one which may be very conveniently carried in collapsed condition. The ribs 16 and the toggle links 19 and 20 may be made of very light material such as aluminum, so that the device will have very little weight. The device can very quickly be placed in collapsed or extended position and the wearer is assured of always being ready for rain. It is apparent that the device will have a very high degree of utility for the purpose intended.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention, which generally stated, consists in a device capable of carrying out the objects above set forth in the parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:—

1. A rain and sun shield adapted to be worn on the head having in combination, an annular member of small diameter, a plurality of ribs having their ends secured in circumferentially spaced relation to said member and extending radially therefrom, said ribs being foldable intermediate their ends, a covering secured to the upper side of said ribs, foldable means connecting said ribs and adapted to be moved into rectilinear form to hold said ribs in diverging relation with said cover extended, means secured to the underside of said ribs for engaging the head of the wearer to support said device, and means secured to said ribs and extending under the chin of the wearer for holding said device in place.

2. An umbrella device adapted to be worn on the head having in combination, a member of substantially circular form and of small diameter, a plurality of ribs having their ends pivoted in circumferentially spaced relation to said member and diverging therefrom radially, said ribs being foldable upwardly at points substantially midway of their ends, a cover secured to the upper side of said ribs having its upper side convex when said ribs are extended, toggle links between adjacent ribs and secured thereto adapted to be straightened to hold said ribs in extended position, a member of open work fabric material secured to the underside of said ribs adapted to engage the head of the wearer to support said device and adjustable means secured to said ribs and extending under the chin of the wearer for holding said device in place.

3. The structure set forth in claim 2, said last mentioned means comprising straps having diverging portions secured to said ribs and adapted to be connected under the chin of the wearer.

4. A rain and sun shield device having in combination, a collapsible and extensible frame comprising ribs arranged in circumferentially spaced and diverging relation, a cover extending over said ribs, toggle links extending between and connected to adjacent ribs adapted to be straightened to hold said frame in extended position and collapsible with said frame, and means carried by said ribs for engaging the head of the wearer for supporting said device.

5. The structure set forth in claim 4, and straps having diverging end portions secured to spaced ribs of said frame and having interengaging portions relatively adjustable and adapted to pass under the chin of the wearer to hold said device in place.

6. A rain and sun shield device having in combination, a collapsible and extensible frame comprising ribs arranged in circumferentially spaced and diverging relation, a member at the top of said device to which all of said ribs are pivotally connected at their ends, a cover extending over said ribs, rigid members connected respectively at their ends to said ribs and swingingly connected at their inner ends and adapted to be moved to straightened position to hold said frame in extended position and collapsible with said frame, means engaging the head of the wearer for supporting the device thereon and means for holding said device upon the head of the wearer.

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