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1,590,867

S. C. VINCENT

UMBRELLA

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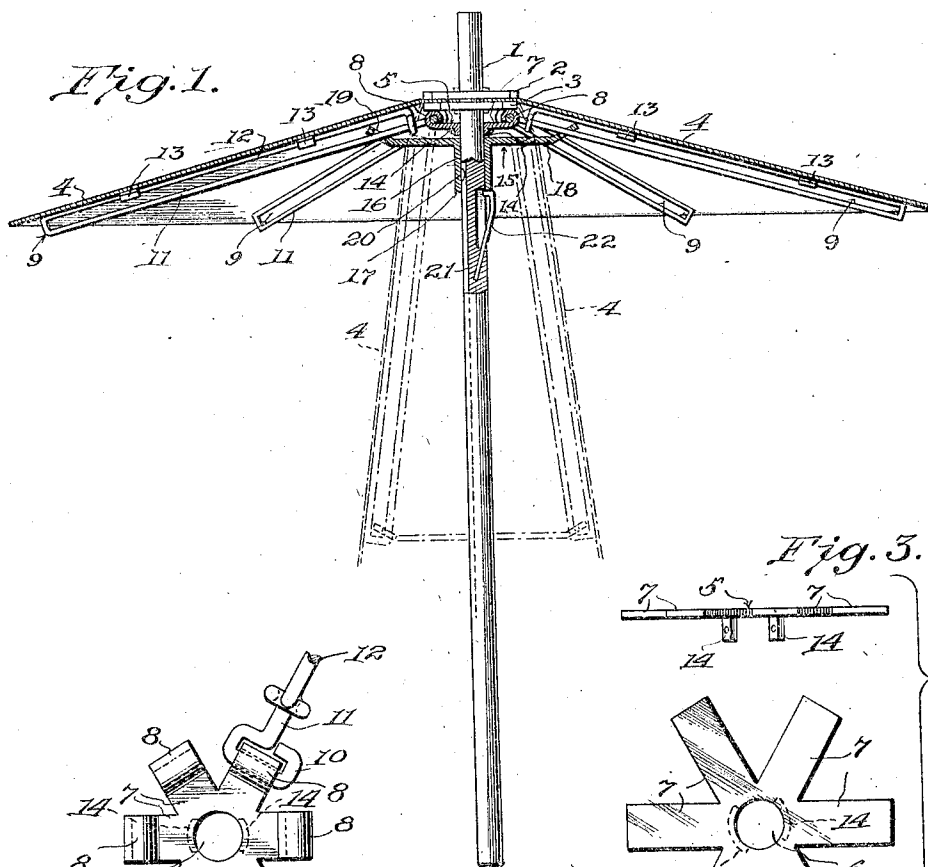


Fig. 1.

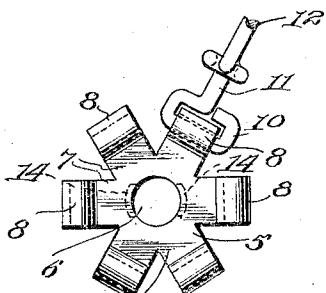


Fig. 2.

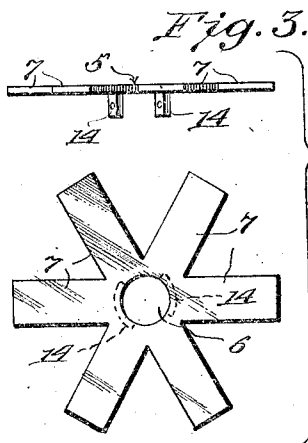


Fig. 3.

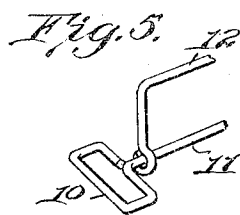


Fig. 4.

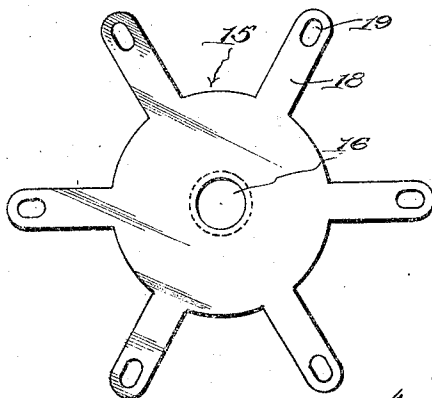


Fig. 5.

Inventor
S. C. Vincent

By *Wm. A. Schum*
Attorney

UNITED STATES PATENT OFFICE.

SIDNEY C. VINCENT, OF BALTIMORE, MARYLAND.

UMBRELLA.

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This invention relates to improvements in umbrellas.

The object of the invention is to provide a simple, durable and inexpensive structure, which will embody an arrangement of parts whereby the umbrella may be readily raised and lowered, and held in closed position when lowered.

A further object of the invention is to provide a novel rib construction, and a spreader or expander cooperating therewith in such a way as to accurately expand or open the canopy, while at the same time preventing it from twisting or binding, as is so frequently the case in raising umbrellas of ordinary construction. It is well known that an objection to the umbrella of ordinary form, wherein the ribs are secured to the underside of the canopy and are expanded or opened by means of connecting rods hinged at one end to the slide, and at the other to the ribs at points about intermediate of the ribs, is that in such construction it is necessary in many cases to shake the closed umbrella to bring the ribs and connecting rods in position for raising the umbrella. Hence, as above stated, my object is to improve the rib and expander or spreader construction in such a way as to completely overcome the objections mentioned.

In the drawings illustrating the invention,

Fig. 1 is a central section of a raised umbrella constructed in accordance with my invention, part of the rod or handle being broken away, the folded position being shown in dotted lines.

Fig. 2 is a perspective view of the rib holder.

Fig. 3 is a plan view and side elevation of the blank from which the rib holder is formed.

Fig. 4 is a plan view of the spreader or expander.

Fig. 5 is a perspective view of the inner end of a rib.

Referring to the drawings, the numeral 1 designates the umbrella rod, which is of integral construction. Near the upper end of the rod is secured in any suitable manner a disk 2, and below it also suitably secured to the rod is a second disk 3, and secured between these two disks is the central portion of the canopy or cover 4. The numeral 5 designates the rib holder which is pro-

vided centrally with an opening 6 for the passage of rod 1, and this holder is further provided with a plurality of radially arranged comparatively broad ears 7, each ear being provided with an eye 8 at its end, the eye being of a width corresponding to the width of the ear. The numeral 9 designates the ribs, and each rib is provided at its upper end with a loop 10, which is received in the eyes 8 of the ears 7. The description of one rib will serve as a description for all, since the ribs are identical.

The rib is bent to form two rods, a guide rod 11, and a rod 12, which lies against the underside of the canopy or cover of the umbrella, and is secured thereto at intervals by clips or strips 13, as clearly shown in Fig. 1.

The material of the rib holder 5 is preferably thin metal, and in stamping the same out or manufacturing it, I provide for two oppositely disposed integral ears 14, and by means of brads or short tacks these ears are secured to the umbrella rod, thus securing the rib holder firmly in place and preventing the same from turning.

The numeral 15 designates the spreader or expander. This is in the form of a flat metallic disk having a central opening therethrough, as indicated at 16, from which the sleeve 17, said sleeve corresponding to the similar part in umbrellas of ordinary construction, and which is as is usual, gripped by the hand in raising or lowering the umbrella. The disk part of the spreader is provided with a plurality of radial arms 18, each provided at its end with an elongated slot 19, through which the rod 11 of the ribs passes, and by which the ribs are guided accurately in their up and down movement. To prevent turning of the spreader upon the rod, I provide the sleeve 17 with an internal lug 20, which is received in a long groove 21, made in the side of the rod. Hence the spreader is accurately guided in its movement on the rod, and consequently, as stated, must guide the ribs accurately in opening and closing the umbrella.

At a point a little below the disk 15 when in raised position, I provide the usual spring catch 22 adapted of its own accord to engage the under edge of the sleeve 17 to keep the umbrella raised, and to be ma-

nipulated by the thumb in the usual manner to force it within its pocket to permit the umbrella to be lowered.

It will be observed that by reason of the extraordinary width of the eyes 8, and the corresponding width of the loops 10 of the ribs, which loops are embraced by the eyes, the rib as a whole, is kept from twisting out of shape by torsional action, thus keeping the two arms of the ribs parallel, and one aligned vertically above the other at all times. This arrangement provides for the easy, uninterrupted passage of the spreader upon the lower rod of the rib in raising and lowering the umbrella.

I desire it understood that I do not limit myself to the material of which the umbrella is made, either as to the canopy or the other parts, or to the manner of attaching the various disks to the umbrella rod.

It will be noted that the construction of the umbrella described is such that it may be very cheaply made, and indeed so cheaply that it may be adapted for emergency use, as when a person is caught in a sudden shower, the expense being so insignificant that the article may be thrown away after such use. For instance—the canopy or top of the umbrella may be made of paper treated with paraffin or analogous waterproofing material of sufficient strength and durability to serve a temporary purpose.

Claims:

1. An umbrella comprising a rod, a hanger disk secured to the upper part of the rod and formed with a plurality of eyes radially arranged thereon, ribs having loops at their inner ends engaging said eyes, said ribs being formed of upper and lower

parallel members, a disk-like spreader having apertures through which extend the lower parallel members of the ribs, said spreader being slidable on the rod and slidable on said lower members of the ribs, whereby when the spreader is raised or lowered, corresponding movement will be imparted to the ribs.

2. An umbrella comprising a rod, a hanger disk secured to the upper part of the rod and provided with a plurality of broad outstanding ears, each ear being provided with an eye of a width corresponding to the ear, ribs having loops at their inner ends of substantially the width of the ears and embraced, one loop in each eye, each rib being formed of a single piece of wire bent upon itself to form upper and lower parallel members, a spreader disk having apertures therein through which said lower members are slidable in the operation of raising and lowering the umbrella, said disk being adapted to serve as a means for holding the umbrella in expanded position, and also as a retaining means to keep the ribs in proper position when the umbrella is folded.

3. An umbrella comprising a rod, a hanger disk secured to the upper part of the rod, ribs pivoted to the hanger disk and each formed of two parallel members, a spreader slidable on the rod and having constant engagement with the lower parallel member, said spreader serving to hold the ribs in expanded position when the umbrella is raised, and also to hold said ribs in proper position when the umbrella is closed.

In testimony whereof I affix my signature.

SIDNEY C. VINCENT.