Aug. 16, 1949. A. F. MOTE 2,479,250

UMBRELLA

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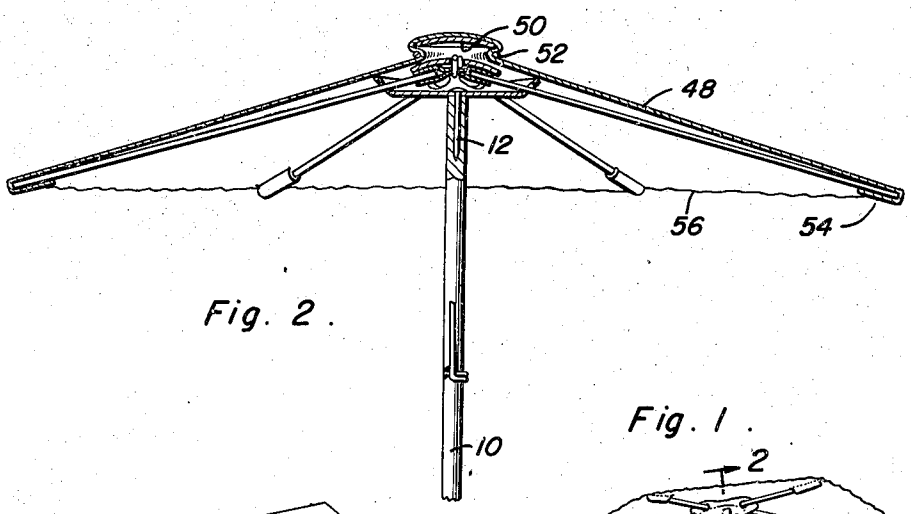
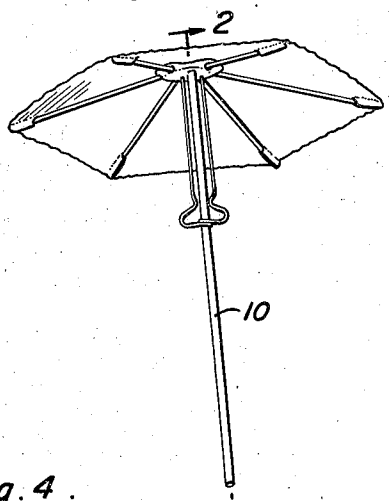


Fig. 2.

Fig. 1.



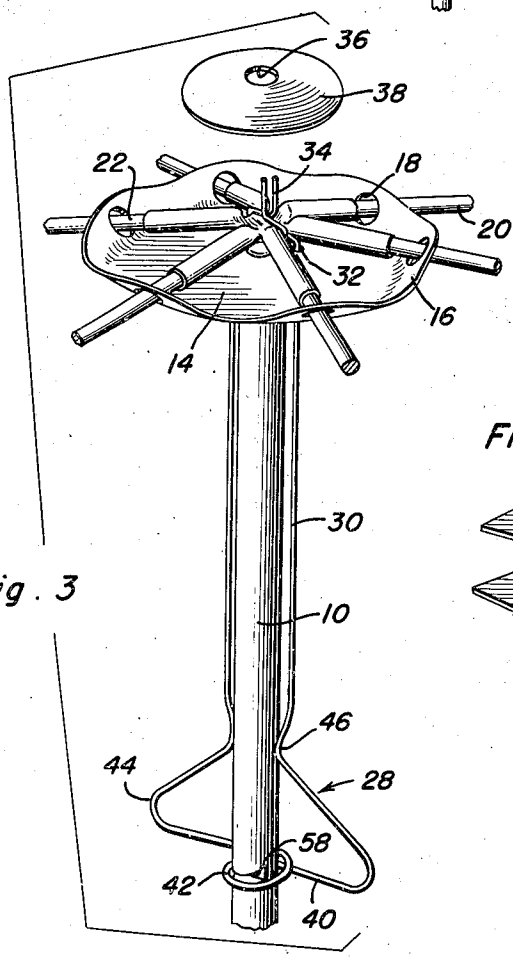
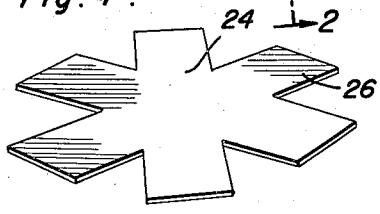


Fig. 3

Fig. 4.



Allen F. Mote
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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2,479,250

UMBRELLA

Allen F. Mote, Casper, Wyo.

Application June 9, 1948, Serial No. 31,866

4 Claims. (Cl. 135—20)

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This invention relates to new and useful improvements in umbrellas, and the primary object of the present invention is to provide a plurality of hinged arms which support a flexible or pliable covering, and embodying novel and improved means for retaining the said arms spread relative to each other whereupon the covering will be extended for use.

Another important object of the present invention is to provide an umbrella including a handle, a guide carried by the handle, a group of arms slidably carried by the guide, and novel and improved means pivotally connecting the upper terminals of the arms to each other and for raising and lowering the upper terminals of the arms relative to the guide for selectively spreading and closing the arms toward the handle.

A further object of the present invention is to provide an umbrella that is extremely small and compact in structure and which is particularly designed for use as a toy for children.

A still further aim of the present invention is to provide a toy umbrella that is simple and practical in construction, strong and reliable in use, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the present umbrella, and showing the same in an open position for use;

Figure 2 is a longitudinal vertical sectional view taken substantially on the plane of section line 2—2 of Figure 1, and with parts of the handle broken away and shown in section;

Figure 3 is a group perspective view of the supporting frame that is used in conjunction with the present invention, and with parts of the covering supporting arms broken away; and

Figure 4 is a perspective view of the hinge or pivot means that is used in conjunction with the present invention for securing the upper terminals of the covering supporting arms relative to each other.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents an elongated substantially cylindrical handle or support to the

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upper end of which there is secured by a suitable fastener 12 a guide plate 14 having an undulated marginal flange 16 the raised portions of which are formed with apertures or guide openings 18.

Slidably and loosely engaging the guide openings 18, is a plurality of circumferentially spaced or radially disposed supporting arms 20 the upper terminals 22 of which are pivoted or hinged together by a pliable sheet of material 24 having radially disposed arms 26 that embrace the upper terminals 22 of the supporting arms 20. Obviously, the radial arms or portions 26 of the material 24 may be provided with adhesive material so that the same will adhere to the outer periphery of the arms 20 or the same may be secured to the inner terminals of the arms 20 by fasteners or by stitching or the like. It is preferred that the said material 24 be of an adhesive substance such as friction tape however any suitable means could be employed in order to hinge the upper terminals of the arms 20 to each other.

The numeral 28 represents an actuating member generally, comprising a substantially U-shaped element the leg portions 30 of which slidably engage diametrically disposed apertures 32 formed in the central portion of the guide 14. The upper free extremities 34 of the member 28 are bent toward each other, as shown best in Figure 3 of the drawings, to provide portions that overlie the material 24 and more particularly the central portion of the material 24.

The said member 28 is preferably formed of wire construction so that the upper terminals 34 thereof will be resilient so that the same will yieldingly engage a central aperture 36 provided in a cap or disk 38. The function of this disk 38 will later be more fully described.

The web portion 40 of the member 28 is formed with a loop 42 that is slidably received on the handle 10, and the legs 30 are turned inwardly as at 44 and upwardly as at 46 to provide bearing portions at 46 that will engage the outer periphery of the handle 10.

Supported by the arms 20, is a flexible or pliable covering of preferably waterproof material 48 the central portion of which engages a removable, substantially concavo-convex plate 50 that is retained relative to the covering 48 by a split band or resilient member 52. Pockets 54 are integrally formed at the marginal edge or undulated edge 56 of the covering 48, and these pockets 54 engage the free terminals of the supporting arms 20.

In practical use of the present invention, when the web portion 40 of the member 28 is raised or pushed upwardly on the handle 10, toward the

guide 14, the upper terminals 22 of the supporting arms 20 will be raised or pushed upwardly from the guide 14 and the free terminals of the supporting arms 20 will be pivoted inwardly toward the handle 10. It being understood, that the undulated flange portion 16 of the guide 14 is inclined relative to the main portion of the guide 14 so as to permit such a movement of the arms 20.

During the raising of the upper terminals 22 of the supporting arms 20, the disk 38 will bear upon the central portion or plate 50 carried by the covering 48, to raise the central portion of the covering 48 and thus permit the marginal edge 56 thereof to be moved with the free terminals of the arms 20 inwardly toward the handle. In this position the device is collapsed for carrying, handling, storage or shipment thereof.

When it is desired to open the present invention for use, the web portion 40 of the actuating member 28 is pulled downwardly on the handle 10, and the loop 42 engages a notch 58 provided in the handle 10 thus retaining the upper terminals 22 of the supporting arms 20 lowered relative to the guide 14 and the free terminals of the supporting arms 20 spread outwardly relative to each other and from the handle 10, as shown best in Figures 2 and 3 of the drawings.

Although the intended use of the present umbrella is for children it is obvious that the same could be constructed of a larger size for use of the same as a protective means for adults during inclement weather. Also, by further increasing the size and dimension of the present umbrella, the same may be employed as a sun shield for bathers and the like or it may be installed in association with tables for outside cafes, thus providing an article that is quickly and readily actuated to an open position for use or which is moved to a collapsed position.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. An umbrella comprising a handle, a guide carried by the handle, a plurality of arms slidably carried by said guide, said arms including upper terminals disposed above said guide, means pivoting the upper terminals of said arms together, a substantially U-shaped actuating member, said guide having openings slidably receiving the leg portions of said U-shaped member, the terminals of said U-shaped member engaging the upper terminals of said arms, a loop provided in the web portion of said U-shaped member slidably engaging said handle, and means carried by said handle engaging said loop for holding said U-shaped member against sliding movement.

2. An umbrella comprising a handle, a guide carried by the handle, a plurality of arms slidably carried by said guide, said arms including upper terminals disposed above said guide, means pivoting the upper terminals of said arms together, a substantially U-shaped actuating member, said guide having openings slidably receiving the leg portions of said U-shaped member, the terminals of said U-shaped member engaging the upper terminals of said arms, a loop provided in the web portion of said U-shaped member slidably engaging said handle, and a notch provided in said handle engaging said loop to hold the U-shape member against sliding movement.

3. The combination of claim 2 wherein said means pivoting the upper terminals of said arms together includes a sheet of pliable material.

4. An umbrella comprising a handle, a guide fixed on one end of said handle and having an undulated marginal flange, the raised portions of said undulated flange having guide openings, a plurality of arms slidably engaging the openings in said undulated flange, said arms having upper terminals disposed above said guide, means hinging the upper terminals of said arms together, a pliable covering carried by said arms, means for raising and lowering the upper terminals of said arms, and means for locking the upper terminals of said arms in a lowered position relative to said guide and the free terminals of said arms disposed outwardly from said handle.

ALLEN F. MOTE.

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