May 27, 1952 H. H. MULLEN 2,598,588

SHIFTABLE SHADE

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Fig.1

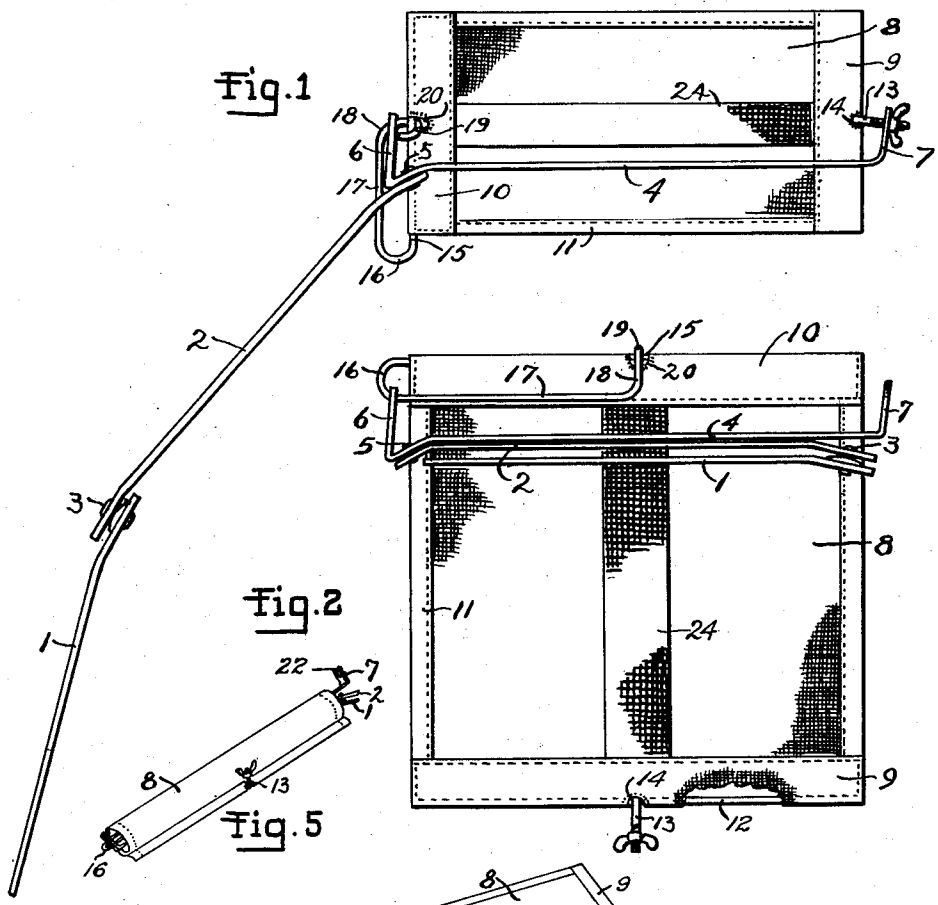


Fig.2

Fig.5

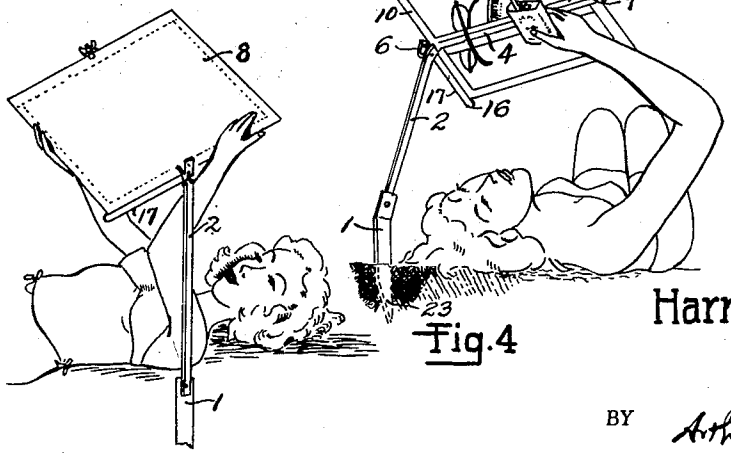


Fig.4

Fig.3

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SHIFTABLE SHADE

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2 Claims. (Cl. 135—5)

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This invention relates to adjustable out-door shades, canopies or awnings to shelter any part of the body from the rays of the sun.

Its primary purpose is to provide a simple, durable, efficient and inexpensive means to furnish protection from over-exposure to sun, or to give shelter from wind or from wind-blown sand, as when at a beach or at a picnic.

A further object is to provide a light, strong, and easily adjustable means for holding a flexible fabric shield in any desired position.

Another object is to construct the shelter so that the rigid, metallic portions can be folded closely together and rolled within the fabric into a very compact form for carrying or for storage.

In the drawings showing a preferred embodiment of the invention, Figure 1 is a front elevation of the device in a normal erect position and with the awning member tilted; Fig. 2 is plan view of the device with the metal members folded and ready to be rolled within the fabric; Fig. 3 is a perspective showing a user adjusting the shade; Fig. 4 is a rear view showing the use of the pocket-strap on the lower face of the shade; and Fig. 5 is a perspective view of the device rolled into a compact bundle.

The supporting framework is shown as comprising uprights 1 and 2, preferably consisting of flat strips of aluminum, connected by a pivot 3 to permit one to be folded parallel with the other, and a transverse member 4, connected by the pivot 5 with the member 2 near the end remote from the member 1. The member 4 is shown as bent near each end to form supporting portions 6 and 7, both projecting from the same face of the strip.

A flexible awning member 8 of any suitable fabric is shown as having end hems 9 and 10 and side hems 11. Within the hem 9 and extending across substantially the entire width of the member 8 is a spreader 12, preferably formed of a stiff wire of stainless steel. Near its center, this straight wire passes through a screw-threaded tension member 13 which enters the hem at an opening 14 in its outer edge. Within the hem 10, is another spreader, also of the same kind of wire, having a straight portion 15 extending across the member 8 along the inside of the outer edge of the hem, the wire of the spreader being cut in a semicircular loop at 16 and having a straight portion 17 returning parallel with the portion 15 nearly to the center of the hem where it is bent sidewise toward the hem at 18 and is formed with a hook or loop 19 encircling the portion 15 of the spreader

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through an opening 20 in the outer edge of the hem 10.

The wire of this spreader passes through an opening near the outer end of the projecting portion 6 of the frame member 4. As seen in Fig. 1, in the operative position of the awning member 8, the end of this portion 6 lies opposite the opening 20 in the center of the hem between the bend 18 and the hook or loop 19. The projecting portion 7 at the other end of the member 4 is engaged near its end by the tension member 13 on which is a winged thumb-nut 21. The outer end of the portion 7 is preferably bifurcated as seen at 22 in Fig. 5 to permit the end of the tension member to be swung sidewise into engagement with this supporting member without removal of the winged nut. The nut is unscrewed outward to the end of the tension member and the fabric is pulled toward the end of the member 4 to let the bifurcated end slide between the inner face of the nut and the hem 9 onto the tension member. Any slack remaining in the fabric after the parts are thus sprung together can be taken up by turning the nut on the stem of the tension member. This will increase the friction and tend to hold the member 8 at any angle to which it may be adjusted.

In Fig. 2, the parts are shown as ready for rolling up to form a package. The tension member has been slipped out of engagement with the portion 7 and the end of the portion 6 has been slid along the wire section 17 from the bend at 18 to the bend at 15. The supporting member 2 has been swung on the pivot 5 parallel with the transverse supporting member 4 and the upright member 1 has been swung on the pivot 3 parallel with both members 2 and 4. When rolled together within the fabric, a small, neat, and compact bundle results as shown in Fig. 5.

The lower outer end of the upright 1 is preferably pointed as indicated at 23 in Fig. 4 in broken lines for easier thrusting into ground or said.

With the awning member 8 held spread out, the upright 1 can usually be set to hold it to provide shade from the sun or shelter from wind or wind-blown sand wherever needed, but the pivots 3 and 5 and the pivotal connections of the spreaders of the member 8 with the member 4 enable the user to swing the parts into many positions with slight effort without changing the location or tilt of the member 1.

A pocket-strap 24 of a suitable heavy material

may be secured at its ends to the awning member 8 when the sewing is done to form the end seams. The space between this strap and the awning material provides a handy place for sunglasses, cigarettes, brushes, combs or sun tan lotion to hold them protected from sand, sun, or rain.

The member 4 is shown in Fig. 1 as substantially horizontal and the upright member 1 as tilted to hold the canopy 8 off to one side of its support, though it is evident that in practice, the canopy will be placed wherever desired to secure the sort of protection needed at the time. In Fig. 1, the member 8 is tilted at about 45 degrees to the horizontal and seen from one side, while in Fig. 2, its full size is seen in plan. The tilt of about 15 degrees of the member 1, in Fig. 1, holds the member 2 at about 45 degrees to the horizontal, and this difference of about 30 degrees is brought about by bending each of the members 1 and 2 at a little distance from the pivot 3 to the same amount of about 15 degrees, so that when folded to the position shown in Fig. 2, their major straight portions lie parallel. Similarly, the members 2 and 4 are bent at about 22½ degrees at a little distance from the pivot 5. In swinging the members about their pivots from the folded position to the extended position, these angular differences are added. The effect of these added inclinations enables a small tilt of the upright 1 to carry the member 4 and the awning member 8 practically level with a certain extra space to give greater freedom of movement for the user.

While a specific embodiment of the invention has been illustrated for purposes of the disclosure, it is my intention to cover all changes and modifications of the example of the invention herein described which do not constitute departures from the spirit of what is claimed.

I claim:

1. A shelter comprising a flexible awning member having a hem at each end, and a relatively rigid metallic spreader member having a straight portion extending along the awning member within one of the end hems and being curved outward from the side of the awning member to form a loop having one side extending to a point opposite the center of the edge of the hem and into engagement with the straight portion of the spreader, and a supporting member slidable upon the loop from a position of engagement opposite the center of the hem and in which the supporting member is at substantially right angles to the hem, to a position in which it lies substantially parallel to the hem and with its point of engagement with the loop outward from the end of the hem a second relatively rigid spreader member within the hem at the opposite end of the flexible member from the first hem, and means connecting the central portion of the second spreader member with the supporting member when the flexible member is extended, to adjust the longitudinal tension of the flexible member.

2. In a canopy, a flexible member, a rigid element extending transversely of the flexible member and having at each end supporting portions lying outward from the end of the flexible member, the flexible member having a relatively rigid spreader secured at each end thereof, the spreader at one end having a sliding connection with its adjacent supporting element to permit movement into parallelism therewith and the spreader at the other end having a threaded tension member with a nut thereon engageable with its adjacent supporting element whereby to adjust the tension of the flexible member from end to end.

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