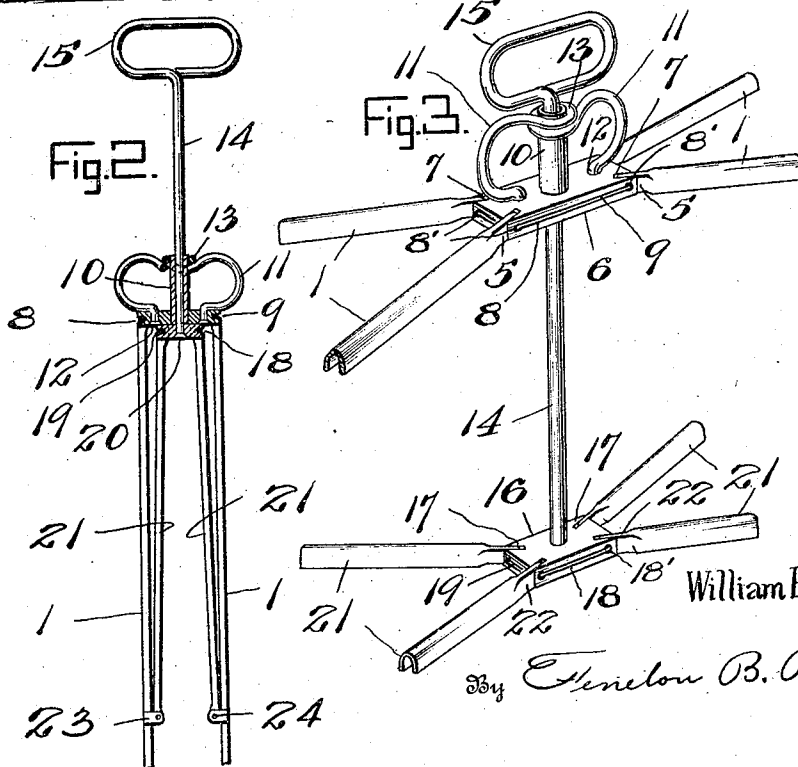
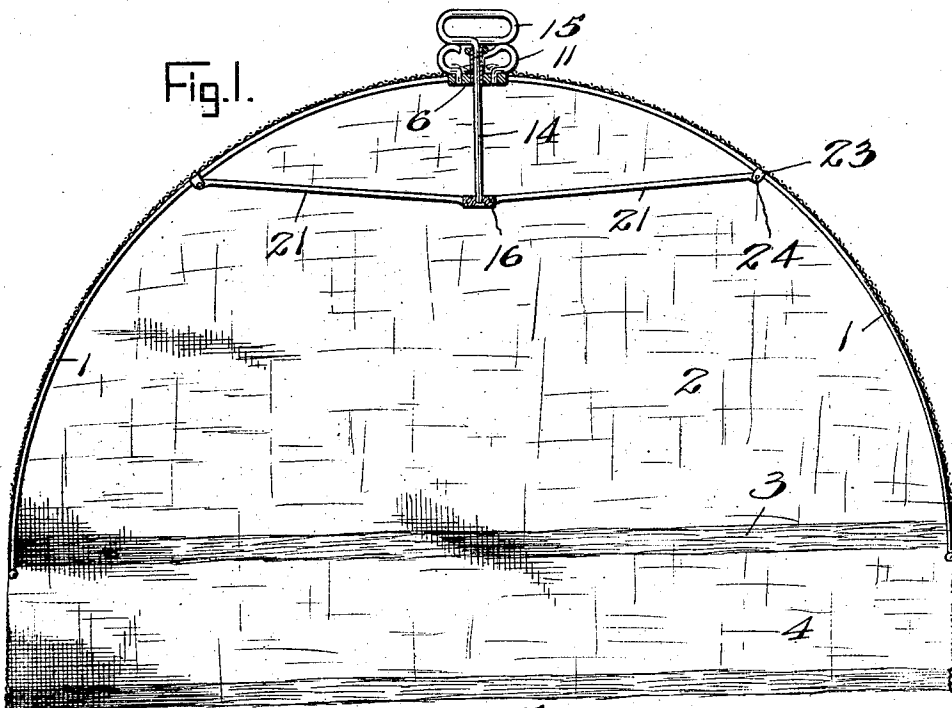


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CANOPY.
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CANOPY.

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To all whom it may concern:

Be it known that I, WILLIAM H. BEEHLER, a citizen of the United States of America, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Canopy, of which the following is a specification.

My invention relates to improvements in canopies designed especially as a mosquito or fly screen for use in connection with baby carriages, beds, etc., for the protection and comfort of babies and children.

The primary object of the invention is the provision of a device of the character noted which will be comparatively light in weight, economical in cost of production, simple in construction and operation, manipulated with facility, and when folded or compacted will occupy small space and may be suspended or hung up when not in use, thus providing a convenient and desirable article of this nature which performs its required functions in a comparatively perfect manner.

With the above objects in view the invention consists in certain novel features of construction, and combinations and arrangements of parts as will hereinafter be more fully described and claimed.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention in which the parts are combined and arranged according to the best mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a longitudinal, vertical, sectional view of the device, with the canopy extended or open.

Figure 2 is an enlarged view in elevation, partly in section, showing the operating parts of the device in closed position.

Figure 3 is a still further enlarged view of the operating parts of the device, shown in perspective, in position assumed when the canopy is open and ready for use.

In the preferred form of the invention as illustrated in the drawings, the device is of rectangular shape, formed as a dome-like structure, and provided with four radiating ribs designated by the numeral 1, fashioned in the nature of the usual umbrella or parasol ribs, to support the covering or canopy

2 of mosquito netting or other suitable material. At the free ends of the ribs, which when the canopy is open or distended are disposed in rectangular formation, a tape or border 3 is provided for retaining the free ends of the ribs and maintaining the correct shape of the canopy, and below the border tape a ruffle 4 of ornamental character imparts a finished appearance to the canopy. The body of the canopy may be of any suitable material as bobbinet, or other netting, and the border or restraining tape 3 is of flexible material of sufficient strength and durability for holding the resilient ribs to their proper positions.

The inner ends of the four ribs are flattened and perforated as at 5 in customary manner, and pivoted to the base member 6, which is a flat, rectangular metallic block, of comparatively large dimensions which is fashioned from a blank rod or bar, by shearing into the required lengths, and the four corners of the base block are notched as at 7 on diagonal lines radiating from the center of the base, to receive the flattened vertically disposed, perforated ends 5 of the ribs. Along the exterior ends and sides of the block or base are provided grooves 8 which stop adjacent the corners of the block and terminate in angularly disposed openings 8' passing through the bifurcated or notched corners of the block, in order to accommodate the retaining wire 9. The wire 9 is laid in the grooves and passed through the openings 8' and the perforated rib-ends 5, and passing around the exterior of the base, but through its perforated corners, retains the ends 5, permitting them to have a pivotal motion on the wire in the notches of the base when the canopy is opened or closed.

The base is formed rigidly with the tubular runner or slide sleeve 10, preferably of metal and secured to the base in suitable manner to form an integral structure, and these parts or elements, the base and runner, are joined and reinforced by duplex loops 11, formed of wire and disposed perpendicularly to the base along the longitudinal center thereof, with its ends 12 firmly secured to the base. At 13 a central coil is formed in the wire about the runner or slide sleeve, and in this manner a well braced, rigid struc-

ture is provided, the two loops affording finger holds or handles for use in opening and closing the canopy.

The runner is slidable on the center rod 14, which is fashioned with an integral loop 15 at one end, beyond the slide or runner, which, in addition to providing an abutment to limit the movement of the runner, also forms a hand piece complementary to the duplex loops of the runner, thus enabling the operator to grasp the respective loops with the fingers, and protecting the fingers from the danger of pinching while operating the device.

Below the runner and its base, and at the end opposite the loop 15, the rod 14 has a head 16 rigidly secured thereto, the head being a counterpart, although smaller in dimensions, of the base of the runner. The rectangular head 16 has four notched corners 17, and exterior grooves 18, terminating in angular passages or openings 18', for the wire 19, and the lower end of the rod 14 is passed through a central opening in the head and riveted thereto as at 20 in Figure 2, to form a rigid joint between the rod and its head.

The head 16 is connected with the supporting ribs 1 through the instrumentality of four distending short ribs 21, which radiate from the four corners of the head and are fashioned with flattened, perforated ends 22 slipped into the notches 17 of the head, and retained there by the wire 19 which passes around the grooved head, through the openings 18' and through the ends of the short ribs 21 to pivot the ribs to the head. The short ribs are connected to the longer, supporting ribs by means of the attaching clips secured to the latter ribs, and the pivotal connection is made at 24.

In operating the canopy to open it for use or close it the duplex loops 11 and the single loop 15 are grasped by the fingers and thumb respectively of a hand, and by drawing the duplex loop and the single loop together, the runner is drawn toward the loop 15, sliding upwardly on the rod 14. In consequence of this action and simultaneously therewith the four supporting ribs are spread apart to the position shown in figures 1 and 3, and the distending or short ribs 21 are stretched from position substantially parallel with the rod 14, to horizontal position perpendicular thereto, and the continued movement of the rod through the runner projects the head 16 to position where the pivoted ends 22 of the short distending ribs are beyond the plane in which the four pivots 23 are located. In this position the plane of the pivots 23 is between the head 16 and the base 6, and the short ribs decline from their outer ends to their inner ends which are pivoted to the head, as in Figures 1 and 3. The relative movement of the

runner and rod is limited by contact of the runner with the upper loop of the rod, and therefore the head 16 is permitted to pass only a restricted distance beyond the plane of the pivots 23. The passage of the head through this plane is accompanied by a snapping action due to the resiliency of the supporting ribs, and by the elasticity of these ribs the canopy frame is held in distended position. To close the canopy, the loops are grasped as described, the rod is pulled with relation to the runner, drawing the head 16 toward the base 6, and as the head passes through the plane of the four pivots 23, the resiliency of the supporting ribs imparts a snap action to the rod and it is quickly forced through the runner to the position of Figure 2. The specific construction of the duplex loops and the single loop which permit the insertion of the fingers and thumb therethrough, protects these members from pinching or being caught between the parts of the rod and runner as the device is snapped, and render the operation of the device quite simple.

From the above description taken in connection with my drawings it is evident that I have provided a light, durable, compact device which may be manipulated with facility and forms a comparatively perfect instrumentality for performing its required functions. In construction and operation the device is simple and effective. The rectangular shape of the runner base and the head on the rod permit these members to be sheared from blanks into the required lengths by an inexpensive process of manufacture and considerable saving in material, time and labor for their production. The completed canopy is capable of ornamentation by the use of different colored ribbons extending around the edge of the body of the canopy, and such colors as light blue and pink may preferably be used. When not in use the canopy, after being folded, may be suspended by means of the loop at the upper end of the rod 14.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is—

1. The combination in a canopy with four supporting ribs and complementary distending ribs pivoted thereto, of a center rod having an end loop and a head at the opposite end of the rod, pivotal connections between the distending ribs and said head, a runner on said rod having a base pivotally connected with the supporting ribs, and duplex reinforcing loops forming finger holds and connecting said runner and base, said head being located below the plane of the pivotal connections between the supporting and distending ribs when the canopy is open.

2. The combination with supporting ribs

and complementary distending ribs pivoted thereto, of a center rod having a rectangular flat head with notched corners and an integral loop at the opposite end of the rod, 5 pivotal connections between said head and the distending ribs, a runner having a rectangular head pivotally connected with the supporting ribs and an integral wire forming duplex loops connecting said runner and its head, the head on the rod being located 10 below the plane of the pivotal connection between the supporting ribs and distending ribs when the latter are distended.

WILLIAM HENRY BEEHLER.