

No. 676,621.

Patented June 18, 1901.

H. GERIKE.
 UMBRELLA SUPPORT.
 (Application filed Sept. 7, 1900.)

2 Sheets—Sheet 1.

(No Model.)

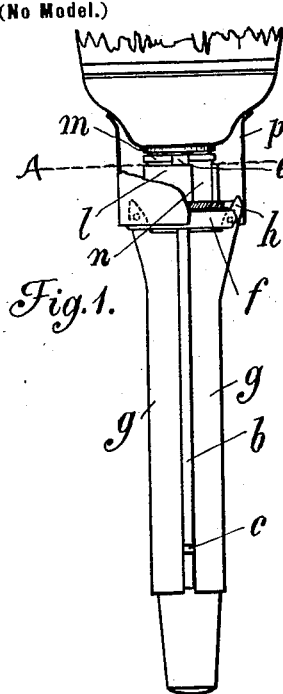


Fig. 1.

Fig. 7.

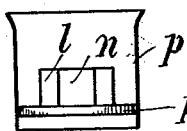


Fig. 6.

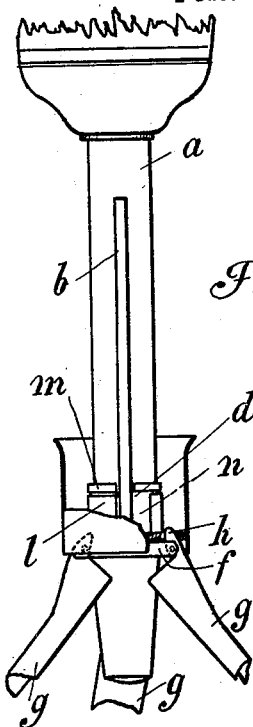
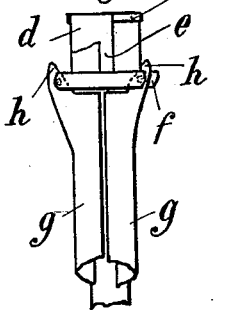


Fig. 2.

Fig. 3.

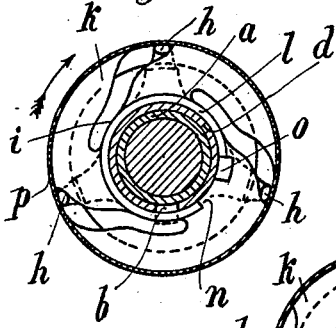


Fig. 5.

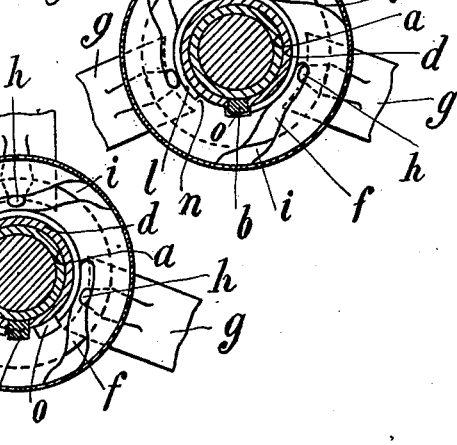
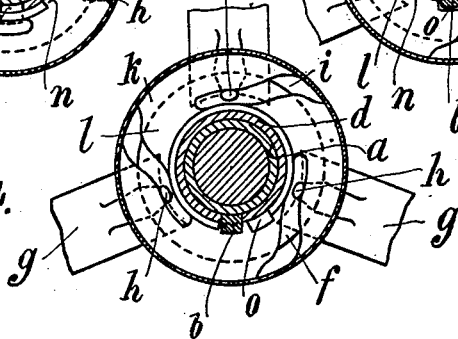


Fig. 4.



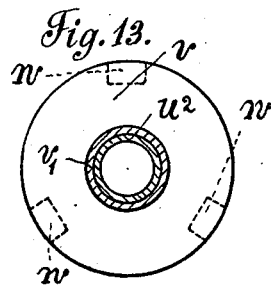
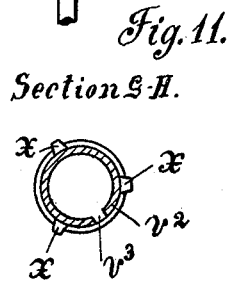
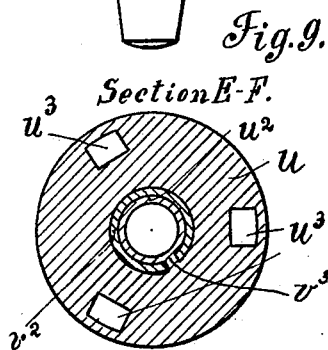
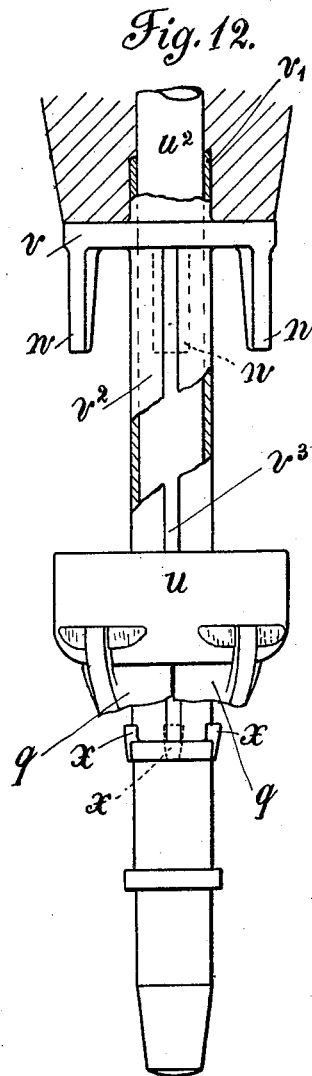
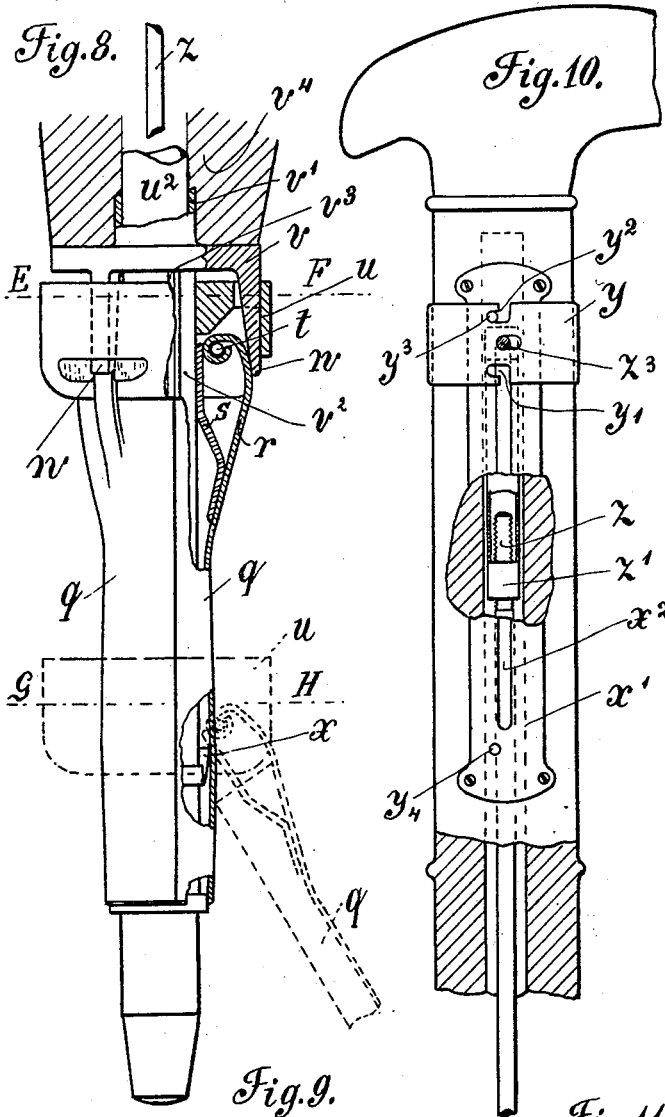
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 UMBRELLA SUPPORT.
 (Application filed Sept. 7, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

HUGO GERIKE, OF BERLIN, GERMANY.

UMBRELLA-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 676,621, dated June 18, 1901.

Application filed September 7, 1900. Serial No. 29,295. (No model.)

To all whom it may concern:

Be it known that I, HUGO GERIKE, a subject of the Emperor of Germany, residing at Berlin, Germany, have invented certain new and useful Improved Means for Supporting Umbrellas, Sunshades, and the Like in a Standing Position, of which the following is a description.

The present invention relates to means for supporting umbrellas, sunshades, and the like in a standing position when closed; and it consists of the details of construction hereinafter set forth, and particularly pointed out in the claims.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is an elevation, partly in section, of the lower end of an umbrella provided with the supporting means. Fig. 2 is a similar elevation showing the supporting-legs extended and in their operative position. Fig. 3 is a sectional plan on line A B of Fig. 1, showing the supporting-legs closed onto the lower end of the umbrella-stick; Fig. 4, a similar plan showing the legs spread apart, but not yet locked in position; Fig. 5, a further plan showing the position of the parts when the legs are locked in position. Fig. 6 is a detail elevation of the leg-carrying sleeve, and Fig. 7 a detail section through the locking-ring. Figs. 8 to 13 show a modified form of the invention, Fig. 8 being an elevation, partly in section, of the lower part of the umbrella; Fig. 9, a section on line E F of Fig. 8; Fig. 10, an elevation, partly in section, of the handle of the umbrella, showing means for operating the supporting-legs from the said handle; Fig. 11, a cross-section on line G H of Fig. 8; Fig. 12, a sectional elevation showing the position of the parts at the lower end of the umbrella-stick when the legs are in their operative position, and Fig. 13 a plan view of the lug-supporting ring at the lower end of the umbrella.

Referring to Figs. 1 to 7, the lower end of the umbrella-stick is provided with a metallic sleeve *a*, having a vertically-disposed guide-bar *b* thereon, which does not extend quite the whole length of the end of the stick projecting below the umbrella and is provided

at the lower part thereof with a horizontal recess *c*. Upon this sleeve *a* is adapted to slide vertically up and down a ring *d*, having a vertical slot *e*, guided on the said guide-bar *b*. The lower part of the ring *d* is enlarged, as at *f*, and carries the horizontally-disposed pivots of three or more legs *g g*, having outwardly-extending lugs *h h* at their upper ends, as hereinafter particularly referred to. The pivots of the ring *f* extend through these lugs *h*, and the latter extend upwardly beyond the said pivots a short distance. The legs, three of which are shown in the drawings, are, advantageously, of hollow cross-section to enable them to properly close around the lower end of the umbrella-stick when they are drawn back and out of operation, as indicated at Fig. 1. Upon the ring *d* is mounted a second ring *l*, having a vertical slot *n*, which is broader than the guide-bar *b* for reasons hereinafter set forth. At the lower part of the sleeve *a* a horizontally-disposed annular flange *k* is provided, having three cam-slots *i* therein, into which the upper ends of the lugs *h* extend, the said ring *l* being prevented from axial movement on the ring *d* by the beading *m* at the top of the latter and by the enlargement *f* at the bottom thereof, between which two enlargements *m* and *l* it lies. The ring *k* is further provided with a recess *o*, adapted to fit over the guide-bar *b*.

The device operates in the following manner: Normally the parts are in the position shown in Figs. 1 and 3—i. e., the ring *p* and with it the flange *k* are turned so that the recess *o* is not in alinement with the guide-bar *b*, being turned around over the top of the same. The upwardly and outwardly projecting ends of the lugs *h* are in the outer ends of the cam-slots *i*, Fig. 3, so that the legs *g* lie closed onto the sleeve *a*. In order to extend the legs to support the umbrella in a standing position, the ring *p*, and with it the flange *k*, is turned in the direction of the arrow in Fig. 3 until it has reached the position in Fig. 5, when the ends of lugs *h* are at the inner ends of the cam-slots *i*, so that the legs *g* are spread out like a tripod and the recess *o* is in alinement with the guide-bar *b*, so that the two rings *d* and *l*, and with them the three legs, may now be pushed down the stick—i. e., along the sleeve *a*—until the flange *k* has reached the recess *c* at the lower end of the

guide-bar *b*. The downward stroke of the rings may be arrested at this point by any suitable stop, (not shown,) as will be readily understood. In this position of the parts the supporting-legs *g* are spread out in the operative position at the lower end of the stick, as shown at Fig. 2. The ring *p* and with it the flange *k* are now turned back slightly in the direction of the arrow in Fig. 5 until the slots *i* have attained the position shown at Fig. 4—i. e., with the lugs *h* still in the inner parts of the said slots, but with the recess *o* out of alinement with the guide-bar *b*, and consequently with the full part of the flange *k* lying in the recess *c*, and thus locking the parts in the extended position. The turning movement of the flange *k* and ring *p* will be limited at the lower end of the sleeve *a* by the sides of the slot *n* contacting with the guide-bar *b*, as will be clearly seen from Fig. 4. To close up the legs, the ring *p* is turned back until the recess *o* is in alinement with the bar *b*. Then the two rings are slid up the sleeve *a* and the ring *p* again turned back, so that the ends of the lugs *h* will be moved into the outer ends of the cam-slots *i*, when the legs will be closed onto the lower part of the stick again.

In the modification shown at Figs. 8 to 13 the legs *g* are of sheet metal bent round to fit properly onto the lower part of the stick and having their upper ends made narrower, as at *r*, and bent round to embrace the pivot *t* of a ring *u*, adapted to slide up and down on the sleeve *v*². The upper part of the sleeve *v*² is provided with a flange *v*, which is fixed to the lower end of the hollow stick *v*¹, said flange having an upper short sleeve *v'* extending into the lower end of the stick and having a number of downwardly-extending lugs *w* extending down into the upper end of the path of movement of the ends *r* of legs *g*. The ring *u* is provided with orifices *u*³ to receive the said lugs as it reaches its uppermost position. The sleeve *v*² is provided with a slot *v*³ along its length, and within the said sleeve a slide *u*² is arranged, which is connected to the ring *u* through the said slot, as will be seen from Fig. 9. The slide *u*² is tapered at its upper end and runs out in a small tube or rod *z*, extending through the stick until it reaches approximately the handle of the umbrella. The interior of the ends *r* of the legs have cams *s* mounted thereon, adapted when the ring *u* and with it the legs *g* are pushed down the sleeve *v*² to contact with a corresponding number of projections *x*, fixed to the lower part of the said sleeve *v*².

The device operates in the following manner: When the ring *u* is simply pushed down the sleeve, the cam-surfaces *s* meet the projections *x* and are pushed outwardly by the same, as indicated in dotted lines in Fig. 8. Since the ring *u* is moved by a device at the upper end of the umbrella-stick, it will be fixed in its upper and lower positions by the mechanism now to be described.

The tube or bar *z* extends up through the stick and is adjustably screwed to the end of a sleeve *z'*, provided with a radially-extending pin *z*³, extending out of the stick through a slot *x*² in the same, which may advantageously be covered by a correspondingly-slotted plate *x'*, suitably fitted to the outside of the stick. A ring *y* is adapted to slide over the said plate and is provided with a short horizontal slot, into which the pin *z*³ of the sleeve *z'* extends. The top and bottom edges of this ring *y* are provided with angular slots *y'* *y*², adapted to engage pins *y*³ *y*⁴ at the top and bottom of the plate *x'*. Thus, as will be readily understood, by slightly turning the ring *y* it will be freed from the top pin *y*³ and may be pushed down the plate, operating the ring *u*, as previously mentioned, and it may be locked in its lower position by turning the horizontal arm of the slot *y'* onto the pin *y*⁴. When the ring *u* reaches its upper position, the legs *g* will be held against the sleeve *v*² by the action of the downwardly-extending lugs or arms *w* against the rounded upper shoulders of the ends *r* of the said legs *g*.

I claim as my invention—

1. An umbrella-support consisting of the combination of a hollow stick, a ring to slide on the lower end of the same and a plug in the said lower stick end, a slot in the latter through which the said ring and plug are connected, a series of supporting-legs pivotally mounted in said ring and having outwardly-inclined cam-surfaces at the inside of their upper ends, a lug-carrying ring fast to the lower end of the stick and lugs on the same against which the said cam-surfaces act to spread the legs, when the said sliding ring is lowered, a slot in the upper end or handle of the stick and a slide within the latter having a pin to extend through said slot, a rod within the stick to couple the lower plug to the said slide, a ring around the exterior of the handle to engage and operate the pin of said slide and means for arresting the said ring in its upper or lower position substantially as described.

2. In an umbrella-support, the combination of a ring to slide on the lower end of the stick, and means for preventing the rotation of the same on said stick end, a series of legs pivotally supported in said ring and having upwardly-extending lugs, a rotary member on said ring having cam-slots in which said lugs lie, the said cam-slots being adapted to draw the lugs inwardly and throw the legs outwardly when the ring is turned, and means in connection with said rotary ring and the end of the stick to arrest all the parts in the lower position substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HUGO GERIKE.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUP.