H. V. DE WITT.

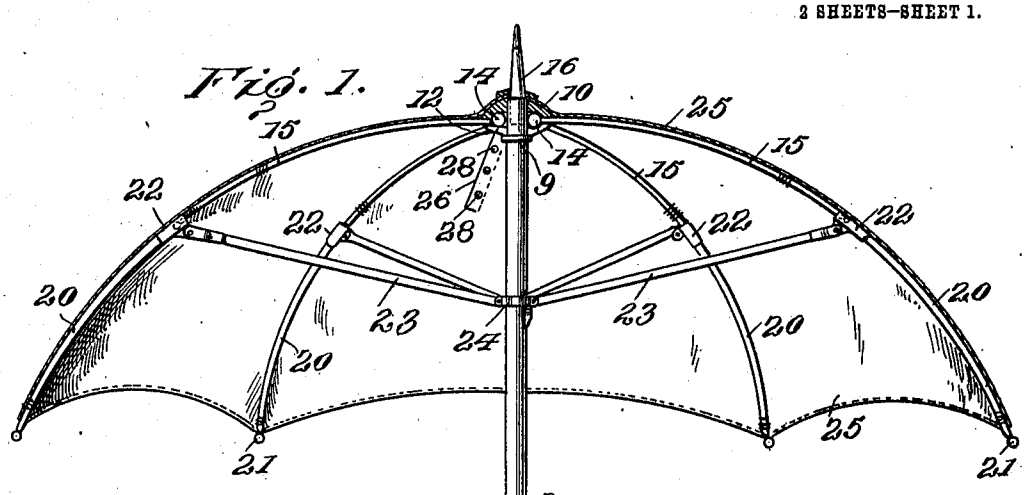
COLLAPSIBLE UMBRELLA.

APPLICATION FILED MAR. 2, 1910.

992,861. **Patented May 23, 1911.**

2 SHEETS—SHEET 1.

Fig. 1.



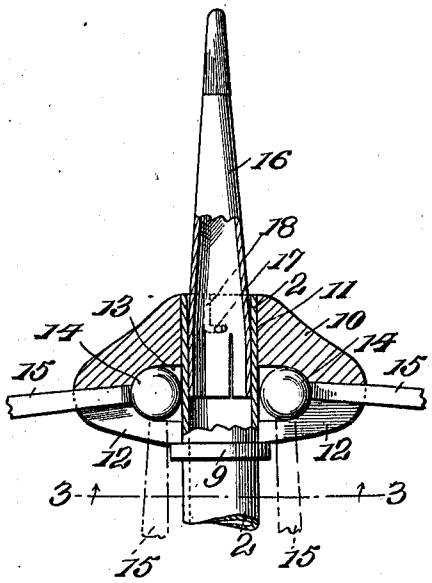
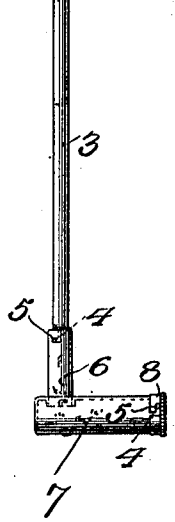


Fig. 2.



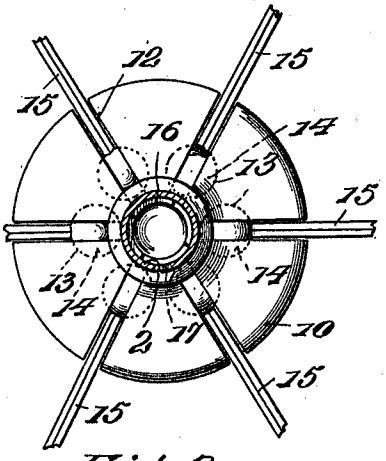


Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 4.

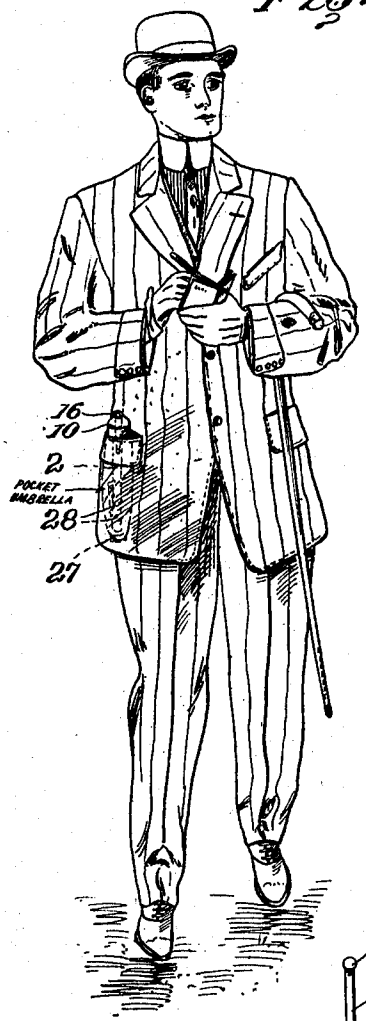


Fig. 5.

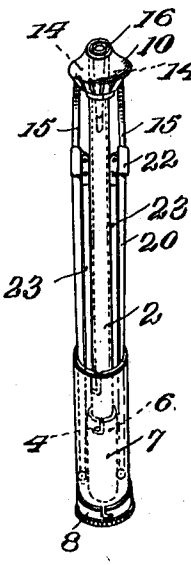


Fig. 6.

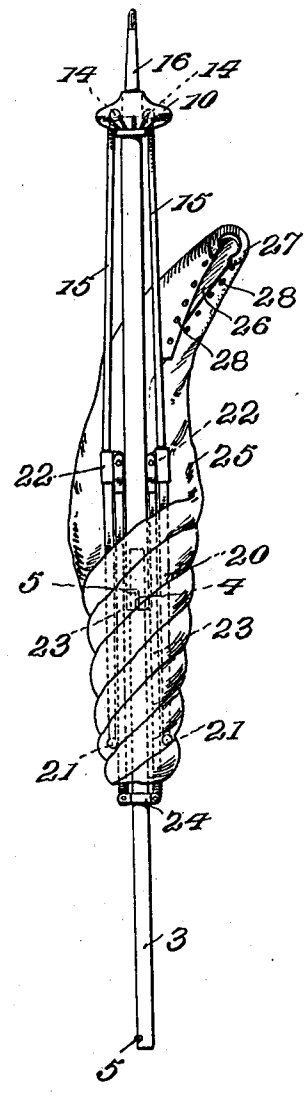


Fig. 7.

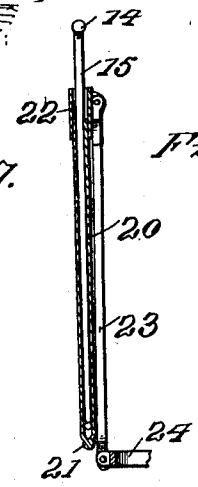
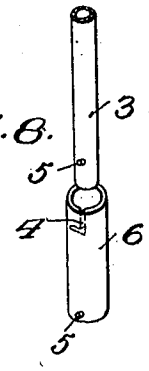


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY V. DE WITT, OF CANTON, OHIO.

COLLAPSIBLE UMBRELLA.

992,861. Specification of Letters Patent. Patented May 23, 1911.

Application filed March 2, 1910. Serial No. 546,908.

To all whom it may concern:

Be it known that I, HARRY V. DE WITT, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Collapsible Umbrellas, of which the following is a specification.

My invention relates to umbrellas, parasols and like articles, and particularly to folding or collapsible umbrellas, the object of the invention being to proivde an umbrella of this character, in which the staff or central rod of the umbrella, the handle and the ribs are all telescopic so as to reduce the umbrella, when desired, to half its ordinary length. The cover is so made that it may be partially detached from the frame of the umbrella and reversed to inclose the frame in its reduced condition.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my improved collapsible umbrella in its expanded condition; Fig. 2 is a detail fragmentary sectional view of the upper end of the central rod, the rib-engaging cap being shown in section and the reversible tip partly in elevation; Fig. 3 is a section on the line 3—3 of Fig. 2 looking in the direction of the arrows; Fig. 4 is a perspective view showing the umbrella folded so as to be easily carried; Fig. 5 is a view showing the position taken by the umbrella frame when folded; Fig. 6 is a side elevation showing the umbrella frame folded, the cover being loosened for the purpose of reversing it; Fig. 7 is a detail view showing one of the ribs in its collapsed position; and, Fig. 8 is a detail perspective view showing the bayonet joint connection between the central rod and the base of the handle.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to these drawings, 2 designates the upper section of the central rod or staff of the umbrella, this upper section being tubular and arranged to receive a smaller tubular section 3 which forms the lower section of the staff of the umbrella. The section 3 is adapted to telescope into the section 2, and in normal condition is held in its extended relation to the section 2 by forming the sections 2 and 3 with a bayonet joint, the slot 4 of which is adapted to receive a stud 5, the slot being upon one section and the stud 5 upon the other section. When the sections are extended so that the stud 5 of one section enters the slot 4 of the other section, and the sections are then rotated, it will be obvious that the two sections 2 and 3 will be held in rigidly extended condition. The lower end of the section 3 is also connected by a bayonet joint with a short tubular section 6, which section is larger than the tubular section 2, and engaged with the extremity of the short section 6 is the handle section 7 which is also tubular and larger in diameter than the section 6. One end of this handle section is permanently closed, while the other end is provided with a detachable cap 8. This cap is adapted to be removed from one end of the handle 7 and to be replaced upon the closed end of the handle, thus leaving this handle section closed at one end so that it may be slipped over the section 6 and inclose the same. The handle 7 has a bayonet joint connection with the cap 8 so that the cap will not become easily detached.

The ribs of the umbrella are attached to the upper end of the rod or staff section 2 as follows: The upper end of the section 2 is provided with the outwardly projecting annular flange 9, while the cap 10 is formed with a central tubular passage 11 which is adapted to fit over the upper end of the section 2, the lower end of the cap being closed by this plate. The cap 10 is provided with a plurality of radiating slots 12 on its under face, and the body of the cap is provided with a plurality of sockets 13 adapted to receive an enlargement 14 on the end of the rib section 15, the shank of the rib section projecting down through the corresponding radial slot 12. The sockets 13 are of course wider than the radial slots so that the ribs cannot fall out of the slots but are permitted to have a radial turning movement, in the manner usual in umbrellas. The sockets 13 open into the central passage 11 in the cap, and when the cap is removed from its engagement with the section 2, the ribs 15 may be removed by moving the enlarged head 14 thereof out through the

opening into the central passage 11. This permits the ribs to be easily replaced in case any of them are broken. It is to be understood, however, that normally, even when the umbrella is closed or collapsed, the ribs are in engagement with the cap 10. Extending into the upper end of the rod section 2 is the tip section 16. This is tapered, as usual in umbrellas, and its butt end is provided with an outwardly projecting stud 17 which will engage with an angular slot 18 formed in the upper end of the section 2. When the umbrella is in use or unfolded, the butt of the tip section 16 is inserted in the upper end of the section 2. When the umbrella is folded, however, the tip section is inverted, the tapered end being then placed within the upper end of the section 2, and the upper end of the section 3 should be disengaged by the bayonet joint. It will be seen that when the umbrella is folded, the section 3 is telescoped within the section 2, the lower end of the section being received within the section 6, and the handle 7 being removed from its engagement with the section 6, is inserted over the section 6 and extends up around the lower portion of the section 2, all as shown in Fig. 5. The umbrella is thereby reduced to less than half its ordinary length.

The ribs are made in two sections, one telescoping in the other. The section 15 is the upper section and is formed with the enlargement 14 previously described. The section 15 is only half as long as the usual umbrella rib, and the other half of the rib is formed by a metal tube 20 which is adapted to slide over and telescope upon the section 15. The outer extremity of the section 20 is provided with the usual tip 21, while the inner end of the section 20 is provided with a collar 22 having pivotal engagement with a brace 23 which is mounted upon the usual slide 24. In order to hold the section 20 in extended relation to the section 15, the section 20, or rather, the collar 22 forming the inner end of the section 20, is provided with a contracted neck, while the extremity of the section 15 is provided with an enlarged head. When the sections are extended, the contracted neck will compress the enlarged head and hold the two sections from relative movement.

The cover 25 of the umbrella has the usual form of an umbrella cover and is attached to the rib sections 20. It is, however, not attached to the rib sections 15, but the cover is split at one side, as at 26, the upper end of the cover being formed with a leather ring 27 which surrounds the upper end of the staff section 2 just above the rib sections 3. The upper portion of the cover is provided with the fastening devices or snaps 28 whereby the slit 26 of the cover may be closed. The cover is formed, as above described, so as to permit the upper portion of the cover to be turned down over the lower portion when the sections are collapsed.

It will be seen that an umbrella constructed in accordance with my invention is composed of collapsible sections, both as regards the staff or rod of the umbrella and the ribs thereof, and that these sections may be slid into one another until the umbrella is in an extremely compact form and collapsed to about half its ordinary size. In order to collapse the umbrella, it is first wrapped in precisely the same manner as an ordinary umbrella. Then the upper portion of the cover is detached, opened and turned back. The staff sections and the ribs are then telescoped into each other, the tip 16 removed and re-inserted with its butt end upward, and the returned portion of the cover is then folded around the collapsed frame, and buttoned or otherwise fastened.

The particular advantage of an umbrella constructed in accordance with my invention lies in its compactness. The umbrella is so reduced in its size that it is capable of being carried in a pocket or easily packed in a satchel. It may be easily collapsed or opened to its full extent, and is entirely effective in use.

Having thus described the invention, what I claim is:—

1. In a collapsible umbrella, a central rod, telescopic ribs made up each of an outer and an inner section, one movable upon the other, and a cover attached to the outer sections but disconnected from the inner sections, the upper portion of the cover being radially slitted to permit the cover to be folded back upon itself and around the outer rib sections when the ribs are telescoped, and fastening devices whereby the slitted portion of the cover may be held together when the ribs are expanded and the cover in place.

2. In a collapsible umbrella, a central rod, ribs formed of two telescopic sections, the inner sections being receivable within the outer sections, and a cover attached to the outer sections alone, the upper portion of the cover being slitted to permit the cover to be turned back upon itself when the ribs are telescoped, and fastening devices on the margins of said slitted portion whereby the slit may be closed when the cover is in place.

3. A collapsible umbrella having a central rod made up of telescopic sections, ribs formed of telescopic sections, and a cover attached to the outer sections of the ribs but entirely disconnected from the inner sections, the upper portion of the cover being slitted to permit the cover to be turned back upon itself, and said upper portion being provided with fastening devices whereby the slit may be closed when the cover is in place.

4. A collapsible umbrella having a central rod made up of sections sliding upon each other, ribs also formed of sections sliding upon each other, and a cover attached at its margin to the lower ends of the ribs, the upper portion of the cover being split, the margins of the cover on either side of the slit being provided with fastening devices.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY V. DE WITT. [L. S.]

Witnesses:
J. P. DE WITT,
L. A. BUCHMAN.