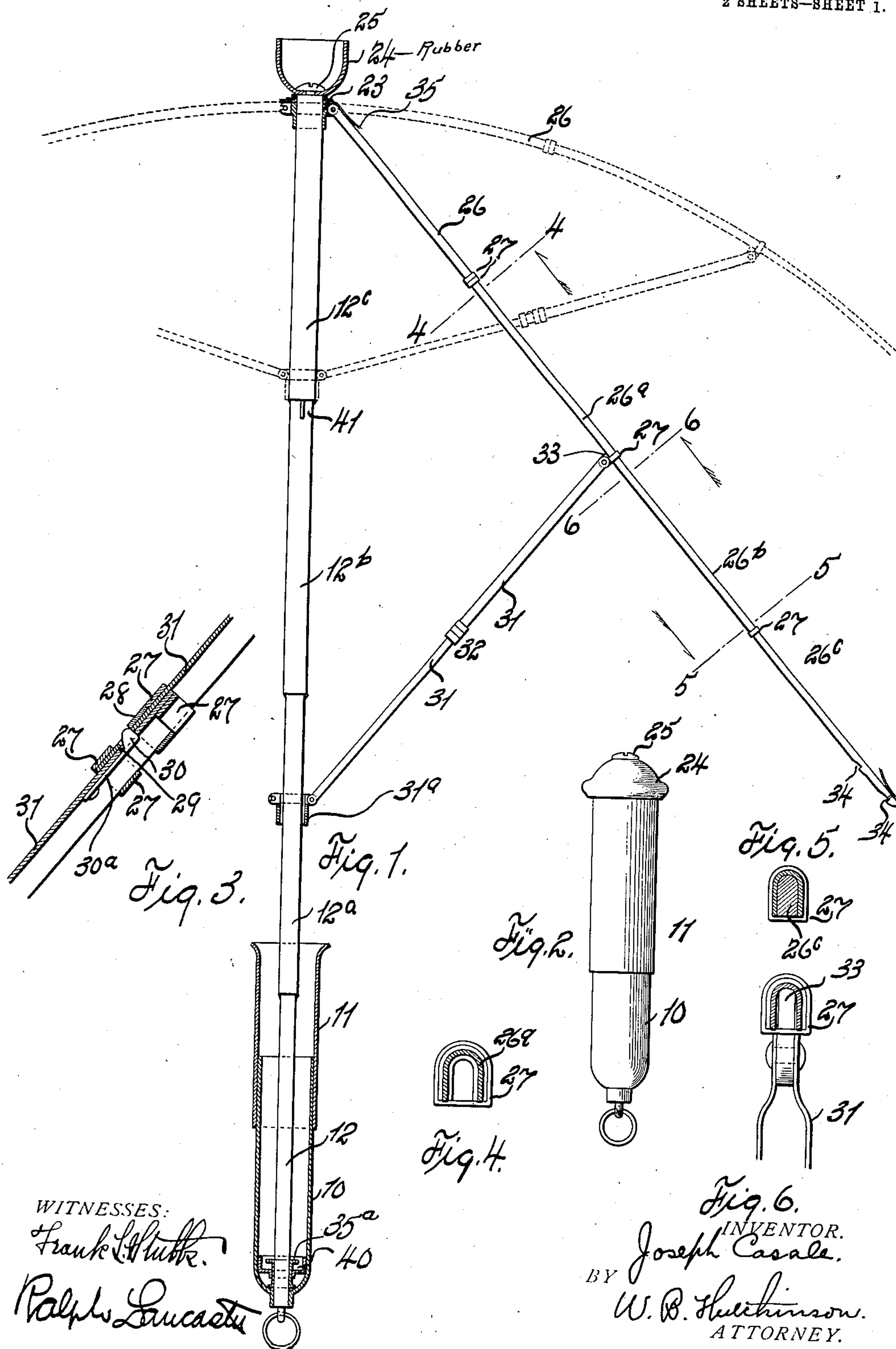


No. 868,326.

PATENTED OCT. 15, 1907.

J. CASALE.
FOLDING UMBRELLA.
APPLICATION FILED DEC. 22, 1906.

2 SHEETS—SHEET 1.

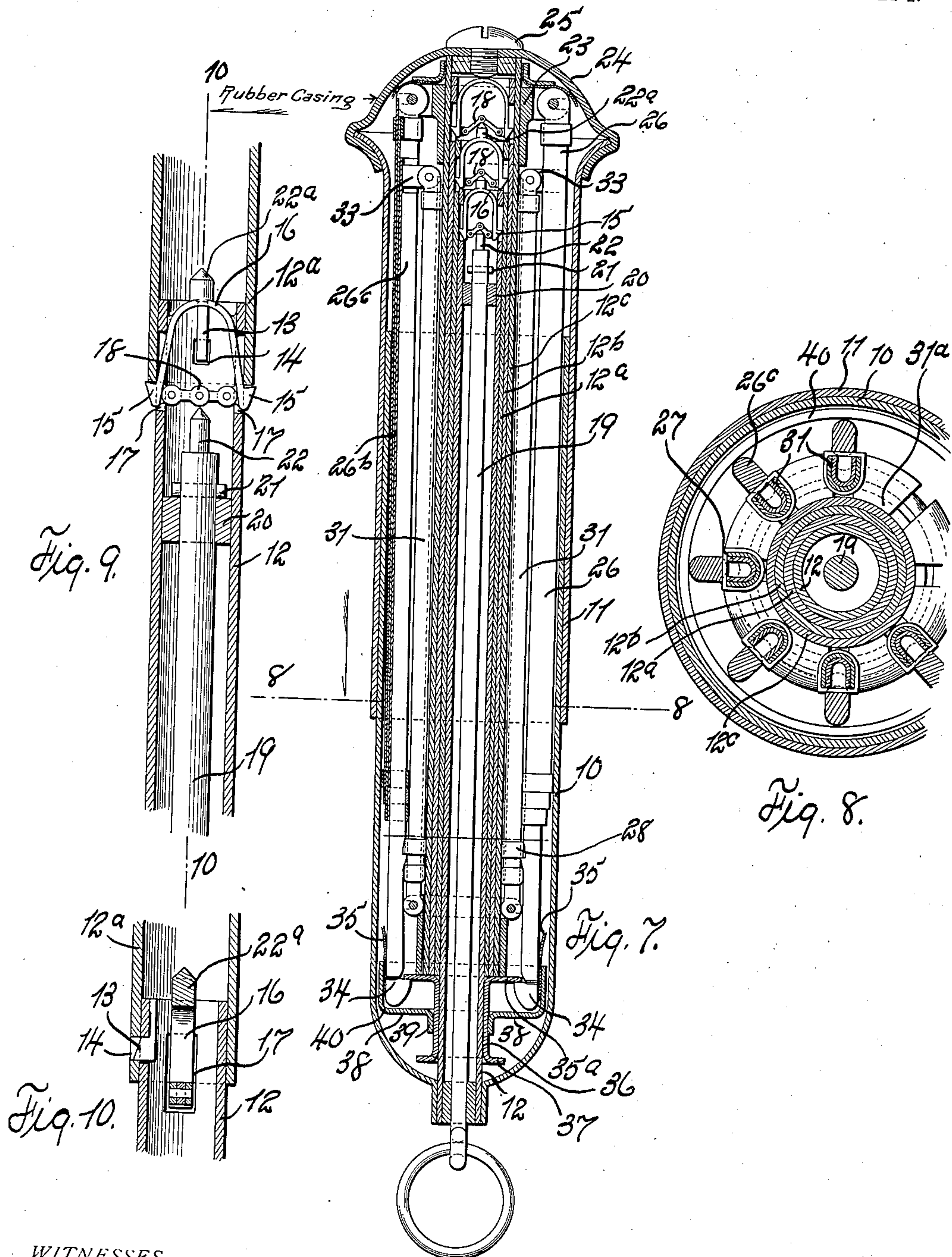


No. 868,326.

PATENTED OCT. 15, 1907.

J. CASALE.
FOLDING UMBRELLA.
APPLICATION FILED DEC. 22, 1906.

2 SHEETS—SHEET 2.



WITNESSES:
Frank L. Hutt.
Ralph Laucaster

INVENTOR.
Joseph Casale.
BY W. B. Hutchinson.
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH CASALE, OF NEW YORK, N. Y.

FOLDING UMBRELLA.

No. 868,326.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed December 22, 1906. Serial No. 349,017.

To all whom it may concern:

Be it known that I, JOSEPH CASALE, of the city, county, and State of New York, have invented a new and Improved Folding Umbrella, of which the following is a full, clear, and exact description.

My invention relates to improvements in folding umbrellas, and the object of my invention is to produce an umbrella which can be conveniently folded up into an extremely small compass, and which can be readily expanded when required for use.

A further object of my invention is to produce an umbrella in which the stem or rod, braces, and ribs, all telescope, to the end that the umbrella may be reduced to a very compact shape, and still another object is to construct and arrange a telescopic handle, so that when the parts are in their folded and telescoped position, they can all be held inside the handle, which will thus be in the form of a small metal or other casing, and can therefore be conveniently carried or packed.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken sectional elevation of an umbrella in partly spread position, the fully spread position being indicated by dotted lines. Fig. 2 is a view of the structure when folded up into its most compact shape. Fig. 3 is a longitudinal section of one of the brace joints. Fig. 4 is a cross section on the line 4.4 of Fig. 1. Fig. 5 is a cross section on the line 5.5 of Fig. 1. Fig. 6 is a cross section on the line 6.6 of Fig. 1. Fig. 7 is an enlarged longitudinal section of the umbrella in its folded position. Fig. 8 is a cross section on the line 8.8 of Fig. 7. Fig. 9 is a longitudinal section showing especially the joints of the telescopic rod, and the means for fastening the rod sections in the different positions, and Fig. 10 is a longitudinal section on the line 10.10 of Fig. 9, showing another detail of the rod fastening means.

The umbrella is provided with a telescope handle consisting of the parts 10 and 11, and the upper part 11 has preferably a flaring mouth so that the other parts of the umbrella can be conveniently pushed into it, and if desired the parts 10 and 11 may be one piece instead of telescopic, but I prefer to have them telescope. The umbrella rod is made up of telescoping sections 12, 12^a, 12^b, and 12^c, though of course there can be a greater or less number of these sections, and hereafter in referring to the other telescoping parts, it will be understood that the number shown can be varied.

The parts 12, 12^a, 12^b, and 12^c shut up one within the other, as shown best in Fig. 7, and when they are extended they are prevented from closing by the spring

catches 13 (see Fig. 10) which are affixed to the inner sides and upper parts of the several sections and project through into slots 14 of the next adjacent section, so that the sections are thus held extended. The parts are also held in extended position by the catches 15 which are formed on the ends of the U shaped springs 16, and which project from within each section through slots 17, and beneath the ends of the next outer section. This is shown clearly in Fig. 9. The catches 15 of each pair are connected by the toggle arms 18, and the lower set of toggle arms are operated by the rod 19, which is affixed to the handle, extends longitudinally within the lower section 12, through a guide 20, and is provided with a stop 21 to prevent its withdrawal. The rod has a reduced end 22 which strikes the lower toggle arms 18, and to operate the other toggle arms, bosses 22^a are affixed to the springs 17, so that when the several sections of the umbrella rod are shoved together, the parts 22 and 22^a will strike the several toggle arms 18, thus doubling them up and withdrawing the catches 15, to permit the said telescoping.

At the top of the rod of the umbrella is the usual crown 23, and attached to this, preferably by a broad headed screw 25, is a rubber casing 24, which, when the umbrella is folded up, telescoped, and inserted in the handle, can be drawn over the ends of the said parts and over the flaring end of the part 11 of the handle, as shown in Fig. 2, thus making a complete casing for the whole.

The ribs of the umbrella comprising the sections 26, 26^a, 26^b and 26^c are hinged to the crown 23 as usual in umbrellas, and these several parts slide together telescopically, as do also the braces, in the manner hereinafter described. These sections of the ribs are preferably U shaped in cross section and the outer section can be solid, if preferred, and they telescope through the collars 27. Referring to Fig. 3, it will be seen how the brace sections are held against accidental telescoping, and how they can be released when necessary. The ribs of the umbrella are connected by braces made up of the sections 31 with the rod of the umbrella, and the sections can be connected by joints 32, which may be like the joints described below. The sections have collars or bands 27, like those already described, one of which is preferably double as shown in Fig. 1, that is, having an outer and inner part, so as to embrace the adjoining ends of both brace sections, and abutting with the upper collar 27 is a sleeve 28, which is adapted to abut with the catch 30 on the spring 30^a, and push the said catch inward through the registering slots 29 in the brace sections. It will be noticed that when the braces are pushed out the catch 30 will hold them locked, and when they are pushed together the sleeve 28 will actuate the catch 30, as already described.

The inner ends of the braces are pivoted to the slide ring 31^a, which moves on the umbrella rod, and the

outer ends are pivoted to bosses 33, which enter into the ribs 26^b. The outer rib section 26 is provided with catches 34, to the outer of which the umbrella cover 35 can be tied or fastened as usual, and the inner catches lock beneath the collar 28 of the braces 31 when the parts are folded together, so that the collar will be removed to release the catch when the umbrella is opened. The outer catches 34 engage the flange 35^a on the sleeve 36 (see Fig. 7) which is provided with a second flange 37, and which moves on the section 12 of the umbrella rod. On the part 36 is a ferrule 39 which extends outwardly as shown at 38, and terminates in an outer ring 40, and when the umbrella is folded together and the handle pushed up, the ring 40 engages the outer ends of the ribs 26 and holds the catches 34 in engagement with the flange 35^a. When the umbrella is opened, the ring 31^a engages the ordinary catch 41, and the braces 31 and ribs 26 are spread out by the pushing up of the rod 12, 12^a, etc., and when the parts are to be collapsed, the ring 31^a is pulled down, the rod sections 12, 12^a, 12^b, and 12^c telescope, the ribs and braces telescope as already described, and the several parts pushed into the handle, after which the rubber casing 24 is pulled over the handle end.

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

1. An umbrella of the kind described, comprising a hollow handle made of telescoping sections, a rod made of telescoping sections, and telescoping ribs and braces secured to the rod, the said ribs, braces and rod being all adapted to enter entirely within the handle when collapsed.

2. An umbrella comprising a hollow handle made of telescoping sections, a rod extending from the handle and made of telescoping sections, and ribs and braces carried by the rod and adapted to collapse with the rod and enter entirely within the handle.

3. An umbrella comprising a hollow handle made of tele-

scoping sections, a telescoping rod extending from the handle, collapsible ribs and braces carried by the rod and adapted to enter entirely within the handle with the telescoping rod, and a casing on the end of the rod adapted to extend over a part of the handle. 40

4. An umbrella comprising a hollow handle made of telescoping sections, a telescoping rod held within the handle, and collapsible ribs and braces carried by the rod, and adapted also to enter entirely within the handle. 45

5. In an umbrella, the combination with the hollow handle formed of telescoping sections, of the telescoping rod sections, catches to hold the rod sections extended, and means carried by each section for releasing the catches by pushing endwise on the rod. 50

6. In an umbrella, the combination with the telescoping rod sections, of the outwardly pressed catches carried by the sections, the toggle arms connecting the catches, a rod within the telescoping sections adapted to strike the toggle arms of one of the catches, and of means carried by the catches to strike with the toggles of the succeeding catches. 55

7. The combination with the telescoping rod sections, of the internal springs carried by the sections provided with catches to hold the sections extended, toggle arms connecting the catches, an inner rod to strike the lower toggle arms and release the catches, and bosses carried by succeeding springs to engage the other toggle arms. 60

8. An umbrella comprising a hollow handle made of telescoping sections, a telescoping rod held within the handle, collapsible ribs and braces carried by the rod and adapted to enter the handle and catches carried by the ribs, a sleeve on the inner section of the rod near the base thereof, said sleeve being engaged by the catches of the ribs when the ribs and braces are folded within the handle. 65

9. An umbrella comprising a hollow handle made of telescoping sections, a telescoping rod held within the handle, collapsible ribs and braces carried by the rod and adapted to enter the handle and means carried by the ribs engaging the inner section of the rod when the ribs and braces are folded within the handle. 70 75

JOSEPH CASALE.

Witnesses:

WARREN B. HUTCHINSON,
M. S. O'DONNELL.