

No. 883,675.

PATENTED MAR. 31, 1908.

M. B. SMITH.
FOLDING UMBRELLA.
APPLICATION FILED AUG. 18, 1906.

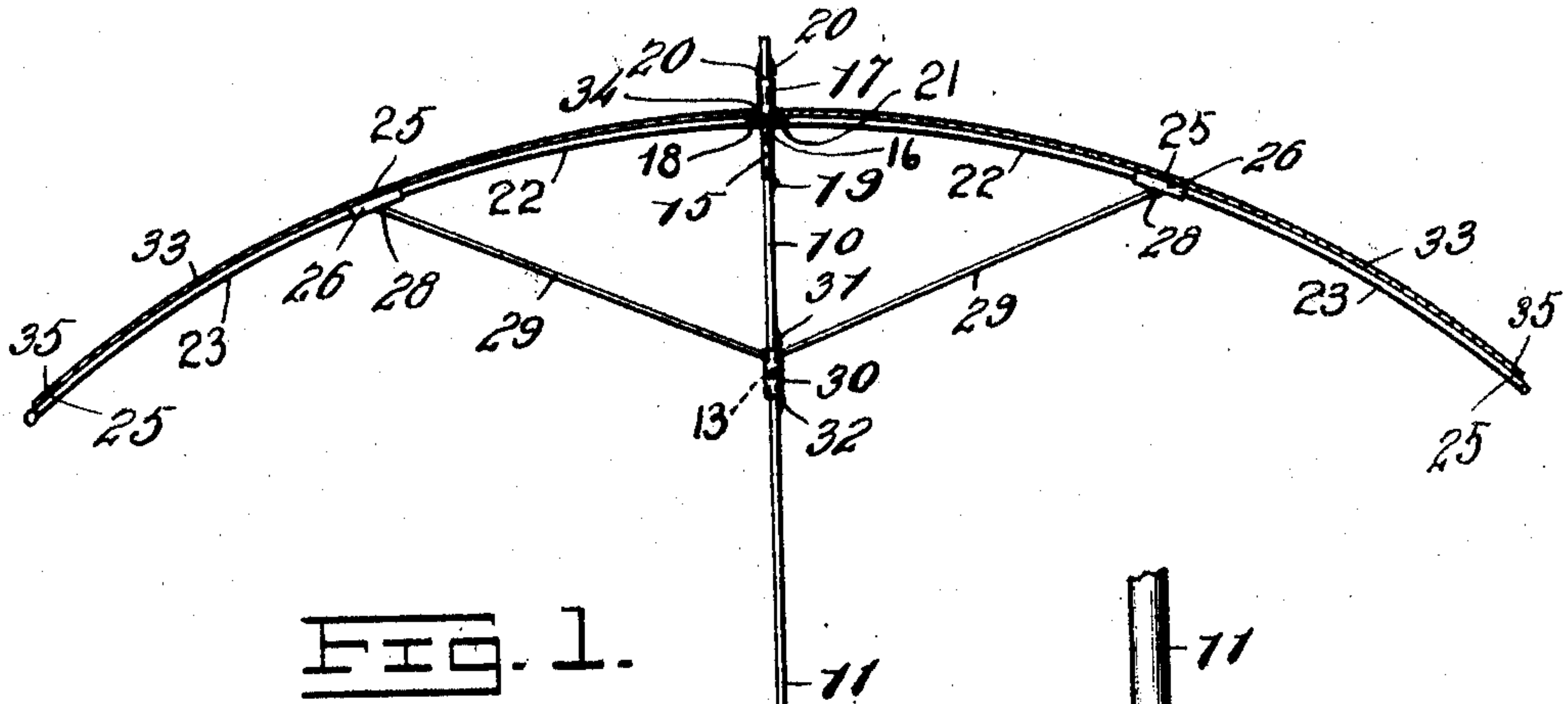


Fig. 1.

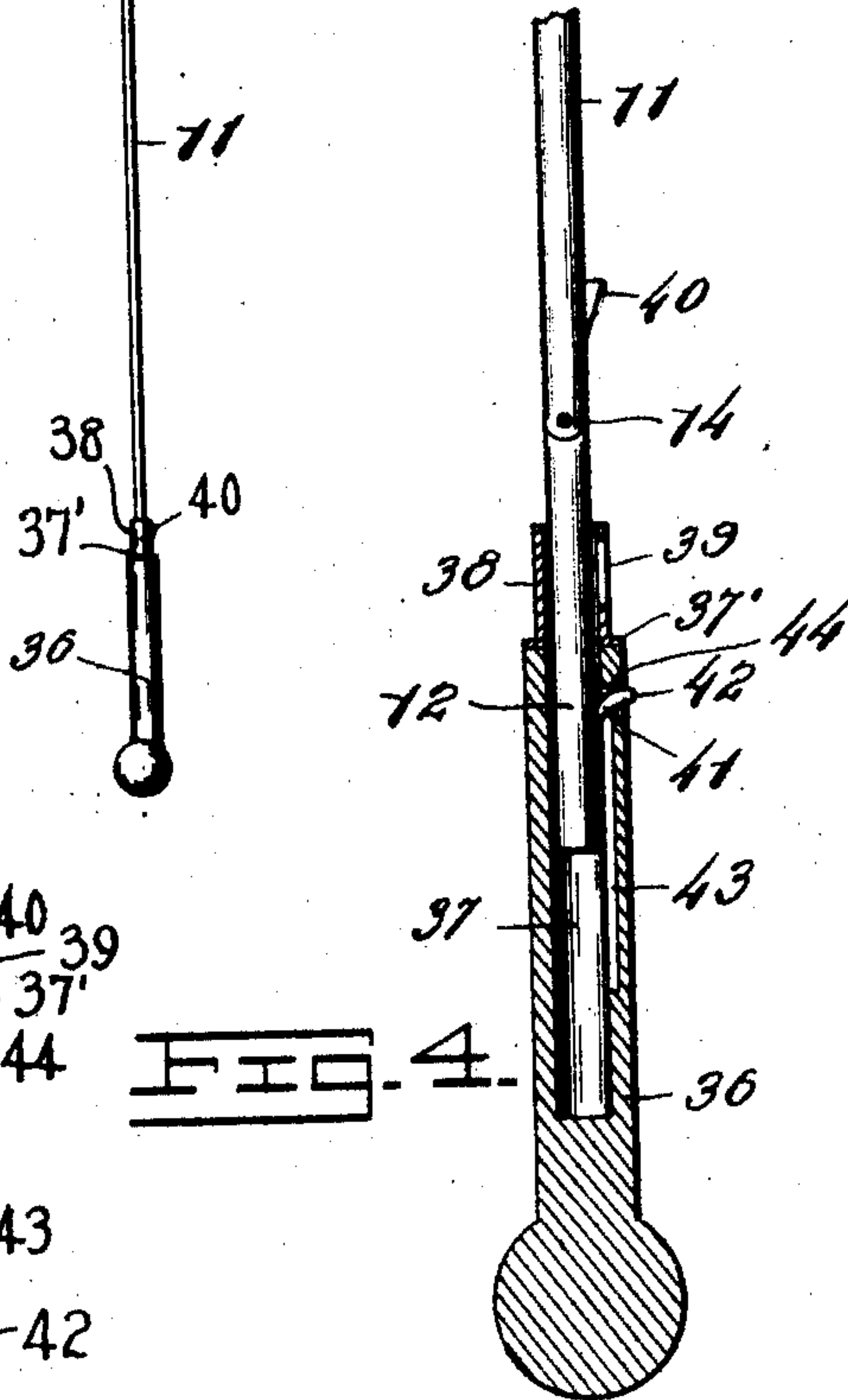
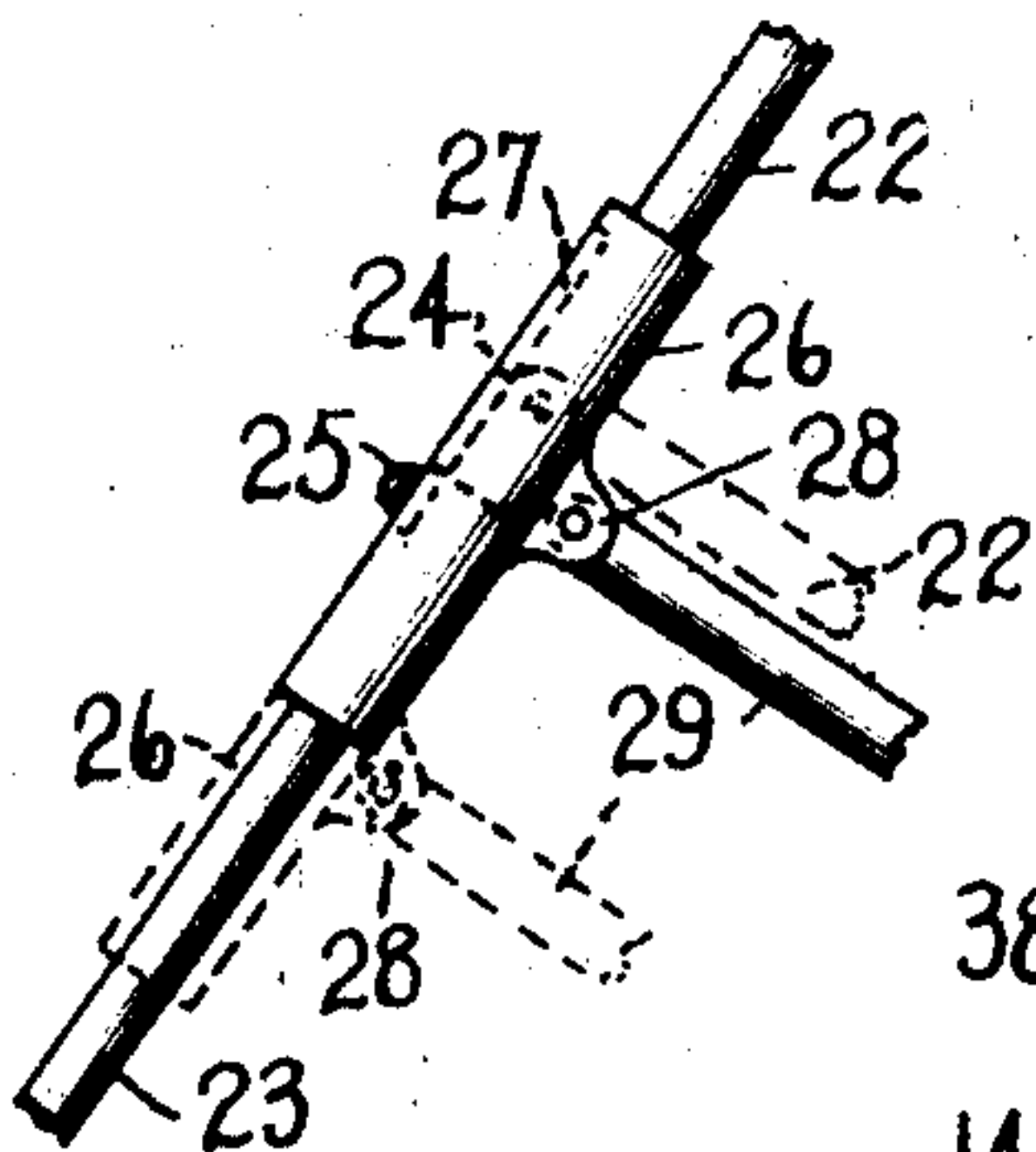



FIG. 4.

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

MARY B. SMITH, OF GUNNISON, COLORADO.

FOLDING UMBRELLA.

No. 883,675.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed August 16, 1906. Serial No. 330,884.

To all whom it may concern:

Be it known that I, MARY B. SMITH, a citizen of the United States, residing at Gunnison, in the county of Gunnison, State of Colorado, have invented certain new and useful Improvements in Folding Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to umbrellas and more particularly to that class which may be folded to occupy a small space when not in use and which may be readily and quickly folded or unfolded when so desired.

With the attainment of this object in view, the umbrella has its stock and its ribs formed of hinged sections which may be readily folded when the umbrella is partly open but, when the umbrella is entirely opened will be securely held against folding. Furthermore the invention resides in a construction of this class of such nature that the entire stock may be removed from the umbrella itself for replacing or repair and entirely without the use of tools or any mechanical means.

With the above and other objects in view the invention resides in the construction and arrangement of parts shown in the accompanying drawings in which,

Figure 1 is a detail vertical sectional view through the umbrella and the cover. Fig. 2 is a similar view through one of the rib sleeves showing in dotted lines its position when the umbrella is partly folded, Fig. 3 is a detail vertical sectional view through the handle and lower end of the stock showing the position of the latter when the umbrella is ready for use, and, Fig. 4 is a similar view showing the position of the parts before the handle is to be folded.

Referring more specifically to the drawings the stock of the umbrella is shown as comprising sections 10, 11, and 12 which are hinged together in the order named as indicated by the numerals 13 and 14. Upon the section 10 of the stock is slidably engaged a sleeve 15 which is exteriorly screw threaded at one end as at 16 for the engagement therewith with an interiorly screw threaded sleeve 17, that portion of the sleeve 17 which receives the end of the sleeve 16 being slightly enlarged as at 18 for a purpose to be hereinafter described. The joined sleeves 15 and

17 are normally held against downward movement against the stock section 10 by means of a spring catch 19 which is carried by the said section adjacent its upper end and is of the usual construction and the said sleeves are held normally against upward movement by means of a pair of similar spring catches 20 which are also carried by the stock section. A plurality of umbrella ribs are hingedly connected to the enlarged portion 18 of the sleeve 17 in the usual manner as indicated by the numeral 21 and the said ribs are formed of sections 22 and 23 which are also hingedly connected to each other as at 24 forming a completed rib. Upon each of the sections 23 of the ribs there is formed a pair of studs 25, one of the studs of each pair being located adjacent the hinge 24 of the rib sections and the other adjacent the free end of the section upon which it is located; the purpose of these studs will be presently explained.

Engaged upon each of the ribs at the hinged joints of the sections thereof is a sleeve 26 which is provided through one of its sides with a slot 27 through which projects the adjacent stud 25. The opposite side of each sleeve 26 is provided with spaced apertured ears 28 between which is pivoted one end of a stay rib 29, the opposite end of each stay rib being hingedly connected in the usual manner with a sleeve 30 which is slidably engaged upon the stock section 11. The hinged joint 13 for the sections 10 and 11 of the stock is located between spring catches 31 and 32 which serve respectively to limit the upward movement of the sleeve 30 and to prevent downward movement thereof when the umbrella is raised for use and it will be understood that the said sleeve 30, when the umbrella is raised, will fixedly prevent folding of the sections 10 and 11 and that the sleeves 26 will also perform the same function as regards the rib sections 22 and 23.

The cover for the umbrella is indicated by the numeral 33, is of the usual shape and is provided at its middle with a ring 34 which is removably engaged over the sleeve 17 and rests against the shoulder formed by the enlarged portion 18 thereof. At the proper points the cover is provided with sockets 35 for the reception of the studs 25 upon the ribs of the umbrella whereby the said cover is detachably held upon the frame as will be readily understood.

The handle for the umbrella is designated

by the numeral 36 and is provided with a central bore 37 in which is removably received the section 12 of the stock. Formed integral with a cap 37' upon one end of the handle is a sleeve 38 which is designed for the reception of the hinged joint 14 of the stock sections 11 and 12 to prevent folding of the handle upon the section 11. The sleeve 38 is slotted as at 39 for the reception of a spring catch 40 which serves to hold the stock to the handle although it may be understood that when it is desired to partially withdraw the section 12 and the adjacent end of the section 11 from the bore 37, the said catch 40 may be depressed to permit this engagement from the slot 39 in the sleeve 38. In order, however, that the stock sections will not be entirely withdrawn at such a time, a spring catch 41 is carried by the section 12 and is provided with a head 42 which works in a groove in the bore of the handle 36. The said groove 43 terminates in an opening 44 formed through the corresponding side of the handle 36 and it will be seen that when the stock has been withdrawn from the said bore to a certain extent, the headed end of the spring catch 42 will be directed through the opening 44 and furthermore it will be understood that when it is desired to remove the handle it is only necessary to depress the headed end of the catch 42 and withdraw the stock.

When it is desired to fold the umbrella, the sleeve 30 is moved downwardly upon the stock section 11 until the sleeves 26 have been moved from around the hinged joint 24 of the rib sections and the spring catches 19 and 32 are then depressed and the joined sleeves 15 and 17 slide downwardly upon the stock and to a point below the last named spring catch as clearly shown in Fig.

2 of the drawings. Further movement of the sleeve 30 will serve to fold the rib sections 23 into position along the stock section 11 and the section 10 may then be folded upon the said section 11 as may also the section 12 and the handle 36 carried thereby.

It is to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

What is claimed is:

1. An umbrella including a stock formed of hinged sections, a handle provided with a bore and a channel, one of the sections and its hinged joint with the adjacent section being received in the bore, a spring catch carried by the first-named hinged section and arranged to move in said channels and to seat in an opening formed through the handle and communicating with the channel, and a spring catch arranged to hold the stock at the inner limit of its movement into the handle.

2. An umbrella comprising a stock formed in sections, ribs formed in sections, sleeves disposed upon the stock and upon the ribs, stay ribs connecting one of the sleeves upon the ribs and the sleeve upon the stock, the said sleeves upon the ribs being slotted, and a pin carried by one of the rib sections and projecting through the slot whereby the sleeve may have a limited movement in one direction to permit folding of the rib sections one upon the other.

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

MARY B. SMITH.

Witnesses:

PEARL G. SAPP,
CARRIE M. EELLS.