

F. W. SCHROEDER.

UMBRELLA.

APPLICATION FILED MAY 23, 1907

973,222.

Patented Oct. 18, 1910.

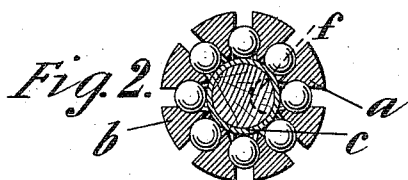
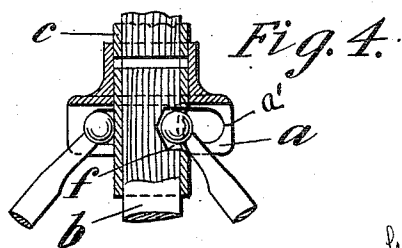
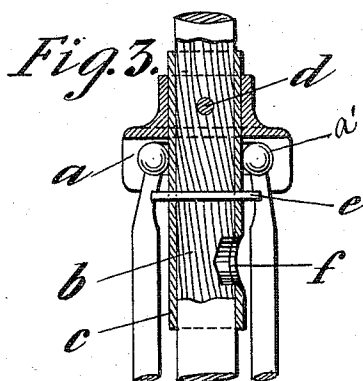
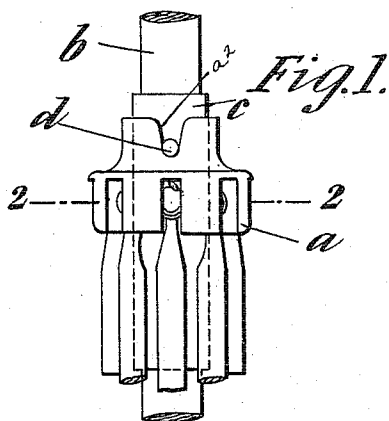
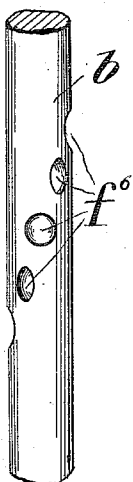


Fig. 5.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM SCHROEDER, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF
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UMBRELLA.

973,222.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK WILLIAM SCHROEDER, a subject of the King of Great Britain, residing at 9 Arundel street, Strand, in the county of London, England, engineer, have invented certain new and useful Improvements in Umbrellas, of which the following is a specification.

My invention relates to improvements in that kind of umbrella top-notch wherein the rib has a ball on its end which fits in a cavity in the top-notch, the neck of the rib immediately below the ball moving in a slot in the top notch when the umbrella is put up and down. In top-notches of this kind which have hitherto been proposed it is difficult to introduce a rib into the top notch or to remove a rib from the top-notch without disturbing the attachment of the rest of the ribs, unless the notch is first removed from the stick by sliding it along the stick toward and over the ferruled end onto a separate slotted rod, a procedure that necessitates the previous removal of the finishing cap usually clenched to the stick and placed over the inner edge of the umbrella cover overlapping the top notch.

By my invention the top-notch is so constructed that by sliding it a very short distance along the stick toward the handle, or by turning it or by first sliding it, then turning it around the stick, the cavity that contains the ball is made to register with a cavity, slot or the like formed on the upper part of the stick which allows the ball to be introduced or withdrawn.

The invention may be applied in several ways. That which I prefer is illustrated in the accompanying drawings wherein—

Figure 1 shows the top notch in elevation with the ribs attached, Fig. 2 is a horizontal cross section on line 2—2 of Fig. 1, Fig. 3 is a vertical section through the axis of the umbrella stick, Fig. 4 is a like section showing the parts in a different position, and Fig. 5 is a view of a modified form of top notch.

In this form of the invention the top-notch *a* is adapted to slide on the umbrella stick *b*, there being a metal sleeve *c* on the stick to form a suitable surface if the stick be of wood. Normally the top-notch is prevented from sliding, on the one hand by a pin *d* in the stick, with the ends of which pin a slot formed on the upper end of the top-notch engages, and on the other hand by a

pin *e* extending through the stick. At a suitable place in the stick there is a cavity *f*, a perforation in the sleeve *c* registering therewith.

In order to withdraw a rib, pin *e* is withdrawn and the top-notch is slid down the stick toward the handle until the slot *a*² in it is free of the pin *d*, whereupon the top-notch is turned until the cavity *a*¹ containing the ball of the rib which is to be withdrawn is in register with the cavity *f*. The umbrella being partly open for these operations to be performed, the ball can be pushed into the cavity *f* as shown in Fig. 4. On now sliding back the top-notch until the neck of the rib is free from the slot in the top-notch, the rib is free to be removed. The ribs are inserted one by one in similar manner, as will be obvious.

It is evident that the top-notch need not be made to turn on the stick as there may be a number of cavities *f* preferably arranged in helical line around the stick as indicated at *f*^o in Fig. 5, so that the sliding of the top-notch would suffice to bring the rib to be removed opposite the cavity corresponding with it. Such a construction, however, tends to weaken the stick.

Having thus described the nature of my said invention and the best means I know of carrying the same into practical effect, I claim:—

1. In an umbrella, the combination of a stick provided with a cavity in the upper part thereof, a fixed pin projecting transversely through and extending beyond the stick between the upper end thereof and the cavity, a top notch having a rib receiving socket, a slot in the upper end of the notch adapted to engage a projecting end of the pin, a rib removably associated with the socket, and removable means interposed between the cavity and the notch to retain the notch in a normal position above the cavity and in engagement with the pin, the notch being slidable upon the stick from the normal position toward the lower part of the stick to bring the socket into registration with the cavity, to permit the removal of the rib; substantially as described.

2. In an umbrella, the combination of a stick provided with a series of cavities wound about the upper part thereof, a top notch having a series of rib receiving sockets, and a series of ribs removably associated

with the sockets, the notch being slidable upon the stick toward the lower part of the stick, to bring its sockets successively into registration with the cavities in the stick to permit removal of the ribs; substantially as described.

3. In an umbrella, the combination of a stick provided with a spiral series of cavities in the upper part thereof, a top notch having a series of rib receiving sockets, and a series of ribs removably associated with the sockets, the notch being slidable upon the stick toward the lower part of the stick to bring its sockets successively into registration with the cavities in the stick to permit removal of the ribs; substantially as described.

4. In an umbrella, the combination of a stick provided with a series of cavities wound about the upper part thereof, a fixed pin projecting transversely through and extending beyond the stick between the upper end thereof and the series of cavities, a top notch having a series of rib receiving sockets, a slot in the upper end of the notch adapted to engage the projecting end of the pin, a series of ribs removably associated with the sockets, and removable means interposed between the cavities and the notch to retain the notch in a normal position above the cavity and in engagement with the pin, the notch being slidable upon the stick from

the normal position toward the lower part of the stick to bring the sockets successively into registration with the cavities in the stick to permit removal of the ribs; substantially as described.

5. In an umbrella, the combination of a stick provided with a cavity in the upper part thereof, a fixed pin projecting transversely through and extending beyond the stick between the upper end thereof and the cavity, a top notch having a rib receiving socket, a slot in the upper end of the notch adapted to engage the projecting end of the pin, a rib removably associated with the socket, and a second pin removably and transversely fixed in the stick above the cavity and below the notch to retain the notch in a normal position engaging the ends of the first pin, the notch being slidable upon the stick from the normal position toward the lower part of the stick to bring the socket into registration with the cavity to permit removal of the rib; substantially as described.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK WILLIAM SCHROEDER.

Witnesses:

JOSEPH MILLARD,
WALTER J. SKERTEN.