March 21, 1933. H. HAUPT 1,902,774

TELESCOPIC UMBRELLA

Filed April 18, 1931

Fig. 1

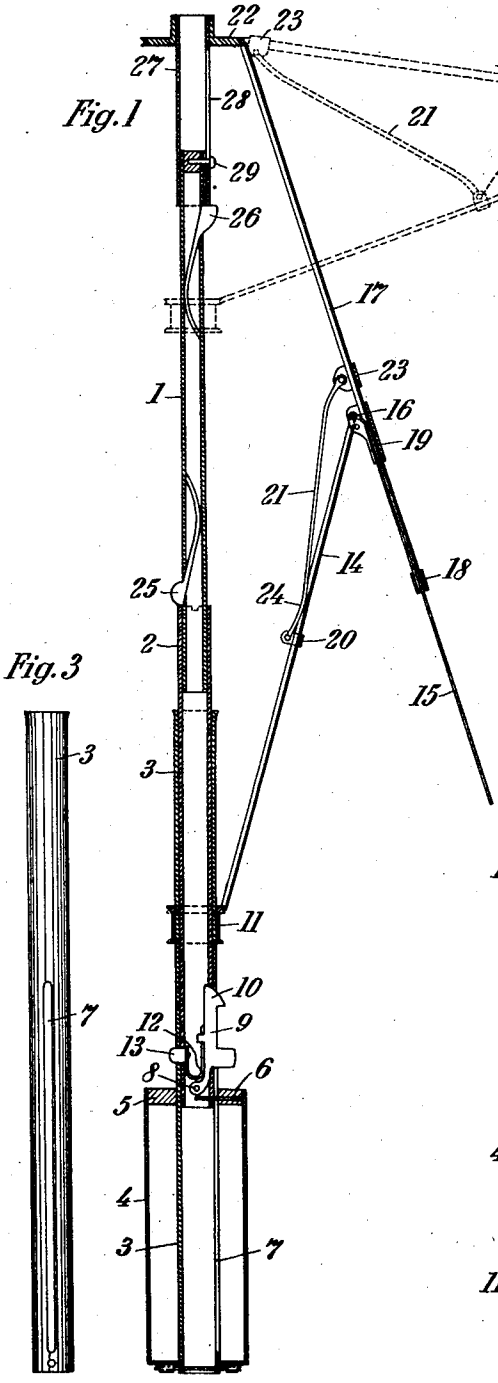


Fig. 3

Fig. 2

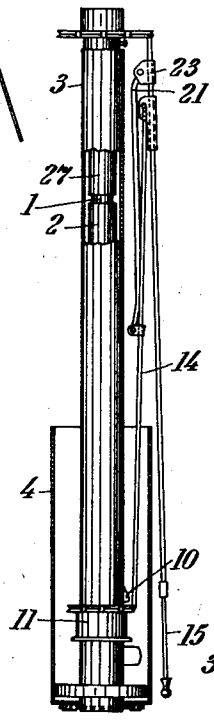
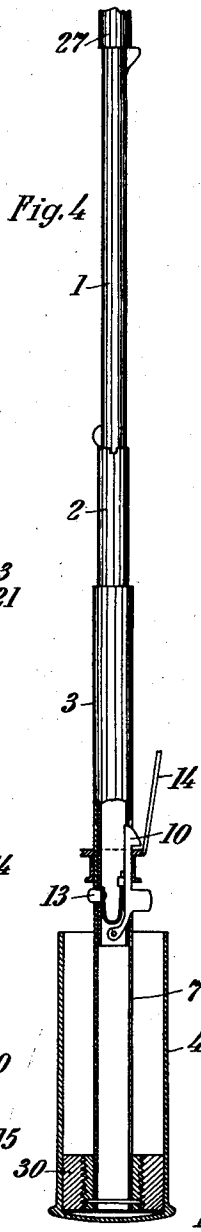


Fig. 4



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UNITED STATES PATENT OFFICE

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TELESCOPIC UMBRELLA

Application filed April 18, 1931, Serial No. 531,172, and in Germany April 25, 1930.

This invention relates to a telescopic umbrella of the kind wherein the stretchers are pivoted to the outer rib sections and wherein the stretchers are supported by auxiliary struts, and the invention consists essentially in connecting one end of each strut pivotally to the central portion of the stretcher and arranging the other end to slide on the corresponding inner rib section.

This arrangement has the advantage that the struts will not be hindered in their movement by the stick sections on the closing of the umbrella. The tubular handle, moreover, is adapted, by engagement with the ribs on the umbrella being collapsed, to prevent the struts from coming into contact with and foul the stick sections.

In order to retain the runner and the ribs in their proper positions on the umbrella being collapsed, the runner and its catch are adapted to move together into the handle.

Fig. 1 of the accompanying drawing represents a longitudinal section of the umbrella showing it in process of being opened,

Fig. 2 is a side view, partly in section, of the collapsed umbrella,

Fig. 3 is a side view of the lowermost stick section, and

Fig. 4 is a side view, partly in section, of a slightly modified stick construction.

The umbrella comprises rib sections 15 and 17 the latter of which are pivoted to the crown 22 and provided at their free ends with sleeves 18 wherein the rib sections 15 are slidably guided. The section 15 moves inside the channel section 17 and is connected at 16 to a saddle-piece 19 which embraces and slides on the section 17. The stretchers 14 are pivoted at one end to the saddle-pieces 19 and at the other end to the runner 11. Connected to the centre portion of each stretcher 14 is a bracket 20 to which one end of an auxiliary strut 21 is pivotally attached. The other end of the strut is pivoted to a sleeve 23 which is free to slide on the inner section 17 of the corresponding rib. The struts are resilient and each strut is, as described and claimed in the co-pending application Serial No. 475,647, filed August 16, 1930, formed with a knee 24 which, when the umbrella is closed, bears against and exerts outward pressure on the contiguous stretcher, thereby facilitating the spreading apart of the ribs and the opening out of the umbrella. As the umbrella is opened, the sleeves 23 move up the rib sections 17 until they strike against the crown 22, and thereupon they act on the stretchers so as to effect the complete extension of the rib sections 15.

The stick is composed of telescopic sections 27, 1, 2 and 3 which are locked in extended position by catches 26, 25 and 13. The catch 13 is released by hand, and the catches 25 and 26 are released by the thrust of the stick sections 3 and 2 respectively to allow the stick to collapse. The catch 26 also serves to retain the runner and maintain the umbrella in open position, it being depressed by hand for the release of the runner. A pin 29 connected to the stick section 1, extends through a slot 28 in the section 27 and limits the movements of the latter. The head of this pin also serves as a stop for the runner 11.

Connected to the lower end of the stick section 3 is a tubular handle 4 which is adapted, on the stick being collapsed, to slide over the runner 11 and ride between the stretchers 14 and the ribs 15. The latter, by abutment against the handle 4, prevent the struts 21 from coming into contact with the stick sections, thus leaving the latter full freedom of movement and protecting them from being damaged by abraison.

The spring 12 which controls the catch 13 also controls a catch lever 9 which is pivoted at 8 inside the stick section 2 and which is adapted to engage and retain the runner 11 on the umbrella being closed. The catch 9, which projects through slots in the sections 2 and 3, has a bevelled head 10 which is automatically retracted by the runner on the lowering of the latter and which snaps into engagement therewith. The slot 7 in the section 3 is long enough to enable the runner and catch to move together into the handle 4 when the umbrella is collapsed. Thus the runner and ribs will be retained in their proper positions during this operation.

In the construction shown in Fig. 1, the handle 4 is adapted to slide over a piston-like

member 5 which guides it and causes it to act uniformly on all the stretchers. The member 5 is connected to the inner section 2 by means of a pin 6 which extends through it and is guided in the slot 7 in the outer section 3.

In the construction shown in Fig. 4, the member 5 is omitted and the stick section 3 is screwed into a boss 30 mounted inside the handle.

I claim:

1. In an umbrella having a telescopically adjustable rib pivoted to a crown and a stretcher pivoted to the outer rib section, an auxiliary strut pivoted at one end to the stretcher and slidable at the other end on the inner rib section independently of the outer one.

2. A structure as claimed in claim 1 wherein the auxiliary strut is adapted to bear against the crown when the umbrella is open.

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