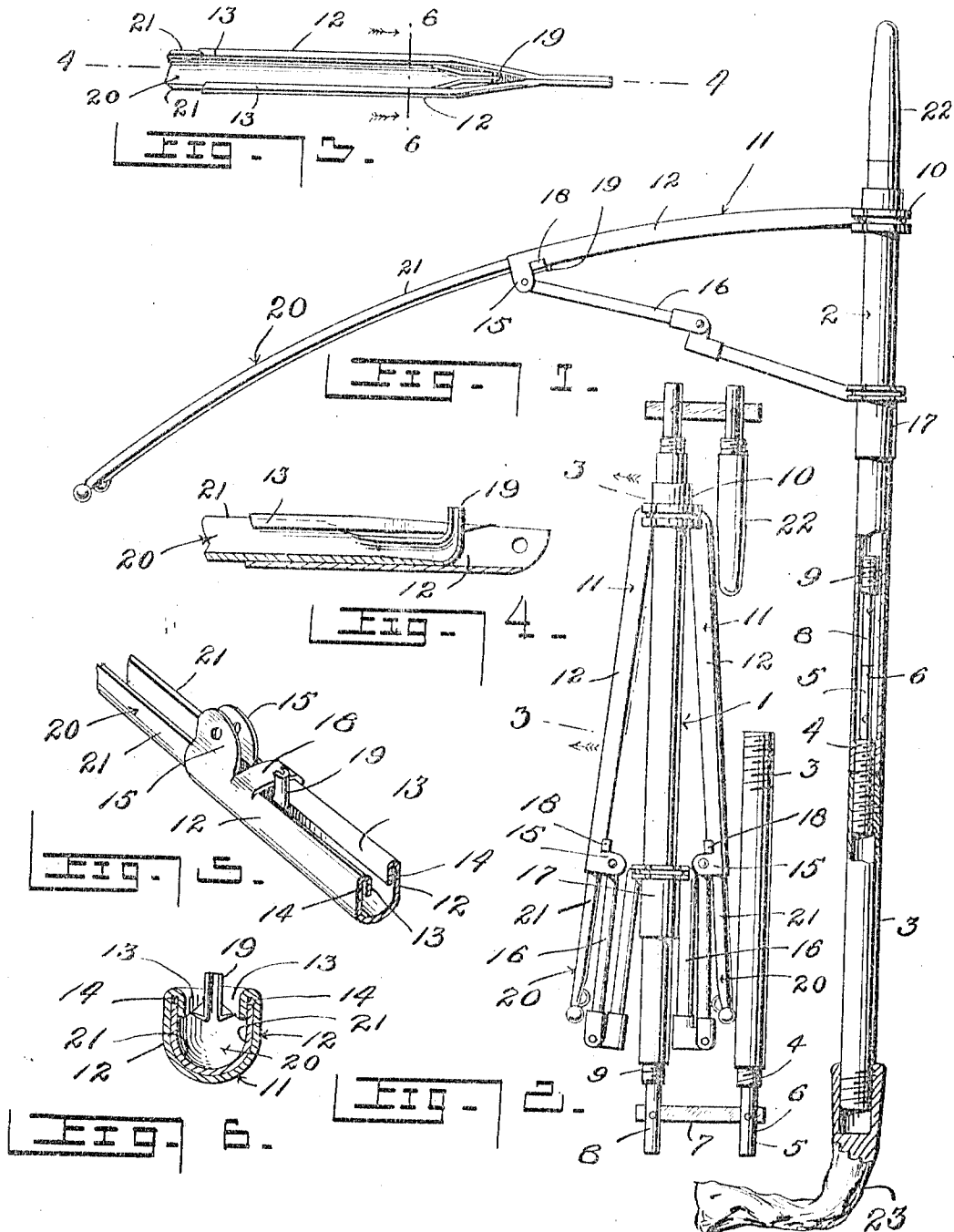


D. A. CAVALLAR.
FOLDING UMBRELLA.
APPLICATION FILED JUNE 8, 1912.

1,063,931.

Patented June 3, 1913.



Witnesses

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DOMENIC A. CAVAILLAR, OF CLARKSBURG, WEST VIRGINIA.

FOLDING UMBRELLA.

1,063,931.

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To all whom it may concern:

Be it known that I, DOMENIC A. CAVAILLAR, a citizen of the United States, residing at Clarksburg, in the county of Harrison, State of West Virginia, 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 is directed to improvements in umbrellas, and has for its object to so construct the same that it may be folded to reduce the length thereof so that the same may be conveniently packed for carrying, and storing away in small space.

A further object of the invention is to so construct an umbrella of this type, which is simple in construction, durable, and one which may be manufactured at a small cost.

With these and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which:—

Figure 1 is an elevation of the umbrella when unfolded, and partly in section. Fig. 2 is a similar view showing the umbrella folded. Fig. 3 is a sectional view on line 3—3 of Fig. 2. Fig. 4 is a similar view on line 4—4 of Fig. 3. Fig. 5 is a fragmentary perspective view of a section of the main rib and sliding rib. Fig. 6 is a sectional view on line 6—6 of Fig. 3.

Referring to the drawing, the numeral 1 designates the stick, the same consisting of an upper section 2, and a handle section 3. The handle section 3 is provided at its upper end with a screw threaded plug 4 which is adapted to engage the internal threads formed in the lower end of the upper section 2, said parts being engaged thus when the umbrella is in its unfolded position. The upper end of the plug 4 terminates in a bifurcated extension 5 between the furcations 6 thereof is pivotally connected one end of a plate 7, the upper end of said plate being connected to the furcations 8 of a threaded plug 9 when the umbrella is in its folded position.

Connected to the upper end of the section 2 is a notch 10 to which is pivotally connected a plurality of main ribs 11. The main ribs 11 are in the form of inverted

channels, and have their sides 12 terminating in inwardly bent flanges 13 which form guideways 14, the purpose of which will appear later. The extreme outer ends of the sides 12 are formed with perforated ears 15, said ears being arranged in spaced parallel relation, and are adapted to pivotally receive therebetween one of the sections of the folding ribs 16, the other section thereof being connected in the usual manner to the runner 17.

Formed integral with one of the sides 12 of the main ribs 11 are bridge pieces 18, which serve as stops for the hooked ends 19 of the sliding ribs 20, the sides 21 thereof being adapted for sliding movement in the guideways 14 of the main ribs 11.

The sides 12 of the main ribs 11 are convergingly arranged near their inner ends, as clearly shown in Fig. 3 of the drawing, so that when the sides of the sliding ribs 20 are forced inwardly in the guideways 14 of the main ribs 11, and when the umbrella is being folded, sufficient frictional engagement between the said ribs will be had to hold the sliding ribs against accidental withdrawal. It will be further noted that the side walls 12 of the main ribs 11 decrease in height as they near the pivotal point with the notched end, and that the sides 21 of the ribs 20 are also inclined slightly so that the upper edges of the sides 21 will engage the bases of the guideways 14, and serve as additional means for frictional engagement between main ribs 11 and sliding ribs 20.

The umbrella is further provided with the usual tip 22, the same being adapted to be folded in a manner similar to the handle section 2, and as clearly shown in Fig. 2 of the drawing.

Detachably connected to the lower end of the section 2 is a handle 23, and by detachably connecting the same, handles of different designs may be applied to the umbrella.

From the foregoing description, taken in connection with the accompanying drawing, the operation and advantages of the device will be apparent.

What is claimed is:—

An umbrella of the class described comprising a sectional stick, a notch carried by the upper end of one of the sections, a runner adapted for travel upon the sections, main ribs pivotally connected to the notch, stay ribs connected to the runner at their inner ends, said ribs consisting of channel

metal and having sides, said sides being
formed with inwardly bent flanges to form
guideways, the outer ends of said sides hav-
ing ears formed integral therewith for piv-
otally connecting the folding stay ribs at
their outer ends, a bridge piece formed inte-
gral with one of the sides and serving as a
stop, ribs slidable in said main ribs, and con-
sisting of sides adapted to engage the guide-
ways, said guideways being convergingly ar-
ranged at their inner ends and decreasing
in depth for frictionally engaging the up-

per edges of the sides of the sliding ribs
when the same are moved inwardly, and a
hook carried by the inner ends of the sliding
ribs to engage said stop to prevent acci-
dental withdrawal of the sliding ribs when
moved outwardly.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

DOMENIC A. CAVALLAR.

Witnesses:

PASQUALE SIMONETTA,
JOSEPH CARDAMON.