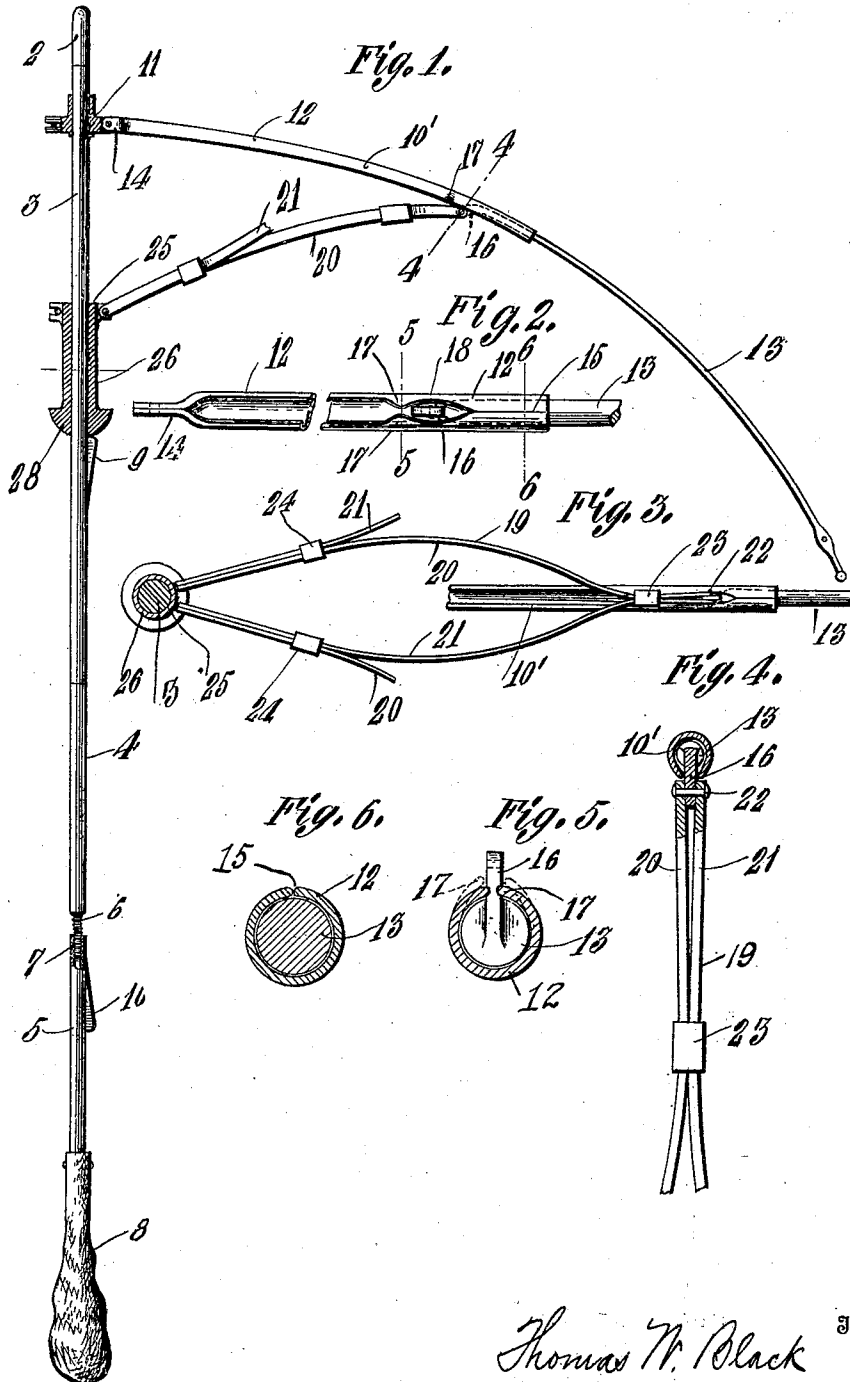


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 APPLICATION FILED JAN. 25, 1909.

929,117.

Patented July 27, 1909.
 2 SHEETS—SHEET 1.



Witnesses

Morris Hessin
 Fannie Jacobs

Thomas W. Black
 Jesse James
 By Watson E. Coleman
 Inventors
 Attorney

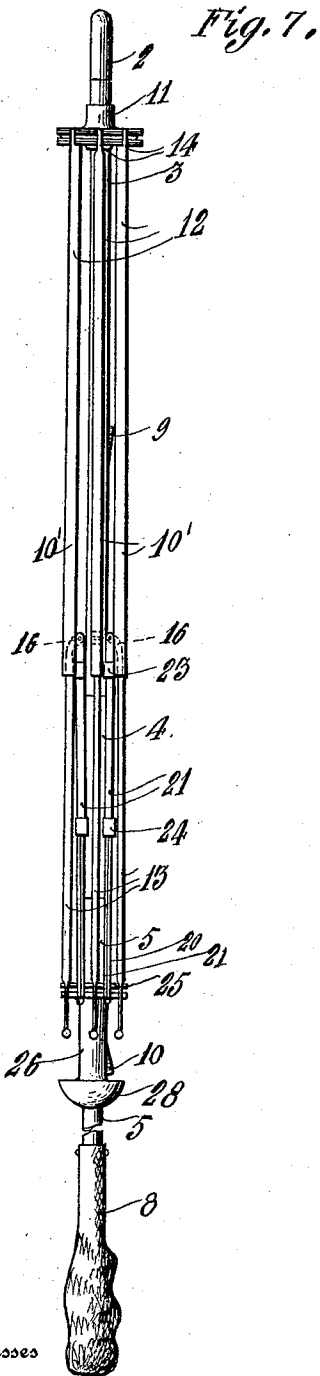
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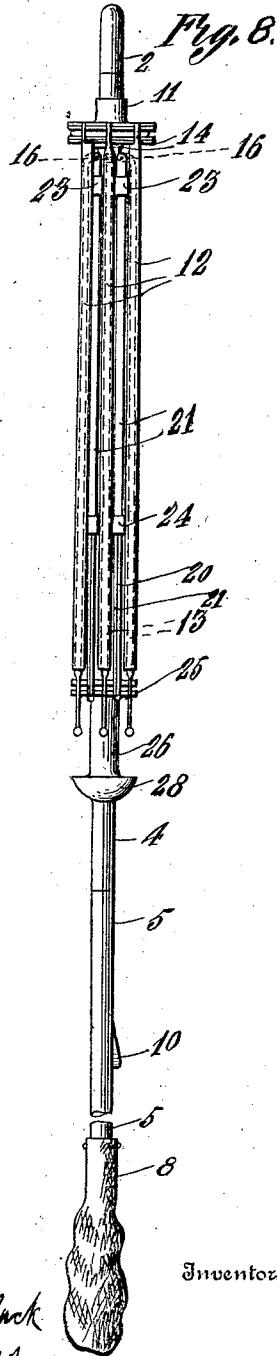
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2 SHEETS--SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS W. BLACK AND JESSE JAMES, OF BURNHAM, PENNSYLVANIA.

UMBRELLA.

No. 929,117.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed January 25, 1909. Serial No. 474,113.

To all whom it may concern:

Be it known that we, THOMAS W. BLACK and JESSE JAMES, citizens of the United States, residing at Burnham, in the county of Mifflin and State of Pennsylvania, have invented certain new and useful Improvements in Umbrellas, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in folding umbrellas, and consists in the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed.

15 The object of the invention is to provide a simple and practical folding frame for an umbrella which may be produced at a small cost, will be strong and durable and which may be compactly folded so that it may be placed in a suit case, satchel or the like.

20 The above and other objects of the invention are attained in its preferred embodiment illustrated in the accompanying drawings, in which—

25 Figure 1 is a detail sectional view through a portion of the improved umbrella frame showing it in its open position; Fig. 2 is an enlarged detail view looking at the under face of one of the telescoping ribs; Fig. 3 is a similar view, partly in section, showing a portion of a rib, one of the braces or stretchers and the runner and staff; Fig. 4 is a detail section taken on the plane indicated by the line 4—4 in Fig. 1; Figs. 5 and 6 are detail sections taken on the planes indicated by the lines 5—5 and 6—6, respectively, in Fig. 2; Figs. 7 and 8 are detail side views of the umbrella frame, the former showing the frame closed and the latter showing it collapsed.

40 The stick or staff 1 of the umbrella is composed of detachably connected sections and while any number of them may be provided and they may be of any suitable form and construction, we preferably employ four tubular sections numbered 2, 3, 4, 5, and connect them by providing at one of each a reduced screw threaded stem 6 to enter a threaded opening 7 in the next adjacent section, as clearly shown in Fig. 1. The uppermost section 2 forms the tip and upon the lower section 5 may be provided a suitable handle 8. The usual spring catches 9, 10 are

provided upon the staff, the former for holding the umbrella frame raised and the latter 55 for holding it closed.

Our improved telescoping ribs 10' are connected in the usual manner to the usual notch 11 upon the staff, and each of said ribs consists of an inner channeled section 12, 60 preferably of U-shape in cross section and an outer section 13 preferably of cylindrical shape. The channeled inner section 12 of the rib has its flanges at its inner or upper end brought together and apertured to provide an eye 14 which is pivoted in the notch 11 and the flanges of said section 12 at its outer end are brought together, as shown at 15, to provide a tubular guide for the outer section 13, which latter is adapted to slide 70 or telescope into the channeled section 12. The inner end of the outer rib section 13 has a laterally or angularly offset ear 16 which projects outside of the channeled section 12 and which is adapted to have one of the rib stretchers or braces, presently explained, pivoted thereto. Said projecting end or ear 16 also serves as a stop to engage the closed end 15 of the channeled section 12 to limit the outward sliding movement of the section 13 and thereby prevent the two sections 12, 13 from separating. For the purpose of retaining the rib sections 12, 13 in their extended position, portions of the flanges of the section 12 are shaped and bent 85 inwardly to provide spring tongues 17 which almost touch each other and which are so spaced from the closed portion 15 of the rib section 12 to provide a pocket 18 for the ear 16. It will be seen, upon reference to Figs. 2 and 5 of the drawings, that the space between the spring tongues or fingers 17 is less than the thickness of the ear 16 so that said fingers or tongues must be sprung apart when said ear is pushed into and out of its seat or pocket 18.

Each of the rib braces or stretchers 19 consists of two resilient strips 20, 21 which have their intermediate portions bowed in opposite directions and their outer ends brought together and pivoted to the opposite sides of one of the ears 16 by a pivot pin or rivet 22. Said outer ends of the stretcher sections 20, 21 are also united by a surrounding metal band 23 which strengthens the 105 stretcher and removes strain from the pivot

22. The inner ends of the sections 20, 21 of each stretcher are connected by similar bands 24 to the sections of adjacent stretchers, as clearly shown in Fig. 3 of the drawings, upon reference to which it will be noted that the adjacent sections of adjacent stretchers have their inner ends brought together and united by the bands 24 and pivoted in the notched portion 25 of a runner 26. This runner has its tubular body portion or sleeve provided intermediate its ends with a slot 27 for the reception of the spring catches 9, 10 and at its lower end it has a semi-spherical enlargement 28.

15 The umbrella frame may be provided with a cover (not illustrated) of any form and construction which may be secured in the usual or any preferred manner.

20 From the foregoing it will be seen that the invention provides an exceedingly simple, strong and durable foldable umbrella frame which may be produced at a small cost and which may be quickly and easily collapsed so that when the sections of the staff are taken apart the entire device may be placed in a very small traveling case or the like. The peculiar construction of the spring fastening for holding the telescoping rib sections extended permits them to be readily collapsed or extended and holds them securely when extended. The peculiar construction of the stretchers provides an ef-

fective bracing frame for the ribs when the umbrella is raised.

Having thus described the invention what is claimed is—

In a folding umbrella, the combination of a staff, ribs pivoted thereto and each consisting of a U-shaped inner section and an outer section to slide in the inner section and formed at its inner end with an inwardly projecting ear, said channeled inner sections of the ribs having the flanges at their outer ends brought together to provide the tubular guides 15 for the outer rib sections, said flanges of the inner rib sections having the opposing inwardly projecting spring fingers 17 arranged adjacent to the guides 15 and spaced therefrom to provide the pockets 18 for the reception of the ears upon the inner ends of the outer rib sections, said ears being movable into and out of said pockets between the spring fingers 17, a runner upon the staff and stretchers pivoted to the runner and to said ears upon the outer rib sections.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

THOMAS W. BLACK.
JESSE JAMES.

Witnesses:

H. C. BURKETT,
O. O. MARK.