J. W. BABBIT.

FOLDABLE UMBRELLA.

APPLICATION FILED MAR. 23, 1909.

929,536.

Patented July 27, 1909.

2 SHEETS—SHEET 1.

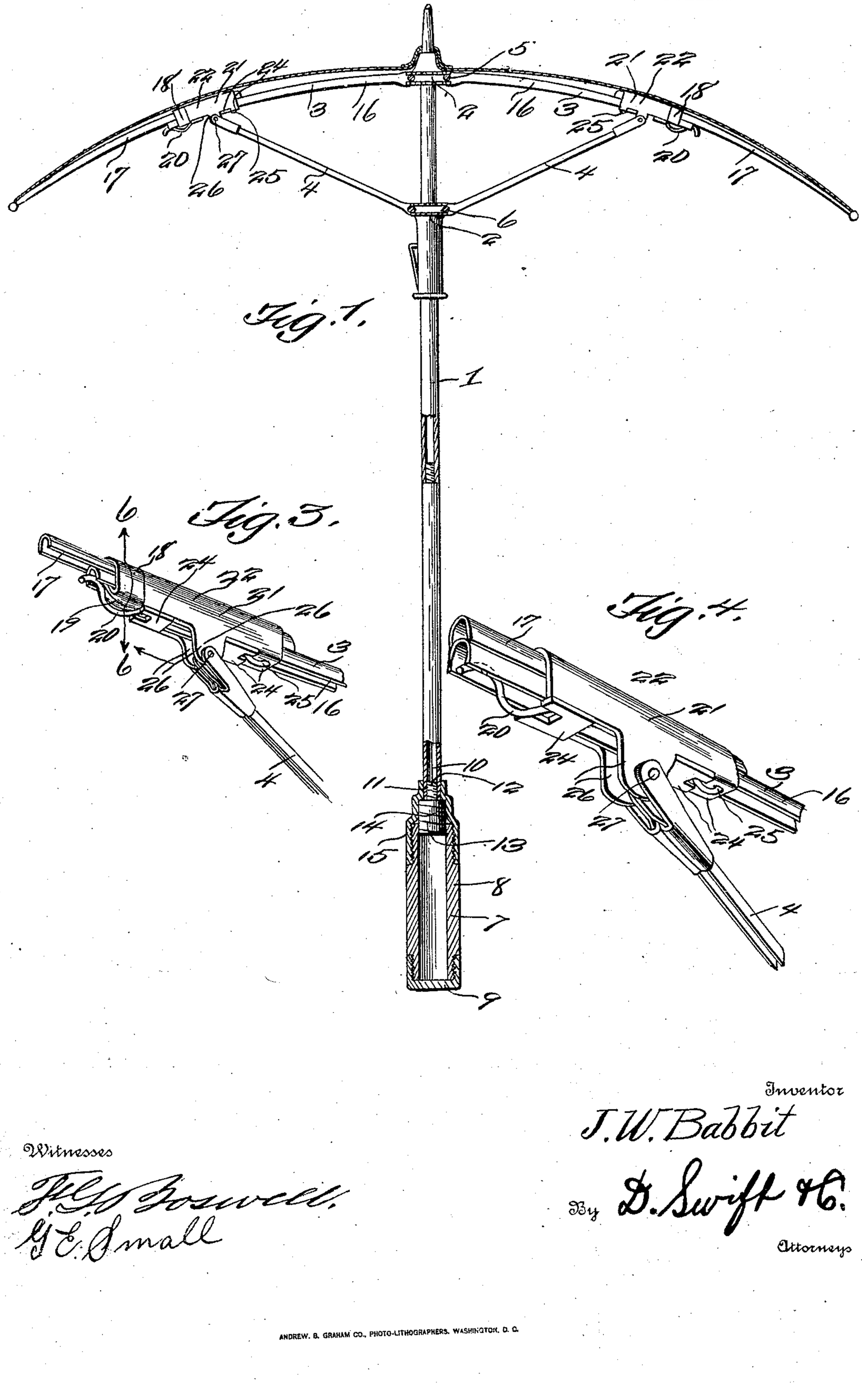

Fig. 1.

Fig. 3.

Fig. 4.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

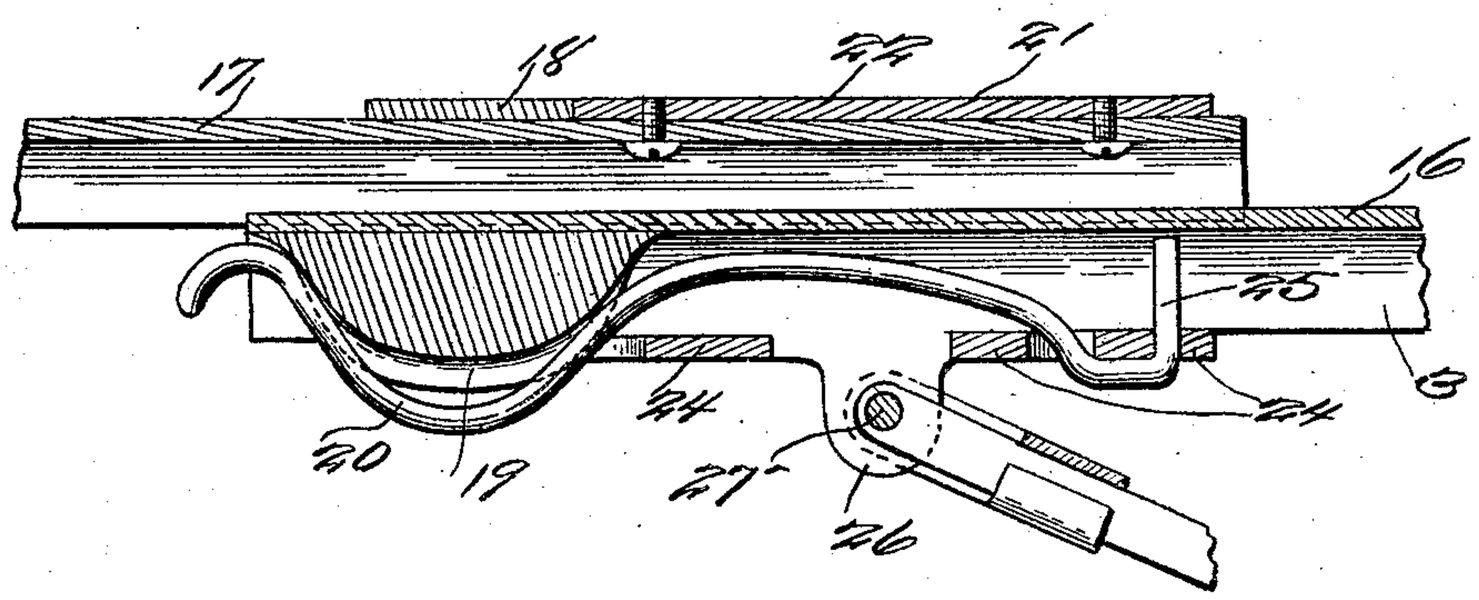


Fig. 5.

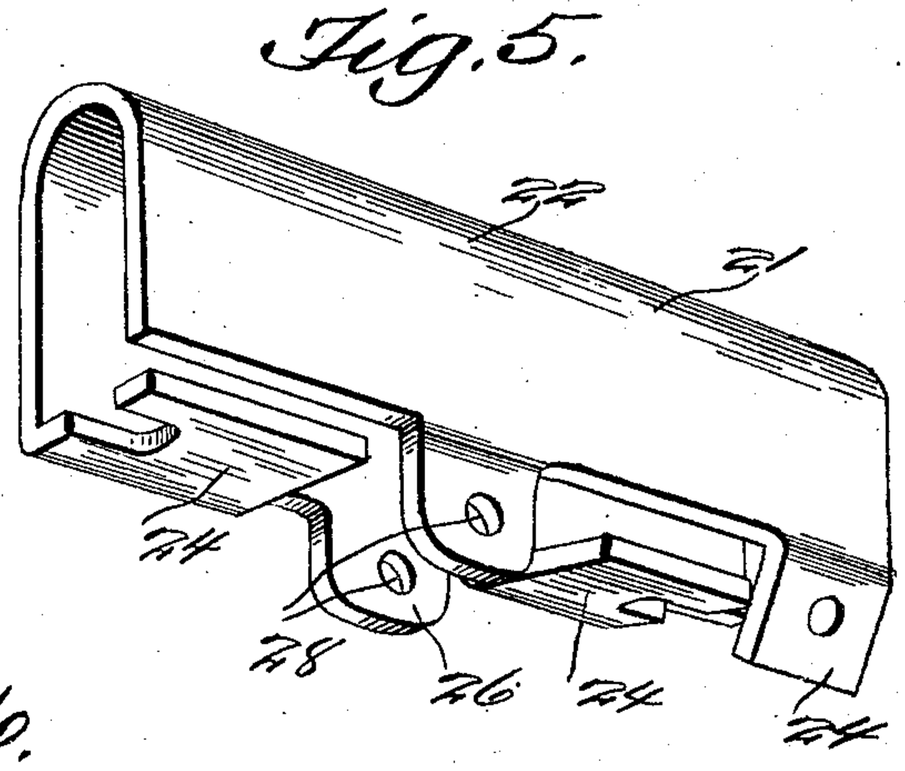


Fig. 6.

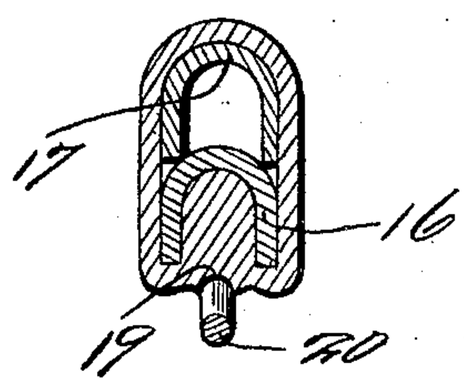
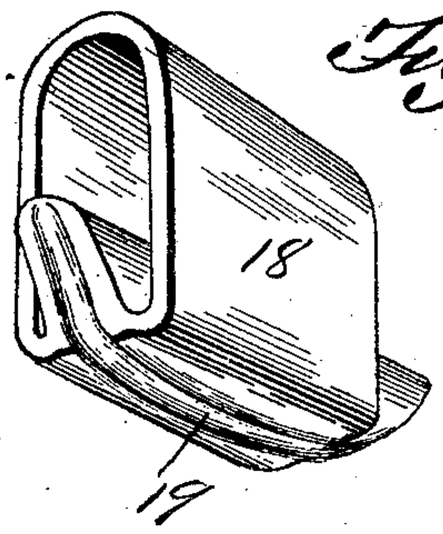


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH W. BABBIT, OF ELWOOD, INDIANA.

FOLDABLE UMBRELLA.

No. 929,536. Specification of Letters Patent. Patented July 27, 1909.

Application filed March 23, 1909. Serial No. 485,238.

To all whom it may concern:

Be it known that I, JOSEPH W. BABBIT, a citizen of the United States, residing at Elwood, in the county of Madison and State of Indiana, have invented a new and useful Foldable Umbrella; 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 belongs generally speaking to the art of making umbrellas, and it particularly pertains to the frame of such devices, and further particularly to a new and novel structure of a connection between the ribs of an umbrella and the supporting stays thereof.

This invention further embodies a novel construction of a handle for the stick of the umbrella, as is clearly shown in the drawings.

The essential object of the invention is to provide a simple and efficient construction of the connection between the ribs and the stays of an umbrella, which is inexpensive to manufacture, said connection comprising plate members, which encircle or are fastened about the ribs of the umbrella, in such a manner as to securely bind the two sections of the ribs, and to also secure a spring clamping member, to hold the sections of the ribs in their extended positions, thereby providing rigidly supporting ribs. When the sections of the ribs that are movable are forced toward the stick of the umbrella, the frame is readily collapsed, thus providing a collapsible structure. To move the said sections, it is necessary to exert a slight pressure longitudinally with the said movable sections, thereby overcoming the frictional contact of the spring members.

The invention comprises further objects and combinations of elements which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

The features and elements and the arrangement thereof, for accomplishing the objects of this device or apparatus, may be changed and varied, that is to say, in an actual reduction to practice, with an understanding that the changes and variations accruing from said reduction to practice, are limited to the scope of the appended claim.

To obtain a full and correct understanding of the details of construction, combinations of features, elements and advantages, reference is to be had to the accompanying drawings and the hereinafter set forth description in connection therewith, wherein—

Figure 1 is a sectional view through an umbrella, showing in elevation the features of the invention. Fig. 2 is an enlarged sectional view of the connection between the ribs and the stays of the umbrella. Fig. 3 is an enlarged perspective view of the connection between the ribs and stays of the umbrella. Fig. 4 is an enlarged perspective view of the connection between the ribs and stays of the umbrella, showing the movable section thereof in an adjusted position and the spring clamping member disengaged from the shoulder. Fig. 5 is a detail view, showing the two plates which form the connection between the sections of the ribs and the stays, as being disassembled, so as to show their structure. Fig. 6 is a transverse sectional view on line 6—6 of Fig. 3. Fig. 7 is an enlarged detail view of the shoulder which is carried by the immovable section of the ribs, showing its cam surface with which the spring clamping member engages.

In regard to the accompanying drawings, wherein similar reference characters indicate corresponding parts in the several illustrations, 1 designates the umbrella stick having the usual members 2 to which the ribs 3 and the stays 4 are suitably connected, by means of the wires 5 and 6. One of the members 2 is slidably mounted upon the umbrella stick, so as to raise or lower the stays of the umbrella together with the ribs. The said stick is provided with a handle 7, which comprises the casing 8, to which the closure 9 is suitably connected by threads. The lower extremity of the umbrella stick is hollowed out, as at 10, and the hollowed out portion is threaded, as at 11, as shown clearly in Fig. 1 of the drawings. Into this hollow threaded out portion, the spindle 12 of the member 13 is threaded. This member 13 is provided with an enlargement 14 which is threaded, and to which the thimble 15 is connected by threads. Into this thimble the casing 8 of the handle is threaded, as shown clearly in the drawings.

The ribs of the umbrella comprise two sections 16 and 17, the section 16 being immovable, other than being capable of being raised or lowered, while the section 17 is slidable parallel with relation to the section

16. The section 16, at its extremity, is provided with a keeper 18, through which the movable section is slidable. This keeper is provided with a cam groove portion 19, which is engaged by the spring clamping member 20. This spring clamping member is carried by the connection 21 between the immovable section of the ribs and the stays, as shown clearly in the drawings. This keeper is an endless member and is designed to hold the movable section in parallel relation with the immovable section. The connection 21 also performs the function of holding the two sections in parallel relation. The section 21 comprises a single plate 22 which is folded upon itself, in such a manner as to hold and encircle the sections of the ribs, as clearly shown. Said plate 22 is provided with overlapping lugs 24, which prevent displacement of the sections of the ribs, and to one of these lugs the spring clamping member is securely fastened. This spring clamping member consists of a single piece of spring wire having a bent portion 25 at its end, and its extremity is turned slightly upward, so as to allow the same to slide over the cam surface of the keeper, thereby allowing the bent portion to fully engage the keeper. The plate 22 is provided with additional lugs 26, in which a pin 27 is mounted, which pin engages apertures 28 of the said lugs. Each pin of these lugs forms a pivot or connection between the stays, as will be clearly understood. It is readily apparent that, when slight pressure is applied to the movable sections of the stays, they may be moved in parallel relation with the immovable sections and toward the umbrella stick, that is to say, when it is desired to collapse the frame of the umbrella.

From the foregoing, the essential features, elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

Having thus fully described the invention, what is claimed as new and useful is:—

In a collapsible umbrella frame, ribs comprising immovable and movable sections, supporting stays therefor, plates carried by the movable sections having lugs to overlap the immovable sections, keepers comprising an endless ring or band having a cam groove carried by the immovable sections and encircling partially the movable sections, and spring clamping members carried by one set of lugs of the plates and provided with bent portions to engage the said cam grooves of the keepers.

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

JOSEPH W. BABBIT.

Witnesses:
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CHAS. D. BABBITT.