

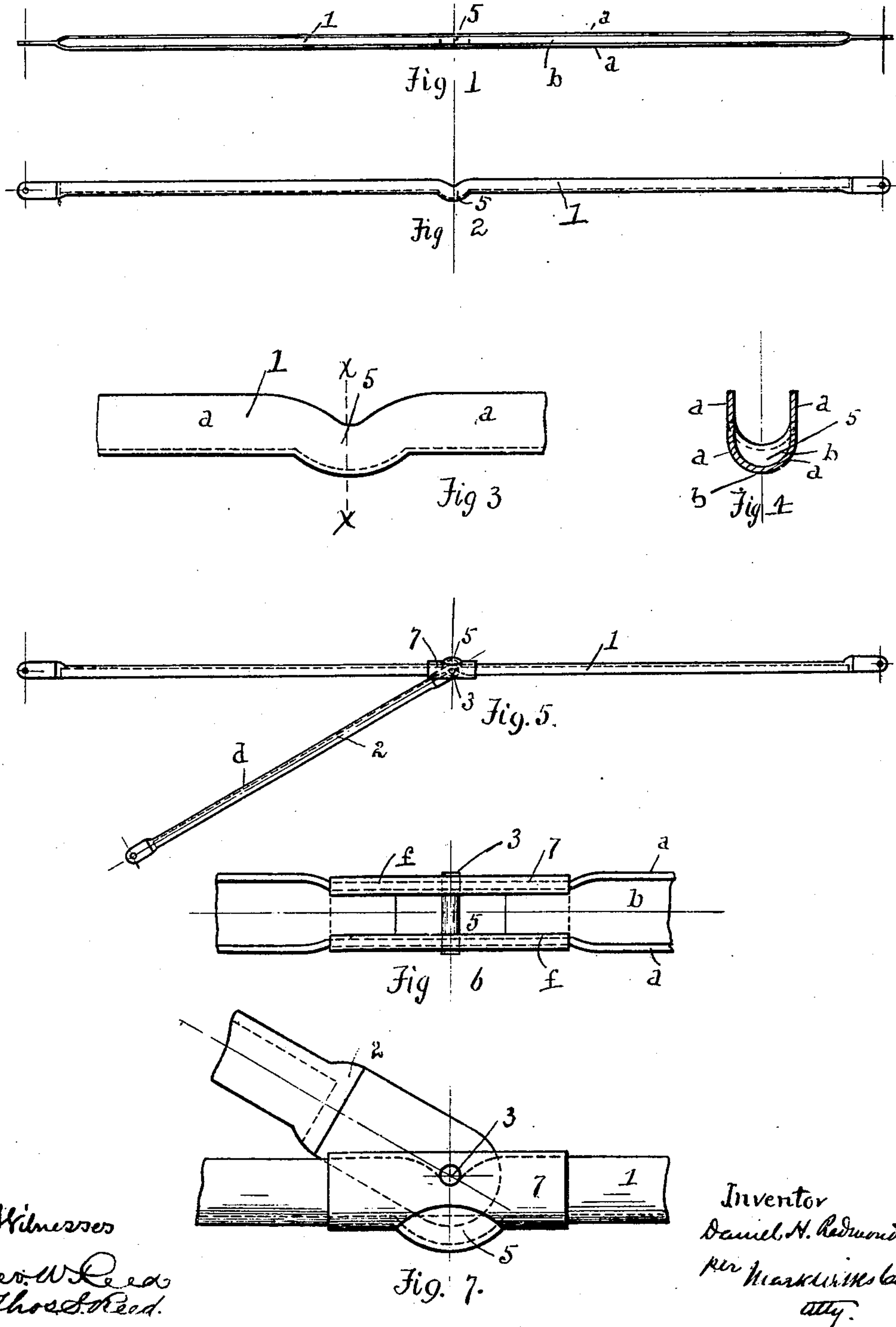
No. 679,035.

Patented July 23, 1901.

D. H. REDMOND.
UMBRELLA RIB.

(Application filed Aug. 7, 1900.)

(No Model.)



Witnesses
Geo. W. Reed
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UNITED STATES PATENT OFFICE.

DANIEL H. REDMOND, OF PHILADELPHIA, PENNSYLVANIA.

UMBRELLA-RIB.

SPECIFICATION forming part of Letters Patent No. 679,035, dated July 23, 1901.

Application filed August 7, 1900. Serial No. 26,122. (No model.)

To all whom it may concern:

Be it known that I, DANIEL H. REDMOND, a citizen of the United States, and a resident of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Umbrella and Parasol Frames, of which the following is a clear, full, and sufficient specification, reference being had to the drawings annexed.

My invention relates to frames in which the joint between the rib and the stretcher is lowered. This lowering hitherto has been attempted to be done in three ways—first, the upper portions of the side walls of the grooved rib have been cut away, or, second, been folded over upon themselves, or, third, been pierced to allow the pin connecting the rib and stretcher to pass through them. All of these ways in any case greatly weakened the rib, and especially did so where, as in all cases where the lowering was carried to any extent, a depression had to be made in the lower or bottom wall of the rib to allow the end of the stretcher play to turn. These facts are very clearly seen with reference to the cut-away rib and the pierced rib and will equally appear to be true with reference to the folded rib upon noticing that by the folding over of a portion of the side walls of the rib upon each other the portions of the rib on either side of the depression are connected by a portion almost all the metal in which lies in two narrow strips, the depression in the bottom not being accompanied with a depression in the side walls being necessarily much thinned out.

The object of my invention is to produce a rib that is equally elastic, equally strong, and equally rigid throughout its length, which I accomplish by producing a depression of the side walls and the bottom walls of the rib at the place of depression, wherein the amount of metal in the rib at this point and its distribution between the side and bottom walls is substantially unaltered—that is to say, that the cross-sectional contour of the rib at the depression is substantially the same as the cross-sectional contour of the rib at the undepressed portion at either side of the depression—and also to secure other advantages of construction in the rib, stretcher, and con-

nection between them, as will appear from the following portion of the specification.

Figures 1 and 2 are plan and side views of the rib. Fig. 3 is a side elevation of a portion of the rib, showing the depressed portion. Fig. 4 is a section on line $x x$ of Fig. 3. Fig. 5 is a side elevation of the ribs and stretcher and lap. Fig. 6 is a plan view of the lap applied to the rib. Fig. 7 is a side elevation, on an enlarged scale, of the portions of the rib and stretcher near the joint, together with the lap and pin.

1 is the rib, of the ordinary U or trough shape, and is finished at one end to fit in the notch and at the other in any usual or convenient manner. At the part where the pin 3, that is to connect the rib and stretcher together, is to be placed I draw down the side walls $a a$ and the bottom wall b of the rib substantially equally to form the depression 5. In doing this I practically simply lower these various parts equally and together, the metal in each part remaining the same, but being lowered, the relative amount of metal in each part and the distribution of the metal between the side and bottom walls and the cross-sectional contour being practically undisturbed. As a considerable drawing action will take place lengthwise of the rib, there will be very little, if any, diminution of the thickness of the walls in any part of the depression 5. The end of the stretcher 2 is flattened, and a hole is cut in this flattened end to receive the pin 3. It will be noticed that the stretcher fitting the rib the frame will not twist in rolling on account of the lowering of the pin 3.

The lap 7 is folded around the bulge formed at the back of the rib by the depression 5. It preferably has a depression or hole g , fitting over the bulge and preventing the lap from moving from its place or being misplaced. The ends of the lugs $f f$ of the lap 7 are folded inside the side walls $a a$ of the rib 1 at and extending preferably a short distance each side of the depression 5. The pin 3 is passed through four thicknesses of the lap and through the hole in the flattened end of the stretcher 2, in practice at the top edge of the side walls of the rib at the lower part of the depression 5. I also in practice pinch the side walls of the rib together at the place where

the lap is put on to prevent the turning of the
stretcher and to give the umbrella rigidity.
This and the necessity that the rib will have
to occupy the proper place will secure an ab-
5 solute uniformity in opening the umbrella or
parasol and in closing it.

Having now described my invention, what
I claim, and desire to secure by Letters Pat-
ent, is—

10 A rib having a depression at the point of
attachment of the stretcher thereto, the cross-

sectional contour of the rib at the depression
being substantially the same as the cross-sec-
tional contour of the rib at the side of the de-
pression, substantially as described.

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Having now described my invention and in-
dicated what I claim as new therein, I hereby
set thereon my hand this 5th day of July, 1900.

DANIEL H. REDMOND.

Witnesses:

M. W. COLLET,

GEO. W. REED.