

(No Model.)

H. JEFFERY.  
UMBRELLA.

No. 381,139.

Patented Apr. 17, 1888.

Fig. 1.

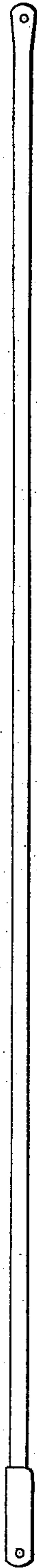


Fig. 2.



Fig. 4.

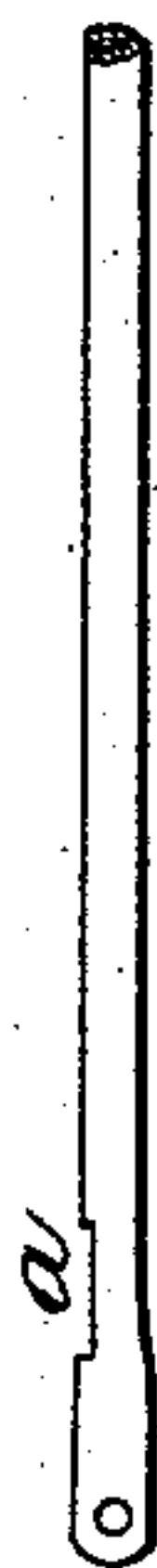


Fig. 6.



Fig. 3.



Fig. 5.



Fig. 7.



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY JEFFERY, OF STOCKSBRIDGE WORKS, NEAR SHEFFIELD, COUNTY OF YORK, ENGLAND, ASSIGNOR TO SAMUEL FOX & CO., (LIMITED,) OF SAME PLACE.

## UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 381,139, dated April 17, 1888.

Application filed August 1, 1887. Serial No. 245,833. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY JEFFERY, a subject of the Queen of Great Britain, residing at the Stocksbridge Works, near Sheffield, in the county of York, England, clerk, have invented certain new and useful Improvements in the Construction of the Frames of Umbrellas, Parasols, and Sunshades, of which the following is a specification.

This invention has for its object improvements in the construction of the frames of umbrellas, parasols, and sunshades; and the improvements relate to the construction of the end portion of the stretchers where they are jointed to the ribs.

Heretofore when the stretchers have been formed of trough-wire with a three-fork end, the two outer prongs of the fork have been formed from part of a thin piece of sheet metal, which piece has been made to pass around the exterior of the end of the stretcher just in rear of the fork and its edges have been bent over the sides of the trough and made to pass into its interior, so that each side of the trough has been nipped by the thin metal. Consequently at the end of the stretcher, where the thin metal is wrapped around it, the edges of the sides of the trough-stretcher close up to the fork have projected somewhat beyond the remainder of the side edges of the trough, so that the stretchers could not along the whole of their length lie perfectly close to the ribs. To remedy this I form a recess in the edge of each side of the end of the trough-wire of which the stretcher is formed, just in rear of the fork and where it is to be embraced by the thin metal above mentioned, and I make this recess of a depth equal to the thickness of the thin metal, so that when the thin metal piece has been secured to the stretcher end the edges of the sides of the trough are continued in one straight line right up to the point where the fork commences.

Figure 1 of the drawings hereunto annexed is a side view of a three-fork end of a stretcher as heretofore made. Fig. 2 is a side view, and Fig. 3 a face view, of a three-fork end formed as above described. Fig. 4 is a side view, and Fig. 5 a face view, of the stretcher end before the outer prong-piece has been secured to it. Fig. 6 is a side view, and Fig. 7 a face view, of the outer prong-piece.

The recesses *a*, which I form in each side of the trough-wire near the end of the stretcher, are shown clearly in Fig. 4. The recesses I form by putting the end of the stretcher into a grooved die, then bringing down upon it a punch the width of the recess, such punch having a tongue on it which goes inside the stretcher to keep it to its proper opening. The piece *b* for forming the outer prongs of the fork is then placed onto the stretcher end and the edges of the portions *b'* of the piece *b* are bent over the edges of the sides of the trough just where the recesses *a* have been formed in them.

The bending over of the pieces *b'* to make them clip the sides of the trough is effected in the ordinary manner.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

A stretcher of trough-wire having notches *a* near the fork end of the stretcher, within which the parts *b'* of the piece *b* lie, substantially as described.

HENRY JEFFERY.

Witnesses:

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