(No Model.)

J. WILLIS.

UMBRELLA FRAME.

No. 356,516. Patented Jan. 25, 1887.

Fig. 1.

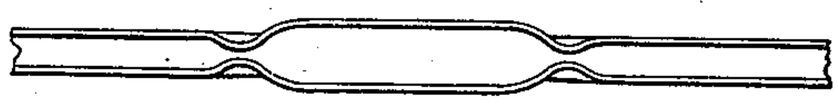


Fig. 2.

Fig. 3.

Fig. 4.

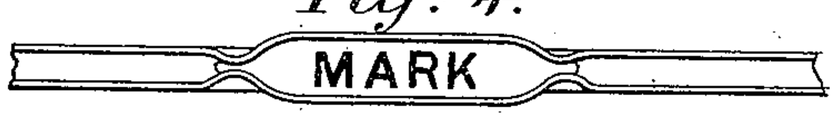
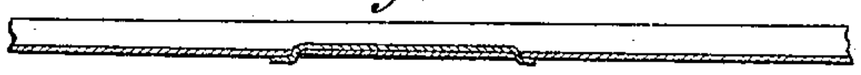


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES WILLIS, OF ROSENDALE, BOURNEMOUTH, COUNTY OF HANTS, ENGLAND.

UMBRELLA-FRAME.

SPECIFICATION forming part of Letters Patent No. 356,516, dated January 25, 1887.

Application filed August 30, 1886. Serial No. 212,202. (No model.) Patented in England January 27, 1885, No. 1,182, and November 13, 1885, No. 13,887, and in France May 13, 1885, No. 168,894.

To all whom it may concern:

Be it known that I, JAMES WILLIS, a subject of the Queen of Great Britain, residing at Rosendale, Bournemouth, in the county of Hants, England, gentleman, have invented certain new and useful Improvements in the Frames of Umbrellas and Parasols, (for which I have received Letters Patent in Great Britain, No. 1,182, dated January 27, 1885, and No. 13,887, dated November 13, 1885, and in France, No. 168,894, dated May 13, 1885,) of which the following is a specification.

This invention relates to improvements in that class of frames of umbrellas and parasols the stretchers or ribs of which have applied to them labels bearing trade-marks.

In accordance with my improvements, hereinafter specifically claimed, I provide for securing to the stretchers or ribs of umbrellas and parasols marks that can be easily read and securely fixed, and that shall become defaced or lose their freshness past restoring by the time the umbrella is worn out, thereby checking fraud on the public by the use on new frames of inferior quality of marks taken from old frames.

The method which I employ consists in spreading out the sides of the ordinary trough-like stretcher, or it might be the rib, as presently described, to a length such as to admit of the label being inserted within the stretcher or rib itself, instead of, as heretofore usually the case, being carried on a block of additional metal formed and fixed by great pressure for the purpose, or on a tablet or name-plate secured about the stretcher or rib. To spread out the sides of a stretcher or rib, I take it in its soft state, and by simply pressing it between a pair of dies in an ordinary fly-press I open out the part which is to contain the trade-mark, and so increase considerably the size of the label that can be used, and consequently render it more legible.

The trade-mark labels I cause to be produced on thin sheet-steel by well-known processes, by which the level surface of the thin metal sheet is left undisturbed, and so the mark loses its freshness in the wear of the umbrella and cannot be restored.

The method is either by direct printing on the metal or by transferring, as is well understood, on either annealed or hardened and tempered steel, and after it has been put into place giving it a coat of copal-varnish thinned down sufficiently to protect the mark from rust until the varnish is worn off. For this reason I prefer steel, as by the time the umbrella is old and the varnish worn off the mark will be more or less coated with fine rust, to remove which would also remove the design of the mark. Out of a sheet so having a number of trade-marks printed upon it I cut or stamp the labels, so as to leave a short tongue projecting from each end. These tongues I make to lie in the hollow of the stretcher or rib beyond the widened part and below the sides of the stretcher or rib, which are closed in somewhat at these points, so as to overlap the tongues and prevent them from escaping. The labels are put into their places after the stretchers or ribs have been hardened and tempered. When the label is of spring-steel, it may be sprung into place, or when it is of soft steel or other metal it may be inserted into place by first bending it to an arched form, which will not injure the mark, and then, when it has been placed over the cavity, again straightening it out, so as to make the tongues at its ends pass below the sides of the trough where they have been closed inward. At the same time the label may, except when of hardened and tempered steel, be dished or bent to make it fit against the sides as well as against the bottom of the cavity, so that a label of greater width than the distance across from side to side of the cavity can be used.

In the drawings, Figure 1 shows a portion of a stretcher prepared to receive the trade-mark label. Fig. 2 shows several labels printed on a strip of sheet-steel. Fig. 3 shows the label cut to form. Fig. 4 shows the stretcher with the trade-mark label in place. Fig. 5 shows a lock-rib stretcher with trade-mark label. Fig. 6 is a longitudinal section of Fig. 5.

Fig. 1 shows a portion of a trough stretcher or rib formed with a cavity suitable to receive a thin sheet-metal label within it. The sides

of the trough just beyond the cavity are closed inward at their edges, as shown. This can be done at the same time and by the same blow by which the spreading out of the stretcher or rib to form the cavity is effected.

Fig. 2 shows a portion of a sheet of thin metal with a number of trade-mark labels transferred or printed upon it, and Fig. 3 shows the form of the labels which are subsequently cut or punched from such sheet of metal. It is unnecessary to show the form of dies used for so spreading out a portion of the stretcher or rib, as the way in which the dies have to be formed to produce such spreading out will be well understood.

The lock-rib stretcher shown by Figs. 5 and 6 is of such dimensions that it does not require to be expanded to receive the metallic label within it. Two holes are made in it at the bottom, and through these the extremities of the label are passed and bent over.

The most convenient part of the frame on which to apply the mark is the stretcher, and I can so mark every stretcher near to the end which is jointed to the runner, as my improvements may be applied at slight cost to mark every stretcher of a set.

In place of applying the mark to the stretchers, as above described, the marks might, if preferred, be applied to the ribs, and, if desired, to each of the ribs; and as the nature of the steel and the perfection of the tempering are of the greatest importance to the ribs of an umbrella (as an umbrella which contains a single bad rib cannot be a serviceable one) the public would then have a guarantee for every rib. When so applying the mark to the ribs, I preferably apply them to the ribs about two inches from the top-notch end, and as, when the marks are in this position, the wet cover cannot touch them on the umbrella being closed, I may use labels of paper, as a coating of very thin varnish, which could not draw the paper in drying, would be quite sufficient to protect them against damp, and so the paper marks could readily be secured in place.

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—

1. The combination, with a trough stretcher, (or rib,) of a sheet-metal trade-mark label secured within and at the bottom of the hollow or cavity thereof, substantially as and for the purpose set forth.

2. A trough stretcher (or rib) spread out at the sides to form an enlargement or broader cavity and contracted or closed at the ends of said cavity, within and at the bottom of which a trade-mark label is received, substantially as and for the purpose set forth.

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