

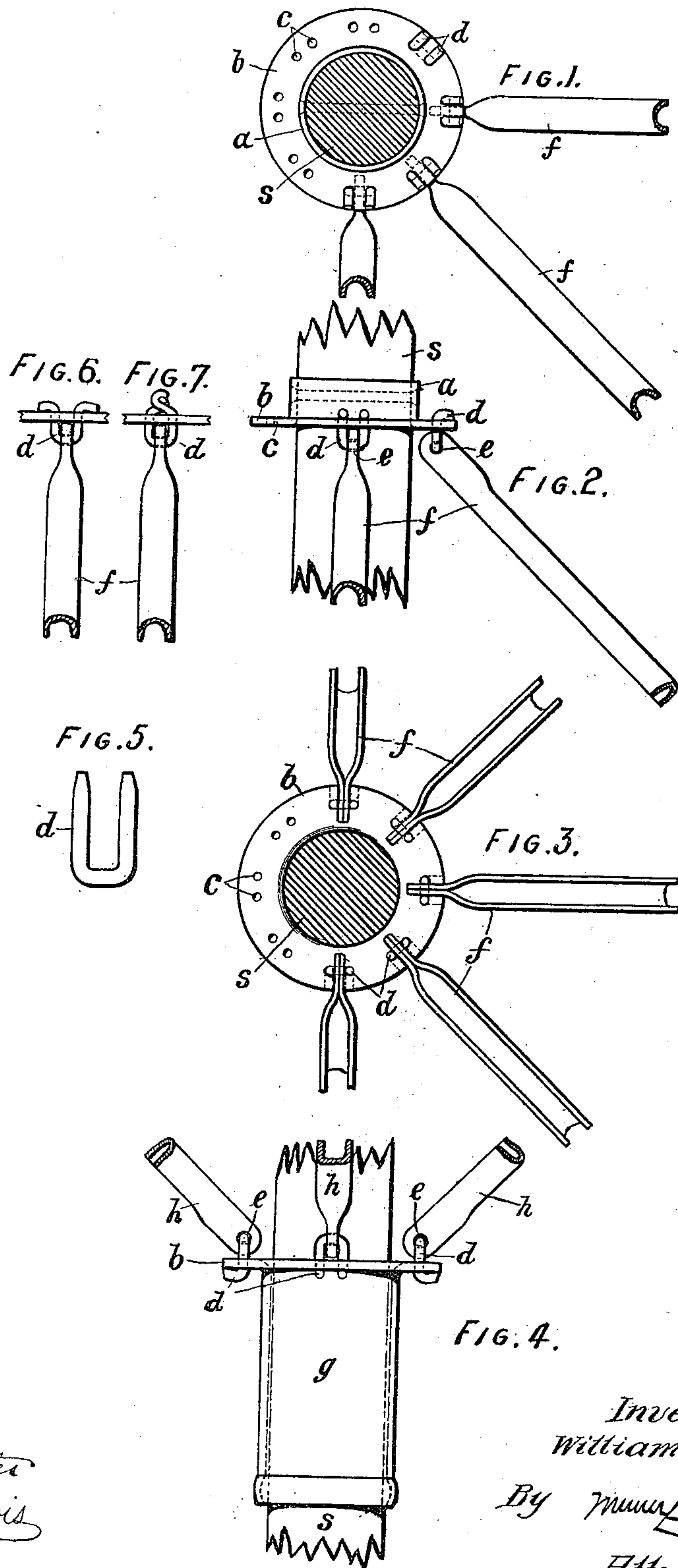
No. 666,500.

Patented Jan. 22, 1901.

W. DAVISON.  
UMBRELLA NOTCH.

(Application filed Oct. 6, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM DAVISON, OF LONDON, ENGLAND, ASSIGNOR TO MAX MARGOWSKI,  
OF SAME PLACE.

## UMBRELLA-NOTCH.

SPECIFICATION forming part of Letters Patent No. 666,500, dated January 22, 1901.

Application filed October 6, 1900. Serial No. 32,249. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DAVISON, accountant, a subject of the Queen of Great Britain, residing at 1 Queens Down road, Clapton, London, N. E., England, have invented new and useful Improvements in Top-Notch and Runner-Notch Joints for Ribs or Stretchers of Umbrellas or Parasols, of which the following is a specification.

My invention relates to improvements in the top-notch and runner-notch joints for the ribs and stretchers of umbrellas and parasols, and has for its object to provide joints which, although as durable and efficient in every respect as those now used, are more simple and are less costly to manufacture.

The invention consists of a plain perforated flange (stamped out in one with a cylindrical collar or tubular portion) in combination with U-shaped wire staples which are fixed in the holes in the flange, the staples before being so fixed being threaded through the usual pivotal holes in the ends of the ribs or stretchers, so that each rib or stretcher will pivot upon the bow portion of the corresponding staple. The staples are clenched in the flange by the points of the staples being bent over at right angles or twisted together at the side of the flange opposite to that from which the staples project.

Reference is to be had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a top plan, Fig. 2 an elevation, and Fig. 3 an under side plan, of the top-notch joint for the ribs, a few only of the staples and ribs being shown. Fig. 4 is an elevation of the runner-notch joint for the stretchers, a few only of the staples and stretchers being shown. Fig. 5 shows one of the staples before being inserted, and Figs. 6 and 7 show modifications of the mode of securing the staples.

The same letters of reference indicate similar parts in all the figures, which are drawn to a modified scale.

The top notch (shown in Figs. 1, 2, and 3) is formed by a cylindrical collar portion *a*, stamped out from a disk of sheet metal in one with a flat annular outwardly-projecting flange *b* of a breadth equal to the depth of the ribs when the latter are collapsed against the

stick *s*. In this flange *b* there are punched as many pairs of holes *c* as there are ribs—say eight pairs arranged in a circle and spaced to correspond to the intended positions of the ribs—the two holes of each pair being spaced to correspond to the limbs of the staple to be fixed therein. In each pair of holes is fixed a staple *d* of substantially U shape, the ends of the limbs being sufficiently pointed to pass easily through the holes *c*. Each staple is threaded through the usual pivotal hole *e* in the end of the rib *f*, so that the latter pivots freely upon the bow end of the staple, and the points of the staple are then inserted upward through the holes *c* in the flange *b* and firmly secured by being clenched or turned down against the upper side of the flange *b*, the points being preferably turned down outward toward the edge of the flange *b*, as shown in Fig. 1, or it may be inward toward the collar *a*, or laterally, as in Fig. 6, or they may be twisted together, as in Fig. 7. The staples are made of wire of suitable diameter, and the holes *c* are punched of the exact size to receive them, so that they shall fit tightly therein. The collar *a* is cross-pinned to the stick *s* in the usual way.

In consequence of the pivotal centers of the ribs being some distance beneath the flange *b* the radial length of the silk or other cover of the umbrella or parasol must be slightly increased accordingly.

In Fig. 4, *g* is the runner, preferably stamped or drawn out from a flat disk in one with the flange *b* by a succession of drawing operations, or the flange *b* may be stamped out in one with a short collar (similar to the collar *a* of the top notch) and be secured upon the runner *g* by beading or upsetting the latter and brazing in the usual way. *h* indicates the stretchers, pivoted upon staples *d*, fixed in holes in the flange *b* of the runner in precisely the same way as above described in reference to the ribs *f*, except that in this case the staples project upward from the flange instead of downward.

I claim—

1. In an umbrella or parasol frame, a top-notch joint for the ribs, formed of a collar fixed to the stick and having a flange perfo-



rated with as many pairs of holes as there are ribs, in combination with substantially U-shaped staples having their limbs passed through the holes in the flange and secured  
5 by being clenched at the other side of the flange, the bow ends of the staples projecting from one face of the flange, and with which the ribs are pivotally connected, substantially as described.

10 2. In an umbrella or parasol frame, a sleeve having a flange provided with a plurality of holes arranged in pairs, in combination with

substantially U-shaped staples having their limbs passed through the holes in the flange and secured by being clenched at the other  
15 side of the flange, the bow ends of the staples projecting from one face of the flange and with which the ribs are pivotally connected, substantially as described.

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