

No. 837,731.

PATENTED DEC. 4, 1906.

J. B. RIEHL.
UMBRELLA NOTCH AND RUNNER.
APPLICATION FILED NOV. 29, 1904.

Fig. 1.

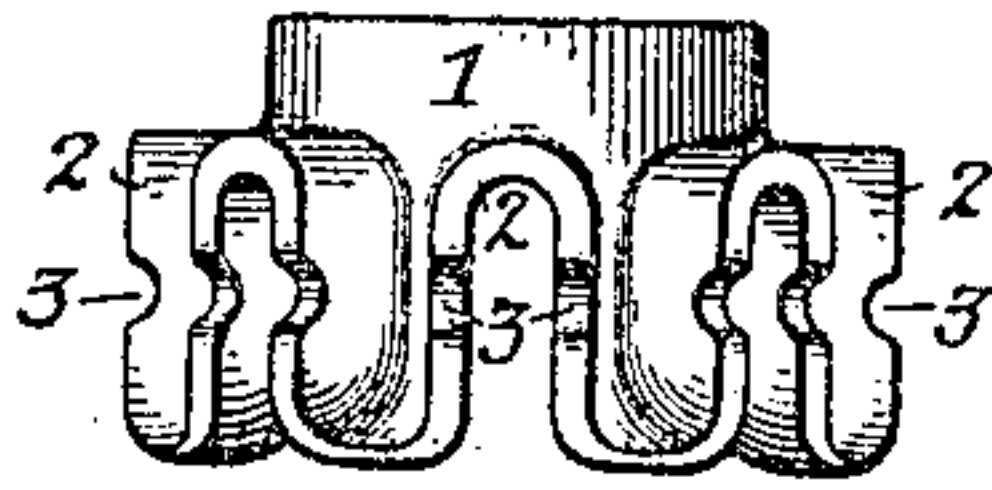


Fig. 2.

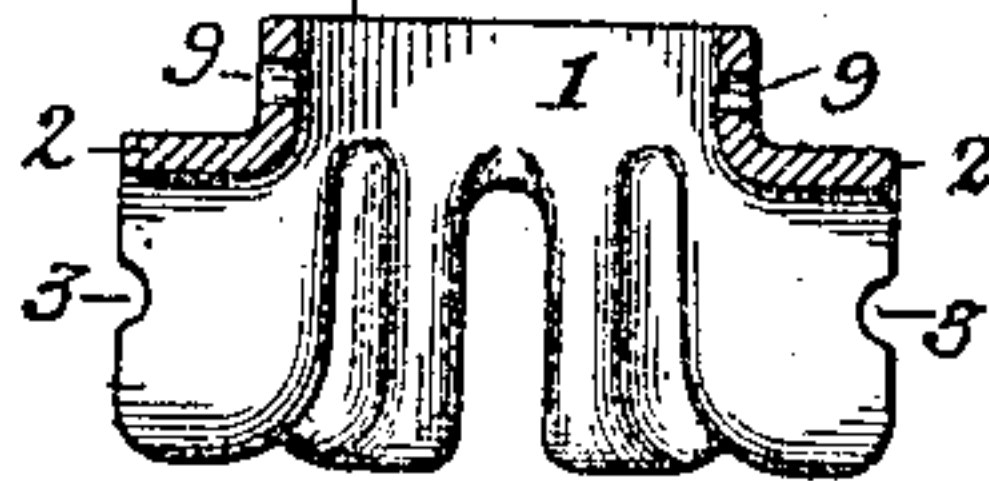


Fig. 3.

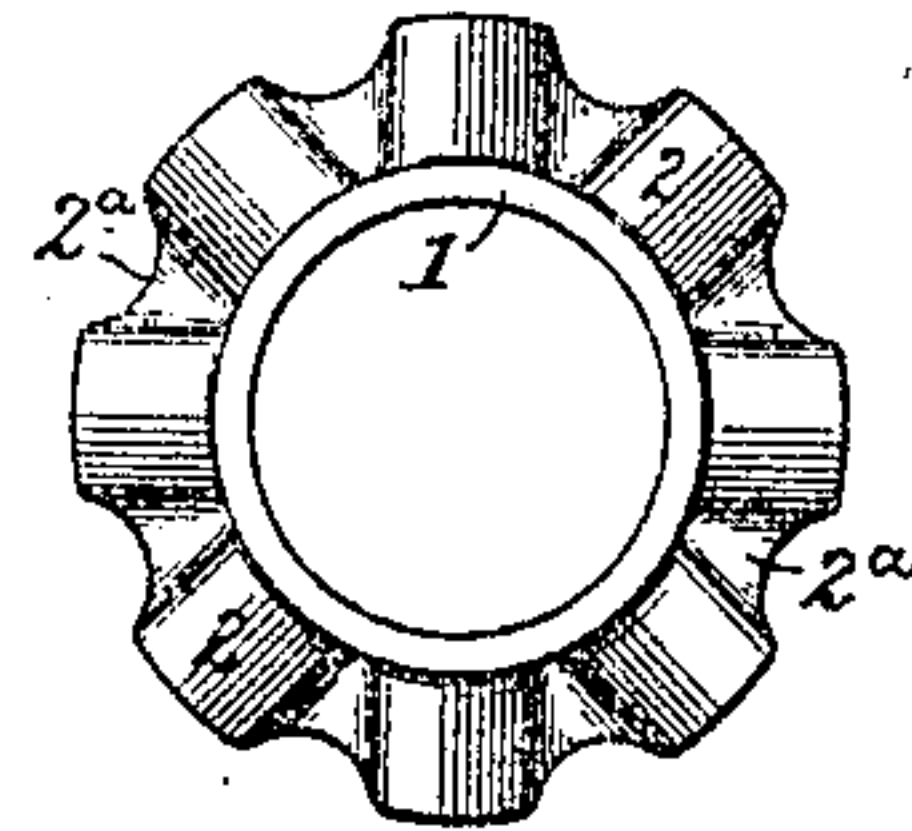


Fig. 4.

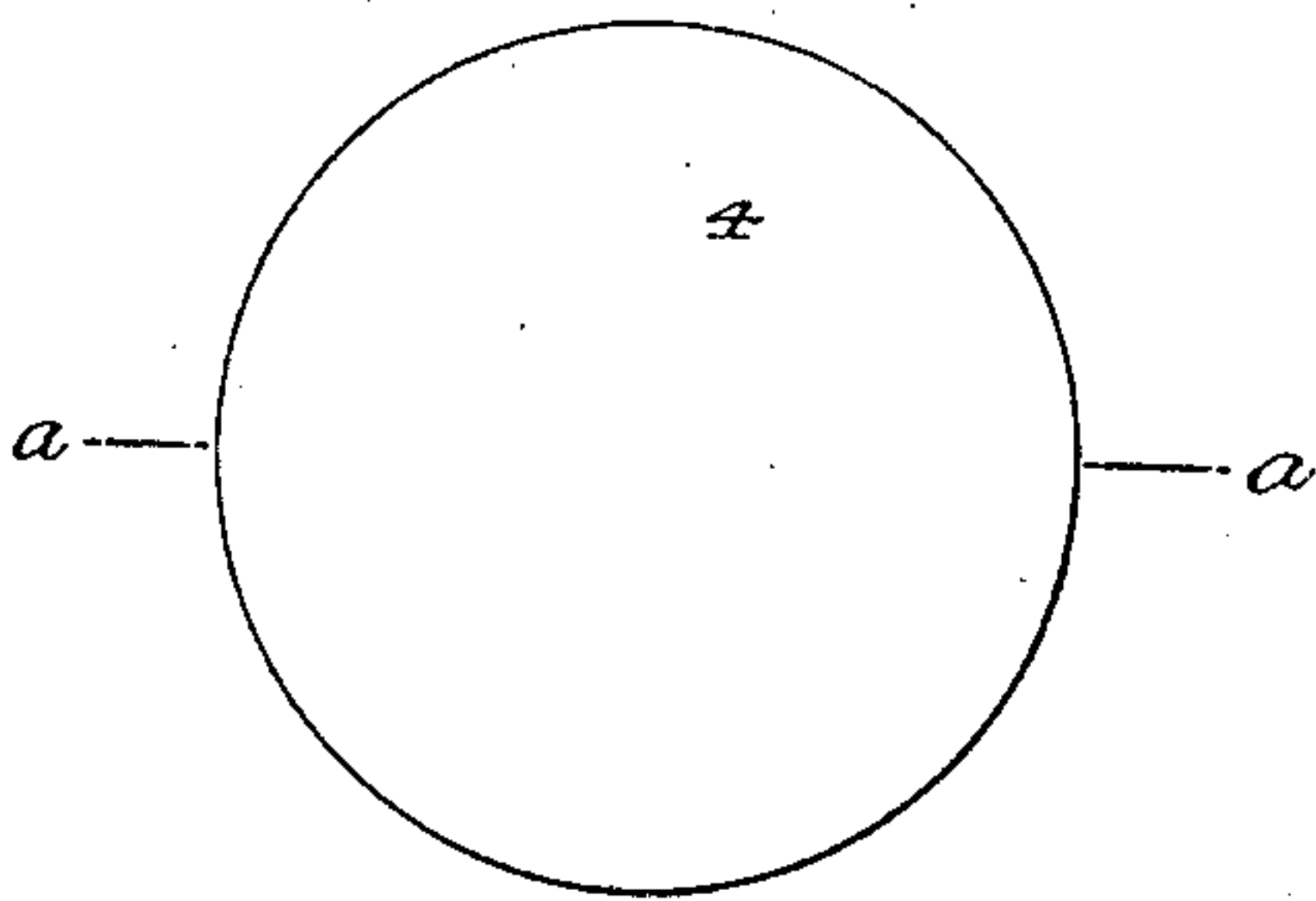


Fig. 6.

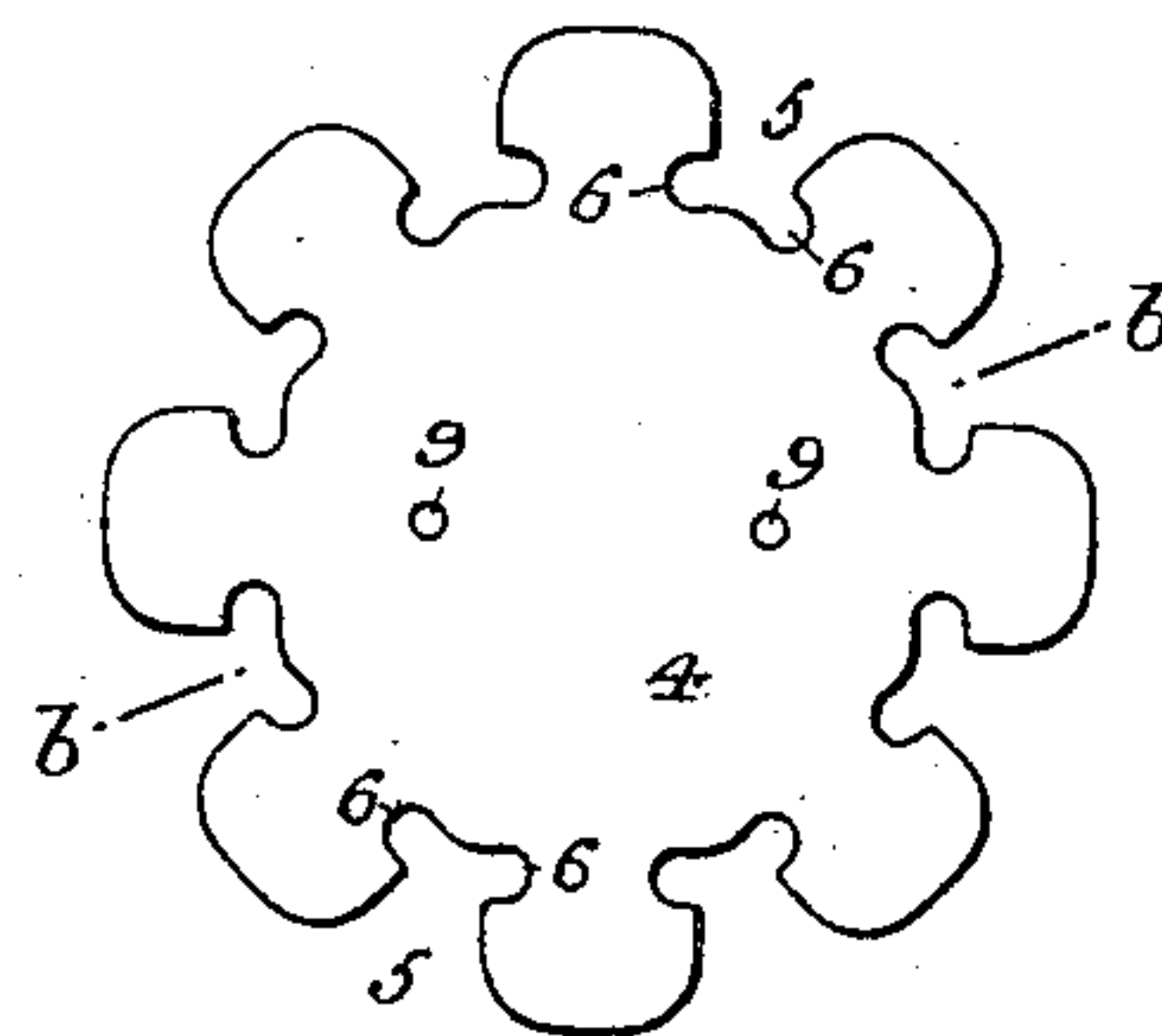


Fig. 5.



Fig. 7.



Fig. 8.

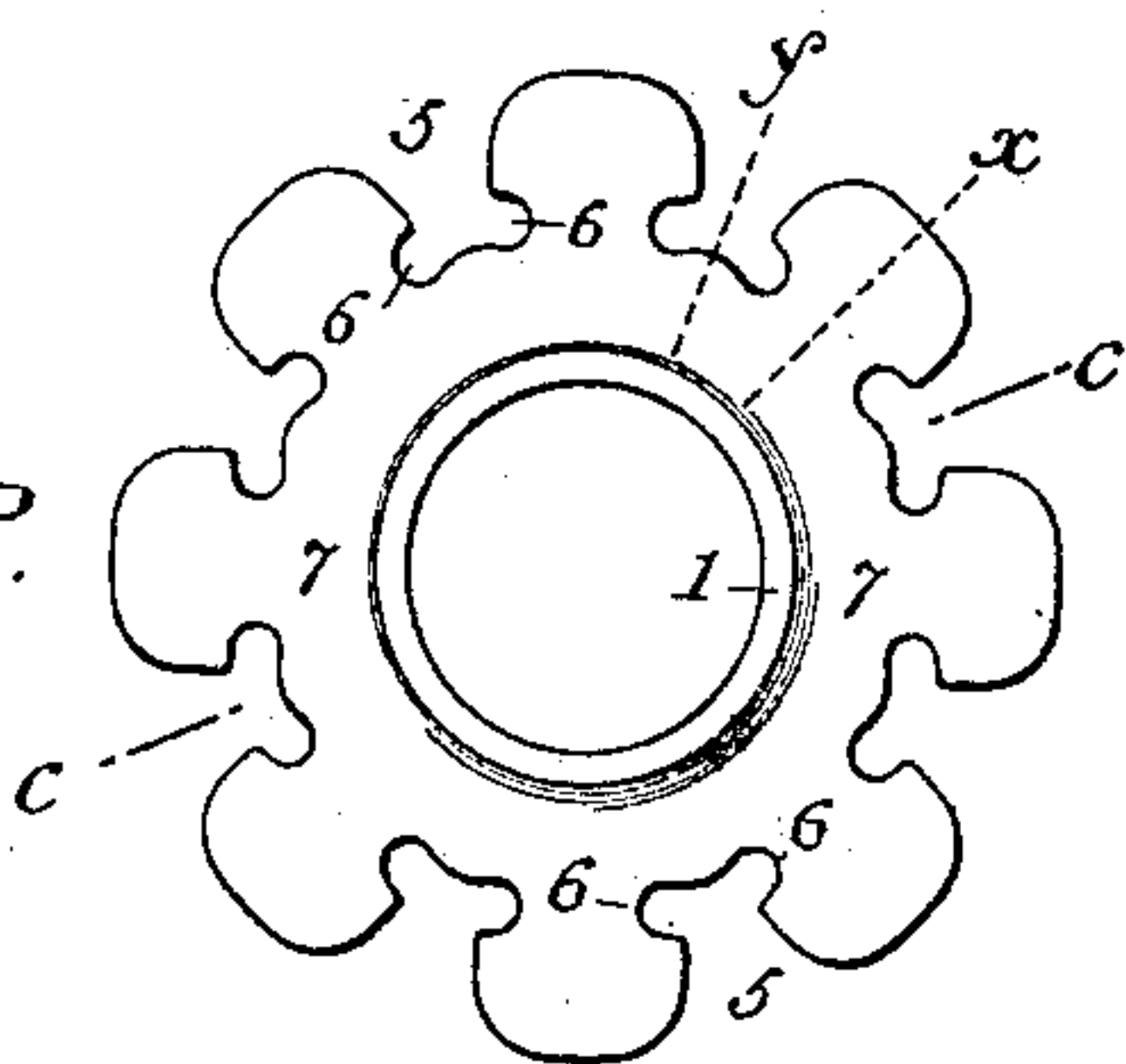


Fig. 9.

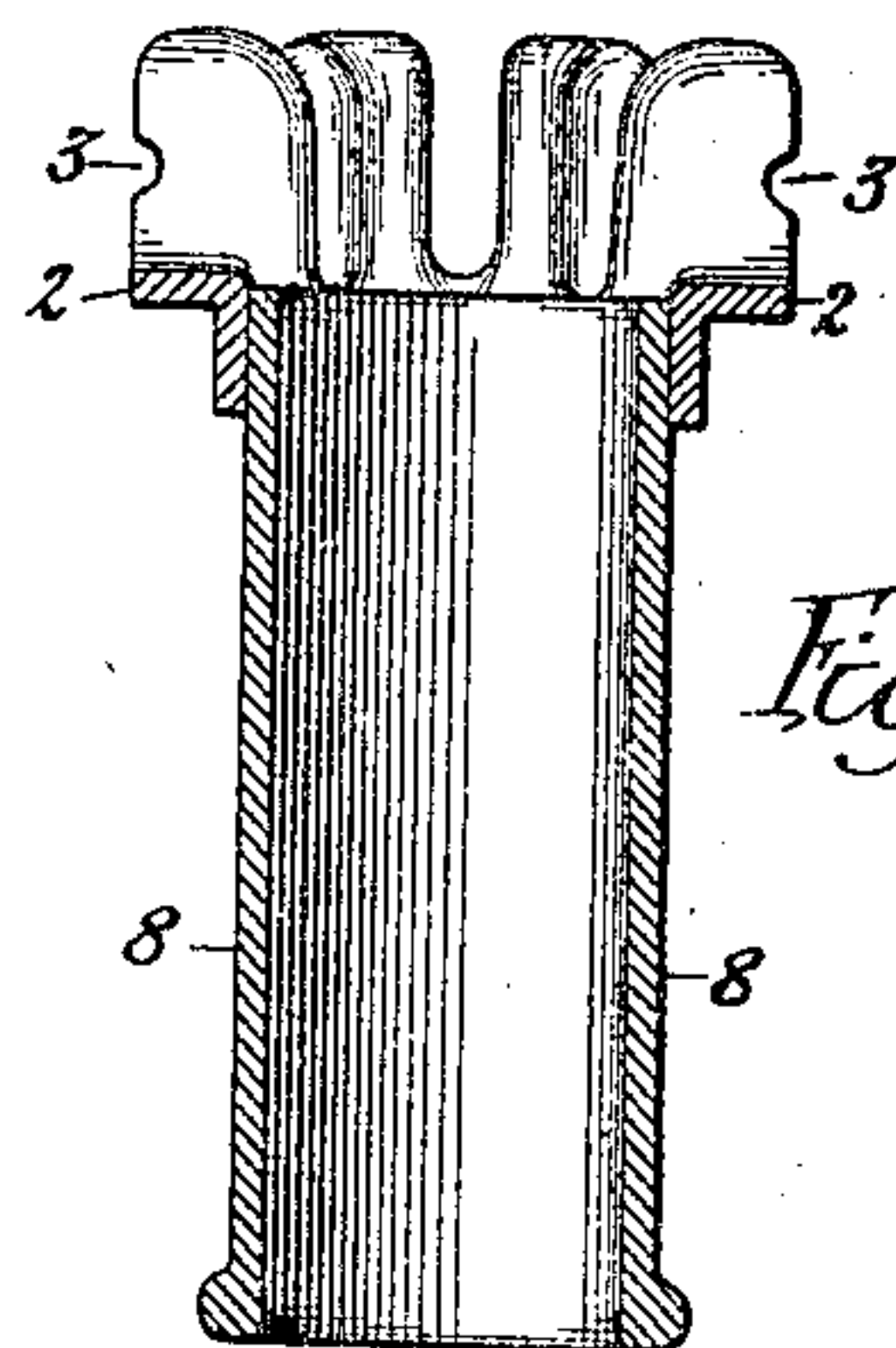
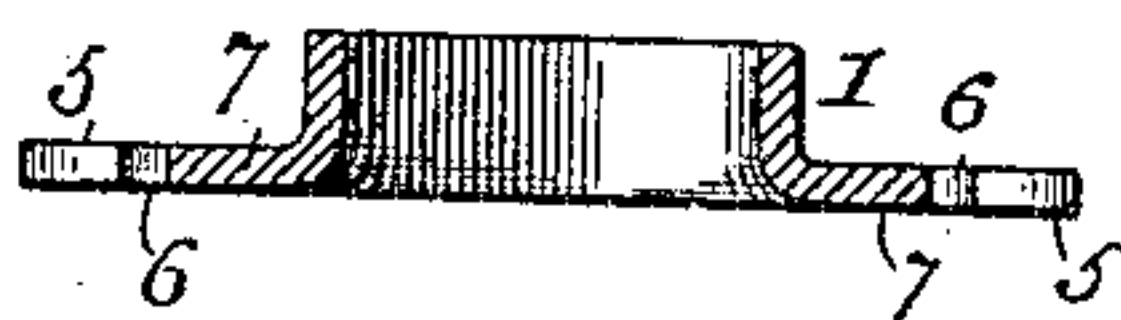


Fig. 10.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN B. RIEHL, OF PHILADELPHIA, PENNSYLVANIA.

UMBRELLA NOTCH AND RUNNER.

No. 837,731.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed November 29, 1904. Serial No. 234,772.

To all whom it may concern:

Be it known that I, JOHN B. RIEHL, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Umbrella Notches and Runners, of which the following is a specification.

The object of my invention is to improve the construction and reduce the cost of umbrella notches or runners, an object which I attain in the manner hereinafter set forth.

In the accompanying drawings, Figure 1 is a side view of an umbrella-notch constructed in accordance with my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a plan view. Fig. 4 is a view of the blank from which the notch is made. Fig. 5 is a sectional view of said blank on the line *a a*. Fig. 6 is a view of the blank, illustrating the next step in the manufacture of the notch. Fig. 7 is a sectional view, on the line *b b*, of the blank shown in Fig. 6. Fig. 8 is a view of the blank, illustrating the second step in the formation of the notch. Fig. 9 is a sectional view, on the line *c c*, of the blank shown in Fig. 8; and Fig. 10 is a sectional view of an umbrella-runner constructed in accordance with my invention.

My invention, which improves the notch or runner and materially reduces the cost of the same, consists, primarily, in the formation of the notch from sheet metal properly shaped and pressed or struck up into the desired form, and, secondarily, in a novel construction whereby such method of production is rendered possible.

Attempts have heretofore been made to produce sheet-metal notches and runners, but such attempts have been based upon a departure from the accepted type of notch or runner and rib or stretcher and have not been successful. In carrying out my invention I have therefore retained the general form of the cast notch, with its vertical slots for the reception of the pivoted ends of the ribs or stretchers and its external groove for receiving the wire, whereby such ribs or stretchers are pivotally confined to the notch. Hence my improved notch can be used in the same manner as the ordinary cast notch and does not necessitate any departure from the ordinary construction of either the ribs or stretchers.

My improved notch consists of a tubular neck 1 and a depending vertically-corrugated flange 2, projecting outwardly therefrom,

said corrugations having in their outer faces notches 3, as shown in Fig. 1, the convolutions of the flange providing the desired slots for the reception of the pivotal ends of the ribs or stretchers, and the notches 3 collectively constituting the circumferential groove for receiving the wire whereby said ribs or stretchers are pivotally connected to the notch in the ordinary manner.

In carrying out my invention I first take a circular blank, such as shown at 4, Figs. 4 and 5, and form in the outer portion of the same radial slots 5 with lateral notches 6 therein, as shown in Figs. 6 and 7, and I then press up the central portion of the blank so as to form the neck 1, as shown in Figs. 8 and 9, after which the projecting flange 7 is bent downwardly by pressure applied on the central line *x*, Fig. 8, of each of the full portions of the blank, while each of the slotted portions of the blank is being supported on its central line *y*, Fig. 8, with the result that said outwardly-projecting flange 7 is converted into the vertically-corrugated flange 2, as shown in Fig. 1, and the lateral notches 6 of the slots 5 are converted into the notches 3 and collectively form the circumferential groove in the outer face of the corrugated flange.

In constructing a runner all that is needed is to solder, braze, rivet, or otherwise secure to the notch a sheet-metal tube 8, as shown in Fig. 10, or such runner-tube may be formed integral with the notch by first drawing a tube of the proper length from a blank and then forming the notch from a flange at one end of said tube in the manner before described.

Although I prefer in all cases to provide the notch with a neck 1, said notch can be formed without this neck, if desired, in which case the blank shown in Fig. 4 may have a central opening formed therein of the desired diameter.

The notch is preferably provided with one or more openings 9 for the reception of the pin, whereby the notch is secured in position upon the stick and said opening or openings can be conveniently formed by punching the blank at the same time that the same is being slotted, as shown, for instance, in Fig. 6, thereby disposing with the drilling of the notch which is usually required and which adds its quota to the ordinary expense of manufacture, or in carrying out my invention these openings for the reception of the secur-

ing-pin may be disposed with altogether, for as the notch is composed of ductile metal a spur or barb can be struck up therefrom and a similar spur or barb can be simultaneously
5 pressed into the metal stick after the application of the notch thereto.

One of the respects in which my improved notch differs from an ordinary notch is in the closure of the tops of the slots which receive
10 the pivotal ends of the ribs or stretchers. Hence in case of the breaking of the pivot-wire the ends of the ribs are not liable to be thrust through the cover of the umbrella, as in the ordinary construction.

15 In carrying out my invention the blank may be slotted so as to eliminate the portions 2^a, Fig. 3, between the bases of the slotted ribs, but the interference with the continuity of the corrugated flange thus effected while
20 it may weaken said flange will not prevent it from performing its proper functions. Hence I intend such construction to be included in the term "corrugated flange."

Although I prefer in all cases to form the
25 notches 6 in the blank so as to constitute the notches 3 in the finished product, such notches 6 may, if desired, be omitted and the notches 3 formed by turning or otherwise after the formation of the corrugated
30 flange 2.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. An umbrella notch or runner having a tubular neck portion provided with an annu- 35 lar flange of sheet metal bent into a series of undulations placed radially to said neck portion, alternate ones of the recesses resulting from said undulations opening inwardly and being formed for the reception of ribs, sub- 40 stantially as specified.

2. An umbrella notch or runner having a tubular neck portion provided with an annular flange of undulatory contour, there being recesses between the undulations of said 45 flange successively opening in opposite directions and in lines substantially parallel to the sides of said neck portion, the edge of the metal forming said undulations lying in a substantially cylindrical surface coaxial with 50 the neck portion and grooved for the reception of a rib-retaining wire, substantially as specified.

3. A blank for an umbrella-notch, the same consisting of a disk of sheet metal hav- 55 ing in its periphery radial slots each provided with notches extending from its inner portion in lines substantially concentric with the disk, substantially as specified.

In testimony whereof I have signed my 60 name to this specification in the presence of two subscribing witnesses.

JOHN B. RIEHL.

Witnesses:

MAY B. McDERMOTT,
JOS. H. KLEIN.