

No. 719,144.

PATENTED JAN. 27, 1903.

C. H. SCHAEFFER.  
UMBRELLA NOTCH PIECE.  
APPLICATION FILED JUNE 5, 1902.

NO MODEL.

Fig. 1.

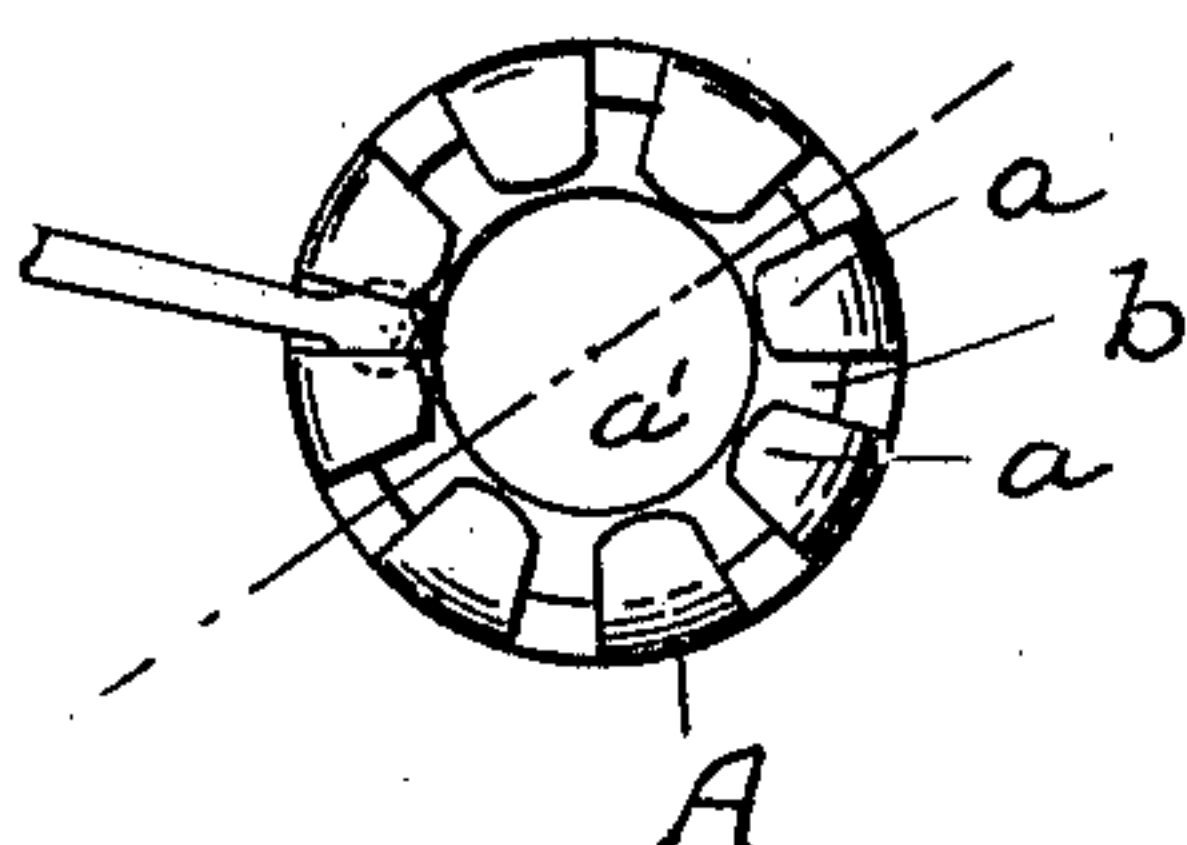


Fig. 3.

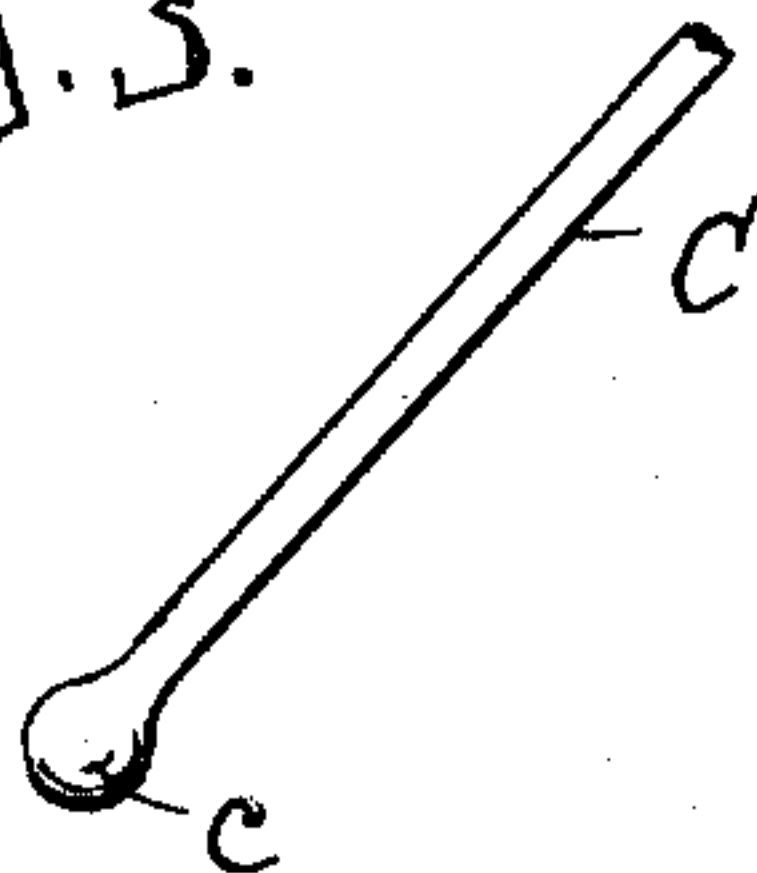
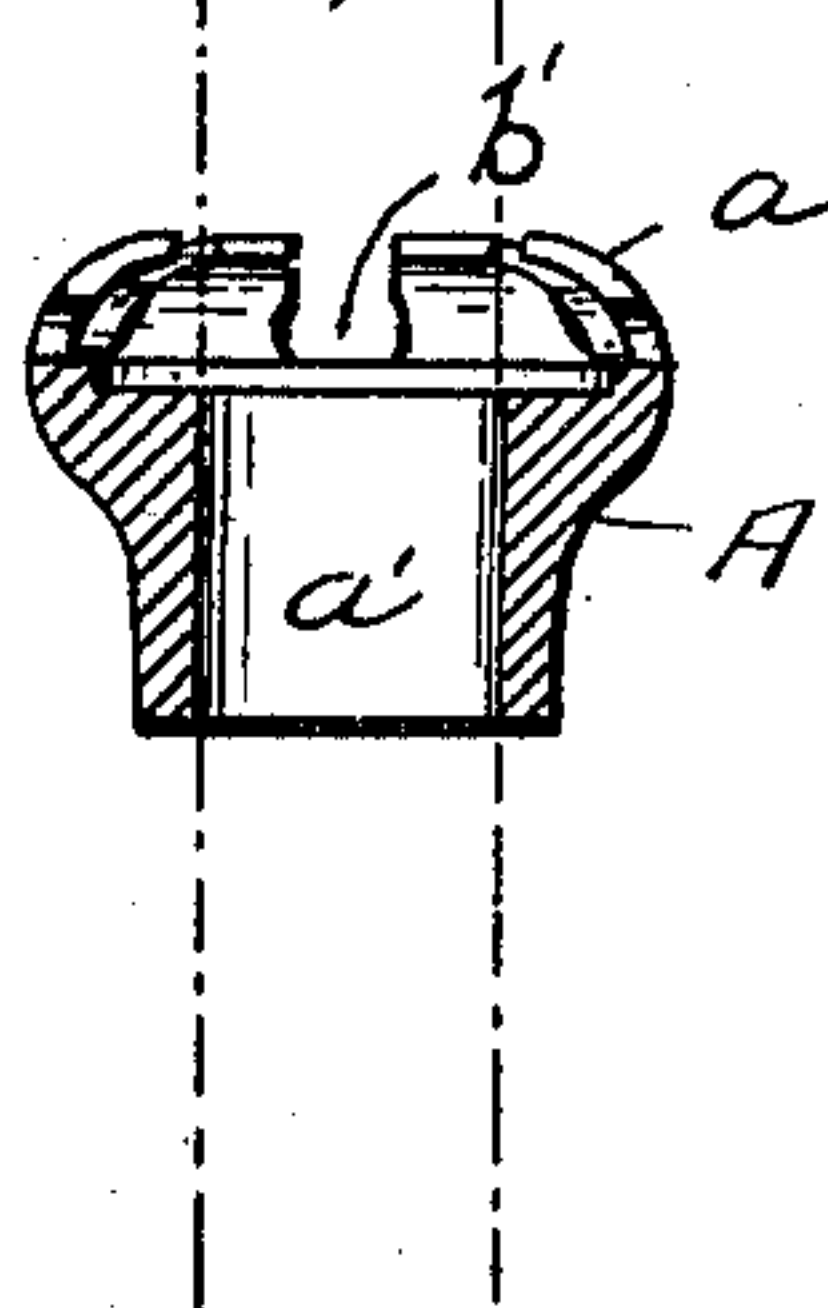


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## UMBRELLA NOTCH-PIECE.

SPECIFICATION forming part of Letters Patent No. 719,144, dated January 27, 1903.

Application filed June 5, 1902. Serial No. 110,294. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. SCHAEFFER, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Umbrella Notch-Pieces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates in general to the construction of umbrellas, but more especially to the construction of the part known as the "notch-piece" or "runner;" and the object of the same is to construct a device which will be applicable to umbrella and parasol frames and in which the ends of the ribs ordinarily used in umbrellas will be held therein independently of each other by means of ball-and-socket joints. Heretofore in umbrellas of this type the construction of the notch-piece or runner has proved objectionable, because in order to insert or remove a rib after the notch-piece or runner has been secured to the stick the rib must be twisted or turned to permit of such insertion or removal, or else the prongs or fingers must be bent and straightened. In the former case the twisting of the rib is rendered impossible by the stretcher, and in the latter instance the constant straightening and bending of the fingers or prongs eventually breaks them off, and this effects two of the ribs and allows them to drop out of position.

The object of my invention is to overcome all of these objections, and to this end I have constructed a rigid single-piece construction in which the ribs can be inserted and removed and also operated independently of all the other ribs without the slightest twisting movement of the ribs.

Referring to the accompanying drawings, Figure 1 is a plan view of my device. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail view on one of the ribs, showing the end with a ball or enlargement.

The body A of the notch-piece or runner is of a rigid and single-piece construction, circular in form, and is adapted to slip onto the umbrella stick or rod. It is formed with the solid body portion A, and around the outside

portion of the edge which engages the ribs are a series of rigid teeth or projections  $\alpha$ , which are independent of each other for their entire length and which taper from their base toward their outer extremities. These projections are bent on a curve from their base, extending first upward and then inward, and terminate at points about the line of the central opening  $\alpha'$ , through which the stick passes. It is to be understood that the notch-piece at the top of the stick has the projections at its base just the reverse of the runner, which latter I only have illustrated. These projections are also so arranged as to form a radiating recess  $b$ , which is quite narrow at the ends, and said projections are each somewhat reduced in diameter near their base, or the point where they join the body portion, so that the adjacent edges of each pair of projections form between them an enlarged and approximately cylindrical opening at the points  $b'$ , as clearly seen in Fig. 2 of the drawings, which terminates in a narrow opening near the top.

The ribs C are formed with balls or enlargements  $c$  on their ends, and these balls are slightly smaller in diameter than the diameter of the enlarged openings  $b'$  at the base of the recesses  $b$ , but are somewhat larger than their inner openings. This is due to the peculiar shape of the adjacent faces of said teeth or projections. The ribs are secured to the runner or notch-piece after the latter has been secured to the stick by inserting their heads in the enlargements  $b'$  and then moving toward the center—that is, toward each other—thereby causing said heads to pass under the projections, while the ribs proper will pass through the reduced openings near the center. After their outer ends have been secured to the cover in the usual manner they will not be able to return to the position at which they entered the retainer, though they will be free to move easily therein while opening and closing the umbrella.

It will be seen that after the ribs are in position in the notch-piece or runner there is no possibility of any of the ribs becoming disengaged; but should one or more of them become so disengaged it will not affect the other ribs, and any rib may be readily detached by



simply forcing the head thereof toward the base of the projections until it comes opposite the enlarged openings *b'*.

When the umbrella is opened, the heads of the ribs are pressed against the stick, which prevents them from dropping out. With the notch-piece at the upper end of the stick it is to be understood that although the projections are just the reverse of the runner, still they are of the same construction.

When the runner is drawn down to close the umbrella, the strain of the ribs will keep them all seated at the inner extremities of the projections or reduced portions, so that the heads will always be beneath the narrow openings between the projections.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described article of manufacture consisting of a one-piece construction, comprising a body portion provided with a cen-

tral opening, a plurality of integral and rigid projections, independent of each other for their entire length arranged around the outer portion of one edge, said projections being tapered from their base toward their free extremities and extended from one edge of and away from the body, and curved inward toward the central opening, the extremity of each projection terminating in a line with the central opening, the edges of each projection being cut away at their base so that the adjacent edges at the reduced parts form enlarged openings which communicate with the narrow openings formed by the taper of the projections at their free extremities.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. SCHAEFFER.

Witnesses:

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