

No. 749,376.

PATENTED JAN. 12, 1904.

S. E. GROFF.  
UMBRELLA RIB RETAINER.  
APPLICATION FILED JUNE 25, 1903.

NO MODEL.

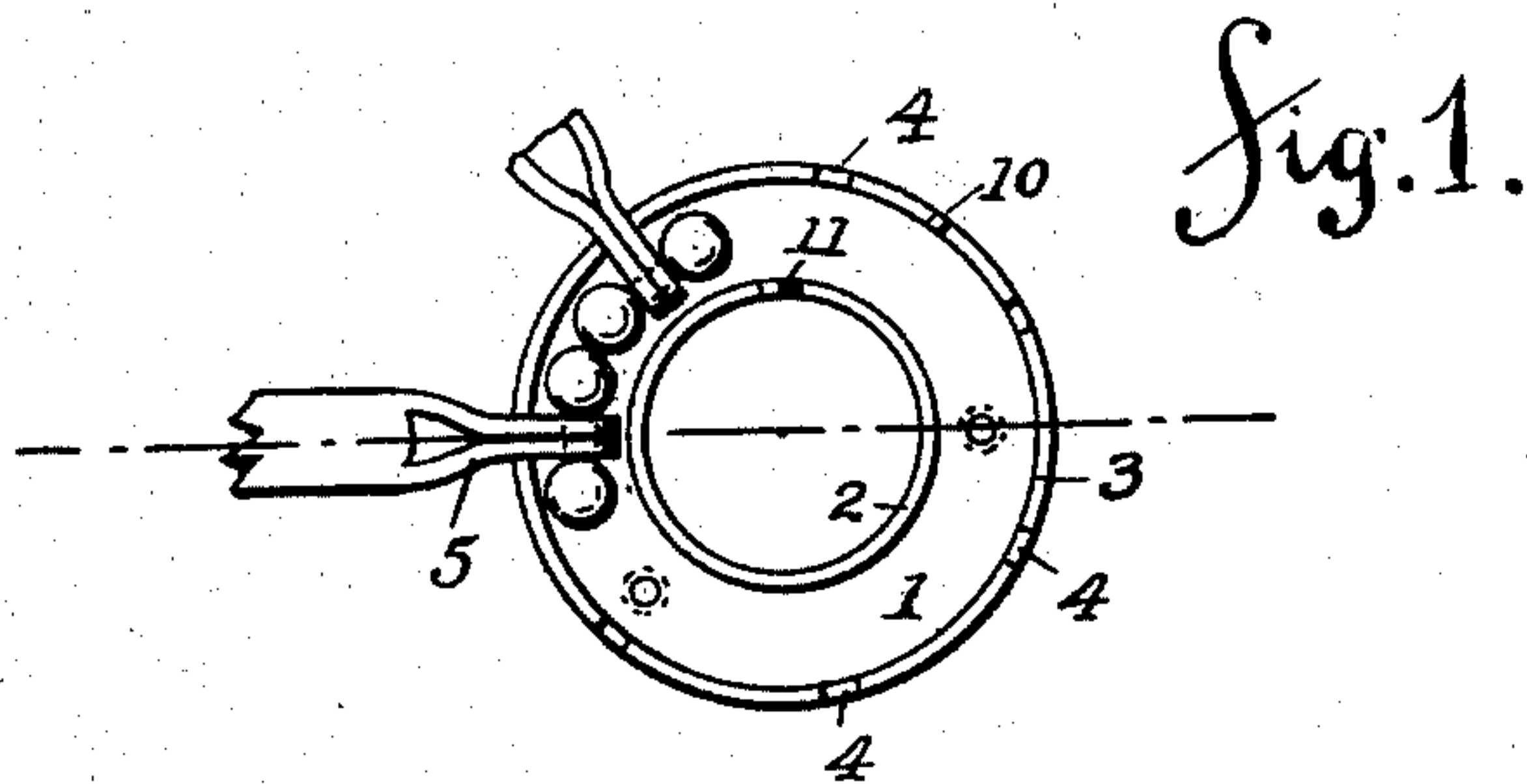


Fig. 1.

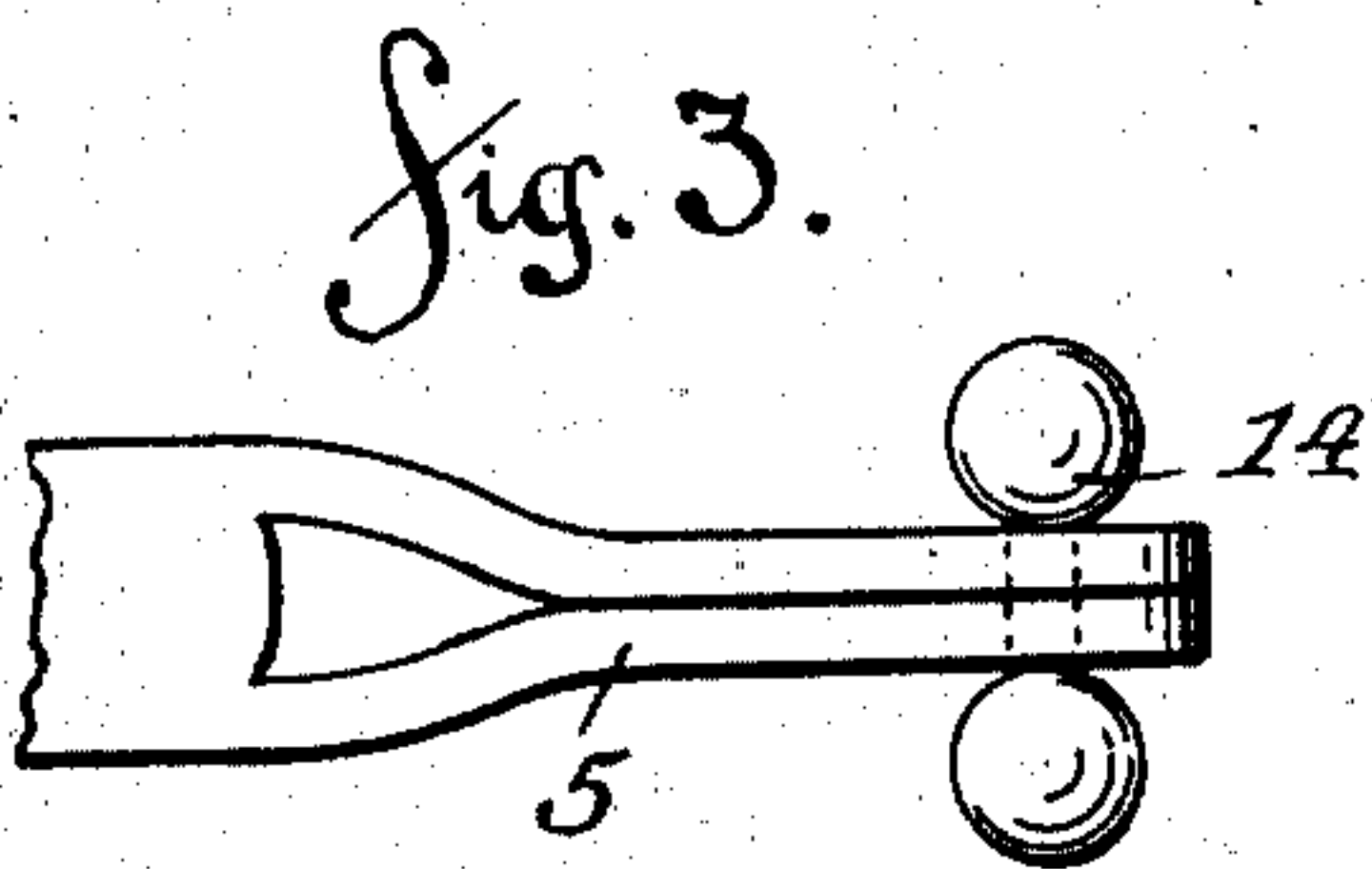


Fig. 3.

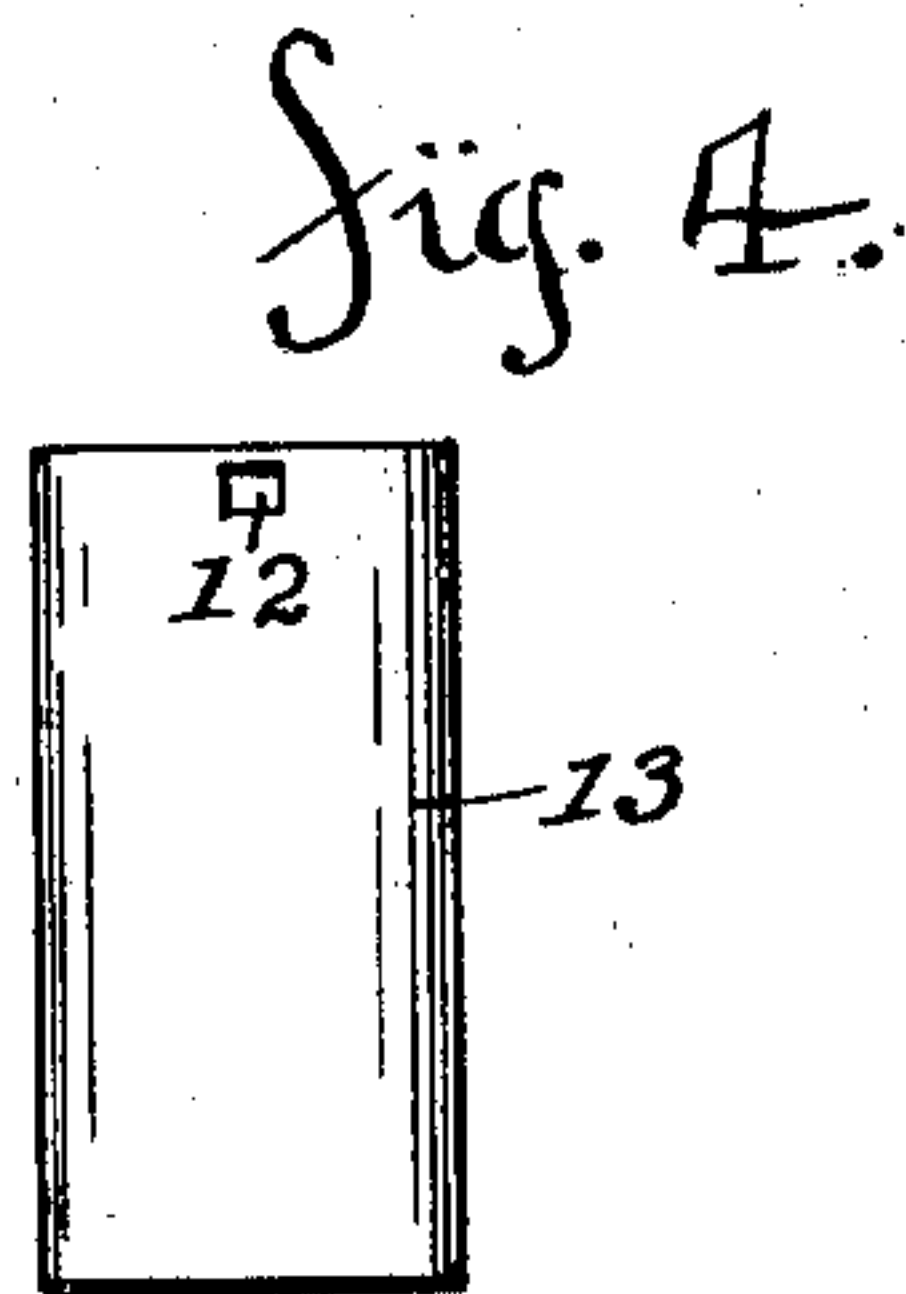


Fig. 4.

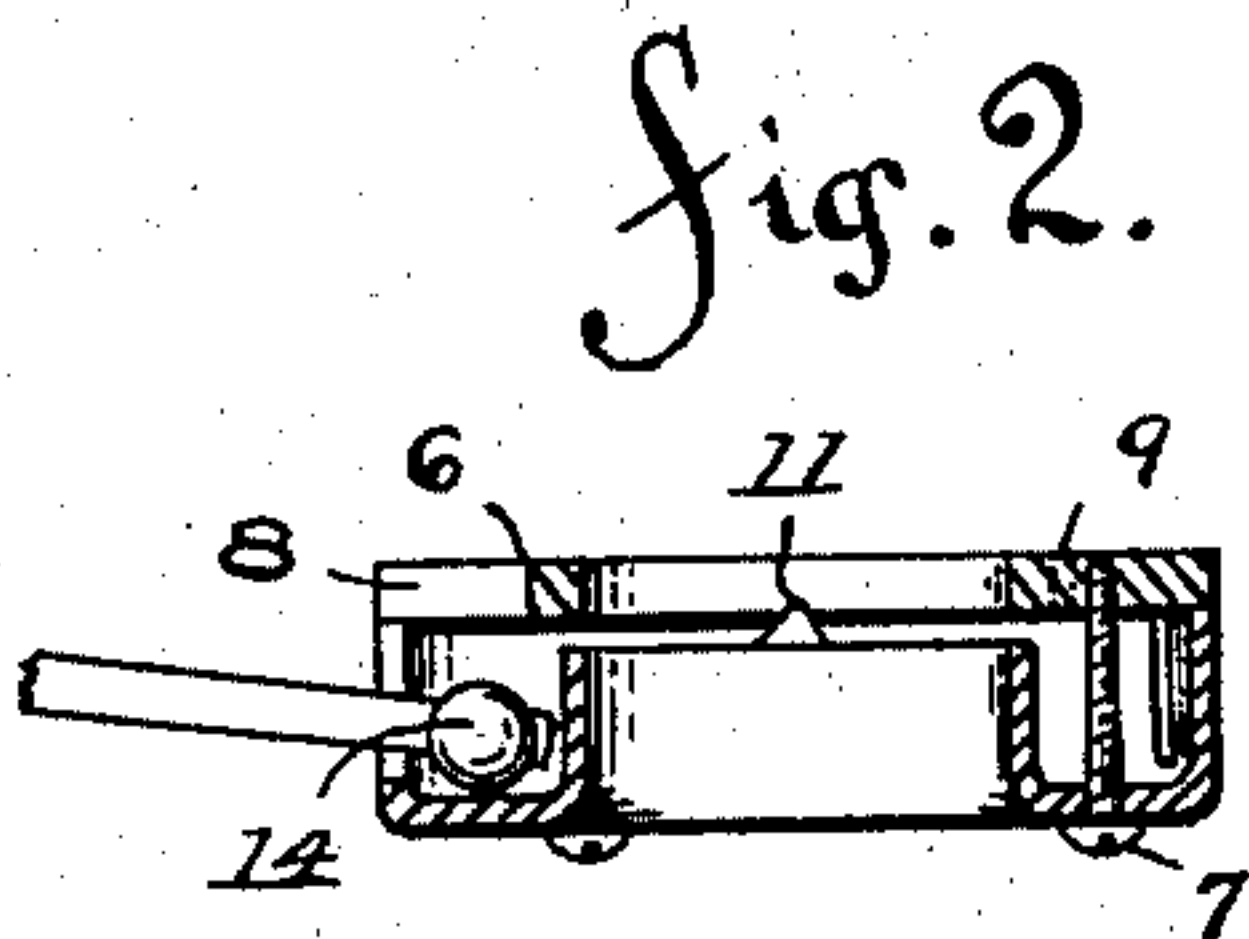


Fig. 2.

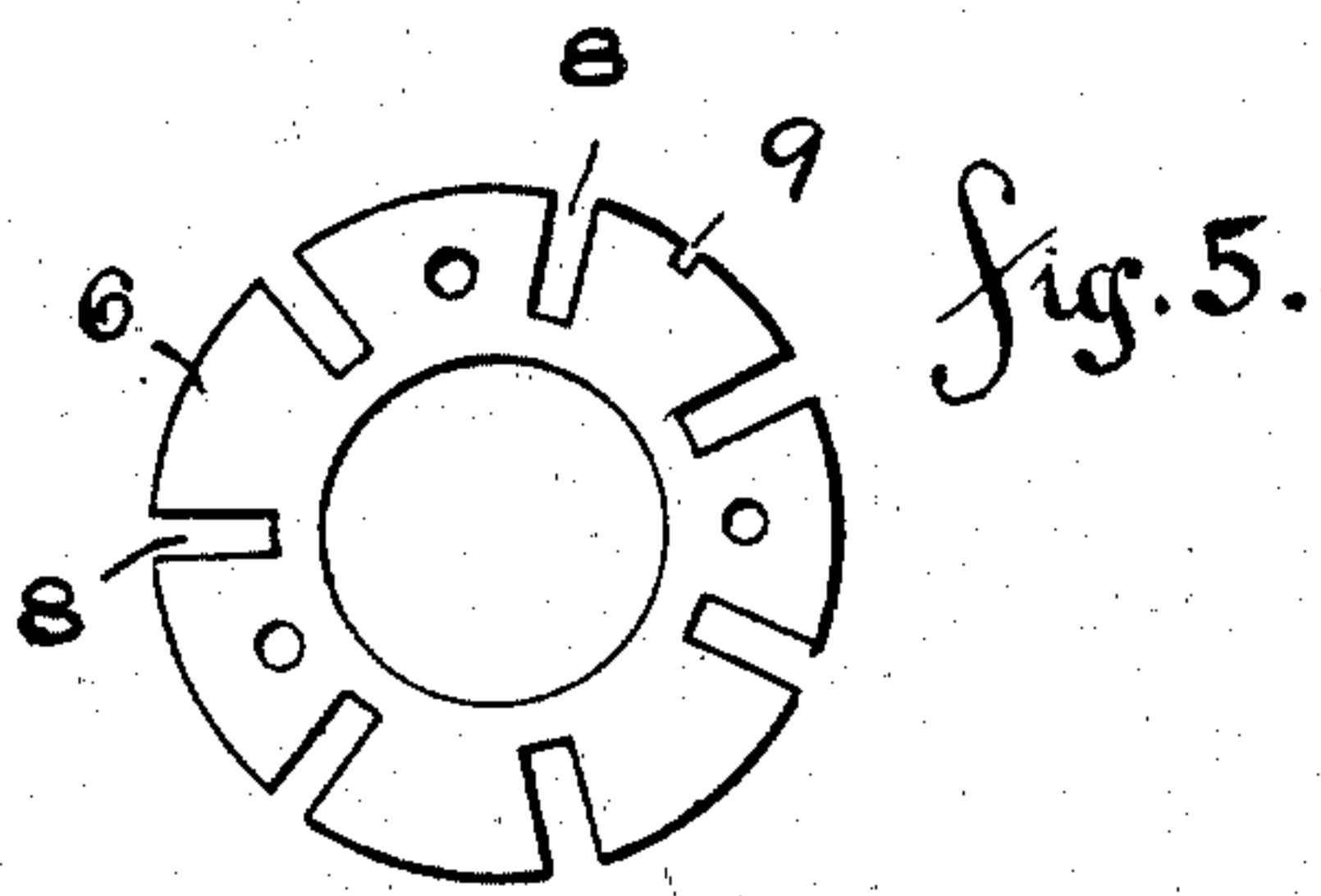


Fig. 5.

Sylvanus E. Groff,

Witnesses

Allen C. Mullert  
C. E. Mullert,

Inventor

By Attorney E. A. [Signature]



# UNITED STATES PATENT OFFICE.

SYLVANUS E. GROFF, OF READING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALLEN C. MELLERT, OF READING, PENNSYLVANIA.

## UMBRELLA-RIB RETAINER.

SPECIFICATION forming part of Letters Patent No. 749,376, dated January 12, 1904.

Application filed June 25, 1903. Serial No. 163,064. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVANUS E. GROFF, 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-Rib Retainers, of which the following is a specification.

This invention relates in general to the construction of umbrellas, but more especially to the construction of the parts 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 prevent of such insertion or removal or else the fingers or prongs 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 prongs or fingers eventually breaks them off, and this effects two of the ribs and allows them to drop out of position.

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

The invention is fully described in the following specification and clearly illustrated in 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 detailed view of one of the rib ends. Fig. 4 is a detailed view of the runner-sleeve. Fig. 5 is a detailed view of the cover or plate.

The body of the notch-piece or runner is substantially of circular dish form and is adapted to slip onto the umbrella stick or rod.

The body portion 1 is formed with two cir-

cular vertical walls 2 and 3 of substantially equal height, leaving an aperture in the center thereof. The outer wall 3 is formed with a series of equidistant slots or depressions 4, adapted to engage the rib ends 5. A plate or cover 6 is adapted to be secured to the top of the body portion, preferably by means of screws 7 passing through the body portion and engaging said plate. This plate is formed with a number of peripheral slots 8, equal in number to and adapted to register with the slots 4 in the body portion. A small slot 9 is also formed in the periphery of the plate adapted to engage an upset lug 10 on the body portion for the purpose of bringing the parts into proper alinement for securing the screws.

On the upper edge of the inner circular wall 2 is formed a V-shaped projection 11, which is adapted to be bent inward to engage the opening 12 in the runner-sleeve 13 to secure it to said sleeve.

The rib ends 5 are formed with balls or enlargements 14 in the form of a "dumb-bell," one ball being formed on either side thereof.

It is understood that the notch-piece at the top of the umbrella-stick is of the same construction, but in reverse position.

The ribs are secured to the runner or notch-piece after the latter has been secured to the stick by inserting their ends in the slots 4 and then placing the plate 6 in position on the body portion and inserting the screw 7, the slots in the plate allowing the ribs to open and close freely.

It will be seen that after the ribs are in position in the notch-piece or runner there is no possibility of any of them becoming disengaged; but should it be desirable to remove one or more of the ribs it can readily be done by merely removing the plate and taking out the said rib without interfering with the other ribs while the umbrella is in open position, as the tension caused by the stretcher will keep the rib ends in proper position even with the plate removed.

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

The combination of an umbrella-rib retainer consisting of a dish-shaped body por-



tion provided with central aperture, two vertical circular walls, one within the other, slots in the upper edge of the outer wall, an upwardly-projecting lug on the upper edge of  
5 each of said walls, a sleeve having an opening adapted to engage the projection on the inner wall, and a circular plate or cover having central aperture, a series of peripheral slots adapted to register with the slots in the body  
10 portion and a smaller peripheral slot adapted to engage the lug on the outer wall of the body portion; of a rib provided with an en-

larged head in the form of a dumb-bell, adapted to be removably secured to said retainer by inserting it in the slots of the outer wall, 15 and screws passing through the said body portion and engaging said plate.

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

SYLVANUS E. GROFF.

Witnesses:

ED. A. KELLY,  
GEO. M. MILLER.