

T. F. RONEY.
 HOLDER FOR BOBBINS OR SPOOLS.
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955,208.

Patented Apr. 19, 1910.

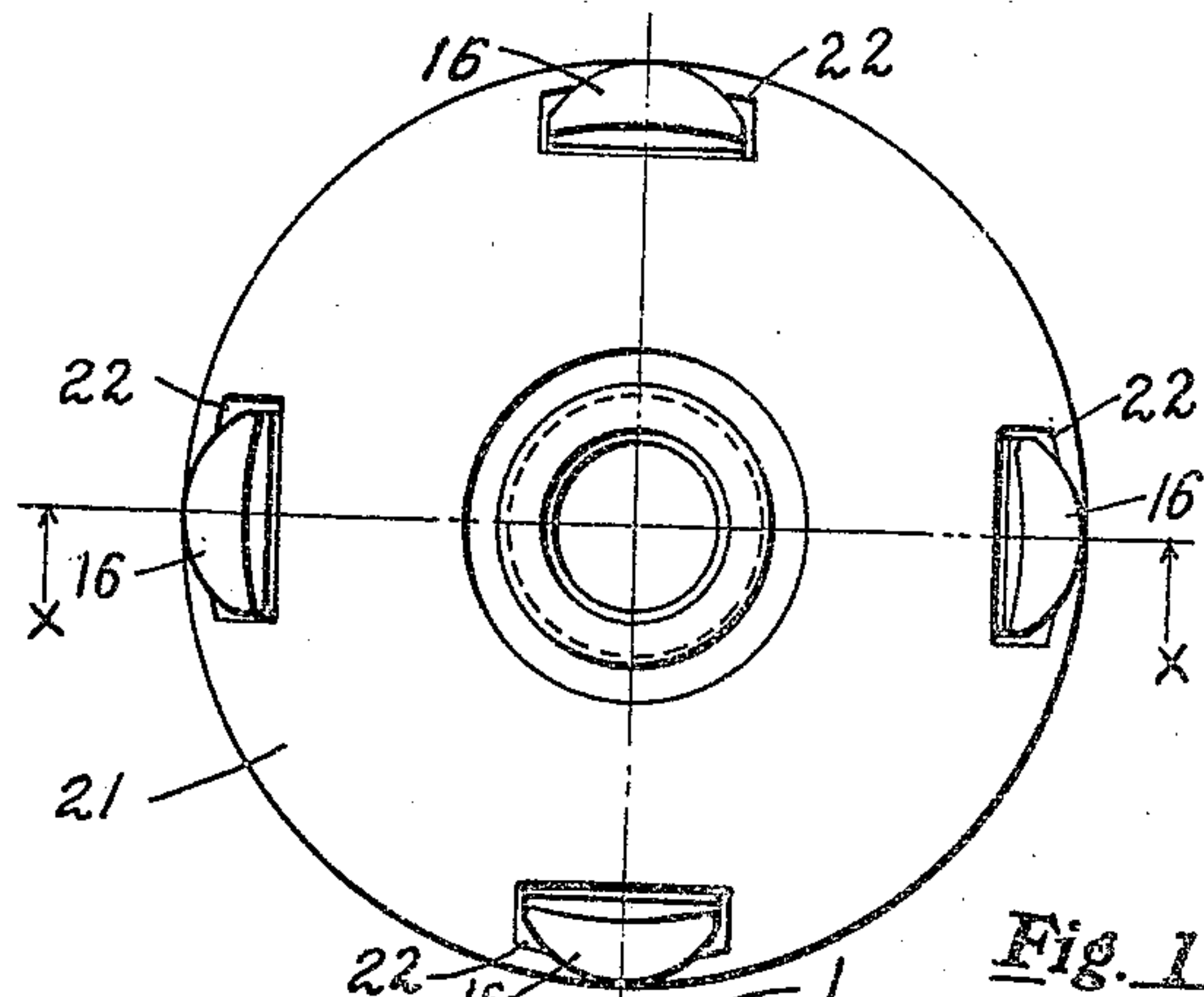


Fig. 1

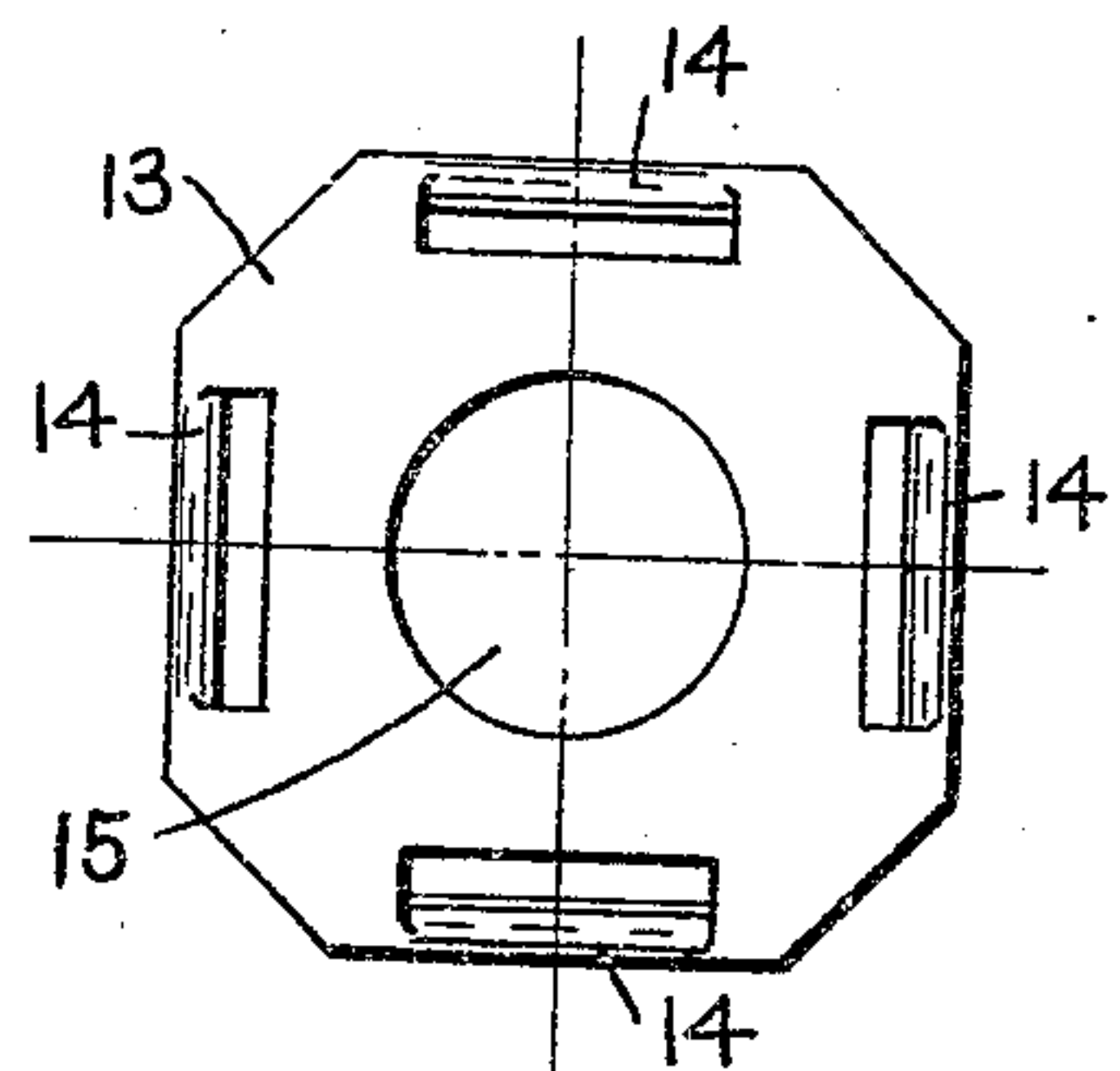


Fig. 5

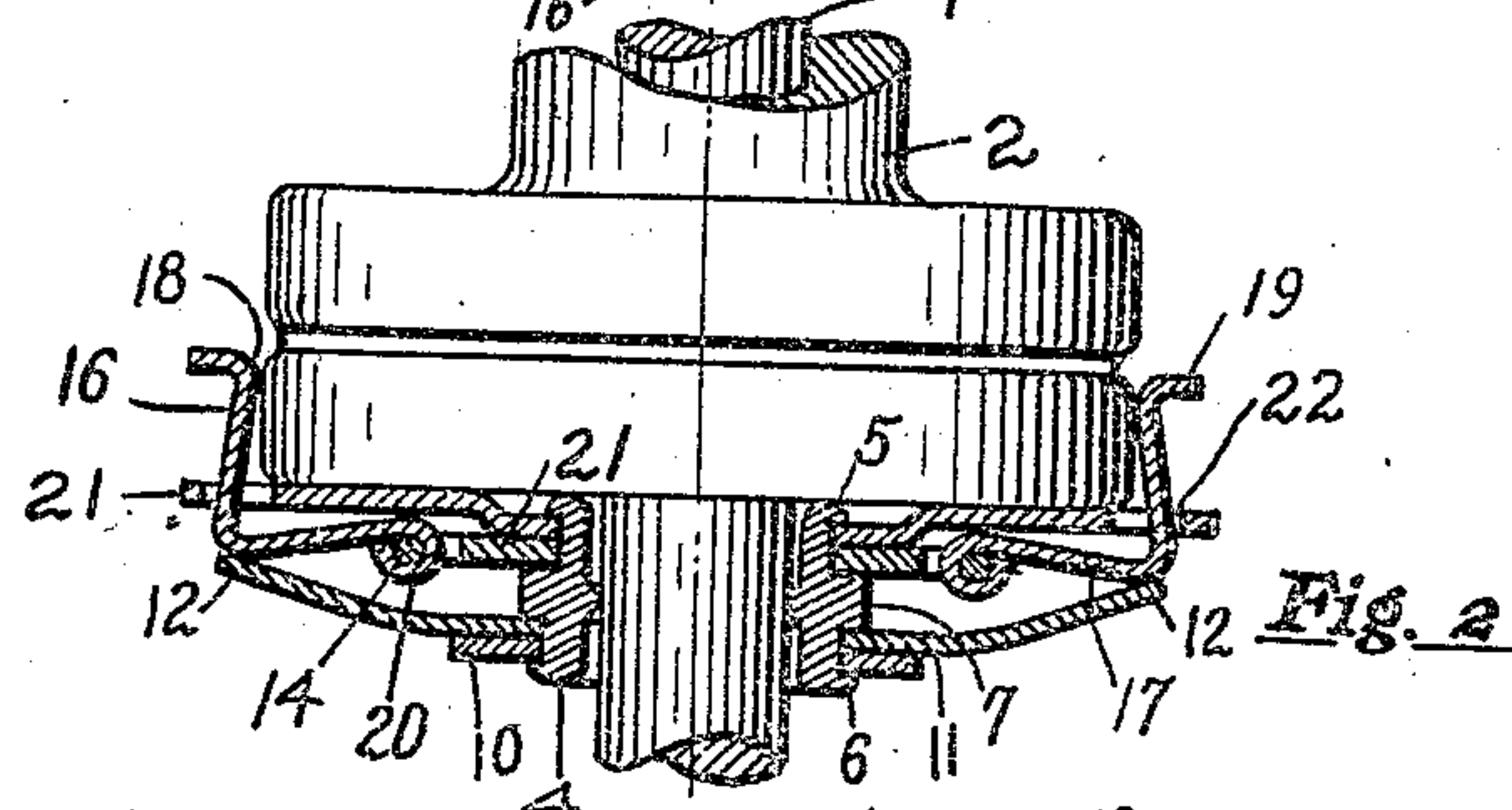


Fig. 2

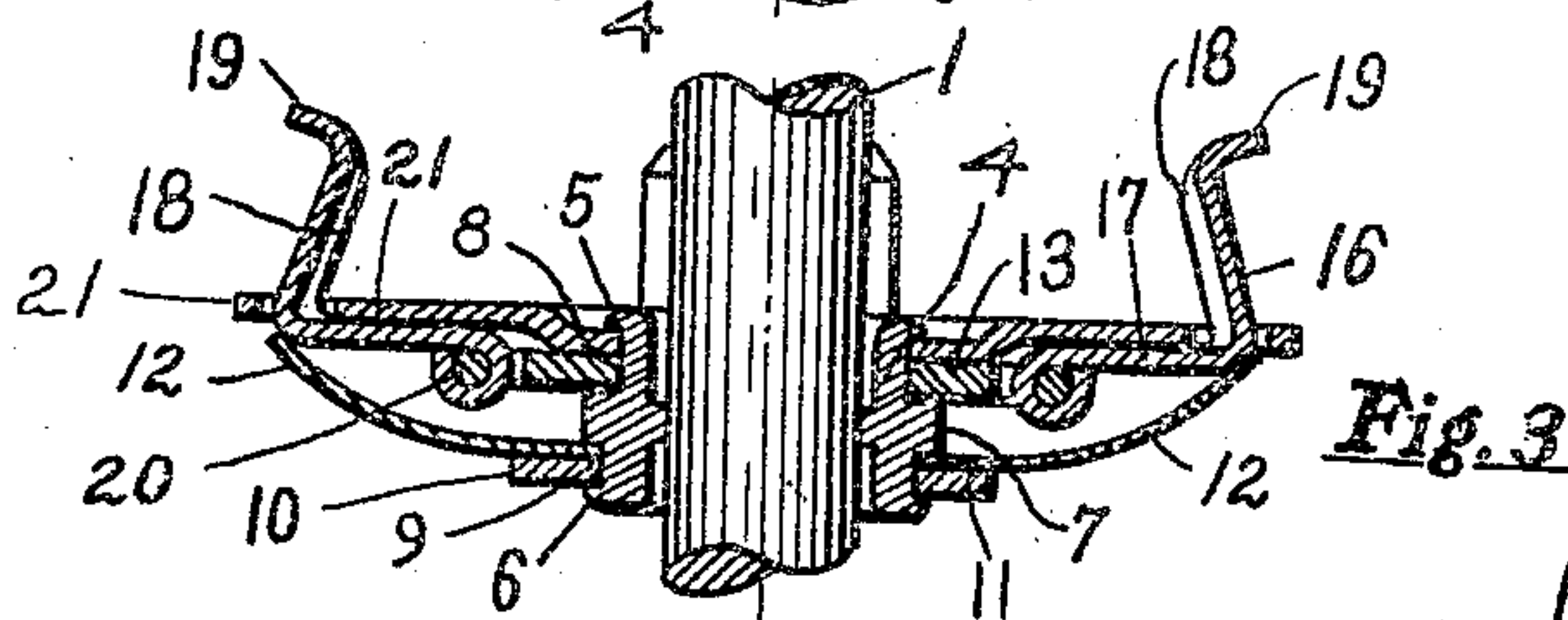


Fig. 3

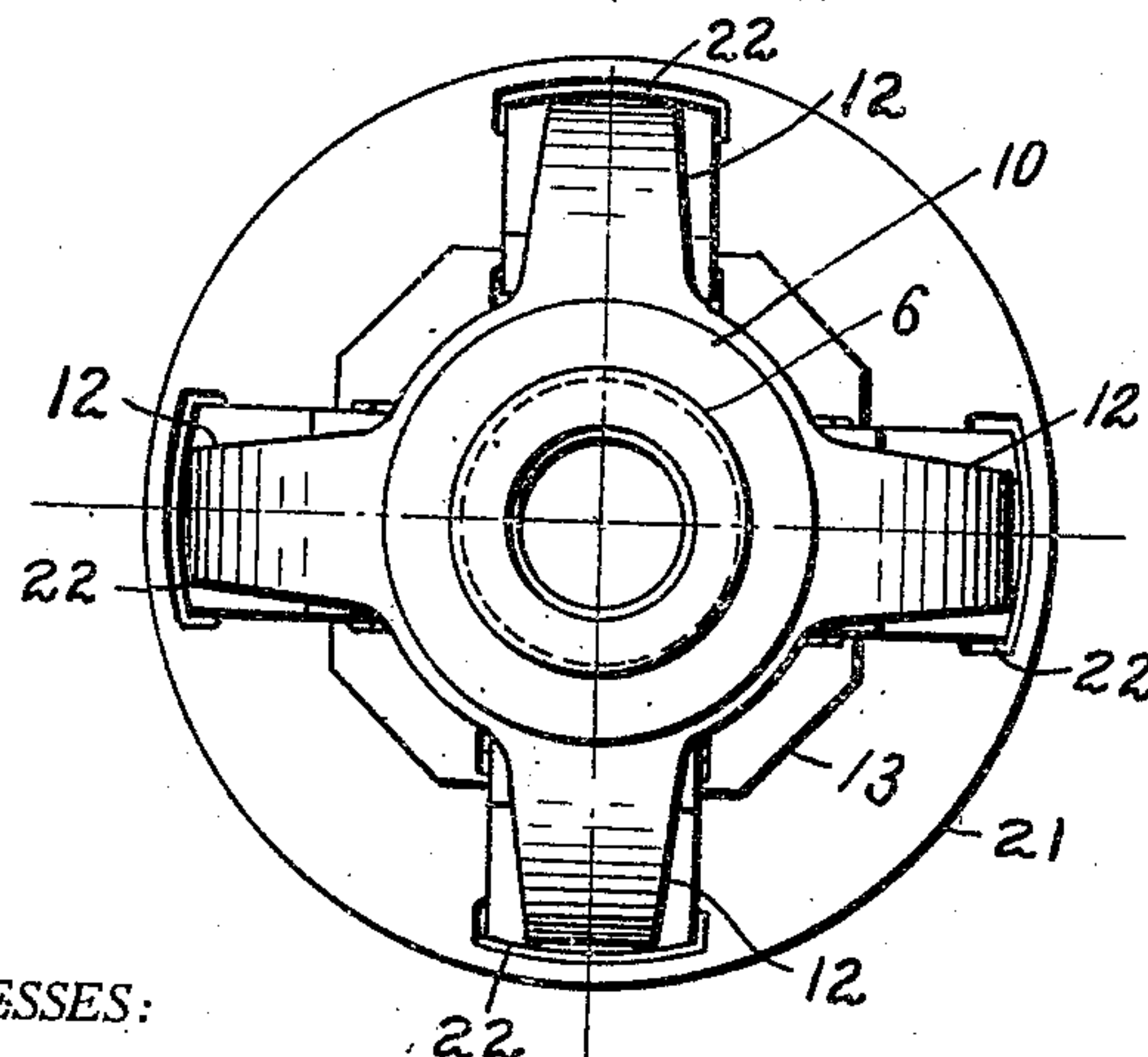


Fig. 4

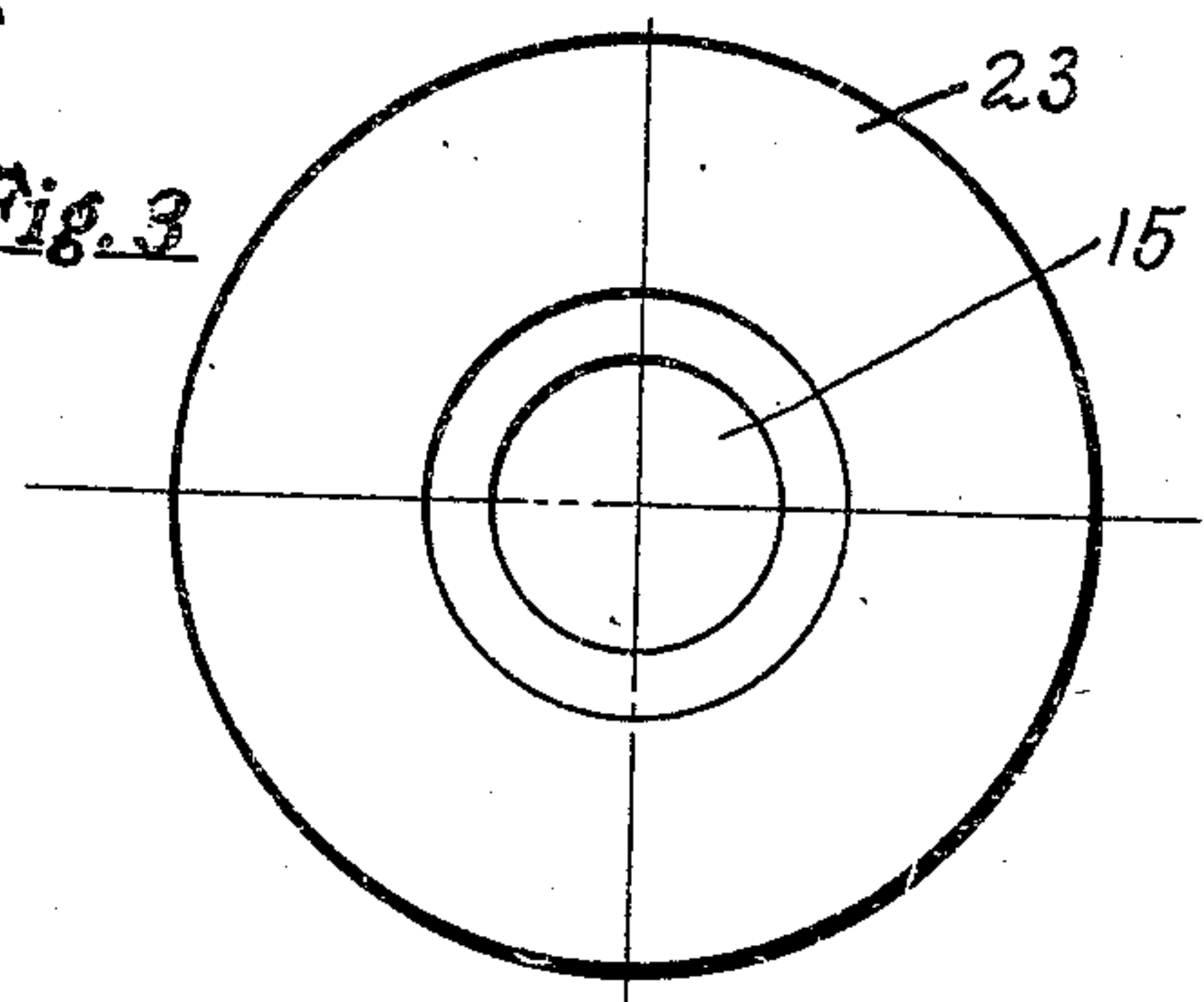


Fig. 6

WITNESSES:

Alfred H. Whately
George H. McLaughlin

INVENTOR.

Thomas F. Roney
 BY *Horatio C. Bellome*

ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS F. RONEY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO ECLIPSE HOLDING COMPANY, A CORPORATION OF RHODE ISLAND.

HOLDER FOR BOBBINS OR SPOOLS.

955,208.

Specification of Letters Patent.

Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, THOMAS F. RONEY, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Holders for Bobbins or Spools, of which the following is a specification.

My invention relates to holders for bobbins and spools and is an improvement upon the device shown in my prior Patent No. 619,506 issued Feb. 14, 1899.

The essential objects of the present invention are to simplify and cheapen the structure, to better adapt the same for use with bobbins or spools of different dimensions; and to insure a certain, positive, and direct action of the clamping fingers.

To the enumerated ends primarily my invention consists in the novel construction, combination, and mode of operation of the parts set forth in and falling within the scope of the claims hereto appended.

In the accompanying drawings which form a part of this specification, Figure 1 is a top plan view of my novel holder, Fig. 2, a section of the same on line $x-x$ of Fig. 1 in expanded position, showing in side elevation adjacent portions of the spindle and bobbin. Fig. 3, a like section of my device in contracted position, Fig. 4, a bottom plan view of the same, Fig. 5, a plan of the pivot plate, and Fig. 6, a plan view of a modified form of supporting plate.

Similar characters of reference indicate like parts throughout the views.

My holder is herein described in conjunction with an ordinary spindle blade 1 and bobbin 2, portions of each not pertinent to the matter in hand being broken away. Frictionally engaging the spindle blade is a sleeve 4 with upper and lower rolled over portions or flanges 5 and 6 respectively, and an intermediate annular enlargement or rib 7. This rib forms in conjunction with the flanges 5 and 6 annular seats or recesses 8 and 9 respectively. A washer 10 upon the sleeve 4 is supported in the recess 9 by the flange 6. Resting upon the washer in this recess, and in contact with the rib 7 is a spring plate 11 having a plurality, in this instance four radial spring arms 12. A pivot plate 13 is provided with marginal bearings 14 corresponding in number with the spring arms and with a central opening

15. Through this opening passes the recessed portion 8 of the sleeve 4, the plate itself being firmly seated upon the rib 7. Upon each bearing 14 is pivoted a broad angular clamping finger 16 comprising a base portion 17, a bearing portion 18 disposed at an acute angle thereto, and an outwardly flaring end or lip 19. The inner end of the base portion 17 is bent to form a pivoting loop 20, engaging loosely a bearing 14. The free ends of the spring arms 12 abut against the lower faces of the base portions 17 of the fingers near their outer extremities. A flat circular supporting plate 21 on the sleeve 4 rests upon the pivot plate 13 against which it is tightly held by the flange 5. The plate 21 is provided with four marginal openings 22 through which upwardly extend the portions 18 of the clamping fingers. The extension of the plate 21 beyond the fingers is found advantageous as a guard against the accidental contact of a thread with the operative parts of the device, but this extension is not imperative. In place of this plate may be used the one shown in Fig. 6 referred to as 23 which is of less diameter and devoid of marginal openings. When the latter form of plate is used the parts 18 of the fingers pass upwardly beyond the periphery thereof, so that no openings are necessary.

When, as shown in Fig. 2, a bobbin is placed upon the base or supporting plate 21, the fingers 16 outwardly yield and their bases press downwardly against the tension of the spring arms 12. The direct contact of these arms with the fingers makes their action certain, and their points of contact being near the ends of the bases 17 locates the pressure of the spring where it is most effective.

What I claim is,—

1. In a device of the character set forth, the combination with a spindle sleeve, of a supporting plate upon the sleeve provided with openings, a pivot plate upon the sleeve below the supporting plate, clamping fingers pivotally connected with the pivot plate and extending through the openings, and yielding means upon the sleeve for actuating the clamping fingers.

2. In a device of the character set forth the combination with a spindle sleeve, of a supporting plate upon the sleeve, a pivot plate upon the sleeve below the clamping

plate, clamping fingers pivotally connected with the pivot plate and extending above the supporting plate, and a spring plate upon the sleeve below the pivot plate provided with radial arms in contact with the fingers.

3. In a device of the character set forth, the combination with a spindle sleeve, of a supporting plate upon the sleeve, a pivot plate upon the sleeve, clamping fingers pivotally connected with the pivot plate, and a spring plate upon the sleeve provided with radially disposed arms contacting with the fingers at points remote from their pivotal connections.

4. In a device of the character set forth, the combination with a spindle sleeve, of a plate upon the sleeve, clamping fingers pivotally connected with the plate, and a spring

plate below the first plate provided with arms in contact with the fingers.

5. In a device of the character set forth, the combination with a spindle sleeve, of a supporting plate upon the sleeve provided with openings near its margin, a pivot plate upon the sleeve below the supporting plate, clamping fingers pivotally connected with the pivot plate and extending upwardly through the openings, and a spring plate upon the sleeve below the pivot plate pressing against the fingers.

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

THOMAS F. RONEY.

Witnesses:

LEONARD W. HORTON,
HORATIO E. BELLOWES.