

T. J. MURDOCK.  
BOBBIN HOLDER.  
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998,857.

Patented July 25, 1911.

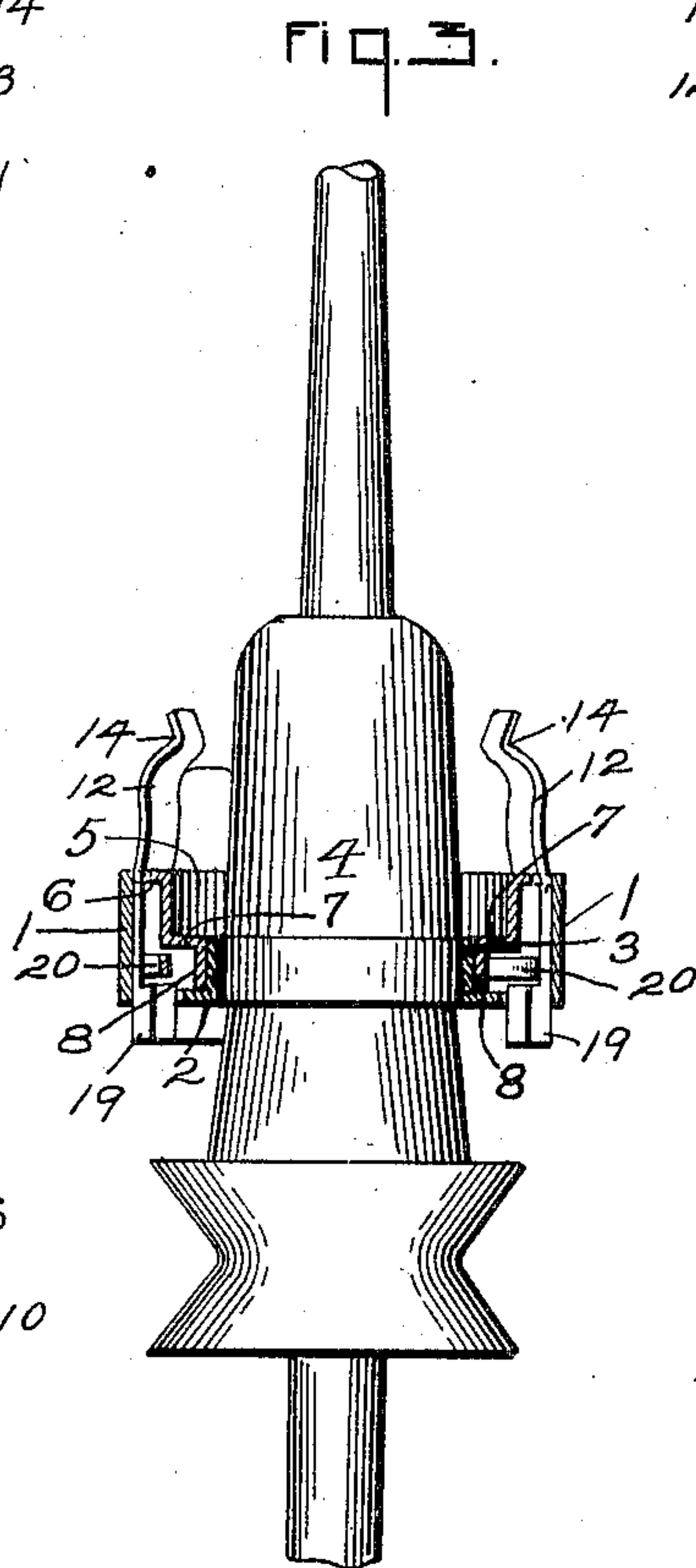
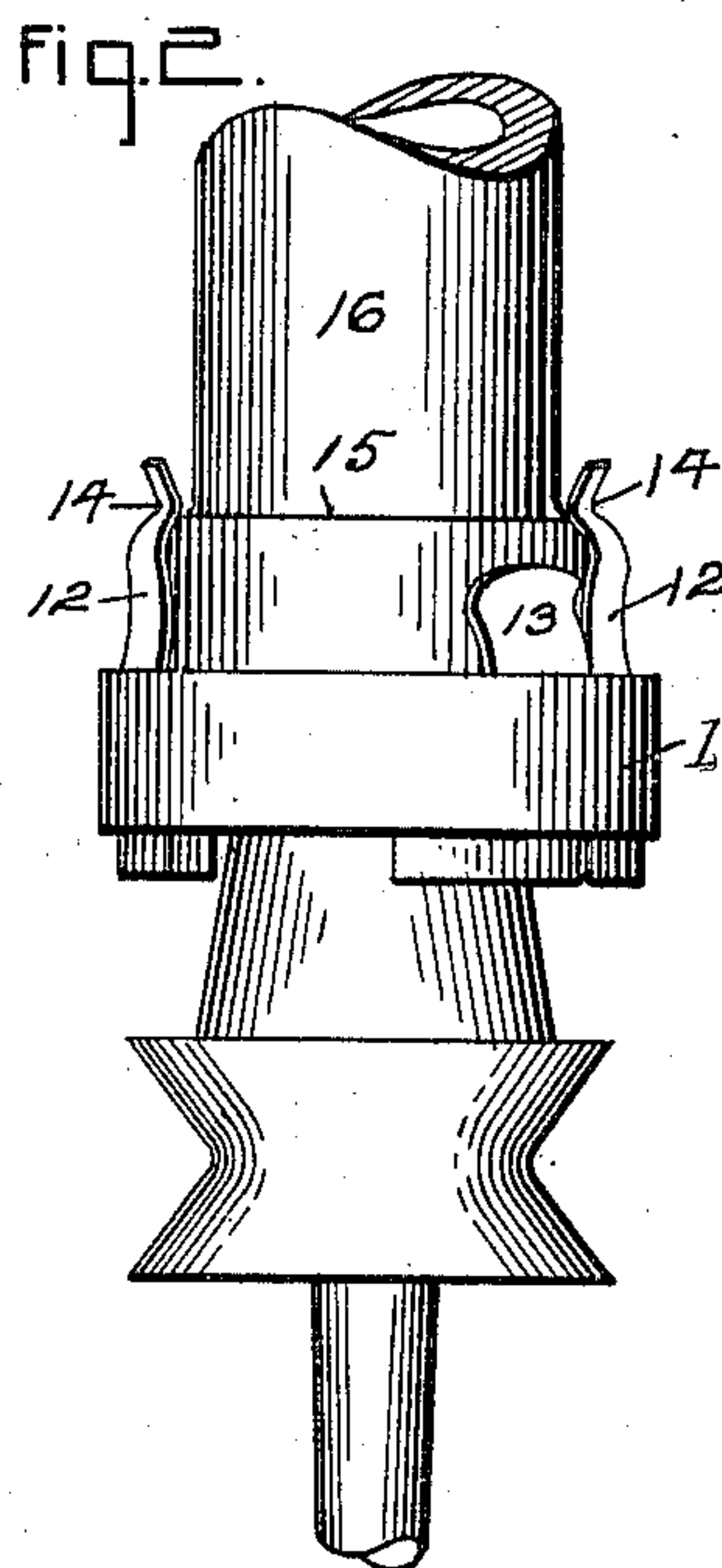
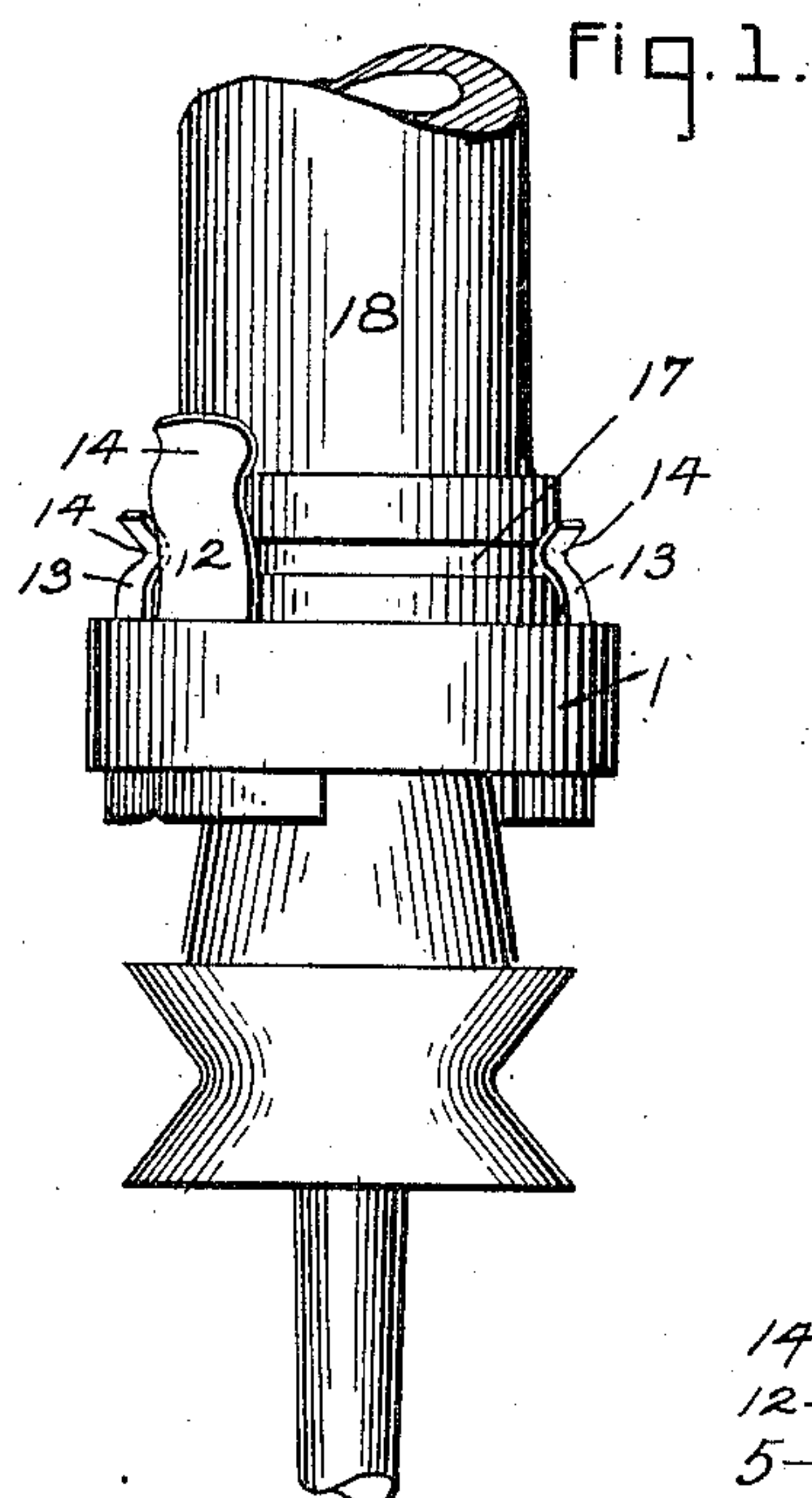


Fig. 6.

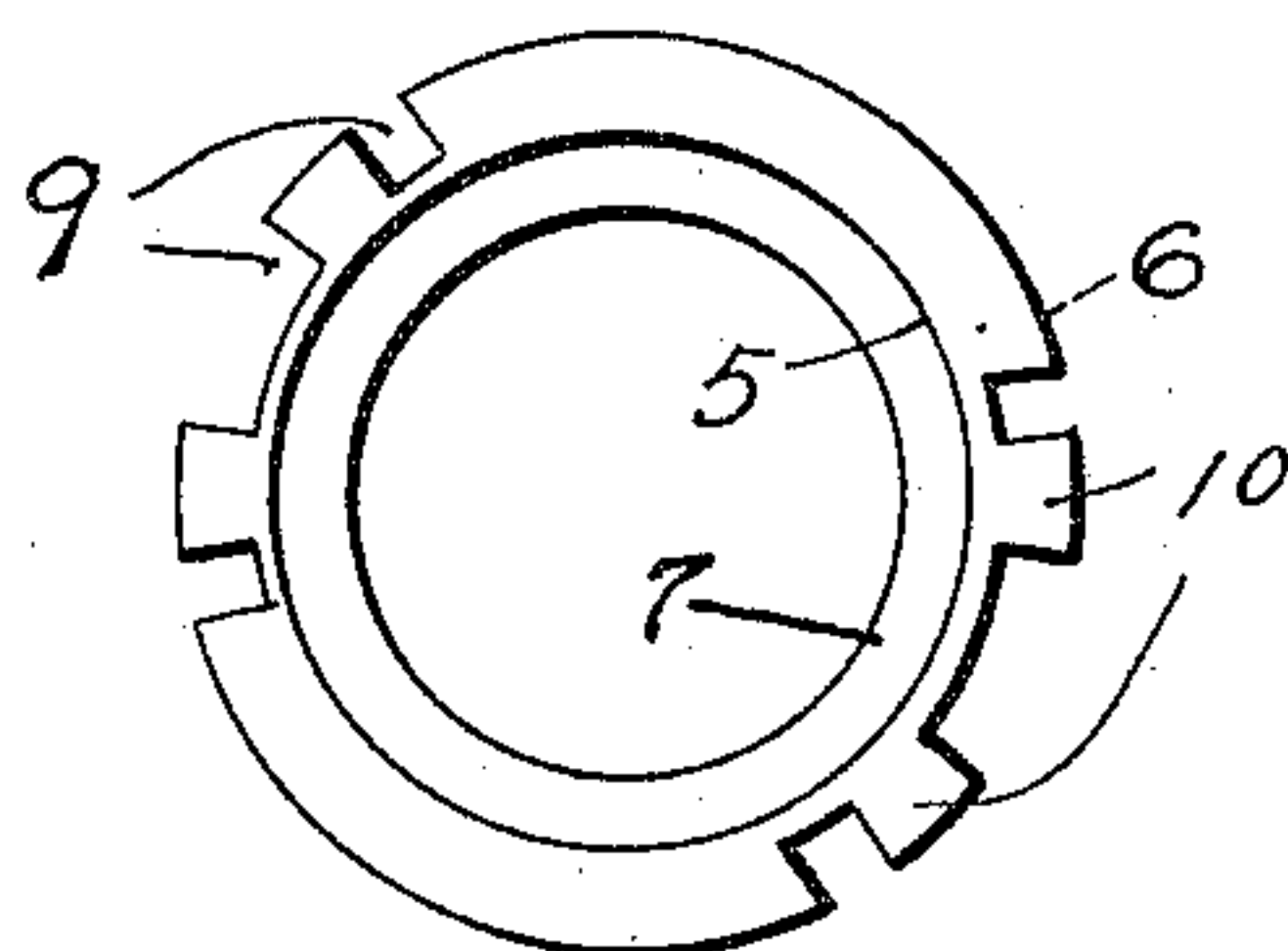


Fig. 5.

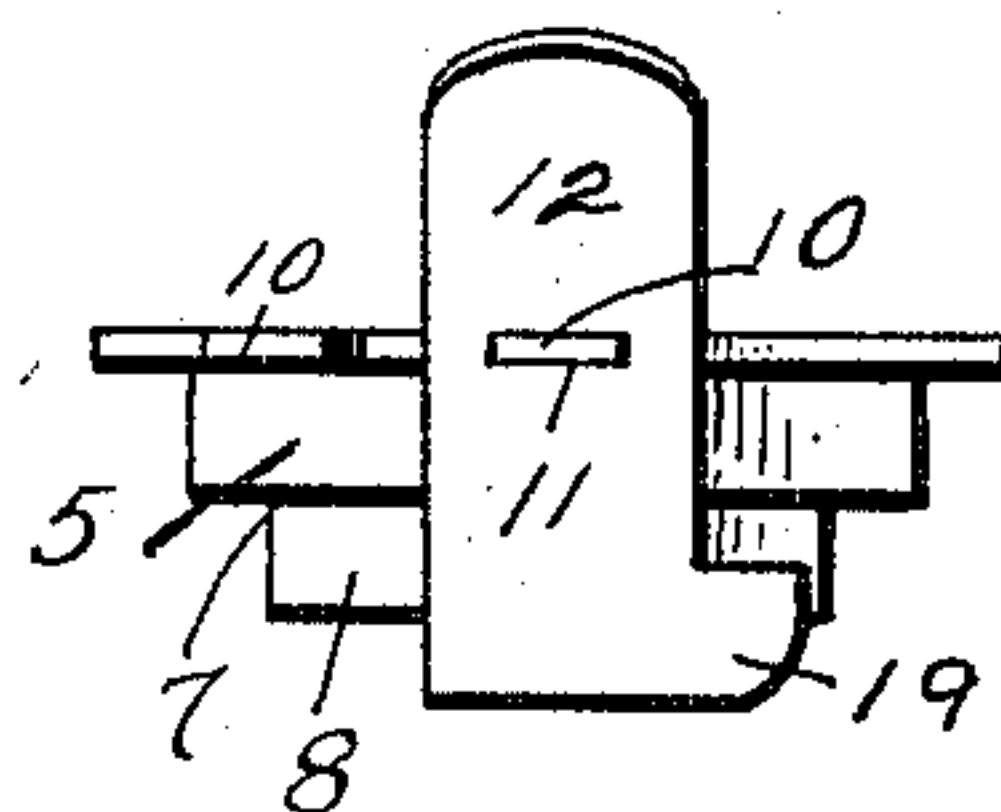
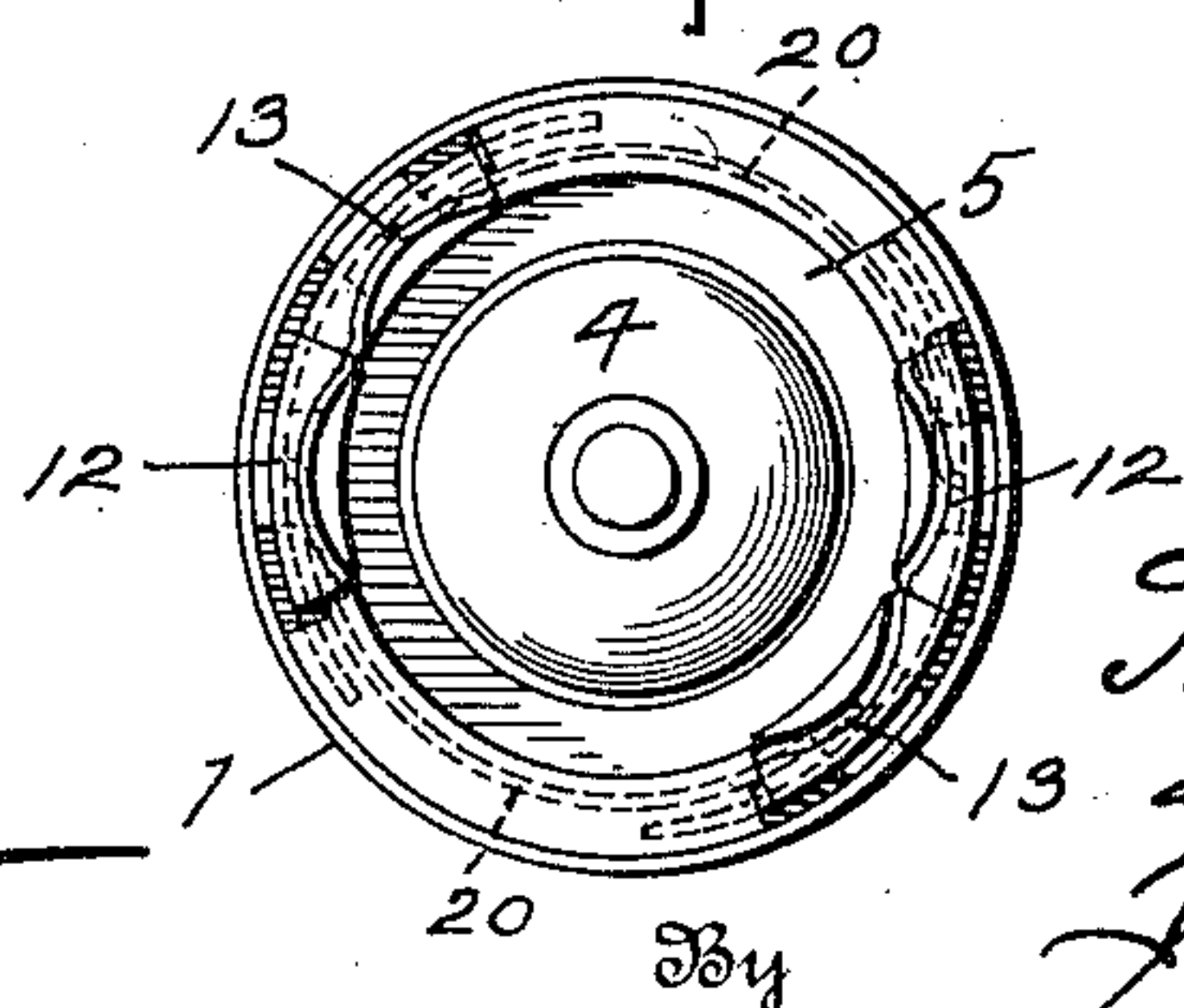


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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BOBBIN-HOLDER.

998,857.

Specification of Letters Patent.

Patented July 25, 1911.

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*To all whom it may concern:*

Be it known that I, THOMAS J. MURDOCK, a citizen of the United States, residing at Franklin, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Bobbin-Holders, of which the following is a specification.

This invention relates to certain new and useful improvements in bobbin holders, and relates more particularly to the clamp thereof.

The object of the invention is to provide a bobbin holder which will be capable of accommodating two forms of bobbins, commonly used in spinning mills.

A further object of the invention is to provide a clamp in which centrifugal action resulting from the rotary movement of the bobbin will cause an increase of gripping force exerted by the clamp on the bobbin.

A still further object of the invention is to generally improve and simplify the construction and increase the efficiency and utility of devices of this character.

Still further and other objects will later appear and be set forth.

In the drawings—Figure 1 is a side elevation showing some of the parts broken away and in section. Fig. 2 is a similar view showing a different form of bobbin. Fig. 3 is a side elevation showing the bobbin removed and some of the parts in section. Fig. 4 is a top plan view of Fig. 3, and Fig. 5 is a detail side elevation of one of the clamps and a part of the supporting structure therefor, and Fig. 6 is a top plan view of said part of the supporting structure.

The invention includes an outer vertically disposed ring 1 and a concentric spaced horizontally disposed flat inner ring 2, the latter being connected to the ring 1 and being formed with an upwardly extending right angular flange 3. It will be understood that the flange 3 is shaped to conformably engage the body 4 of the bobbin holder proper, as clearly depicted in Fig. 3 of the drawings. A second vertical ring 5 is formed with an outwardly projecting horizontal flange 6 and an inwardly extending horizontal flange 7, the latter being integral with a downwardly extending flange which latter conformably fits over the periphery of the upwardly extending flange 3 of the ring 2.

The outwardly extending flange 6 is formed with cut-out portions 9 which latter form outwardly projecting lugs or ears 10, the latter extending through openings 11 provided therefor in the clamps 12. There are two pairs of clamps to accommodate an equal number (2) of varying forms of bobbins, and in the present instance the drawings illustrate long clamps 12 and short clamps 13, there being a pair of long clamps and a pair of short clamps arranged so as to be disposed in approximate diametrically opposed relation. Each clamp is formed at its upper or free end with a kink or bend 14 adapted to engage in the case of the long clamps 12 with the shoulder 15 of the bobbins 16 and in the case of the short clamps with the grooves 17 of the bobbin 18 in a manner clearly illustrated in Figs. 1 and 2 of the drawings. The lower ends of the clamps are of increased thickness as at 19 in the drawings for the purpose of weighting the same at their lower ends, the object being to attract the effect of centrifugal motion on the clamps to the lower ends thereof causing the latter to move outwardly from the bobbin proper and effecting a corresponding increase of inward movement to the upper ends of the clamps, thereby more rigidly clamping the bobbin and holding it against slipping or other movement. By referring to Fig. 5 of the drawings, it will be seen that the clamps 12 are secured in the cut out portions 9 and that they have a pivotal movement about the lugs or ears 10. The leaf or wire springs 20 are arranged to bear against the inner faces of the clamps 12 and 13 at their lower ends as shown in Fig. 3 of the drawings, there being two springs, one spring engaging a short clamp and a long clamp in a manner illustrated in Fig. 4 of the drawings, the spring having its ends turned outwardly and engaging in indentations or depressed seats formed therefor in the inner faces of the lower ends of the clamps.

It will be understood that the ring 1 by virtue of engaging about the flange 6, will hold the clamps in their relationship to the latter and in engagement with the ears 10. It will be furthermore seen that the inner and outer rings cooperate to form a hollow housing in which the springs 20 are confined.



Having thus described my invention I claim as new and desire to secure by Letters Patent:—

1. In a bobbin holder, an outer ring having a vertical disposition, a concentric spaced inner ring horizontally disposed and connected to the outer ring, said inner ring being formed with an upwardly extending right angular flange, a second vertical ring formed with an outwardly projecting horizontal flange, and an inwardly projecting horizontal flange, a downwardly-extending vertical flange integral with said inwardly-extending flange, said downwardly extending flange conformably fitting over the periphery of said upwardly extending right angular flange of the first named ring, said outwardly extending flange of the second vertical ring being formed with cut-away parts leaving ears, clamps having openings through which openings said ears project, the lower ends of said clamps being weighted, and springs engaging the lower ends of said clamps to urge the latter outwardly and thereby the upper ends of the clamps inwardly.

2. In a bobbin holder, a ring formed with outwardly extending ears, clamps formed with openings in which said ears project, a

second ring surrounding the clamps to hold the same in their relation to said ears, and springs between the rings and engaging the lower ends of the clamps.

3. In a bobbin holder, a ring having a vertical disposition and being adapted to receive and engage over the bobbin spindle, a second ring having a portion thereof engaged over said ring whereby a double thickness of metal is provided next to the spindle, clamps, and means for pivoting the clamps.

4. In a bobbin holder, a ring having a vertical disposition and being adapted to receive and engage over the bobbin spindle, a second ring having a portion thereof engaged over said ring whereby a double thickness of metal is provided next to the spindle, clamps pivotally connected to the second ring, and a third ring engaging about the clamps and retaining the latter in their pivotal relation to the second ring.

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

THOMAS J. MURDOCK.

Witnesses:

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