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BOBBIN HOLDER.

APPLICATION FILED FEB. 17, 1908.

924,891.

Patented June 15, 1909.

Fig. 1

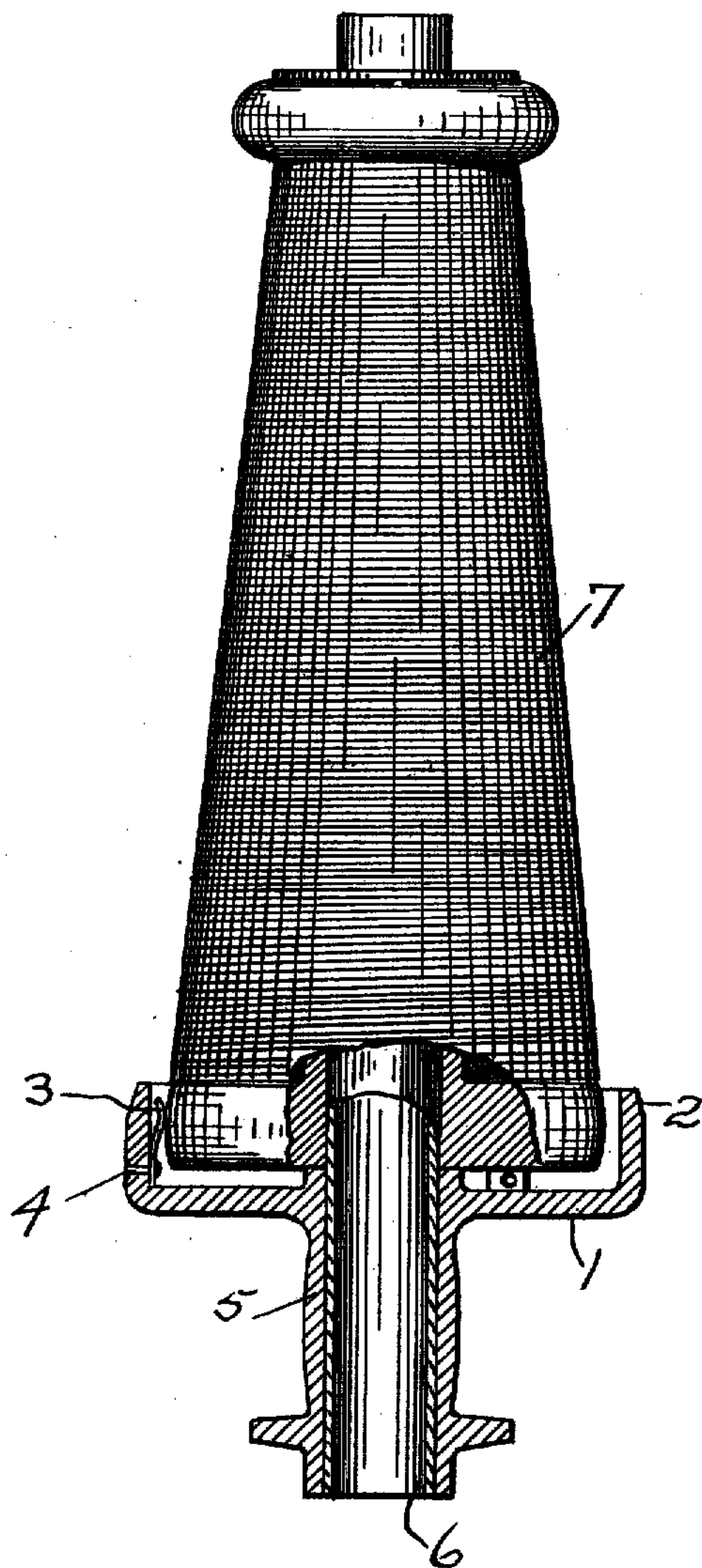


Fig. 2

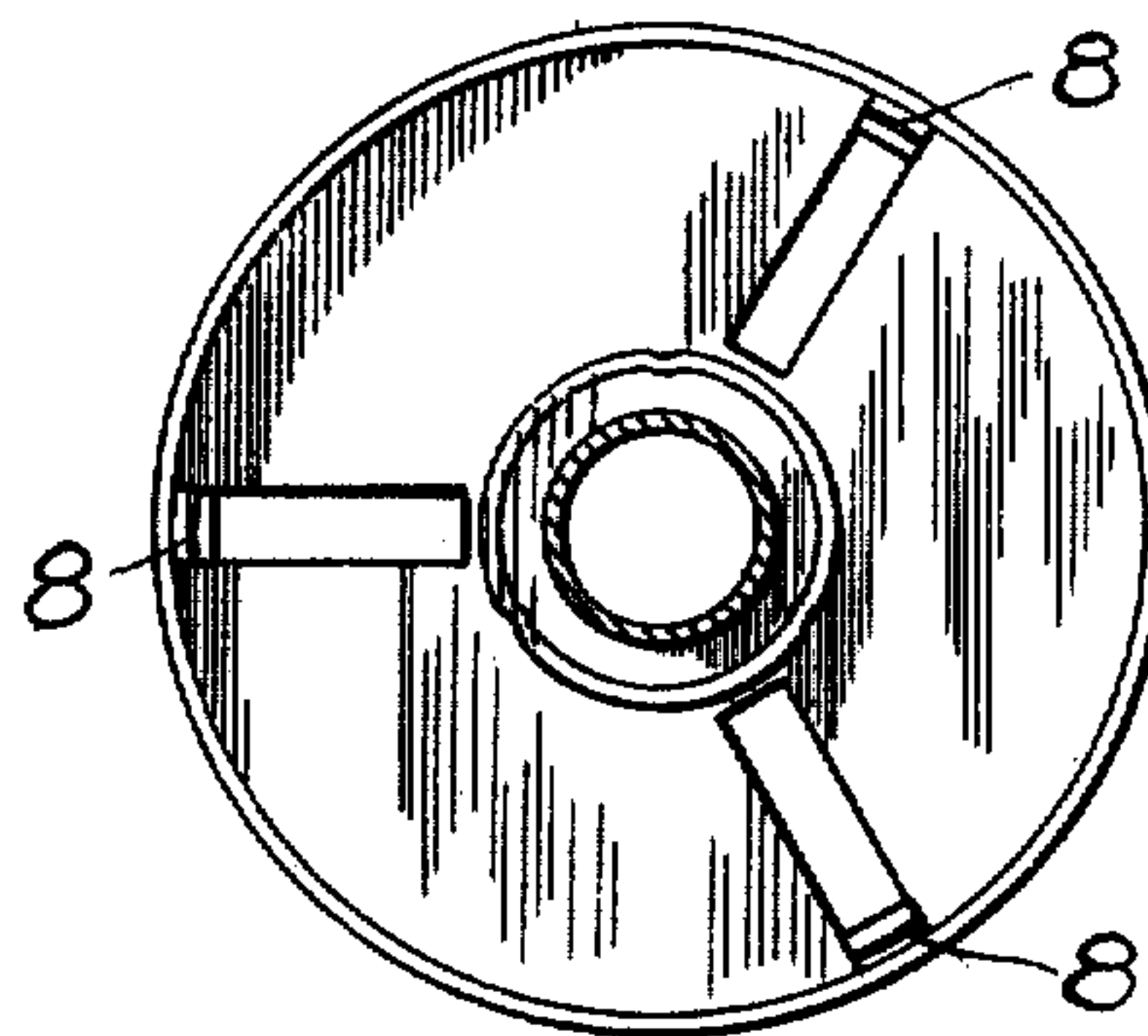


Fig. 3

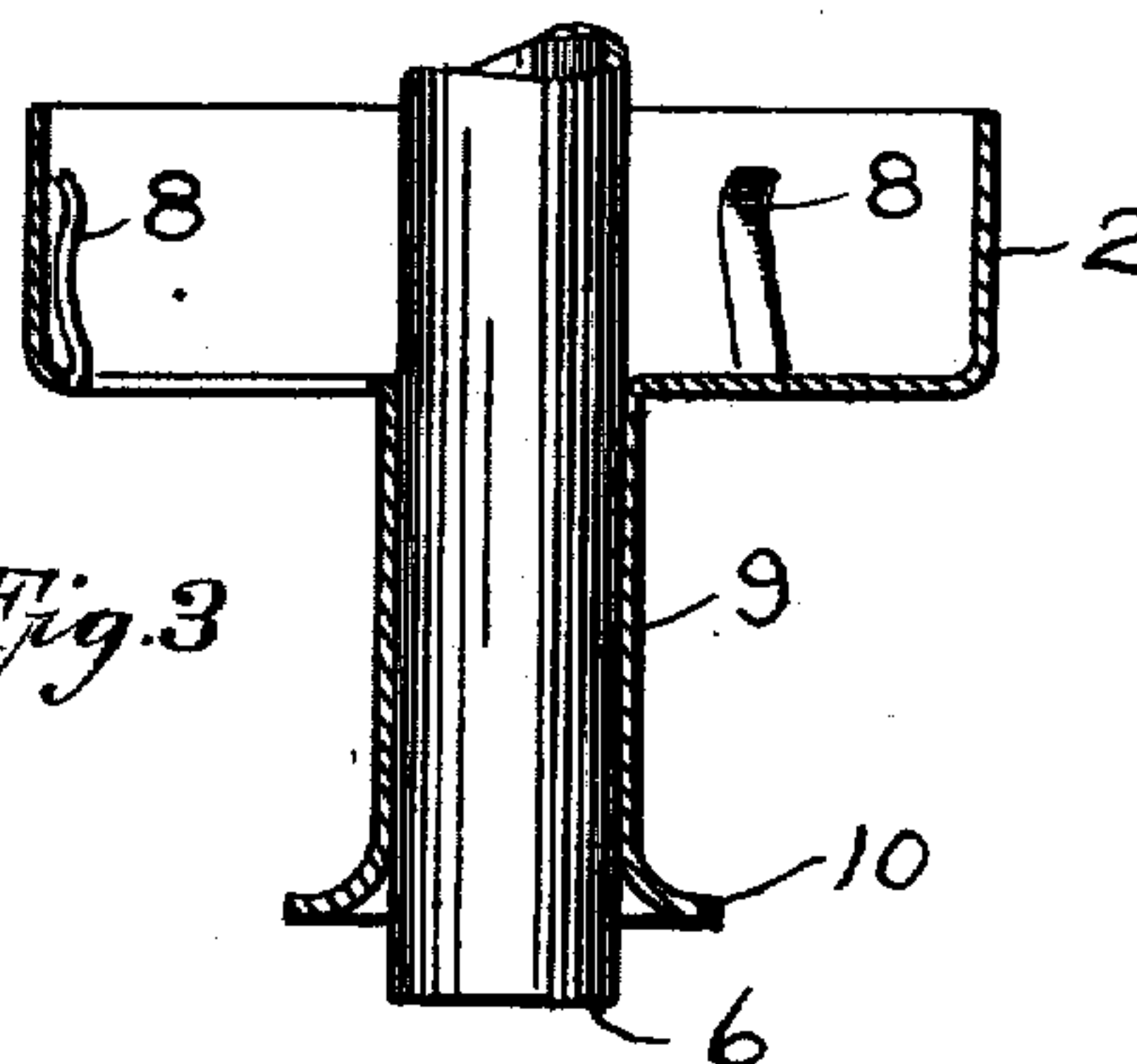
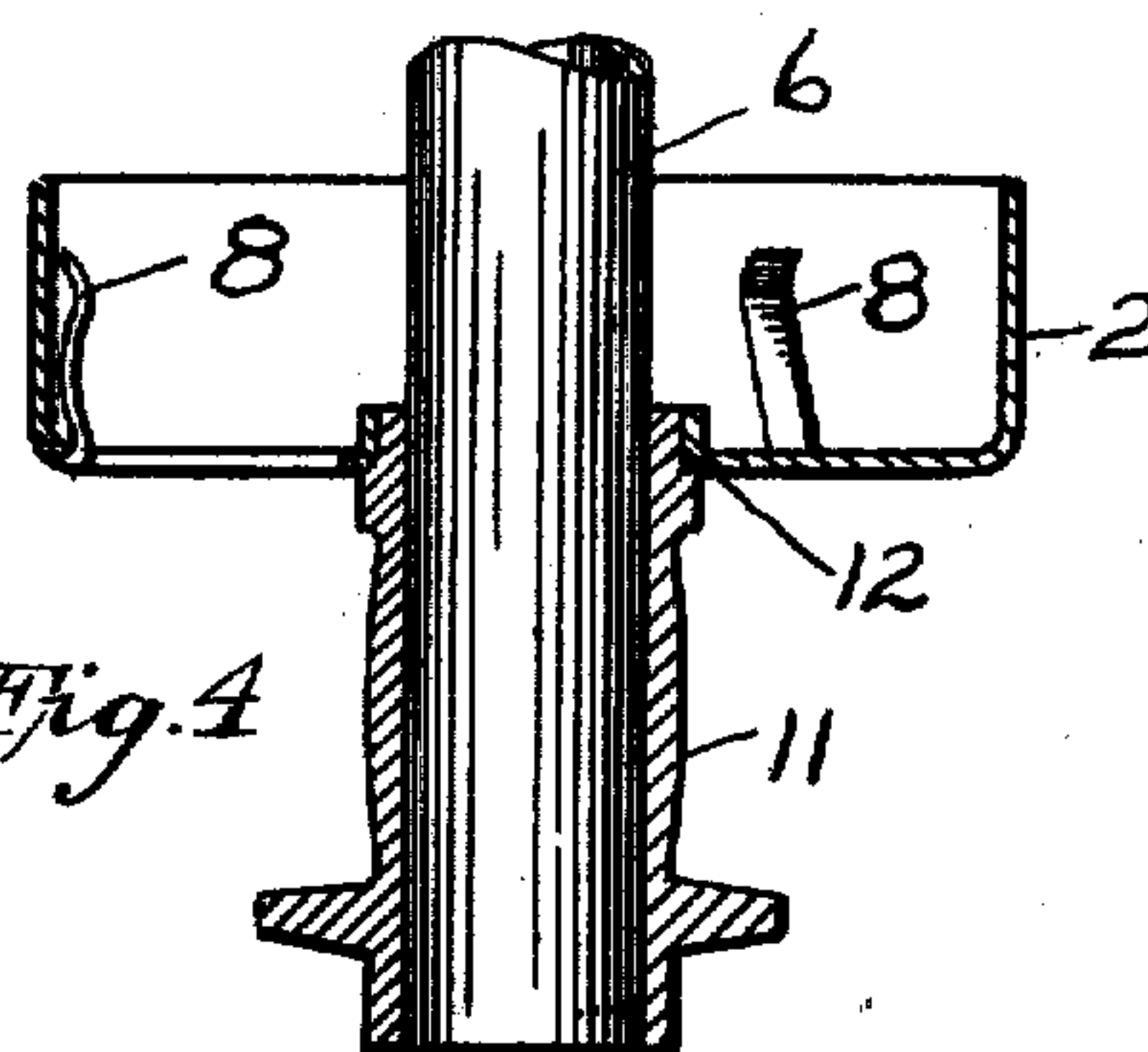


Fig. 4



Witnesses

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# UNITED STATES PATENT OFFICE.

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## BOBBIN-HOLDER.

No. 924,891.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed February 17, 1908. Serial No. 416,188.

*To all whom it may concern:*

Be it known that we, CHARLES H. CURFEW and CHARLES H. CARPENTER, citizens of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Bobbin-Holders, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to bobbin holders, and has for its object to provide a device of this character that is adapted to receive, grip and drive a bobbin by means of clips or resilient fingers. It is found in the practical operation of devices of this character very essential to provide simple and effective means whereby the holder containing the bobbin may be easily arrested by the pressure of the hand so that the bobbin may be doffed quickly. The principal objection to devices of this character now on the market is that no provision has been made for protecting the hand of the operator against injury when he grasps the holder to stop the bobbin.

An essential feature of this invention is that a cup-shaped member is provided having a whirl adapted to receive a band or belt by which the same is driven. The interior of this cup member is provided with a plurality of resilient gripping fingers, the same being surrounded and protected by the broad rim or collar of the cup-member, which serves a double purpose, first, to provide convenient and ample means for grasping the holder with the hand for the purpose of quickly stopping the bobbin, and second, to afford perfect protection to the hand against coming in contact with the resilient gripping fingers or other projections, which are otherwise practically certain, as has been proven in practice, to tear or injure the hand of the operator in attempting to stop the holder.

Another feature of our improved device is that the cup member may be struck up out of sheet stock and drawn up into the desired form and the resilient fingers punched up or raised from the stock thereby forming a holder which is extremely light in weight and at the same time reducing the cost of construction to the minimum.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully de-

scribed and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1— is a side elevation showing one form of holding device in section, with a bobbin in position thereon. Fig. 2—is a plan view showing the cup-shaped member containing a plurality of resilient fingers, said fingers being integral therewith and raised from the bottom portion of said cup. Fig. 3—is a sectional side elevation showing a form of cup which is struck up out of sheet metal having a plurality of fingers formed integral therewith, the same being raised from the bottom portion of the cup member, said cup member also having an elongated neck portion forming a whirl, the same being preferably formed integral with said cup portion. Fig. 4—is a sectional side elevation showing another form of cup-portion struck up out of sheet metal and the whirl portion formed separate therefrom and connected to said cup portion by swaging or any other convenient means.

At 1 is the cup-shaped member having a broad upwardly extending flange or collar portion 2. On the inside of this collar portion, see Fig. 1, is located a plurality of resilient fingers 3 secured to the same by means of the rivets 4. Connected to the bottom side of this cup-member is a downwardly extending portion 5 forming a pulley or whirl for the purpose of receiving the driving band. A long piece of tubing 6 is forced tightly into this whirl portion, the same being adapted to receive the bobbin 7 which is adapted to slide down over the same into position in the cup.

Another feature of this invention is that the cup-member may be struck up out of sheet stock forming the broad rim or collar 2 by which the same may be grasped by the hand of the operator to quickly stop the bobbin. It is found advantageous in this construction to form the fingers 8—8 integral with the cup-member by punching the same upward from the bottom thereof into the position shown in Fig. 3 thereby again reducing the expense of construction. The whirl or neck portion 9 in this particular construction may also be formed integral with the cup-member, if desired, the bottom end of the same being swaged out as at 10 to form a flange to retain the lower edge of the belt. The tube 6 may be also forced



through this neck portion as in the previously described construction and extend a short distance below, to form an end bearing on which the same may turn.

5 The modification illustrated in Fig. 4 shows the cup-member 9 as formed by being drawn up from sheet stock but having a separate and independent whirl member 11 connected thereto at 12, which may be done  
10 by forcing, pinning, swaging or any other suitable means for positively connecting the two members together.

Our improved device for receiving and retaining a bobbin is extremely simple and  
15 practical in its construction and efficient in its operation and by its use the bobbin may be stopped almost instantly by the operator by a slight pressure of the hand thereon, when by a quick motion, the bobbin is in-  
20 stantly released from the gripping springs and removed from the holder and may be as quickly replaced and connected thereto. Then again, owing to the fact that all of the corners, ends and edges on the device are on  
25 the inside of this cup member, which entirely surrounds, incloses and protects the same, there is no chance for the yarn to become caught or entangled in doffing as frequently happens in operating with the old construc-  
30 tion of bobbin holder. This means of fastening is very inexpensive in its construction, and practically indestructible.

Having thus described our invention, what we claim as new and desire to secure by Let-  
35 ters Patent, is:

1. A bobbin holder comprising a cup-

shaped member, a plurality of upwardly ex-  
tending resilient bobbin engaging fingers  
within said cup, the lower portion of said  
fingers being connected to said cup, the walls  
10 of said cup being arranged to inclose and  
protect said fingers and the outer surface of  
said cup being arranged to form a friction  
band or collar to be engaged for the purpose  
of stopping the bobbin, and a whirl con- 45  
nected to said cup member by which the bob-  
bin is rotated.

2. A bobbin holder comprising a cup-  
member struck up out of sheet stock, the  
walls of which form a broad inclosing collar  
50 or band, a plurality of resilient fingers or  
clips punched up from the bottom of said  
cup and formed integral with said cup mem-  
ber, said clips being adapted to receive and  
grip the bobbin. 55

3. A bobbin holder comprising a cup-  
member struck up out of sheet stock, the  
walls of which form a broad inclosing collar  
or band, a plurality of resilient fingers or  
clips punched up from the bottom of said  
60 cup and formed integral with said cup mem-  
ber, said clips being adapted to receive and  
grip the bobbin, and a whirl connected to  
said cup-member through which said bobbin  
is rotated. 65

In testimony whereof we affix our signa-  
tures in presence of two witnesses.

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