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J. CAVANAUGH

2,224,075

BOBBIN

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Fig. 1.

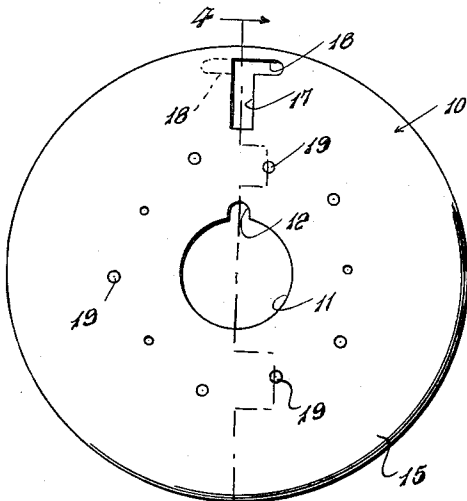


Fig. 2.

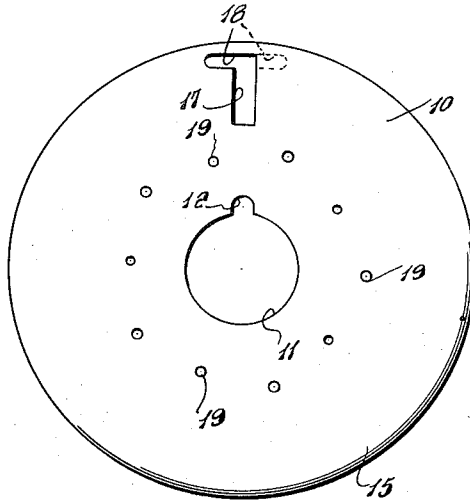


Fig. 4.

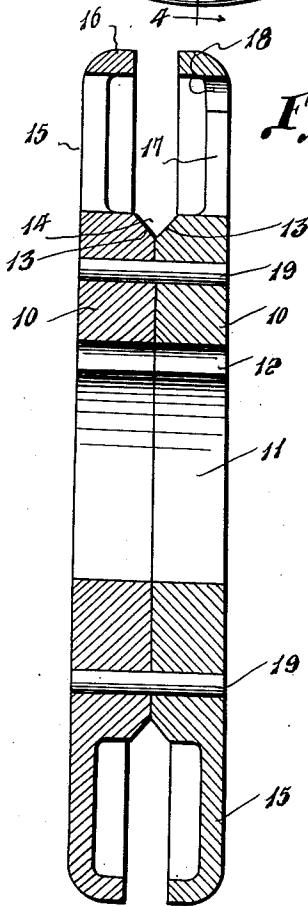
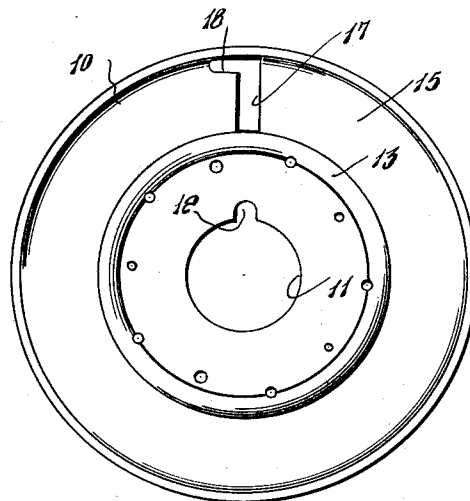


Fig. 3.



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BOBBIN

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3 Claims. (Cl. 242-118)

This invention relates to a bobbin.

It is particularly aimed to provide a construction whereby the bobbin will co-act with a pin or the like of a winder, in order to stop the operation of the winder and winding of the thread, when the bobbin is full.

It is further aimed to provide a construction wherein the thread may be viewed as it is being wound on the bobbin and slot means are provided to operatively accommodate the pin mentioned for operation as the thread accumulates.

It is further aimed to provide a construction wherein the thread will be retained by wedging action on the bobbin in order to reduce the number of coils necessary to secure the thread to the bobbin to expedite the attachment of the thread to the bobbin.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing—

Figure 1 is a view in front elevation of the bobbin;

Figure 2 is a view of the bobbin from the opposite side to Figure 1;

Figure 3 is an elevation showing the inner surface of one of the bobbin sections, and

Figure 4 is a cross section taken on the line 4-4 of Figure 1.

Referring specifically to the drawing, the bobbin is preferably made in two similar sections of a suitable metal, the sections being designated 10 and secured together in any suitable manner as by means of rivets as at 19. The sections provide the usual central opening or bore 11 and groove 12 communicating therewith, so that the bobbin may be operatively mounted on the loom or the like.

The hub or meeting portions of sections 10 at the junction line, are peripherally beveled as at 13, to provide a wedge shaped groove 14 in which the thread to be wound on the bobbin, wedges. I find that it will sufficiently wedge in less than a complete turn around the bobbin and hence attachment of the thread is greatly expedited.

Extending outwardly from the hub of the bobbin, each section has flanges 15 which are reduced and spaced apart, preferably having an intumed marginal rib at their outer or free ends as at 16.

In the flanges 15, laterally alined radial slots 17 are provided, which slots enable the thread

to be observed as it is wound about the bobbin and enables the same to be more easily reached and remedied in the event of breakage.

It will be noted that the slots 17 have angular extensions 18 and that the extension 18 of one slot is laterally disalined with the extension 18 of the other slot.

As the bobbins are having the thread wound thereon, the operation is performed by machine, with the bobbins located stationarily within the machine and the machine having a pin which has a free end extending through one of the slots 17 at the outer end but short of the opposite section 10. Such pin is thus in the path of the thread as it accumulates by winding on the reel and it will be engaged and displaced by such accumulation laterally into the outer end of the slot 18. Through such movement, the pin shuts off an electric switch or any other appropriate control of the winder or winding mechanism.

Because the sections 10 each has a slot 18, the bobbin can be wound with either side disposed in the winding machine. Another material advantage in having the slots arranged as shown is that the longer side wall 17 of each slot serves to guide the accumulating thread in a manner to better urge or laterally displace the pin mentioned.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:

1. A bobbin having a hub portion and relatively close spaced flanges extending outwardly therefrom for winding of thread therebetween, one of said flanges having a slot extending there-through radially from said hub at the zone occupied by the thread, and a slot continuing angularly from the first mentioned slot at the outer end of the first mentioned slot for co-action with a pin of a winder in order to stop operation of the winder and winding of the thread when the bobbin is full.

2. A bobbin having a hub portion, spaced flanges extending therefrom in spaced relation adapted for winding of a thread therebetween onto the hub portion, each of said flanges having a radial slot adapted for co-action with a pin to be engaged by thread as it is wound to control operation of a winder, said radial slots being laterally alined, a slot in one flange extending from the radial slot therein at an angle thereto, and a slot in the other flange extending at an

angle from the radial slot therein, said angle slots extending in opposite directions.

3. A bobbin having a hub portion, spaced flanges extending therefrom in spaced relation
5 adapted for winding of a thread therebetween onto the hub portion, each of said flanges having a radial slot adapted for co-action with a pin to be engaged by thread as it is wound to control operation of a winder, said radial slots
10 being laterally aligned, a slot in one flange ex-

tending from the radial slot therein at an angle thereto, and a slot in the other flange extending at an angle from the radial slot therein, said angle slots extending in opposite directions, said bobbin being made in similar sections, the sections at the hub having peripheral cutaway portions providing a wedge shaped groove to receive the thread.

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