April 20, 1943. G. B. MARKLE, JR 2,317,208

SELF-LOCKING ARBOR FOR SUPPORTING TUBES FORMING HEADLESS SPOOLS OR THE LIKE

Filed Oct. 29, 1941

FIG. 1.

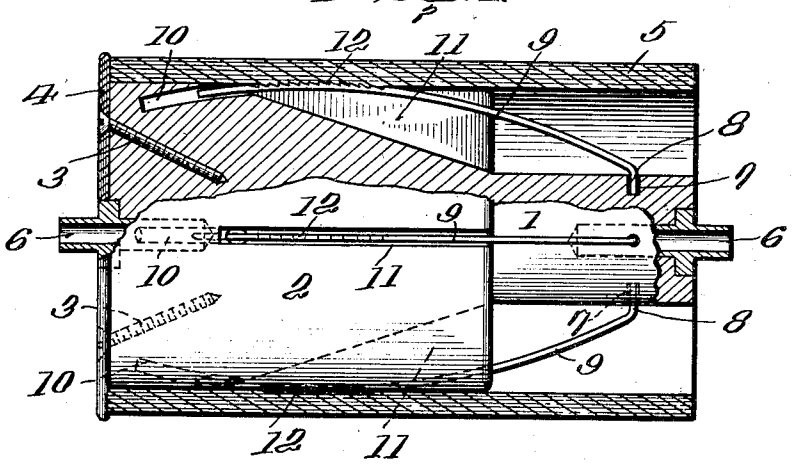


FIG. 3.

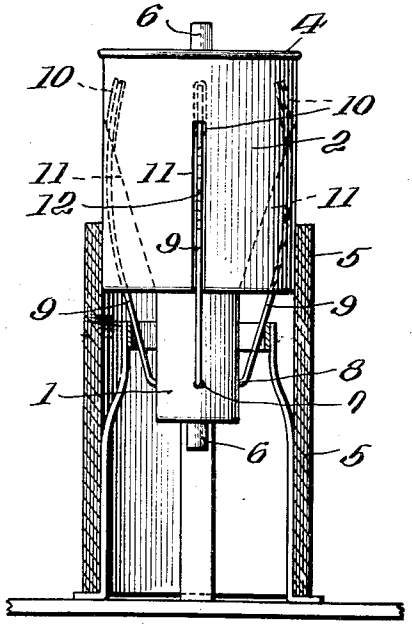
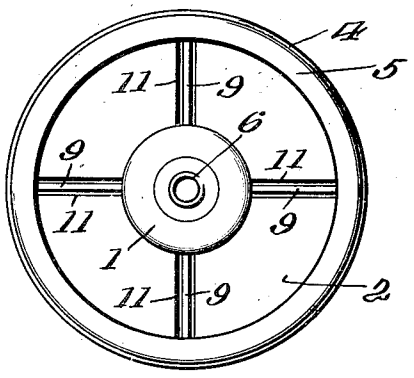


FIG. 2.



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SELF-LOCKING ARBOR FOR SUPPORTING TUBES FORMING HEADLESS SPOOLS OR THE LIKE

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Application October 29, 1941, Serial No. 417,028

1 Claim. (Cl. 242—130)

This invention relates to a self-locking arbor for supporting tubes or the like, and is an improvement on the construction disclosed in my application filed March 7, 1941, Serial No. 382,247, now Patent No. 2,281,983, May 5, 1942, the object being to provide a novel form of arbor with spring arms formed of wires for holding the tube thereon.

The construction of arbor and locking means disclosed in this application is capable of being used in connection with a pinboard construction as disclosed in Patent No. 2,277,556, March 24, 1942, for releasing the locking means as the spool or the like is positioned on the pinboard.

Other and novel features of the invention will be hereinafter set forth in the appended claim.

In the drawing:

Fig. 1 is a longitudinal section through my improved construction of arbor showing a spool in position thereon.

Fig. 2 is an end view of the arbor.

Fig. 3 is a detail section through the arbor showing the spring arms engaged by the ring-like member of a pinboard for releasing the spool or the like.

In the embodiment of my invention as herein shown the arbor is composed of a barrel 1 preferably formed of wood having an enlarged portion 2 over the end of which is secured by screws 3 a fibre head 4 forming a stop for the tube 5 or the like when placed thereon. The barrel is provided with steel gudgeons 6 at each end. The enlarged portion 2 of the barrel forms a support for the spool or the like and the reduced portion allows the spring wires to be engaged to compress the same to release the spool or the like.

The reduced portion of the barrel is provided with bores forming sockets 7 adjacent its outer end in which are secured the angled ends 8 of bowed spring arms 9 having their free ends slidably mounted in oblique bores 10 formed in the enlarged portion of the barrel as clearly shown. The oblique bores are formed at the ends of longitudinal slots 11 formed in the enlarged portions of the bore forming guideways for the spring arms 9 in which the arms work as they expand and contract.

The spring arms 9 are formed of spring wire provided with serrated portions 12 adapted to engage the inner wall of the tube or the like for locking the same on the arbor. When the inclined faces of the spring arms are engaged by a ring-like member of a pin of a pinboard or a special tool the arms are compressed into the slots of the arbor so as to release the tube from the arbor.

This construction is very simple in construction and cheap to manufacture, the only metal parts employed being the spring wires and the gudgeons.

While I have shown the spring arms serrated to form a series of projections it is of course understood that they can be formed with only a single projection in any desired manner without departing from the spirit of my invention. When formed with a single projection it will either engage the inner wall of the tube or enter one of the perforations formed in the tube.

The head forms an annular flange which provides a stop for the tube when placed thereon. The spring arms present inclined surfaces for guiding the tube when being placed thereon.

I claim:

As a new article of manufacture, a wooden arbor comprising a wooden barrel having an enlarged portion at one end for supporting a spool, a disc secured to the end of the enlarged portion forming a stop for the spool when placed thereon, gudgeons secured in the ends of the barrel, the enlarged portion being provided with longitudinal slots terminating in obliquely arranged inwardly extending bores the small portion of said barrel being provided with radial bores, bowed spring wires having angle ends mounted in the radial bores working in the slots and having therein ends slidably mounted in the oblique bores presenting inclined faces to facilitate the placing of the spool thereon the wires being provided with serrated portions for engaging a spool or the like.

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