

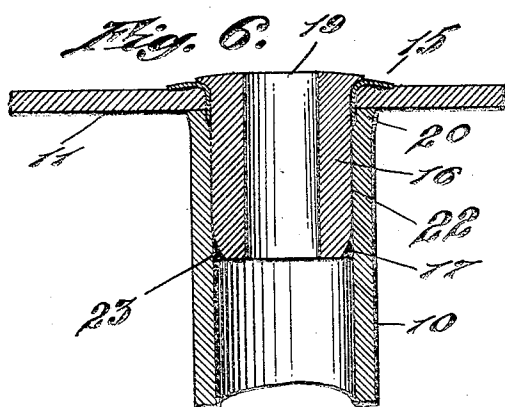
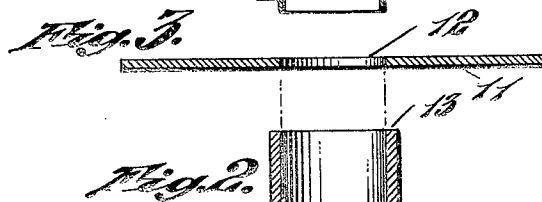
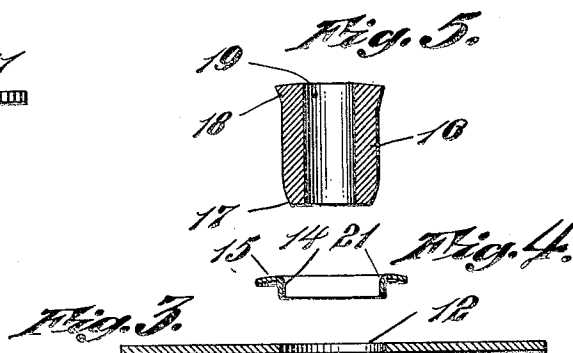
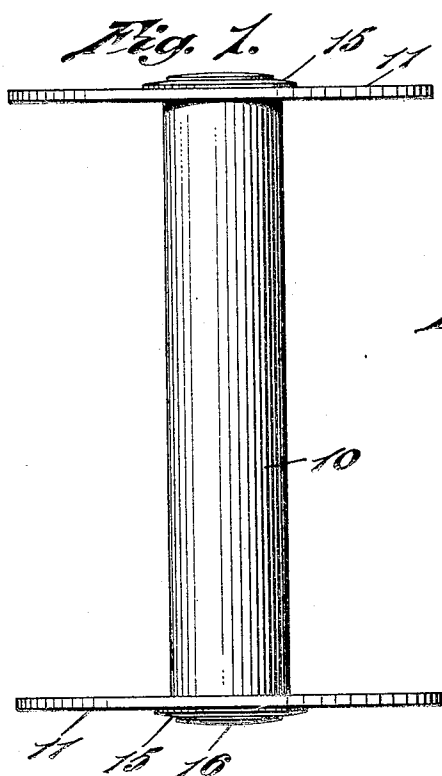
May 23, 1933.

H. MORETTI

1,909,979

SPOOL

Filed June 28, 1932



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UNITED STATES PATENT OFFICE

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SPOOL

Application filed June 28, 1932. Serial No. 619,719.

This invention relates to a spool and has for one of its objects to provide a spool which will be economical to manufacture and one having heads at the ends of the barrel which will not rotate relative to the barrel when in use.

Another object of the invention is the provision of a spool in which the spurs of the driving center of a lathe or turning device may be readily projected to drive or rotate the spool to reel the yarn or other material thereon.

A further object of the invention is to provide a construction in which the bearing opening for receiving the spindle or axle upon which the spool is to rotate may be varied to accommodate different sized spindles or axles.

A still further object of the invention is the provision of a construction in which a long bearing will be had for the spindle or axle upon which the spool is to rotate.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing—

Fig. 1 is a side elevation of the spindle.

Fig. 2 is a central sectional view of the barrel of the spool.

Fig. 3 is a sectional view of the head.

Fig. 4 is a sectional view of the bushing.

Fig. 5 is a sectional view of the locking member for securing the head and barrel in assembled relation.

Fig. 6 is a central sectional view of a fragmental portion of the head and barrel in assembled relation.

In the making of spools of paper, fiber or the like, it is frequently experienced that the head will turn at the end of the barrel and also frequently experienced that the opening in the head is not of the desired size and when a metal bushing is provided through this opening, driving dogs cannot easily be impressed therein for driving the spool for reeling purposes and in order that these disadvantages may be overcome I have provided a bushing which will extend through

the opening in the head and into the barrel and then provided a locking member of wood or the like which may be forced into the bushing or barrel and cemented therein and which may be provided with a hole of any desired size to form a bearing for rotation upon a spindle or axle and also such as to receive the spurs or dogs for driving or rotating the spool for reeling purposes; and the following is a detailed description of the present embodiment of this invention illustrating the preferred means by which these advantageous results may be accomplished.

With reference to the drawing, 10 designates the barrel of the spool which is tubular in form and frequently formed of paper or some other suitable material such as fiber or the like. The head 11 is formed of a similar material and is in the form of a thin disk with an opening 12 therein of a size less than the outer diameter of the tube and in this particular disclosure of the invention is substantially the size of the inner bore of the tube, although not necessarily of this size, so that the head will abut against the end 13 of the tube in positions shown in Figs. 1 and 6. A bushing 14 extends through the opening 12 in the head and is provided with a flange 15 to extend over the outer surface of the head and in general re-enforces the head about the opening 12 and provides a bearing surface to be engaged by a wooden locking member 16 constructed as shown in Fig. 5 with a bore 19 extending therethrough and a tapered inner end 17 and a flaring outer end 18. The bore 19 may be of any desired diameter to form the desired bearing for the spindle or axle upon which this spool is to rotate.

In assembling the head on the spool the head is placed in contact with the end 13 of the barrel 10 and the bushing 14 passed through the opening 12. The bushing is of a length either substantially the thickness of the head 11 or of a length to extend slightly into the end of the barrel 10. The locking member 16 is then forced by pressure through the bushing and into the bar-

rel by which action the bushing 14 is slightly enlarged to contact firmly with the head and also slightly spreads the end of the barrel as indicated at 20 in Fig. 6. The flaring portion 18 of the locking member engages the curved portion 21 of the bushing and maintains firm contact therewith by reason of a slight compression of the wood or similar material of which the locking member 16 is formed. The locking member also firmly frictionally contacts with and slightly spreads the barrel along its engaging surface 22 and in order to additionally secure the parts in this assembled relation I provide an adhesive along the surface 22 which may be indicated 23 in this slightly tapered portion 17 of this assembled structure where it frequently collects.

I have above described the assembly of one head at the end of the spool, however, the other head is assembled in the same manner and in assembly. Pressure is applied on the opposite locking members 16 simultaneously at both ends for securing the heads on the barrel 10.

The locking member 16 is preferably made of wood as the same can be readily worked. Fiber, however, might also be used or any material which is slightly compressible and has the desirable properties which function in this connection.

By the use of a locking member such as 16 the desired length of surface may be provided for contact with the inner surface of the barrel and also the length of the locking member may be varied in order that the desired bearing surface formed by the bore 19 may be had to suitably support the spool on the spindle or axle upon which the spool is to rotate.

By this construction sufficient friction is developed between the engaging surfaces of the parts to prevent rotation of the head on the barrel and also by the use of a wooden plug or locking member an end is afforded into which the dogs for rotating the spool may be impressed to secure the desired driving connection with the end of the spool.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:—

1. A spool comprising a tubular barrel, a head having an opening therein of a size less than the outer diameter of said barrel, a bushing in the opening in said head and provided with a flange extending over the outer surface of said head and a locking member extending through the opening in said bushing and into said barrel and frictionally engaging the inner surface of said barrel, said locking member having a flaring outer end of a size larger than the opening through said bushing to tightly engage the surface of the wall of the opening on the bushing as forced therein.

2. A spool comprising a tubular barrel, a head of relatively soft compressible material having an opening therein of a size less than the diameter of the barrel and abutting one end thereof, a sheet metal bushing in the opening in said head having a flange extending over the outer surface of said head, and an indentable locking member less compressible than the head extending through said bushing and into said barrel and frictionally engaging the wall of the opening in the bushing and the inner surface of the barrel.

3. A spool comprising a paper tubular barrel, a paper head having an opening therein of a size less than the diameter of the barrel and abutting one end thereof, a sheet metal bushing in the opening in said head having a flange extending over the outer surface of said head, and a wooden locking member extending through said bushing and into said barrel and frictionally engaging the wall of the opening in the bushing and the inner surface of the barrel.

4. A spool comprising a paper tubular barrel, a paper head having an opening therein of a size less than the diameter of the barrel and abutting one end thereof, a metal bushing in the opening in said head having a flange extending over the outer surface of said head, and a wooden locking member extending through said bushing and into said barrel and frictionally engaging the wall of the opening in the bushing and the inner surface of the barrel, said locking member having a flaring outer end of a size larger than the opening through said bushing to tightly engage the surface of the wall of the opening on the bushing as forced therein.

5. A spool comprising a paper tubular barrel, a paper head having an opening therein of a size less than the diameter of the barrel and abutting one end thereof, a metal bushing in the opening in said head having a flange extending over the outer surface of said head, a wooden locking member extending through said bushing and into said barrel and frictionally engaging the wall of the opening in the bushing and the inner surface of the barrel and an adhesive for securing the barrel and locking member together, said locking member having a flaring outer end of a size larger than the opening through said bushing to tightly engage the surface of the wall of the opening on the bushing as forced therein.

In testimony whereof I affix my signature.

HENRY MORETTI.