May 22, 1923. 1,455,779

J. M. BROWN

SPOOL

Filed June 7, 1922

Fig. 1.

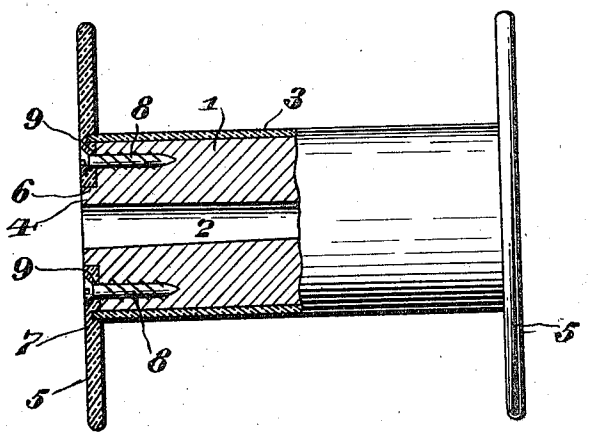
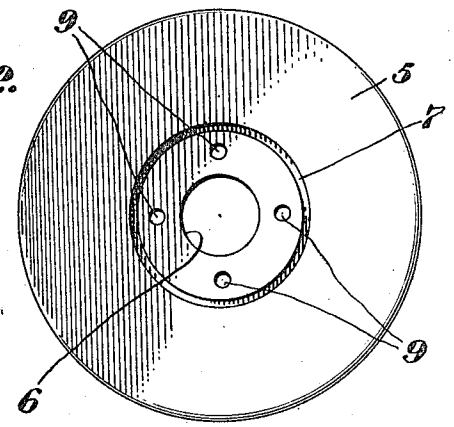


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES MORRIS BROWN, OF PHILADELPHIA, PENNSYLVANIA.

SPOOL.

Application filed June 7, 1922. Serial No. 566,529.

To all whom it may concern:

Be it known that I, JAMES MORRIS BROWN, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Spools, of which the following is a specification.

My invention relates to spools on to which yarn, thread or the like is adapted to be wound.

A general object of the invention is to provide a novel construction of spool comprising means for preventing the catching of any of the threads which may be wound thereon between an end of the body portion of the spool and the disks constituting the ends of the spools secured thereto.

A further object of the invention is to provide a spool comprising a central core member and a surrounding hollow shell like portion the opposite ends of which project into grooves upon the inner sides of the disk plates at the opposite ends of the spool.

Other objects and advantages of the invention will be pointed out in the detailed description thereof which follows or will be apparent from such description. In order that the invention may be readily understood and its practical advantages fully appreciated reference may be had to the accompanying drawing forming a part of the specification, in which I have illustrated one convenient form of embodiment thereof.

In the drawing:

Fig. 1 is a view partly in side elevation and partly in central longitudinal section; and

Fig. 2 is an inside view of one of the disk ends of the spool.

Referring to the drawing: 1 designates an inner core member of suitable material, such as wood, having a central tapered opening 2 extending axially therethrough. The inner core member 1 is surrounded by a closely fitting cylindrical shell 3 which is of slightly greater length than the adjacent portion of the said core member. This shell may consist of any suitable material, such as fibre. The said core member is provided with central projections 4 at its opposite ends which surround the opposite ends of the opening 2. These projections extend beyond the opposite ends of the shell 3 so that the central portion of the core 1 is slightly longer than the shell 3. The said projections are of a height substantially equal to the thickness of the end disks 5 which are provided with central opening 6 through which the said projections extend. The said disks are also provided with annular grooves 7 which are concentric with the openings 6 and into which the opposite ends of the shell 3 project, as is clearly indicated in Fig. 1.

The parts 1, 3 and 5 having been assembled in the manner as indicated in Fig. 1, the latter are then secured and held in position at the opposite ends of the spool by means of ordinary wood screws 8 which are inserted through countersunk holes 9 in the disks 5 into the opposite end portions of the inner core member 1 of the spool.

In the construction shown the inner core member 1 and the shell 3 are cylindrical in cross section but it will be under stood that, if desired, they may be of polygonal shape in cross section.

The construction at both ends of the spool is identical, in consequence of which only one end portion thereof is shown in section.

It will be apparent that in the case of spools constructed in accordance with my invention in which the opposite ends of the shell 3 project into the annular grooves 7 there is no opportunity for threads, which may be wound upon such spools, to catch between an end of the intermediate body portion of the spool and a disk 5 secured thereto.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. A spool comprising an inner core member, a shell surrounding and closely fitting the said core member, the said shell being of a length greater than the adjacent portions of said core member, disk like end plates secured to the opposite ends of the said core member and said end plates having annular grooves into which the opposite ends of the said shell portion project.

2. A spool comprising an inner core member having projections at its opposite ends, said projections being concentric with the said core member, a shell surrounding and closely fitting the said core member the opposite ends of which project beyond the adjacent end portions of the said inner core member and end plate members having central openings which fit over the said projections and also having grooves concentric with the said openings into which the opposite ends of the said shell project.

3. A spool comprising an inner core member having projections at its opposite ends concentric therewith, end plate members having central openings through which the said projections extend, the said end plate members being seated in the spaces surrounding the said projections, said plate members being provided with grooves concentric with the said openings and a shell surrounding the said core member and having its opposite ends projecting into the said grooves, substantially as described.

4. A spool comprising an inner core member having a central opening extending therethrough and being provided with annular projections at its opposite ends concentric with the adjacent ends of said opening, end plate members having central openings through which said projections extend and the said end plate members being provided with annular grooves concentric with the said central openings, a shell surrounding the said core member, the opposite ends of which extend into the said annular grooves and means for securing the said plates to the opposite ends of the said core member.

5. A spool comprising an inner cylindrical core member of wood having a central opening extending axially therethrough and also having annular projections at its opposite ends concentric with the adjacent ends of said opening, end plates of fibre material having central openings through which the said projections extend and which plates are seated in the spaces surrounding the said projections and the said plates having annular grooves concentric with the central openings therethrough, a cylindrical shell of fibre surrounding and closely fitting the said core member and the opposite ends of which project into the said annular grooves and screws connecting said end plates to the opposite ends of said core member.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 3rd day of June, 1922.

JAMES MORRIS BROWN