April 27, 1926. 1,582,769

G. H. LÜNEBURG

TENSIONING DEVICE FOR SPOOLS AND THE LIKE

Filed April 3, 1925

Fig. 1

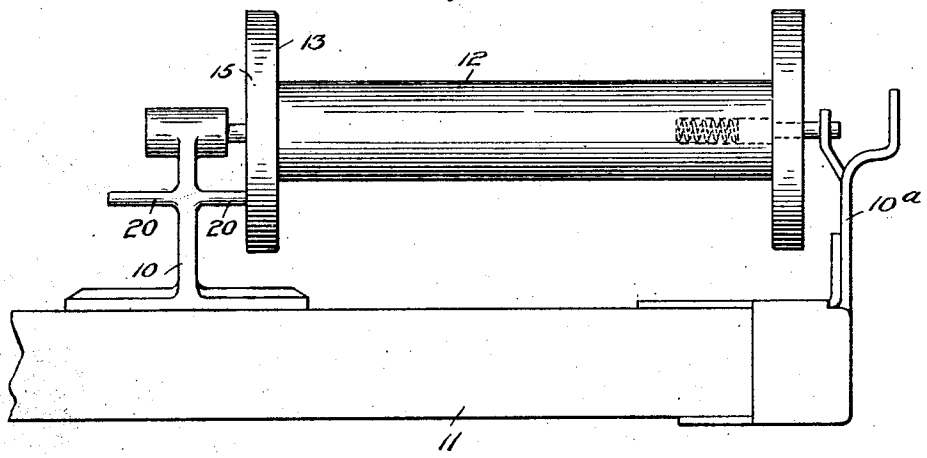


Fig. 2

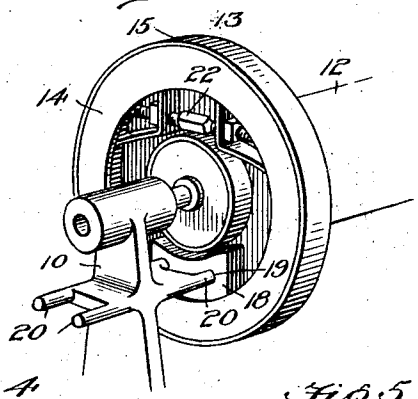


Fig. 3

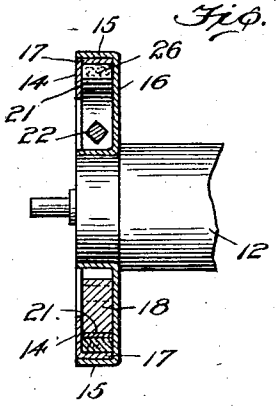


Fig. 4

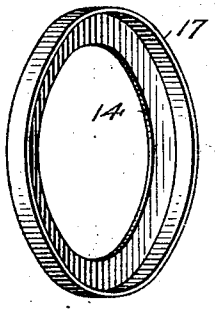


Fig. 5

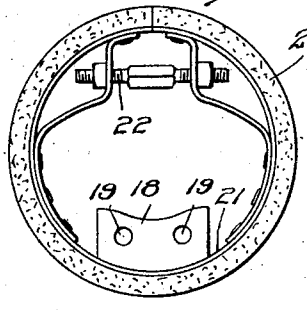
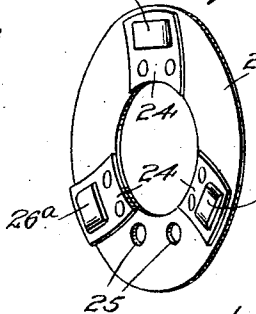


Fig. 6



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UNITED STATES PATENT OFFICE.

GUSTAVE H. LUNEBURG, OF AMSTERDAM, NEW YORK.

TENSIONING DEVICE FOR SPOOLS AND THE LIKE.

Application filed April 3, 1925. Serial No. 20,560.

To all whom it may concern:

Be it known that I, GUSTAVE H. LUNEBURG, a citizen of the United States, residing at Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Tensioning Devices for Spools and the like; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in tensioning devices for spools and the like, but particularly for tensioning the yarn on the spools of carpet looms.

The primary object of the invention is to so conceal or house the tensioning devices that they cannot catch or tangle up the yarn of a new spool placed in the loom.

With this and other objects in view the invention consists in certain novel details of construction and combinations and arrangements of parts all as will hereinafter be more fully described and the novel features thereof pointed out in the appended claims.

In the accompanying drawing,—

Figure 1 is an elevational view of a spool journaled on its standard in the loom, only a portion of the loom supporting the standard being shown.

Fig. 2 is a perspective view looking at the end of the structure illustrated in Fig. 1.

Fig. 3 is a vertical sectional view of the spool head.

Fig. 4 is a detail of the removable side of the spool head detached.

Fig. 5 is a similar view of the brake member; and

Fig. 6 is a similar view of a modified form of brake member.

The standards 10, 10ª, in which the spools are journaled are mounted on the usual portion of the loom frame 11 and though only two standards are illustrated it will be understood that the number actually used depends upon the size or capacity of the loom. Journaled in bearings in the standard are the spools 12 each standard supporting the proximate ends of each pair of adjacent spools, the spindle at one end of each spool being yieldingly projected beyond the end of the spool in order that the latter may be inserted in or removed from its bearings.

One head 13 of each spool is adapted to contain means for tensioning the yarn on the spool in order that it will be fed off of the same properly and according to the present invention these tensioning means are so enclosed or housed within the spool head that there will be no, if any, possibility of the yarn on the spool, especially a fresh spool placed in the loom, becoming caught in said tensioning means. In the preferred form, the outer side 14 of the head fits rather tightly but removably in the peripheral flange 15 of the inner side 16 of the head, which latter side is fixedly attached to spool 12, and the tensioning means are housed within or between these two sides 14, 16 of the head.

The outer side of the head also has a peripheral flange 17, the close fit between the flanges 17, 15 of the two causing the entire head to rotate with the spool, while the braking member 26 within the head remains stationary. For this reason said braking means has a block or lug 18 attached thereto in which there are one or more sockets 19 into which some fixed member located exteriorly of the head engages for holding the braking member against rotation. Preferably such holding means consist of one or more projections 20 on the standard 10, the removable side 14 of the head having an opening therein in order that said projections may extend into the head and engage said sockets. In actual practice each alternate standard is provided with the projections 20 and the tensioning means are placed in adjacent ends of each pair of proximate spools.

The tensioning or braking means proper may take various forms, two being shown in the present instance. In Figs. 1 to 5, the socketed block 18 is mounted on a brake band 21 which carries the braking member 26 in the form of a facing of suitable material such as leather. The band possesses sufficient resiliency to urge it into contact with the braking surface of the head, formed in this instance by the flanges 15, 17 of the head but the frictional engagement of these parts may be varied to place the yarn under proper tension as by a bolt 22 having a right hand thread on one end and a left hand thread on its opposite end with an end of the band between the central portion of the bolt and a nut on each end whereby rotation of the bolt in one direction will take up on the band and rotation in the opposite

direction will permit the band to expand and thus bear harder against the spool head.

In the form of brake illustrated in Fig. 6, there is a disk 23 on which is secured suitable braking means, such as a plurality of springs 24 each carrying a braking element 26[a] of some material such as leather which is forced against the braking surface of the head, the face of inner side 16 in this instance. To hold disk 23 and the braking elements 26[a] against rotation said disk has holes 25 therein for cooperation with the projections 20 on the standard.

In both forms, the braking means are detached from the flange of the outer side of the head and said side being only frictionally locked to said head, the several parts can quickly be assembled. By housing the braking or tensioning means within the head, regardless of the form of said means, there is no danger of the yarn from the spool being caught as it revolves with the spool.

What I claim is:

1. In a tension device for spools, the combination of a spool head, a brake member, a spring for maintaining said brake member in frictional engagement with the head, said brake member and spring being enclosed within the head, and means for holding said brake member stationary while the spool and head are rotated.

2. In a tension device for spools, the combination of a spool head, a brake member enclosed within the head and frictionally engaging the head, and means fixed exteriorly of the head and projecting into said head into engagement with the brake member to hold the latter against rotation.

3. In a tension device for spools, the combination of the spool head, a brake member enclosed within the head and frictionally engaging the same, a socketed member secured to the brake member, and means fixed exteriorly of the head and projecting into said socketed member for holding the brake member against rotation.

4. In a tension device for spools, the combination of a spool head having a removable outer face with an aperture therein, a brake member enclosed within the spool head, and means fixed exteriorly of the head and projecting through said aperture into engagement with the brake member for holding the latter against rotation.

5. In a tension device for spools, a head fixed on the spool, a standard in which the spool is journaled, a brake member enclosed in the head, and means carried by said standard projecting into the head and engaging said brake member for holding the brake member against rotation.

6. In a tension device for spools, a head having one side attached to the spool and a removable outer side adapted to rotate with the spool and attached side of the head, said removable side having an opening therein, a brake member enclosed between the two sides of the head, a standard on which the spool is journaled, and a projection on said standard extending through said opening and engaging the brake member to hold the latter against rotation.

7. In a tension device for spools, a head having one side attached to the spool and a removable outer side adapted to rotate with the spool and attached side of the head, said removable side having an opening therein, a brake member enclosed between the two sides of the head, a socketed member mounted on the brake member, a standard in which the spool is journaled, and a fixed projection on the standard extending through said opening into engagement with said socketed member to hold the brake against rotation.

8. In a tension device for spools, the combination of a spool, a head mounted on one end of the spool and having an apertured, removable outer side adapted to rotate with the spool, a brake member enclosed within the head and spring pressed into frictional engagement with said head, means for varying the frictional engagement between the brake and head, and means fixed exteriorly of the head and connected to said brake member for holding the latter against rotation.

GUSTAVE H. LUNEBURG.