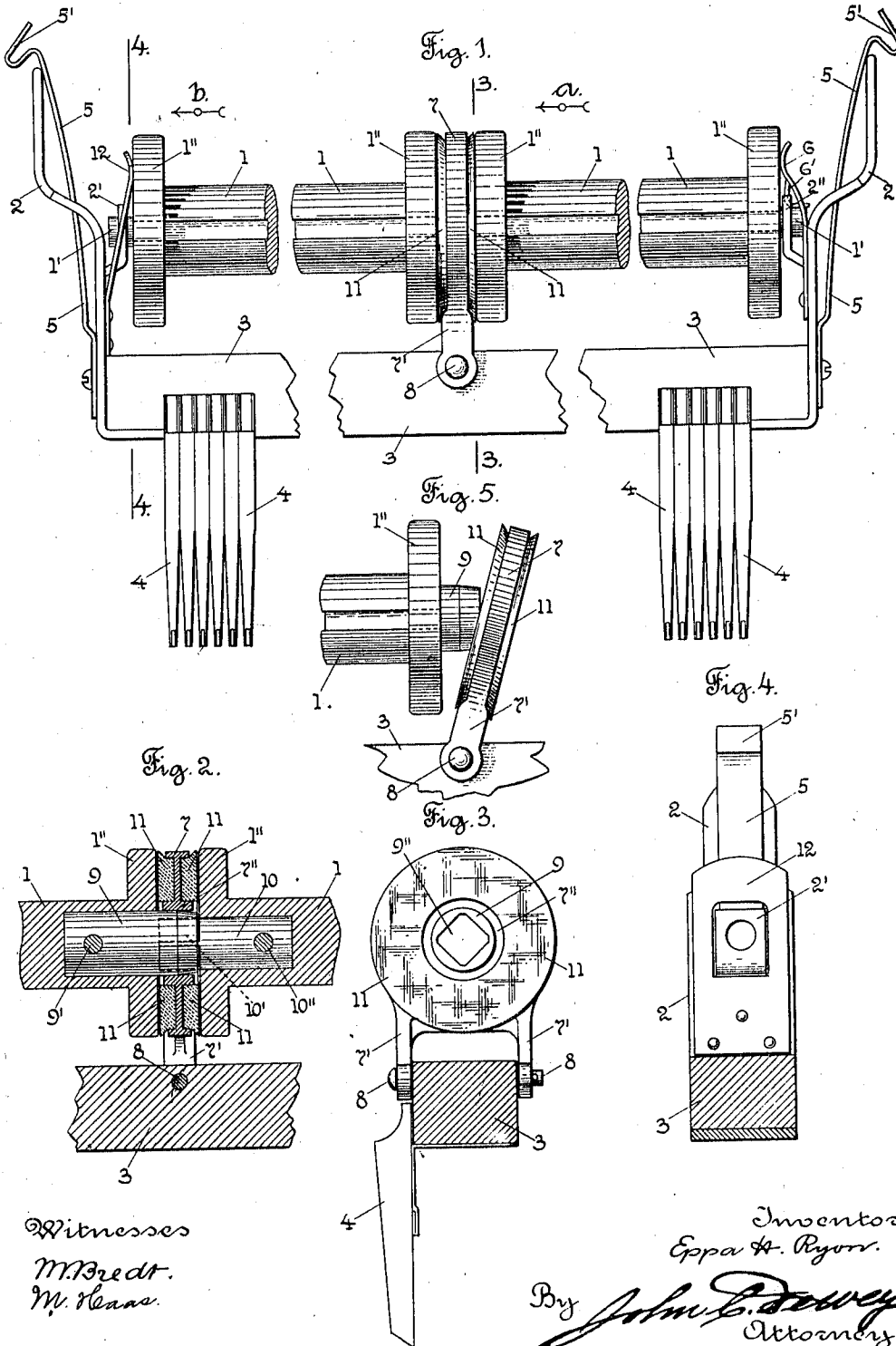


E. H. RYON.
TUFT YARN CARRIER.
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989,060.

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UNITED STATES PATENT OFFICE.

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TUFT-YARN CARRIER.

889,060.

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To all whom it may concern:

Be it known that I, ERPA H. RYON, a citizen of the United States, residing at Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tuft-Yarn Carriers, of which the following is a specification.

My invention relates to tuft yarn carriers for wide moquette looms, and more particularly to the bearing and friction device for the beams or spools in wide moquette looms, where two or more spools or beams are used on one carrier.

The object of my invention is to provide an improved bearing for the inner contiguous ends of spools or beams, by means of which a spool or beam may be readily removed, and also to provide an improved friction device for the beams or spools.

My invention consists in certain novel features of construction of my improvements as will be hereinafter fully described.

Referring to the drawing:—Figure 1 is a front view of a tuft yarn carrier for wide moquette looms with my improvements applied thereto. Fig. 2 is a longitudinal section, through the center bearing shown in Fig. 1. Fig. 3 is a section, on line 3, 3, Fig. 1, looking in the direction of arrow *a*, same figure. Fig. 4 is a section, on line 4, 4, Fig. 1, looking in the direction of arrow *b*, same figure, and, Fig. 5 shows the inner end of the beam or spool shown at the left in Fig. 1, and the bearing in its releasing position.

In the accompanying drawing, 1 are the beams or spools, which have their end journals 1' mounted in bearings 2', and 2'', on the upwardly extending arms 2, secured to the cross bar 3. The bar 3 carries the tubes 4, through which the tuft yarn, not shown, passes from the spools. The upper ends of the arms 2 are adapted to enter or engage links of the carrier chain, not shown. The spring catches 5, secured at their lower ends on the ends of the bar 3, and having hook shaped upper ends 5', to cooperate with the chain, not shown, to carry the spool carriers. The bearing 2' on the right in Fig. 1, is open at its upper end to receive the outer end of the journal 1'. A spring blade 6 acts to hold the journal 1' in its bearing, through an extension or arm 6' on said spring blade 6 extending over the top of the journal 1'.

All of the above mentioned parts may be

of the usual and well known construction in the class of looms referred to. I will now describe my improvements.

The center bearing for the inner contiguous ends of the beams or spools 1, consists in this instance of a disk or plate 7, having the downwardly extending arms 7', see Fig. 3, which are pivotally attached to the bar 3 by a pin 8, which extends transversely through said bar. The disk or plate 7 has a central opening 7'' therethrough, to loosely receive the journal 9 on one of the beams or spools 1. The journal 9 consists in this instance of a stud, which is secured within the end of the spool, in this instance, by a transverse pin 9'. The stud 9 forming the journal has in this instance a square-shaped recess 9'' therein, as shown by broken lines in Fig. 2, which is adapted to receive the square end 10' of a stud 10, secured to the inner end of the other spool by a transverse pin 10'', and forming the journal of the inner end of said spool. Disks or washers 11 extend in annular grooves or recesses in the disk or bearing plate 7, which are adapted to bear against the inner heads or ends of the spools or beams 1.

At the outer end of one of the spools or beams 1 is a spring blade 12, see Fig. 1, secured at its lower end to the arm 2, and bearing at its upper end against the outer surface of one beam or spool head. The spring 12 acts to press the inner ends of the spools against the friction surfaces 11 on the plate 7, to retard the rotation of the spools, the blade 6 acting to hold the spools at the other end.

When it is desired to remove a spool or beam, the spool or beam at the right in Fig. 1, is raised out of its slotted bearing, by moving out the spring 6, and its inner end disconnected from the inner end of the other spool, leaving the swivel ring or bearing 7 free to be moved on its pivotal support to the right, as shown in Fig. 5, to allow the other spool at its inner end being raised to withdraw the outer end or journal of the spool from its bearings.

It will be understood that the details of construction of my improvements may be varied if desired.

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

4. The combination with a tuft yarn car-

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rier, of a plurality of spools connected at their contiguous ends to rotate in unison, and a bearing, pivotally mounted on the yarn carrier, for the contiguous ends of the spools, and friction surfaces on said bearing, and means at the outer ends of the spools, to cause frictional engagement between the ends of the spools and said friction surfaces.

- 10 2. The combination with a tuft yarn carrier, of a plurality of spools connected at their contiguous ends to rotate in unison,

and a bearing pivotally mounted on the yarn carrier, for the contiguous ends of the spools, and friction surfaces on said bearing, and a spring blade or arm at the outer end of a spool to bear against said end, and cause frictional engagement between the inner ends of the spools and said friction surfaces.

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Witnesses:

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