No. 881,149. PATENTED MAR. 10, 1908.

C. W. PILSCHEUR.

REEL FOR WINDING MACHINES.

APPLICATION FILED AUG. 3, 1907.

Fig. 1

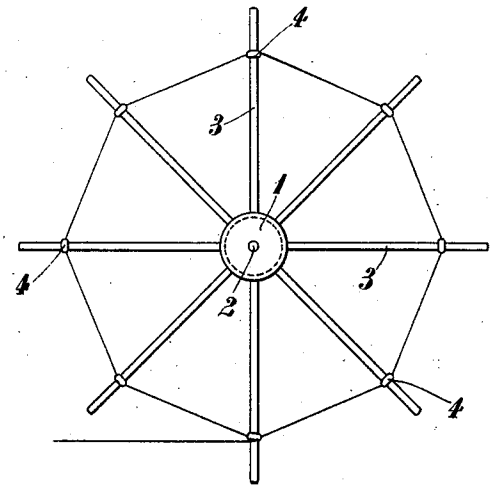


Fig. 2

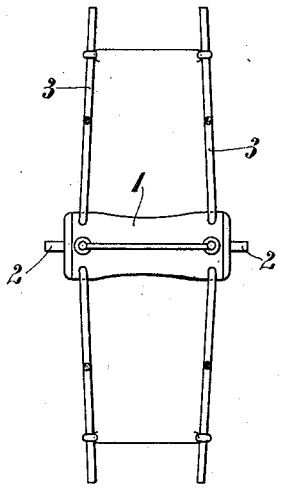


Fig. 3

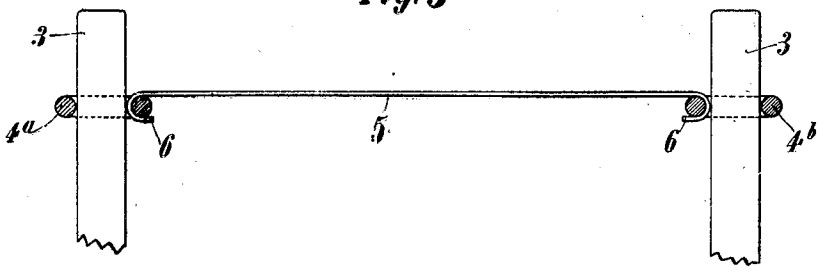
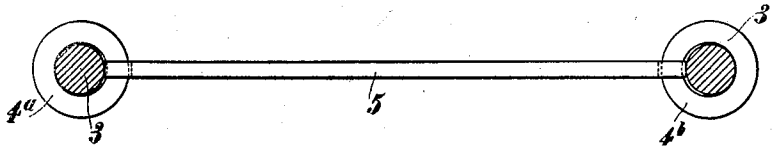


Fig. 4



Witnesses.

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REEL FOR WINDING-MACHINES.

No. 881,149. Specification of Letters Patent. Patented March 10, 1908.

Application filed August 3, 1907. Serial No. 386,993.

To all whom it may concern:

Be it known that I, CARL WILHELM PILSCHEUR, a citizen of the German Empire, residing at Barmen, in the Province of Rhenish Prussia and Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Reels for Winding-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Reels (whims) for winding machines in the case of which the arms or spokes forming the reel proper are connected by elastic bridges which serve as yarn-carriers are already well-known. Very recently such bridges have been frequently made from endless rubber bands, each of which is placed round a pair of spokes and tightened. The flexibility of these rubber bands is sufficient to satisfy requirements but said bands possess the defect that said flexibility does not last long, as the rubber bands soon become torn during use so that they lose in elasticity and become slack, so that the bridges are not able to offer sufficient resistance to the pressure of the skeins of yarn resting on them and to the tension which exists during unwinding and the result being that they glide down on the spokes towards the axle of the reel. This gliding down action of the bridges is non-uniform in correspondence with the varying tension at various moments during one revolution. The bridges set themselves at various heights, *i. e.* at various distances from the axle so that not only does the reel run irregularly and jerkingly the result of which is that loops are formed and that breakages occur, but also the layers of thread possess a non-uniform periphery.

The reel forming the subject-matter of the present invention is intended to do away with these defects. It is distinguished by a new kind of yarn-carrier which is formed of two rubber rings which are placed on the spokes and are connected by a bridge which is suitably elastic, the rubber rings embracing the spokes firmly all round and making the displacement of the yarn-carrier independent of the nature and of the flexibility of the elastic intermediate member or of the tension in the yarn while being unwound.

In the accompanying drawing the subject-matter of the present application is represented by way of example, one embodiment being shown.

In said drawings: Figure 1 is a side elevation of the reel, Fig. 2 is a front elevation of the same, Fig. 3 an elevation of a single yarn-carrier drawn to a larger scale, and Fig. 4 a plan of the same.

The reel consists of the axle 1 provided with lateral pivots 2 and with the spokes or arms 3 which are inserted radially in the nave on the axle. The yarn-carriers serving to hold the yarn skeins wound upon the reel consist each of two rubber rings 4^a, 4^b, the internal opening of which is smaller than the cross section of the spokes and of a bridge 5 which is likewise suitably elastic. The bridges connect said spokes in pairs the length of said bridges corresponding with the distance apart of the spokes. In order to be able to fulfil this condition in each case said bridges may if desired be adjustable in length and may be surrounded with cylindrical sheaths for the purpose of projecting the yarn. These yarn-carriers thus formed are placed with their rubber rings on the spokes, the rings contracting tightly round the latter and so giving to the yarn-carrier sufficient hold against the tension and the weight of the yarn so that the bridges are prevented from shifting and sliding towards the axle during the winding-on process. The bridges connecting the rubber wings may themselves consist of any suitable material, such as wire, strips of sheet metal, and so on, the bent-over ends 6 of which are for example hooked in the simplest manner into the reels.

Having now described my invention I declare that what I desire to secure by Letters Patent is:

1. Reel for winding-machines comprising in combination a revoluble nave, a plurality of radial spokes arranged at opposite ends of the nave the spokes at one end being opposite those at the other end, a rubber ring on each spoke near its outer end, and a bridge interconnecting the rubber rings on each pair of spokes situated opposite one another.

2. Reel for winding-machines comprising in combination a revoluble nave, a plurality of radial spokes arranged at opposite ends

of the nave the spokes at one end being opposite those at the other end, a rubber ring on each spoke near its outer end, and an elastic bridge interconnecting the rubber rings on each pair of spokes situated opposite one another.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

CARL WILHELM PILSCHEUR.

Witnesses:
OTTO KÖNIG,
EMIL PITTAU.