

F. W. MOORE.
YARN STRIPPER FOR WEFT REPLENISHING LOOMS.
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937,838.

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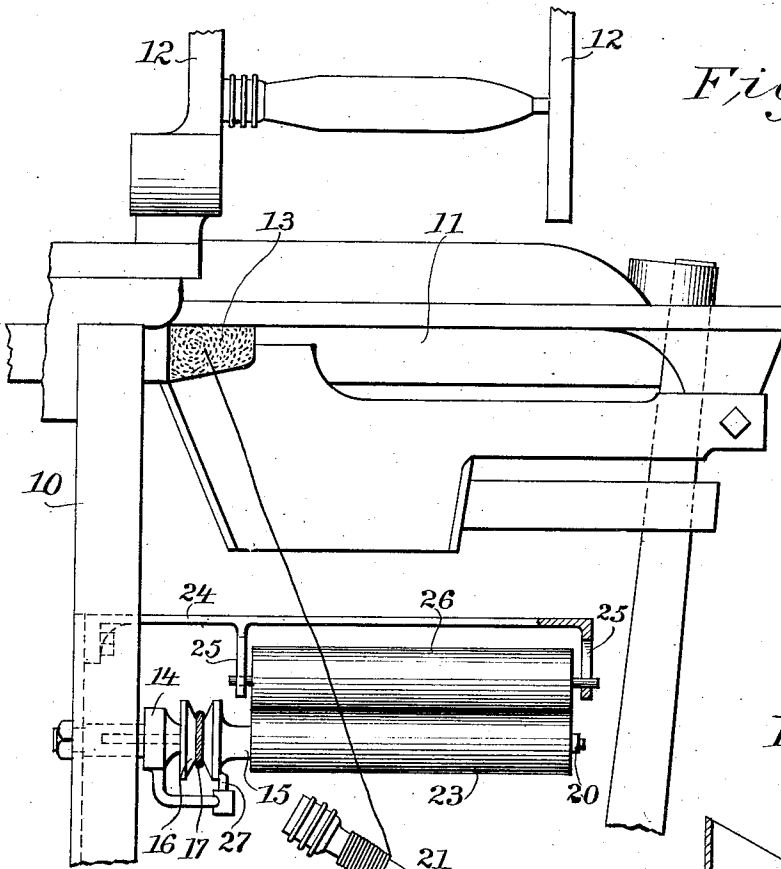


Fig. 1.

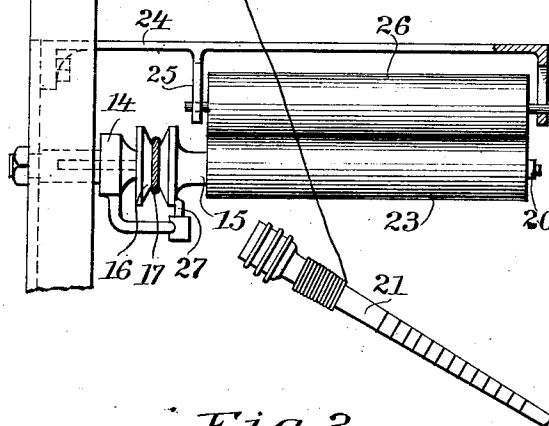
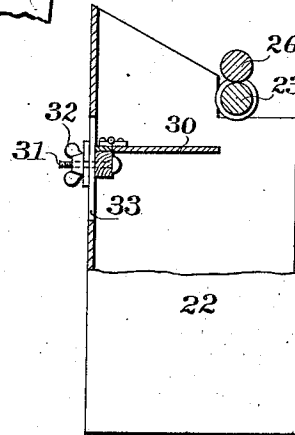
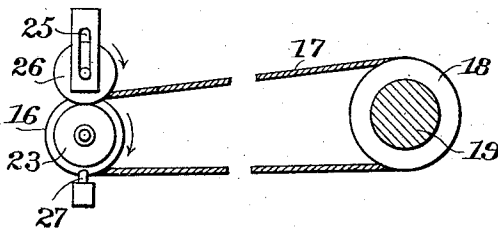


Fig. 2.

Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERIC WILLARD MOORE, OF MILLBURY, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

YARN-STRIPPER FOR WEFT-REPLENISHING LOOMS.

937,838.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, FREDERIC WILLARD MOORE, a citizen of the United States, residing at Millbury, in the county of Worcester and State of Massachusetts, have invented a new and useful Yarn-Stripper for Weft-Replenishing Looms, of which the following is a specification.

This invention relates to weft-replenishing looms wherein the replenishment is effected before the running weft is exhausted, so that the bobbins are discharged from the shuttle with more or less yarn thereon.

The object of this invention is to provide a practical means whereby the yarn will be unwound from the bobbins as they are discharged from the shuttle. This is accomplished by mounting in some convenient position, preferably on the end of the frame, a yarn-stripper consisting of a pair of rotating rollers adapted to engage the end of the yarn which usually hangs from the bobbin when the same is discharged. This yarn-stripper rotates and winds the yarn upon itself, removing it from the bobbin. This is done partly during the fall of the bobbin, and is completed after the bobbin reaches the can or other receptacle into which it is discharged. In order to assist in this operation and retard the end of the yarn so that it may be more surely engaged by the bobbin stripper, a clearer cloth is preferably mounted on the lay or in some other convenient position. If the yarn engages this cloth, the fibers of the cloth become entangled to a slight extent with the threads of the yarn and hold the same back so that it will insure the yarn engaging the bobbin-stripper long enough to get wound thereon in one or two turns, so that the fall of the bobbin will not release the yarn from the stripper. Means are also provided whereby the bobbin is temporarily held in proper position for the stripper to act, instead of falling at once to the bottom of the can.

The improvement is illustrated in the accompanying drawings in which—

Figure 1 is a fragmentary elevation of the end of a weft-replenishing loom showing the stripper. Fig. 2, is a side view partly in section of the can for the discharged bobbins. Fig. 3 is an end elevation partly in section of a portion of the stripper showing how it may be driven from the main shaft.

Only a few parts of the loom are illustrated as the invention may be applied to practically all forms of weft-replenishing looms.

Fig. 1 shows a portion of the end frame 10, the lay 11, and a part of the magazine or battery 12. On the lay is mounted a clearer cloth 13, while on the frame is mounted a bracket 14 carrying a spindle 15. This spindle is provided with a pulley 16 which by means of a rope or belt 17 is operated from the pulley 18 on the main shaft 19, but it can be rotated in any desired way. A removable roll 23 is mounted on the spindle 15. On a frame 24 which has slotted arms 25, a second roller 26 is mounted. This roller moves by gravity along the slots in said arms into contact with the roller 23, and when the end of the yarn from a bobbin has once passed between the rollers it will be kept there long enough to be wound on the roller 23. The pulley 16 is preferably provided with a guide 27 for holding it in position. When the roller 23 is filled with yarn it can be removed endwise and replaced by another or stripped in any desired way.

This yarn-stripper is of special utility in the case of fine yarns and those of smooth finish. During the fall of the bobbin past the rollers 23, 26, the yarn is caught between them, and is unwound from the bobbin by the conjoint action of the driven roller 23, and the loose roller 26, which is frictionally driven from the roller 23, and separates therefrom as the yarn accumulates. This accumulation of the yarn is permitted by the separate mounting of the two rollers due to the slots in the arms 25. One or both the rollers 23, and 26, may be covered with rough cloth to more readily grasp the yarn trailing from the falling bobbin.

When the bobbins are discharged into a deep can, some of them pass the stripper in such a way that the yarn is not caught by it, and when a shallow can is used it soon fills up. In order to avoid both difficulties the stripper is used with a can like that shown in Letters Patent of the United States, No. 890,865, June 16, 1908. This can has a shelf 30 extending from one side nearly to the other so that as the bobbins are discharged on the shelf they are in proper position for the trailing end of the yarn to be engaged by the stripper and when the yarn unwinds the bobbins roll to the edge of the shelf and

drop off. They are retained on the shelf long enough for the stripper to wind up enough yarn to secure a firm hold.

It is to be observed that there is an unob-
 5 structed space between the shuttle and the can, whereby the bobbin may drop down without hitting any surface to cause it to turn or wind up the yarn thereon, except the clearer-cloth and the stripper, the func-
 10 tions of which have been explained. The usual guide-chute carried by the lay beneath the shuttle-box at the replenishing side of the loom, together with the can and
 15 bobbins falling from the shuttle within reach of the rotating rollers of the yarn stripper, so that the trailing ends of the threads pass in position to be caught by the rotating rollers.

20 In order that the shelf may be turned up to permit the bobbins to be removed it is hinged to the can. It is also shown as adjusted so that it may be placed at the proper distance below the stripper to act efficiently
 25 with different kinds of bobbins and yarn. This may be accomplished in any desired way. In the drawings the shelf is adjustably connected with the can by screws 31 and thumb nuts 32, the former passing
 30 through slots 33 in the wall of the can.

I claim:

1. A weft-replenishing loom having a yarn-stripper for removing the yarn from the bobbins as they are discharged from the shuttle, said yarn-stripper consisting of a pair of rotating rollers located in the path of the yarn of the discharged bobbins.

2. A weft-replenishing loom having a yarn-stripper for removing the yarn from the bobbins as they are discharged from the shuttle, said yarn-stripper consisting of a pair of rotating rollers located in the path of the yarn of the discharged bobbins, said rollers being separably mounted so as to permit the accumulation of yarn thereon.

3. A weft-replenishing loom having a yarn-stripper for removing the yarn from the bobbins as they are discharged from the shuttle, said yarn-stripper consisting of a pair of rotating rollers located in the path of the yarn of the discharged bobbins, one of said rollers being driven and the other roller being separably supported and rotated by the driven roller.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

FREDERIC WILLARD MOORE.

Witnesses:

CHAS. R. CHASE,
 E. D. OSGOOD.