No. 823,401. PATENTED JUNE 12, 1906.

W. FERRIS.

ROPE FASTENING FOR WINDING DRUMS.

APPLICATION FILED AUG. 2, 1905. RENEWED MAY 16, 1906.

Fig. 1.

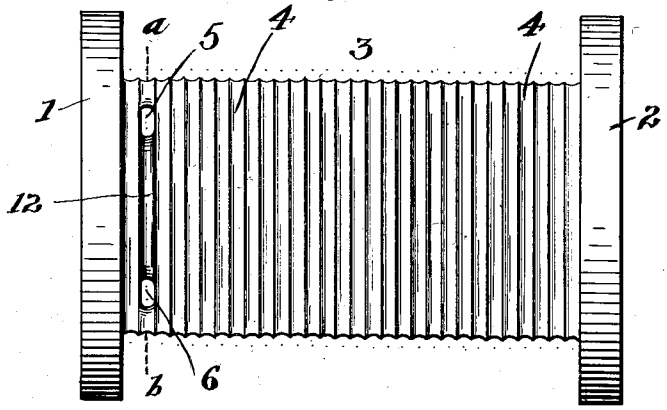
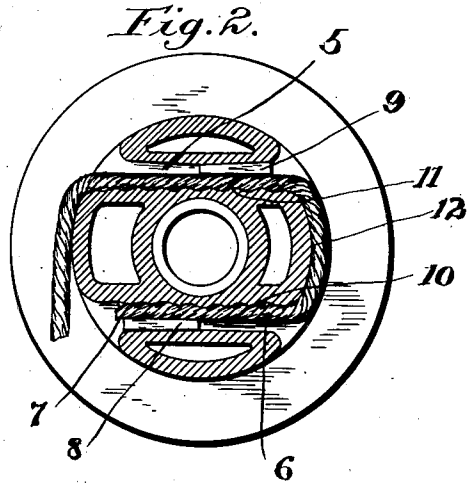


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER FERRIS, OF SOUTH MILWAUKEE, WISCONSIN, ASSIGNOR TO THE BUCYRUS COMPANY, OF SOUTH MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

ROPE-FASTENING FOR WINDING-DRUMS.

No. 823,401. Specification of Letters Patent. Patented June 12, 1906.

Application filed August 2, 1905. Renewed May 16, 1906. Serial No. 317,166.

To all whom it may concern:

Be it known that I, WALTER FERRIS, a citizen of the United States, residing at South Milwaukee, county of Milwaukee, State of Wisconsin, have invented certain new and useful Improvements in Rope-Fastenings for Winding-Drums; 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.

This invention relates to the drums on which the ropes or cables of hoisting or other apparatus are wound.

The object of the invention is to dispense with the employment of clips or leading or splicing special fittings into the end of the rope, as has heretofore been the practice, and at the same time obtain a simple, secure, and compact fastening of the rope.

In the accompanying drawings, which set forth an embodiment of the invention, Figure 1 is a side elevation of a winding-drum. Fig. 2 is a transverse section on the line *a b* of Fig. 1.

With the exception of the rope-securing means the drum may be of usual construction, having the end flanges 1 and 2 and the winding-surface 3. The winding-surface may be plain or of any desired conformation; but it is the usual practice to form a spiral groove 4 upon it to guide the rope into its proper position upon the drum.

To secure the rope to the drum, the latter is provided with two transverse holes 5 and 6, adapted to receive the end 7 of the rope. The fastening of the rope is effected by passing the end 7 through the hole 5 from left to right as viewed in Fig. 2 and then through the hole 6 from right to left to a point within the winding-surface. A wedge 8 is then driven tight alongside of the rope in the hole 6. The rope is then pulled taut through the holes 5 and 6 and a wedge 9 is driven home in the hole 5. The apparatus is then ready for use. The wedges are driven in such direction that the pull upon the rope when in service tends to tighten them, and to more firmly grip the rope corrugations 10 and 11 are provided upon the interiors of the holes, the wedges 8 and 9 pressing the rope against the corrugations.

For many purposes it would be sufficient to simply pass the rope end 7 through the hole 5 and secure it therein, as described. It will be more securely held, however, if passed through the additional hole 6 and secured therein, as the pulling of the rope against the bends along its path increases its resistance to the pull upon the rope. It will be obvious that any number of transverse holes may be employed which is thought necessary to give the required security of fastening. The holes 5 and 6 open into the winding-face of the drum, and therefore when the drum is provided with a guiding-groove they open into the groove, as shown. Connecting the holes 5 and 6 and lying in the winding-face is a groove 12 of such depth that when the rope lies within this groove the outer surface of the rope constitutes a continuation of the winding-surface, so that the rope may be wound smoothly over it. The pressure between the portion of the rope in the groove and that portion wound over it serves to bind the rope more firmly to the drum.

While the invention has been illustrated in what is considered its best embodiment, it is to be understood that it can be embodied in other constructions without departing from its spirit. The invention should not, therefore, be limited to the precise structure shown.

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

1. The combination with a winding-drum having a transverse hole, of a rope and a wedge securing said rope within said hole.

2. The combination with a winding-drum having a transverse hole and corrugations on the interior thereof, of a rope and a wedge pressing said rope against said corrugations.

3. The combination with a winding-drum having a plurality of transverse holes, of a rope and wedges securing said rope within said holes.

4. The combination with a winding-drum having a plurality of transverse holes and corrugations therein, of a rope and wedges pressing said rope against said corrugations.

5. The combination with a winding-drum having two transverse holes at one end and a groove in the winding-surface connecting the same, of a rope within said holes and groove.

6. The combination with a winding-drum having two transverse holes at one end open-

ing into the winding-surface, of a rope within said holes and passing along said winding-surface from one opening to the other.

7. A winding-drum having a plurality of transverse holes at one end.

8. A winding-drum having a transverse hole and corrugations therein.

9. A winding-drum having two transverse holes at one end and a groove in the winding-surface connecting the same.

10. A winding-drum having two transverse holes at one end opening into the winding-surface.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER FERRIS

Witnesses:
H. B. HAYDEN,
GEO. H. RONDEAU.