H. TRUMM.

SHEAVE ATTACHMENT.

APPLICATION FILED JAN. 28, 1921.

1,438,674. Patented Dec. 12, 1922.

Fig. 1,

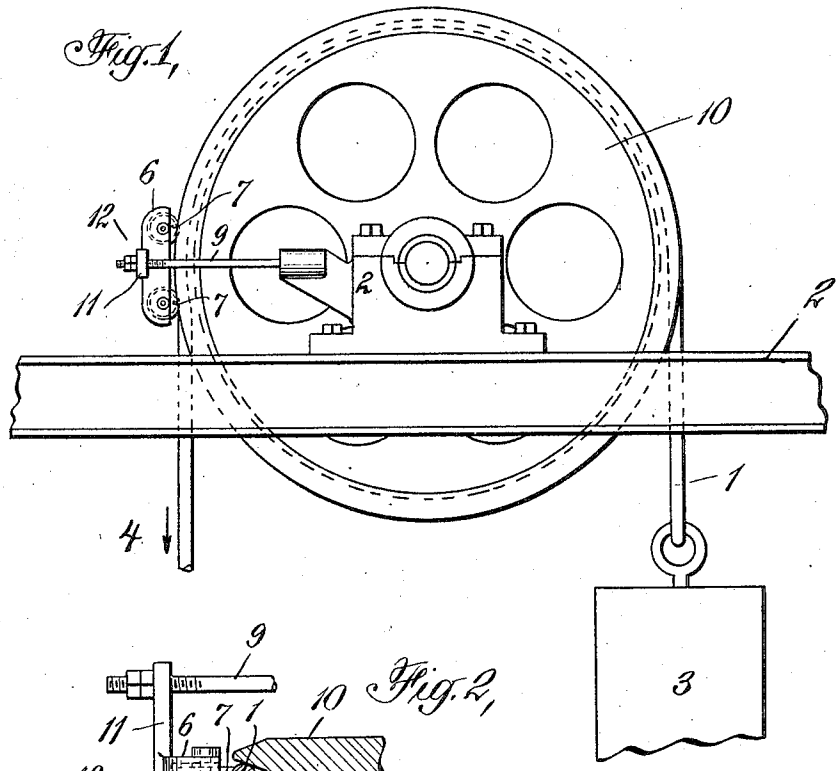


Fig. 2,

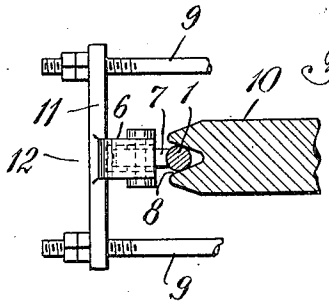


Fig. 3,

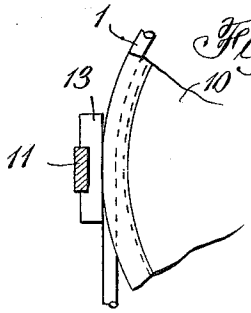
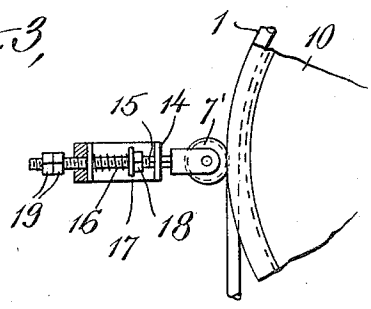


Fig. 4,



Inventor

Henry Trumm

By his Attorney

E. W. Marshall

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UNITED STATES PATENT OFFICE.

HENRY TRUMM, OF WEST HOBOKEN, NEW JERSEY, ASSIGNOR TO GURNEY ELEVATOR COMPANY, INC., OF HONESDALE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SHEAVE ATTACHMENT.

Application filed January 28, 1921 Serial No. 440,565.

To all whom it may concern:

Be it known that I, HENRY TRUMM, a citizen of the United States, and resident of West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Sheave Attachments, of which the following is a specification.

My invention relates to devices for increasing traction of ropes especially on V groove sheaves and has particular reference to such devices in connection with hoisting apparatus used on construction work.

An object of the invention is the provision of simple, inexpensive means to increase the traction of ropes on V groove sheaves.

A further object is to provide such traction increasing means on sheaves of the standard or usual construction such as may be used, for example, in connection with lifting machinery, elevators, counterweights and the like.

With the foregoing and other objects in view such as will be apparent to those skilled in this art as the description proceeds, my invention resides in the combination and arrangement of parts and in the details of construction described in the specification and particularly pointed out in the appended claim. It is to be understood, however, that I do not limit myself to the precise details shown and described, as modifications may be made within the scope of the claim without departing from the spirit of the invention. I intend no limitation other than those of the claim.

An embodiment of my invention is shown in the drawings, in which Fig. 1 is an elevation of a V groove sheave with my attachment in position,

Fig. 2 is a plan view of the device of Fig. 1, a portion of the sheave being in section.

Figs. 3, and 4, are modified forms of my device.

Similar reference characters designate similar parts throughout the views.

10 designates a sheave, which is supported in a frame 2 and may be driven from any suitable source of power. The sheave 10 has a peripheral V-groove 8 for receiving a rope or cable power transmitting member 1.

I have shown a load 3 at one end of the cable 1 and a downward force may be exerted at the other end 4 of the cable by any suitable means such, for instance, as a counterweight.

In order to increase the traction of a rope or cable 1, I have found it desirable to attach to the frame 2 a traction increasing member 12 comprising a housing 6 (Fig. 1) in which are mounted two rollers 7, 7, one below the other so adapted and arranged as to enter the groove 8 of the sheave 10. By means of clamping members 9, 9, attached to and supported by frame 2 and passing through a bar 11 affixed to the housing 6, a clamping action may be exerted between the frame 2 and traction increasing member 12, forcing rollers 7, 7, against the rope or other power transmitting member 1 and increasing the friction between the member 1 and the sheave to such an extent as to permit of the lifting of a considerable load as at 3 without a counterweight or other application of force at the end 4. It will be noted from the showing in Fig. 2 that the rollers 7 are relatively thin in width so that they may readily enter the groove in the sheave 10.

Sheave 10 rotates as is usual but traction increasing member 12 is held stationary by its supporting clamp members 9, 9.

It is desirable that traction increasing member 12 be placed at a point farthest from the point of application of the load so that as great a circumferential contact as possible of power transmitting member 1 and sheave 10 may take place between the load and rollers 7, 7, or equivalent members. In this way the maximum traction is believed to be developed. From the foregoing description it will be seen that as power is applied to rotate the sheave 10 in a counter clockwise direction the increase of the traction of the cable 1 on the sheave will materially aid in transmitting the power from the sheave to the load 3. The practical effect will therefore be to conserve power by transmitting a greater proportion of the power to the load. Thus, a larger load may be lifted by the same power by the use of the traction increasing member.

In a device arranged according to the modification, of Fig. 3 a hard wood or similar block 13 is substituted between the bar 11 and the power transmitting member 1 in place of housing 6 and rollers 7, 7 of Fig. 1.

In a device arranged according to the

modification of Fig. 4 housing 6 of Fig. 1 is replaced by a housing 14 through which a rod 15 extends. Freely mounted on one end of rod 15 is a roller 7′ which is spring pressed against rope 1 by reason of a resilient member 16. A collar or washer 17 and an adjustable nut 18 mounted on rod 15 are arranged to compress spring 16 to give desired pressure to roller 7′. Nuts, 19, 19, limit the inward motion of roller 7′ and, further, permit of taking up nut 18 and thus increasing the pressure of spring 16. A part of rod 15 is squared to prevent rotation thereof.

What I claim is:

In a device of the character described, in combination, a frame, a sheave having a V-shaped peripheral groove adapted to receive a power transmitting member, a rod secured to the frame at each side of the sheave, a bar adjustably mounted on said rods, a sheave rotatably mounted on said bar and adapted to engage the power transmitting member on the first sheave.

In testimony whereof I hereunto affix my signature.

HENRY TRUMM.