No. 638,057. Patented Nov. 28, 1899.

S. MATTSON.

SELF LUBRICATING SHEAVE.

(Application filed Mar. 30, 1899.)

(No Model.)

FIG. 1.

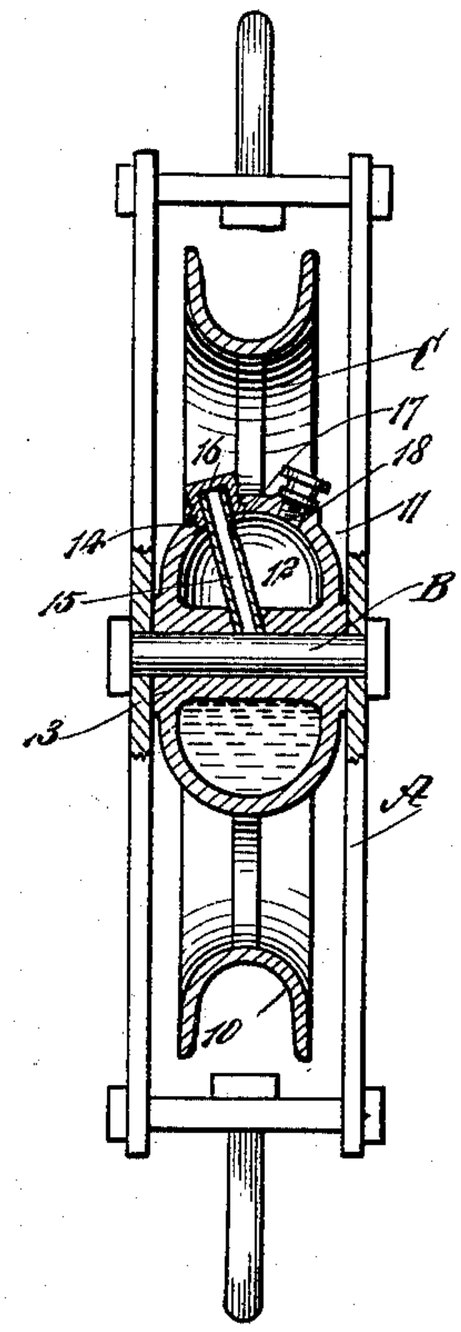
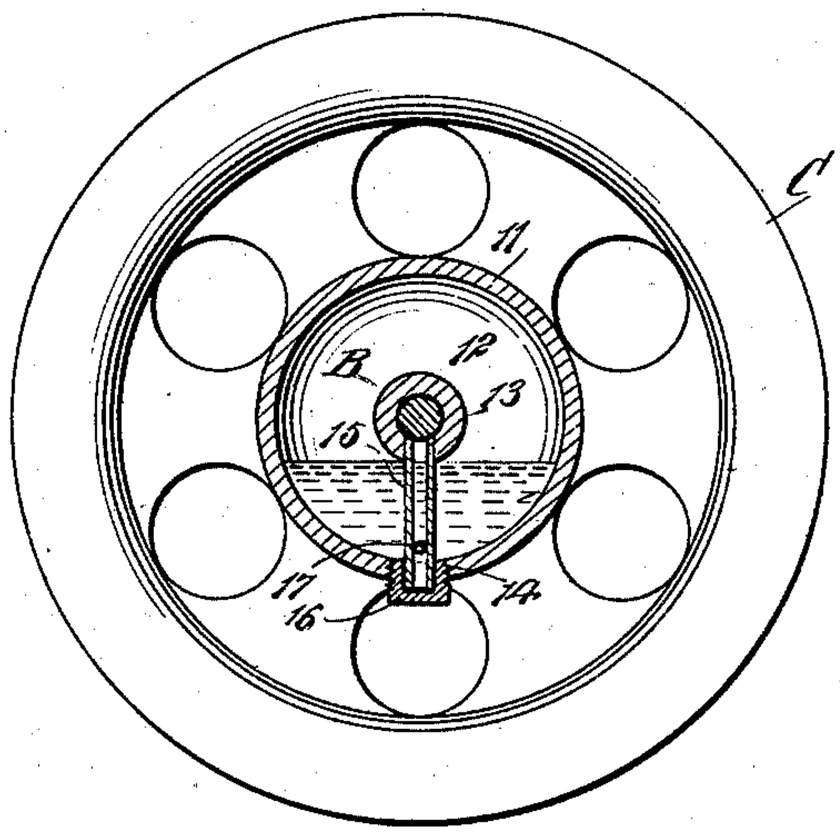


FIG. 2.



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SELF-LUBRICATING SHEAVE.

SPECIFICATION forming part of Letters Patent No. 638,057, dated November 28, 1899.

Application filed March 30, 1899. Serial No. 711,116. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MATTSON, of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Self-Lubricating Sheave, of which the following is a full, clear, and exact description.

The object of the invention is to provide a sheave with a chamber adapted to contain a liquid lubricant and, further, to provide a means whereby the pivot or spindle of the sheave will be constantly lubricated while the sheave is in action and without loss of material, since the feed is stopped when the sheave is out of action.

Another object of the invention is to so construct the self-lubricating sheave that it will be as strong and practically as light as the ordinary sheave.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a vertical section through the improved sheave and its frame or casing; and Fig. 2 is a vertical section through the hub portion of the sheave, the rest of the sheave being shown in side elevation.

A represents a frame, cage, or casing of any desired construction adapted to receive the sheave C, which sheave is mounted to turn upon a pivot-pin or spindle B, passed through the central portion of the frame or casing A, as is best shown in Fig. 1. The sheave is provided with the usual peripheral groove 10, and its hub 11 is somewhat enlarged over the hubs of ordinary sheaves and is hollow, forming an interior chamber 12. Ordinarily the said chamber appears oval in cross-section when the section is taken through the head parallel with the axis of the sheave, but the chamber appears round in cross-section when the section is taken through the hub at right angles to the axis of the sheave. An opening is made in each side of the hub at its center, and a sleeve 13 is preferably cast integral with the hub, extending from one of said openings to the other. The pivot-pin or spindle B extends through said sleeve and out through the openings in the sides of the hub, so that the spindle is engaged by the sleeve and an extended bearing is provided for the sheave. An opening 14, having a threaded wall, is made in the hub 11 at one side of the center, and a smaller opening is made in the sleeve 13 at or near a central point. The open end of a tube 15 is fitted in the said opening in the sleeve, while the other end of the tube 15, which is closed, extends into the opening 14 in the hub, and a cap 16 is screwed into the opening 14 in the hub and over the tube and secured in a liquid-proof manner. The tube 15 is provided with an aperture 17, preferably near the wall of the chamber 12, which chamber is adapted to contain the lubricant.

Air necessary to the flow of liquid from the chamber 12 to the spindle B is supplied through the space that naturally intervenes the spindle B and surrounding sleeve 13. Consequently when the feed-tube 15 is in the upper position the air will enter said tube and will pass out at the opening 17 therein and into the chamber 12, and when the tube 15 is in its lower position (shown in Fig. 2) it will receive sufficient oil to supply the spindle while passing from its lower to its upper position. In this manner the spindle B is kept constantly lubricated while the sheave is in action, but when the sheave is stationary the lubrication of the spindle almost entirely ceases.

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

A lubricating-sheave, having a hub formed with a cavity therein and with a sleeve extending through the cavity, the sleeve being adapted to receive the spindle of the sheave, a tube extended through the outer wall of the hub and through the wall of the sleeve, the tube leading the lubricant to the spindle and having an opening near its end, the opening communicating with the interior of the hub, and a cap fitting and secured into the opening in the outer wall of the hub, through which opening the tube passes, the cap receiving the outer end of the tube, to close the same.

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Witnesses:
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