

G. B. Cowles,

Fulley.

No. 104,119.

Patented June 14, 1870.

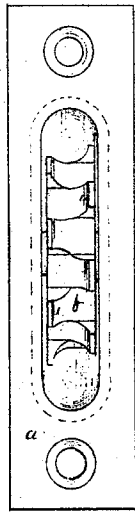


Fig. 1

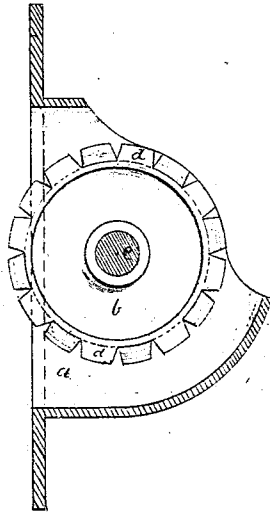


Fig. 2

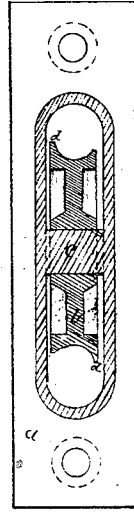


Fig. 3.

A. J. Knapp
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WITNESSES.

Inventor
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United States Patent Office.

GEORGE B. COWLES, OF BRIDGEPORT, CONNECTICUT.

Letters Patent No. 104,119, dated June 14, 1870.

IMPROVEMENT IN PULLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

I, GEORGE B. COWLES, of Bridgeport, county of Fairfield, State of Connecticut, have invented certain Improvements in Pulleys, of which the following is a specification.

Nature and Object of my Invention.

To construct a metallic pulley, whose frame shall be in one piece, combining the axle for sheave to roll upon, or forming the bearing for axle of sheave, the same being cast thereto.

Description of Accompanying Drawing.

Figure 1 is a front view of my invention.

Figure 2 is a section of frame with sheave.

Figure 3 is a cross-section of same.

General Description.

a, figs. 1 and 2, the frame of the pulley.

b, the sheave.

c, the axle.

d d d, the flange of sheave.

I construct my invention as follows:

I cast the sheave solid in center, and with the flange broken, as shown at *d d d*, to facilitate molding. I then drill out the center, making a true and perfect surface to bear on the axle. The sheave is then set in a core or forming-box, whose form corresponds to the opening desired in frame; the space around sheave and box is then filled with core-sand and dried in the usual way, leaving the hole in center of sheave open. The frame is molded in the common method, and

the core with sheave is set into the mold, the molten metal is then run into the mold, filling the space around the core and running through the sheave; as soon as the metal is set the casting is taken from the sand, the core cleaned out, and the pulley is complete.

If desired, the axle can be formed on the sides of sheaves, and let the metal fill around ends of bearing.

The advantages of my invention are readily understood.

First, I can dispense with all rivets, screws, or clamps to hold the frame together.

Second, the axle, being run through the drilled hole in sheave, becomes chilled and hard, also very smooth and true, at the same time, being more certain of its being square with frame.

Third, there is no possibility of the frame or its parts being sprung and liable to be broken in riveting or screwing together.

Fourth, its simplicity lessens the cost nearly one-half of the common mode.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The pulley-frame *a* and axle *c* entire, and constructed as specified and shown.

2. The sheave *b*, with its broken flanges *d d d*, in combination with frame *a* and axle *c*, for the purpose specified and shown.

GEO. B. COWLES.

Witnesses:

SHERWOOD STERLING,

A. SKAAT.