(No Model.)

C. O. CASE.

METHOD OF MAKING PULLEYS.

No. 421,668. Patented Feb. 18, 1890.

Fig. 1.

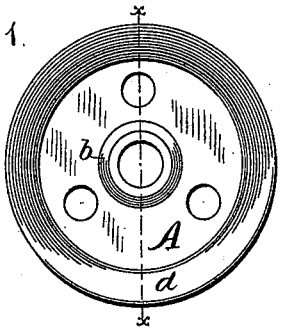


Fig. 2.

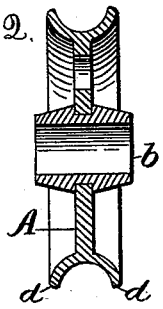


Fig. 3.

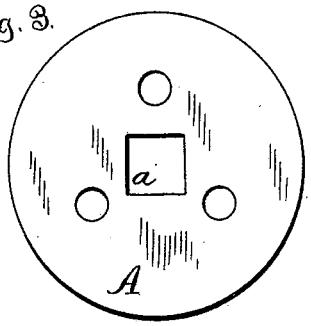


Fig. 4.

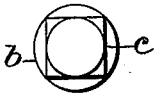


Fig. 5.

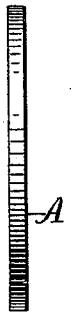


Fig. 6.

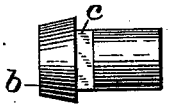


Fig. 7.

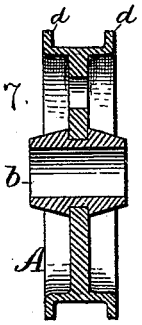
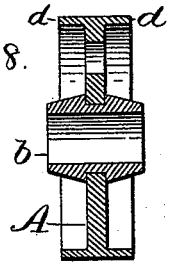


Fig. 8.



Witnesses,
John Edwards Jr.
W. H. Whiting.

Inventor.
Cromwell O. Case.
By James Shepard.
Atty.

UNITED STATES PATENT OFFICE.

CROMWELL O. CASE, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P. & F. CORBIN, OF SAME PLACE.

METHOD OF MAKING PULLEYS.

SPECIFICATION forming part of Letters Patent No. 421,668, dated February 18, 1890.

Application filed September 20, 1889. Serial No. 324,479. (No model.)

To all whom it may concern:

Be it known that I, CROMWELL O. CASE, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in the Method of Making Pulleys, of which the following is a specification.

My invention relates to improvements in the method of making pulleys or wheels; and the object of my invention is to produce the article at a small cost and of superior quality.

In the accompanying drawings, Figure 1 is a side elevation of my pulley. Fig. 2 is a section thereof on line *x x* of Fig. 1. Fig. 3 is a side view of the blank for the body portion. Fig. 4 is an end view of the headed piece for the hub portion. Fig. 5 is an edge view of the blank for the body portion. Fig. 6 is a side view of the piece shown in Fig. 4, and Figs. 7 and 8 are sectional views of the complete pulley or wheel with different forms of periphery.

The pulley or wheel herein shown and described is made the subject of a separate application of even date herewith.

I first form the blank for the body portion A by cutting a disk from a flat sheet of metal of uniform thickness, as shown in Figs. 3 and 5, punching the central hole *a*, Fig. 3, which hole I prefer to make of an angular form, and, if desired, I also punch other holes from the body portion for ornament, to reduce the weight of the pulley, or for other purposes. The hub portion *b*, I form of wire by first making a headed piece with a square neck *c* immediately under the head, as shown in Figs. 4 and 6, the neck *c* being of a form and size to fit the central hole in the body-blank. The angular neck *c* is not essential, and the smaller portion under the head may be made round, if desired, and the central hole in the body-blank may be made of a corresponding form or enlarged or notched at one side. I prefer, however, to make a square or irregular-shaped hole, and make the neck of a corresponding form in order to insure the body portion and hub being so secured that they will not rotate one with reference to the other. The smaller part of the headed piece, Figs. 4 and 5, is placed in the central hole of the body blank or disk when the small end of the hub portion is upset or headed, throwing it into the form shown in Figs. 1, 2, 7, and 8, excepting that when first formed it has no axial hole. If the hole in the disk is of an irregular form and the neck of the tenon round, the upsetting of the metal will shape the neck to correspond with the form of the hole. The body or disk is placed in a lathe or some special machine either before or after the hub and disk are united and the outer edge of the body portion is spread out and wrought into the desired form for the peripheral flanges *d d*, preferably by spinning. The final form of the peripheral flanges may be varied, so as to produce pulleys or wheels of any desired form. The concave form shown in Figs. 1 and 2 may be produced by a single operation in the spinning-lathe, and after the metal is thus spread out it may be subjected to another operation to make a flat groove for a chain, as shown in Fig. 7, or a plain-faced wheel or pulley, as in Fig. 8, or a wheel with a convex periphery.

I claim as my invention—

1. The improvement in the manufacture of pulleys or wheels, which consists, in part, in forming a flat sheet-metal disk for the body portion of the pulley, spreading out and reducing its edge into the desired form of periphery, substantially as described, and for the purpose specified.

2. The improvement in the manufacture of pulleys or wheels, which consists in forming the hub or central portion in a headed piece and the body portion in the form of a disk of sheet metal, with a central hole heading the small end of the hub portion to fasten said parts together, spreading out and reducing the edge of the body portion into the desired form of periphery, substantially as described, and for the purpose specified.

CROMWELL O. CASE.

Witnesses:

ALBERT N. ABBE,

G. E. ROOT.