

(No Model.)

W. H. KING.
PULLEY.

No. 382,042.

Patented May 1, 1888.

Fig. 1.

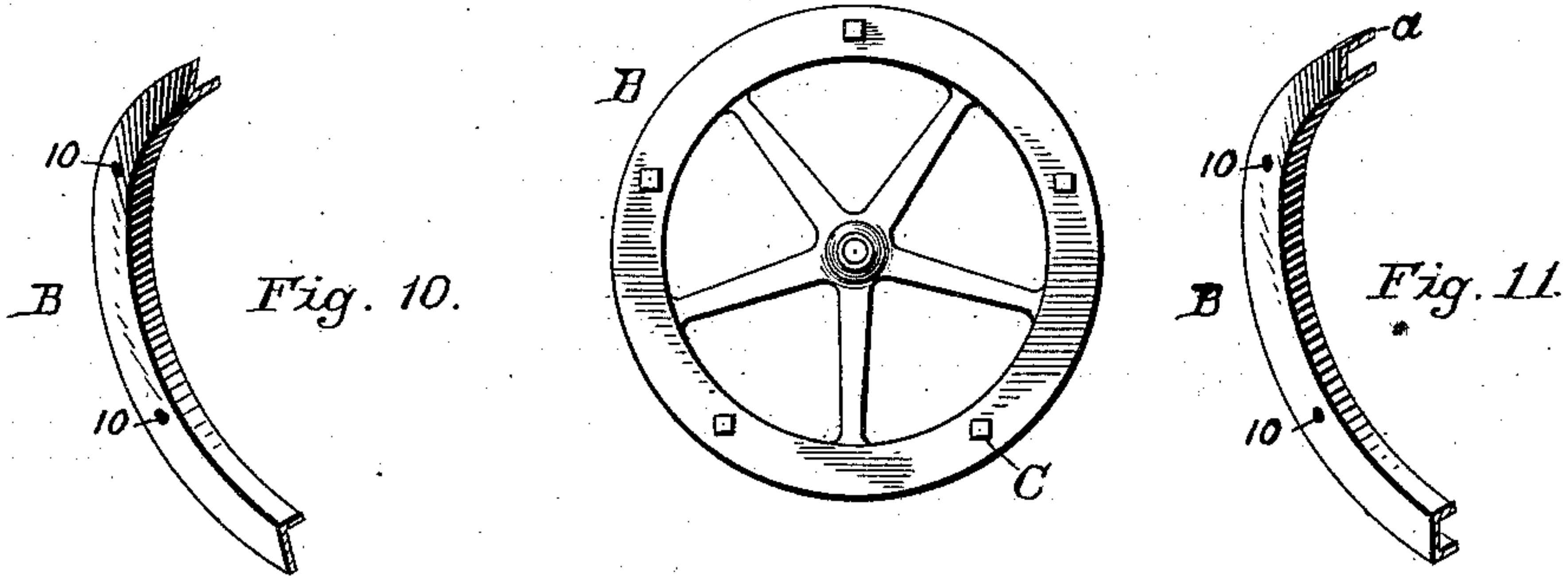


Fig. 2.

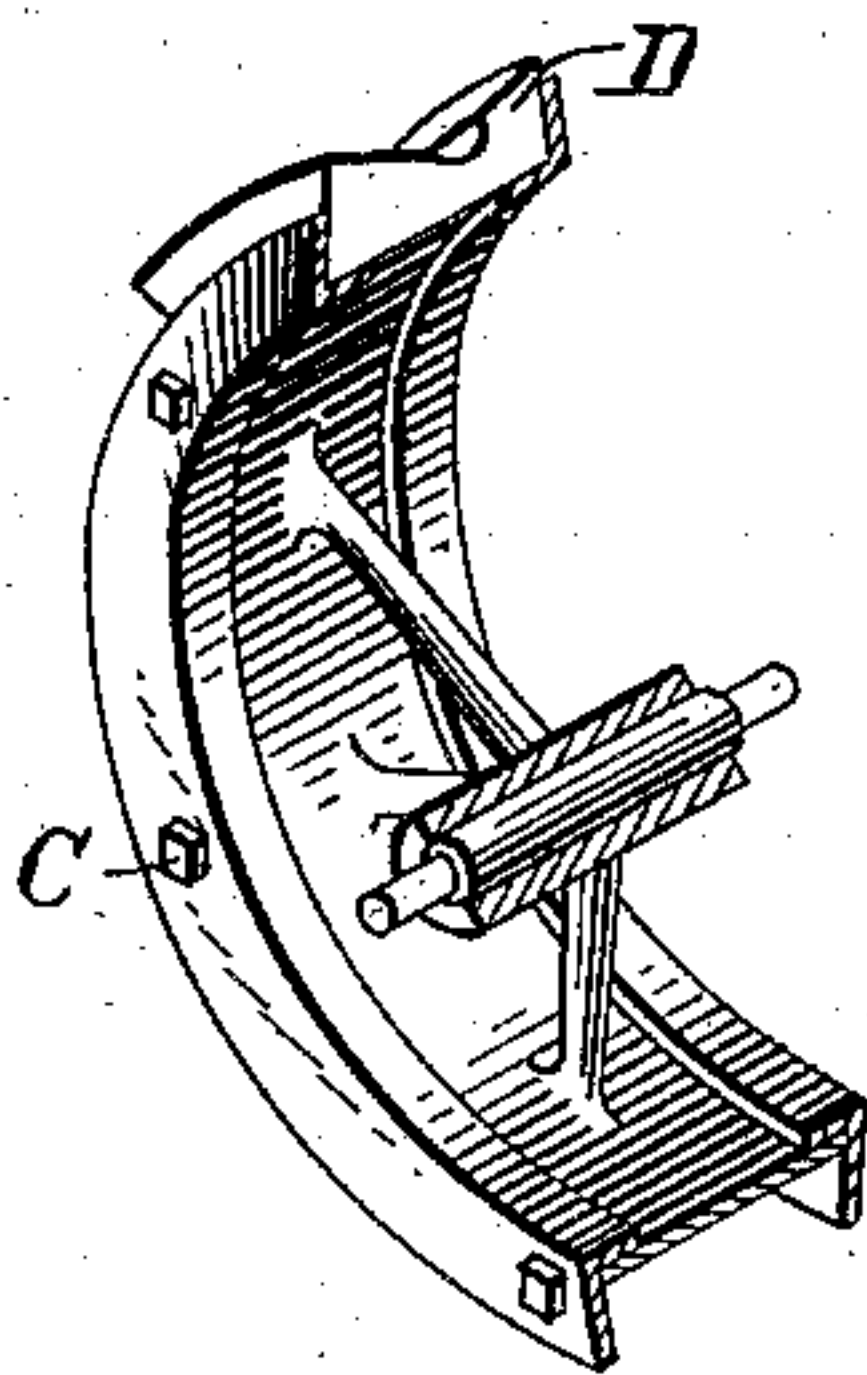


Fig. 3.

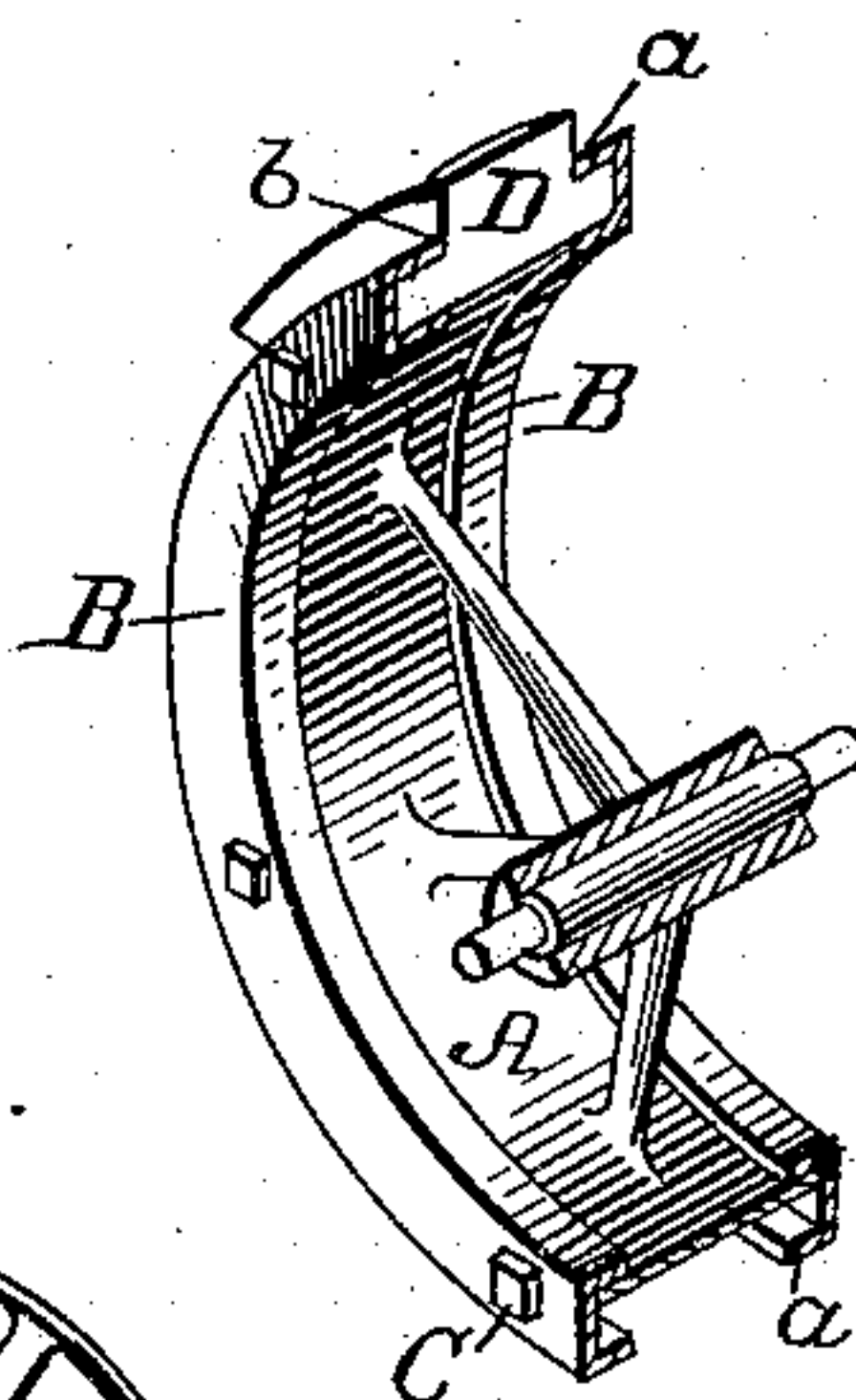


Fig. 12.

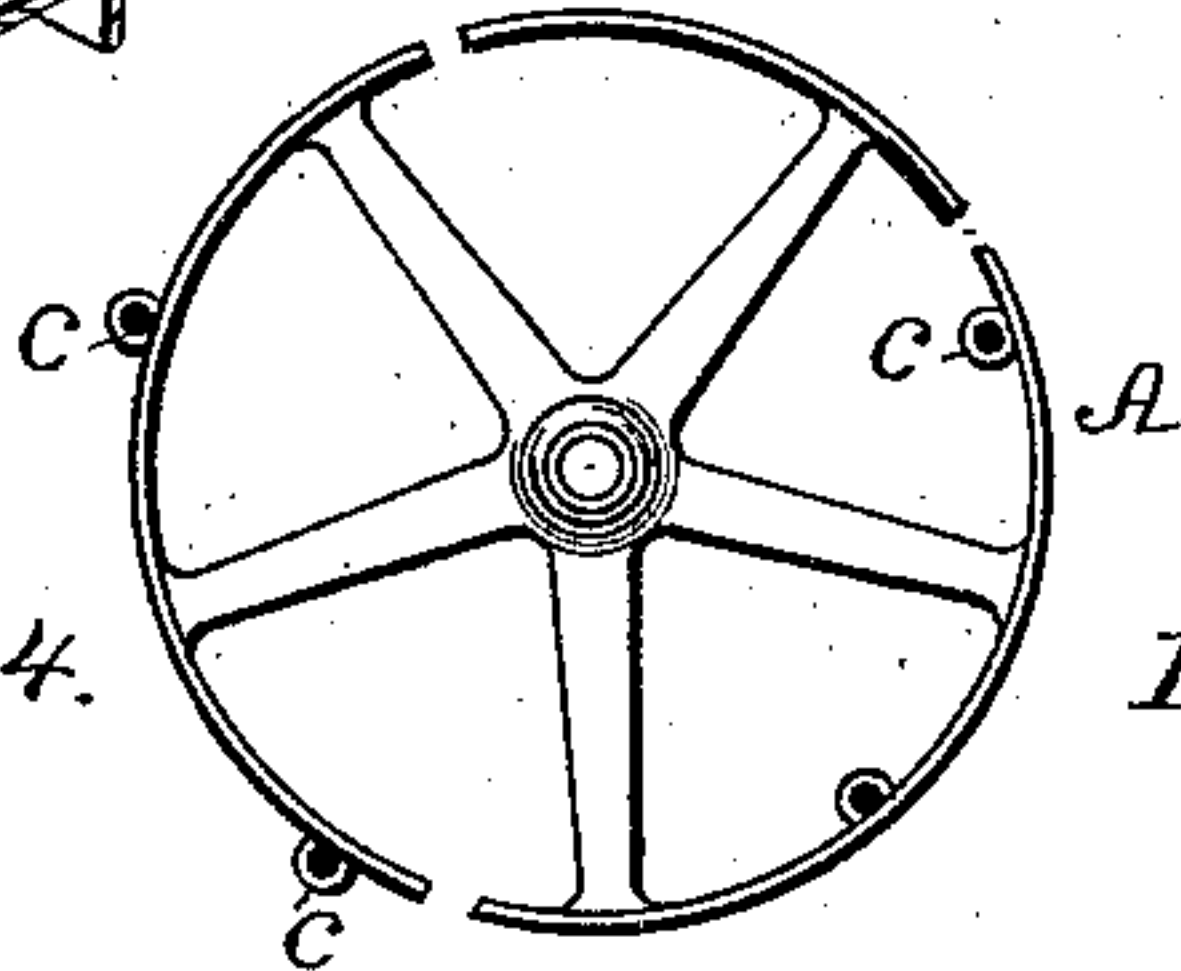


Fig. 4.

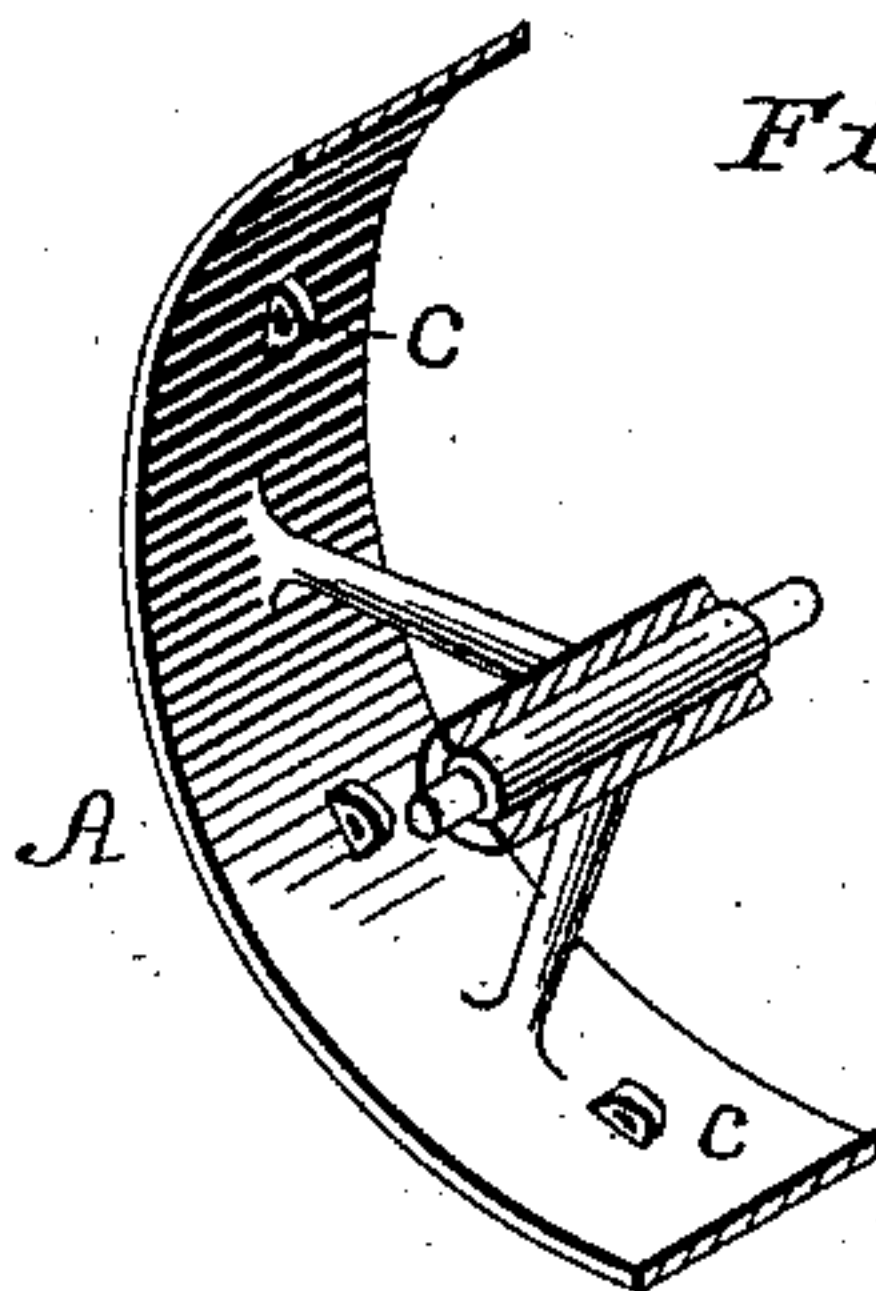


Fig. 5.

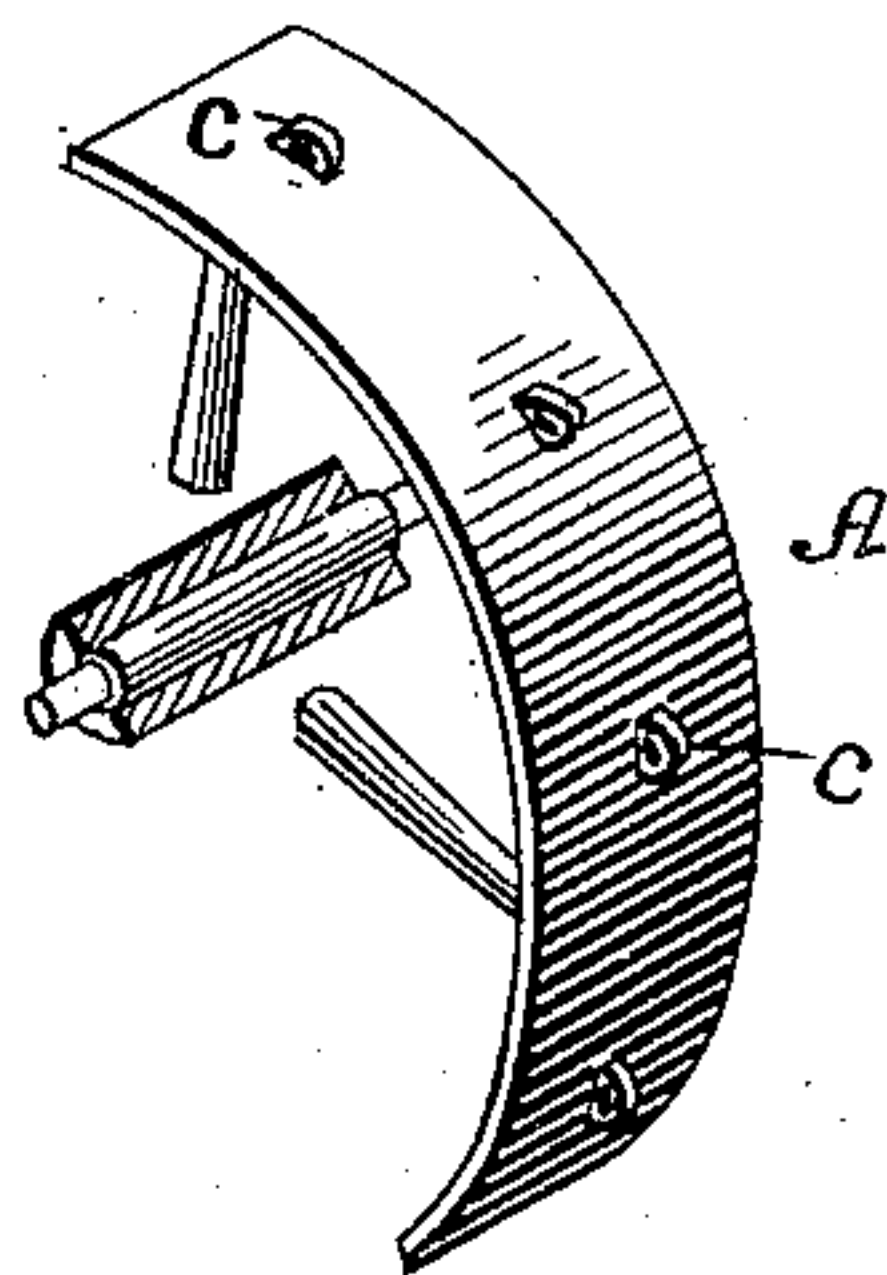


Fig. 6.

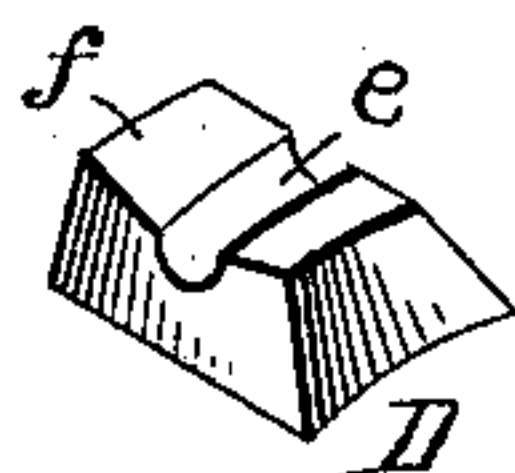


Fig. 7.

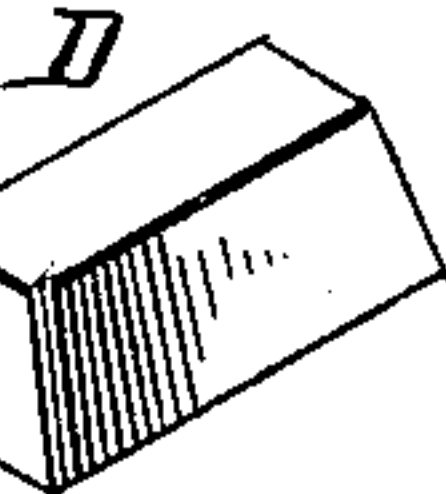
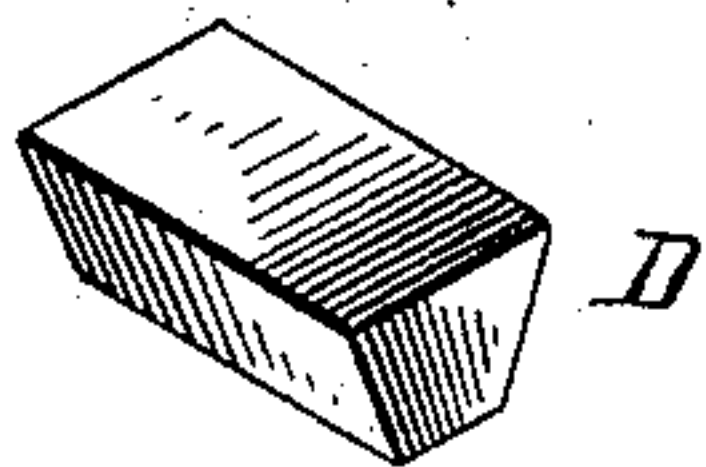


Fig. 8.

WITNESSES

L. J. Fischer
A. Mason

C

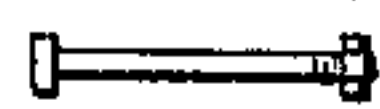


Fig. 9.

INVENTOR

William H. King
By *J. A. Higdon*
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM H. KING, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF
TO JOHN GILDEA AND JOHN J. O'KEEFE, BOTH OF SAME PLACE.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 382,042, dated May 1, 1888.

Application filed July 25, 1887. Serial No. 245,197. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. KING, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Pulleys or Sheaves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to a combination or adjustable pulley, made or constructed of wood and metal, and adapted either for driving or carrying purposes, but more particularly as a carrying-sheave for cable railways.

The object of my invention is to provide a combined wood and iron pulley that may be readily adjusted to different widths of face and diameters, and to provide a more simple and practical method of making or constructing such pulleys than has been known heretofore.

In the drawings which illustrate the manner of carrying out my invention, Figure 1 is a side view of a completed pulley. Fig. 2 is a sectional view in perspective showing a sheave adapted to carry the cable in cable railways. Fig. 3 is a sectional view in perspective showing a slight variation in the mode of constructing the pulley. Figs. 4 and 5 are sectional views in perspective showing the construction of the pulley with side flanges removed, and also showing the bolt-lugs on the inner and outer surfaces, respectively, of the rim. Figs. 6, 7, and 8 are detail views in perspective showing the various shapes of the wooden blocks used for facing or covering the outer surface or periphery of the metal rim. Fig. 9 is a detail view of one of the bolts used for securing the flanges in position. Figs. 10 and 11 are respective views illustrating the various forms of side flanges which are intended to hold the wooden blocks in position on the face of the metal rim, and Fig. 12 is a broken side elevation illustrating the various forms in which the metal rim may be constructed.

The particular idea of my invention or method of constructing the pulleys or sheaves hereinbefore mentioned is embodied in the combination of an inside metal rim, A, provided with the usual arms and hub, and which metal rim can be of any desired dimensions, with wooden blocks D cut in the proper shape

for the purpose which they are intended to subserve, and set on end, so as to form the exterior rim or face of the pulley, and metal flanges B, located on opposite sides of the pulley, for holding the wooden blocks firmly in position.

My object in making use of wooden blocks set on end, as will be hereinafter more fully described, is to locate the largest amount of durability and driving or tractive power in the face of the pulley, and to prevent, as far as possible, all wear and tear on the belt or cable which the pulley shall be used to drive or carry.

The side flanges, B, are held securely in place by means of ordinary bolts, such as C, which pass through said flanges, and also through an eye or lug, c, on the metal rim A, as shown. Of course the perforated eyes or lugs c may be located either on the inner surface of the metal rim, as shown more clearly in Fig. 4, or upon the outer surface of the said rim, as indicated in Fig. 5, and which, as evident, may be done without departing from my invention.

In some instances I may make use of plain blocks such as are shown in Figs. 7 and 8, the one shown in Fig. 8 being termed a "key-block," its sides being inclined or beveled in a direction that is opposite the direction in which the sides of the block shown in Fig. 7 are inclined; or I may use blocks of any desired form for the different purposes required of them.

In the case of an ordinary belt-pulley I would make use of the particular block shown in Fig. 3, which is provided with a rabbet, b, in each edge, which is engaged by the inwardly-turned edge a of the particular form of flange shown in Fig. 11.

In constructing a carrying-sheave for cable railways, which is the main use to which I have proposed to put my improved pulleys, I provide the blocks with a concave or inclined outer surface, f, and form a groove, e, in said surface for the reception of the cable, and in such cases I make use of the particular flange shown in Fig. 10, which, as will be seen, is devoid of the inwardly-turned edge a, the perpendicular sides of said flange being somewhat inclined inwardly, and being made to directly

engage the ends of the said blocks and hold them in position without further fastening. It will be observed that the side flanges, B, are provided with apertures 10 in their perpendicular sides for the passage of bolts C, and that their inwardly-turned edges are formed integral with the body of the flange.

It should be evident that by my method of construction pulleys having different widths of face may be provided by simply making use of blocks having greater lengths than those before employed, at the same time without necessitating the use of a wider metal rim, but simply utilizing the initial rim having a narrower face. Of course, however, the width of the inwardly-turned edges *a* of flange B will determine the limit to which the face of a given pulley can be widened. It is also evident that the diameter of the pulley may be increased or diminished by simply making use of blocks having greater or less thickness, without the

necessity of increasing the diameter of the metal rim or that of the removable side flanges.

Having thus described my invention, what I claim is—

A pulley or sheave consisting in a metal rim provided with the usual arms and hubs, and with perforated lugs which project from the surface of said rim, wooden blocks arranged around said rim, so as to form the exterior face of the pulley, opposite flanges which extend around the edges of the metal rim and engage said blocks, and suitable bolts which are passed through said flanges and engage said perforated lugs, substantially as set forth.

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

WILLIAM H. KING.

Witnesses:

S. S. MOREHOUSE,
FREDERICK G. FISCHER.