(No Model.)

P. CONYNGHAM & W. R. GIBBONS.

PULLEY.

No. 519,493. Patented May 8, 1894.

Fig. 1.

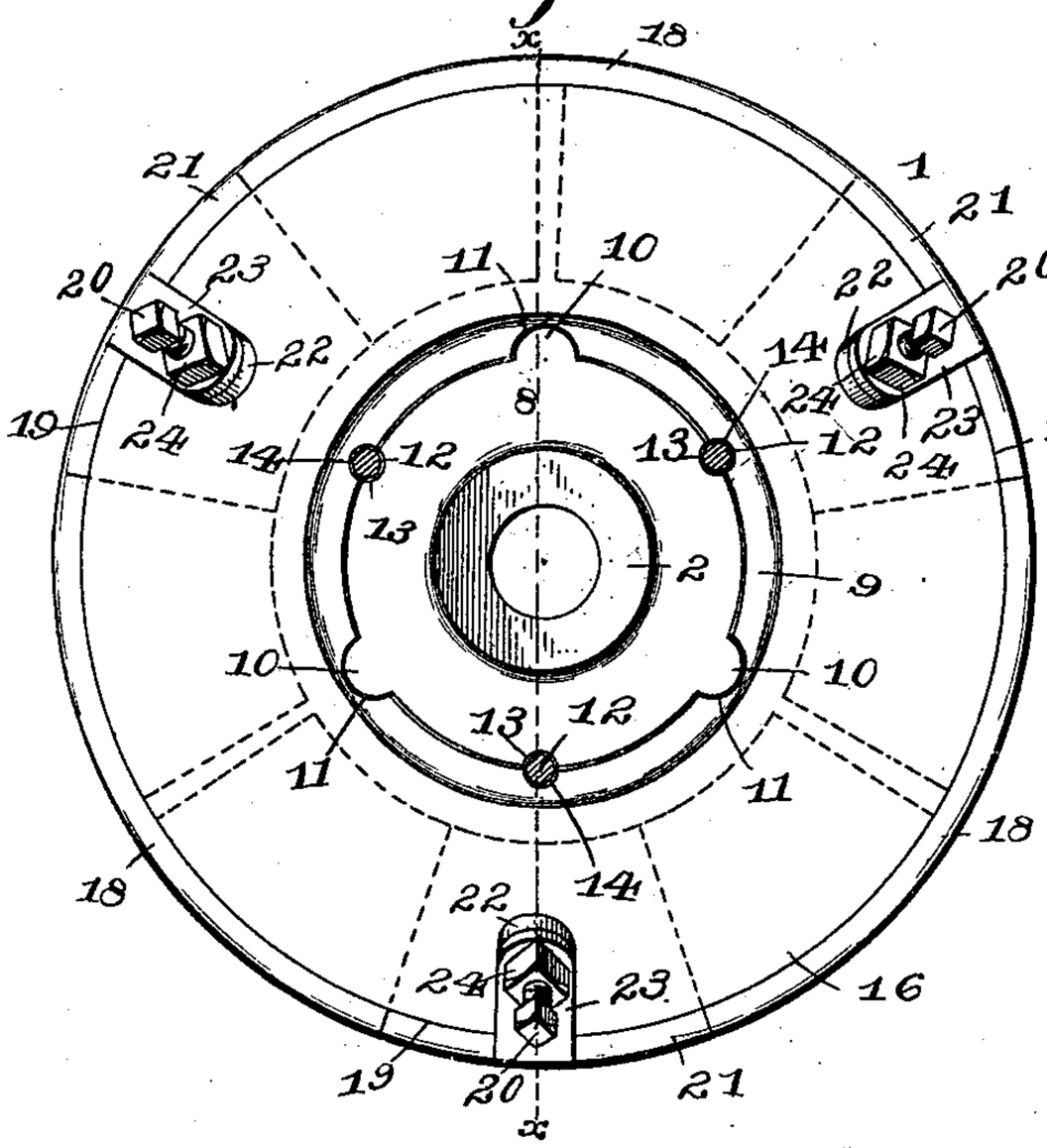


Fig. 2.

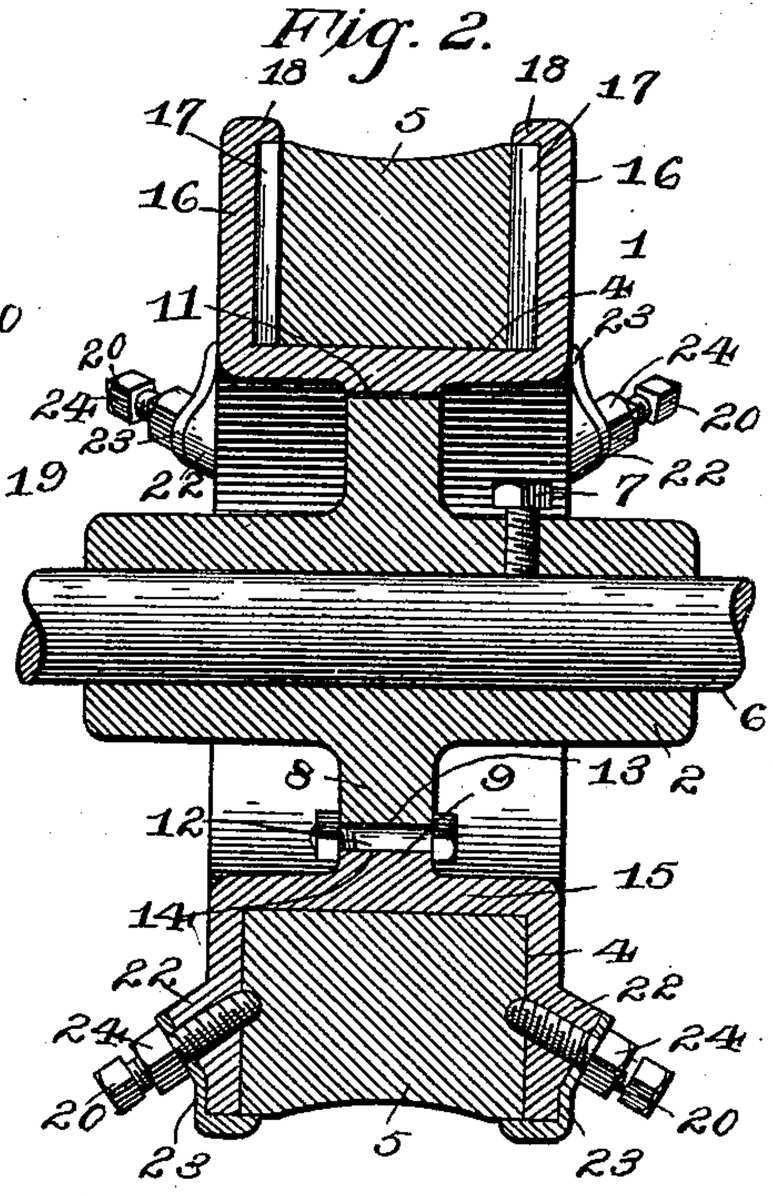


Fig. 3.

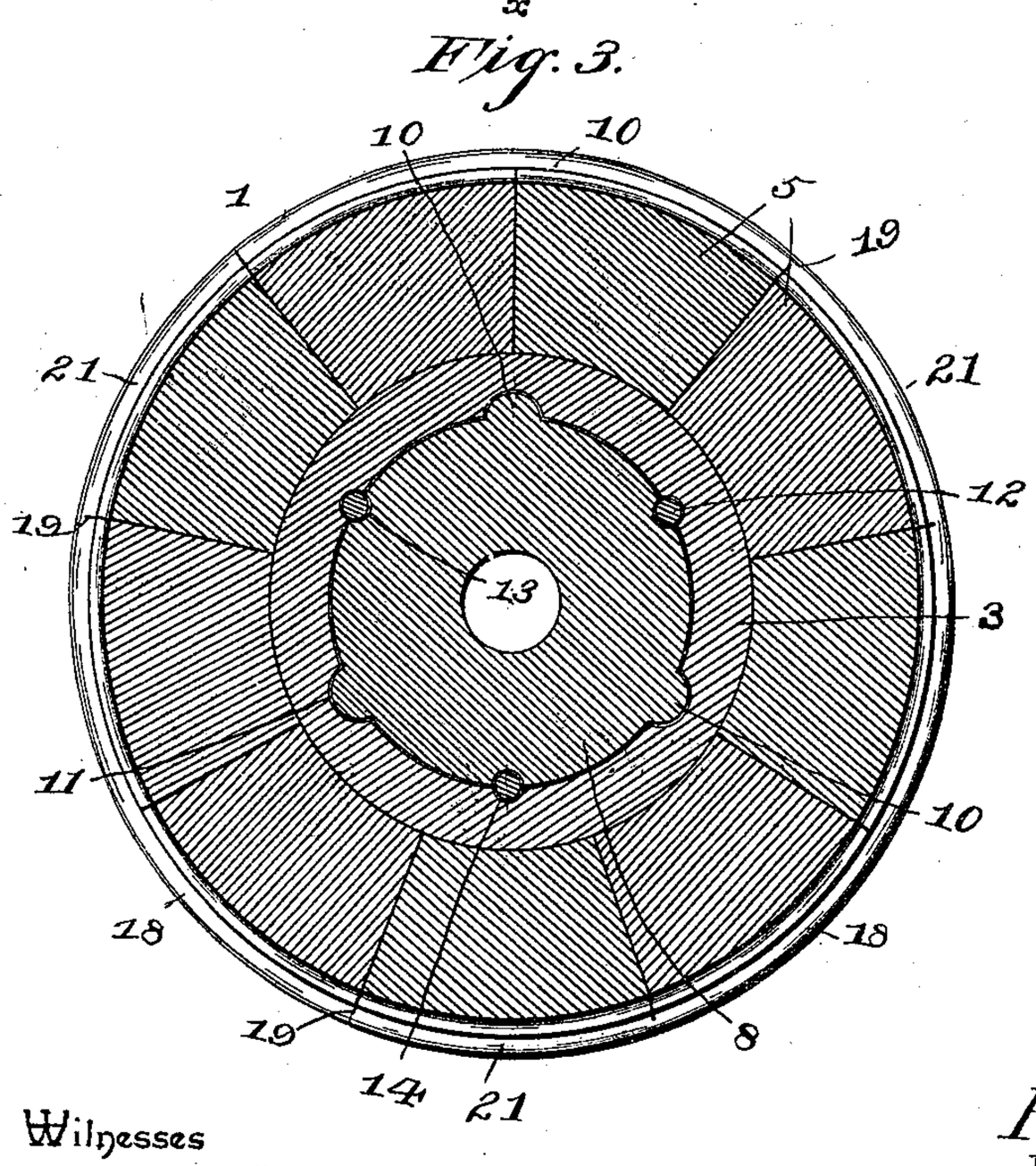
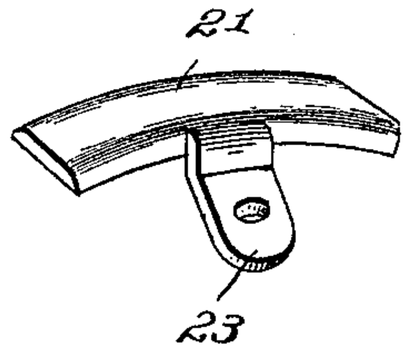


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP CONYNGHAM AND WILLIAM R. GIBBONS, OF WILKES-BARRÉ, PENNSYLVANIA.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 519,493, dated May 8, 1894.

Application filed August 4, 1893. Serial No. 482,357. (No model.)

To all whom it may concern:

Be it known that we, PHILIP CONYNGHAM and WILLIAM R. GIBBONS, citizens of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Pulley, of which the following is a specification.

The invention relates to improvements in pulleys.

The object of the present invention is to improve the construction of band pulleys and to provide a simple and inexpensive one in which the parts when worn may be readily replaced without necessitating an entire separation of the parts of it.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings: Figure 1 is a side elevation of a pulley constructed in accordance with this invention. Fig. 2 is a transverse sectional view on line *x*—*x* of Fig. 1. Fig. 3 is a longitudinal sectional view on line *y*—*y* of Fig. 2. Fig. 4 is a detail view of one of the attachment plates.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a pulley comprising a hub 2, a separate rim 3 provided with an annular recess 4, and series of wedge-shaped blocks 5, arranged in the annular recess or groove 4, of the rim 3. The hub is designed to be secured on a shaft 6 by a clamping-screw 7, or other suitable means, and it is provided with a central annular web 8, arranged within and adapted to form a continuation of an annular flange 9, of the rim 3. The web 8 is provided with semi-cylindrical transverse ribs 10, which fit in corresponding curved recesses 11, of the flange 9, to prevent the rim from rotating on the hub, and the parts are held against lateral movement on each other by bolts 12, which prevent the rim from becoming separated from the web of the hub. The bolts 12 are transversely disposed and are arranged in registering semi-cylindrical recesses 13 and 14 of the web 8 and the flange 9. The rim consists of a cylindrical bottom 15, and parallel circular sides 16, and is rectangular in cross-section to provide the space or groove 4 for the reception of the removable wedge-shaped blocks 5, which form the periphery of the band pulley. The sides 16 of the rim are provided on their inner faces with inwardly-extending integral radially-disposed division flanges 17, which divide the annular space 4 into three or more compartments for the reception of the wedge-shaped blocks. The blocks 5 are arranged in series of three, and the ribs or flanges 17 vary according to the size of the pulley, the larger the pulley the greater the number of flanges 17 being employed; and the blocks are correspondingly increased in number. At their circumferences the sides 16 are provided at intervals with inwardly-extending curved flanges 18, which form an overhanging edge to engage the end-blocks of the series, spaces 19 being left to enable the blocks to be inserted. The intermediate blocks of the series operate to wedge the other blocks against the radial flanges 17, and each intermediate block is secured in place at opposite sides of the rim of the pulley by inclined screws 20 and attachment plates 21, which are curved and which fill the spaces 19 and complete the curved flanges 18 of the rim, thereby securely fastening the blocks in the rim of the pulley. Each inclined screw is arranged in a threaded opening of a boss 22 and extends through the side of the rim and engages the block. The plate 21 is provided with a shank 23, which has an opening to receive the screw 20, and which is bent angularly and fits against the outer face of the boss and is securely clamped by a jam-nut 24. The outer edges of the blocks 5 are concaved, and whenever the blocks become worn they may be readily replaced without necessitating the separation of the rim and the hub.

It will be readily apparent that the pulley is simple and inexpensive in construction, that its parts may be readily assembled, and that when its periphery becomes worn it may be readily replaced.

Changes in the form, proportion, and the

minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. A pulley, comprising a hub provided with an annular web having transversely-disposed ribs, a rim provided with an annular flange conforming to the configuration of the web and forming a continuation thereof and having recesses corresponding in shape to and receiving the ribs, and fastening devices passing through oppositely disposed recesses of the web and the flange for preventing the flange and the web from moving laterally on each other, substantially as described.

2. A pulley, comprising a hub provided with an annular web having transversely-disposed projecting ribs of semi-cylindrical shape, a rim provided with a flange conforming to the configuration of the web and forming a continuation thereof and having curved recesses receiving the ribs, and transverse bolts passing through oppositely disposed recesses of the web and the flange and arranged in registering recesses thereof and securing the parts against lateral movement, substantially as described.

3. A pulley, comprising a hub, a rim having an annular space and provided at its opposite outer edges with inwardly extending curved flanges forming overhanging edges and having entrance spaces between the flanges, wedge-shaped blocks inserted at the entrance spaces and arranged within the annular space, curved plates closing the entrance spaces and having curved flanges completing the curved flanges of the rim and projecting inward over the adjacent blocks, and screws passing through the plates and the sides of the rim and securing the plates in position and engaging the adjacent blocks, substantially as described.

4. A pulley, comprising a hub, a rim having an annular space and provided in the same with radial flanges having circumferential curved flanges arranged at intervals, said rim being provided with interiorly threaded bosses wedge-shaped blocks arranged in series in the annular space of the rim, curved plates arranged at the intervals between the curved flanges of the rim and provided with shanks arranged adjacent to the sides of the rim, inclined screws passing through the shanks and the bosses of the rim and engaging the adjacent blocks, and jam-nuts arranged on the screws and engaging the shanks of the plates, substantially as described.

5. A pulley, comprising a hub provided with an annular web having transversely-disposed projecting ribs, a rim having an annular space and provided with an annular flange conforming to the configuration of the web and provided with recesses receiving said ribs, said rim being provided at its circumference with inwardly-extending curved flanges arranged at intervals, fastening devices passing through the web and the annular flange and securing those parts from moving laterally on each other, wedge-shaped blocks arranged in series on the annular space of the rim, and curved plates arranged at the intervals between the curved flanges of the rim and projecting inward over the adjacent blocks, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

PHILIP CONYNGHAM.
WILLIAM R. GIBBONS.

Witnesses:
W. S. PARSONS,
THEO. REMIFERN.