

(No Model.)

E. J. PENNINGTON.  
PULLEY.

No. 419,791.

Patented Jan. 21, 1890.

Fig. 1.

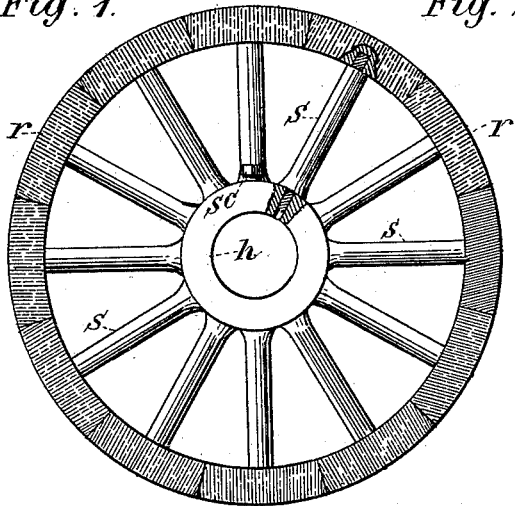


Fig. 2.

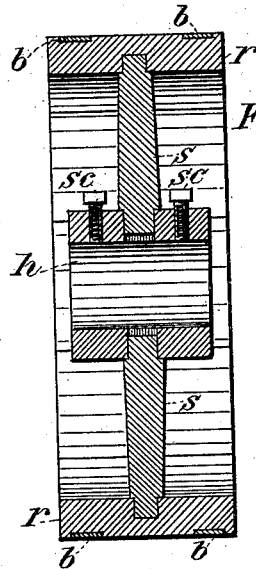


Fig. 3.

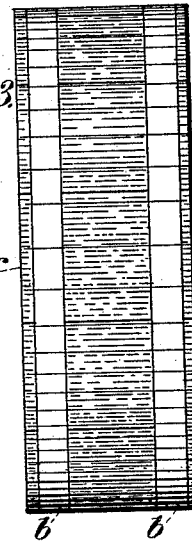


Fig. 4.

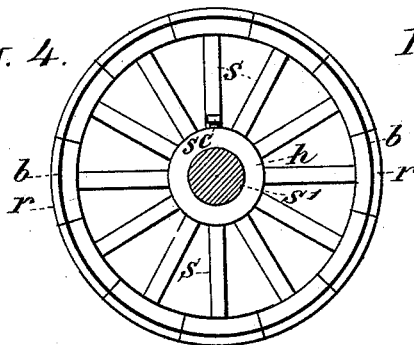
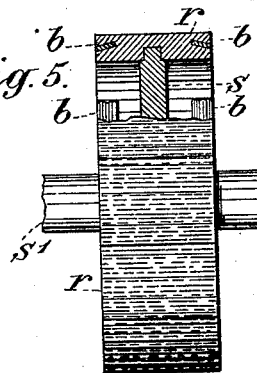


Fig. 5.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

EDWARD J. PENNINGTON, OF EDINBURG, INDIANA.

## PULLEY.

SPECIFICATION forming part of Letters Patent No. 419,791, dated January 21, 1890.

Application filed September 4, 1889. Serial No. 322,992. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. PENNINGTON, of Edinburg, county of Johnson, and State of Indiana, have invented certain new and useful Improvements in Pulleys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

My invention relates to the construction of wooden pulleys, and is intended to provide a pulley which will bear up under any reasonable strain, and yet be economical as to cost and have a surface adapted to prevent the slipping of the belt, and will be understood from the following description.

In the drawings, Figure 1 represents a side view of my device, a part of the hub and rim being broken away, showing the manner in which the spokes are fastened. Fig. 2 is a sectional view of the same through the center. Fig. 3 is a face view. Fig. 4 is a side view of a modified form of my device. Fig. 5 is a face view of the same, a part of the rim broken away, showing the manner in which the bands are secured therein.

In detail my pulley consists of an iron hub *h*, in which are driven wooden spokes *s*, their ends squared and fitting in corresponding openings in the periphery of the hub. The latter is secured to the shaft *s'* by a set-screw *sc*. The ends of the spokes are tenoned into the rim, which is composed of a series of short staves, the grain running at right angles to the spokes. The spokes being driven into the hub, the staves set upon the spokes, the device is placed in a former, and the whole compressed until the ends of the staves abut against each other in the shape shown in Fig. 1, and then steel bands *b* are countersunk in the rim, one on each side, as shown in Fig. 2, so that the rim presents a smooth face across its entire width, and these compress the ends of the staves closely together and hold all firmly in place, and the

completed structure presents the appearance shown in Figs. 1 and 3. The grain of the wood running transversely across the rim *r* forms a surface which will bear a great strain without slipping the belt, and the steel or metal bands hold the parts tightly in place, so that the pulley will not break down, the spokes and hub being properly proportioned and the staves made thick enough to insure sufficient strength in the completed structure.

Instead of setting the metal bands on the outside of the rim, as shown in Fig. 2, a kerf or groove may be cut in the ends of the staves and at a slight angle, as shown in Figs. 4 and 5, making a flare, and the metal band is flared to correspond and then driven into the groove on each side so as to fit tightly, and the same purpose is subserved as that shown in Figs. 2 and 3. In this construction the entire face of the rim is formed by the grain of the wood, as shown in Fig. 5.

What I claim as my invention, and desire to secure by Letters Patent, is the following, viz:

1. A pulley whose rim is composed of staves whose grain runs at right angles to the spokes, the edges thereof abutting against each other and held in position by one or more metal bands let into the rim, substantially as shown and described.

2. A pulley comprising a metal hub *h*, spokes *s*, driven into such hub, tenoned into a rim *r*, the latter composed of staves whose grain runs at right angles with the spokes, their edges abutting against each other, the whole structure further secured by metal bands let into such rim, all combined substantially as shown and described.

In witness whereof I have hereunto set my hand this 17th day of August, 1889.

EDWARD J. PENNINGTON.

Witnesses:

C. P. JACOBS,  
E. B. GRIFFITH.