(No Model.)

H. H. BLAKE.

COMPOUND PULLEY OR WHEEL.

No. 295,337. Patented Mar. 18, 1884.

Fig. 1

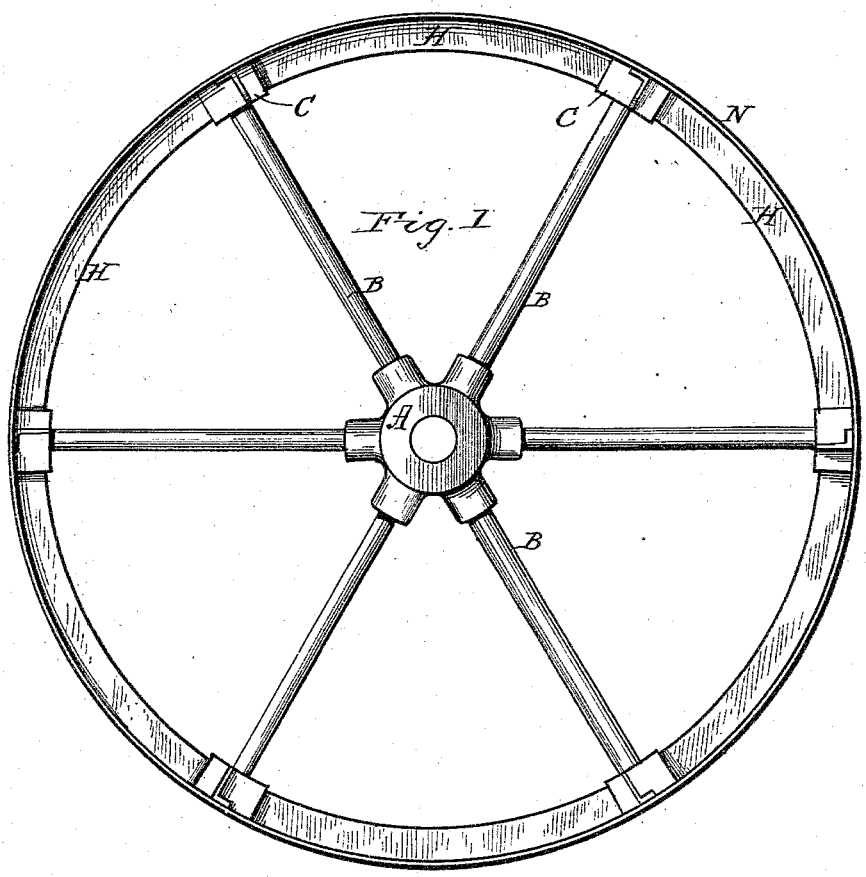


Fig. 3.

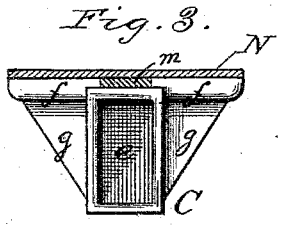


Fig. 2.

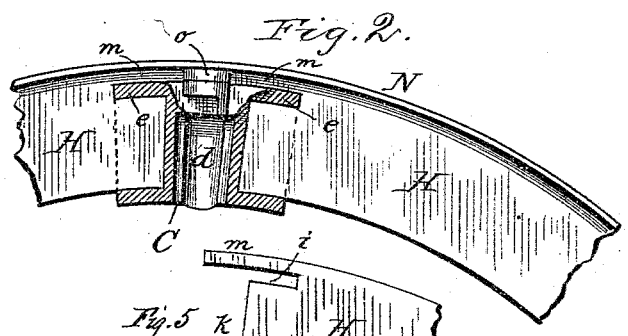


Fig. 4.

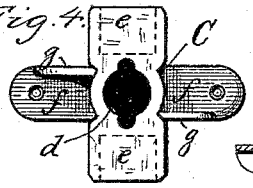


Fig. 5

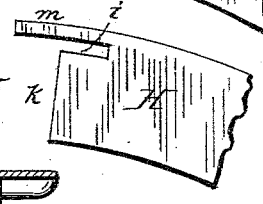
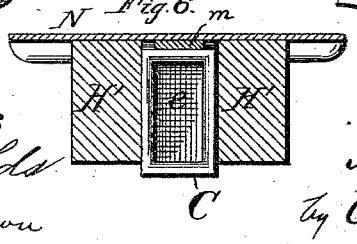


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. BLAKE, OF PITTSBURG, PENNSYLVANIA.

COMPOUND PULLEY OR WHEEL.

SPECIFICATION forming part of Letters Patent No. 295,337, dated March 18, 1884.

Application filed October 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. BLAKE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Compound Pulleys and Wheels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is an elevation of my complete pulley. Fig. 2 is an enlarged detail of Fig. 1, sectional in part. Figs. 3 and 4 are respectively an end elevation and plan of one of the socket-lugs. Fig. 5 shows the form of the end of one of the wooden rim-segments. Fig. 6 is a transverse section of modified rim for wide-face pulley.

In a pending application I have described and claimed a compound pulley or wheel in which the arms or spokes are separate and embedded in a socketed hub and in rim-sockets, to which a wrought-metal band is riveted or secured. As this band in that portion which is between the spokes has only its own inherent stiffness to depend upon for resisting the strain of the belt, I have found it necessary for ordinary purposes to use a comparatively thick and heavy rim. It is the object of my present invention to avoid this necessity, and to so construct as to admit of the use of a very thin metal band as a mere facing.

The invention consists in the construction and combination of devices, as hereinafter fully described and claimed.

A designates the hub, having the spokes B embedded therein or secured thereto, and C C are the socket-lugs at the outer ends of the spokes. One way of connecting these parts is to set the spokes into the sockets C and pour molten metal around them, as described in my said pending application. Besides the sockets *d* for the spokes B in lugs C, I form the latter with the transverse sockets *e*, preferably rectangular in cross-section, as shown in Fig. 3. Where the metal band is to be wider than the lug C, I form the latter with the brackets *f* and the strengthening-ribs *g*, as shown in Figs. 3 and 4. Before fixing the spokes and lugs C finally, I insert the wooden rim-segments H, each having the recess *i* and rabbet *k* in each end. Rabbet *k* leaves space for the body of the socket-lug C between adjoining rim-segments, and recess *i* fits the outer wall of socket *e*, so that when the spokes and rim-segments are drawn in together and the former embedded in or secured to the hub A and lugs C, the whole becomes one solid structure. The rim-segments H, with lugs C between them, mutually brace one another in the proper direction and cannot slip asunder. The rim-segments abut against each other in passing over the lugs C by the overlaps *m*, thus forming a complete surface of wood extending around the whole circumference. I then center the whole in a suitable lathe and cut its face perfectly true, after which I apply a very thin wrought-metal band, N, and secure it by rivets or other device at the lugs C. At the points where the rivets are applied I insert the spacing-washers *o*, to make up for the wooden segment overlap *m* standing out beyond the lugs C or their brackets *f*.

The wooden segments H form a stiff but light rim, and re-enforce the metal facing or band N at all points, and hence the latter may be made of very thin material. Where a broad band N is required, as in Fig. 6, I form the lugs C without the ribs *g*, and then lay on additional widening segments H′, and bolt them to the segments H or to the lugs C.

While I have shown the construction as applied to a pulley or wheel having its hub, spokes, and lugs set together in a particular manner, I do not confine my invention thereto, as it is also applicable to any compound wheel or pulley wherein the spokes or spoke-sockets are separate and attachable, as such can be formed with segment recesses or sockets for the adaptation of my invention.

I claim as my invention—

1. In a compound pulley or wheel having spokes or spoke-lugs separately attachable, the combination of metallic lugs at the spoke ends, having sockets *e*, wooden rim-segments

H, adapted to enter said sockets, and a metallic facing or band, N, secured outside said wooden segments, substantially as described.

2. In a compound pulley or wheel having spokes or spoke-lugs separately attachable, the combination therewith of the lugs C, having sockets *e*, wooden rim-segments fitting said sockets, and having recesses *i* and overlaps *m*, and the metallic facing-band N, secured outside said segments, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY H. BLAKE.

Witnesses:
T. J. PATTERSON,
D. E. DAVIS.