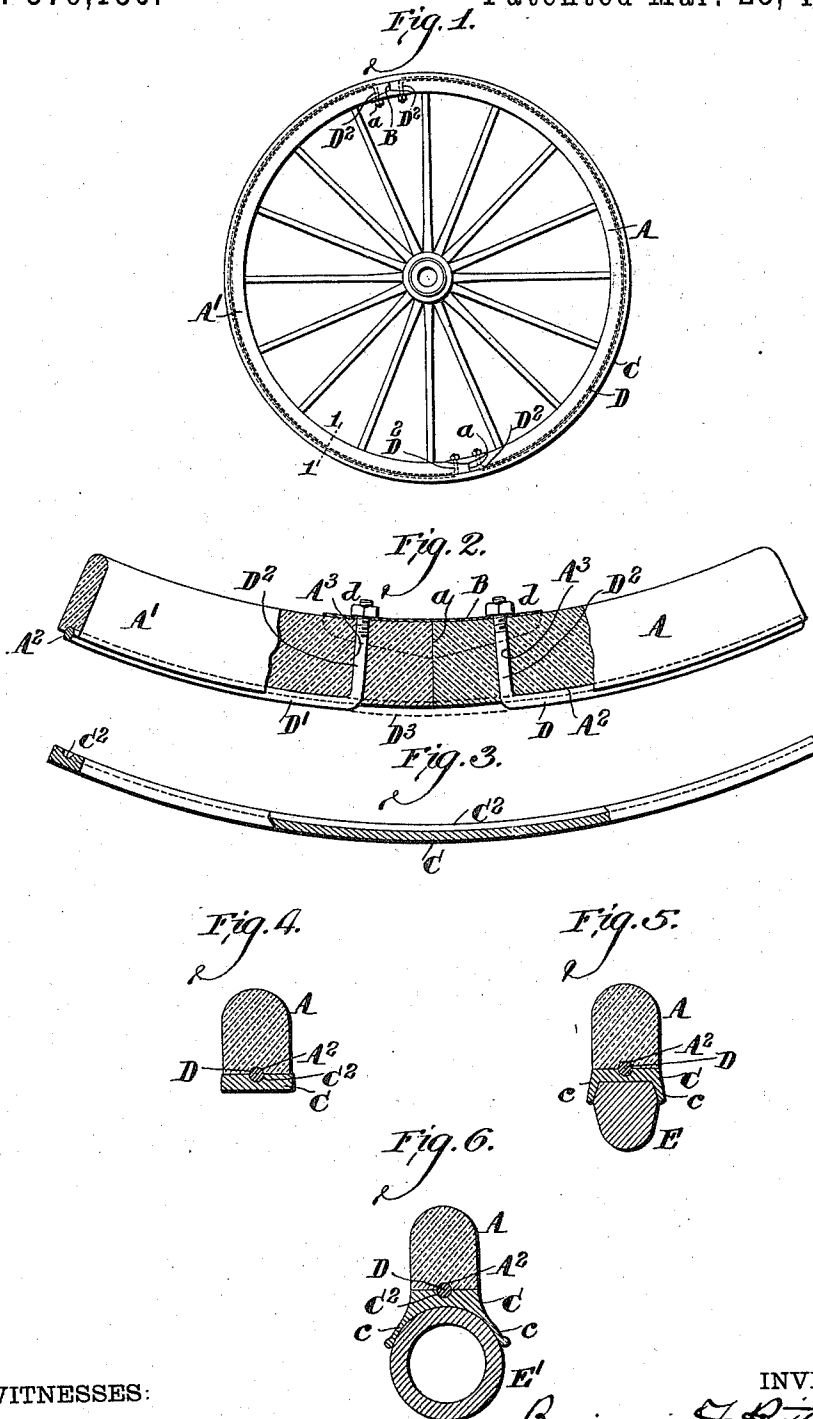


(No Model.)

B. F. RITTENHOUSE.
WHEEL.

No. 579,180.

Patented Mar. 23, 1897.



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BENJAMIN F. RITTENHOUSE, OF NORRISTOWN, PENNSYLVANIA.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 579,180, dated March 23, 1897.

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To all whom it may concern:

Be it known that I, BENJAMIN F. RITTENHOUSE, a citizen of the United States, residing at Norristown, in the county of Montgomery, in the State of Pennsylvania, have invented a certain new and useful Improvement in Wheels, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of wheels, and particularly to the securing of metal rims to the wheel-fellys, the object of my invention being to provide an efficient, simple, and inexpensive locking device for holding the rim in place.

The nature of my improvements will be best understood as described in connection with the drawings, in which they are illustrated, and in which—

Figure 1 is a side elevation of a wheel constructed in accordance with my invention. Fig. 2 is an enlarged side view, partly in section, of a portion of the wheel-felly-rim-fastening device. Fig. 3 is a side view, partly in section, of the wheel-rim adapted for use with my invention. Fig. 4 is a cross-section through the felly and rim, taken, for instance, as on the section-line 1 1 of Fig. 1; and Figs. 5 and 6 are cross-sections showing modified forms of rims.

A and A' indicate sections of the wheel-felly, the construction illustrated showing the felly made up of semicircular sections divided by "saw-cuts" at *a a*, B B indicating felly-plates which are frequently placed at the junction of the felly-sections.

A² indicates a circumferential groove formed in the face of the felly and preferably of semicircular cross-section, and A³ A³ indicate transverse socket-holes extending inward through the wood of the felly and registering with the circumferential groove A².

C indicates the metal rim of the wheel, which is formed with an internal circumferential groove C², corresponding in position with the groove A² of the felly and preferably of semicircular cross-section.

As shown in Figs. 1, 2, 3, and 4, the rim C is a plain ordinary wheel-rim, but my invention is obviously applicable also to other forms

of rims, for instance rims having flanges, as indicated at *c c* in Figs. 5 and 6, said flanges serving as supports for rubber tires, as indicated at E and E'.

D and D' indicate metal rods which are adapted to lie in the circumferential felly-grooves A² and also to project beyond the face of the felly into the circumferential rim-grooves C². These rods are preferably of circular section, adapted to fit in the circular grooves, and should of course fit neatly in the grooves, as the function of the rod D is to lock the felly and rim together. Preferably I form the rods D D' with inwardly-projecting ends D², adapted to fit in the anchor-holes A³, and in all cases I make the length of the rods D or D' equal to at least one-fifth of the circumference of the felly, so that the form of the rod lying in the groove will be that of a considerable arc of a circle. The rods D should be held taut in the grooves of the felly and are preferably brought to the proper tightness by shrinking them into the grooves, that is to say, the rod is heated, so that its projecting ends can be readily inserted in the anchor-holes, and then allowed to contract, which of course results in causing them to hug tightly the bottom of the groove.

While I prefer to use at least two rods, such as D and D', in connection with ordinary fellys made up of two parts, such as A A', and cause the rods D caught in this way to be secured to each separable part of the felly, it will be obvious that my prime object of having the locking-rod D tightly secured in the felly-groove can be attained by using a rod the ends of which are welded or otherwise fastened together. The rod is in this way anchored to itself and can be shrunk in place on the grooved felly and made to tightly grip the groove, as in the case of the construction shown with anchored ends.

I have at D³ in Fig. 2 of the drawings indicated in dotted lines the union of the two rod-sections D and D'.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a wheel-felly having a circumferential groove in its outer periphery, one or more metal rods shrunk into said

groove and projecting beyond the face of the felly, so as to provide a means for anchoring an internally-grooved rim upon the felly.

2. In combination with a circumferentially-grooved wheel-felly having transverse sockets as A^3 extending in from the bottom of the groove, a metal rod or rods as D the length of which is not less than one-fifth of the circumference of the felly, said rod or rods being adapted to lie in the groove and to project beyond the face of the felly and having inwardly-projecting ends as D^2 adapted to enter sockets A^3 and thereby anchor the rod or rods in the groove all substantially as specified and so as to provide an anchorage for an internally-grooved tire or rim.

3. In combination with a wheel-felly having a circumferential groove in its periphery, one or more metal rods shrunk into said groove and projecting beyond the face of the felly,

and an internally-grooved wheel-rim embracing the felly, the groove in which receives the rod or rods and locks the rim to the felly.

4. In combination with a circumferentially-grooved wheel-felly having transverse sockets as A^3 extending in from the bottom of the groove, a metal rod or rods as D the length of which is not less than one-fifth of the circumference of the felly adapted to lie in the groove as described and having inwardly-projecting ends D^2 adapted to enter sockets A^3 and thereby anchor the rod or rods in the grooves and an internally-grooved wheel-rim adapted to embrace the felly and interlock with the rod or rods as specified.

BENJAMIN F. RITTENHOUSE.

Witnesses:

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