

(No Model.)

P. H. CUMMINS.

WHEEL.

No. 307,021.

Patented Oct. 21, 1884.

Fig. 1.

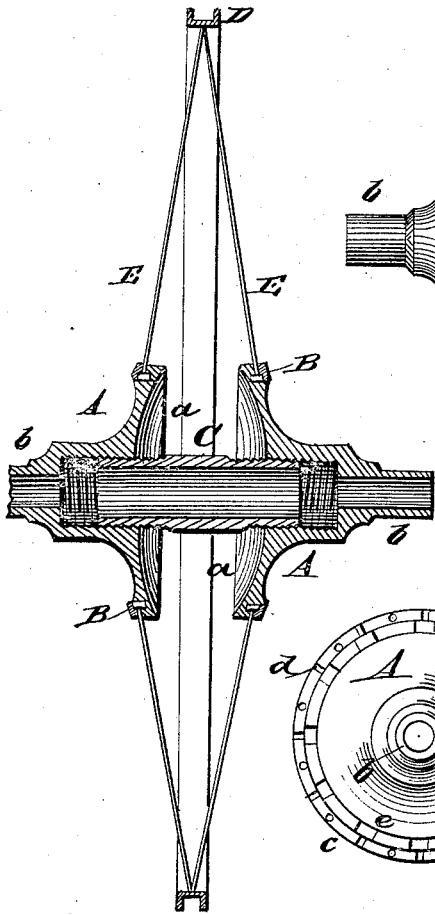


Fig. 2. Fig. 4. Fig. 3.

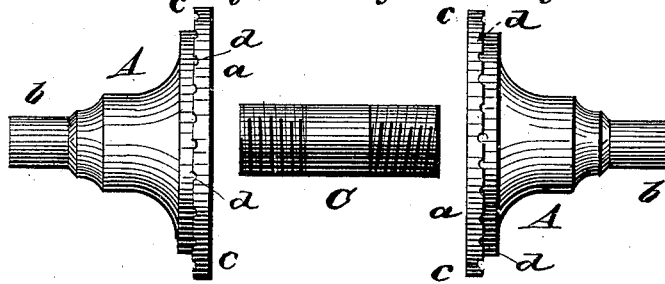


Fig. 5.

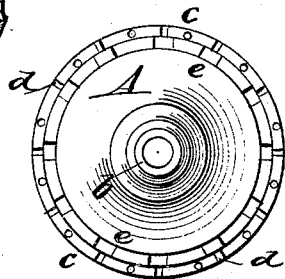
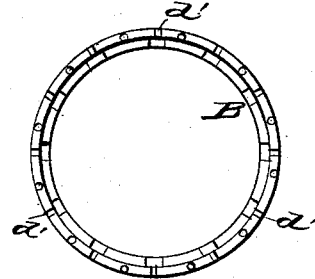


Fig. 6.



WITNESSES

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# UNITED STATES PATENT OFFICE.

PATRICK HENRY CUMMINS, OF AMSTERDAM, NEW YORK.

## WHEEL.

SPECIFICATION forming part of Letters Patent No. 307,021, dated October 21, 1884.

Application filed May 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK H. CUMMINS, of Amsterdam, in the county of Montgomery and State of New York, have invented certain  
5 new and useful Improvements in Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked  
10 thereon, which form part of this specification, in which—

Figure 1 is a diametrical section through my improved wheel. Figs. 2, 3, and 4 represent the hub-sections and the spreader detached. Fig. 5 is a face view of a hub-section,  
15 showing its recesses. Fig. 6 is an inside view of a clamping-ring.

This invention relates to improvements on metal wheels which are required to be made  
20 very light and at the same time very stiff and strong; and it consists in a novel construction of the hub, whereby all of the spokes of the wheel can be readily tightened at any time, as will be fully understood from the following  
25 description, when taken in connection with the annexed drawings.

My improved wheel-hub is composed of two circular hub-sections, A A, in combination with means for spreading them apart for the  
30 purpose of tightening the spokes. Each hub-section A consists of a dished disk, *a*, formed on a tubular axle, *b*. It will be observed that the inner part of the axle has a much larger bore than the outer or journal portion,  
35 the object of which will be hereinafter explained. The outer face of each disk *a* is formed with an annular shoulder, *c*, and also with recesses *d*, adapted to receive corresponding enlargements, *e*, on the inner ends of the  
40 hub-sections. Each hub-section A is provided with a ring-clamp, B, which has tapered recesses *d'* in it, corresponding to the recesses *d* in the main part of each section A.

C designates a tubular or solid spreader,

which has right and left screw-threads cast on 45 it, adapted to enter the enlarged portions of the axles *b*, which have female screw-threads in them. The spreader C connects the two hub-sections together, and it also allows these sections to be forcibly spread apart by the use 50 of a wrench.

D designates the metal rim of the wheel, which is circumferentially grooved, as shown, to receive a suitable band. To this rim the outer ends of the wire rods or spokes E are 55 properly secured.

It will be seen that by turning the spreader C the hub-sections can be forcibly separated and the spokes tightened. It will also be seen that the bore of the spreader is of 60 greater diameter than the bore of the journal portions of the axle. Consequently, if it is desired to use a separate fixed axle, the latter will not touch the spreader, and of course it will not unscrew it. 65

Having described my invention, I claim—

The combination, in a wheel, with the hub-sections secured to the spokes, extending alternately to opposite sides of the tire, the said sections having central openings for the passage 70 of a shaft, and larger openings which are screw-tapped right and left, of a tubular spreader of greater internal diameter than the journal-openings for the shaft, the spreader being externally screw-threaded at the ends, 75 and adapted to fit the larger openings of the hub-sections, whereby said sections may be adjusted to tighten the spokes, while the spreader is permitted to rotate clear of the shaft, substantially as specified. 80

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

PATRICK HENRY CUMMINS.

Witnesses:

HENRY MCNIEL,  
M. WEMPLE.