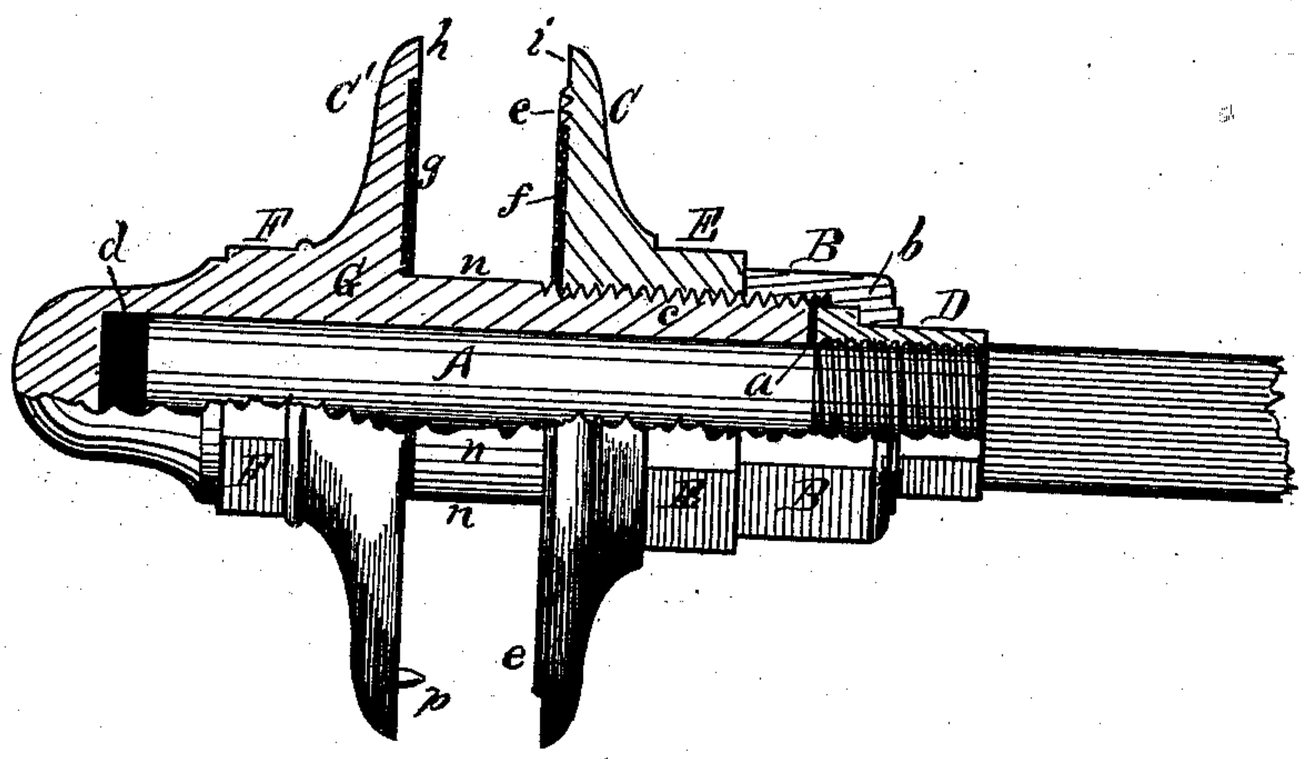
W. H. WRIGHT.

Vehicle Wheel Hub.

No. 201,583. Patented March 19, 1878.



Witnesses.

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WILLIAM H. WRIGHT, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN VEHICLE-WHEEL HUBS.

Specification forming part of Letters Patent No. **201,583,** dated March 19, 1878; application filed December 17, 1877.

To all whom it may concern:

Be it known that I, WM. H. WRIGHT, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Metallic Hub for Vehicle-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which the figure is a side view of my improved hub, with part broken away, as applied to the axle-arm.

The invention consists in the application of a convolute thread to the inner face of the running-collar of metallic hubs, and in the employment of a collar-nut upon the axle-arm, having one end always exposed beyond the inner end of the hub, as and for the purposes hereinafter more fully set forth.

The threaded section of the axle, upon which the shoulder or collar-nut D is screwed, is reduced from the square only sufficiently to form a cylindrical surface upon which to cut the thread. The arm A is made as much smaller than the threaded section as the depth of the thread. A very fine thread is preferable for this section. The inner end of the nut D is provided with a heavy flange or collar, *b*, and the outer or exposed end with several flat sides, as shown, to receive a wrench. The nut B is fitted to couple over said collar *b*, and screw upon the end of the threaded section *c* of the hub-stock G, the latter being bored out to receive the arm A. There may be an oil-reservoir formed in the hub at the end of the arm, as indicated at *d*.

The fixed collar C′ has a shallow annular recess formed in its inner face to receive a thin packing or cushion *g*. This cushion may be made of leather-board or any other suitable material. The running-collar C is formed with one or more convolute threads, *e*, on its inner face, and within the circle of this thread is placed a cushion, *f*. The depths of the threads *e* should be about equal to the lead of the threads *c*, and they are preferably raised above the general plane of that face of the collar, whereby they may be thoroughly bedded into the contiguous edge of the spokes in the built-up wheel. One or more dowels, *p*, project from the inner face of the fixed collar C′, and, the spoke placed opposite such dowels being provided with a hole to receive them, the spokes are prevented from turning when the running-collar C is being screwed up to its clamping position.

The spokes, after being properly fitted, are placed between the collars C C′, their ends resting against the smooth section of the stock G at *n*. After the spokes are all placed in position, wrenches are applied to the sections E and F, and the collar C forced up until the face *i* presses firmly against the spokes, and forces them as firmly against the face *h*. This operation, as will be seen, also causes the threads *e* to become embedded in that face of the spokes next to them, and the lead of said convolute threads, being in the right direction for that purpose, (being right-hand on one wheel and left-hand on the opposite one,) tends to force them concentrically more firmly against the tube at *n*, and hold them there.

The wheel is secured upon the arm by turning the nut B upon the projecting threaded end of the stock G, and up firmly against the collar C. The nut B might be formed in one piece with the collar C by an extension of the nut E; but they are preferably made separate, as shown. As will be seen, the wheel may now be removed by unscrewing either the clamping-nut B or the swivel-nut D.

The ordinary leather or other cushion *a* may be used between the end of the stock G and the collar-nut D. The manufacture of the axles is somewhat simplified and the expense lessened by the employment of a threaded collar or swivel-nut, D.

If necessary, the swivel-nuts may be fixed to their set position on their respective screws by inserting a pin or set-screw from one into the other, or otherwise. However, it is believed that nothing of that sort will be necessary if all the screw-threads of the axles and of the wheels (except the convolute threads) for the right side of the vehicle are made right-hand, and those for the left side are made left-hand, since the constant tendency of the revolving wheels will then be to turn the several nuts more firmly to their place. The axle may be strengthened, if necessary, at the shoulder of the threaded section by upsetting or otherwise.

What I claim as my invention is—

1. A metallic hub embracing in its construction a fixed collar, C′, and a running-collar, C, the latter being threaded upon the tube of the hub, and provided with a convolute screw-thread, *e*, formed upon its face, as shown and described, whereby a concentric draft upon the spokes is produced by screwing the collar to its place upon the tube, as set forth.

2. In combination with the coupling-nut B of a metallic hub, the detachable threaded collar D on the axle-arm A, the said threaded collar D having one of its ends always exposed beyond the inner end of the hub and the coupling-nut B, as shown and described, whereby the wheel may be detached by unscrewing either the collar-nut D or the said coupling-nut B, as set forth.

WM. H. WRIGHT.

Witnesses:

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