

J. O'CONNOR.

Wheel Hub.

No. 102,580.

Patented May 3, 1870.

Fig. 1.

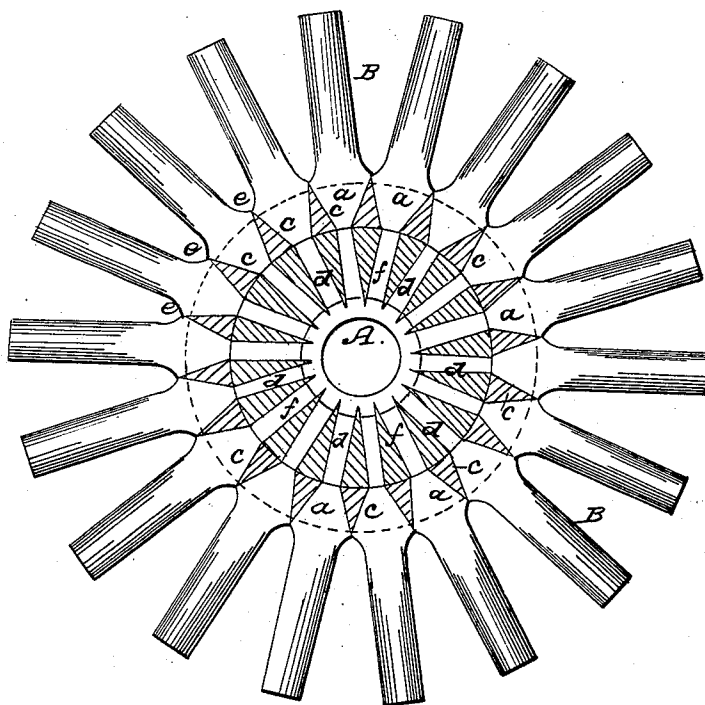
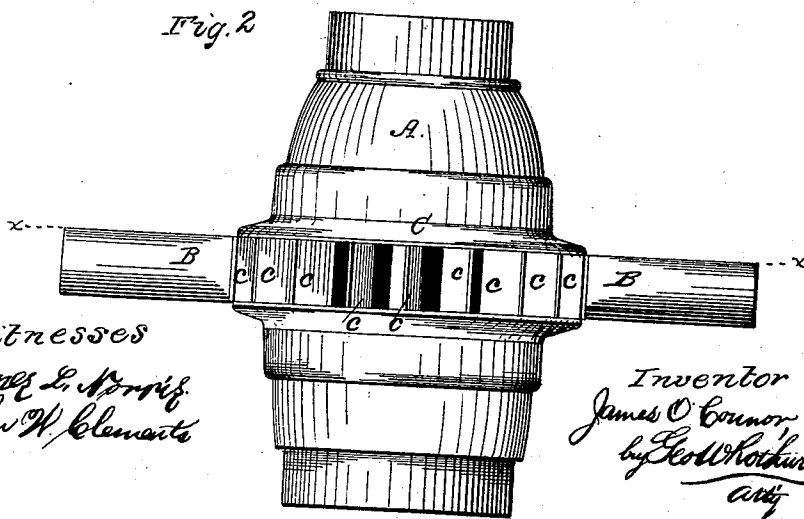


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES O'CONNOR, OF JACKSON, MISSOURI.

IMPROVEMENT IN CARRIAGE-HUBS.

Specification forming part of Letters Patent No. 102,580, dated May 3, 1870.

To all whom it may concern:

Be it known that I, JAMES O'CONNOR, of Jackson, in the county of Cape Girardeau and State of Missouri, have invented a new and useful Improvement in Carriage-Hubs; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to fully understand and to make and use the same, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 is a transverse section of the hub, the plane of section being represented by the line *xx*, Fig. 2. Fig. 2 is a side view of the hub, several of the spokes being removed.

Many attempts have been made during the last few years to construct a hub of small proportions and elegant form, and to so fit the spokes as to combine increased strength with a neater appearance.

In order to increase the strength of a hub of small diameter, the mortises for the spokes being in such close proximity to each other as to greatly weaken the hub, flanged metallic collars, having recesses for the spokes, have been fitted onto the hub.

With all the previous efforts, however, the advantages of strength and finish have not been attained, owing to the fact that the spokes were so made and fitted into their sockets as to bear directly on the wooden hub, thus making it sustain most of the strain, the collar serving simply as a strengthening-band, constructed in such a way that the spokes could not be inserted, so as to present a finished appearance.

The object of the present invention is to produce a hub possessing the requisite strength, and presenting, at the same time, a finished appearance when the spokes are inserted.

To accomplish these results, I make the spokes with an enlargement or shoulder, having inclined faces, so as to form a wedge, and fit each spoke into a recess of corresponding form in the metallic collar, so that the collar sustains the entire strain, the inner extremities of the spokes being perfectly straight, to enter the hub, which is mortised in a peculiar

manner, all as hereinafter more fully described.

Referring to the drawings, wherein similar letters indicate like parts in the two figures—

A represents the wooden hub, which may be of any suitable construction. This hub is mortised to receive the inner ends of the spokes, as shown in Fig. 1.

B B are the spokes, made with wedge-shaped enlargements *a*, from which to the inner extremity the spoke is straight or without taper, as at *ff*.

Each spoke is fitted in a separate socket in the hub A and flanged metallic collar C, the latter being cast with tapering cross-bars *cc*, arranged closely together, so as to form between each two bars a socket corresponding in form to the wedge-shaped enlargements of the spokes.

It will be seen that by the peculiar construction and mutual adaptation of the flanged collar and spokes, the spokes, when driven into the hub, will have no tendency to strain or split the same, the only portion of the spoke which enters the hub being entirely straight, and that the metallic collar, besides serving as a strengthening-band to the wooden hub, bears the whole strain when the spokes are driven in, and at all times supports the spokes independently of the wooden hub.

The mortises in the wooden hub being straight, the solid portions *d*, which separate them, are in the best possible form to insure strength at this part of the hub, which is an important feature.

The spokes, when in place, conceal the cross-bars of the flanged collar, and being rounded at *ee*, as shown, give a neat and finished appearance hitherto unattained.

The provision in the flanged collar of a separate socket, of the form described, for each spoke, insures the permanent rigidity of the spokes, and makes them self-tightening.

As the wooden hub is entirely relieved of the strain of driving in and retaining the spokes, it will be seen that, were the wooden hub cut all out, or only a thin shell left, the spokes would still remain in their original po-

sition, being supported by the collar independently of the hub.

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

The construction of the collar C with wedge-shaped partitions *c c*, terminating in a sharp edge at the periphery of the collar, in connection with the spokes B, made as described,

whereby the spokes are not only securely wedged between the partitions *c c*, but are brought into contact with each other, as herein shown and described.

JAMES O'CONNOR.

Witnesses:

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