J. B. BAUMAN.

Improvement in Carriage-Wheel Hubs.

No. 131,650. Patented Sep. 24, 1872.

Fig. 1.

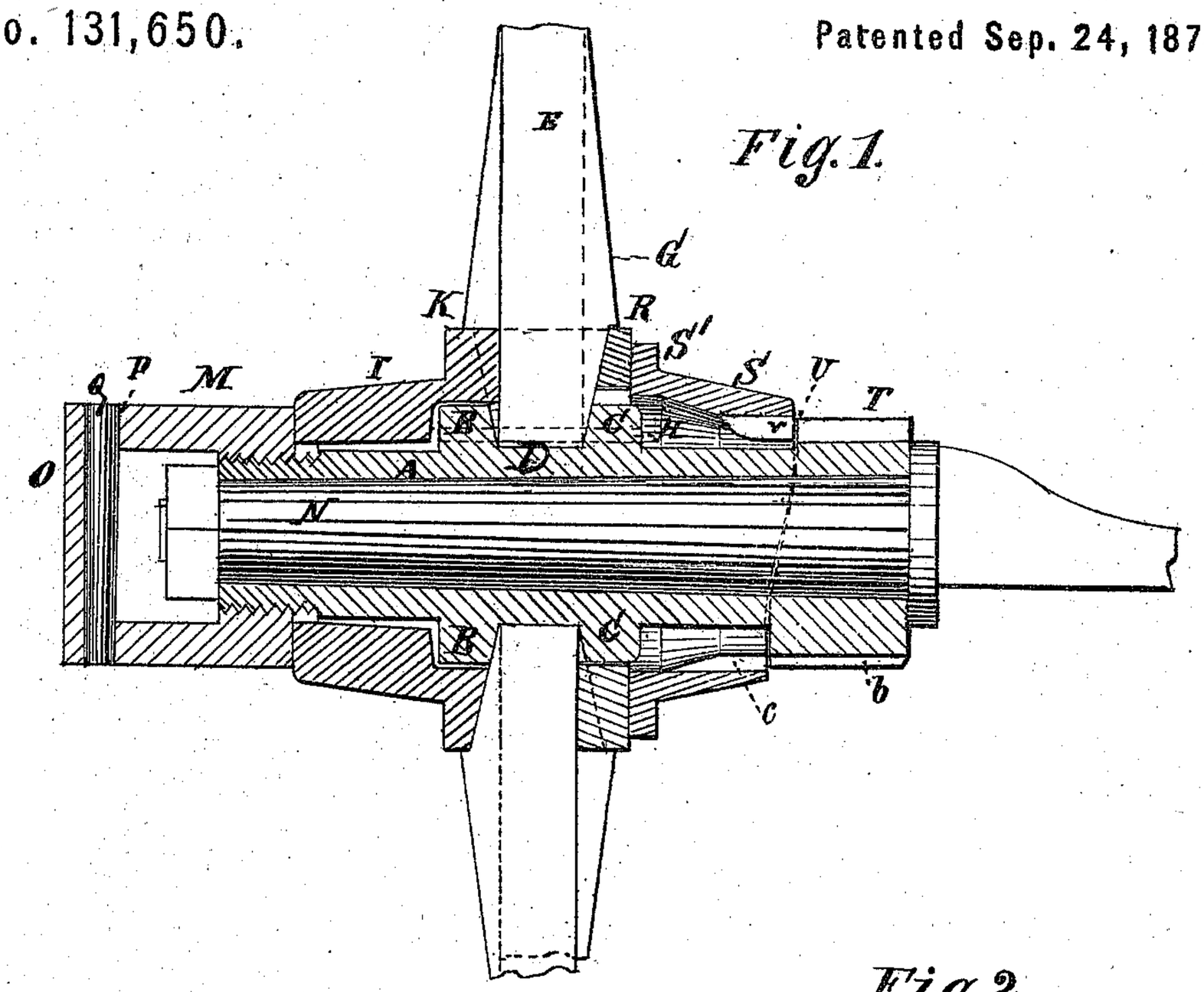


Fig. 2.

Fig. 3.

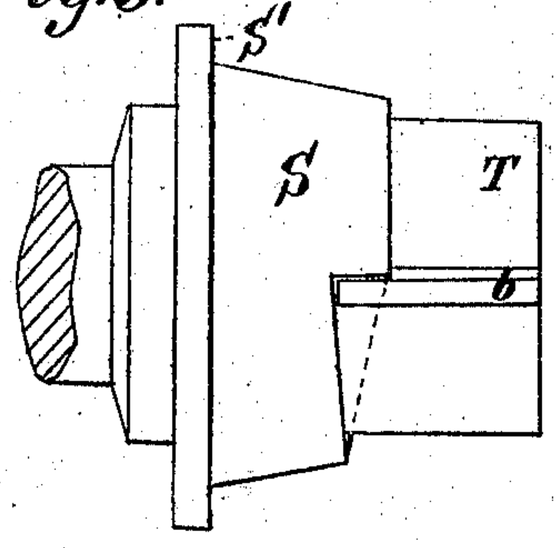
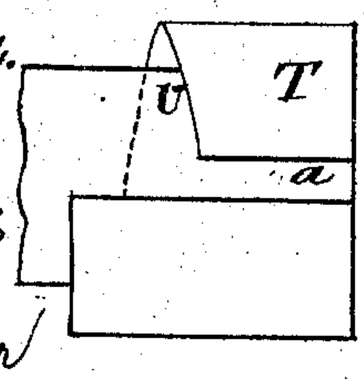
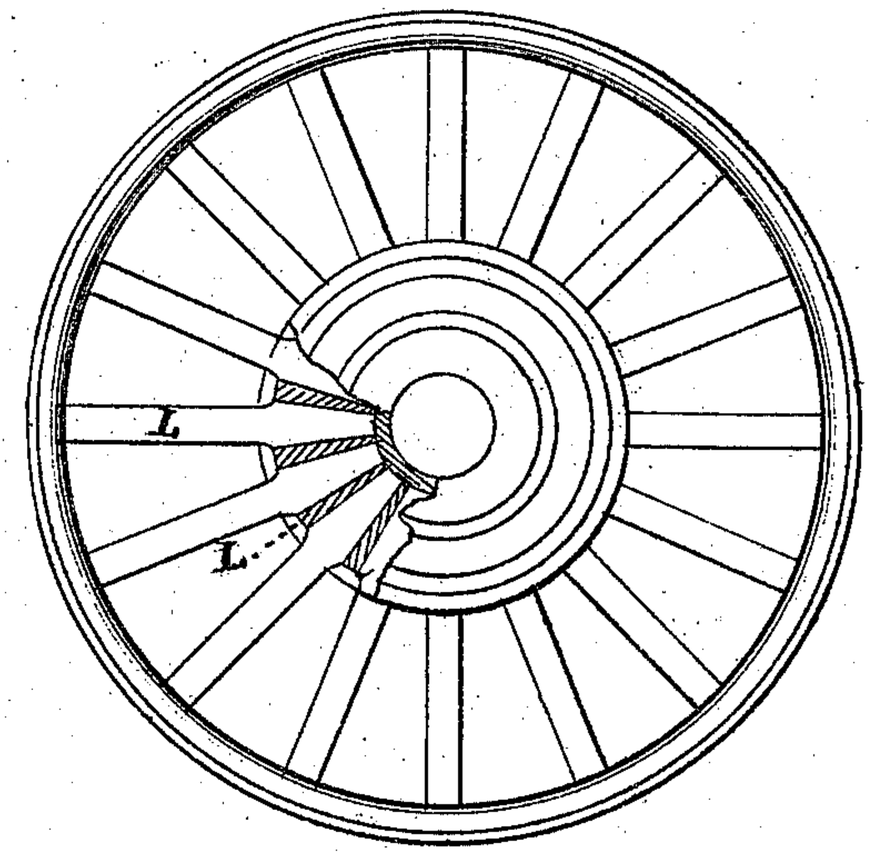


Fig. 4.





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UNITED STATES PATENT OFFICE.

JESSE B. BAUMAN, OF SHEPHERDSTOWN, PENNSYLVANIA.

IMPROVEMENT IN CARRIAGE-WHEEL HUBS.

Specification forming part of Letters Patent No. **131,650**, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JESSE B. BAUMAN, of Shepherdstown, in the county of Cumberland and State of Pennsylvania, have invented a new and useful Improvement in Carriage-Wheels, of which the following is a specification:

This invention relates to an improvement in carriage-wheel hubs, the construction of which is such that the spokes, tire, and felly can be readily and easily tightened by means of movable collars when it is necessary to take the dish out of the wheel. The first feature of my invention consists in forming the axle-box with two stationary collars having inclined inner surfaces, and located a suitable distance apart to form a continuous groove or channel for the reception of the spokes, and in the combination therewith of two movable collars provided with adjusting devices for enabling the spokes to be securely clamped between them. The second feature of my invention consists in forming on one end of the axle-box a projecting shoulder, a portion of the inner surface of which is obliquely turned, so that upon the application of the spoke-clamping collar it is only necessary to partially rotate the same when it is secured in position.

In the drawing, Figure 1 is a longitudinal sectional view of my invention; Fig. 2 is a front view of a complete wheel provided with my improved hub; Fig. 3 represents a detail view of the means employed for attaching the rear clamping-collar; and Fig. 4 is a detached view of the obliquely-turned shoulder with the collar removed.

A represents the axle-box, which is formed with two central raised collars, B C, located a suitable distance apart to form a continuous groove, D. E E are the spokes, which are arranged in a circumferential staggered row, as represented at G in the drawing. The contiguous sides of the spokes are formed in the ordinary manner, but their lateral sides, which are usually straight, are beveled or made tapering to fit the correspondingly-inclined inner sides of the collars B C. H are a suitable number of transverse pins located in the spoke-receiving groove D for the purpose of preventing the rotation of movement of the spokes. I is a movable or sliding collar applied to the forward end of the axle box, and provided with a vertical flange, K, which bears against the face of the spokes. The inner face of said flange K may either be made entirely straight or smooth, or it may be provided with horizontal projecting lugs, shown at L in Fig. 2 of drawing, which fit between the adjoining sides of the spokes and form, in connection with similar projections on the collar located on the opposite side of the hub center, a series of metallic mortises for supporting or bracing the spokes. To enable the spokes to be set alternately to the right or left, to form a wheel with staggered spokes, I provide the inner faces of the two clamping-collars with vertical recesses or chambers, into which the sides of the spokes enter. M is a large nut or cap, provided with an internal screw-thread for applying it to the correspondingly-screw-threaded forward end N of the axle-box. Said cap is of a cylindrical shape, and is provided with an end plate, O, and an opening, P, for inserting lubricating material, which opening is closed by a plug, Q. R represents a detachable ring or circular flange, bearing against the inner sides of the spokes, and fitted on the collar C, to which it is secured by a spline and feather. The inner side of said ring is of a form corresponding with that of the clamping-collar I. S is a movable collar located on the rear end of the axle-box, and provided with a vertical flange, S′, which, when the collar is turned, is caused to exert pressure upon the ring or flange R. Said collar S is secured in position, and is capable of being adjusted longitudinally upon the hub-box by means of a raised shoulder of a peculiar shape, which is formed on the extreme end of the axle-box. The shoulder T referred to is formed with an obliquely-turned or cam-shaped inner side, U, the ends of which are in line with a longitudinal channel, *a*, and spline *b*, of both of which there may be one or more, in the face of the shoulder. The collar S is formed with a correspondingly-shaped oblique outer edge, and is provided with an internal spline, V, and a longitudinal groove, *c*, which, when in line with the spline and channel in the shoulder T, will allow of the application of said collar S.

To secure the same in position it is only necessary to partially rotate the collar after the spline V has passed out of the channel in the shoulder T, when the obliquely-turned

portion will cause the same to be pressed inward against the flange R, thus securely clamping the spokes.

I do not confine myself to the exact combination of parts above recited, as the screw-threaded lubricating and dust-cap for adjusting the front collar may be dispensed with and the devices for securing and adjusting the rear collar substituted therefor. The solid metallic collars on the hub-box may also, in certain cases, be dispensed with and detachable wooden sections or collars be used instead. It is further proposed to use a straight circumferential row of spokes instead of the staggered spokes represented in the drawing.

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

1. A carriage-wheel hub, composed of the axle-box A, having central stationary collars B C and circumferential groove D, adapted for the reception of the spokes E, combined with movable spoke-clamping collars I S, located on opposite sides of the hub center, as herein set forth.

2. The method of securing and adjusting the spoke-clamping collars of carriage-wheel hubs, herein described, by means of the raised shoulder T, having obliquely-turned inner side U, and combined with a clamping-collar, S, having a correspondingly-shaped oblique edge, when the various parts are provided with one or more splines and channels for effecting the connection, as herein set forth.

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