

S. E. SHUTE & W. C. STARR.

Improvement in Carriage-Wheels.

No. 129,686.

Patented July 23, 1872.

Fig 1

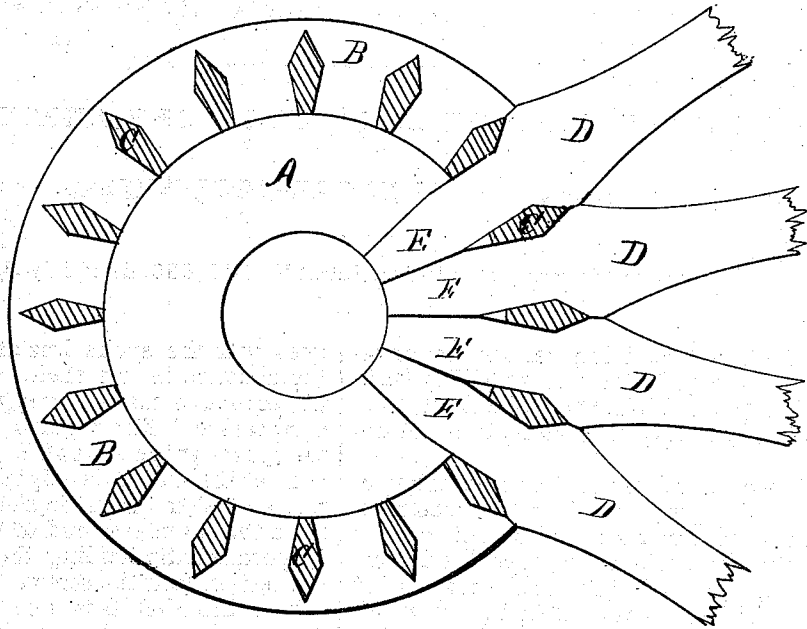
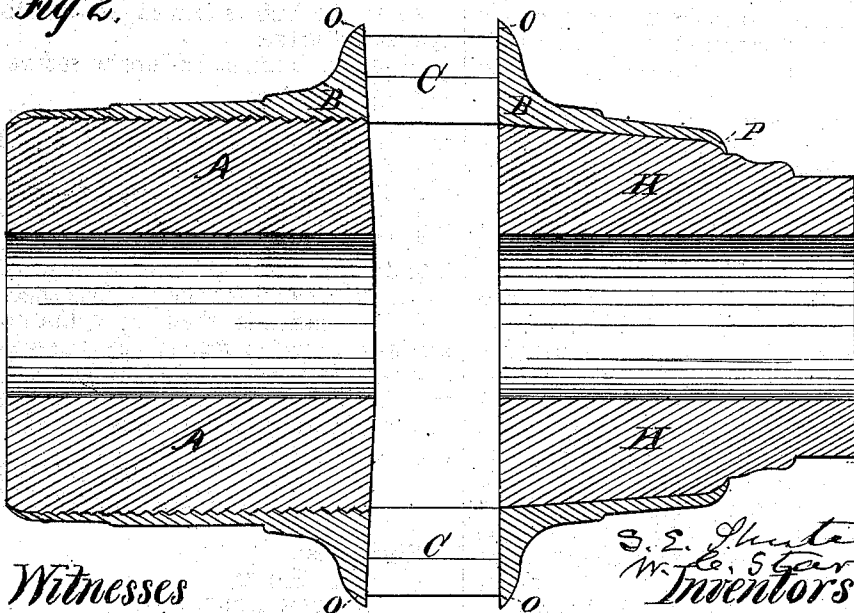


Fig 2.



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## IMPROVEMENT IN CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 129,686, dated July 23, 1872.

Specification describing certain Improvements in Carriage-Wheels, invented by SAMUEL E. SHUTE and WILLIAM C. STARR, both of Richmond, county of Wayne, State of Indiana.

Our invention relates to the construction of a carriage-wheel, wherein the hub is constructed by first providing a metallic shell having mortises in it, into which the spokes are driven. The shell also extends back to the rear end of the hub, and has a screw cut in it, into which a wooden core is screwed, thus forming the rear end of the hub. The shell also extends forward in front of the spoke-mortises, and is made in slightly taper form to receive a wooden core, which is driven or pressed into it from the rear end.

Figure 1 is a cross-section, showing the tenons E of the spokes and the divisions C between the mortises. Fig. 2 is a longitudinal section, showing the shell B as constructed with the wooden core A screwed into its rear end and the wooden core H driven into its front end.

B is the metallic shell, cast in one piece, consisting of the shell B, flanges O, and connections or divisions C, between the mortises. These connections or divisions are made diamond shaped, the longest faces of the diamond being parallel with the line of the spoke-tenons, the outer or short faces forming the shoulders upon which the spokes are arched. The outer end of the shell is made slightly tapering on the inside, being smaller at the point than at the spoke-line, the wooden core H being pressed or driven in from the rear end. The core A is then screwed into the rear end of the shell

even with the spoke-line at the back end of the mortises in the shell. The inner end of the core A is made slightly cone-shaped, to compress and firmly grasp the lower ends of the spoke-tenons edgewise. The rear or outer end of the core A is slightly chamfered, the rear end of the metallic shell being closed in upon the chamfered end of the core A, thereby permanently holding the core in place in connection with the screw. The front or outer end of the shell B is also fitted and closed down in like manner into a chamfer, P, on the front core H.

After the hub is formed as described, the spokes are driven.

What we claim, and desire to secure by Letters Patent, is—

1. The shell B, cast in one piece, in combination with the wooden cores A and H, as specified.
2. The core A, screwed into the shell B, having its inner end cone-shaped, as described.
3. The metallic shell B, upset at the ends into or upon the wooden cores A and H, substantially as and for the purpose specified.
4. The metallic shell B, cylindrical and screw-threaded in rear of the spoke-mortises, and tapering in front thereof, in combination with the cylindrical and screw-threaded core A and tapering core H, substantially as and for the purposes specified.

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