

No. 635,785.

Patented Oct. 31, 1899.

T. A. KILLINAN & A. E. POTTER.

SPOKE SOCKET.

(Application filed July 14, 1899.)

(No Model.)

Fig. 1

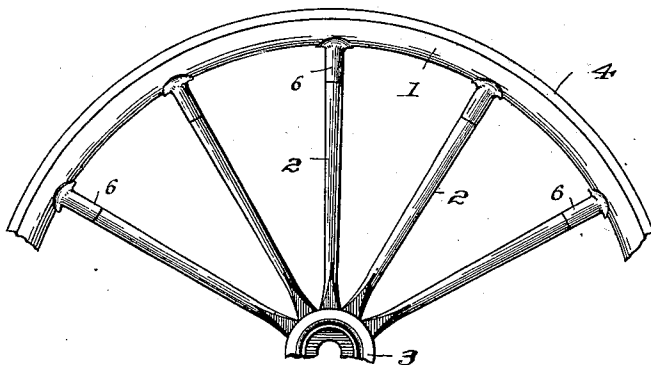


Fig. 3

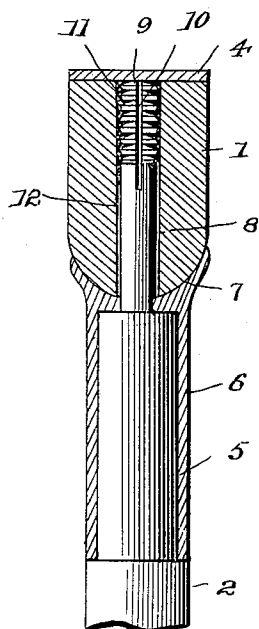


Fig. 2

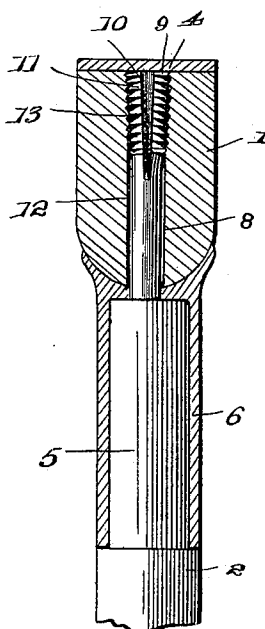
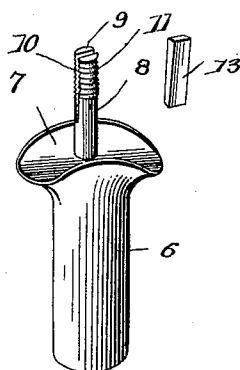


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS A. KILLINAN AND ALVIN E. POTTER, OF LIBERTY, TENNESSEE.

SPOKE-SOCKET.

SPECIFICATION forming part of Letters Patent No. 635,785, dated October 31, 1899.

Application filed July 14, 1899. Serial No. 723,826. (No model.)

To all whom it may concern:

Be it known that we, THOMAS A. KILLINAN and ALVIN E. POTTER, citizens of the United States, residing at Liberty, in the county of De Kalb and State of Tennessee, have invented a new and useful Spoke-Socket, of which the following is a specification.

This invention relates to spoke-sockets; and the particular object sought to be obtained is to relieve the inner portion of a felly from strain and at the same time reinforce said portion by means which are simple and durable in their nature and adapted to be easily and quickly applied to the spoke end and firmly connected to the felly.

The invention consists, essentially, of a sleeve or ferrule having a concaved flange and an outwardly-extending stem with a split terminal to receive a wedge, the portions on opposite sides of the split or slit being exteriorly corrugated or threaded and slightly enlarged, the bore through the felly to receive the stem being of equal diameter throughout its length and the wedge operating to spread the outer split terminal of the said stem, and thereby apply the connecting or fastening strain adjacent the periphery of the felly, the concaved flange bracing the inner portion of the latter.

The invention further consists of the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of a portion of a wheel, showing the improved spoke-socket applied to the spoke. Fig. 2 is a transverse vertical section through one of the spoke ends and felly, showing the mode of securing the spoke-socket to the felly. Fig. 3 is a transverse vertical section similar to that shown by Fig. 2 and illustrating the stem of the socket before it is spread by the securing-wedge. Fig. 4 is a detail perspective view of the improved socket, a wedge being shown to one side thereof.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a felly having spokes 2 attached thereto and to a hub 3. The felly, as in ordinary devices of this character, is adapted to have a tire 4 shrunk or otherwise

secured thereon. As the improved socket is alike on all the spokes, only one spoke will be referred to, and the latter has its outer end reduced or turned down, as at 5, to receive a sleeve 6 of the socket. The reduced or turned-down end 5 of the spoke abuts closely against the outer terminal of that part of the sleeve in which it is fitted, and on the outer end of the said sleeve a concaved flange 7 is formed and projects at opposite ends beyond the diametrical extent of the sleeve and provides a seat into which the felly fits and is reinforced by the opposite flanged portions. From the center of the outer flanged end of the sleeve a stem 8 projects, being disposed centrally of the said flange, and has its outer end 9 split or slitted, as at 10, the opposite portions of said outer end being formed with corrugations 11, which may be enlarged screw-threads of a diminished pitch in view of the fact that this would be a very simple way to arrive at the construction sought. The felly 1 has a bore 12 therethrough extending from the inner edge to the periphery, which is of a diameter equal to the largest cross-sectional extent of the stem 8 or so that the said stem can be readily passed or driven thereinto. The length of the stem 8 from the point of connection with the flange 7 to the outer free end or terminal should be equal to the length of the bore 12, so as to avoid exterior projection of the said outer end or terminal of the stem beyond the periphery of the felly.

In assembling the parts the reduced or turned-down end 5 of the spoke 2 is driven into the socket 6, and then the stem 8 is caused to enter the bore 12 of the felly 1. The inner curved edge of the felly 1 will be then closely seated against the flange 7, and while held in this position a wedge 13 is driven longitudinally into the split or slit 10 of the outer end of the stem 8. This wedge spreads the opposite portions of the outer terminal 9 of the stem 8, as shown by Fig. 2, and drives the corrugations into the wood of the felly adjacent the periphery of the latter. This operation also jams the stem and prevents longitudinal movement thereof in the bore 12, and the greater portion of the wood of the felly which is located between the outer spread terminal of the stem and the inner curved edge of said felly is entirely relieved

of strain, and working loose or pulling out of said stem is thus prevented. Furthermore, the flange 7, snugly fitted around the inner curved edge of the felly over the bore 12, will materially preserve the stem by preventing the ready entrance between the parts of moisture or grit. After all the spokes have been connected up in the manner stated the tire 4 is applied to the felly 1, and the outer spread ends of the stems 8 are entirely covered and protected.

By the use of the improved device the connection between the outer ends of the spokes and the felly is positive and the securement can be easily effected without injury to the felly. The ends of the spokes are also protected from wear and decay by accumulation of moisture adjacent the point of attachment of the same, and the sleeve 6 being firmly fastened on the outer reduced or turned-down end of each spoke holds the concaved flange 7 firmly in one position, and after application of the latter to the felly the spoke end is laterally braced.

Changes in the proportions, size, and minor details of construction can be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new is—

1. The combination with a felly having a bore extending transversely therethrough, of a spoke, a socket fitted on the said spoke and provided with a stem equal in length to the bore through the felly and having its outer

extremity longitudinally split, the opposite portions of said outer split end being corrugated and normally located within the bore of the felly, adjacent the outer portion of the same, the outer split end of the stem being exposed through the outer opening of the bore, and a wedge adapted to be driven into the said split end of the stem to spread the opposite corrugated portions apart and bear against the wall of the bore of the felly to prevent withdrawal of the said stem from the felly.

2. The combination of a socket having a concaved flange at its outer end, a stem projecting from the said flanged end of the socket and having an outer split end, the opposite portions of the split end of the stem being roughened and adapted to be laterally spread, a spoke on which the socket is fitted, a felly having a bore therein which extends entirely therethrough, from the inner curved edge to the periphery, and equal in length to the stem, and a wedge adapted to be driven into the split end of the stem to spread the same, the said flange on the end of the socket fitting closely against and bracing the inner portion of the felly.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

THOMAS A. KILLINAN.
ALVIN E. POTTER.

Witnesses:

A. F. EVANS,
J. R. STARK.