

(No Model.)

J. R. McALISTER.
SPOKE SOCKET.

No. 417,741.

Patented Dec. 24, 1889.

Fig. 1.

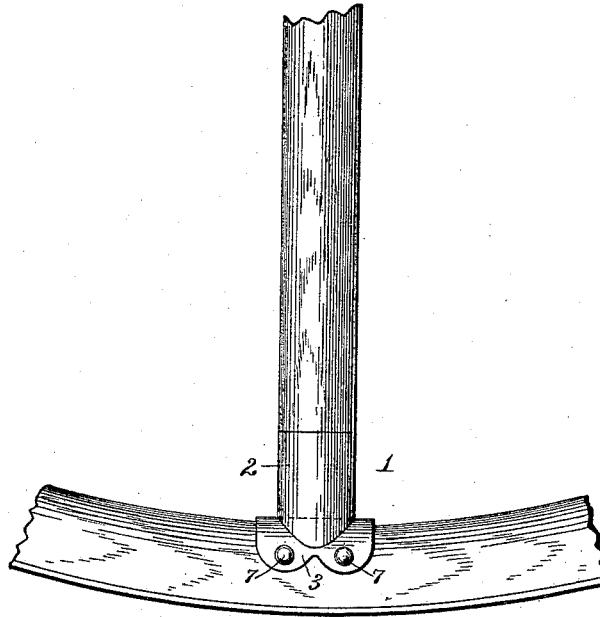


Fig. 2.

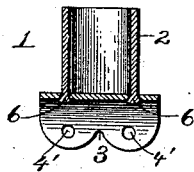


Fig. 3.

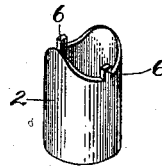


Fig. 4.

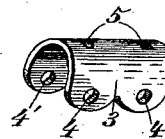
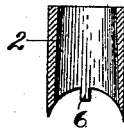


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES R. McALISTER, OF ROSSIE, NEW YORK.

SPOKE-SOCKET.

SPECIFICATION forming part of Letters Patent No. 417,741, dated December 24, 1889.

Application filed September 19, 1889. Serial No. 324,384. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. McALISTER, a citizen of the United States, residing at Rossie, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Spoke-Sockets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in spoke-sockets, which will be hereinafter fully described, and particularly pointed out in the claims.

The common practice of uniting a spoke to a felly of a vehicle is to form a large aperture or socket in the felly to receive a tenon on the outer end of the spoke; but this is objectionable, because it tends to weaken the felly.

The primary object of my invention is to overcome this objection by providing a socket which will receive the spoke, and thus preserve the felly entire and materially strengthen the joint at its weakest part—namely, where the spoke is united to the felly.

Heretofore a spoke-socket and felly have been cast in a single piece of metal; but I propose to make the felly-clasp and the spoke-socket in separate pieces of metal—as, for instance, sheet-steel—and to unite the two parts permanently together in a novel manner. By making the device in two parts of thin sheet-steel and uniting them together the weight of the sockets in an entire wheel is very materially reduced without sacrificing the necessary strength and stability, which is very desirable, the device can be more conveniently manufactured, it is less exposed to view and abrasion, and is more durable than cast-metal sockets and clasps.

To enable others to understand my invention, I will now proceed to a detailed description thereof in connection with the accompanying drawings, in which—

Figure 1 is a view of my improved felly applied to a vehicle-wheel. Fig. 2 is a vertical sectional view through the spoke socket and clasp. Figs. 3 and 4 are detached views of the socket and clasp, respectively. Fig. 5 is

a vertical section of a modified form of the socket.

Like numerals of reference denote corresponding parts in all the figures of the drawings, referring to which—

1 designates my improved spoke-socket, which consists of a socket 2 and a clasp 3, which are made of separate pieces of metal and permanently united together in a novel manner, as will be presently described.

In the preferred embodiment of my invention I stamp a blank for the felly-clasp 2 out of a single piece of sheet metal, and then bend the blank into the concavo-convex shape shown in Fig. 4. The clasp is provided at its edges with coincident apertures 4 4', through which bolts, rivets, or other suitable contrivances can be passed to secure the clasp to a felly, and in its crown or apex the clasp has two or more transverse apertures 5, for a purpose which will presently appear.

The socket 2 is made by stamping a blank from a piece of sheet metal, bending it into the desired cylindrical shape, and uniting the meeting edges of the blank together in any suitable manner. At one end the socket is provided with studs or tenons 6, preferably two in number and located at diametrically-opposite points, and these tenons are made integral with the socket by being stamped out of the sheet of metal at the same time with the blank of which the socket is made. The lower end of the socket is recessed or shaped to fit snugly over the concavo-convex felly-clasp, and the clasp and socket are permanently united together by heading the tenons or studs 6 down on the inner side of the clasp, said tenons passing through the apertures 5 in the crown of the clasp.

The device is used by fitting the clasp snugly over the felly and securing it firmly on the latter by means of rivets or bolts 7, which pass transversely through the felly and the coincident apertures 4 4' in the clasp, and the tenon on the spoke is fitted in the socket and securely held in place by the same on the felly. The clasp and socket thus serve to unite the felly and spoke and to materially strengthen the parts without weakening the felly by cutting a large socket or aperture therein. I prefer to make the combined clasp

and socket out of thin sheet-steel, which possesses the necessary strength and is light, so that the weight of a series of clasps and sockets, constructed as specified and applied to a wheel, is less than a corresponding number of cast-metal sockets, which is very desirable.

By making the clasp and socket in separate pieces and uniting them together the device can be very conveniently manufactured, is less exposed to view and abrasion, and is more durable than cast-metal sockets. I also contemplate casting the socket in a single piece of metal and uniting it to the sheet-metal clasp. When the socket is cast, the wall thereof is tapered from its upper toward its lower end to facilitate withdrawing the same from sand or mold, and the tenons are made integral with the socket, as shown in Fig. 5, and the two parts are united together by fitting the socket on the clasp, so that the tenons of the socket enter the apertures in the clasp, and heading the tenons down on the inner face of the clasp, as is obvious.

As a further modification of my invention, the clasp may be cast in a single piece of metal with the apertures in its crown and the socket cast in another piece. When the socket is cast separate from the clasp, it can be made thinner and lighter than it is possible to make the device when made of a single piece of metal. The hole in the socket is tapering to permit the pattern to be easily drawn from the sand and to adapt the socket to fit the tenon of the spoke tightly and snugly.

The cast-metal socket may have its outside taper to correspond with the inside taper, the thickness of the wall of the socket being uniform throughout; but in cases where the sockets are cast connected with the clasp the sockets must be of reverse taper as to inside and outside taper in order to draw from the sand.

Slight changes in the form and proportion of parts can be made without departing from

the spirit or sacrificing the advantages of my invention.

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

1. As an article of manufacture, a combined spoke-socket and felly-clasp consisting, essentially, of a clasp made of a single piece of metal and having the transverse apertures, and a socket made of another piece of metal and provided with the tenons which are fitted in the apertures of the clasp and headed down thereon to permanently unite the clasp and socket together, substantially as described.

2. As an article of manufacture, a combined spoke-socket and felly-clasp consisting of a clasp shaped to snugly fit a felly, and a socket which is made separate from the clasp, the two parts being permanently united together, substantially as described.

3. A combined spoke-socket and clasp consisting of a curved clasp and a socket made separate from the clasp and curved or recessed at its lower end to fit snugly on the back of the clasp, the clasp and socket being riveted together, substantially as described.

4. In a combined spoke-socket and clasp, a clasp made of a single piece of sheet metal bent into the desired curved shape and having the central apertures, and a socket also made of a single piece of sheet metal which is bent into cylindrical form and shaped at its lower end to fit snugly on the back of the clasp, said socket having the integral tenons at its lower end which are fitted in the central apertures in the clasp and are headed down on the inner face thereof, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES R. McALISTER.

Witnesses:

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