

(No Model.)

E. WEINMANN & F. LINDHORST.
PROTECTING PLATE FOR SPOKE SOCKETS.

No. 486,995.

Patented Nov. 29, 1892.

Fig. 1.

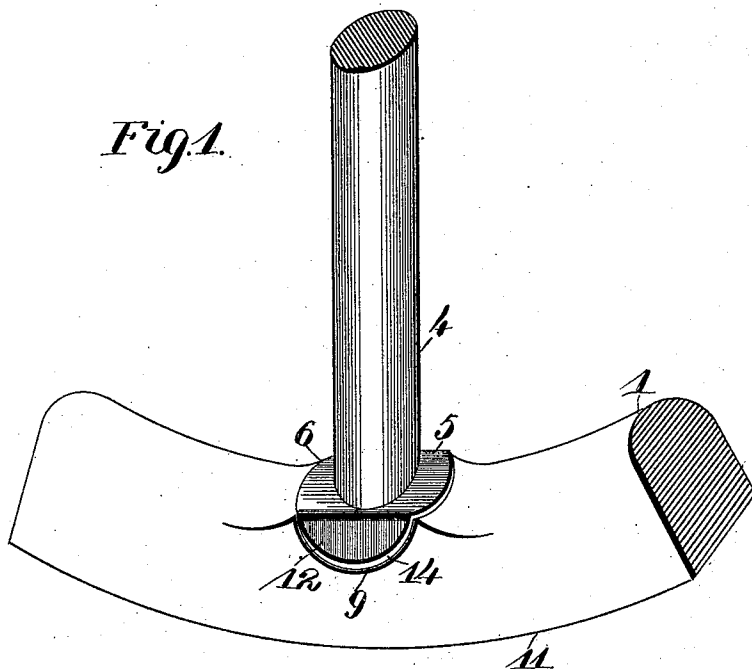


Fig. 2.

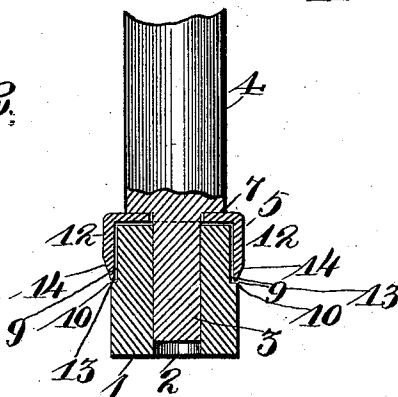


Fig. 3.

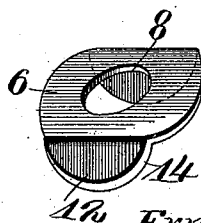
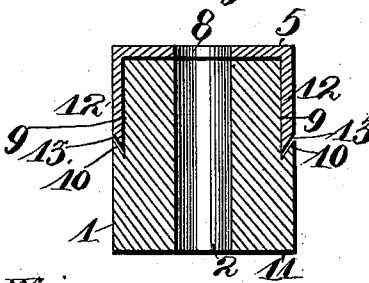


Fig. 4.



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UNITED STATES PATENT OFFICE.

ERNEST WEINMANN AND FRANK LINDHORST, OF ST. LOUIS, MISSOURI.

PROTECTING-PLATE FOR SPOKE-SOCKETS.

SPECIFICATION forming part of Letters Patent No. 486,995, dated November 29, 1892.

Application filed August 5, 1892. Serial No. 442,238. (No model.)

To all whom it may concern:

Be it known that we, ERNEST WEINMANN and FRANK LINDHORST, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Protecting-Plates for Spoke-Sockets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to improvements in protecting-plates for spoke-sockets; and it consists in the novel construction and combination of parts more specifically set forth in the specification and brought out in the claims.

Figure 1 is a perspective view of a felly and spoke with parts broken away, having our invention applied thereto. Fig. 2 is a transverse section of a felly, protecting-plate, and spoke, showing the several parts united. Fig. 3 is a perspective view of the protecting-plate; and Fig. 4 is a transverse section of a felly and plate, showing a modification.

The object of our invention is to construct a protecting-plate in such a manner that the same can be applied or interposed between the shoulder formed on the lower end of the spoke and the inner surface of the felly adjacent to the opening formed in the same for the reception of the reduced extension of the spoke. By the use of our invention, when applied in the manner as hereinafter stated, the felly is prevented from splitting at either side of the opening formed in the same—a thing of repeated occurrence on wheels generally; and, further, the spoke is prevented from wearing into the felly and causing the said spoke to become loose.

Referring to the drawings, 1 represents a felly having an opening 2 formed therein for the reception of the decreased extension 3 of the spoke 4.

5 represents a metallic plate, preferably formed of a single piece, and is of such a thickness as to adapt itself for the purposes hereinafter stated. The said plate 5 is provided with a flat surface 6, against which the shoulder 7 of the spoke 4 comes in contact, in which instance the said shoulder will not rest directly upon the felly, as ordinarily it does. The flat surface 6 extends a suitable distance beyond the shoulder of the spoke,

as best shown in Fig. 1, affording a sufficient amount of bearing-surface on the felly. Through the protecting-plate 5 is formed a circular opening 8, of such a size as to receive the decreased extension 3 of the spoke in a manner, as shown in Fig. 2, before the same is inserted into the opening formed in the felly. Thus it will be seen that the said protecting-plate is interposed between the shoulder 7, formed on the spoke and the inner surface of the felly. On either side of the felly, opposite the opening 2 therein, are formed two semicircular depressions 9, which are shallow and form shoulder 10 at a suitable distance from the outer edge 11 of the felly.

Referring again to the protecting-plate, 12 represents two downwardly-projecting lips, which are formed integrally with said plate and are bent at right angles with the flat surface 6 of the same. The edges 13 of the said lips are of such a thickness as to fill the space or semicircular depressions 9, the said edge 13 coming in contact with shoulders 10, formed by the said depressions, as best shown in Fig. 2. The edges of said lips are curved to conform to the curved depression 9, formed in the felly, and adjacent to said curved edge the lips are beveled up to the edge of the shoulder 10, as shown at 14, which prevents the said plate from being abruptly struck, or, more properly, the lower edges of the lips forming a part of the same by obstructions in the street as the wheel turns.

The protecting-plate subserves a very important function in that it prevents the spoke from working into the socket by heavy jolts during the travel of the wagon on a rough road, and as a result splitting the felly around the socket, and thus loosening the tire. Accordingly, the plate acts as a spoke, felly, and tire-protector.

In the modification shown in Fig. 4 the depressions 9, formed on the opposite sides of the felly 1, are of a depth corresponding to the thickness of the lips 12 of the plate 5, whereby the outer surface of the said lips and the corresponding surface of the felly are flush or in a line with one another. The lower edges 13 of said lips are beveled to an edge and are fitted in correspondingly-shaped shoulders 10, forming the curved wall of the de-

pressions 9. By this construction it will be seen that the lips 12 are prevented from being bent in any manner and are held snugly against the opposite surfaces of the felly, which is necessary for preventing the said felly from splitting.

Having fully described our invention, what we claim is—

1. In combination with a spoke and felly, a plate 5, having a flat surface 6, an opening 8, formed in the said plate for receiving the reduced extension of the spoke, lips formed on the opposite sides of the said plate and provided with beveled edges 14, and semicircular depressions 9, formed on the opposite sides of the felly forming shoulders 10, the depth of said shoulders corresponding to the thickness

of the lower edge of said lips, substantially as described.

2. In combination with a spoke and felly, a plate 5, having an opening 8, lips 12, formed on the opposite sides of said plate, the lower edges of which are beveled, depressions 9, formed on the opposite sides of said felly, and shoulders 10, of a shape corresponding to the lower edges of said lips, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ERNEST WEINMANN.
FRANK LINDHORST.

Witnesses:

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