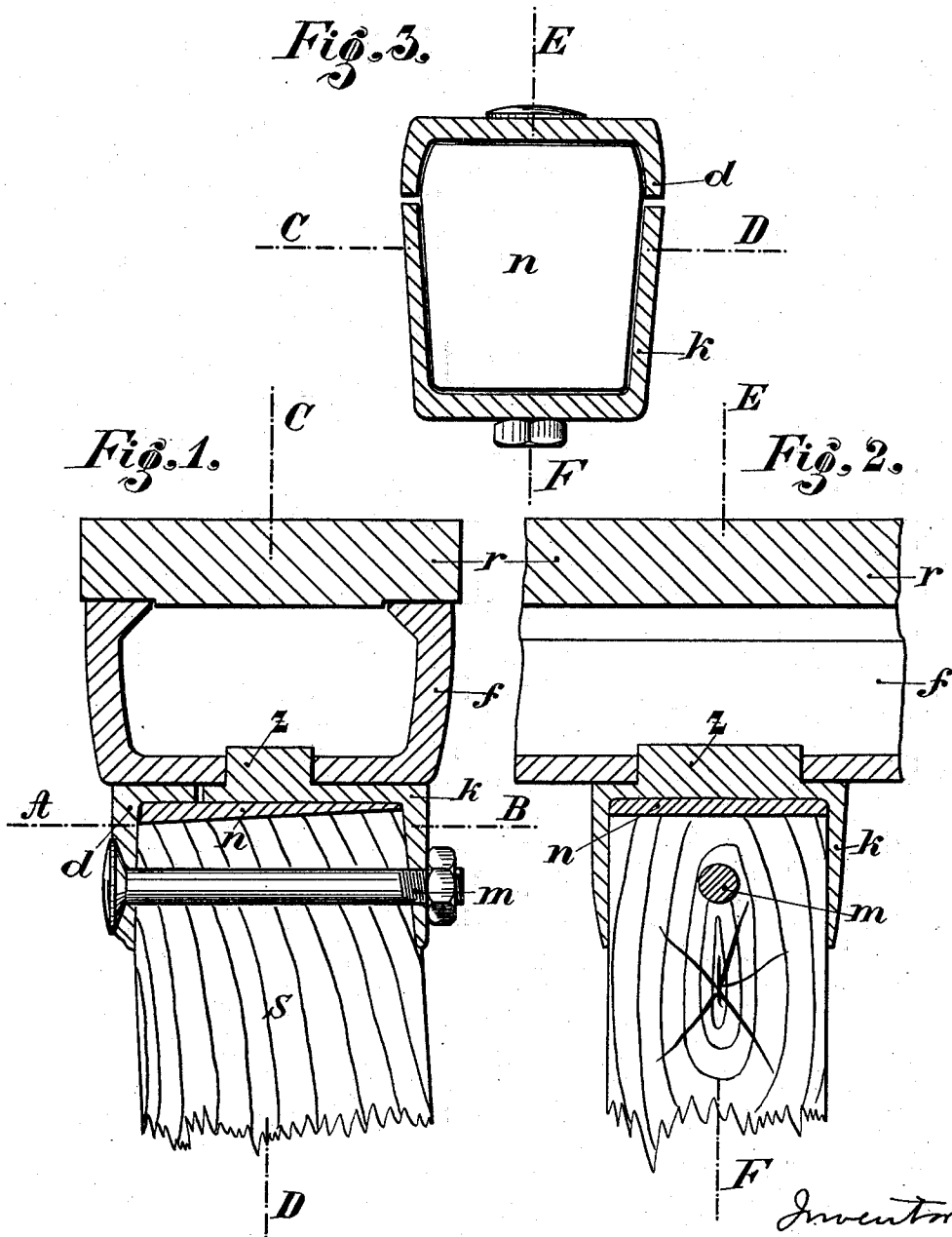


(No Model.)

C. SCHMIDT.
SPOKE SOCKET.

No. 580,732.

Patented Apr. 13, 1897.



Witness:—

John H. Hogelton.
Thos M. Pinner

Inventor
Carl Schmidt, by
Edward Weaver, atty.

UNITED STATES PATENT OFFICE.

CARL SCHMIDT, OF ERFURT, GERMANY.

SPOKE-SOCKET.

SPECIFICATION forming part of Letters Patent No. 580,732, dated April 13, 1897.

Application filed September 28, 1895. Serial No. 563,953. (No model.) Patented in Germany August 17, 1892, No. 68,010; in England June 4, 1894, No. 10,858; in Belgium June 11, 1894, No. 110,428; in Switzerland August 4, 1894, No. 8,825; in Hungary August 19, 1894, No. 929; in Austria October 20, 1894, No. 44/6,064; in Norway July 25, 1895, No. 3,940; in France August 30, 1895, No. 249,991; in Natal September 24, 1895, No. 30, and in Cape Colony September 30, 1895, No. 508.

To all whom it may concern:

Be it known that I, CARL SCHMIDT, a subject of the King of Prussia, Emperor of Germany, residing at Erfurt, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in Means for Securing Spokes to the Tires of Wheels, of which the following is a specification.

Upon the subject-matter of this invention I have already secured Letters Patent in several countries, to wit: in England, No. 10,858, dated June 4, 1894; in Belgium, No. 110,428, dated June 11, 1894; in Switzerland, No. 8,825, dated August 4, 1894; in Austria No. 44/6,064, dated October 20, 1894; in Hungary, No. 929, dated August 19, 1894; in Norway, No. 3,940, dated July 25, 1895; in France, No. 249,991, dated August 30, 1895; in Cape Colony, No. 508, dated September 30, 1895; in Natal, No. 30, dated September 24, 1895, and in Germany, No. 68,010, dated August 17, 1892.

My invention relates to improved means for fixing the wooden spokes to the rims or fellies of vehicle-wheels in which the end of each spoke is connected to the wheel rim or felly by means of a cap composed of two parts which are clamped to the spoke by a bolt and one of which is formed with a tenon or lug that fits in the rim or felly.

The accompanying drawings illustrate fixing means of the kind referred to.

Figure 1 is an axial section on the line E F of a wheel provided with an iron felly; Fig. 2, a cross-section on the line C D of Fig. 1, and Fig. 3 a section on the line A B of Fig. 1.

In the figures, *s* represents the outer end of a spoke; *f*, the iron wheel-felly; *r*, the tire; *k* and *d*, the two parts of the cap; *z*, the lug or tenon on the part *k*, and *m* the screw-bolt.

In a spoke-fastening of this kind the usual wooden spoke-tenons are entirely dispensed with, and the spokes have consequently the greatest possible bearing area for supporting the load. Such spoke-fastenings have hitherto suffered from the disadvantage that in consequence of the shrinking of the wood, and also of traveling under pressure, the spoke

itself shrinks, so that the end of the spoke finally becomes loose in the cap or the cap loose in the felly. Now in order to obviate this disadvantage there are employed, according to this invention, one or more wedges *n*, which is or are inserted in a removable manner between the end *s* of the spoke and the parts *k* and *d* of the cap. The thickness of the wedge or the total thickness of the wedges, which may be of equal or of unequal thicknesses, depends upon the degree of contraction or shortening of the spoke.

If, when a wheel constructed with this spoke-fastening has been for some time in use, a certain amount of space or play exists between the cap and the felly, or between the cap and the end of the spoke, the cap *d* is removed after removing the screw-bolt *m*, and then either a fresh wedge, corresponding in thickness to the amount of the contraction or shortening of the spoke, is inserted, or another wedge *n* already in position. The cap *d* is then replaced and fastened by the bolt *m*. The use of removable wedges *n* in this way renders the spoke-fastening available for effectual use for an unlimited time.

What I claim is—

In a wheel, the combination with the spokes, of the angular boxes embracing three sides of the outer end thereof, having inwardly-extending portions overlapping the outer ends of the spokes and formed with an outwardly-extending lug or tenon, the covers also embracing said spokes and formed with an overlapping portion, the bolts connecting said boxes and covers, the fellies having apertures with which said lugs or tenons engage the tire, and the wedges interposed between the fellies and the boxes and covers, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CARL SCHMIDT.

Witnesses:

MAX MEYER,

WILHELM BREIDEWALD.