

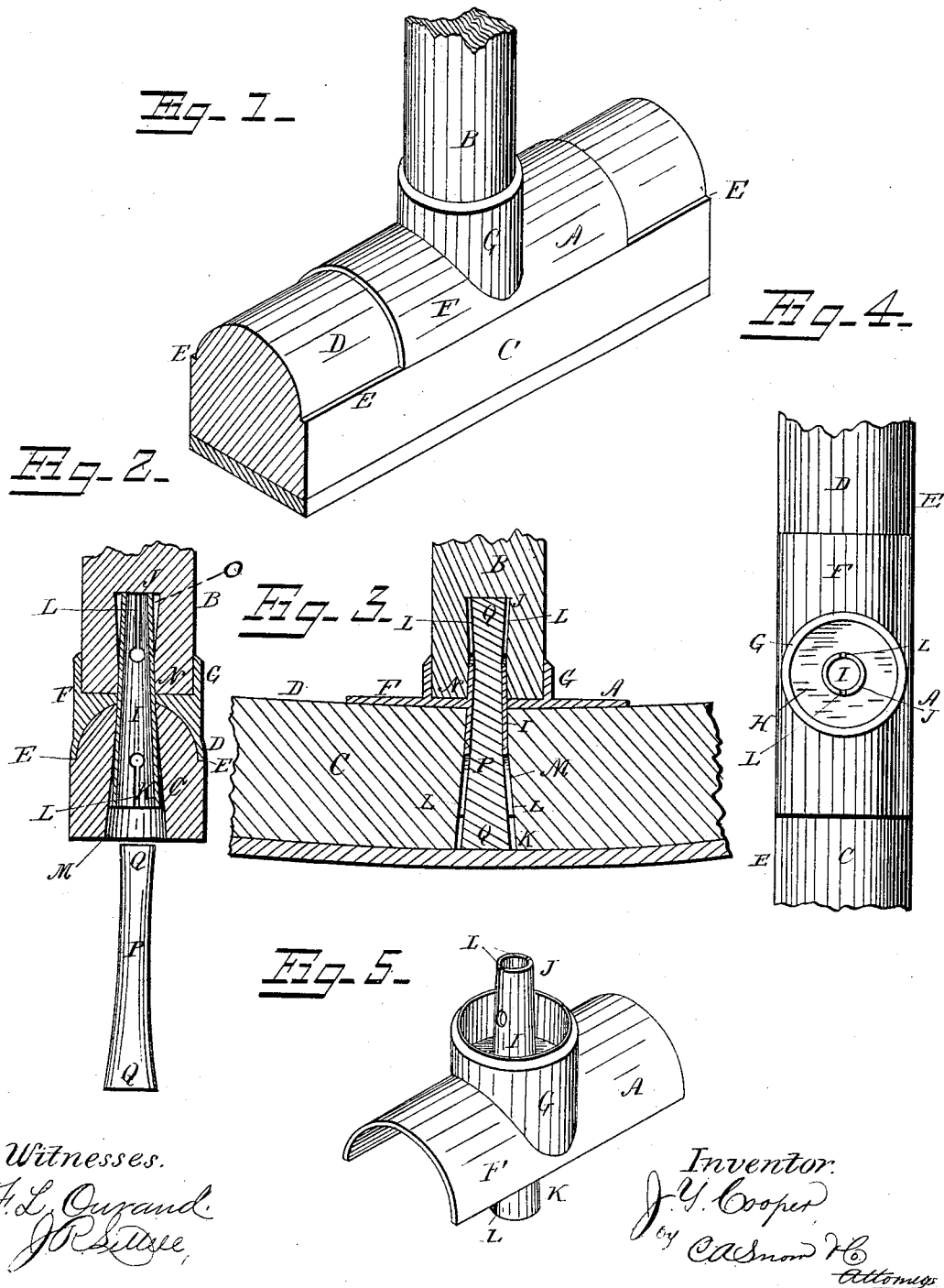
(No Model.)

J. Y. COOPER.

SPOKE SOCKET.

No. 266,609.

Patented Oct. 31, 1882.



# UNITED STATES PATENT OFFICE.

JOHN Y. COOPER, OF NASHVILLE, TENNESSEE.

## SPOKE-SOCKET.

SPECIFICATION forming part of Letters Patent No. 266,609, dated October 31, 1882.

Application filed August 31, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN Y. COOPER, of Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Spoke-Sockets; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to spoke-sockets; and it consists in certain improvements in the construction and operation of the same.

It has been practically demonstrated that the strain of the spoke on the felly is downwardly and laterally, and this it is the object of my present invention to obviate, and also to provide a simple, durable, and efficient socket that will equalize the strain.

In the drawings, Figure 1 is a perspective view of a part of a felly with the socket and spoke; Fig. 2, a transverse vertical sectional view thereof; Fig. 3, a longitudinal vertical sectional view; Fig. 4, a top view with the spoke removed; Fig. 5, a perspective view of the socket detached.

Referring to the drawings, A designates the socket, which is preferably formed of one piece of malleable iron; B, the spoke, and C the felly. The inner surface, D, of the felly is preferably curved or convexed, as shown, and is provided at each side with longitudinal shoulders E E. On these shoulders abut the side edges of a base-plate, F, of the spoke-socket. Plate F conforms to the shape of the inner face, D, of the felly, and is provided on top with an annular flange or collar, G, forming a socket or recess for the end of the spoke, said recess having a flat bottom, H. Centrally through bottom H, and extending some distance above and below the same, is a tube, I, having its top and bottom ends, J K, respectively formed with slits L, so as to be capable of expansion and contraction. The lower end, K, of tube I is of sufficient length to extend into the felly about three-fourths (more or less) the depth of the latter. It is received into an opening or perforation, M, formed in the felly, said opening being enlarged at its outer end by reaming or other-

wise, so that when the slitted end of tube is inserted it will expand, when pin P is driven in, in this enlarged space and securely hold and bind plate F of the socket to and upon the inner surface of the felly. The end N of the spoke is formed with a hole or recess, O, to receive the upper end, J, of tube I, which end J extends preferably some distance above flange or collar G. End J is also tapering and slightly smaller than end K, so that when the pin P is driven through perforation M in the felly and through tube I it will expand the ends J K by reason of its own enlarged or bulging ends Q Q. The end of the spoke rests on surface H, and is protected from splitting or other damage by the surrounding collar or flange G.

The tire is fitted on in any suitable manner, and should it become separated the wheel, being independent in construction, would remain intact.

The tube I and collar G and base-plate F prevent lateral strain on either the spoke or felly, and bottom H obviates any damage to the felly by downward pressure of the spoke. The edges of base-plate F abutting upon the shoulders of the felly, with the tube that extends into the felly, prevent lateral movement of the socket.

I claim as new—

1. In a spoke-socket, the combination, with the double tube extending one end into the end of the spoke and the other into the felly, both ends being slitted, of the retaining-pin having bulging or enlarged ends to expand the ends of the tube, as set forth.

2. The combination, with the felly having a curved inner surface terminating in a shoulder at each side and an opening or perforation enlarged at its outer end, of a spoke-socket having a curved base-plate arranged with its side edges abutting on the shoulders, and provided with a tube capable of expansion, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN Y. COOPER.

Witnesses:

STOKELY BLACK,  
CHRISTOPHER C. BURMAN.