

R. FRANCIS.
SPOKE JOINT.

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1,001,380.

Patented Aug. 22, 1911.

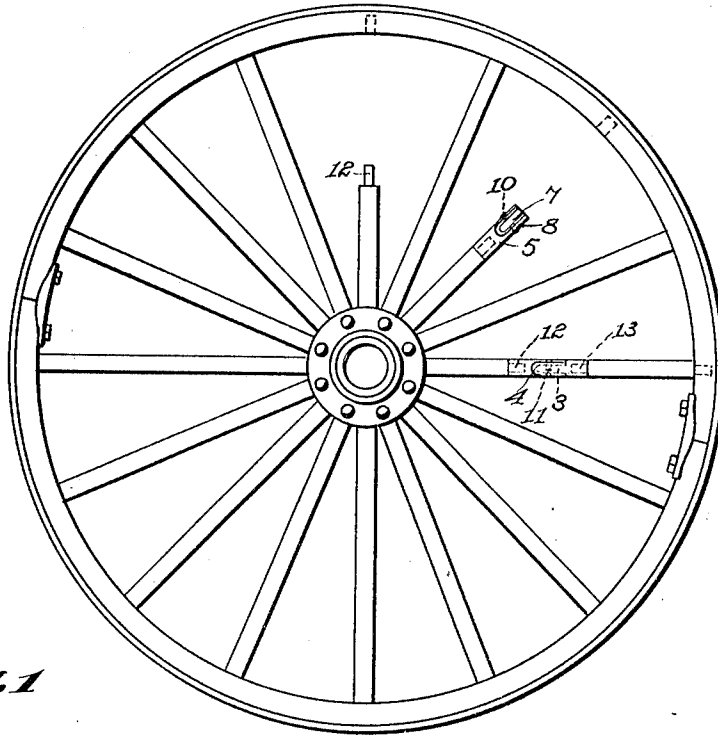


Fig. 1

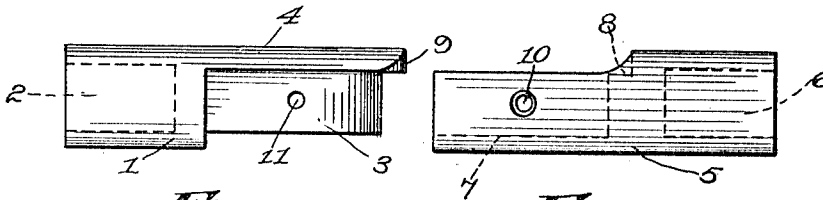


Fig. 2

Fig. 4

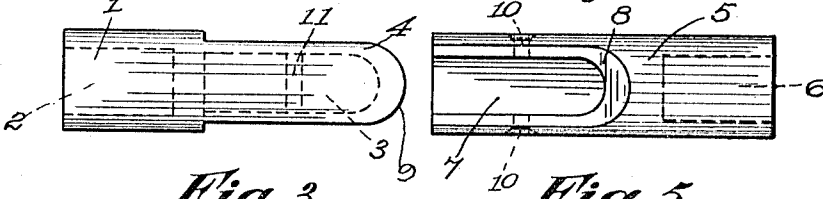


Fig. 3

Fig. 5

Witnesses:

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SPOKE-JOINT.

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To all whom it may concern:

Be it known that I, ROBERT FRANCIS, a subject of the King of England, residing at Brussels, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Spoke-Joints; and I do hereby declare that the following is 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.

The invention to be hereinafter described relates to vehicle wheels and more particularly to a spoke repairing device therefor.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a side elevation of a wheel with the joint applied; Fig. 2 is an enlarged side elevation of the male part, removed; Fig. 3 is a top plan view of Fig. 2; Fig. 4 is a view of the female part, similar to Fig. 2; and, Fig. 5 is a view of the female part, similar to Fig. 3.

The main objects of the invention are to provide a simply constructed, economical, and compact spoke repairing device which may be quickly and easily applied to a broken spoke without removing the wheel tire and without removing the inner spoke end from the wheel hub.

Referring to the drawings in detail, 1 indicates a male joint member provided with a socket 2 in one end and a tenon 3 on its opposite end. The tenon is formed as a reduced extension of the male member and leaves a flange 4 projecting from its base. The cooperating, or female member 5 is provided with a socket 6 corresponding to socket 2 and a mortise 7 adapted to receive the tenon 3. The said mortise and tenon have their ends rounded to fit each other, the end of the mortise being concave and that of the tenon correspondingly convex. In like manner the flange 4 integral with said tenon has a convex end 9 which fits a correspondingly concaved part 8 of the end of the wall of said mortise at and near the surface of the latter. This flange is curved trans-

versely to constitute a section of a cylinder and the corresponding part of the female member 5 is cut away to receive said flange, so that the surface of the latter will be flush and continuous with that of said member, the two members together constituting a cylinder of equal diameter throughout. The walls of the mortise and the body of the tenon are provided with perforations 10 and 11, respectively, to receive a rivet or pin by which the joint is held in place.

In applying the device, the broken spoke is cut at the break. The hub end is then reduced or cut down to form a pin or stud 12. The socket 2 of the male member 1 is then forced tightly on to this stud. Next, the other end of the spoke is similarly reduced to form a stud 13 and the socket 6 of the female member is forced tightly on to the stud. The outer end section of the spoke is then seated in the rim in the usual manner and the mortise of the member 5 is fitted about the tenon of the member 1. A pin or rivet is then passed through the perforations 10 and 11 and the joint is held rigidly.

One great advantage of the device is that a broken spoke may be repaired by it without removing either the wheel tire, or removing the inner end of the spoke from the hub.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.

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

1. In combination with the broken parts of a spoke reduced to form tenons on their proximate ends, a pair of spoke-repairing members which are socketed to fit on said tenons and provided at their proximate ends respectively with an elongated mortise and with an elongated tenon surmounted by a longer and broader flange, said tenon fitting into said mortise, said flange fitting the outer part and wall of said mortise and presenting a surface flush with the periphery of the other member, said mortise and tenon having rounded ends and said tenon and the walls of said mortise being transversely perforated to receive a fastening pin substantially as set forth.

2. A pair of members for connecting to-

gether the proximate ends of the parts of a
broken wagon spoke, said members being
adapted to be attached to said parts and
provided respectively with a longitudinal
5 mortise and a tenon and flange to fit the
same, said flange being flush with the pe-
riphery of the mortised member and said
tenon and mortised member being trans-

versely perforated to receive a fastening pin
substantially as set forth. 10

In witness whereof I have hereunto set
my hand in the presence of two witnesses.

ROBERT FRANCIS.

Witnesses:

A. T. CUSISE,

ALEX. ROE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
