

(No Model.)

G. E. ELLIOTT.  
SPOKE CONNECTION FOR VEHICLE WHEELS.

No. 477,203

Patented June 21, 1892.

Fig. 1.

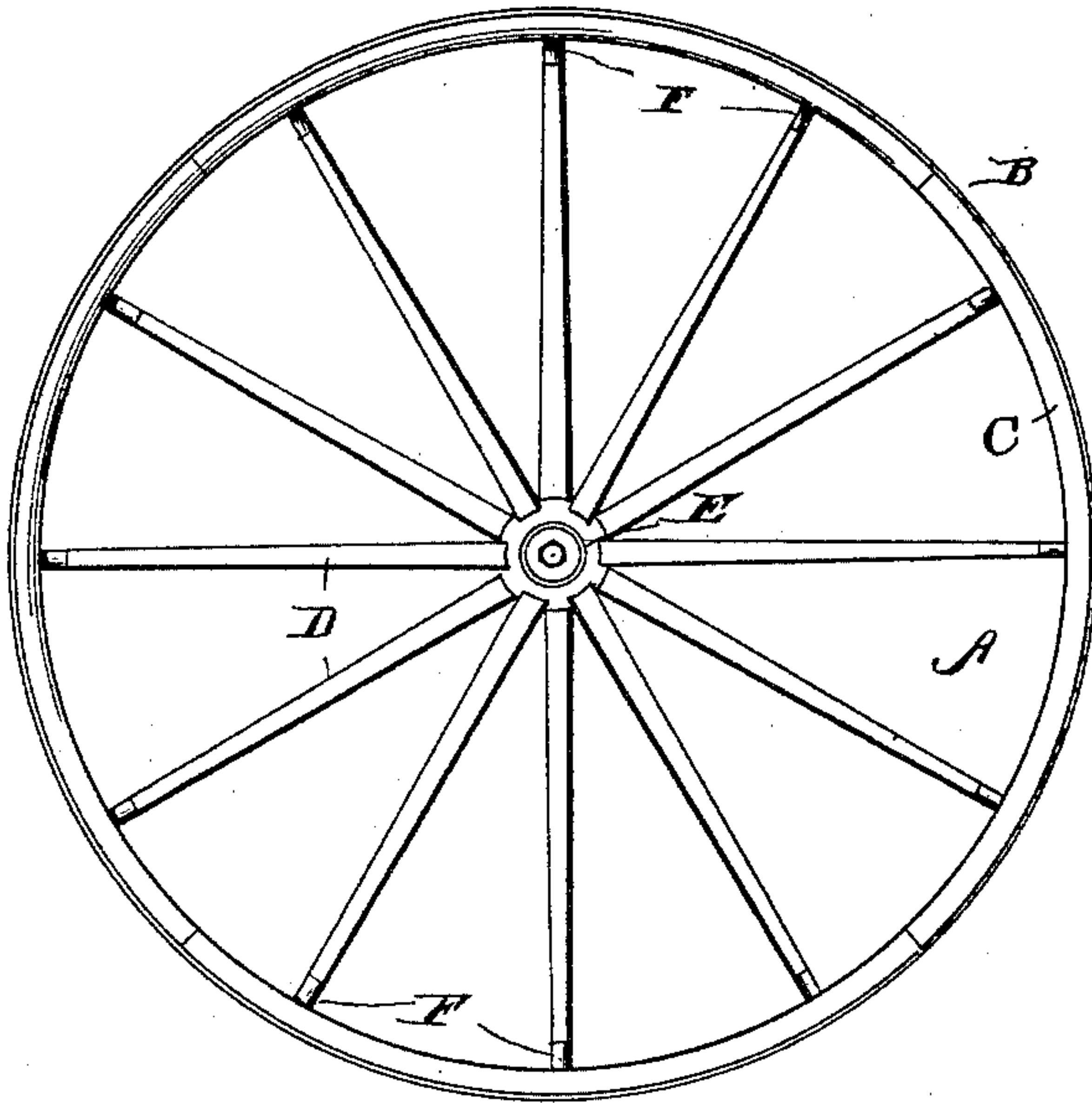


Fig. 2.

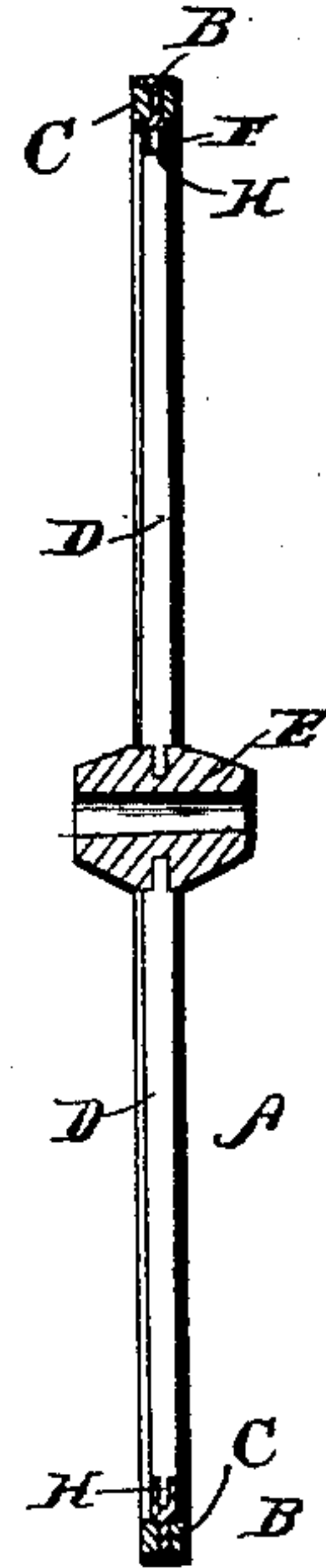


Fig. 3.

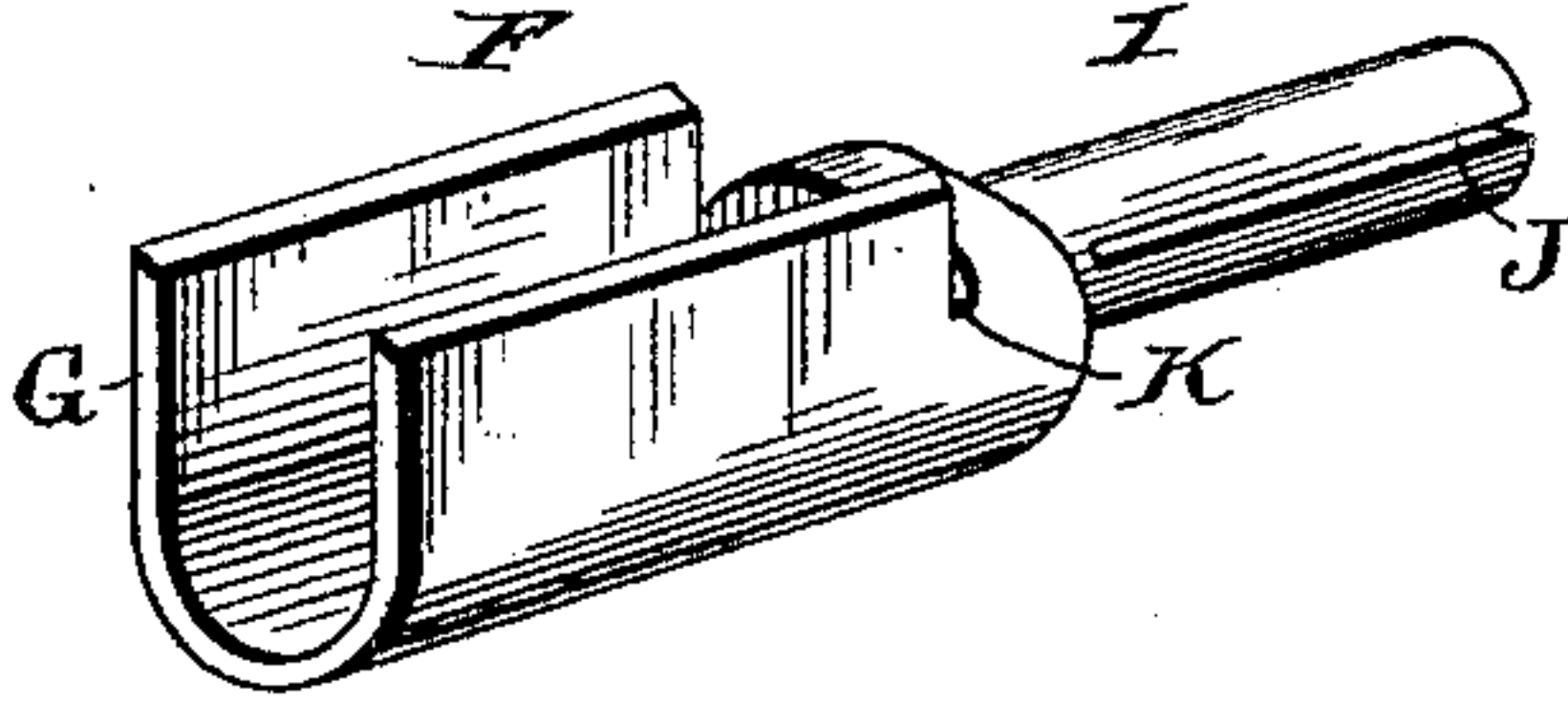


Fig. 4.

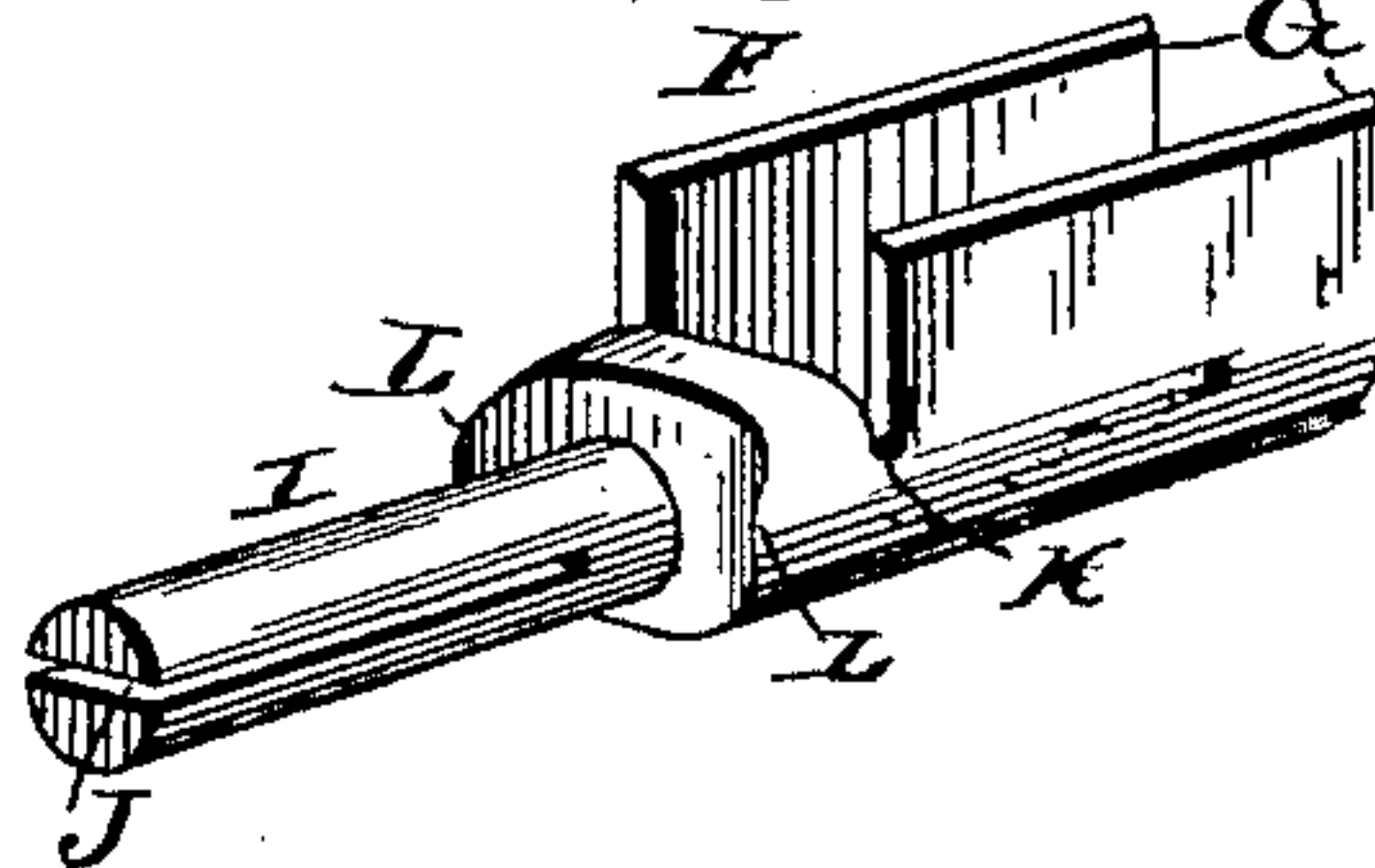
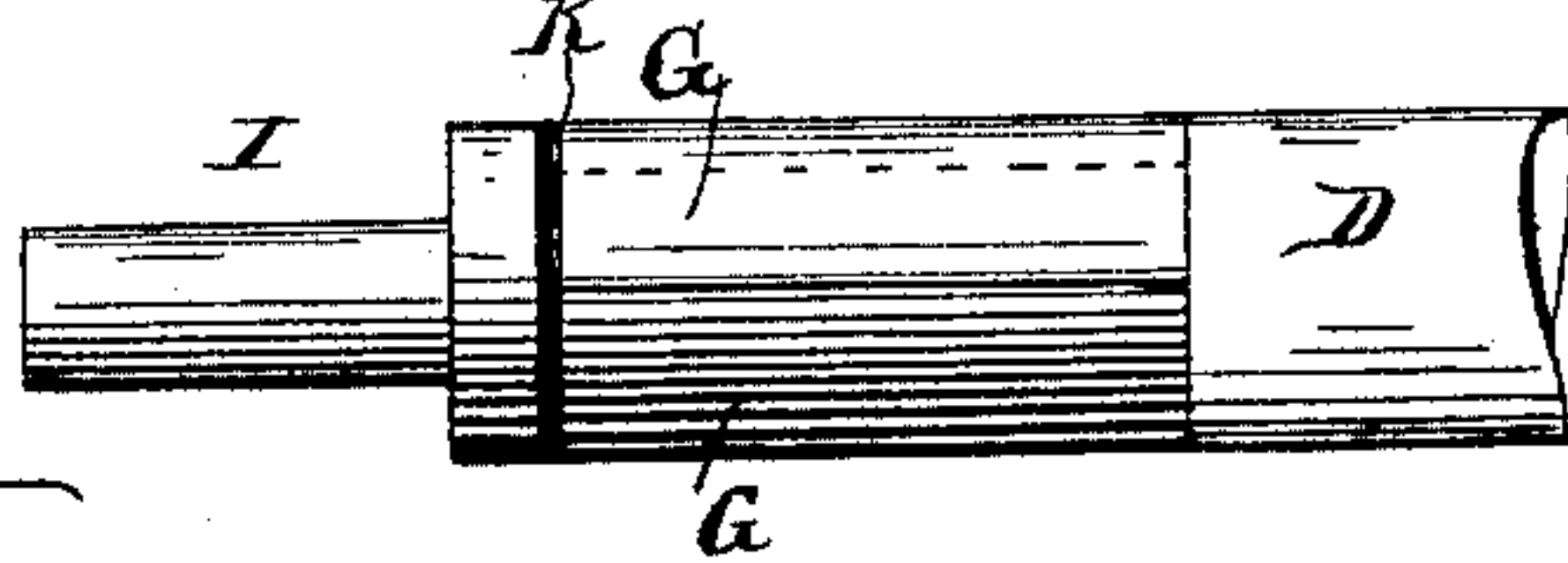


Fig. 5.



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# UNITED STATES PATENT OFFICE.

GEORGE E. ELLIOTT, OF GROSVENOR DALE, CONNECTICUT.

## SPOKE CONNECTION FOR VEHICLE-WHEELS.

SPECIFICATION forming part of Letters Patent No. 477,203, dated June 21, 1892.

Application filed April 20, 1891. Serial No. 389,664. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. ELLIOTT, a citizen of the United States, residing at Grosvenor Dale, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Spoke Connections for Vehicle-Wheels; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to vehicle-wheels, and more particularly to devices for connecting the ends of the spokes to the felly in case of a breakage or loosening of the same after the wheel has been completed and in use; and it consists in providing a piece of malleable metal which may be attached to the end of the spoke and connected with the felly in such a manner that it will be very strong and durable, as will be hereinafter more particularly set forth.

Referring to the accompanying drawings, which form a part hereof, and in which the same letters of reference indicate corresponding parts in each of the views, Figure 1 is a view of a wheel provided with my invention. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a perspective detail view of the device. Fig. 4 is a similar view of a different form of it. Fig. 5 shows the device with the wings G closed.

Referring more particularly to the drawings, A indicates a wheel, which may be made in the usual manner, with the outer ends of the spokes tenoned and inserted into the felly. With such wheels it sometimes happens that the tenon becomes loose in the mortise of the felly or perhaps broken off. In such instances the only way to remedy the trouble, without some such device as I have invented, it is necessary to remove the tire B and felly C, take the spoke D out of the hub E, and replace it with a new spoke. This of course requires the skill of a wagon or carriage maker. Besides it is very costly.

My invention is designed to take the place of such a troublesome process; and it consists of a peculiarly-shaped metallic piece F, which can be applied to the end of the spoke

with very little trouble and by any one possessing ordinary mechanical skill. The piece of metal is formed into an open-sided socket, having its sides extended into wings G G, which are of such length that when they are bent around the end of a tenon H, which is formed upon the end of the broken spoke, they will just meet and form a cylinder of the same size as the spoke, and will thus be hardly noticeable. On one end of the socket is formed a pintle or tenon I, which will fit into the hole in the felly and hold the end of the spoke firmly in its place. The pintle may be slotted, as shown at J, so as to receive a wedge for tightening it in the felly, and the wings are separated at their inner ends from the base of the socket by means of a slit or kerf K, which extends substantially half-way across the base and will permit of the wings being bent toward each other throughout their entire length, and thus make a very neat fit, and as the metal is of such strength this separation of the wings from the base will not weaken it to any great degree.

In applying the device to a spoke it is preferable to place a base or fulcrum of any kind upon the hub of the wheel and pry up the felly and tire by means of a lever upon the fulcrum until they are in their desired position. The tenon of the metal is then placed in the socket of the felly and the spoke marked at the end of the socket and wings. The device and lever are then removed and a tenon formed upon the end of the spoke, with its shoulder at the mark previously made upon it. The tenon of the device is then inserted into the socket of the felly and driven in firmly, a wedge having been inserted in the slit J, which will engage with the tire and be driven into the pintle as the device is driven into the felly and prevent its accidental removal. The felly and tire are again pried outward until the tenon on the end of the spoke will just slip into the socket between the wings, which stand substantially parallel with each other. A vise or pinchers of sufficient strength are then applied to the wings, and they are closed or clamped around the tenon of the spoke and the work is complete; or the wings may be driven around the tenon by means of a hammer and a small anvil held against the opposite side. In this



manner the inward pressure of the tire and felly is borne by the shoulders of the device and the ends of the spoke, which will make as secure an attachment as originally, 5 and after it is painted will scarcely be noticeable.

If desired, the shoulders of the device, where they engage with the sides of the felly, may be provided with small wings L L, which will 10 prevent the felly from spreading or splitting at that point, which is apt to happen from the pressure upon the end of the spoke.

Having thus described my invention, I claim--

15 1. A device for connecting the end of a spoke with the felly, consisting of the metallic piece F, having a pintle I and formed with the wings G G, which are separated at their inner ends from the base of the socket by the

slot or kerf K, substantially as and for the 20 purpose set forth.

2. The herein-described device for connecting the end of a spoke with the felly, consisting of the metallic piece F, having a pintle I and formed with the wings G G, which are 25 separated at their inner ends from the base of the socket by the slot or kerf K, the wings G G being of such length that they will just meet when pressed together around the spoke and form a cylinder of the same size as the 30 spoke, substantially as set forth.

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

GEORGE E. ELLIOTT.

Witnesses:

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AMASA COMAN.