

W. F. RAY.

Improvement in Wheel for Vehicles.

No. 119,788.

Patented Oct. 10, 1871.

Fig. 1.

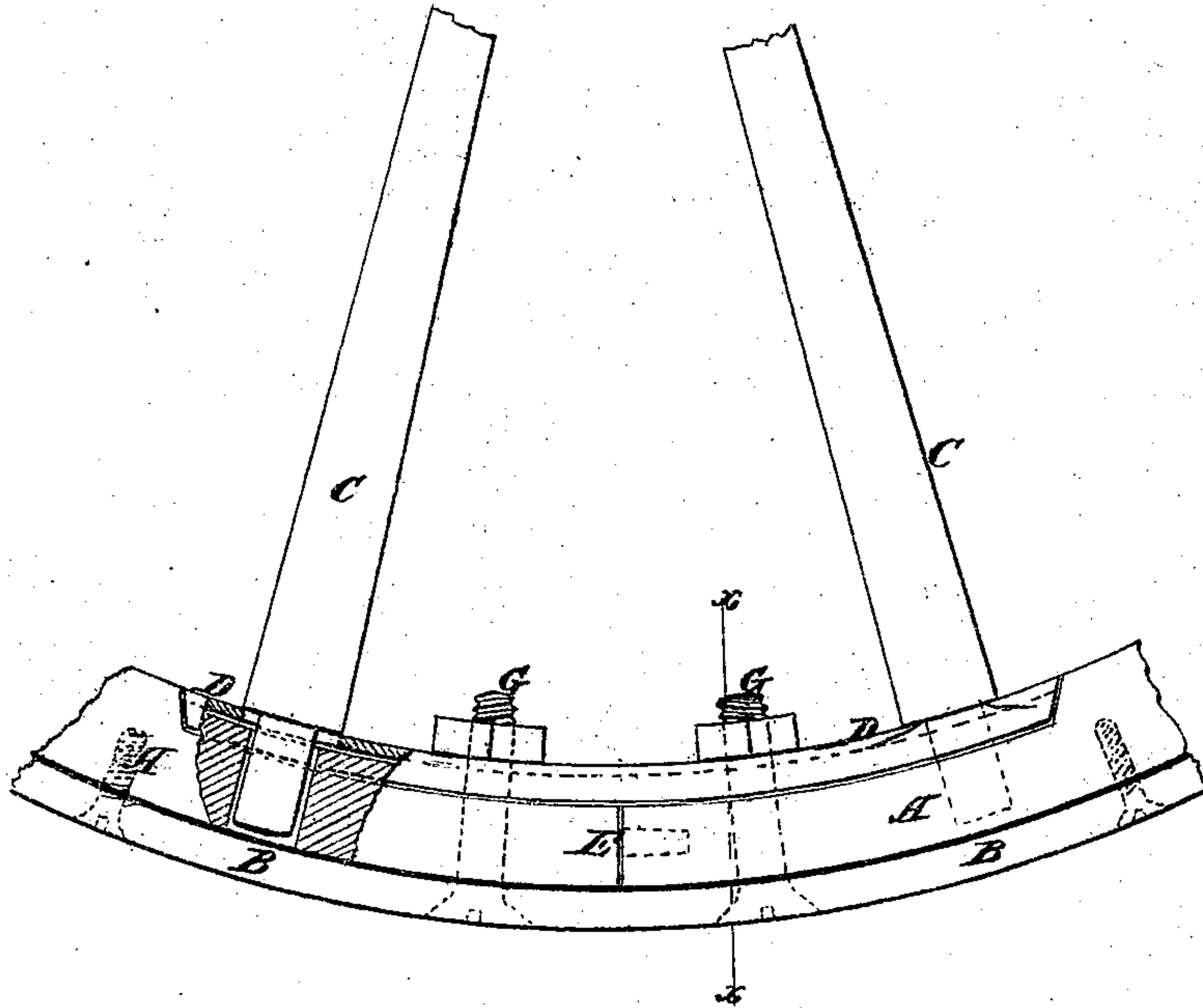


Fig. 2.

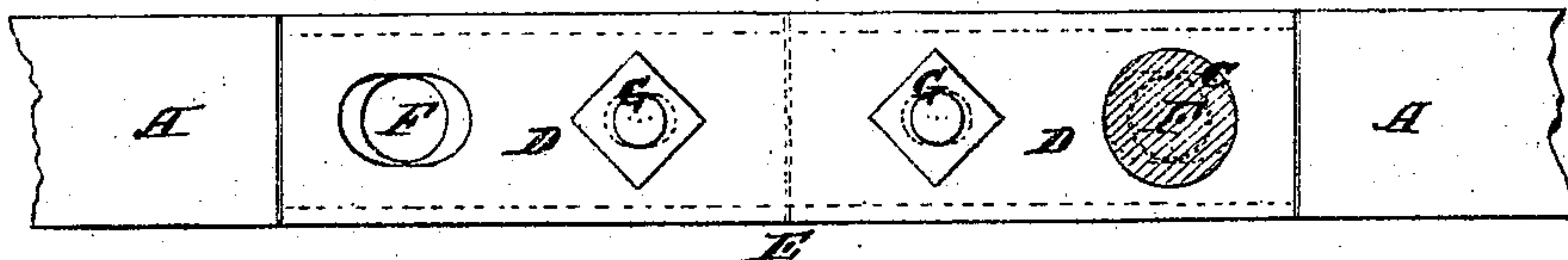
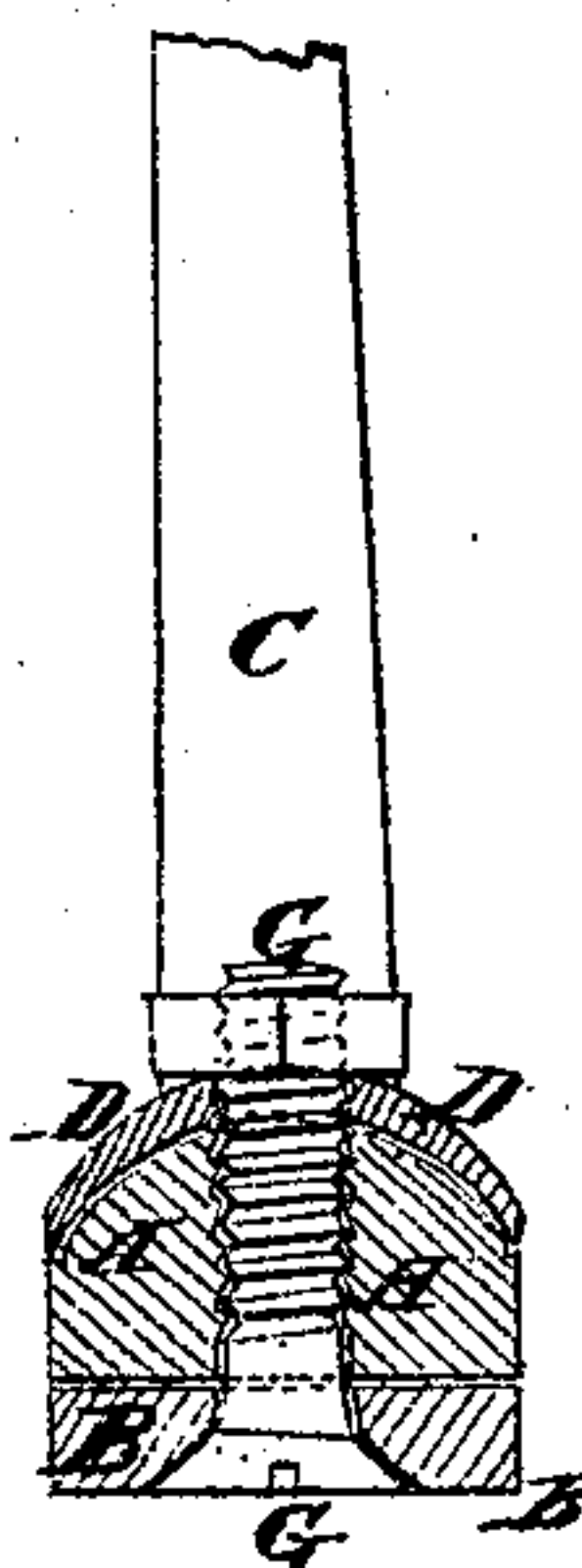


Fig. 3.



Witnesses:

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PER *mm*  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. 119,788, dated October 10, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM F. RAY, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and useful Improvement in Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of this invention is to strengthen the fellies or rims of wagon and carriage-wheels at the joints or where the felly-segments abut together; and it consists in a fish-plate curved longitudinally to fit the inside diameter of the felly, and also transversely to fit the inner surface of the felly, of a length sufficient to receive and support the ends of the first spoke or more, on either side of the felly-joint, as will hereinafter be more fully described.

In the accompanying drawing, Figure 1 shows a section of a wheel-rim constructed according to my invention. Fig. 2 is an inside view of the rim. Fig. 3 is a cross-section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A is the felly. B is the tire; C, the spokes; and D, the curved fish-plate. E represents the joint in the felly, showing the dowel-pin in dotted lines. The plate or piece D is made of metal and

let into the felly so that its outer surface is even with and corresponds with the inner surface of the felly. The plate D may be put in without cutting the fellies. This plate extends far enough in either direction from the joint E to receive a spoke on each side, as seen in the drawing. F F are holes through the plate for the tenon of the spokes. G G are screw-bolts which pass entirely through the tire and rim, which hold the plate firmly to the felly.

It is well enough known that the weakest part of the felly of a wheel is at the joint; various devices have been adopted to strengthen the felly at these points, but so far as I am aware nothing as yet has proved effective for that purpose. My fish-plate confines the ends of the segments and forms a strong arch, supported by the spokes at the joint; for withstanding the heavy blows dealt upon every portion of the rim of the wheel. This is a cheap, simple, and effective arrangement, and its advantages over anything of the kind heretofore used must be obvious to all.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The curved plate D, arranged on the inside of felly A, and receiving at each end a spoke, C, as and for the purpose specified.

WILLIAM F. RAY.

Witnesses:

GEORGE W. MABEE,  
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(31)