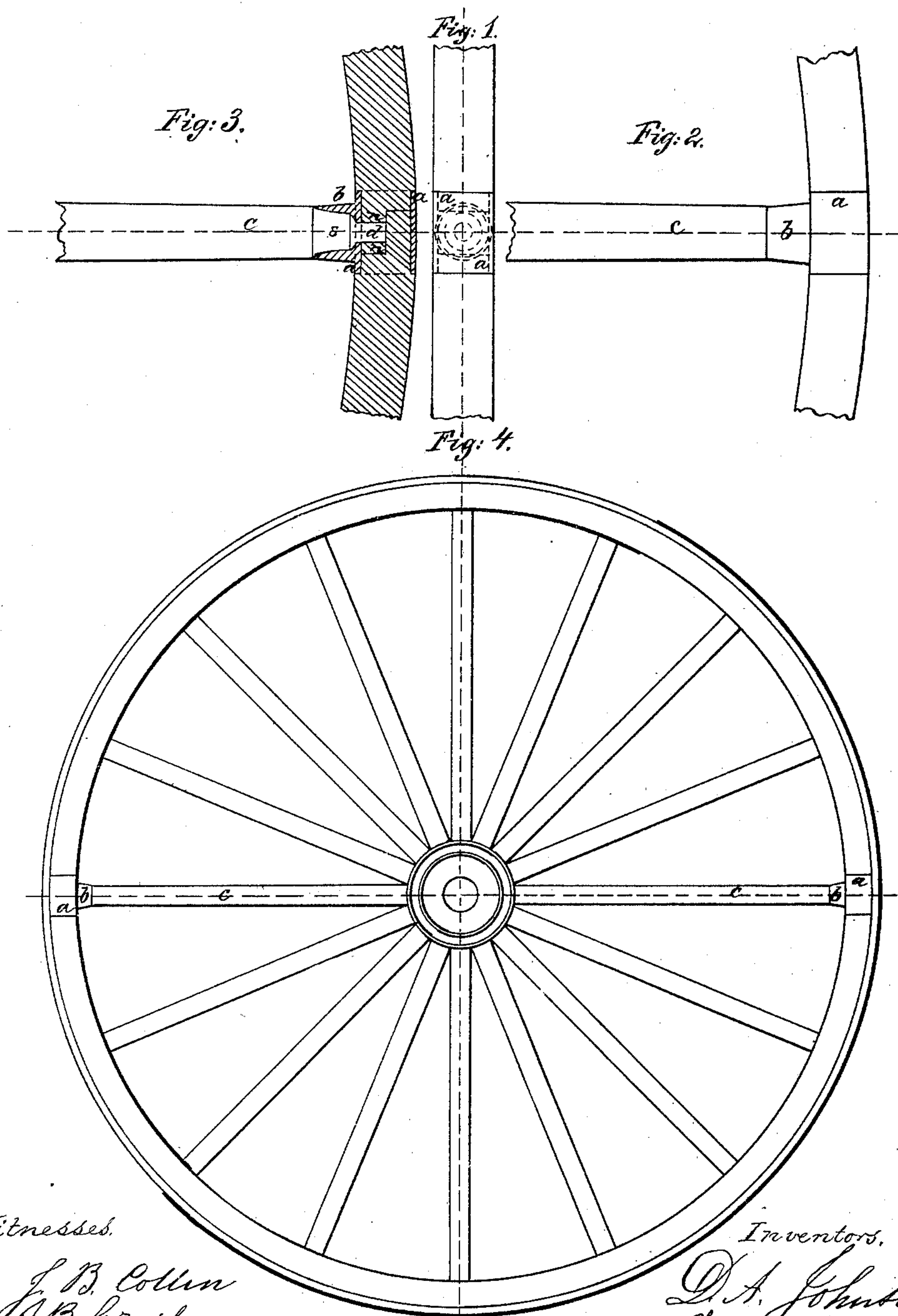


D. A. JOHNSON & F. M. GIBSON.
WOODEN WHEEL FOR CARRIAGES.

No. 30,479.

Patented Oct. 23, 1860.



Witnesses.

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UNITED STATES PATENT OFFICE.

D. A. JOHNSON AND F. M. GIBSON, OF CHELSEA, MASSACHUSETTS.

CARRIAGE-WHEEL.

Specification of Letters Patent No. 30,479, dated October 23, 1860.

To all whom it may concern:

Be it known that we, Dr. D. A. JOHNSON and F. M. GIBSON, both of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Construction of Wooden Wheels for Carriages; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention, so full and exact as to enable those skilled in the art to practice it.

Wooden wheels, as they are commonly made with two or more joints in the fellies, in the spaces between two adjacent spokes, are weak in such joints. In wear such wheels depart from their circular form and assume a polygonal one, having the spokes at the angles. When wheels have approximated to a polygon their use brings violent concussions upon the spokes loosening them where inserted in the felly and hub, rapidly destroying the wheels.

The object of our invention is to remedy this described yielding of the felly joints, thus practically preserving the circular form of the wheels and increasing their durability, and it consists in the manner of forming the joints in and at the felly. This is shown in plan in Figure 1, in side elevation in Fig. 2, and in section in Fig. 3, while Fig. 4 shows the side view of a wheel having but two felly joints, as is the case with wheels having bent steamed fellies.

In the practice of our invention the adjacent ends of the felly at the joints are halved together and are fitted into a metallic band *a*. This band must be made flush with the periphery and sides of the felly, and

may be flush with or projecting from the inner circle thereof. Said band is further constructed with an inner projecting socket or thimble *b*, shown in section in Fig. 3. The spoke, *c*, is made with a tenon, *d*, at its outer end to fit, after passing through the band, *a*, within a mortise or hole formed to receive it in the inner halved end, *n*, of the felly, and said spoke further bound by its forming a wedge gear or close fit with the thimble on the inner side of the band, as shown at, *s*, in Fig. 3.

By this before described arrangement the joints in the felly, be they two or more, are brought directly over and in line with the spokes, which, with the manner shown and described of making the felly joints, prevents such injurious depressions of the joints as were formerly common. It will also be obvious that, from the manner of connecting the felly with the spokes, lateral play of the former upon the latter will be prevented. The felly is worked upon the spokes and into the bands in a manner similar to working those fellies to their places which have dowel pins in the felly joints.

We claim—

Making the felly joints in wooden wheels by halving the ends of the felly together, surrounding the joint by a metallic band provided with an inner projecting socket piece or thimble, and inserting the outer end of the spoke through the thimble and band into the inner half, *n*, of the felly, substantially as herein shown and described.

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Witnesses:

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