T. E. MURRAY.

METAL WHEEL SPOKE.

APPLICATION FILED MAR. 22, 1918.

1,293,870. Patented Feb. 11, 1919.

Fig: 1.

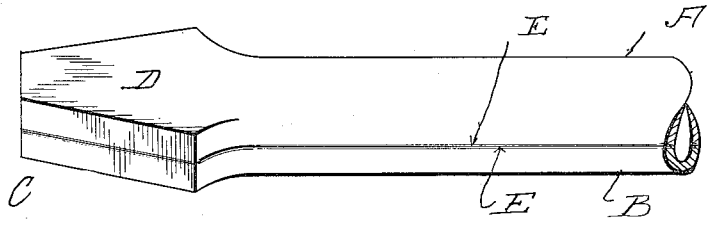


Fig: 2.

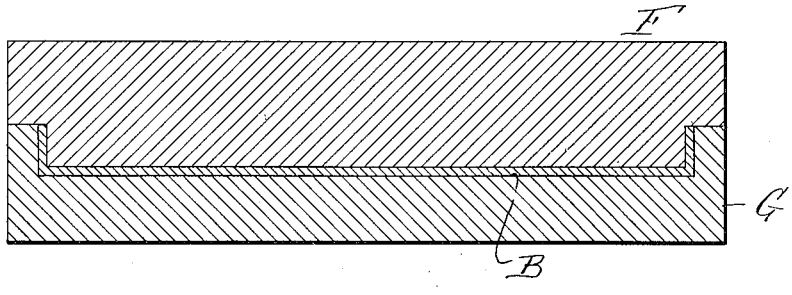
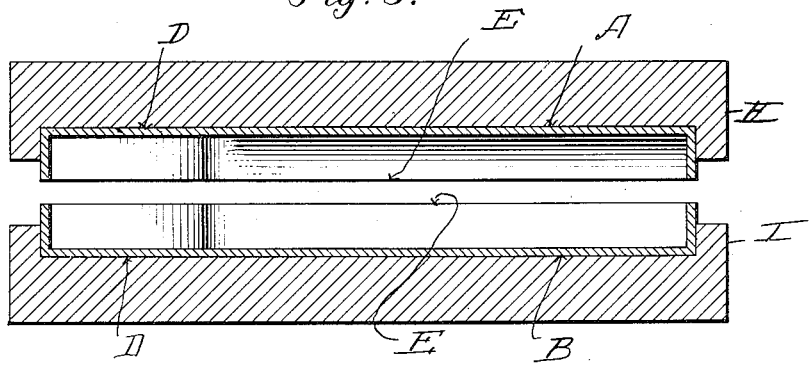


Fig: 3.



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THOMAS E. MURRAY, OF NEW YORK, N. Y.

METAL WHEEL-SPOKE.

1,293,870. Specification of Letters Patent. Patented Feb. 11, 1919.

Application filed March 22, 1918. Serial No. 223,888.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Metal Wheel-Spokes, of which the following is a specification.

The invention relates to a metal wheel spoke formed in two longitudinal half sections by striking up, pressing or stamping the metal. Each section is integral in itself and is trough-shaped with end walls. The edges of the said half sections being placed in contact registry are electrically welded together, so that the resulting spoke is in elongated box form integrally closed at both ends. One end of the spoke has a frusto-wedge-shaped enlargement, and the said enlargements, when the spokes are assembled, unitedly form a nave for the wheel.

In the accompanying drawings—

Figure 1 is a perspective view of the inner or nave end portion of my spoke, the outer portion being broken away. Fig. 2 shows a half section of the spoke in the stamping dies, shown in longitudinal section, by which each half section is produced. Fig. 3 shows both sections of the spoke disposed in the welding electrodes, also shown in longitudinal section. In Figs. 2 and 3 the tubular body portion of the spoke is arbitrarily shortened for convenience in representation. Similar letters of reference indicate like parts.

The spoke is formed of two longitudinal half sections A and B, each integral and in trough shape with end walls. The inner or nave end of each half section is enlarged to form a wedge-shaped frustum C having a flat frusto-wedge shaped face D. The longitudinal edges E of each section lie in a plane parallel to said face D.

In order to produce said half sections, I place a plate of sheet metal between suitably shaped dies F, G, which, being pressed together, cause said plate to assume the desired box form, as shown in section, Fig 2. In this way, I can produce any number of seamless spoke sections all alike. I take any two of these half sections, produced as above described, and seat them in suitably formed recesses in electrodes H, I, as shown in Fig. 3. Welding current being established to said electrodes, the contacting edges E of the sections A, B become integrally united, so that the finished spoke is substantially integral—or, in other words, a single piece of metal in elongated box form closed at both ends.

I have made wheels containing these spokes and subjected them to severe practical tests, and I have found said spokes to be strong, durable and cheap to manufacture.

A spoke made as described has no openings and, therefore, dust, moisture or mud cannot possibly enter it. At the nave extremity the united end walls form a tubular bearing for the axle. At the felly end, the end walls may be directly united to the inner surface of the rim or felly, so that there is a double thickness of metal at the joint. The end walls also serve to brace the body of the spoke laterally, and thus to minimize the effect of any compression of the spoke, as by a blow or collision, and so to strengthen the same.

I claim:

1. As a new article of manufacture and sale, a spoke integrally formed of sheet metal and composed of two longitudinal seamless half sections, each in trough shape with end walls electrically welded together edge to edge, each section having at one end a frusto-wedge shaped enlargement having a flat frusto-wedge shaped face, and the said longitudinal edges of said section being in the plane parallel to said flat face.

2. As a new article of manufacture and sale, a spoke integrally formed of sheet metal and composed of two longitudinal seamless half sections each in trough shape with end walls electrically welded together edge to edge, each section having a cylindrical tubular body portion and at one end

thereof a frusto-wedge shaped enlargement having a flat frusto-wedge shaped face, and the said longitudinal edges of said section being in the plane parallel to said flat face.

3. An integral sheet metal wheel spoke in elongated box form and formed of two similar longitudinal half sections each in trough shape with end walls, the said half sections having their edges electrically welded together.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.