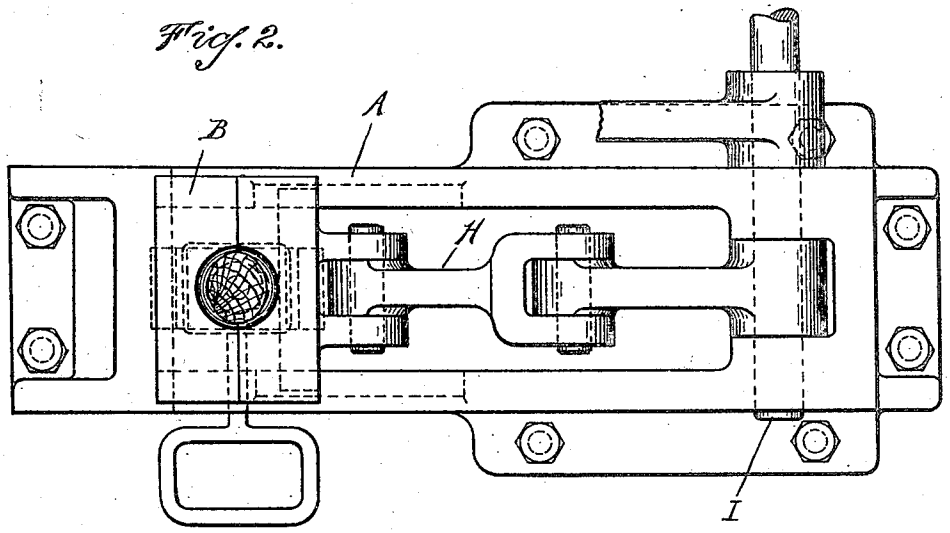
J. E. BATIE.

MACHINE FOR ENGAGING FERRULES WITH WHEEL SPOKES.

APPLICATION FILED JULY 11, 1918.

1,416,677. Patented May 23, 1922.

Fig. 2.



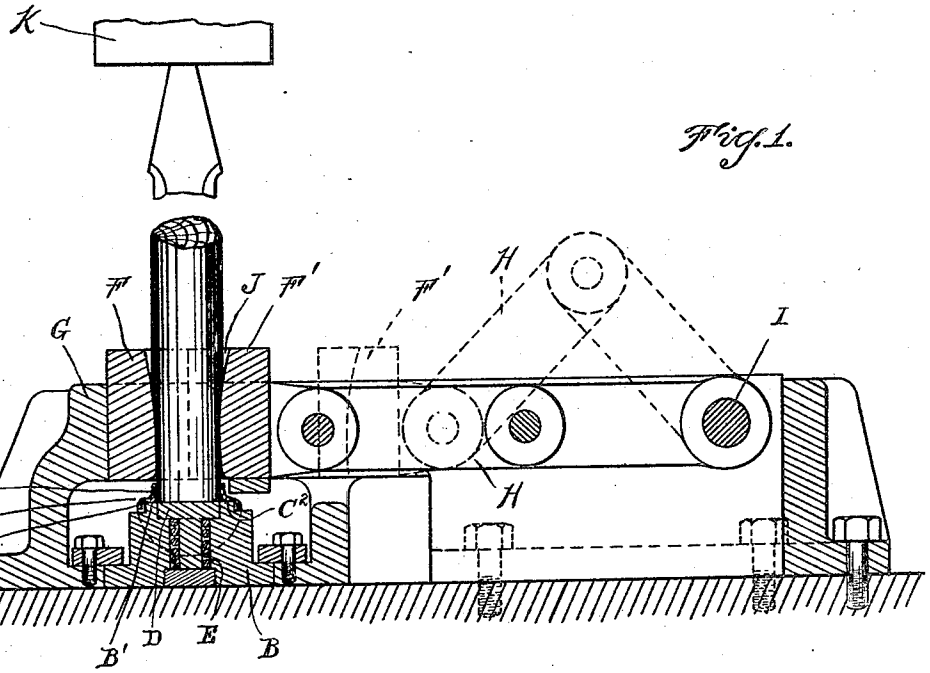


Fig. 1.

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JOSEPH E. BATIE, OF DETROIT, MICHIGAN, ASSIGNOR TO KELSEY WHEEL COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

MACHINE FOR ENGAGING FERRULES WITH WHEEL SPOKES.

1,416,677. Specification of Letters Patent. Patented May 23, 1922.

Application filed July 11, 1918. Serial No. 244,378.

To all whom it may concern:

Be it known that I, JOSEPH E. BATIE, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Machines for Engaging Ferrules with Wheel Spokes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to the manufacture of vehicle wheels of that type in which the spokes are secured to the fellies by metallic fasteners having sockets for engaging the spokes and flanges for attachment to the felly. It is the object of the invention to simplify the operation of fitting and engaging the spokes with the sockets or ferrules as hereinafter set forth.

In the drawings:

Figure 1 is a longitudinal section through the machine for sizing and engaging the spokes with the ferrule;

Figure 2 is a plan view thereof.

In the commercial manufacture of wooden spokes for vehicle wheels it is practically impossible to maintain exact diameters. Thus where the end of the spoke is to be engaged with a ferrule a fitting operation is first necessary. With the present invention the fitting is performed by the forcing of the end of the spokes through a sizing die and by placing the ferrule in registration with the die it may be engaged by the same operation.

Various specific constructions of apparatus may be employed for carrying out my method, but as shown A is a base or frame having a seat B thereon for the spoke fastener C. This fastener comprises a circular flange or ferrule portion C′, a laterally-extending portion C^2 and parallel flange portions C^3. The seat B is fashioned to form an abutment B′ for the portion C^2 and is centrally recessed to receive a guide D for fitting within the ferrule. E is a spring for yieldably supporting the guide D in position to engage the ferrule but permitting the depression of said guide when displaced by the spoke. Above the seat B there is arranged upon the base A a sizing die comprising complementary sections F and F′. The section F is rigidly supported in a bracket G while the section F′ is slidably mounted in said bracket to be movable towards or from the section F. H is a toggle lever connected at its opposite ends to the sliding member F′ and to a pivot I upon the base, the arrangement being such that by bending the toggle the die section F′ is retracted while in the straightened position of the toggle it is locked in contact with the section F.

The die sections F and F′ together form a cylinder which is of the same diameter as the ferrule C′ and which is axially aligned with said ferrule when supported on the seat B. The upper portion of the die is flared as indicated at J so that the entering end is of a diameter in excess of the maximum diameter of a spoke to be sized.

In operation to fit and engage a spoke with the ferrule the ferrule is first placed upon the seat B and the toggle lever H is then depressed to lock the dies F and F′ together. The end of the spoke is then inserted in the flaring mouth of the die and is pressed inward by suitable means, such as the plunger K of a press, which will force the end of the spoke through the contracted portion of the die and into engagement with the registering ferrule. The guide D is initially in engagement with the ferrule and holds the same in exact registration with the die but as the spoke is forced downward this guide is displaced into the recess in the seat B. As soon as the spoke is thus engaged the toggle lever H is bent which retracts the die section F′ and permits of withdrawing the spoke with the fastener C secured thereto.

What I claim as my invention is:

1. A machine for engaging spokes with fasteners comprising a seat for the fastener, a guide for engaging the ferrule of the fastener depressible into a recess in said seat, yieldable means for holding said guide in engagement with the ferrule, and a sizing die mounted in proximity to said seat and in exact registration with said guide permitting the displacement of the latter by the sized end of the spoke.

2. A machine for sizing spokes, comprising a sectional die having a flaring mouth, a toggle for moving a section of said die toward and away from another section of said

die, and means for forcing a spoke through said die.

3. A machine for engaging spokes with fasteners, comprising a base, a seat for the fastener upon said base, a sectional die above said seat having a section rigidly mounted on said base and a second section movable toward and away from said first-mentioned section, a toggle lever connected to said second section for moving the same, and means for forcing a spoke through said die when closed and into engagement with the fastener.

In testimony whereof I affix my signature.

JOSEPH E. BATIE.