June 1, 1915.

DRAWING

1,171

A careful search has been made this day for the original drawing or a photolithographic copy of the same, for the purpose of reproducing the said drawing to form a part of this book, but at this time nothing can be found from which a reproduction can be made.

Finis D. Morris,
Chief of Division E.

AWK.

# UNITED STATES PATENT OFFICE.

SAML. E. FARRAND, OF NEWARK, NEW JERSEY.

## MANUFACTURE OF HUB-BANDS FOR CARRIAGE-WHEELS.

Specification of Letters Patent No. 1,171, dated June 11, 1839.

*To all whom it may concern:*

Be it known that I, SAMUEL E. FARRAND, of the city of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Machine for Making, Constructing, Forming, and Forging Hub-Bands for Carriages; and I do hereby declare that the following is an exact and full description of the said machine, viz:

(A) represents an iron frame into which the rollers are fixed. It is of cast iron and consists of a bottom plate from two to three feet long and of sufficient breadth to be bolted firmly to a bench or some solid foundation. At each end of said bottom plate is an upright post or cheek with a slot through the center to form a slide for the journal boxes. The bottom plate and posts or cheeks form but one piece; B, the cap or upper plate, which is bolted to the top of the upright posts by four bolts or screws N, N, N, N. Its office is to give strength to the frame, and to receive the regulating screws; C, C, two iron shafts passing through the posts, upon the outside of which they are connected together at one end by two small cog-wheels of equal size. The crank may be applied to either shaft. At the other ends of each shaft, and outside the frame are the two rollers or dies D, D. They should be made of cast steel and may be welded to the end of the journal of the shaft or otherwise be attached by a tenon upon the end of the shaft passing through a hole, through the center of the roller or die, and secured by a bolt or by a nut upon the end of the journal. The numbers or figures to be raised or sunk upon the hub-band must have their respective shapes turned into the rollers. The upper roller is made to rise and fall by turning the screw (E), which regulates the pressure by acting upon the sliding box F. The follower (G), is to keep the band firmly in its place, while passing through the rollers. It is moved to and from the lower roller by the lever (H). It is attached to and forms a right angle with the horizontal plate (I,) which plate has a tenon on its lower side which slides in a slot or mortise through the bench J, and kept firmly in its place by a stop bolt attached to the spring K, which stop bolt drops into a hole in the gage plate L. The dies D, D, are kept apart by the action of the spring M, upon the upper shaft C, when relieved by turning back the screw E. The spring M, is bolted to the plate A, and crooked in a manner to clear the lower shaft C. The band previous to receiving the impression from the rollers must be welded and formed into a ring of less diameter than it is required to be when finished; after which it should be heated equally in all its parts, in which state it must receive the impression of the rollers. The force of the pressure is regulated by gradually turning the screw E, while the rollers are turned by a crank, or in any other way to suit the convenience of the operation.

What I claim as my invention and desire to secure by Letters Patent is—

The manufacture of hub-bands, for carriage wheels, by means of rollers formed and operating in the manner substantially as herein described.

SAMUEL E. FARRAND.

Witnesses:

THEO. FRELINGHUYSEN, Jr.,

D. C. BOSWORTH.