H. T. ANDERSON.

MANUFACTURE OF RAILWAY DRAFT GEAR YOKES.

APPLICATION FILED JUNE 18, 1919.

1,419,346. Patented June 13, 1922.

2 SHEETS—SHEET 1.

Fig. 1.



Fig. 2.

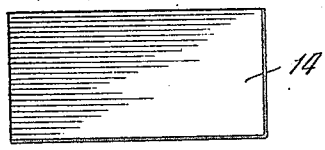


Fig. 3.

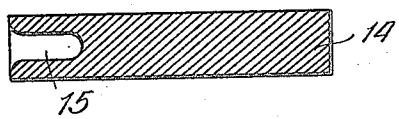


Fig. 4.

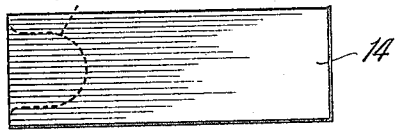


Fig. 5.

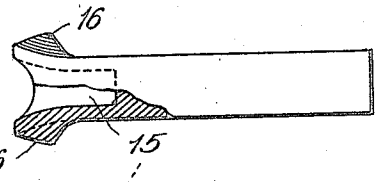


Fig. 6.

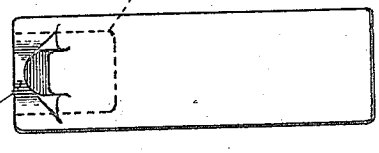


Fig. 7.

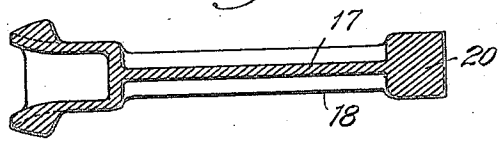
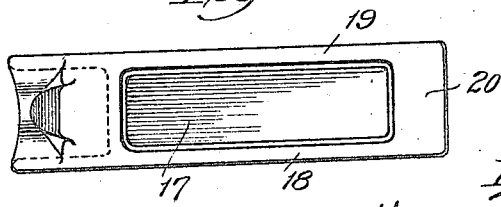


Fig. 8.



Witness:
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2 SHEETS—SHEET 2.

Fig. 9.

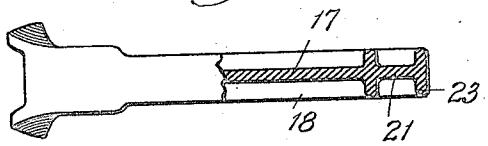


Fig. 10.

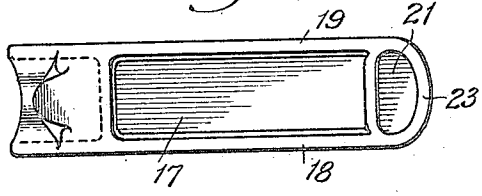


Fig. 11.

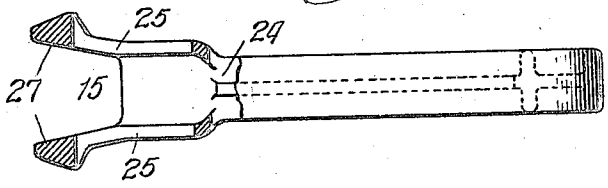


Fig. 12.

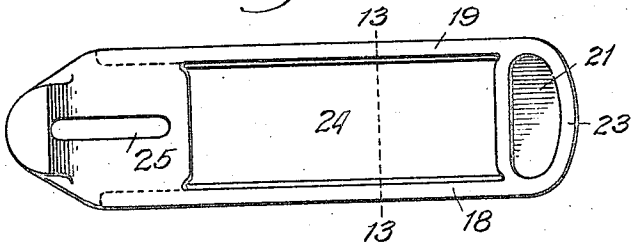
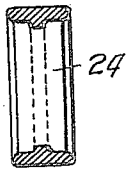


Fig. 13.



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UNITED STATES PATENT OFFICE.

HARRY T. ANDERSON, OF BUTLER, PENNSYLVANIA, ASSIGNOR TO HARRY VISSERING & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

MANUFACTURE OF RAILWAY DRAFT-GEAR YOKES.

1,419,346. Specification of Letters Patent. Patented June 13, 1922.

Application filed June 13, 1919. Serial No. 305,033.

To all whom it may concern:

Be it known that I, HARRY T. ANDERSON, a citizen of the United States, and a resident of Butler, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Railway Draft-Gear Yokes (Case A), of which the following is a full, clear, and exact description.

The invention relates to the manufacture of yokes for railway draft gear and its object is to provide a method by which the finished yoke may be forged from a single block of metal.

The invention consists in the several novel features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings: Fig. 1 is a plan and Fig. 2 is a side elevation of a block of metal which constitutes the blank from which the yoke will be forged. Fig. 3 is a section and Fig. 4 a side elevation showing the blank after it has been partially pierced at one end to form the socket for receiving the coupler-shank. Fig. 5 is a plan and Fig. 6 a side elevation of the blank after the head has been completely pierced and the key-way reinforcements have been formed on the sides and near the front of the yoke. Fig. 7 is a section and Fig. 8 a side elevation of the blank after the body portion of the shank has been forged into I-shape with a central longitudinal web and top and bottom flanges. Fig. 9 is a plan partly in section and Fig. 10 a side elevation showing the forging after the back end has been shaped. Fig. 11 is a plan partly in section and Fig. 12 is a side elevation of the finished yoke after it has been trimmed and the key-ways and the opening for the draft-gear have been cut therein. Fig. 13 is a section taken on line 13—13 of Fig. 12.

The invention is adapted for the manufacture of draft-gear yokes from a block of open hearth steel. A block 14 of such steel sufficiently ductile to be forged of the form shown in Figs. 1 and 2, is first pierced by a suitable die to form pockets 15, as shown in Figs. 3 and 4, and during this operation the block will be elongated. Next, the pockets 15 are deepened and the side walls of the pocket are flared and shaped by suitable dies to form key-way-reinforcements 16 on the outer sides thereof, as shown in Figs. 5 and 6. Next, the blank is drop-forged in suitable dies which will elongate the blank and form flanges 18 and 19 with a connecting web 17 so that the shank between the head and the back will be substantially I-shaped in cross-section, leaving a solid portion 20 at the back end of the yoke, as shown in Figs. 7 and 8. Next, the back portion 20 will be drop-forged so that the metal therein will be displaced to form a web 21 and a flange 23 which forms a reinforcement for the back end of the yoke and for engaging the back of the draft-gear, as shown in Figs. 9 and 10. This operation is separately formed from the shank-shaping operation, because more metal must be displaced. Next, the web portion 17 and back walls of pocket 15 are cut away to form an opening or pocket 24 to receive the draft-gear. Then key-slots 25 are punched and the front ends are trimmed so that the yoke will be finished and of the form shown in Figs. 11, 12 and 13. The pocket between the side walls 27 at the front of the yoke will be adapted to receive the coupler-shank, the draft-gear will operate in opening or pocket 24 between top and bottom flanges 19 and 18, the front of flange 23 and the back of the side walls 27 and the key between the coupler and yoke will be held in slots 25, as well understood in the art.

The invention exemplifies a method of manufacture by which a one-piece yoke will be forged from a blank or block of desirable metal, for example open hearth steel.

The invention is not to be understood as restricted to the details set forth, since these may be modified within the scope of the appended claims, without departing from the spirit and scope of the invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. That improvement in the manufacture of yokes for railway draft-gear which consists in forging a pocket into one end of a solid block of metal which is adapted to receive a coupler, forging the metal at the other end of the block into a yoke back, forging the intermediate portion into a shank and forming a draft-gear opening in the intermediate portion of the block.

2. That improvement in the manufac-

ture of yokes for railway draft gear which consists in forging a coupler pocket into one end of a substantially solid block of metal, forging the other end of the block to form a back with a marginal flange and a web, forging the intermediate portion of the block into a shank, and forming a draft-gear pocket in said intermediate portion.

3. That improvement in the manufacture of yokes for railway draft-gear which consists in forging a coupler pocket into one end of a substantially solid block of metal cutting slots in the sides of the pocket, forging reinforcements adjacent said slots, forging the other end of the shank into a back, forging the intermediate portion into a shank and cutting a draft-gear pocket in the shank.

4. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler-pocket, forging the remainder of the block into a shank and cutting in the shank an opening adapted to receive the draft-gear.

5. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler-pocket, forging the blank to form a shank having top and bottom flanges and a connecting web, cutting an opening in the web to form a pocket for the draft-gear.

6. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler pocket, forging the other end portion of the yoke into a shank having a web with a surrounding flange and cutting an opening in the shank to form a draft-gear pocket.

7. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler-pocket, forging an intermediate portion of the block of metal into a shank having a web and top and bottom flanges, forging the other end of the block into a web and a reinforcing flange around the web to form a reinforced back, and cutting an opening through the web of the shank to form a draft-gear pocket.

8. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler-pocket, forging reinforcements on the side walls of said pocket, forging a portion of the block intermediate its ends into a web and marginal flanges, cutting an opening through the web to form a draft-gear pocket, and cutting key-slots through the side walls of the coupler-pocket.

9. That improvement in the manufacture of yokes for railway draft-gear which consists in piercing one end of a solid block of metal to form a coupler-pocket, forging reinforcements on the side walls of said pocket, forging a portion of the block intermediate its ends into a web and marginal flanges, cutting an opening through the web to form a draft-gear pocket, forging the other end into a web with a surrounding reinforcing flange to form a reinforced back, and cutting key slots through the side walls of the coupler-pocket.

HARRY T. ANDERSON.