

F. VAN PATTEN.

Dies for Making Blanks for King-Bolts.

No. 141,679.

Patented August 12, 1873.

Fig. 1

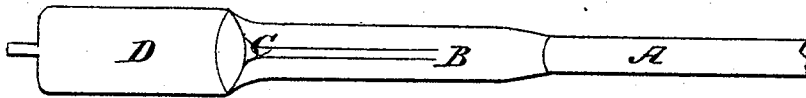


Fig. 2

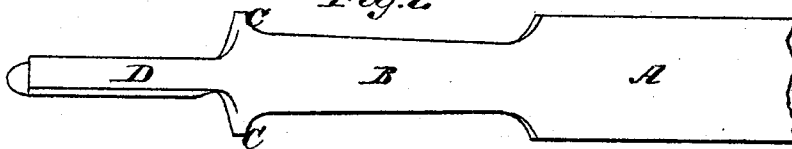


Fig. 3

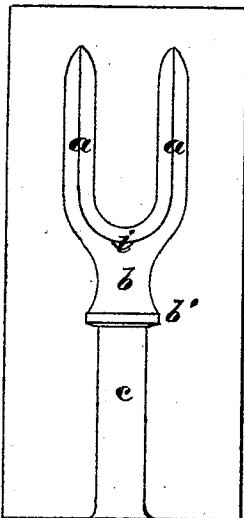


Fig. 5

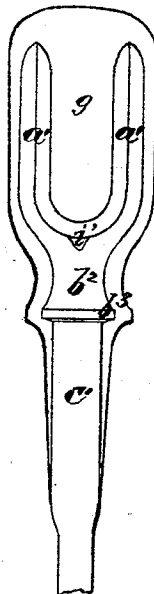


Fig. 4

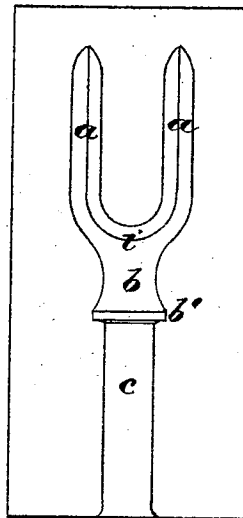


Fig. 7

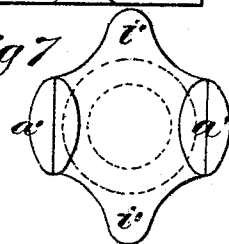
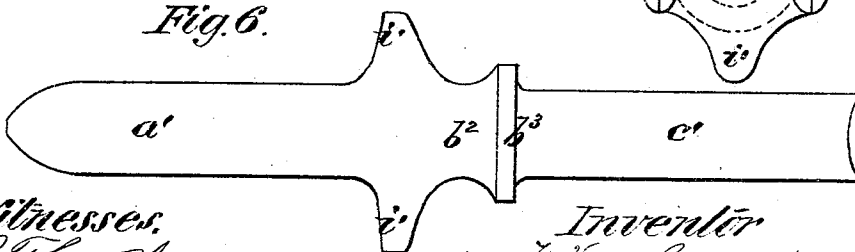


Fig. 6.



Witnesses.
R. T. Campbell
J. H. Campbell

Inventor
F. Van Patten
By his Atty.
Mason Hamrick & Lawrence

UNITED STATES PATENT OFFICE.

FREDERICK VAN PATTEN, OF AUBURN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF AND E. D. CLAPP, OF SAME PLACE.

IMPROVEMENT IN DIES FOR MAKING BLANKS FOR KING-BOLTS.

Specification forming part of Letters Patent No. **141,679**, dated August 12, 1873; application filed February 28, 1873.

C.

To all whom it may concern:

Be it known that I, FREDERICK VAN PATTEN, of Auburn, in the county of Cayuga and State of New York, have invented Improved Dies to be used in the Manufacture of King-Bolt Blanks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figures 1 and 2 are views of the blank ready for the dies. Figs. 3 and 4 show the two die-sections. Fig. 5 shows the result of the operation of the dies on the blank of Figs. 1 and 2. Figs. 6 and 7 show the blank of Fig. 5 after it is trimmed.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in the manufacture of clip king-bolts for vehicles, wherein I am enabled to produce, at one operation, between dies, from a blank of peculiar shape, a blank, represented by Fig. 5 of the annexed drawings, having an equal amount of stock in each of its tines, and also having a well-rounded crotch with extended bearings or wings on each side thereof, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawings, Figs. 1 and 2, I have represented what I denominate a break-down, which is a blank produced directly from a flat bar of metal, as described in my application marked case B, and bearing even date with the filing of this, but not herein claimed. This blank is formed from a bar, A, and consists of a flattened portion, B, two lugs, C C, and a flattened concavo-convex portion, D. It is the best form out of which to produce the blank shown by Fig. 5, for reasons hereinafter explained.

Figs. 3 and 4 show the two die-sections for reducing the blank of Figs. 1 and 2 to the required shape at one heat and by one blow. These sections are constructed precisely alike, and consist, respectively, of forked recesses *a*, for producing the tines *a' a'*, a depression, *i*, for giving the required shape to each one of the wings or extended bearings *i'*, at the

crotch of the tines, two depressions, *b b'*, for producing the neck *b²* and annular shoulder *b³*, and, finally, a semicircular groove, *c*, for producing the cylindrical bolt-stem *c'*. The blank of Figs. 1 and 2 is laid upon the bottom die with the concave side of the portion D down one of the lugs C in the recess *i*, and the narrow reduced portion B in the groove *c*. The blank of Figs. 1 and 2 contains somewhat more stock than will be forced into the die-recesses, consequently the surplus of stock will spread outward between the flat surfaces of the die-sections, and leave fins *g*, which are subsequently trimmed off, and the blank represented by Figs. 6 and 7 is produced.

By these means there is always a certainty of filling the die-recesses perfectly with the heated stock, and consequently a perfect blank is produced at each operation, and an equal amount of the stock will be disposed into the two tines *a' a'* of each blank.

The blanks thus produced can be readily trimmed of their thin fins, after which their cylindrical stems are drawn down to the proper size, and their tines are spread apart by any well-known or suitable means, and the articles known as clip king-bolts are ready for the trade.

I am aware that an attempt has been made to produce the tines of clip king-bolt blanks from a flat head formed on a forged shank, by means of cutters of a V-shape; but such means will not equally dispose the stock of which the tines are formed with any degree of certainty, nor can the work of forming the article in question be produced by such means at one and the same operation. I do not, therefore, claim separating the tines by a cutting operation.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The dies 3 and 4, constructed and applied for producing the blank, Fig. 5, from which, by trimming, the king-bolt blank, Figs. 6 and 7, is produced, all substantially as set forth.

FREDERICK VAN PATTEN.

Witnesses:

HORACE T. COOK,
C. M. FITCH.