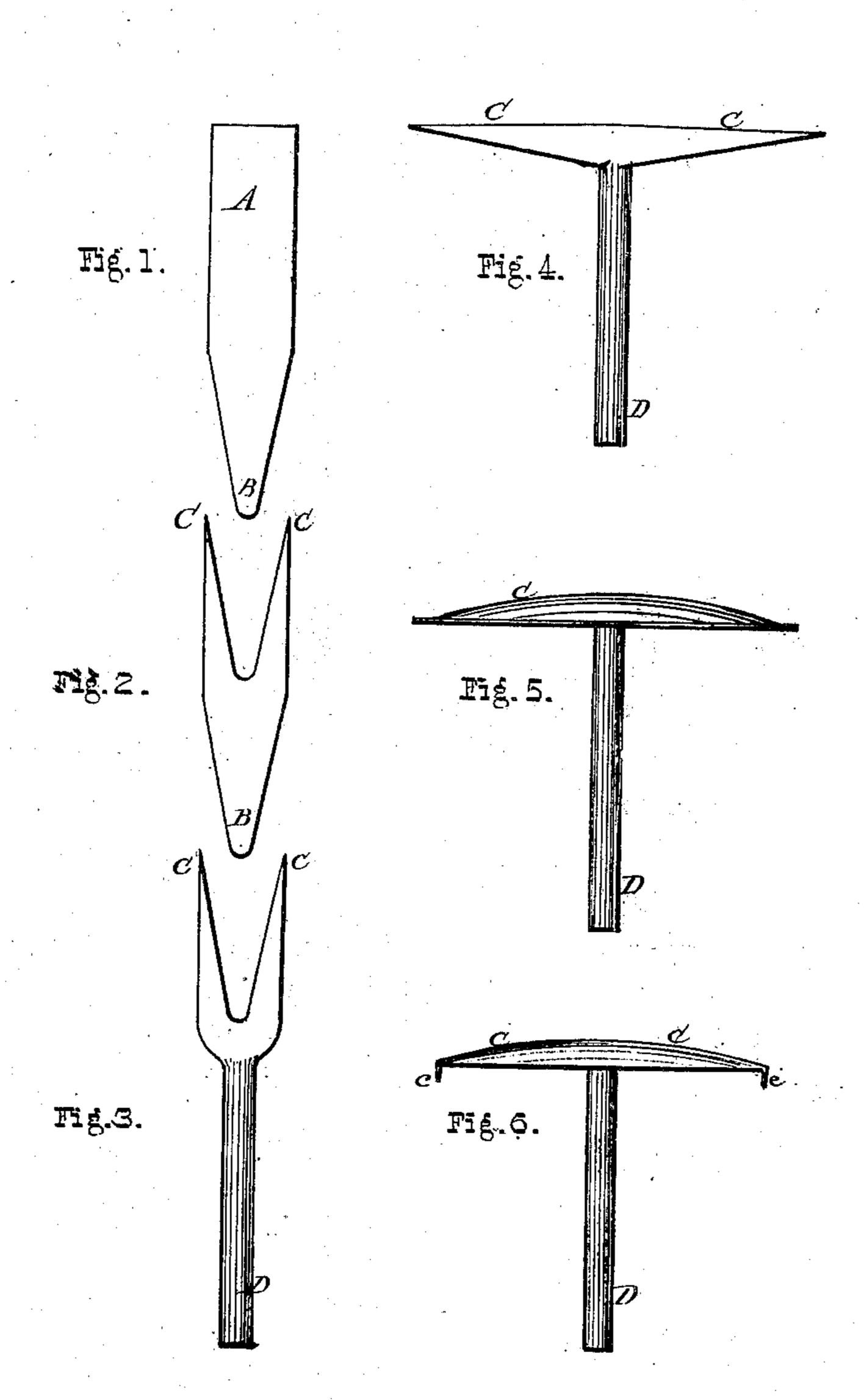
## Jee/je.

# Mans. Carriage Irons. 10.98,931.

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Inventor.

### Anited States Patent Office.

#### JOHN DEEBLE, OF PLANTSVILLE, CONNECTICUT.

Letters Patent No. 98,931, dated January 18, 1870.

#### IMPROVED METHOD OF FORMING T-BOLTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, John Deeble, of Plantsville, in the county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in the Method of Forming Bolts; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 shows a bar, from which a blank has been cut;

Figure 2 shows the blank as first formed;

Figure 3 shows the same, with the shank of the bolt formed;

Figure 4 shows the head turned down into place; Figure 5 shows the same partially finished; and

Figure 6 shows the complete bolt.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement in the construc-

tion of T-shaped bolts; and

It consists in a peculiar method of forming said bolts from flat or rectangular bars of iron, by reason of which the fibres of the metal composing the head are neither staved up nor broken, as in ordinary practice, and no waste of metal occurs.

In the annexed drawing—

A represents a flat rectangular bar of iron, from the pointed end, B, of which has been cut a blank, fig. 2, and which end will, in turn, form the bolt or shankend of another blank.

In fig. 2 is shown a blank, the upper end of which, C, is crotched, and corresponds with the tapered end B of the bar A, from which it has been cut, while its lower end B bears a like relation to the upper end of the preceding blank, by which means bars of any length may be cut into blanks, without waste of metal.

The blank thus formed is placed between suitable swages, and the end B drawn out and rounded, so as to form the shank D of the bolt, after which it is placed within a suitable die, the ends C bent outward and downward, so as to occupy a position at a right angle with said shank D, when the bolt is ready for finishing, which operation is accomplished by rounding the upper side of the head, and turning its ends c downward, as shown in figs. 5 and 6.

When formed in this manner, the fibre of the iron extends lengthwise of the shank D, and, dividing at its upper end, continues outward, in either direction, through the head, by which means said head and shank are formed of one continuous piece of iron, and are, therefore, much stronger than though formed of separate pieces, and afterward united by welding.

In addition to the above, the bolt is formed more easily and in less time than by other methods, which results, in combination with the saving in stock, will enable it to be furnished at a much less cost than has heretofore been possible.

Having thus fully set forth the nature and merits

of my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The hereinbefore-described method of cutting the blank and forming the bolt, substantially as shown, and for the purpose set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 11th day of December, 1869.

JOHN DEEBLE.

Witnesses:

H. R. BRADLEY,

J. A. ATWATER.