(No Model.) 2 Sheets—Sheet 1.

T. E. VAN NESS & D. MALONEY.

ART OF FORMING CHEEK PIECES FOR BRIDLE BITS.

No. 258,166. Patented May 16, 1882.

Fig. 1.

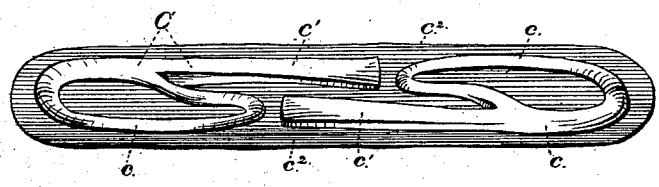


Fig. 2.

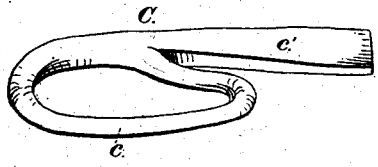


Fig. 3.

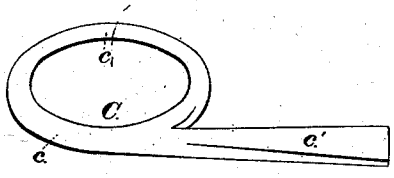
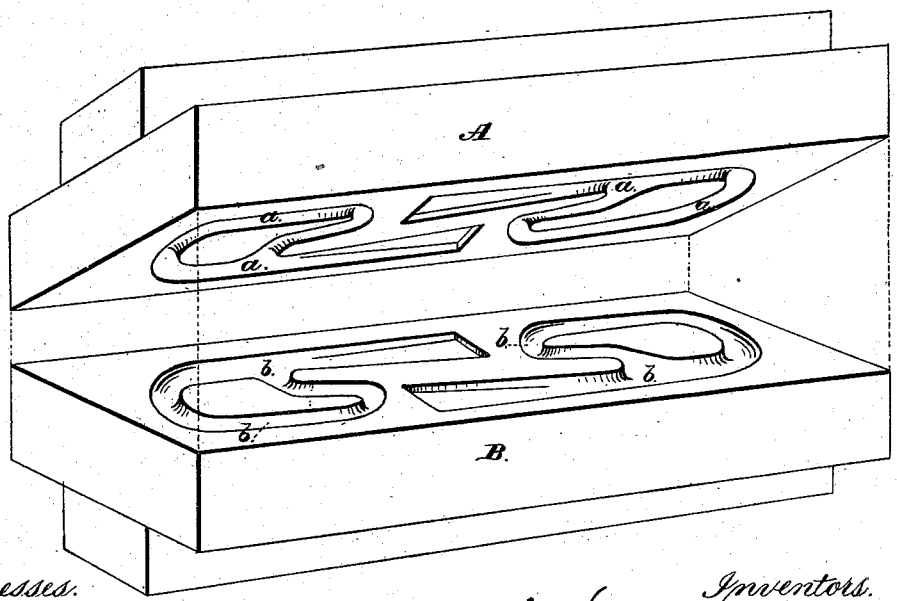


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

T. E. VAN NESS & D. MALONEY.

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Fig. 5.

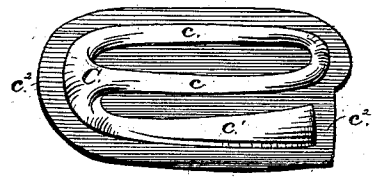


Fig. 6.

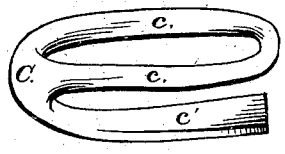


Fig. 7.

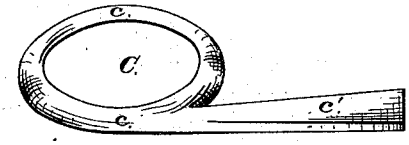
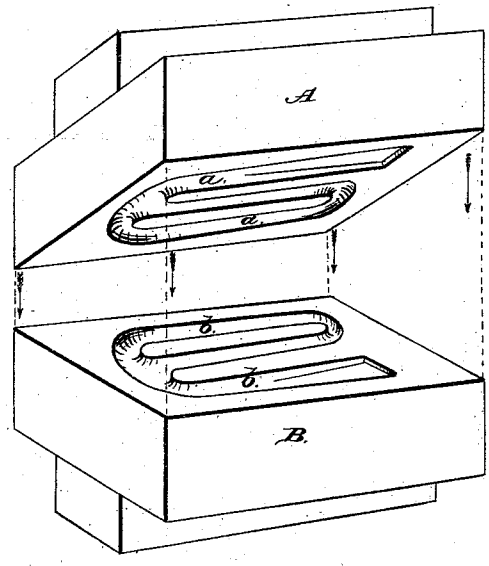


Fig. 8.



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UNITED STATES PATENT OFFICE.

THOMAS E. VAN NESS AND DANIEL MALONEY, OF NEWARK, NEW JERSEY.

ART OF FORMING CHEEK-PIECES FOR BRIDLE-BITS.

SPECIFICATION forming part of Letters Patent No. 258,166, dated May 16, 1882.

Application filed December 10, 1881. (No model.)

To all whom it may concern:

Be it known that we, THOMAS E. VAN NESS and DANIEL MALONEY, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in the Method of Forming Cheek-Pieces for Bridle-Bits; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of two blank cheek-pieces as they leave the forming-dies. Fig. 2 is a like view of one of the same after the fin or surplus metal has been trimmed away. Fig. 3 is a perspective view of said cheek-piece after having passed through the finishing-die. Fig. 4 is a like view of the dies used for forming said blanks. Fig. 5 is a perspective view of a blank cheek-piece, in which the parts are arranged differently from that before named. Figs. 6 and 7 show respectively said blank after trimming and the completed article, and Fig. 8 is a perspective view of the dies employed for producing said last-named blank.

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

Heretofore it has been customary to form the cheek-piece of a bridle-bit from a bar of iron having one of its ends bent around in the form of a circle, which blank was then heated to a welding temperature and subjected to the action of dies within a drop; but such method has proved objectionable from the fact that it has been practically impossible to make a perfectly-welded joint at the point where the coiled end of the bar overlapped the body of the cheek-piece.

To remedy this difficulty and to render easy the production of a perfect solid article is the design of our invention.

It consists principally, as an improvement in the art of making cheek-pieces for bridle-bits, in raising said cheek-pieces in relief on opposite surfaces of a plate or bar by dies that, while producing substantially the proper form and dimensions in cross-section, shall, by an irregular or distorted line of the raised portion thereof, give to the ring or bow in one direction a reduced sectional area to bring the article in the ensemble within greatly-reduced limits, (whereby a saving in stock and in the cost of dies and in the power to operate the same is effected,) then trimming off the fins and intermediate plate of metal, and finally opening out said ring or bow to its proper form and dimensions, substantially as hereinafter specified.

It consists, further, in the dies, substantially as and for the purpose hereinafter shown.

In the use of our method we take square bar-iron having the relative proportion of measurement in cross-section of three-eighths by five-eighths of an inch, and after heating the same place it between two dies, A and B, and subject said heated bar to several blows of the upper die, A. Each of the dies A and B is provided within its face with a half-round recess, *a* or *b*, which corresponds in outline to the form of a cheek-piece, C, with its ring part *c* and tail-piece *c'* closed inward, so as to occupy but little space laterally, which dies, operating upon the heated bar, as before described, produce the blank C shown in Fig. 1, the surplus metal being forced horizontally outward in each direction in the form of a fin, c^2. The blank C passes from the forging-dies to trimming-dies, which remove the fin c^2 and leave it in the form shown in Fig. 2, after which the ring part *c* is spread and given the form of a circle by dies, or by any other desired means, such operation completing the forging of the cheek-piece and producing the article shown in Fig. 3.

There are various other forms in which the ring part and tail-piece may be arranged in order to cause them to occupy little lateral space and to enable them to be forged from a narrow bar of iron, and it will sufficiently illustrate the principle to describe one of such forms.

In Figs. 5, 6, and 7 are shown respectively a blank cheek-piece before trimming, the same after trimming, and the completed cheek-piece, and in Fig. 8 the dies used for forming said blank, the latter being a modification of the blank before described, and having its tail-piece bent around beside and parallel with the ring part, instead of being extended longitudinally beyond the same. This form of blank is not, however, deemed as advantageous as that shown in Fig. 1, as wider iron is required for its production and there is more waste from trimming.

The form of blank shown in Fig. 1 permits the production at the same time of two within one pair of dies, as seen in Fig. 4, with considerable economy as regards waste of material. Two of the blanks shown in Fig. 5 may also be produced at one time by one pair of dies; but less economy results in the latter than in the former case.

Having thus fully set forth the nature and merits of our invention, what we claim as new is—

1. As an improvement in the art of making cheek-pieces for bridle-bits, raising said cheek-pieces in relief on opposite surfaces of a plate or bar by dies that, while producing substantially the proper form and dimensions in cross-section, shall, by an irregular or distorted line of the raised portion thereof, give the ring or bow in one direction a reduced sectional area to bring the article in the ensemble within greatly-reduced limits, (whereby a saving in stock and in the cost of dies and in the power to operate the same is effected,) then trimming off the fins and intermediate plate of metal, and finally opening out said ring or bow to its proper form and dimensions, substantially as specified.

2. The dies, as described, and shown in Fig. 4, substantially as and for the purpose shown.

In testimony that we claim the foregoing we have hereunto set our hands this 1st day of December, 1881.

THOMAS E. VAN NESS.
DANIEL MALONEY.

Witnesses:
JOHN OTTO,
FRANK J. MERZ.