(No Model.) 2 Sheets—Sheet 1.

H. S. SQUIER.

BRIDLE BIT.

No. 552,932. Patented Jan. 14, 1896.

Fig. 1.

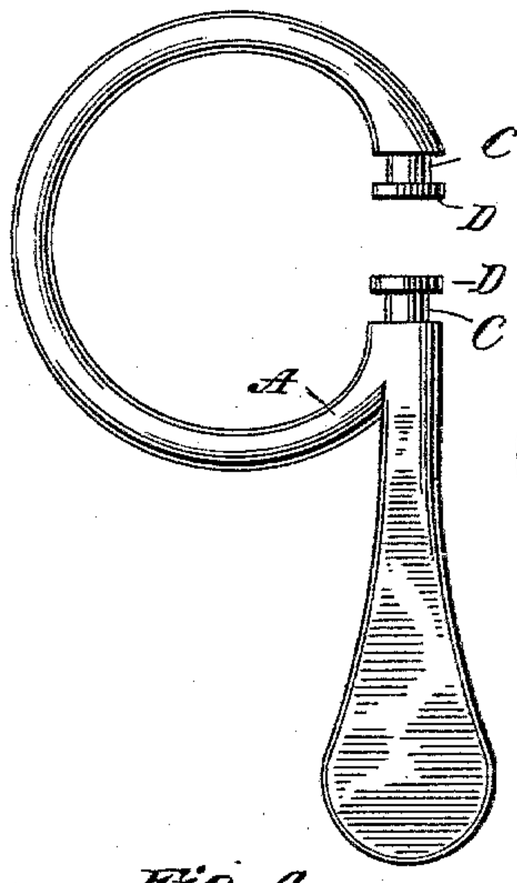


Fig. 2.

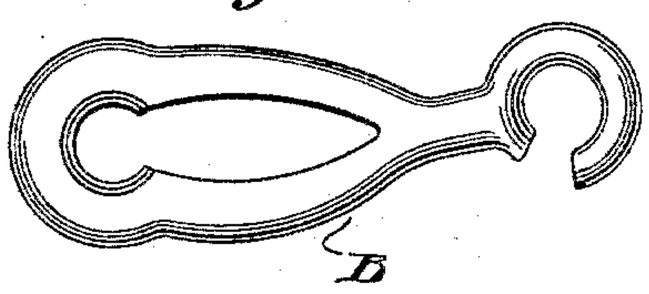


Fig. 3.

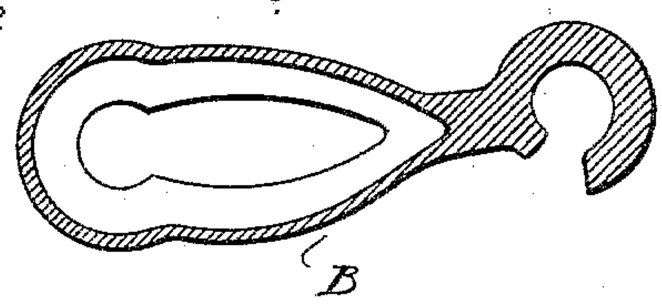


Fig. 4.

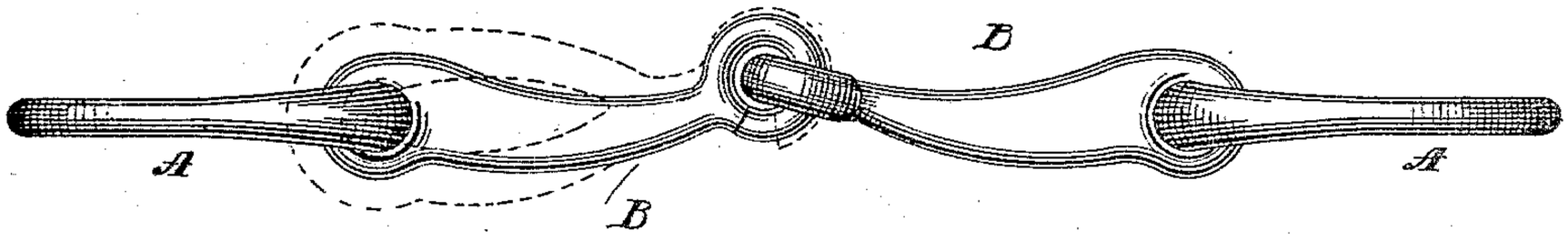


Fig. 5.

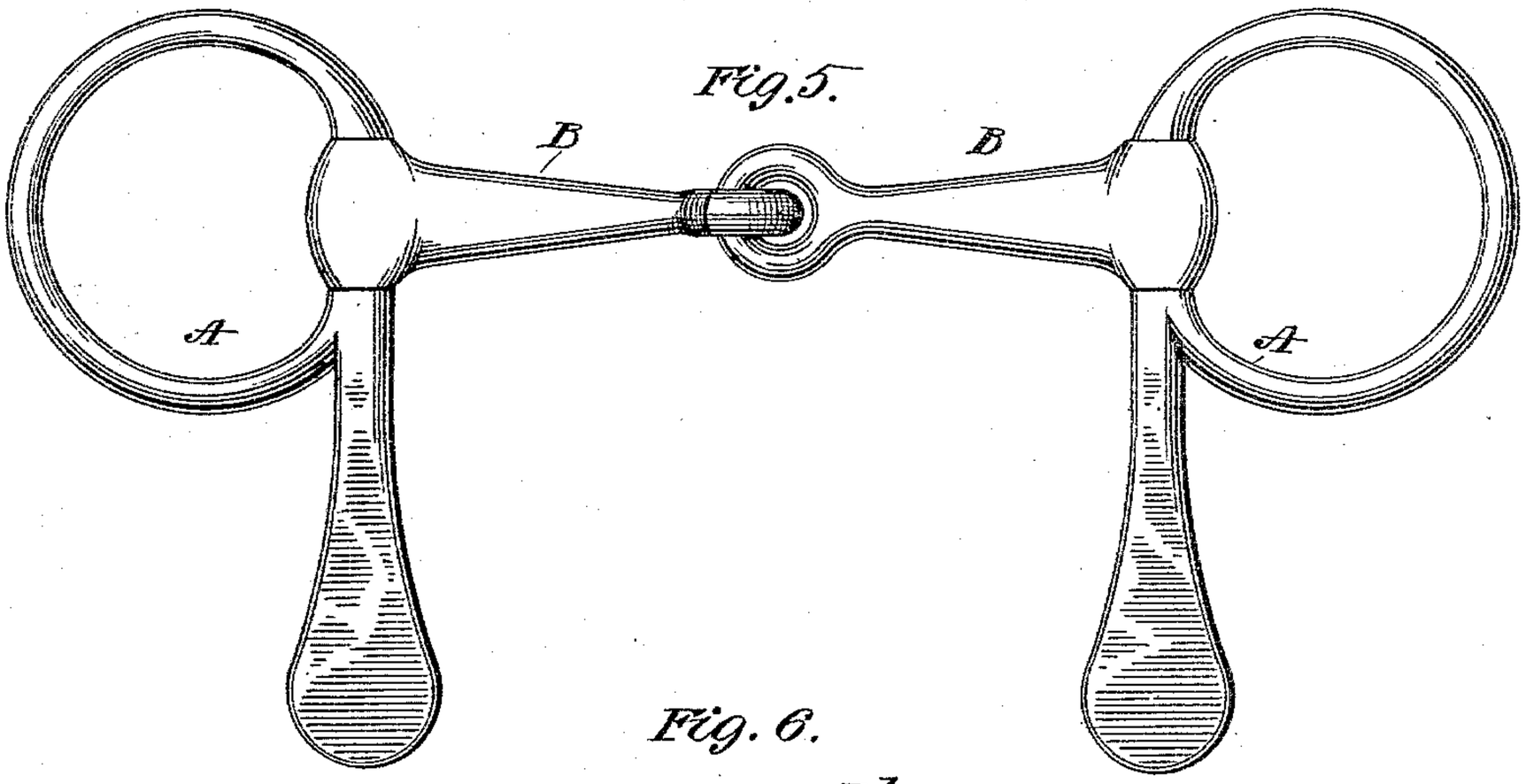
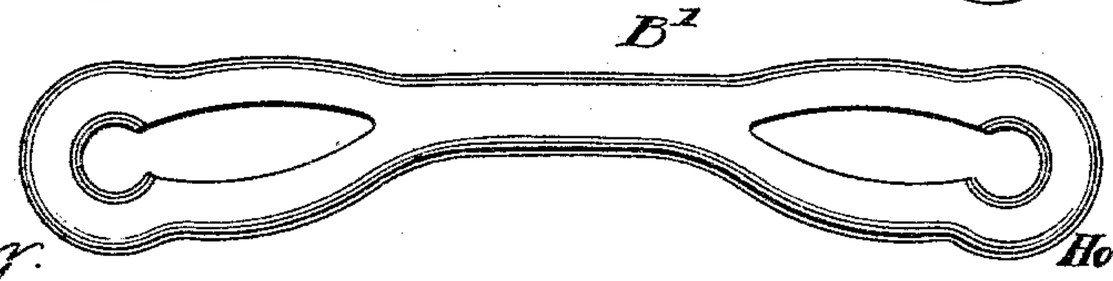


Fig. 6.



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(No Model.)

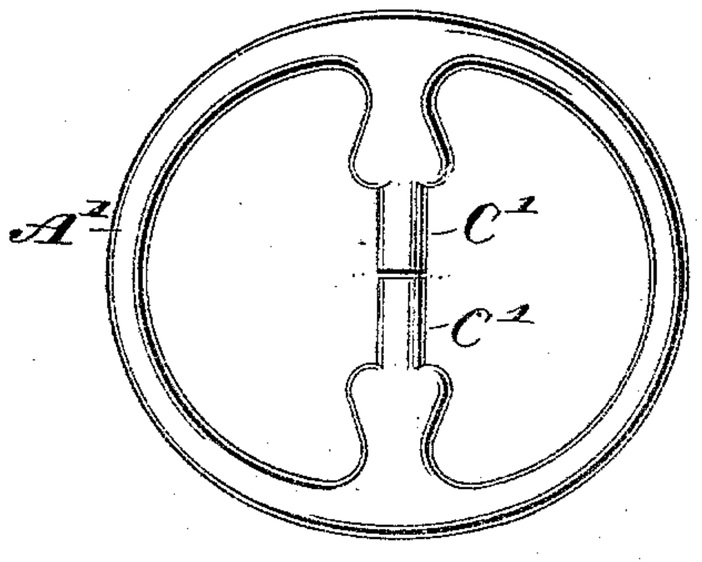
2 Sheets—Sheet 2.

H. S. SQUIER.

BRIDLE BIT.

No. 552,932. Patented Jan. 14, 1896.

Fig. 7.



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HORACE S. SQUIER, OF NEW BRITAIN, CONNECTICUT.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 552,932, dated January 14, 1896.

Application filed June 19, 1894. Renewed March 9, 1895. Serial No. 541,189. (No model.)

To all whom it may concern:

Be it known that I, HORACE S. SQUIER, a resident of New Britain, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Bridle-Bits, of which the following is a full, clear, and exact specification.

My invention relates to an improvement in bridle-bits; and it consists in the novel article and process of forming the same hereinafter fully set forth and described.

The object of my invention is to construct in an economical manner a high-grade bridle-bit that shall be light, strong and effective.

My invention is illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of one part of my invention. Fig. 2 is a side elevation of another part of my invention. Fig. 3 is a longitudinal section of the part illustrated in Fig. 2. Fig. 4 is a plan view of my invention, all parts being assembled. Fig. 5 is a side elevation of the mechanism shown in Fig. 4. Fig. 6 illustrates a modification of one of the parts of my invention, and Fig. 7 is a modification of another part of the invention.

Similar letters refer to similar parts in all the figures.

A A are cheek-pieces adapted to be hinged, as hereinafter described, to a mouthpiece B. This mouthpiece may be formed of two or more parts linked together, as shown in Figs. 4 and 5, or it may consist of one continuous piece B′, Fig. 6. At each extremity of the mouthpiece elongated perforations or slots are provided. It is obvious that the inner ends of these perforations may meet, as shown in Fig. 6, illustrating a modification, making thereby one continuous perforation. The mouthpiece can be made from malleable iron or any other kind of metal desired, and is so cast, by the presence of a core, that back of the elongated slots a recess may extend so as to make the mouthpiece substantially a hollow shell, the desired thickness of which may be determined by the size of the core used in casting. The cheek-pieces A A are of the ordinary form and can be forged out of steel or iron or cast in any metal desired and in any style. The beam C of the cheek-piece, however, is separated at an intermediate point in its length, as shown, so that it may be sprung into the opening at the end of the mouthpiece B. By preference the extremities of the beam C adjacent to the opening are provided with the enlargements or heads D D, excepting when using a full-ring cheek-piece with the beam extending diametrically across said ring, in which case it is not necessary that enlargements be provided, as will be readily seen. It is obvious that the separation in the cheek-piece to permit its being joined with the mouthpiece may be made in any part of the cheek-piece ring instead of in its beam. The elongated perforations at the ends of the mouthpiece are made sufficiently wide at an intermediate point to permit the heads D D to be inserted therein.

The sides of the head at the outer extremity of the elongated opening are milled off so as to afford a smooth bearing-surface for the beam C. After the beam of the cheek-piece is seated within this outer extremity of the elongated slot, the sides of the mouthpiece adjacent thereto may be stamped or swaged down so that the edges of the slot away from the beam of the cheek-piece are forced together, thereby making it impossible to remove the cheek-piece from the mouthpiece, owing to the presence of the heads D D within the hollow end of the mouthpiece, at the same time permitting the cheek-pieces to turn freely. The surfaces of the parts may be smoothed off and polished so as to take any desirable finish.

If desired, the edges of the slot in the mouthpiece, which have been swaged together, may be brazed so as to make the said mouthpiece more homogeneous. Furthermore, when the said edges are brazed together the line of demarcation between the said edges may be completely removed by the polishing and finishing operations.

Figs. 4 and 5 illustrate a completed bit. In the said figures the mouthpiece is shown as formed from two parts the ends of which are linked together. This link may be formed by casting an eye on one end of one part and a hook on the end of the adjacent part, the hook being shaped so that it may be driven or pressed together to form an eye after it has been linked into the solid eye formed in the adjacent part, as above described.

A bridle-bit constructed as above described possesses several advantages over the ordi-

nary form of bit. In the first place it may be made very light, and is very strong because of its peculiar construction. Furthermore, by reason of the fact that it is hollow it can be annealed very readily, the process of annealing striking entirely through the metal. It is also much cheaper, as this construction admits of the use of machinery in place of skilled hand work. Fig. 7 illustrates a form of cheek-piece wherein the beam need not be provided with the enlargements D D. In the said figure the beam is cut into at an intermediate point in its length, so that by laterally staggering the two ends C′ C′ of the beam thus formed the cheek-piece A′ may be readily attached to the mouthpiece, where it is securely retained as soon as the beam ends C′ C′ are straightened up into line. The fact that the beam extends in a line diametrically across the ring cheek-piece prevents the ends from separating.

In Fig. 7 shoulders are shown formed on each of the beams C′ C′, so that the end of the mouthpiece will be held substantially midway in the length of said cheek-piece beam.

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

1. In a bridle-bit a mouth piece provided with elongated perforations toward each end thereof, the extreme ends of said perforations being rounded out to form bearing surfaces carrying the beams of the cheek pieces after said parts have been assembled and the elongated perforations closed, said beams being split transversely substantially as and for the purpose specified.

2. In a bridle-bit, a mouth piece B provided with perforations toward each end, in combination with a ring cheek-piece having its beam extending in a line diametrical thereto, said beam being separated at an intermediate point in its length for the purpose of permitting the same to be inserted into the perforations in the mouth-piece, in the ends of which perforations the cheek-pieces are held by closing the edges of the said perforations about the beams of the cheek-pieces, said beams having shoulders formed thereon substantially as and for the purpose specified.

3. In a bridle-bit, a mouth-piece provided with elongated perforations toward each end thereof, the extreme ends of which perforations are rounded out to form bearing surfaces for the beams of the cheek-pieces after said parts are assembled and the edges of the elongated perforations have been closed about the cheek-piece beams, in combination with the said cheek-pieces the beams of which are substantially transversely split and provided with the enlargements D D, all substantially as and for the purpose specified.

4. A blank for the herein described mouth-piece for bridle-bits, having toward one end thereof an elongated perforation rounded out at its outer end to form two bearing surfaces for the opposite beams respectively of a cheek-piece, and having between said bearing surfaces an interior recess adapted, when the side portions of the blank are closed upon themselves, to receive the enlarged inner ends of the beams of the cheek-pieces used therewith, substantially as and for the purpose specified.

5. A blank for the herein described mouth-piece for bridle-bits, having toward one end thereof an elongated perforation comprising one relatively long portion between two closable side portions of the blank, and a relatively short transversely elongated portion adapted on the closing of the blank to form a circular bearing for the beam of a cheek-piece used therewith, said portions of the elongated opening being separated by oppositely disposed projections for limiting the closing of the blank adjacent to said bearing surfaces, substantially as and for the purpose specified.

6. A mouth-piece for bridle bits, said mouth-piece having therein adjacent to each end thereof an elongated perforation inclosed by a continuous wall, the outer end of each perforation carrying a cheek-piece and having the adjoining walls of the mouth-piece at the sides of said perforation closable upon each other for retaining the cheek-pieces, substantially as described.

HORACE S. SQUIER.

Witnesses:
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JOHN H. KIRKHAM.