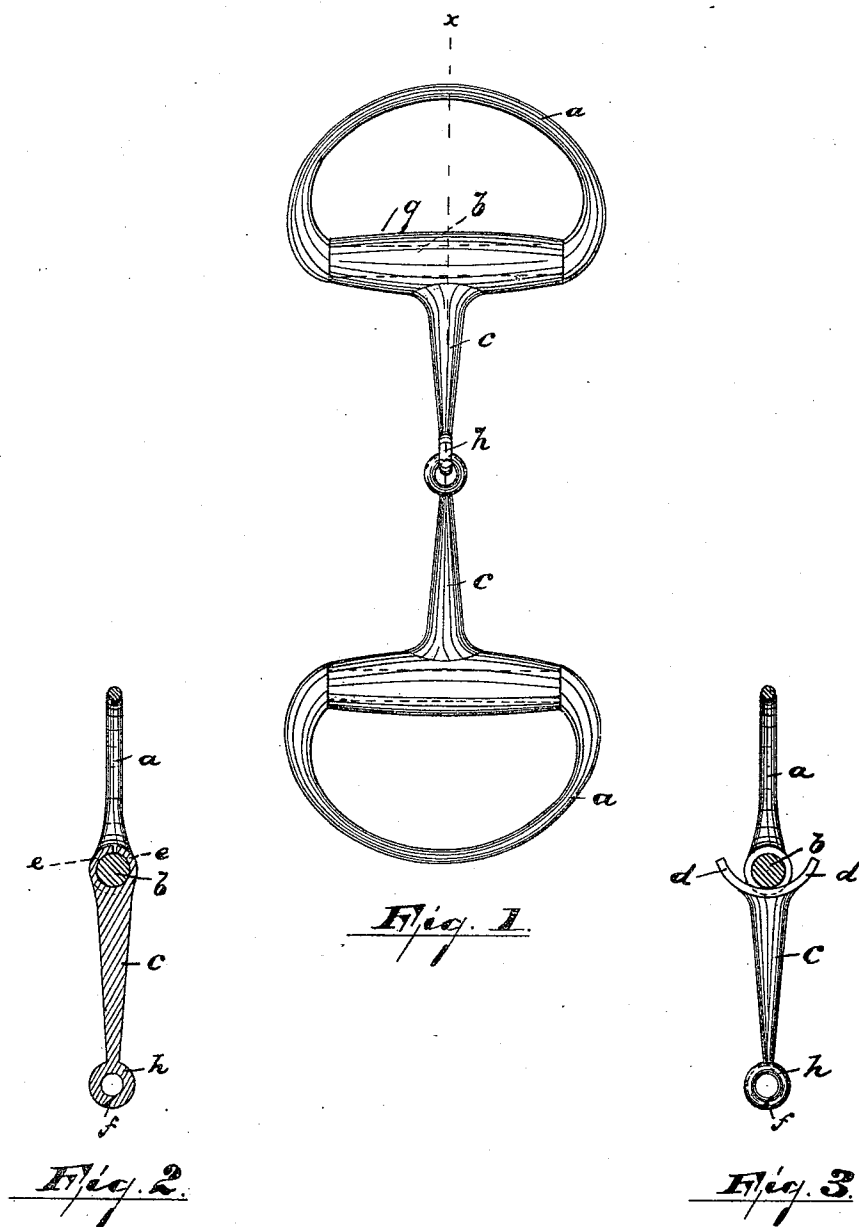


(No Model.)

B. TURTON.
MANUFACTURE OF BRIDLE BITS.

No. 461,514.

Patented Oct. 20, 1891.



WITNESSES:

Wm. Snell
E. L. Sherman

INVENTOR.

Benjamin Turton
BY
Partner & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

BENJAMIN TURTON, OF NEWARK, NEW JERSEY.

MANUFACTURE OF BRIDLE-BITS.

SPECIFICATION forming part of Letters Patent No. 461,514, dated October 20, 1891.

Application filed June 9, 1891. Serial No. 395,677. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN TURTON, a citizen of the United States, residing at Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in the Manufacture of Bridle-Bits; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

15 This invention relates more especially to the process of manufacture of that class of bridle-bits having T-head mouth-pieces; and its object is to simplify the process of manufacture, reduce the cost of production, and increase the efficiency and durability of the complete bit. Heretofore in bits of this class the cheek-rings have been cast or forged with a smaller portion adapted to be pivoted to the mouth-piece. The mouth-pieces were also forged or
20 the efficiency and durability of the complete bit. Heretofore in bits of this class the cheek-rings have been cast or forged with a smaller portion adapted to be pivoted to the mouth-piece. The mouth-pieces were also forged or cast with a flattened enlarged end to connect with the cheek-piece and a forged hook to connect with the corresponding end of the other mouth-piece. The outer flat portion of the mouth-piece is then turned up on a curve and
25 the center reamed or drilled to furnish a smooth bearing and then turned down closely upon the cheek-piece. The hooks on the ends of the two mouth-pieces are then heated and their ends turned over on each other to form interlocking eyes as a joint.

30 To better illustrate my process of manufacture, reference can be had to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures.

Figure 1 is a plan view of a bit made by my improved process. Fig. 2 is a central section on line *x*, Fig. 1, only one cheek-piece and one portion of the mouth-piece being shown. Fig. 3 is a central cross-section of a cheek-piece and a plan view of one portion of the mouth-piece, showing the sides of the end open and in position for closing the mouth-piece on the cheek-ring.

50 In carrying out my process the cheek-rings are first stamped out of any desired metal by a die in one continuous integral piece, as

shown at *a*, Fig. 1, the straight or inner side of the ring being made smaller, as shown at *b*, Fig. 3, to receive the T end of the mouth-piece, and on which it turns as a pivot. The portions *c* of the mouth-piece are also stamped out by a die in one integral piece, the portion designed to be connected to the cheek-ring being a solid cylinder of metal as it comes from the die and of a length equal to that of the part *b* of the cheek-ring. The inner end is formed with a solid eye *h*. After being thus stamped out a hole is drilled longitudinally through the center of the cylinder, thus forming a tube *g* of the diameter of the part *b* of the cheek-ring. This tube is then divided longitudinally on its outer edge by a saw or in any desired manner, and the lips of the tube are forced outward by proper tools into the position shown at *d*, Fig. 3. The portion *b* of the cheek-ring is then placed in the position shown in that figure, and the lips *d* of the tube are then forced around the part *b* by a die until they assume the form shown at *e*, Fig. 2. This forms a universal pivotal connection between one portion of the mouth-piece and its cheek-ring. The connection between the two portions of the mouth-pieces is made by sawing or cutting in any desired manner a slot in the small eye at the inner end of one of the mouth-pieces, as shown at *f*, Figs. 2 and 3. This cut eye is then opened apart sufficiently to allow one eye to enter the other, and the ends of the cut eye are then forced together by a die in the ordinary manner and the seam or joint brazed or united in any preferred manner and as shown in Figs. 2 and 3.

Bridle-bits made according to my process are much stronger than those made in the ordinary manner, are more easily manufactured and at much less cost, and a greater quantity can be made within the same time.

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

1. The within-described process of manufacturing bridle-bits, the same consisting in striking up in a die in a solid piece the cheek-rings and also the mouth-pieces with a solid cylindrical head on the outer end and an eye on the inner end, then drilling in the cylinder a longitudinal hole of the diameter of the

portion of the cheek-rings to which it is to be fitted, then sawing or splitting the cylinder longitudinally on its outer edge, forcing open the sides, inserting the cheek-ring, and compressing in a die the sides of the cylinder over and around the cheek-ring, forming a pivot, substantially as described and set forth.

2. The within-described process of manufacturing and uniting two portions of a mouth-piece of a bridle-bit, consisting first in striking up in a die the two separate portions of the mouth-piece with solid eyes at their inner ends, then sawing or cutting one eye on an angle, forcing open the cut eye, and then inserting one within the other and closing the cut eye by a die or other suitable means and

brazing the seam, substantially as described and set forth.

3. As a new article of manufacture, a T-shaped head and mouth-pieces for bridle-bits struck up by a die and adapted to be connected with each other and with the cheek-rings by the process herein described, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of May, 1891.

BENJAMIN TURTON.

Witnesses:

ALFRED GARTNER,
E. L. SHERMAN.