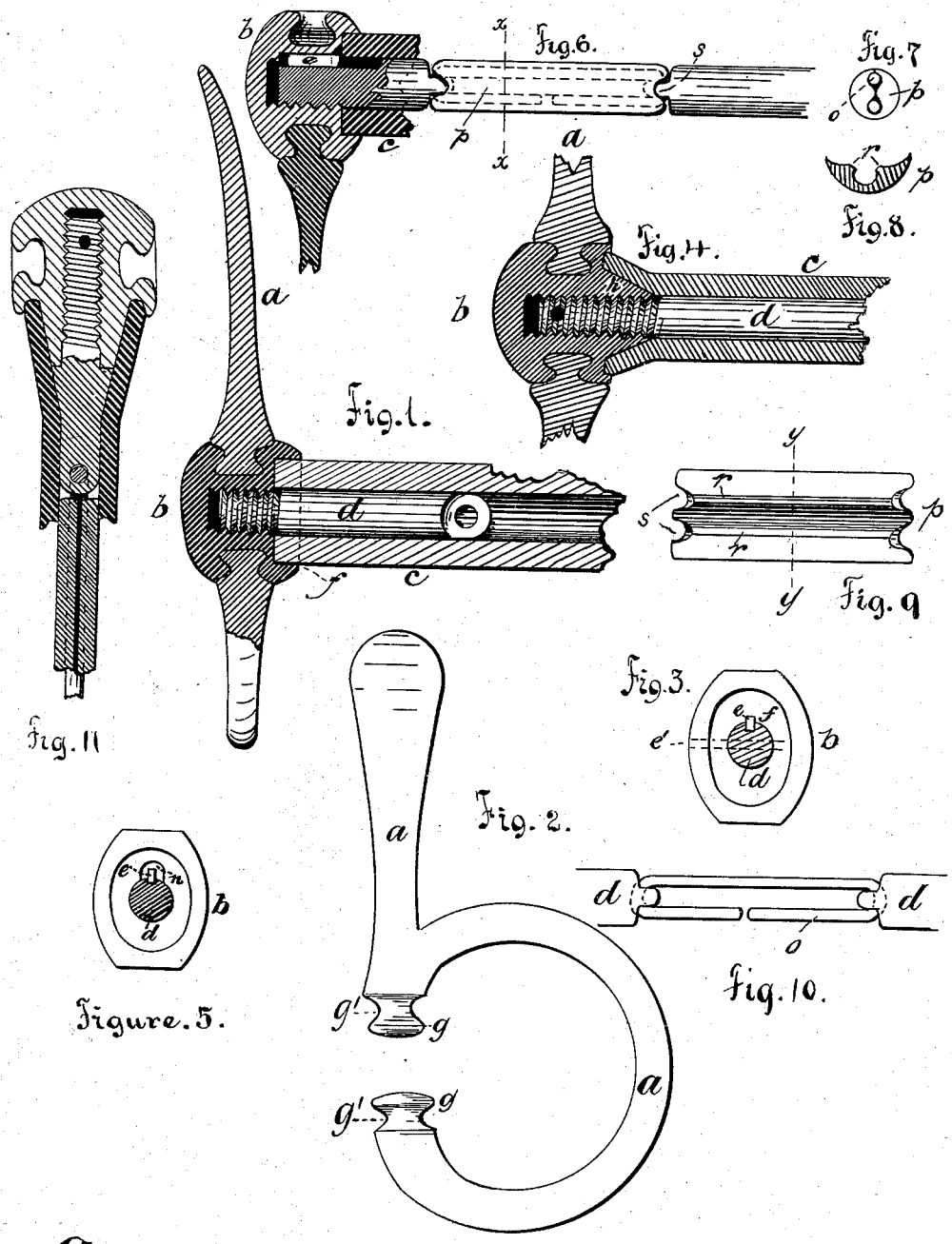
(No Model.)

E. R. & C. E. CAHOONE.

BRIDLE BIT.

No. 264,925. Patented Sept. 26, 1882.



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UNITED STATES PATENT OFFICE.

EDWIN R. CAHOONE AND CHARLES E. CAHOONE, OF NEWARK, N. J.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 264,925, dated September 26, 1882.

Application filed February 15, 1882. (No model.)

To all whom it may concern:

Be it known that we, EDWIN R. CAHOONE and CHARLES E. CAHOONE, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bridle-Bits; and we 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.

The object of this invention is to reduce the cost of construction, and to increase the durability and effectiveness of the device.

It consists in the arrangements and combinations of parts, substantially as will be set forth and shown, and in the specified material used in constructing certain parts in the combination, all as will be finally embodied in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate like parts in each of the several figures, Figure 1 is a sectional view of a portion of a bridle-bit, clearly illustrating our method of combining the cheek-piece with the head of the mouth-piece; Fig. 2, a cheek-piece detached from the mouth-piece; Fig. 3, an end view of a head hollowed out to receive a mouth-piece-core covering, and illustrating two methods of keying the core within the head. Fig. 4 shows a head provided with a projecting shank adapted to cause the core-covering to flare. Fig. 5 illustrates a detail of the head. Figs. 6, 7, 8, 9, and 10 illustrate our improved method of constructing a mouth-piece; and Fig. 11 illustrates our head and mouth-piece with further improvements, which will be described. Fig. 7 is a section taken through line *x*; and Fig. 8, a section of an open jacket, taken through line *y*.

In carrying out our invention we cast or otherwise form the cheek-piece *a* with buttons or bulbs *g* on that portion thereof where said cheek-piece engages with the mouth-piece head, as shown more clearly in Fig. 2, said bulbs having recesses *g'* formed behind them. The cheek-piece is then, or may be, laid in molds and the head *b* cast around the said buttons or bulbs, forming in a certain degree dovetailed joints between the head and cheek-piece, as will be clearly understood.

Within the head *b*, and between the bulbed extremities of the cheek-piece, we form a socket for the reception of the mouth-piece or core *d*, which said socket may have a female screw-thread formed therein adapted to engage with a male thread on the shank, or any other manner of uniting the two parts may be carried into effect, although the method described is preferable, it giving greater security to the parts.

The threaded extremity of the shank may be keyed into the socket by means of the longitudinal key *e*, or by means of a pin, *e'*, passed through the side of the head, as shown in Fig. 3.

We form, or may form, within the head *b* a recess, *f*, adapted to receive the end of the core-covering *c*. The core *d* may be formed of one integral piece to form a rigid mouth-piece, or the same may be jointed and form a flexible mouth-piece.

Should we desire, we may form a flange, *h*, (shown in Figs. 4 and 11,) projecting from the head *b* around the core *d*. It is thus adapted to cause the extremities of the tubular covering to flare and form a more perfect protection against the metallic portions of the bit from injuring the horse's mouth in frosty weather. The end of said flange *h* may engage with a shoulder, *q*, on and surrounding the mouth-piece core, and the flaring portion of the mouth-piece be thus lengthened, as shown in Fig. 11. The said flaring portion, in addition to the purpose above stated, serves to prevent the horse from getting a strong purchase with his teeth upon the bit. The bearing-surface of the said teeth being on a horizontal line and the bit at an angle thereto, the surfaces of contact are greatly reduced, as will be apparent.

Although we do not limit ourselves to it, we prefer, because of its simplicity and cheapness, to construct our mouth-piece as follows:

A link, *o*, preferably of wire, and of brass or other similar non-corrosive composition, connects the shanks *d*, (or any sections of the mouth-piece,) the wire being simply bent, as

shown more clearly in Fig. 10. The said brass portion of the mouth-piece will not be affected to any detrimental extent by oxidation or other decomposition caused by the juices and saliva from the horse's mouth; nor will the brass be weakened by contact with the rubber covering, which contains sulphur, all of which defects are common to any iron mouth-pieces.

Over the link or links *o* we form a metallic binding-jacket, *p*, adapted to prevent the link from uncoupling and to give solidity and rotundity to the mouth-piece. Said jacket has longitudinal projections *r*, adapted to pass between the wires, so that when said jacket is bent to protect the wires the latter are inclosed in separate chambers, as will be clearly understood upon reference to Fig. 7. Each end of the jacket may have notches *s* formed in them to give a closer joint with the sections. By means of the screw-core *d*, adjusted within the head *b*, the distance between the cheek-pieces of the bit may be increased or diminished at pleasure to adapt the said bit to the width of the horse's mouth. This action is accomplished by simply removing the longitudinal key *e*, screwing up or unscrewing the core and reinserting the key, as will be understood.

A recess, *n*, may be formed to allow a pair of nippers to catch the end of the key, which should not, as will be evident, interfere with the covering *c*.

In thus describing an extensible mouth-piece we do not wish to be understood as limiting ourselves to the exact arrangement herein shown, but wish to be understood as claiming the feature broadly, as set forth in the claims.

What we claim is—

1. In combination, in a bit, a mouth-piece core having threaded extremities, socketed heads adapted to receive said mouth-piece core, and keys adapted to hold said heads and said mouth-piece in fixed relation to one another, as set forth.

2. In a bit, the bulbed or dovetailed extremities *g* of the cheek-piece working in sockets in the head of the mouth-piece, substantially as set forth and shown.

3. In combination, in a bit, a cheek-piece having bulbed extremities, a head having corresponding recesses therein, and having a socket between said recesses adapted to receive the mouth-piece, and a mouth-piece, said parts being arranged and operating substantially as and for the purposes herein set forth.

4. In a bit, the cheek-piece having the pivotal parts *g* dovetailed within a head, said head having a threaded socket adapted to receive a threaded mouth-piece, substantially as and for the purposes herein set forth.

5. In a bit, the combination, with the core *d* and covering *c*, of a head having a projecting flange, *h*, adapted to cause the extremities of the covering *c* to expand, substantially as and for the purposes herein set forth and shown.

6. A bit having therein a mouth-piece composed of sections connected by a link, *o*, covered with a metallic jacket, *p*, substantially as and for the purposes set forth and shown.

7. In combination with the link *o* of a bridle-bit mouth-piece, a jacket having longitudinal projecting ribs *r* adapted to pass between the sides of the link, said jacket being adapted to prevent the said link from uncoupling.

8. In a bit, a cheek-piece having bulbs *g* thereon, a head having corresponding recesses, and having the flange *f* projecting therefrom, a core, *d*, secured in said head, and a covering, *c*, all arranged in combination, substantially as and for the purposes set forth.

9. In a bit, the head provided with the flange *h*, causing the mouth-piece covering to flare, substantially as and for the purposes set forth and shown.

10. In a bit, the head provided with the flange, in combination with the core provided with the shoulders *q*, substantially as and for the purposes set forth and shown.

11. As an improved article of manufacture, a bit having a head carrying bulbed cheek-pieces, said head having a threaded recess therein to receive the mouth-piece core, having recess *f* to receive the end of the covering *c*, and having a flange, *h*, to cause said covering to flare, a mouth-piece having therein a link, *o*, coupling-sections, as *d*, a jacket, *p*, covering and binding said link, and a covering, *c*, the whole being arranged and combined substantially as and for the purposes set forth and shown.

In testimony that we claim the foregoing we have hereunto set our hands this 31st day of January, 1882.

EDWIN R. CAHOONE.
CHARLES E. CAHOONE.

Witnesses:
CHARLES H. PELL,
CHARLES T. WINTERS.