

F. CRANE.  
BRIDLE-BIT.

No. 188,726.

Patented March 27, 1877.

FIG. I.

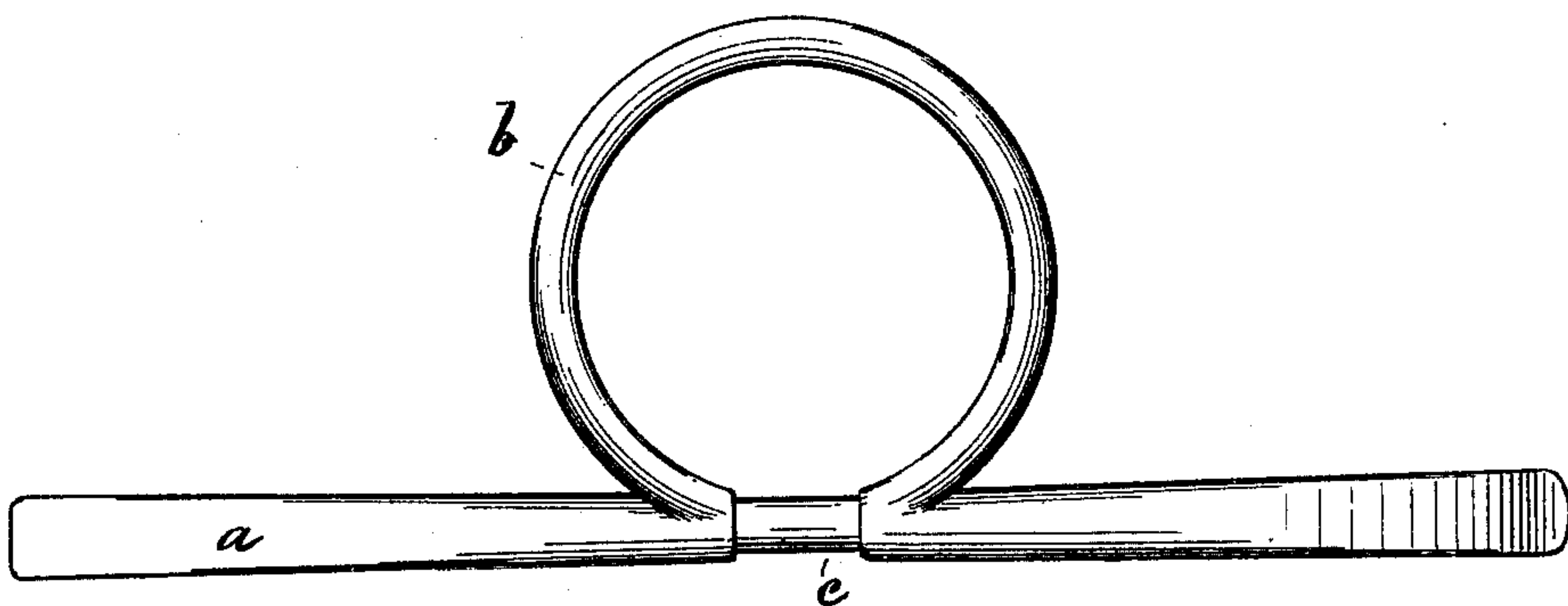


FIG. II.

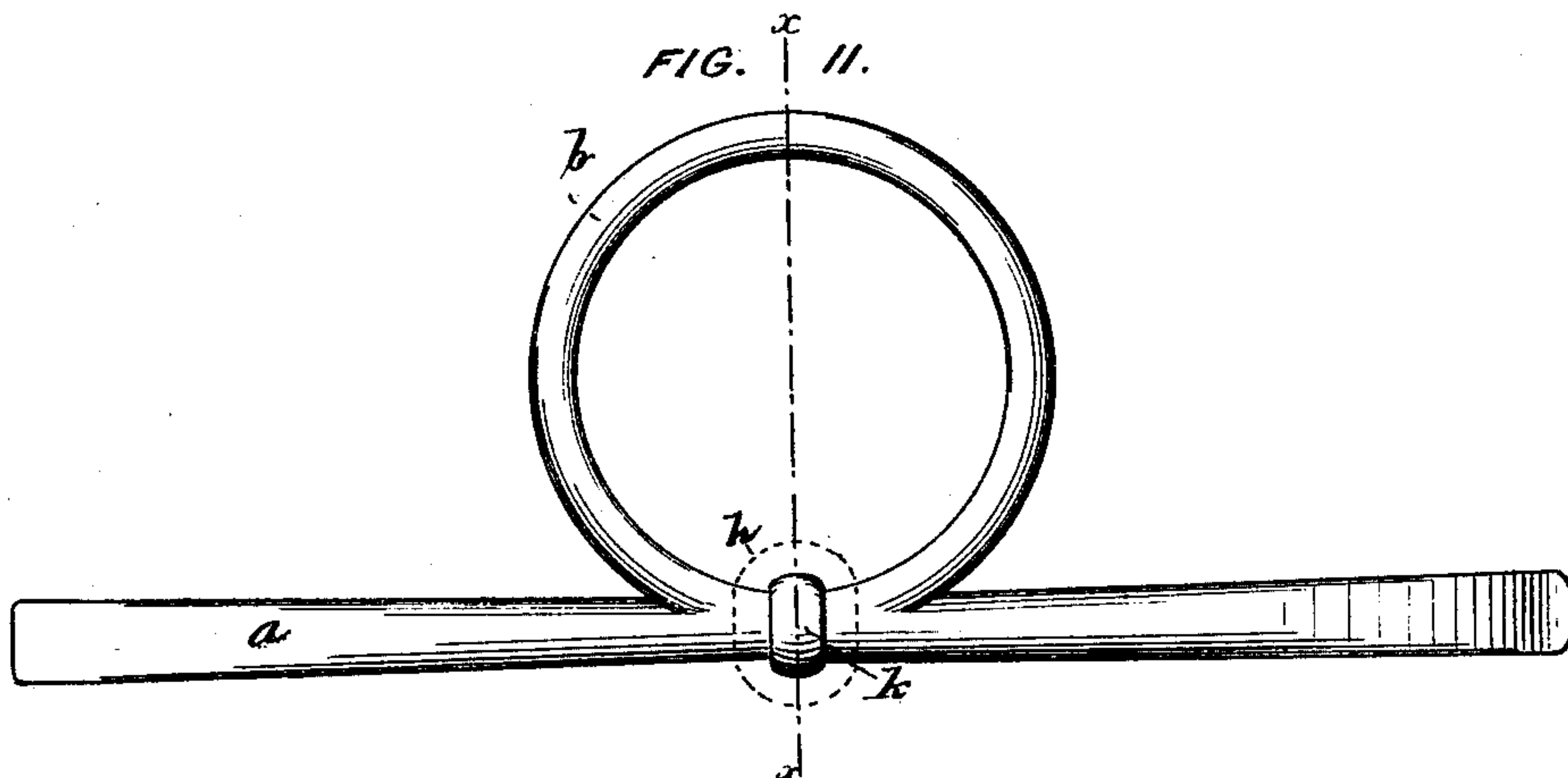
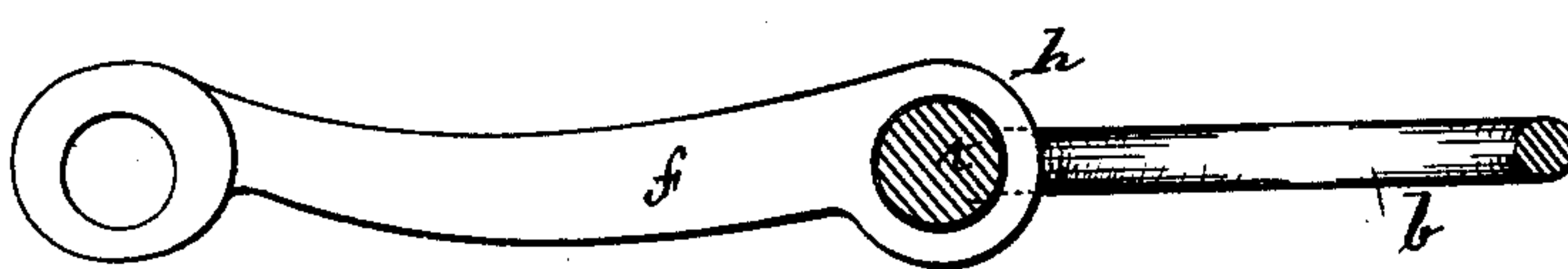


FIG. III



WITNESSES:

Lizzie Towle,  
E. M. Helmick,

INVENTOR:

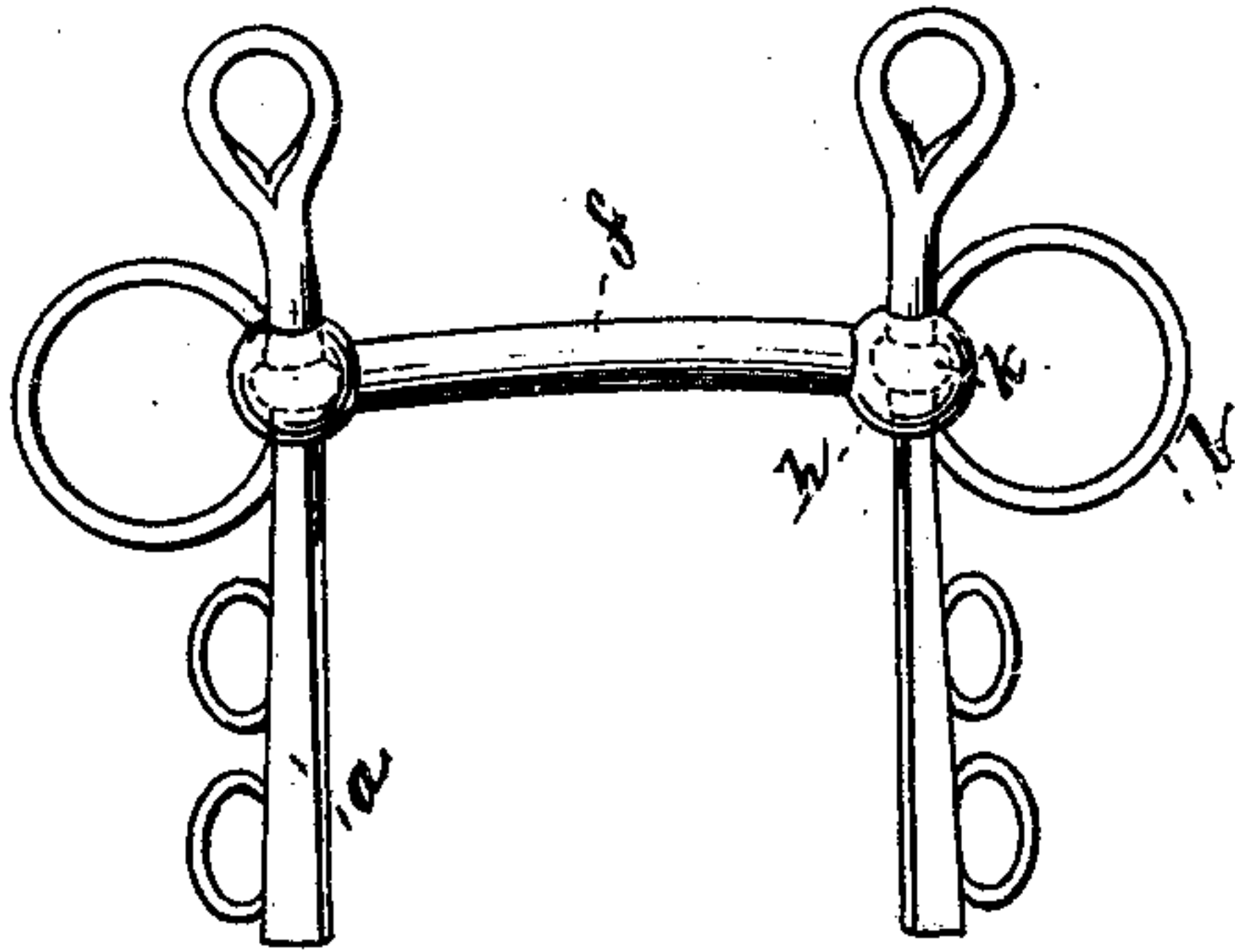
Frederick Crane.

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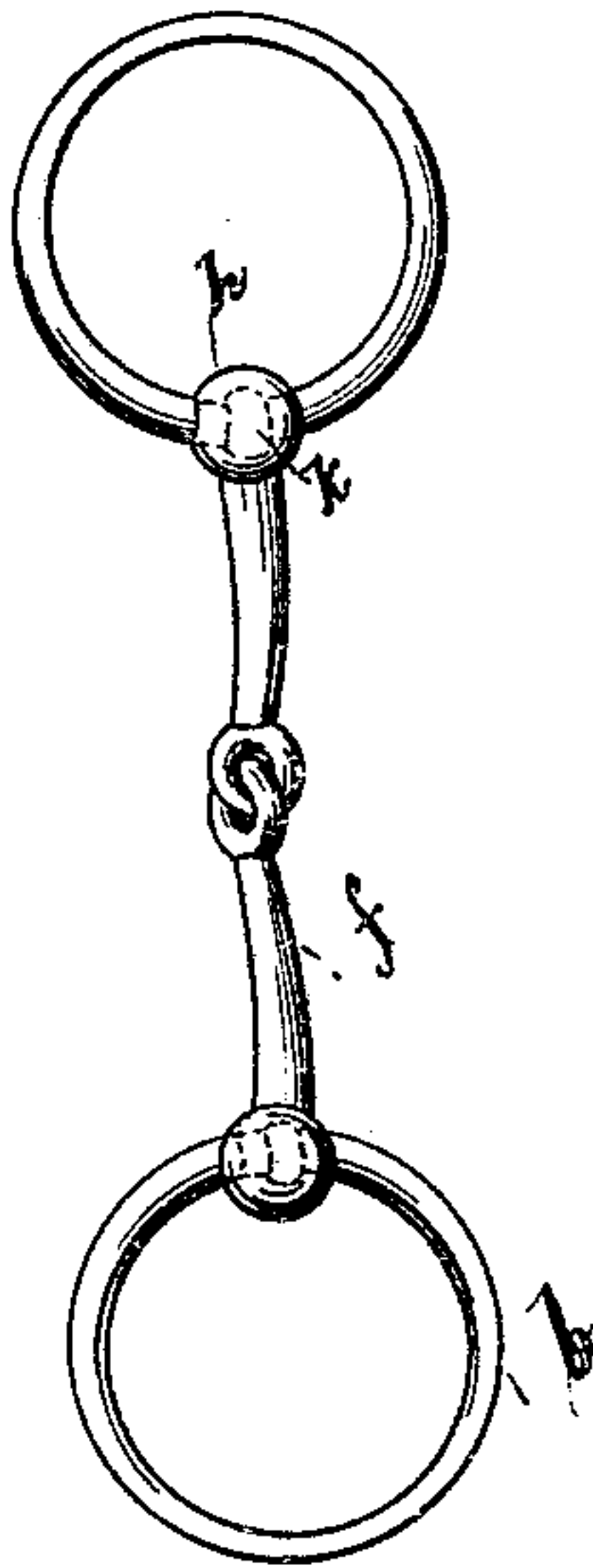
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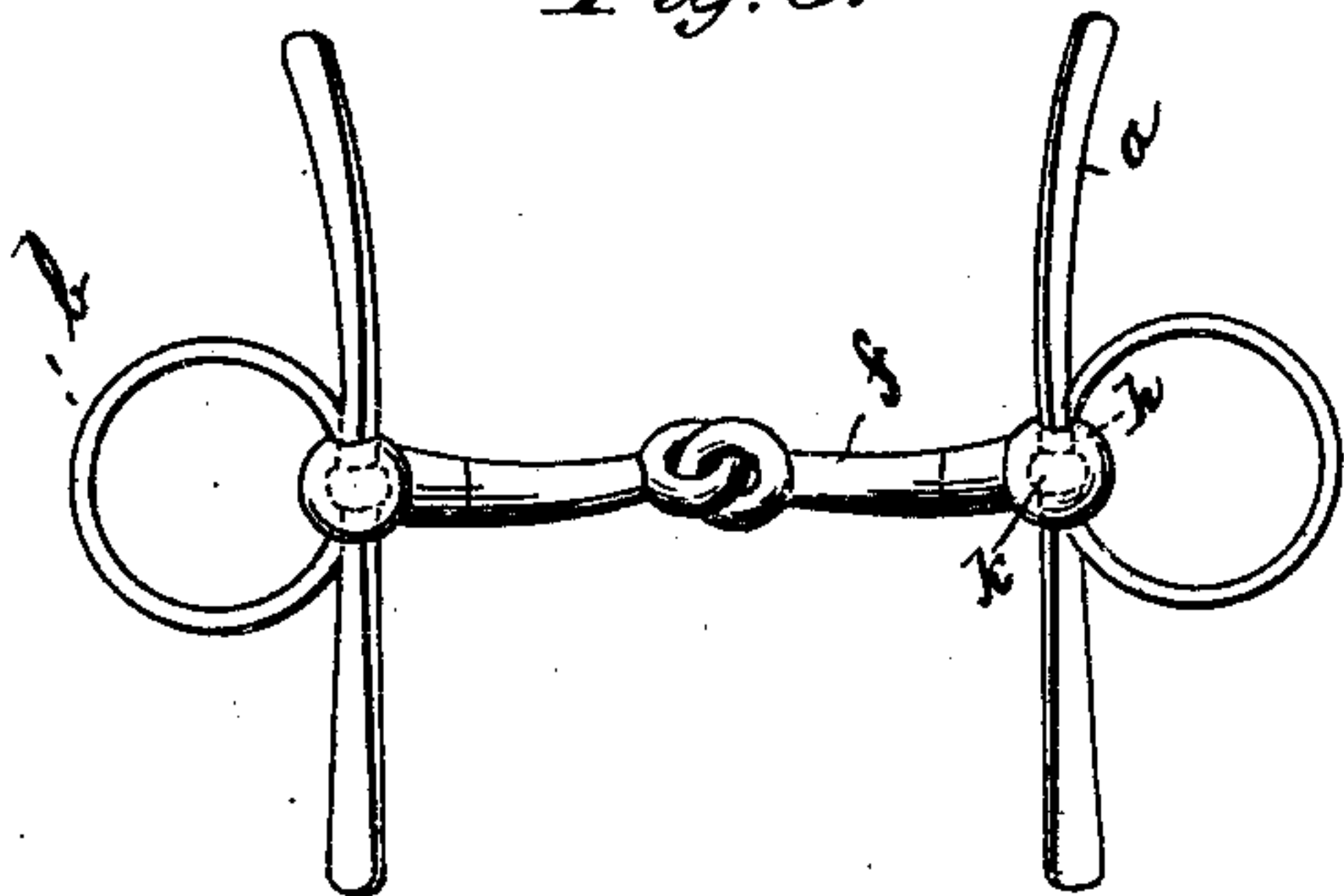
*Fig. 4.*



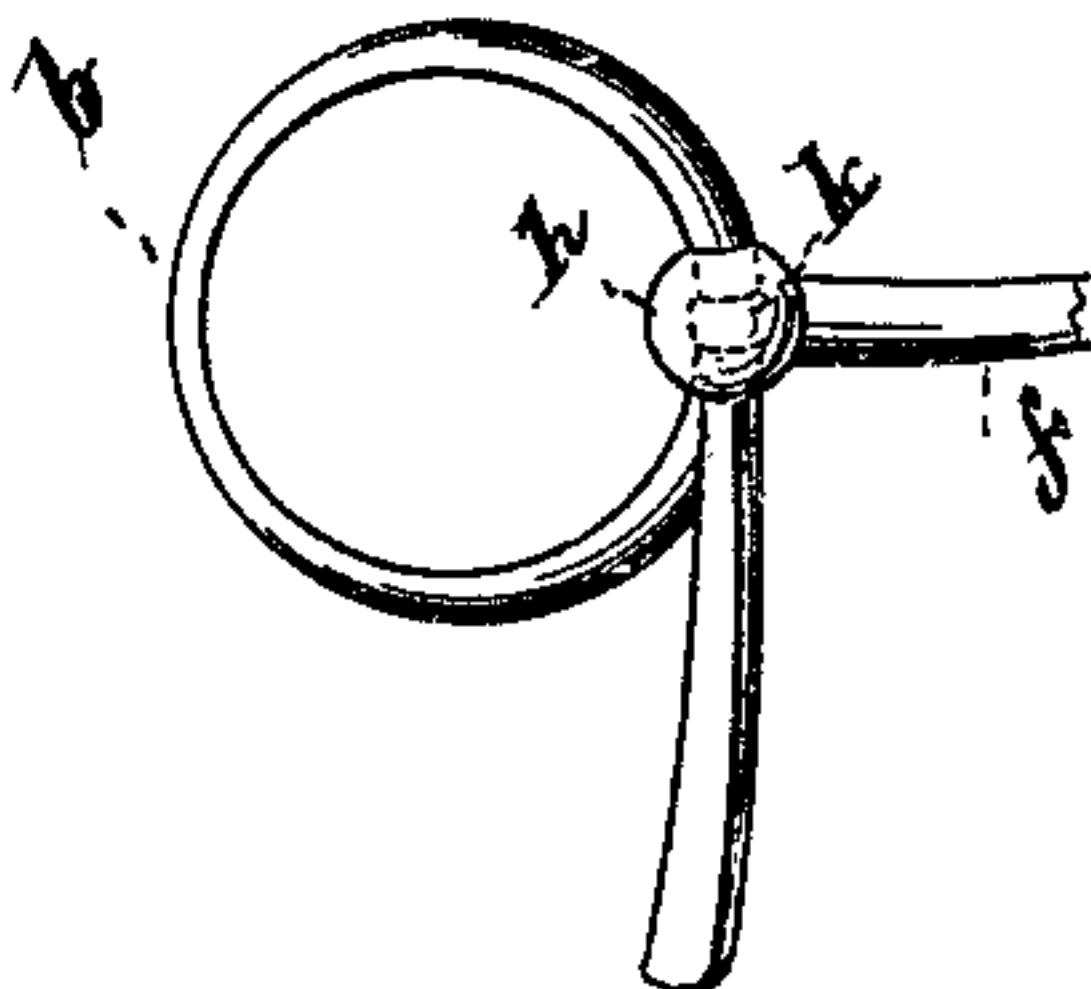
*Fig. 5.*



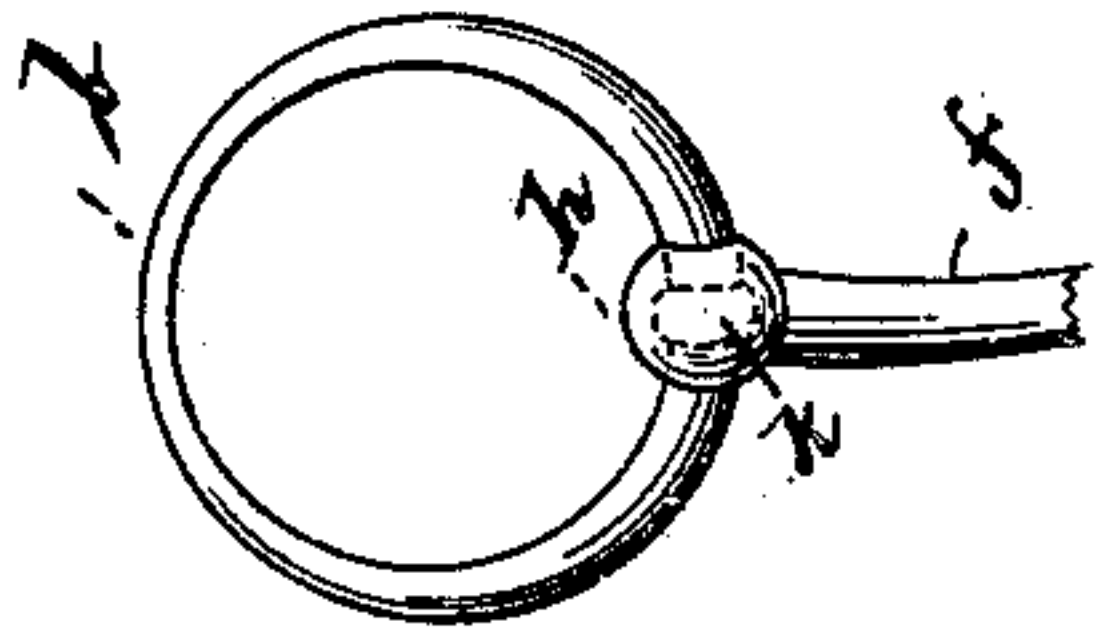
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



Witnesses:

Lizzie Towle  
E. M. Helmick

*Inventor.*

Fredrick Crane



# UNITED STATES PATENT OFFICE.

FREDERICK CRANE, OF BLOOMFIELD, ASSIGNOR TO HIMSELF, EDWARD N. CRANE, OF NEWARK, AND JASON CRANE, OF BLOOMFIELD, N. J.

## IMPROVEMENT IN BRIDLE-BITS.

Specification forming part of Letters Patent No. 188,726, dated March 27, 1877; application filed December 12, 1876.

*To all whom it may concern:*

Be it known that I, FREDERICK CRANE, of Bloomfield, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bridle-Bits; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 shows the cheek-piece of a bridle-bit as now ordinarily constructed. Fig. 2 shows the same piece as made according to my invention, and Fig. 3 a section on the line *xx* of Fig. 2. Fig. 4 represents a Hanoverian bit; Fig. 5, a jointed ring-bit; Fig. 6, a jointed snaffle-bit. Fig. 7 is a half-cheek snaffle-bit; and Fig. 8, part of a stiff ring-bit.

In the drawing, *a* shows the cheek-piece; *b*, the ring; *c*, the depression in the cheek-piece, into and around which the head of the mouth-piece is forged or cast, so as to join the ring to the mouth-piece. *k* is a raised portion or bead, around which the head *h* of the mouth-piece moves in the bits made according to my invention. In Figs. 2, 4, 5, 6, 7, and 8 the head *h* of the mouth-piece surrounding the raised portion or bead *k* is shown in dotted lines. The body of the mouth-piece is shown at *f*, Fig. 3. Figs. 3, 4, and 5 show a few of the various other patterns of cheek-pieces, to all of which, and to any other pattern, my invention is applicable.

My invention has for its object the production of a stronger and safer bridle-bit without destroying the grace and beauty of the present patterns. Heretofore the cheek-pieces of a bridle have been kept in position with each other and from moving, except toward and from each other and the mouth-piece, by a depression, as shown at *c*, Fig. 1, corresponding in length with the width of the head of the mouth-piece, into and around which the head of the mouth-piece is cast or forged; but, while serving its purpose in this respect, this depression in the cheek very materially weakens the bit, experience showing that the bit gives

way first at this spot. At this shoulder, too, which must be sharp, that it may be neatly fitted round the head of the mouth-piece, there is a liability to irregular shrinkage when the iron is cooling, and, consequently, of flaws in the casting; and, again, in bits which have forged mouth-pieces, (the cheek being of wrought or malleable iron,) when the hot iron is driven around this depressed center, this depressed place, being weak, is often flattened and warped out of true, so that there is greater difficulty, when finishing up, in making the hinge work smooth and even. All of these defects are remedied in my invention, which consists in raising a small bead in the center of the cheek-piece, as shown at *k*, Figs. 2 and 3, where a depression is now made, over and around which bead the head of the mouth-piece is forged or cast, completely hiding the bead from view. The raised portion will serve the purpose of keeping the cheek in its place, and will make the bit extra strong at the place in the bit where the most friction comes, and where, too, in the forging process the greatest strength is also desirable. A fuller and handsomer head can also be made by my improvement without the necessity of much upsetting, since in driving the iron around the knob the iron will be spread out on the sides where needed to form a handsome bit.

I am aware that bits with two raised knobs on the side have been made with the head of the mouth-piece between; but, while giving the bit greater strength than the depressed center, they are not in the center of the mouth-piece where needed to resist the friction caused by the swinging of the cheek, and possess none of the other advantages of my invention, and, moreover, they give the bit such a clumsy appearance, and are so difficult to finish handsomely, that they have only had a very limited application, and for a common article. The essential difference between my invention and this and all other styles is that the central point or part of the cheek covered by the head of the mouth-piece is thicker than the parts of the cheek immediately outside of the head of the mouth-piece.

My invention is not confined to any particular kind or pattern of bits, but is applicable



to all bits in which the cheek-pieces are to be kept in a certain position with the head, but allowed to move to and from it and each other.

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

1. A cheek-piece for a bridle-bit having a raised bead, *k*, substantially as and for the purpose set forth.

2. A bridle-bit provided with a cheek-piece with a raised bead, *k*, and a mouth-piece with

a head, *h*, surrounding the bead *k*, so as to hold the parts in position, substantially as described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

FREDERICK CRANE.

Witnesses:

JOSEPH COULT,

CHAS. D. HERMION.