

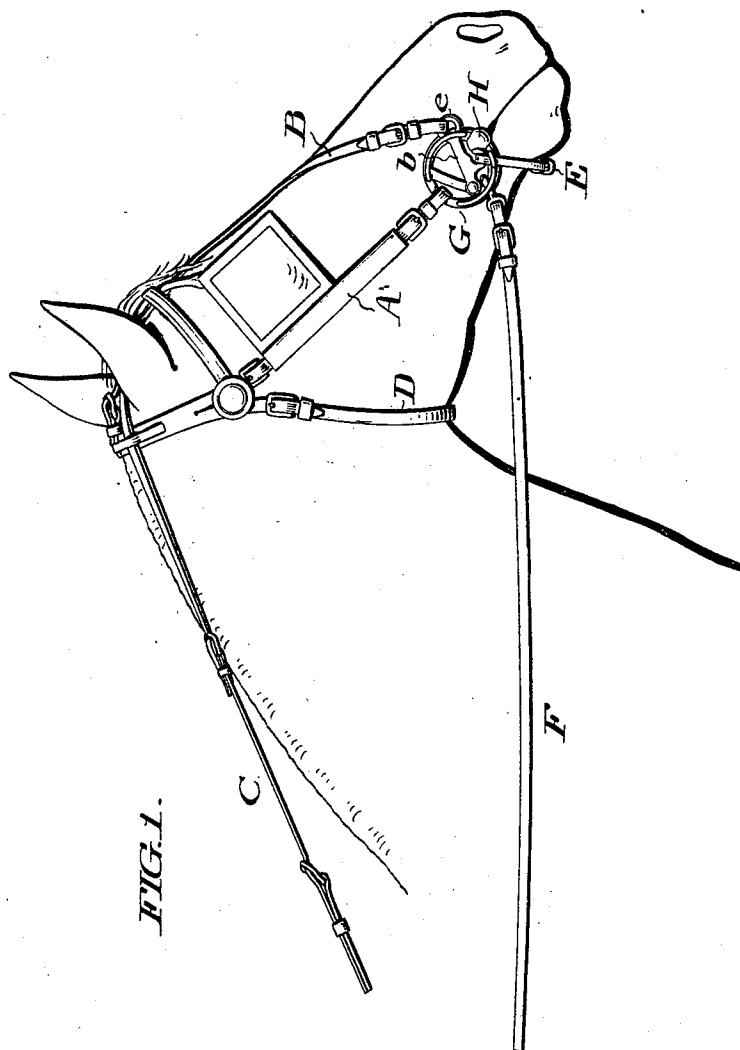
(No Model.)

3 Sheets—Sheet 1,

J. CLAMER.
BIT FOR HORSES.

No. 544,563.

Patented Aug. 13, 1895.



WITNESSES:

F. V. Starnes, Jr.
B. Thompson.

INVENTOR:

Joseph Clamer
J. C. Leathrop,
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(No Model.)

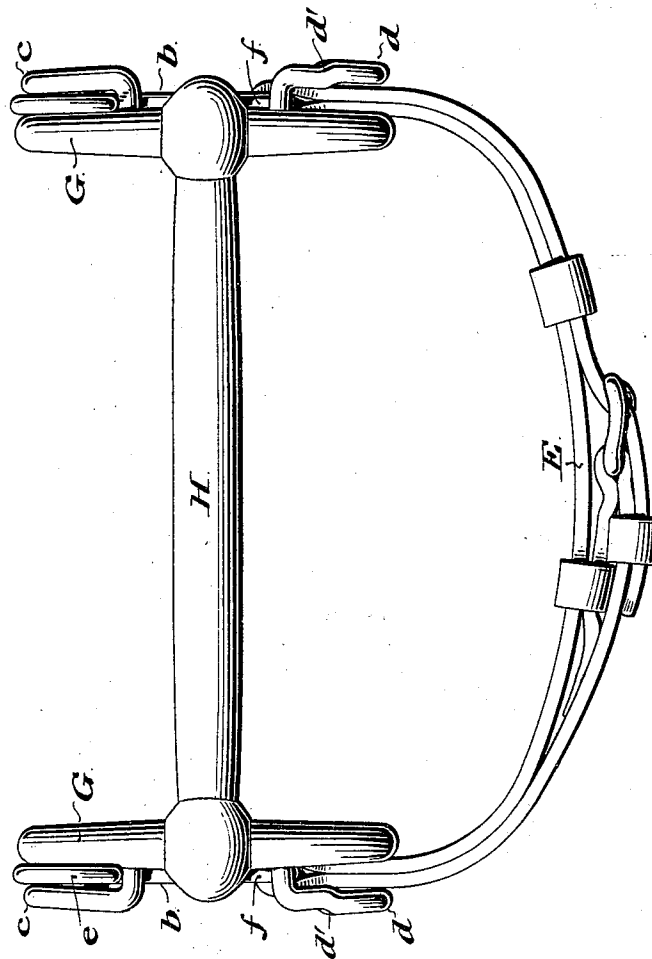
3 Sheets—Sheet 2.

J. CLAMER.
BIT FOR HORSES.

No. 544,563.

Patented Aug. 13, 1895.

FIG. 2.



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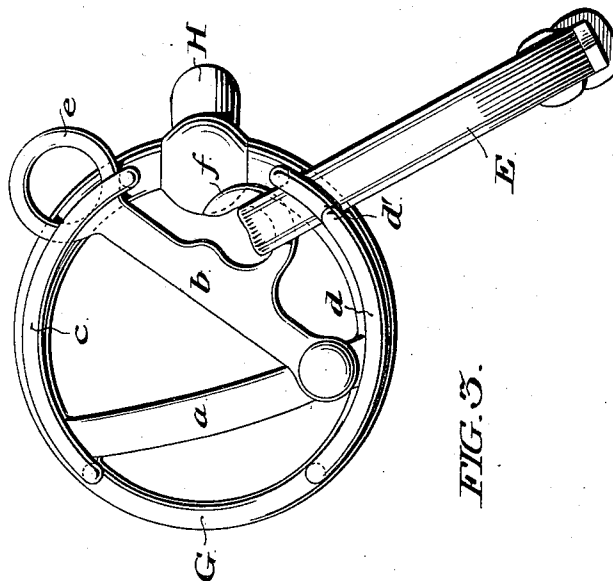
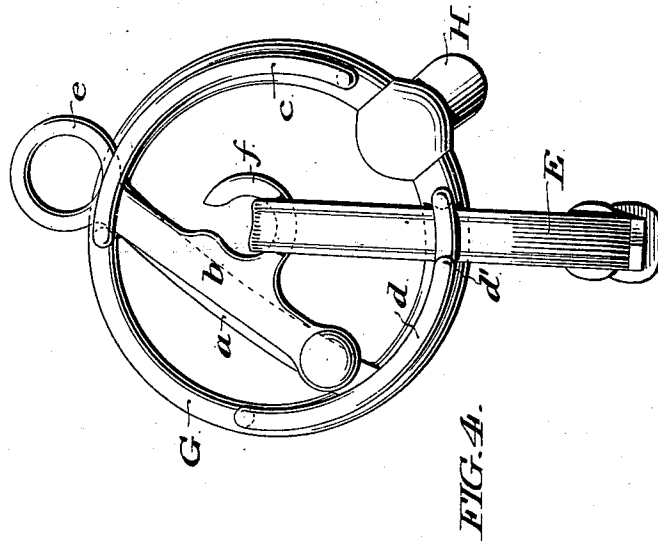
(No Model.)

3 Sheets—Sheet 3.

J. CLAMER.
BIT FOR HORSES.

No. 544,563.

Patented Aug. 13, 1895



WITNESSES:

F. W. Stevens, Jr.
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INVENTOR:

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Attorney.

UNITED STATES PATENT OFFICE.

JOSEPH CLAMER, OF TRENTON, NEW JERSEY, ASSIGNOR TO THE CLAMER
LEVER BIT COMPANY, OF NEW JERSEY.

BIT FOR HORSES.

SPECIFICATION forming part of Letters Patent No. 544,563, dated August 13, 1895.

Application filed May 16, 1895. Serial No. 549,505. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CLAMER, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Bits for Horses, of which the following is a specification.

My invention relates to that class of bits which are used to exert a strong pressure upon the lower jaw of a horse for controlling him when unruly, as well as to guide him; and the object of my invention is to produce a simple and efficacious bit for such purpose, which, while fully controlling the horse and preventing "tongue-lolling," will not lacerate the mouth or injure the jaw.

In the accompanying drawings, forming a part of this specification, Figure 1 shows a side view of the head of a horse and illustrates the usual position of my improved bit in the mouth. Fig. 2 is a front view of my improved bit, showing the depending chin-strap. Fig. 3 is an end view of the bit, showing my improved construction of ring and attachments as the same appear in the horse's mouth without special draft upon the lines; and Fig. 4 is a similar view of the bit and ring, showing the position which the bit and attachments assume when there is a draft upon the lines.

In the drawings, A is the cheek-piece.

B is the overdraw.

C is the back section of the overdraw.

D is the throat-latch.

E is the chin-strap, and F is the line.

G G are the rings of the bit.

H is the mouthpiece.

a is the fulcrum bar.

b is a lever pivoted on the fulcrum-bar a.

c c are upper guide-bars.

d d are lower guide-bars.

The rings G G are preferably made of the usual size and attached to the mouthpiece H in the usual manner.

The peculiar features of my improvement are found upon the rings of the bit. Above the mouthpiece H—that is, on the upper side of each ring and on the outside thereof—I form a curved guide-bar c, the inner or under side of the guide-bar being about one-eighth of an inch distant from the face of the ring

G. On the lower outer face of each ring G, I place a curved guide-bar d. Parts of this guide-bar d are formed in different planes parallel to the plane of the ring G. The inner side of the guide-bar d at its lower plane is about one-eighth of an inch from the opposing face of the ring G, while that part of the guide-bar d lying in its other plane is about one-quarter of an inch from the face of the ring G, an offset being formed in the guide-bar at d'. The higher offset parts of the guide-bars d d are provided for the convenient attachment of the lines to the rings G G. Between a point on the ring G, near the end of the guide-bar c, farthest from the mouthpiece H and a point on the opposite side of the ring near the middle of the guide-bar d, is placed the fulcrum-bar a, which is made of metal cast integral with the ring. At the end of this fulcrum-bar a nearest the guide-bar d is swiveled the lever b. This lever extends from its connection with the fulcrum-bar a across the ring G and between it and the guide-bar c and terminates at its outer end in the ring e. On its front side and a little below its middle portion the lever has formed upon it a hook f, to which hook is attached one end of the chin-strap E. When the bit is in its normal position in the mouth, the chin-strap E lies across the outer face of each ring G, within the guide-bar d, and between the offset therein d' and the end of the guide-bar nearest the mouthpiece H. Each lever b is attached to an end of the overdraw (see Fig. 1,) and the lines may be attached (as preferred) to the rings G, either forward of the lower end of the fulcrum-bar a or back of it, but always within the guide-bars b.

The operation of my bit is as follows: Starting with the bit in its normal position in the mouth, the chin-strap E, as has been said above, will be found passing over the rings G and between them and the guide-bars d at that part of each ring lying between the offset d' in the guide-bar d and the end of the guide-bar nearest the mouthpiece H, while the upper ends of the levers b b will be at or near the forward ends of the guide-bars c, the parts holding the relative positions indicated in Fig. 3. If the animal prove unruly, or it be desired to check him, the lines are drawn

in with the result of turning the rings G G upwardly and the mouthpiece H downwardly relatively to the horse's lower jaw. The overdraw B, being fixed, pulls the levers *b b* backward relatively to the rings G G and levers *b b* pass backward within the guide-bars *c*. This movement draws the chin-strap E up tightly against the under side of the lower jaw, the parts assuming the relative position shown in Fig. 4, while the mouthpiece H is thrown back in the mouth. As will be readily observed, the effect of this action of the parts described is to clamp the lower jaw with all desirable power between the mouthpiece H and the chin-strap E without laceration of the mouth or tongue. Under this action of the bit and attachments the animal naturally closes its mouth to obtain relief from the excessive pressure of the chin-strap and is prevented from forcing the bit forward between its teeth by its tongue, and is brought absolutely under control without injury to the animal.

As will be readily seen, the power of the bit may be augmented or diminished accordingly as the lines are placed on the rings G G forward of the lower ends of the fulcrum-bar *a* or back of those points, the stronger force being secured by placing the lines forward of the fulcrum-bars.

I prefer to embody the fulcrum-bars *a* in my construction, as they not only afford convenient locations for the fulcrums of the levers *b b*, but serve to stiffen and brace the rings G G; but, as will be readily understood, I may omit the fulcrum-bars *a* and fulcrum the levers *b b* upon the rings G G proper or upon ears or projections fixed thereon.

Having thus described my invention, I claim—

1. In a bit, the combination of a mouth piece, two rings attached respectively to the ends of the mouth piece, and a lever connected with each of said rings, and adapted to swing relatively to the mouth piece, said levers having

means at their free ends for attaching the overdraw thereto, and means on their middle portions for attaching thereto the ends of a chin strap; substantially as shown and described.

2. In a bit, the combination of a mouth piece, two rings attached respectively to the ends of said mouth piece, a lever connected with each of said rings to swing relatively to the mouth piece, each of said levers having means at its free end for attaching thereto the overdraw, and means on its middle portion for attaching the chin strap thereto, and a guide on each ring for the lever connected with said ring, and a guide on said ring for the chin strap; substantially as shown and described.

3. In a bit, the combination of a mouth piece, two rings attached respectively to the ends of said mouth piece, a fulcrum bar attached to each of said rings, a lever fulcrumed on each of said fulcrum bars to swing relatively to the mouth piece, each of said levers having means at its free end for attaching thereto the overdraw, and means on its middle portion for attaching thereto a chin strap, and a guide on each ring for the lever connected with said ring, and a guide for the chin strap; substantially as shown and described.

4. The combination of the mouth piece of a bit, two rings attached respectively to the ends of said mouth piece, a lever connected with each of said rings to swing relatively to said mouth piece, said levers having at their free ends means for attaching the overdraw thereto and means on their middle portions for attaching the chin strap thereto, a chin strap connected at its ends with said levers, an overdraw connected with the free ends of said levers and the lines attached to said rings; substantially as shown and described.

JOSEPH CLAMER.

Witnesses:

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SAML. D. OLIPHANT, Jr.