(No Model.)

H. VAN ARSDALE.

BRIDLE BIT.

No. 422,469. Patented Mar. 4, 1890.

Fig. 1.

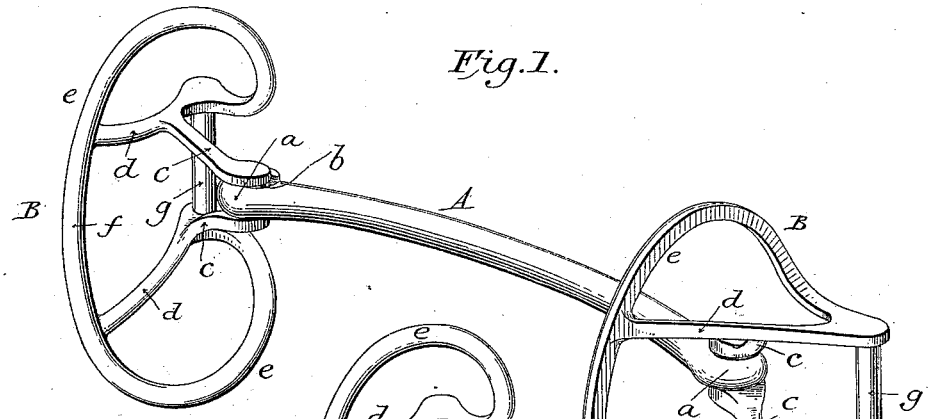


Fig. 4

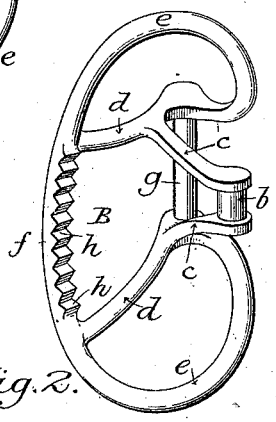
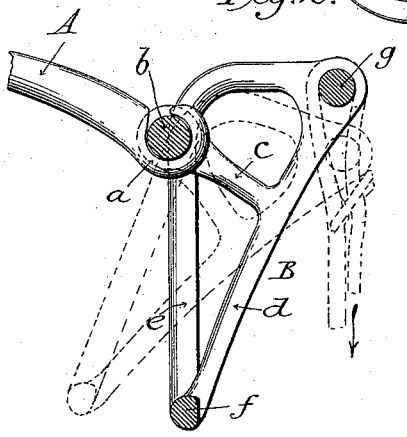
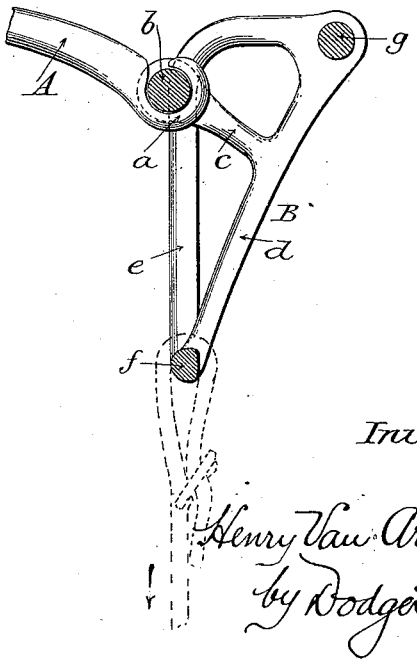


Fig. 2.

Fig. 3.





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UNITED STATES PATENT OFFICE.

HENRY VAN ARSDALE, OF RACINE, WISCONSIN.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 422,469, dated March 4, 1890.

Application filed November 21, 1889. Serial No. 331,094. (No model.)

To all whom it may concern:

Be it known that I, HENRY VAN ARSDALE, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Bridle-Bits, of which the following is a specification.

My invention relates to bridle-bits; and it consists in a novel construction of the same, as hereinafter set forth and claimed.

In the drawings, Figure 1 is a perspective view of my improved bit, and Figs. 2, 3, and 4 views illustrating certain details.

The object of the invention is to simplify and cheapen and to generally improve this class of bits by using but one bar in lieu of the two bars commonly used and by varying the construction of the end or side "rings" commonly employed. The reins can be secured to the rings in such manner as to permit the driver to exert a pressure on either or both sides of the lower jaw of the animal, as desired or as becomes necessary, or may be so secured to the rings as not to exert this pressure, the former arrangement of the reins being used only when the animal is fractious, runs to one side, or becomes unruly.

A indicates the main bar, and B B the rings pivoted to the ends thereof, so as to be capable of swinging backward and forward in a horizontal plane parallel with the axis of the bar, the said bar being bent at each end to form a hook or eye *a* to embrace a straight arm *b*, formed on the inner side or face of each ring. This arm *b*, which forms a pivot or center from or upon which the ring swings, is carried by or connected with two arms or braces *c c*, which in turn are connected with or carried by two arms or braces *d d*, which extend across the ring from front to rear. The connection of the arms *d d* with the rim *e* of the ring at the rear side of the latter forms a bar *f*, to which the reins are secured when the bit is to be used as an ordinary bit or for a tender-mouthed animal, the bar *f* being in effect a part or continuation of the rim of the ring.

Where the arms or braces *d d* join the front side of the ring the rim *e* of the latter and the said arms *d d* are extended outward laterally a slight distance, as shown, and between the outer ends of the arms *d d* is a second bar *g*, to which the reins are attached when it is desired to have a hard bit to control unruly or fractious animals or to correct a side-puller. It will thus be seen that there are two rein-bars—one *f* in rear of and practically in line with the pivot *b*, while the other *g* is in advance of and out of line with said pivot.

Where the arms *d d* and bar *g* join the rim of the ring the former are enlarged somewhat and flattened to give the necessary strength to the bit, as is required by the increase in leverage when pulling upon the reins D.

In practice it will be found best to make the rings B with their bars and braces in one casting; but if for any reason it should be desired to make the bars *f g* and the pivot or arm *b* separate from the ring of course that may be done.

With an ordinary animal it will be necessary to use the reins secured to the bar *f*, and it will be seen upon reference to Fig. 3 that when a pull is exerted upon them, as indicated by the arrow, inasmuch as the point of attachment of the reins (at bar *f*) is nearly or quite in line with the pivot or center *b*, the rings will not bear or press upon the sides of the animal's jaw. Should, however, a vicious animal be encountered, the reins will be used fastened to the bar *g*, and upon reference to Fig. 2 it will be noted that if a pull be exerted upon them in the direction of the arrow the inner end of the ring, or that portion in rear of its pivot, will be pressed firmly against the side of the animal's jaw, the ring swinging upon its pivot or center *b*, as indicated by the dotted lines.

In the case of particularly vicious animals it may be found advisable to provide that portion of each ring designed to bear against the animal's jaw with studs, corrugations, or projections *h*, as shown in Fig. 4.

The form in cross-section of the metal forming the rim *e* and the arms or braces is advisably D-shaped, the flat face being on the outside and giving an attractive appearance, besides rendering easier the finishing of the rings.

It is possible that it would be desirable to

attach the reins to separate rings and secure the latter to the bars *f* and *g;* but I consider such rings unnecessary attachments.

The form of the arms or braces and the rim might have to be varied or changed slightly when the rings B are being made for application to the bits now in use; but it will be found best to follow the form illustrated in the drawings.

Generally the reins will be fastened to the bar *g*, for it is clear that by pulling slightly upon them the rings will not be forced against the sides of the animal's jaw; but at the same time the reins will be in such position as to enable the driver to exert considerable pressure upon the animal's jaw should it be desired so to do. The bit is particularly useful in connection with animals that carry their head to one side or which are continually lugging or pulling on one rein. For instance, if the animal throws its head to one side, or is otherwise affected on the left side, the left-hand rein would be secured to the bar *g* and the right-hand rein to the bar *f*, and it will be seen that if the driver pull upon the reins the animal's jaw would be pressed on the left side only, and, minding the pressure of the ring on that side, the animal would place its head in the correct position.

To animals in the habit of running to one side the bit will be found particularly applicable, the pressure on one or the other side, as desired, securing an obedience that would not be attained if the pressure were necessarily upon both sides of the jaw at once.

Having thus described my invention, what I claim is—

1. In a bridle-bit, the combination, with a bar A, of the rings B B, hinged thereto, and each provided with the two rein-attaching bars *f* and *g*, arranged, respectively, in line and out of line with the pivots of the rings, substantially as shown and described, and with an extended or elongated bearing face or rim *e*.

2. In a bridle-bit, the combination, with the bar A, of the hinged rings B, having each a rim *e* and studs or projections *h* on the inner face of each rim, as and for the purpose set forth.

3. In a bridle-bit, the combination, with the bar A, having eyes or hooks *a*, of the rings B B, each having the following elements, to wit: an arm *b*, to enter the eye *a*, braces *c c*, to support arm *b*, arms or braces *d d*, extending at right angles to braces *c c* and connected with the rim *e* of the ring, and rein-attaching bars *f* and *g*, located, respectively, in rear and in advance of the arm *b*.

In witness whereof I hereunto set my hand in the presence of two witnesses.

HENRY VAN ARSDALE.

Witnesses:
A. C. PETERSON,
J. E. LYON.