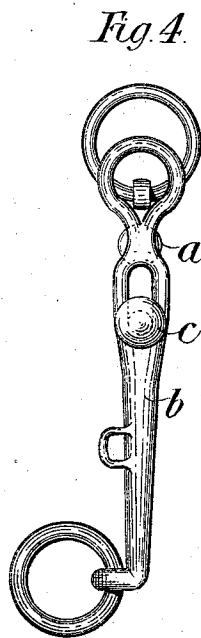
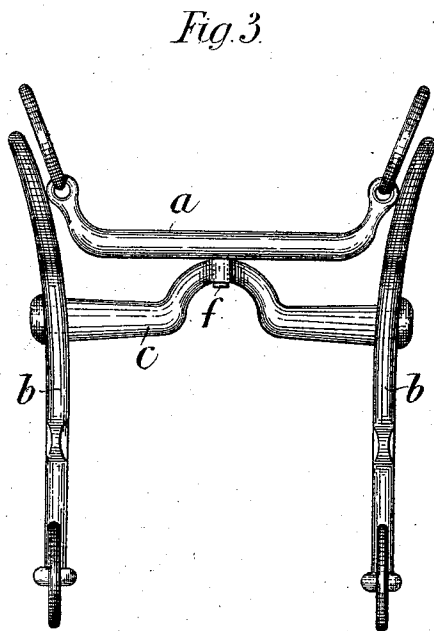
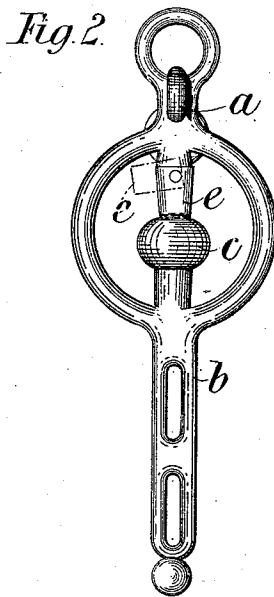
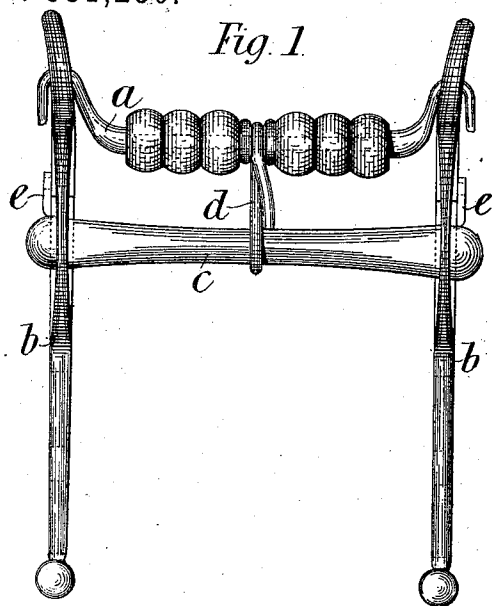


(No Model.)

F. SWALES.
BRIDLE BIT.

No. 531,230.

Patented Dec. 18, 1894.



WITNESSES

John E. Doucfield.
Arthur Lister.

INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK SWALES, OF LONDON, ENGLAND.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 531,230, dated December 18, 1894.

Application filed April 24, 1894. Serial No. 508,848. (No model.) Patented in England January 10, 1893, No. 549, and in France August 17, 1893, No. 232,211.

To all whom it may concern:

Be it known that I, FRANK SWALES, a subject of the Queen of Great Britain, residing at London, England, have invented new and useful Improvements in Bits for Riding or Driving, (for which I have obtained patents in Great Britain, No. 549, dated January 10, 1893, and in France, No. 232,211, dated August 17, 1893,) of which the following is a specification.

My invention relates to bits for riding or driving.

In the specification of former Letters Patent granted to me, No. 497,931, I described the combination with a driving bit of well known construction, of a bar or bridoon having the extremities tapered and bent in a particular manner, the said bridoon being to prevent the horse from seizing the main bar or mouth-piece of the bit between his teeth. In using such a bit provided with such bridoon I find it necessary to provide means for retaining the bridoon in its normal position relatively with the mouth-piece and this I do in the case of an ordinary Liverpool or coaching bit by arranging an india rubber spring to connect the main mouth-piece with the bridoon and in the case of a bit having a revolving sliding mouth-piece (for instance the Pelham bit) by pivoting the bridoon to the bow of the mouth-piece.

To enable my invention to be fully understood I will describe the same by reference to the accompanying drawings, in which—

Figures 1 and 2 are front and side elevations respectively of a Liverpool or coaching bit having my improvements applied thereto; and Figs. 3 and 4 are similar views of a bit having a revolving sliding mouth-piece.

Similar letters of reference indicate corresponding parts in the several figures.

a is my bridoon.

b, b are the side bars of the ordinary bit and *c* is the bar or main mouth-piece thereof.

d, Fig. 1 is the spring with which in the case of a coaching bit I connect my bridoon *a* with the main mouth-piece *c*. The spring, as shown, consists of an ordinary india rubber ring or band which is first of all passed over one of the side bars of the bit and around the mouth-piece *c*, the bridoon *a* be-

ing then passed through the said ring and turned so as to partially twist the latter before the hooks at the end of the bridoon are attached to the billet rings of the bit.

e, e are turnbuckles or stops which are pivoted to the side bars *b, b* of the bit and which serve, when required, to prevent the mouth-piece *c* from sliding upon the said bars so as to maintain as great a distance as possible between the bridoon and the said mouth-piece.

When my bridoon is applied to a bit having a revolving sliding mouth-piece, as shown in Figs. 3 and 4, the bridoon has fixed to it at the center a pivot pin *f* and in the center of the bow of the mouth-piece I form a hole into which the said pin is introduced, the pin being riveted over at its end or provided with a cap or collar to prevent the bridoon from becoming detached from the said mouth-piece.

The bridoon shown in Figs. 1 and 2 is represented as having rollers thereon in the manner described in my said former patent, while the bridoon shown in Figs. 3 and 4 is represented as being plain, as I have found in many cases that rollers are not required.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a riding or driving bit having a bar or mouth-piece movably connected thereto a bridoon provided with bent ends, a central connecting device between the bridoon and the mouth-piece and serving to retain them in their proper relative positions, substantially as described.

2. The combination with a riding bit having a revolving sliding mouth-piece, of a bridoon having tapering bent ends, the said bridoon being movably attached to the center of the mouth-piece, substantially as described.

In witness whereof I, the said FRANK SWALES, have hereunto set my hand.

FRANK SWALES.

Witnesses:

JOHN E. BOUSFIELD,
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ARTHUR LISTER.