

(No Model.)

J. DOUGLASS.

BRIDLE BIT.

No. 345,955.

Patented July 20, 1886.

Fig. 1.

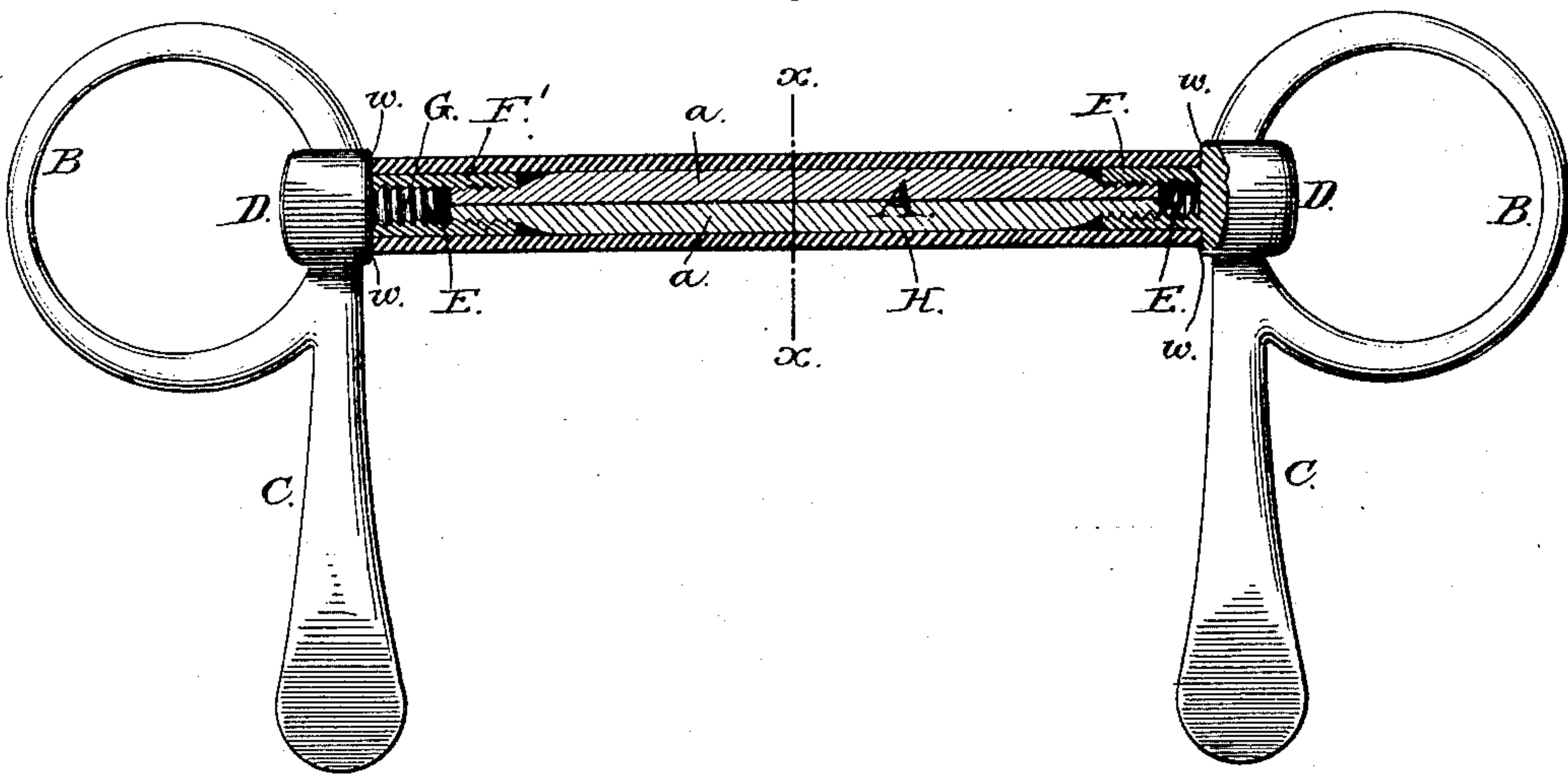
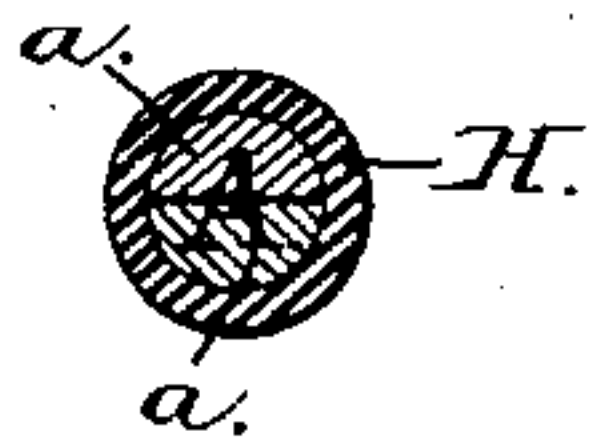


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN DOUGLASS, OF BROOKLYN, NEW YORK, ASSIGNOR TO ANN DOUGLASS,
OF SAME PLACE.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 345,955, dated July 20, 1886.

Application filed April 3, 1886. Serial No. 197,651. (No model.)

To all whom it may concern:

Be it known that I, JOHN DOUGLASS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Flexible Bits; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a
10 part of this specification, in which—

Figure 1 is a longitudinal section taken centrally through the mouth-piece of my improved flexible bit, with the rings and cheek-pieces in elevation; and Fig. 2, a transverse section in
15 line *xx* of Fig. 1.

My invention relates to that class of bridle-bits which are constructed with a flexible mouth-piece formed with a pliable core protected by an outer rubber envelope, and has
20 for its object to avoid the disadvantages attendant upon the flexible mouth-pieces formed of metal, and to reduce the cost of manufacturing this class of bridle-bits.

In the accompanying drawings, A represents the core for the mouth-piece, formed of leather or of rawhide as its equivalent, preferably in two longitudinal divisions, *a a*, each of a half-round or semicircular cross section,
25 (see Fig. 2,) the flat faces of the two divisions being superimposed and firmly united in any suitable manner—as, for example, by means of a strong water-proof cement, as shown in the drawings, or by means of transverse
30 stitches—so as to form jointly a cylindrical core of the proper diameter.

The rings B B, cheek-pieces C C, and heads D D are made of any desired form; but for the sake of economy and strength each ring B is formed integrally with its cheek-piece C
40 and head D, as shown in Fig. 1. An internally-threaded socket, E, is provided at the side of each head, either within a cylindrical projection, F, formed in one piece with the head, of a diameter corresponding with that
45 of the central portion or body of the leather core A, as shown at the right in Fig. 1, or by means of a short tubular section or socket-piece, F', internally threaded and made to screw upon a threaded offset, G, projecting

from the head integrally therewith, as shown 50 at the left in the drawings, the tubular section being made to extend out beyond the end of the offset G far enough to form a socket thereat. The spiral grooves in the threaded sockets E E are deeply cut, to firmly engage the ends 55 of the leather core A, which are to be screwed thereinto.

In assembling the parts of the bit to complete it, one end of the leather core A is screwed fast into one of the threaded sockets F, the 60 threads in the socket serving to cut and form the counterpart threads upon the core as it is forced with a rotary movement into the same. While the end of the core is compressed sufficiently to enter and work into the socket, the 65 body of the core is left free to swell out and enlarge sufficiently to correspond in diameter with the external diameter of the socket. A rubber sleeve, H, is then slipped over the core and upon the socket-piece to cover the same, 70 its end being brought to bear against the head and make a close joint therewith, as shown at *w* in the drawings. This rubber sleeve is made long enough to cover the entire length of the core and of both socket-pieces. After it has 75 been fitted upon the core and over one socket, as described, the opposite end of the core is screwed into the opposite socket, the free end of the rubber being carried over the exterior of the socket-piece, so that when the core has 80 been fully secured the rubber will bear against the head at that end in like manner as against the first head, presenting a neat finished appearance.

The socketed projections F F' from each head 85 form solid bearings at each end of the mouth-piece, to fit into the corners of the horse's mouth and provide the necessary purchase thereon to render the bit effective, while the remainder of the bit is pliable and flexible. 90

Whenever it becomes necessary to renew the rubber covering, one of the heads may be detached from the core by holding the core tightly in a vise close by the socket, and applying the requisite force to the latter to turn and 95 unscrew it; or, if the socket be formed in the tubular section F', the latter may be unscrewed from the head-piece, leaving the attachment

of the core to its socket undisturbed. The rubber covering having been previously cut away, a new sleeve of rubber may be slipped in place over the core, and the head screwed back into place again.

I claim as my invention—

1. The flexible mouth-piece for a bridle-bit, constructed of two strips of leather, half-round in cross-section, united longitudinally to form a cylindrical core, in combination with an outer tubular rubber case or covering, substantially in manner and for the purpose herein set forth.

2. The combination of the heads D D in a bridle-bit, having the cylindrical projections F F, a cylindrical mouth-piece or core, A, of leather, screwed at either end into the projec-

tions F F, with a rubber tube covering the core and the projections, substantially in the manner and for the purpose herein set forth.

3. The combination, in a bridle-bit, of the heads D D, a threaded offset, G, projecting therefrom, a tubular socket-piece, F', screwing thereon, and a cylindrical leather core, A, screwing into the socket-piece, all substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN DOUGLASS.

Witnesses:

JOHN A. ELLIS,
S. M. MADDEN.