

(No Model.)

J. D. KELLER.
BIT.

No. 555,867.

Patented Mar. 3, 1896.

Fig. 1.

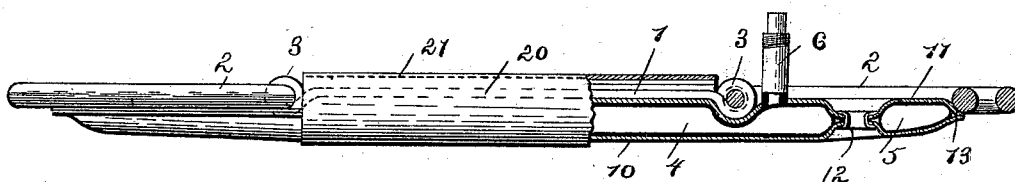


Fig. 2.

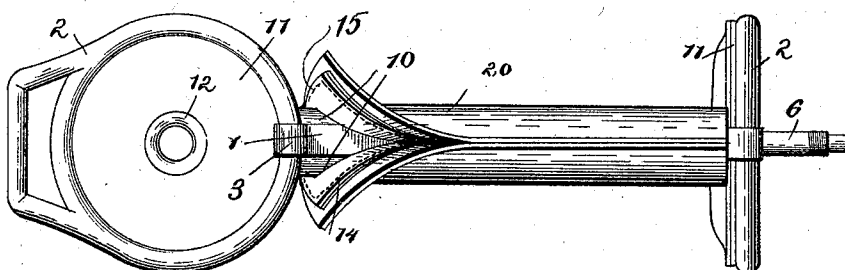
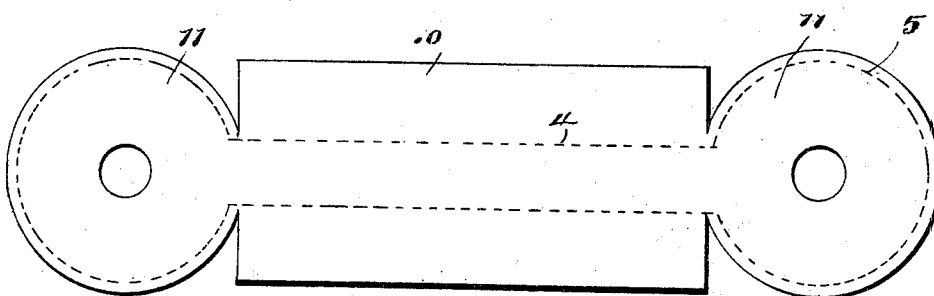


Fig. 3.



Witnesses:

Geo. C. Trech,
J. H. Joehum Jr.

Inventor:

James D. Keller,
by Collamer & Co.,
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES DAVID KELLER, OF DETROIT, MICHIGAN.

BIT.

SPECIFICATION forming part of Letters Patent No. 555,867, dated March 3, 1896.

Application filed June 22, 1895. Serial No. 553,748. (No model.)

To all whom it may concern:

Be it known that I, JAMES DAVID KELLER, a citizen of the United States, and a resident of Detroit, Wayne county, State of Michigan, have invented certain new and useful Improvements in Bits; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to harness, and more especially to that part thereof known as bits; and the object of the same is to produce a pneumatic bit so constructed that it will not injure the horse's mouth.

To this end the invention consists of the usual rod forming the body of the bit and having rings at its ends; a pneumatic tube standing in rear of the rod and having circular pockets at its ends, all in communication with an inflation-nipple; a jacket covering the tube and pockets and having its edges sewed around the rod, and a cover surrounding the tubular portion of the jacket, all as herein-after more fully described, and as illustrated in the drawings, wherein—

Figure 1 is a plan view of this bit, partly broken away the better to illustrate its interior construction. Fig. 2 is a front elevation, also partly broken away, showing the right ring and pad turned out and the left ring and pad turned to the rear. Fig. 3 is a plan view of the blank forming one-half of the jacket, showing in dotted lines where the edges of the tube and pockets would come if these parts were flattened out beneath said jacket.

In the said drawings, the numeral 1 designates a rod preferably having a flattened rear face, and 2 2 are rings taking into eyes 3 3 at the opposite ends of the rod, to which rings the reins are attached in the usual manner.

4 is a tube of rubber standing adjacent the flat rear face of the rod and having circular or annular pockets at its extremities, as seen at 5 5, these pockets being equal in diameter to, or larger than the diameter of, said rings and standing in rear thereof.

6 designates a nipple of any approved construction and having a suitable closing device, (not shown;) and this nipple projects from any desired point of the tube or pockets, although I have shown it as projecting outward

from the left-hand pocket and extending through the ring at that end of the bit, where it is not at all in the way nor liable to get into the horse's mouth.

It is to be understood that the tube and pockets, as well as the nipple, are all in one piece, preferably of rubber, so that the whole may be inflated with air.

Before the parts are assembled a jacket is applied to completely cover the rubber parts, which jacket is preferably of leather or some other soft and pliable material or fabric. This jacket is in two similar parts, one of which is shown in plan view in Fig. 3, and each part is of the same configuration as the rubber parts when laid out flat, though larger in every direction in order to leave edges projecting beyond the rubber to receive the seams. The said jacket, when in place, comprises a straight shank 10, considerably wider than the flattened tube 4, and circular or annular eyes 11 at its extremities.

If the pockets 5 5 are annular, the centers of the two registering pads at each end of the jacket are connected with each other as by eyelets 12, as shown; but in some cases the pockets may be circular instead of annular, in which event these eyelets would be omitted. However, I prefer to make the pads and pockets annular, so as to leave a central aperture through each for ventilation. In any event the projecting edges of the pads are sewed or otherwise connected with each other beyond the edges of the pockets, as seen at 13, care being taken that the fastening means do not puncture the inclosed rubber pockets; also, the projecting edges of the shank are sewed or otherwise connected with each other, as seen at 14, but preferably at some considerable distance laterally from the edges of the flattened tube 4, and at the ends of these seams 14 they are turned inward, as at 15, at the extremities of the shank and made to join the seams 13 around the pads.

The pneumatic part, covered and protected entirely by the jacket, is then brought into place against the flattened rear face of the rod 1, when the pads will strike against the rear faces of the rings 2 2 with the seams 13 preferably lying directly against the metal rings, as will be understood, and the eyelets at the centers of said rings. The nipple 6, if located

where above described, projects through the leftring adjacent the end of the rod 1 and just outside the eye 3. The body of the jacket rests against the rear face of the rod 1, and the seamed edges 14 are carried forward respectively above and below the rod until they meet at the front thereof, where they may be joined by another seam or by the seam 14, if desired, to complete the structure. It will be seen that as thus constructed the rubber part is thoroughly protected from abrasion in the horse's mouth; but I prefer to add a cover 20, preferably of rather thick though pliable leather, no matter whether the jacket is of leather or not. This cover is in the blank simply a rectangular piece of just the length of the rod 1 between its eyes, and it is applied to the shank of the jacket from the rear, as shown. Its edges are carried respectively above and below the jacket to the front, where a seam 21 or other suitable fastening means is employed to connect them in a position where this seam will not abrade the horse's mouth. The whole is then ready for use.

In the practical application of this device the reins are fastened into the rings and the whole inflated through the nipple as usual and put into the horse's mouth. The metal rod 1 gives strength and rigidity to the parts, yet stands forward of the pneumatic portion, so that a strong pull to the rear on the reins will but draw the soft parts back into the corners of the mouth. The animal may bite down on the tubular portion at will, for the height or thickness vertically of the rod 1 is sufficient to prevent his closing his jaws upon the tube 4, and the presence of the pockets is adequate to give sufficient room for the air compressed within the tube to flow temporarily out into them without bursting the whole.

Considerable change in the specific details may be made without departing from the principle of my invention, and the relative sizes, shapes, and materials of parts are a matter of choice.

What is claimed as new is—

1. A bit consisting of a rigid rod, rings at its ends, a pneumatic tube standing in rear of the rod, pneumatic pockets in connection with the ends of the tube and standing inside

said rings, and means for inflating said pneumatic parts, substantially as described.

2. A bit consisting of a rigid rod, open rings at its ends extending to the rear, a pneumatic tube standing in rear of the rod, pneumatic pockets standing inside the rings and of equal diameter therewith, eyelets through the centers of the pockets, and means for inflating the pneumatic parts, substantially as described.

3. A bit consisting of a rigid rod of some considerable vertical height and having a flattened rear face, a pneumatic tube with means for inflating it, and a jacket of flexible material surrounding the tube and projecting beyond its edges, the edges of the jacket being carried around the rod to the front and connected, substantially as described.

4. A bit consisting of a rigid rod, rings connected with its ends and projecting to the rear, a pneumatic tube, pockets in connection with its extremities, a jacket of flexible material whose shank covers and projects beyond the side edges of said tube, pads at the ends of said shank projecting radially beyond the edges of said pockets, means for securing all projecting edges of the jacket beyond the inclosed parts, the edges of the shank being carried around said rod and fastened, and a nipple projecting from the pneumatic part outward through the covering-jacket and extending outward through one ring, as and for the purpose set forth.

5. In a bit the combination with a rigid rod having eyes at its ends, rings taking into said eyes, a jacket comprising a wide shank with pads at its extremities, and pneumatic inflating means inclosed within the jacket, said shank being brought from the rear around the rod; of a tough cover also of flexible material and of tubular shape surrounding the shank and the rod, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature on this the 10th day of June, A. D. 1895.

JAMES DAVID KELLER.

Witnesses:

JOHN C. GLOVER,
A. L. HARRIS.