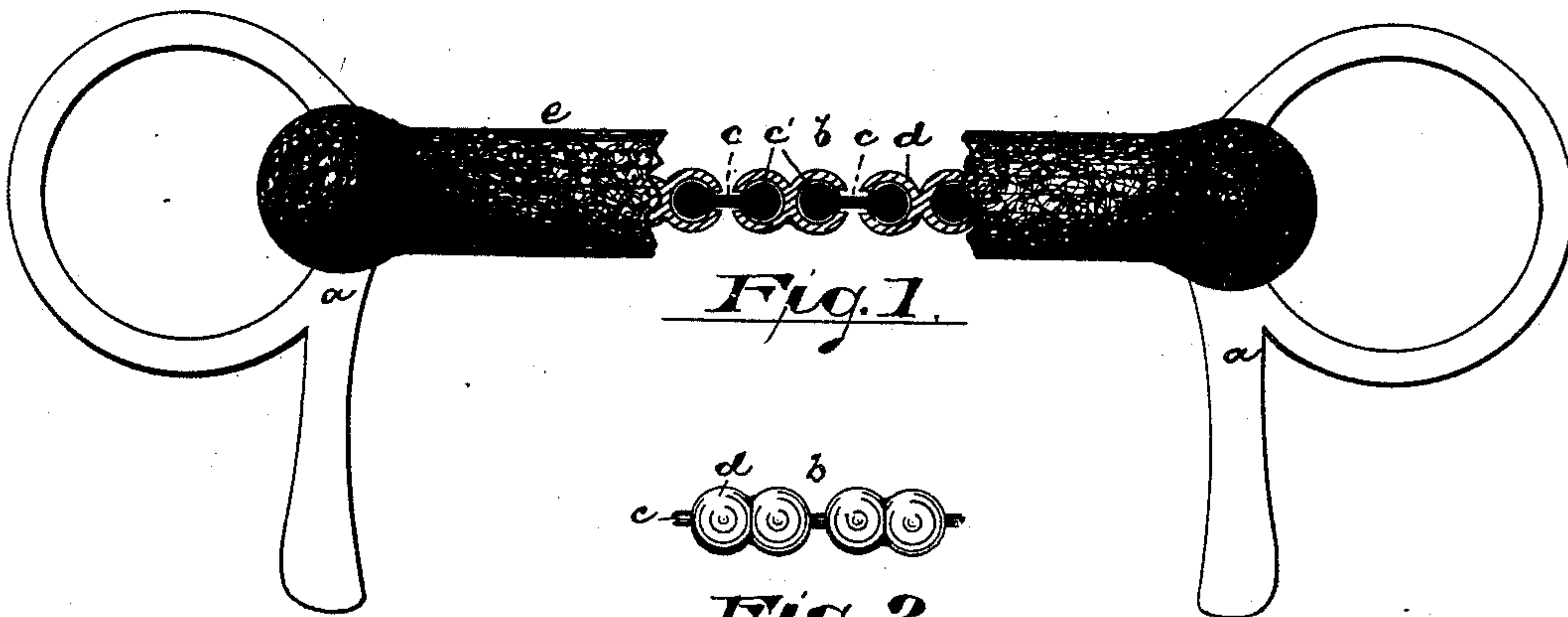


(No Model.)

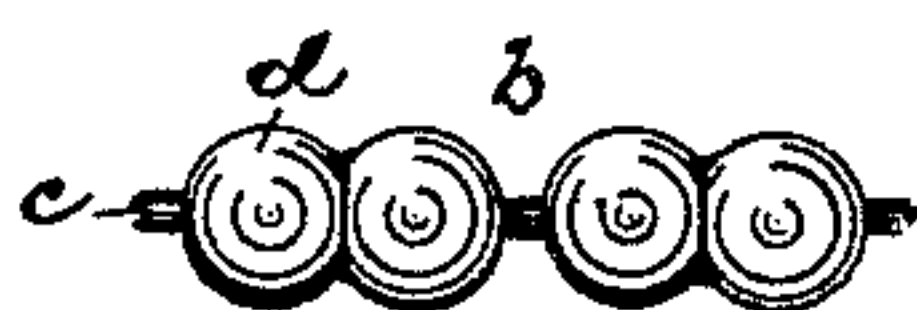
G. BROCKINGTON.  
BRIDLE BIT.

No. 428,767.

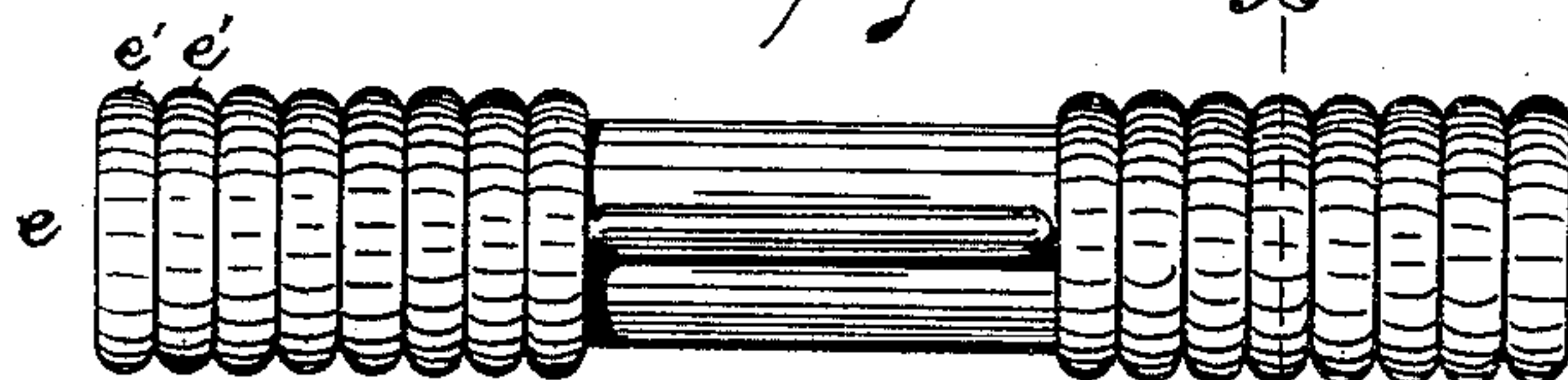
Patented May 27, 1890.



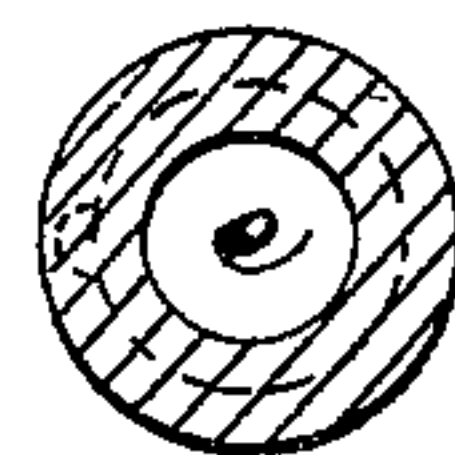
*Fig. 1.*



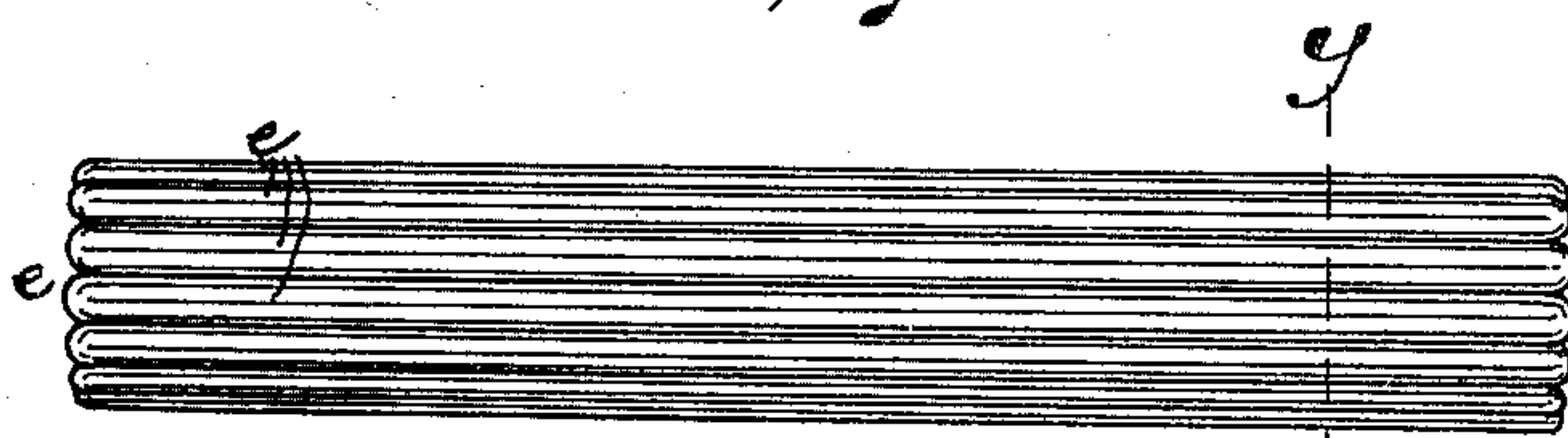
*Fig. 2.*



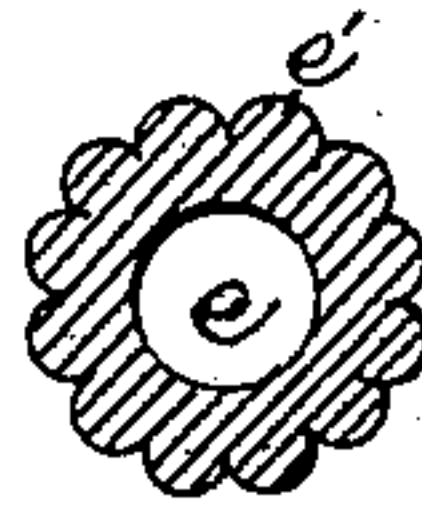
*Fig. 3.*



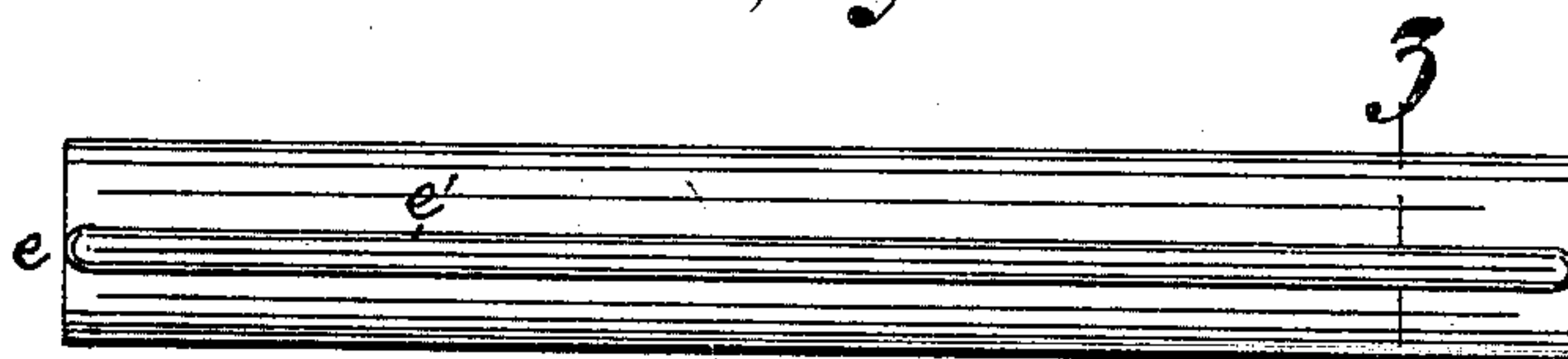
*Fig. 6.*



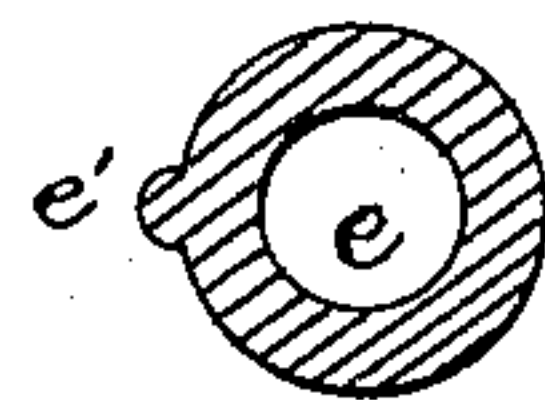
*Fig. 4.*



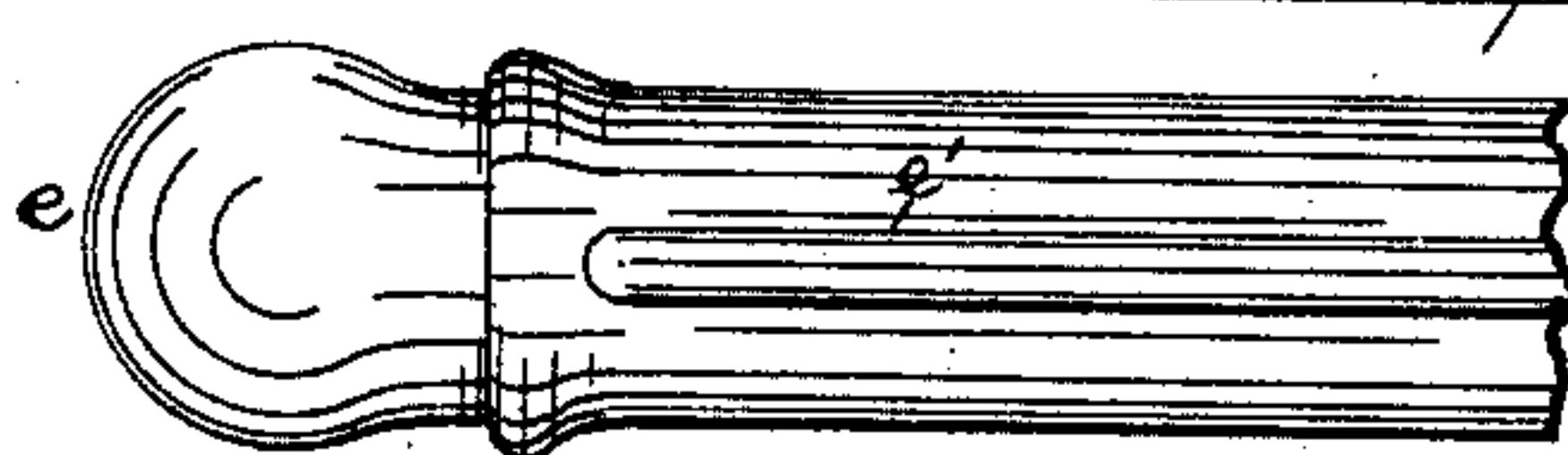
*Fig. 7.*



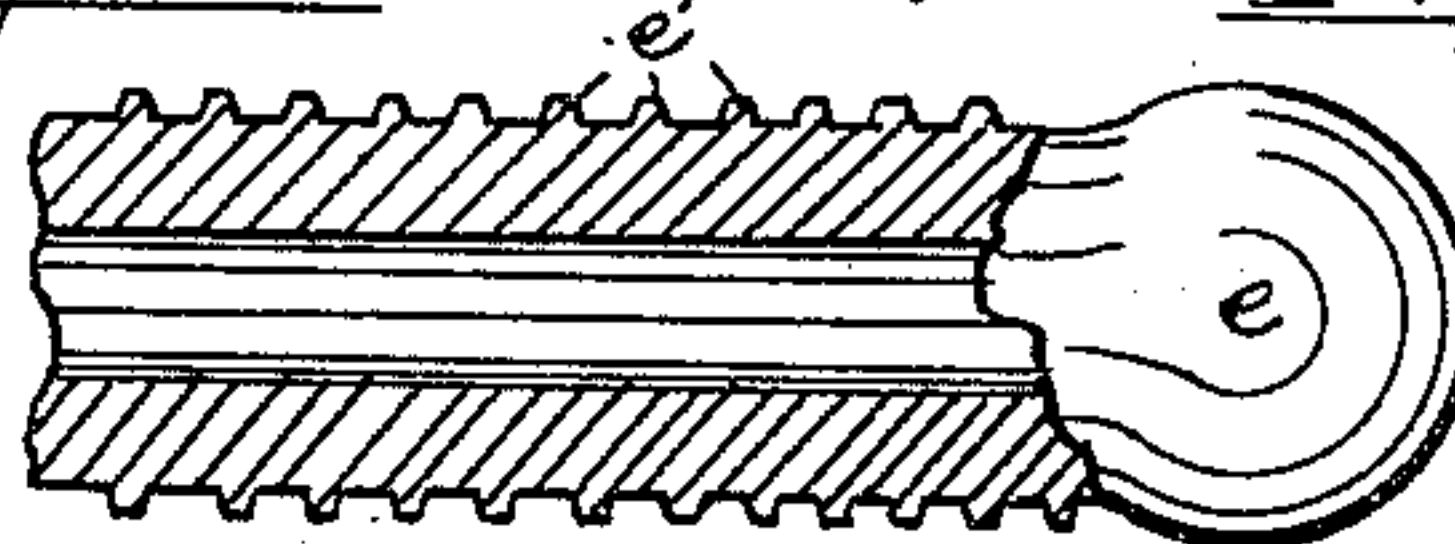
*Fig. 5.*



*Fig. 8.*



*Fig. 9.*



*Fig. 10.*

WITNESSES:

*Alfred Gartner*  
*E. E. Sherman*

INVENTOR:

*George Brockington,*

BY *W. H. B. B.* ATTY'S.



# UNITED STATES PATENT OFFICE.

GEORGE BROCKINGTON, OF BROOKLYN, NEW YORK.

## BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 428,767, dated May 27, 1890.

Application filed April 17, 1889. Serial No. 307,525. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE BROCKINGTON, a subject of the Queen of England, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bridle-Bits; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to secure greater strength and durability, both in the covering of the mouth-piece and in the core thereof; to reduce the weight of the covered bit; to avoid the cost and trouble incident to the operation of welding or riveting the sections of the core together; to secure a greater freedom and yet a positive movement of the links or sections of the core on one another; to provide a covering material of reduced cost, and one better adapted for the horse's mouth, and to secure a locking in the smoothness and hardness of surface of the covering of the ordinary bits, whereby a new sensation to the horse is produced, and the horse thereby may be more easily controlled.

The invention consists in the improved bridle-bit, and in the arrangements and combinations of parts thereof, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several figures, Figure 1 is an elevation of a bridle-bit, showing the mouth-piece core-covering broken away to exhibit the construction of the core-sections, the latter being in longitudinal section. Fig. 2 is a detail view of the said sections. Figs. 3, 4, and 5 illustrate the construction of the core-covering, showing corrugated or ribbed surfaces. Figs. 6, 7, and 8 are sections taken through lines *x*, *y*, and *z*, respectively. Figs. 9 and 10 illustrate further modifications, the last showing lugs projecting from the periphery of the covering.

In said drawings, *a a* are suitable cheek-

pieces of any ordinary construction, and *b* is a metallic core connecting said cheek-pieces and providing the base of the mouth-piece, the said core being preferably of linked sections of peculiar construction. When said core is in sections, I prefer to provide ball-and-socket joints, which, while giving a more positive movement than an ordinary link chain, allow of a freedom of movement laterally in any direction.

I am aware that core-sections of a mouth-piece have been united by means of a "ball-and-socket joint," (so called,) but in a manner quite different from that illustrated and described by me herein. In my invention the socket incloses the ball sufficiently to prevent any material longitudinal movement in the mouth-piece, and the exterior surfaces are formed to give a comparatively regular bearing for the covering.

In manufacturing this core I first cast the sections *c c*, which are short bits of iron or other metal having bulbs or balls *c' c'* on their opposite ends. Said balls are then covered with sand made to adhere thereto by molasses or other mucilaginous substance and laid in a suitable mold, after which the socketed sections *d d* are cast therearound, producing a very firm, durable, and strong mouth-piece core. At the same time and in similar manner the core may be secured to the cheek-pieces. The ball-and-socketed mouth-piece core may be manufactured by hand or in any other suitable manner. The core is then covered with a coating *e*, which may be of ordinary rubber compound; but I prefer to secure the best results and to provide a more efficient and durable bit and to reduce the weight of the same as compared with bits having coverings of the ordinary compound of rubber, to make the covering or coating of the following composition: This consists of a mixture of leather and rubber ground together and pressed by suitable molds or dies around the core. The covering thus formed has not the deleterious and injurious effects on the horse's mouth of the ordinary "rubber" (so called) mouth-pieces, (which are usually of rubber mixed with white lead, zinc-white, and other injurious substances,) and the covering is much more dura-

- ble, elastic, soft, and spongy, and thus is also much more pleasant to the horse. This peculiar covering, having the spongy surface, may be regular in superficial outline, as in Fig. 1; 5 but I prefer to form on said surface protuberances *e' e'*, which may be ribs, either longitudinal or extending around the periphery, or lugs or points projecting from the regular surface, as indicated in Fig. 10.
- 10 The small protuberances serve to provide soft and flexible irregularities for the horse to play with his tongue, so that his attention is more fully occupied and he is more easily controlled by the driver.
- 15 Having thus described the invention, what I claim as new is—
1. A bridle-bit consisting of cheek-pieces, a

core comprising a series of ball-sections and a series of socket-sections, and a covering on said core of soft or flexible material, substantially as described. 20

2. The improved bridle-bit herein described, combining with the cheek-pieces and mouth-piece core a core-covering having soft and flexible ribs formed on the surface thereof, 25 substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of April, 1889.

GEORGE BROCKINGTON.

Witnesses:

CHARLES H. PELL,  
E. L. SHERMAN.