E. A. A. GRANGE.
Balling-Iron.

No. 217,209. Patented July 8, 1879.

Fig. 1.

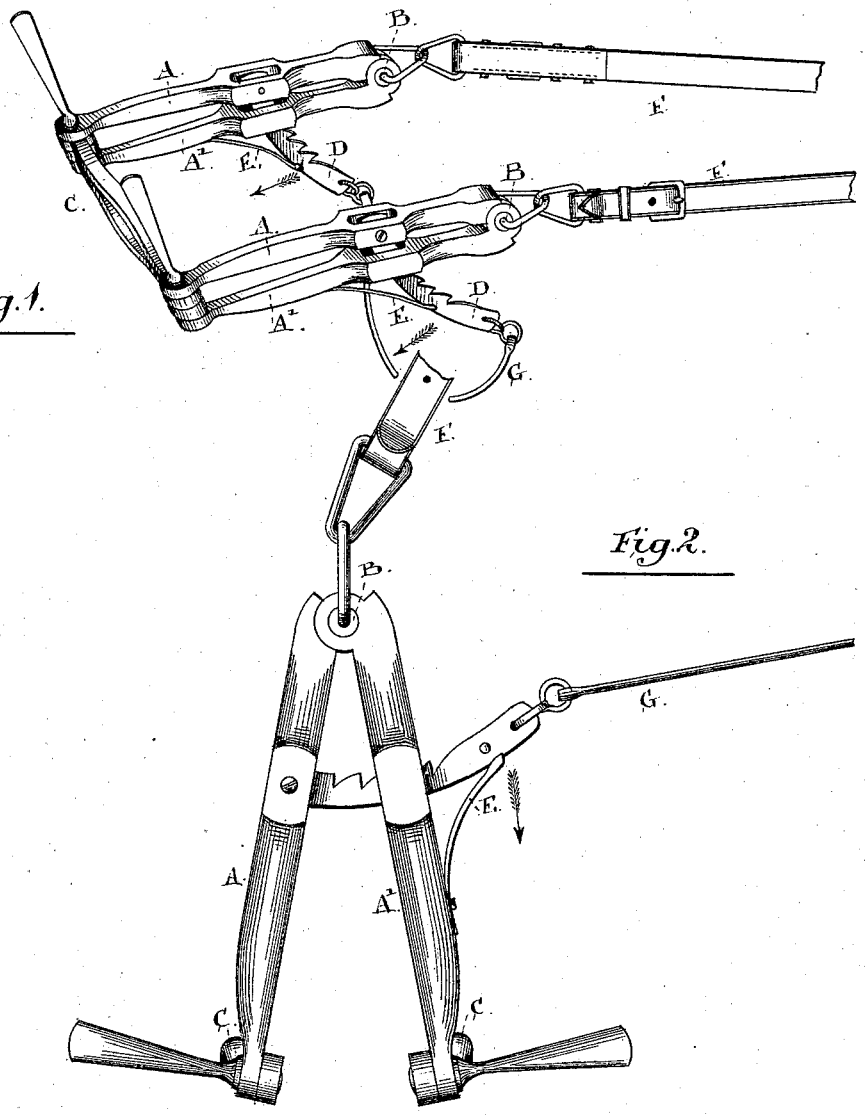

Fig. 2.

Witnesses:-
Louis Whitehead.

Inventor:-
E. A. A. Grange
by Richards Hirst & Co
Attys

UNITED STATES PATENT OFFICE.

EDWARD A. A. GRANGE, OF GUELPH, ONTARIO, CANADA.

IMPROVEMENT IN BALLING-IRONS.

Specification forming part of Letters Patent No. **217,209**, dated July 8, 1879; application filed May 27, 1879.

To all whom it may concern:

Be it known that I, EDWARD ALEXANDER ANDREW GRANGE, of the town of Guelph, in the county of Wellington, in the Province of Ontario, Canada, veterinary surgeon, have invented certain new and useful Improvements in Balling-Irons; and I do hereby declare the following is a full, clear, and exact description of the same.

My invention relates to that class of veterinary surgical instruments commonly called "balling-irons;" and its object is to so construct the instrument that it may be easily applied without exciting the animal, or making an assistant necessary, when an examination of the mouth is to be made.

Figure 1 is a perspective view of the device as it appears when closed. Fig. 2 is a side view of the instrument as it appears when holding the horse's mouth open.

A A′ are two pairs of metal bars, each pair being hinged together at B and pivoted to the bit C, which consists of two suitably-formed bars, so arranged that they form an ordinary mouth-bit when the bars A are closed, as shown in Fig. 1; but when separated, as shown in Fig. 2, they constitute a double bridge or support to keep the jaws of the animal apart, as shown. With the view of keeping the bars open, and at the same time readily adjusting them, I hinge or pivot to each of the bars A a notched plate, D, which passes through a slot in the opposite bar, A′, and, owing to the pressure of the spring E, or its equivalent, is held against a catch in the slot referred to, which catch is made to fit in the notches in the plate D; consequently by opening the hinged bars A A′ they remain open whenever so adjusted till the plates D are pulled forward in the direction indicated by arrow, releasing the catch, and thus permitting the bars A A′ to close and the bars C to resume their ordinary mouth-bit character.

As indicated by Fig. 1, my device is in appearance an ordinary bit, the bars A forming the branches, to which a common bridle could be attached in the usual way, although in the drawings I only show a single head-strap, F, and connect the plates D by the strap G, by which they may be pulled forward, as described.

As the instrument looks like an ordinary bridle, its appearance will not make the horse nervous. It can, therefore, be put on without difficulty, and adjusted to suit the mouth of the animal applied to; and, as it will not tumble out when once on, a surgeon can make an examination without assistance.

What I claim as my invention is—

A divided bit, C, pivoted to the hinged bars A, in combination with a notched plate, D, substantially as and for the purpose specified.

Second day of April, A. D. 1879.

E. A. A. GRANGE.

Witnesses:

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DONALD C. RIDOUT.