A. T. PARKER.

HOG RINGER.

APPLICATION FILED MAR. 20, 1919.

1,306,714. Patented June 17, 1919.

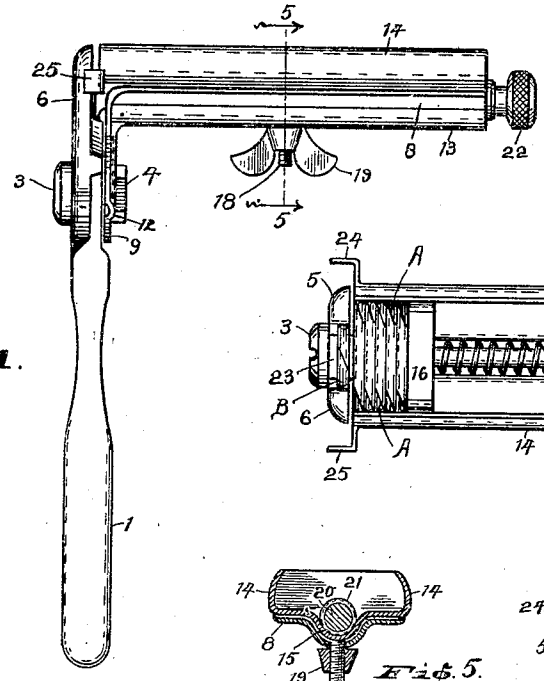


Fig. 1.

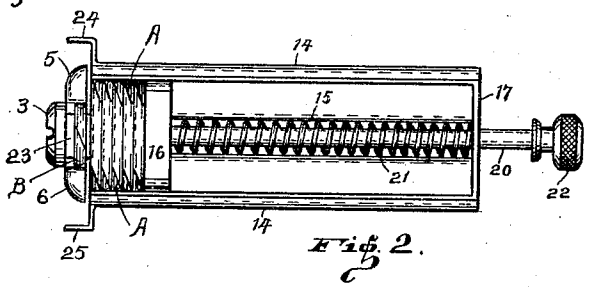


Fig. 2.

Fig. 5.

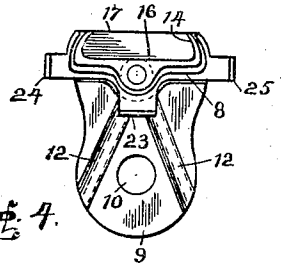


Fig. 4.

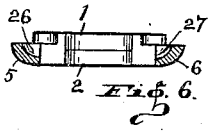


Fig. 6.

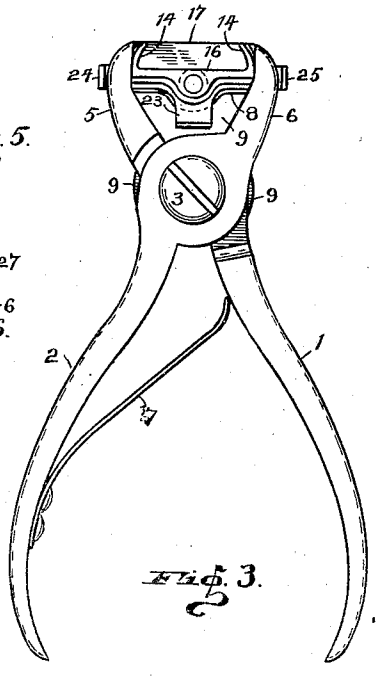


Fig. 3.



Fig. 8.

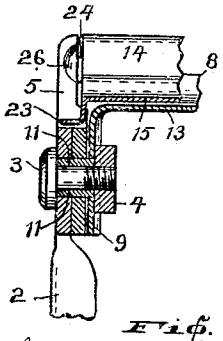


Fig. 7.



Fig. 9.

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UNITED STATES PATENT OFFICE.

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HOG-RINGER.

1,306,714. Specification of Letters Patent. Patented June 17, 1919.

Continuation in part of application Serial No. 112,361, filed July 31, 1916. This application filed March 20, 1919. Serial No. 283,895.

To all whom it may concern:

Be it known that I, ALONZO T. PARKER, a citizen of the United States, residing in the city of Richmond, in the county of Wayne, State of Indiana, have invented certain new and useful Improvements in Hog-Ringers, of which the following is a full, clear, and comprehensive specification and exposition, the same being such as will enable others to make and use the same with exactitude.

The object of this invention, broadly stated, is to provide a surgical instrument, or tool, especially adapted for applying rings in the noses of hogs or other animals in order to prevent the animals from committing injury to property. The said instrument or tool is strong and durable in construction, easily operated and controlled, adapted to perform the work for which it is intended in a minimum of time, and can be manufactured and sold at a comparatively low price.

The particular object of this invention is to provide a magazined nose-ringing tool which may be loaded before hand with open rings which may be inserted in quick succession until all of the rings in the magazine are exhausted, and which will permit of the rings being applied before the animal has time to become conscious of the operator's purpose. By means of the device the operator will be enabled to work more easily and without manual assistance, and the work may be accomplished in a minimum amount of time.

Other objects and particular advantages will be brought out and will suggest themselves in the course of the following description.

The particular features of this invention reside in a pair of crossed handles which are pivotally connected together, with the shorter ends of the handles merging into jaws having oppositely disposed ring-receiving cavities in the proximate faces and at the inner edges thereof. Other features of the device are the ring-containing magazine swingingly connected to the pivot of the handles and extending at right-angles from the jaws; a follower for feeding rings automatically from the magazine to the cavities of the jaws; and means for limiting the opening and closing of the jaws and at the same time centering the magazine.

The preferred means for carrying out my invention in a practical manner is shown in the accompanying drawings, in which—Figure 1 is a side elevation of the complete construction. Fig. 2 is a top plan view, showing the jaws closed. Fig. 3 is a front elevation, showing the jaws open. Fig. 4 is a front elevation of the magazine, the jaws and handles being removed from in front of the magazine. Fig. 5 is a cross section of the magazine, as taken on the line 5—5 of Fig. 1. Fig. 6 is a horizontal section taken through the jaws and centrally of the ring-receiving cavities. Fig. 7 is a vertical section taken centrally between the jaws and centrally through the pivot for the handles. Fig. 8 shows one of the open rings ready for operation and adapted to be inserted in the magazine. And Fig. 9 shows one of the rings after being operated upon by my invention.

Similar indices denote like parts throughout the several views.

In order to make clear the construction, the operation, and advantages of the invention, I will now take up a detailed description thereof, in which I will set forth the various parts and the operations thereof as fully and as comprehensively as I may.

Referring now to the drawings in detail: Numerals 1 and 2 denote the two handles, which are pivotally connected together by the bolt 3, with the nut 4 threaded on the inner end of said bolt. Upward and beyond said bolt the handles merge into the respective jaws 5 and 6. Said handles and jaws are normally retained open, that is with the handles and the jaws, spaced apart, by means of the flat spring 7, which is secured to the handle 2 with its free end in contact with the handle 1, as shown in Fig. 3.

Numeral 8 denotes the magazine base, the same having a bracket 9 integral therewith and extending down at right-angles from its forward end. Formed through the bracket 9 is an aperture 10, in which fits the inner

end of the spacer 11. The apertures through the handles for the bolt 3 are larger than said bolt, whereby said handles are really pivoted on the spacer 11, with the bolt 3 fitting in said spacer, whereby when the nut 4 is tightened it will contact tight against the end of the spacer thereby leaving the bracket free to rotate on the spacer.

Stiffening ribs 12 are formed on the rear face of the bracket 9, as shown in Fig. 4, and they also form a lock for the nut 4.

Also formed centrally of the base 8, and extending throughout the length thereof, is an interior channel, forming a rib 13 below and a channel above or in the surface of the base 8, as indicated.

Numeral 14 designates the magazine proper which is adapted to rest in the base 8, and it is provided with a rib 15 which fits in the channel of the rib 13 and also forms a channel in the center of the upper face of the magazine and extending from end-to-end thereof. The sides of the magazine curve upward and inward forming flanges, as shown in Fig. 5. The rear end of the magazine is closed by the end member 17, as shown in Fig. 2.

Numeral 16 designates the follower which corresponds with the interior curvature, in cross section, of the magazine 14 and the rib 15, and it is adapted to slide therein.

Extending down from the center of the rib 15 is the screw stem 18 which is inserted through an aperture in the rib 13, extending therebelow, and a wing-nut 19 is threaded on said stem whereby when the nut 19 is tightened the magazine 14 will be secured to the base 8, but in such manner that it can be easily removed.

Numeral 20 denotes the follower-rod, the same being slidably mounted in an aperture in the member 17, and its front end is rigidly secured in the follower 16, and it is adapted to operate endwise in the magazine 14 and longitudinally thereof. A helical spring 21 surrounds the rod 20 with one end in contact with the follower 16 and the other end in contact with the member 17, said spring at all times being under compression whereby the follower is normally forced forward. A knob 22 is attached to the rear end of the rod 20, in the rear of the member 17, and it affords means for manually drawing the follower rearward against the resiliency of the spring 21, and it also acts as a stop to prevent the follower from moving forward beyond the forward end of the magazine.

Extending downward and then forward from the front end of the rib 15 of the magazine is the L-shaped center-stop 23, which projects between the jaws 5 and 6. Also extending out laterally from the sides of the magazine 14, and then extending forward, are the two L-shaped stops 24 and 25.

Formed in the rear inner corners of the jaws 5 and 6 are the respective cavities 26 and 27, the same being crescent-shaped, and they are located in alinement with the sides of the magazine.

Letter A denotes open rings which are formed ready to be used in my tool. And letter B denotes the rings as they will appear after they have been closed by my tool operating thereon.

In practice the follower may be pressed back to its limit, after which the magazine may be filled with rings A, and then when the follower is released the rings will be forced forward by the spring 21, and when the jaws are open then the first ring will be forced into the cavities 26—27 of the jaws.

If now the handles be pressed toward each other it is evident that the first ring will be bent, closing the ends together, and forming a closed ring B. Now if the handles be released it is evident that the spring 7 will open the jaws thereby releasing the ring B, which will then fall out in front, and immediately thereafter the second ring A will be forced into the cavities of the jaws, and so on repeatedly until all of the rings are exhausted from the magazine.

The magazine, and the parts thereto attached, are normally free to swing on the bolt 3, or more properly on the spacer 11, as will be found if the jaws be only partly closed, and therefore it is absolutely essential that the magazine be centered both when the jaws are open and when they are closed, and also that there be a precise limitation for both the opening and the closing of the jaws. The stops 24 and 25 prevent the jaws from opening beyond the point required for the rings A to feed into the cavities 26 and 27 of the jaws, and at the same time center the magazine with relation to the jaws whereby the rings may feed directly into the jaws. The stop 23 prevents the jaws from closing beyond that required to form a perfect ring B, and also centers the magazine with relation to the jaws.

From the above it will be seen that the operator may hold the handles in one hand and apply the tool with the open ring then in the jaws to the nose of an animal, and that instant pressure of the handles toward each other to their limit and instant release of the pressure will drive the points of the ring through the nose of the animal before the animal has had time to realize it, and that this operation may be repeated very rapidly without the operator releasing the tool until all of the rings in the magazine are exhausted.

I desire that it be understood that various changes may be made in the several details of construction, without departing from the spirit of the invention and without sacrificing any of the advantages thereof which are shown in the drawings.

Having now fully shown and described my invention, what I claim and desire to secure by Letters Patent of the United States, is—

1. A hog ringing tool comprising pivotedly connected jaws having open ring receiving cavities therein, a ring containing magazine extending at right angles from the jaws, a spring pressed follower located in the magazine and adapted to successively supply open rings into the cavities of the jaws as the latter are opened, spaced jaw receiving stops projecting from the magazine and each adapted to engage with and to receive the outer edge of one of the jaws to limit the opening movement of the latter and to maintain the magazine in alinement with the recesses in the jaws as the rings are being fed from the magazine, and a central stop projecting from the magazine and lying between the jaws to engage therewith for centering the magazine with relation to said cavities as the jaws are being closed, substantially as set forth.

2. A hog ringing tool comprising pivotally connected opening and closing jaws having cavities in the opposing faces thereof, a handle integral with each jaw, a bracket pivotally connected to the pivot of said jaws, a base projecting at right-angles from the bracket, a ring containing magazine detachably connected to said base, means for automatically feeding rings from the magazine into the cavities of the jaws, means for limiting the opening of the jaws and at the same time centering the magazine, and means for limiting the closing of the jaws and at the same time centering the magazine, all substantially as set forth.

3. A hog ringing tool comprising a pair of handles, oppositely disposed jaws integral with the respective handles, means for pivotally connecting the handles whereby the jaws will move toward each other as the handles are moved toward each other, means for normally pressing said handles apart, there being ring receiving cavities formed in the opposing inner faces of the jaws and at the rear corners thereof, a bracket pivotally connected to the pivotal connection of the handles, a magazine base integral with the bracket and projecting at right-angles from the jaws, a ring containing magazine detachably connected on said base, a closure for the rear end of the magazine, a rod operative through said closure, a follower connected to the forward end of said rod and adapted to slide forward and backward in the magazine, means for manually operating said rod and for limiting the forward movement of the follower, a helical spring encircling said rod with one end thereof in contact with the follower and the other end in contact with said closure, means for limiting the opening movement of the jaws, and means for limiting the closing of the jaws.

4. A hog ringing tool comprising a pair of crossed handles pivotally connected together, jaws integral with the shorter ends of the handles and having ring receiving cavities formed in the inner corners of their contact faces, a bracket mounted to the pivotal connection of the handles and adapted to swing laterally thereon, a base member integral with the bracket and extending at right-angles therefrom, a magazine resting on and fitting the base member, means for detachably connecting the magazine to the base member, pressed down ribs formed in the center of the base and the magazine and extending longitudinally thereof and nested together when the magazine is secured to the base and forming a channel extending longitudinally through the center of the magazine, a follower slidably mounted in the magazine fitting the interior thereof and extending down and fitting said channel, a rod located in said channel with its forward end secured to the follower, means for limiting the forward movement of the follower, means for normally forcing the follower forward, means for limiting the opening of the jaws, and means for limiting the closing of the jaws, all substantially as set forth.

5. A hog ringer having a pair of jaws adapted to open and close with cavities formed in the jaws, a magazine pivoted and extending back at right angles from the jaws, means carried by the magazine for preventing the jaws from opening beyond a certain degree and at the same time centering the magazine with relation to the jaws, means carried by the magazine for preventing the closing of the jaws beyond a certain degree and at the same time centering the magazine with relation to the jaws, and means carried by the magazine for automatically feeding open rings from the magazine into the cavities of the jaws, all substantially as set forth.

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

ALONZO T. PARKER.

Witnesses:
R. E. RANDLE,
ROBT. W. RANDLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."