

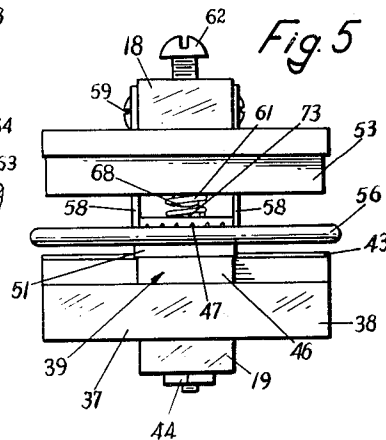
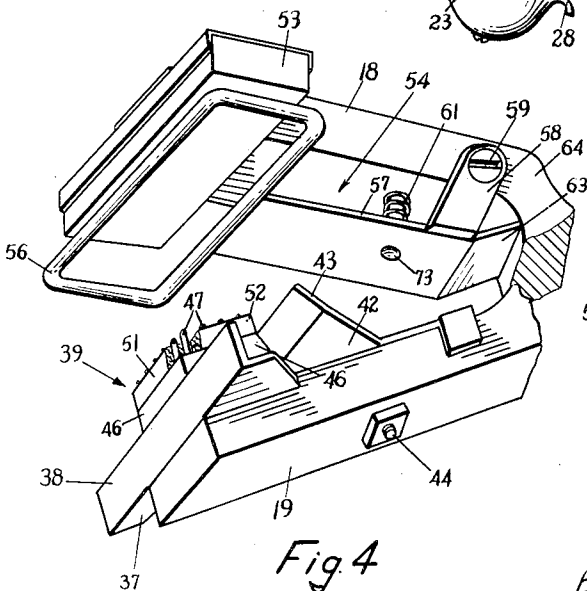
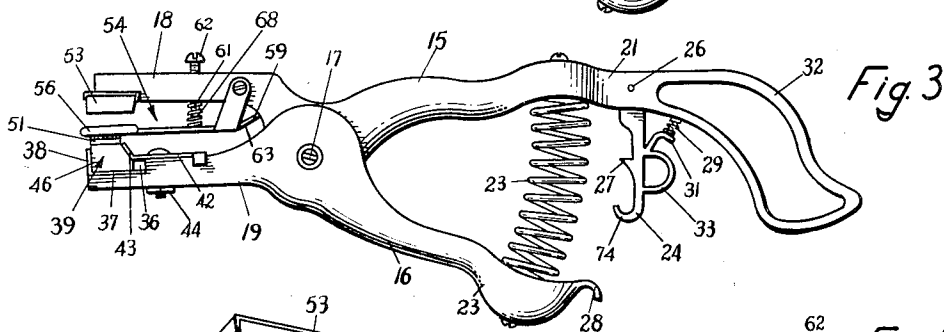
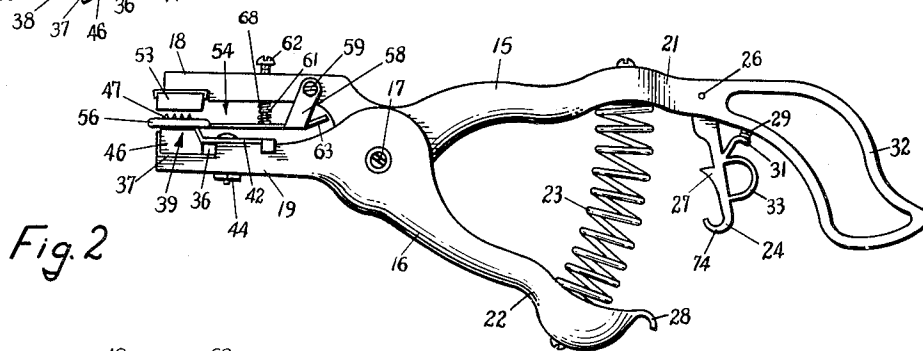
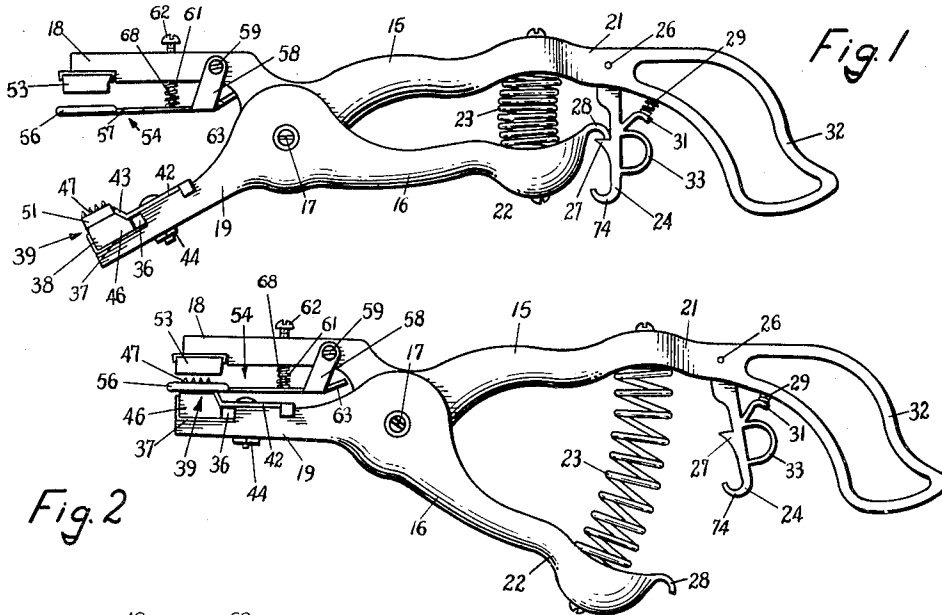
Feb. 13, 1951

J. A. BARGER
BRANDING DEVICE

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2 Sheets-Sheet 1



INVENTOR

John A. Barger

BY Rudolph L. Lawell
ATTY

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2 Sheets-Sheet 2

Fig. 7

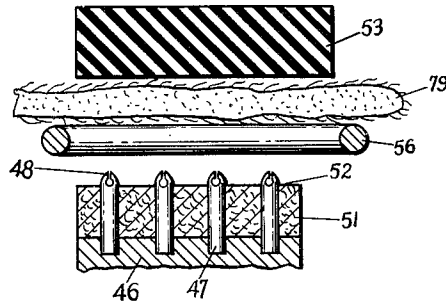


Fig. 8

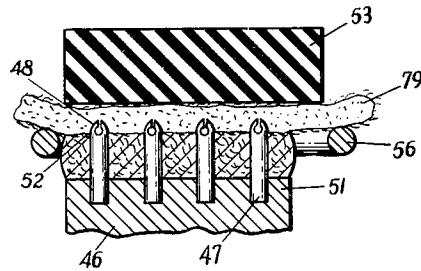


Fig. 9

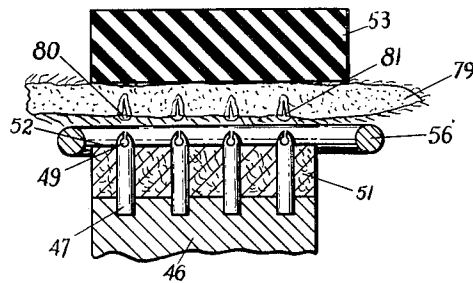
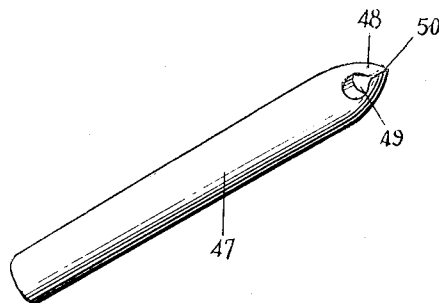


Fig. 6



INVENTOR

John A. Barger

By *Ludolph L. Lawell*
Attorney

UNITED STATES PATENT OFFICE

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BRANDING DEVICE

John A. Barger, Des Moines, Iowa

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3 Claims. (Cl. 101—26)

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This invention relates generally to branding devices and in particular to a device for tattooing the ears of livestock for the purpose of identification in registering and in testing for diseases.

Tattoo devices now in common use include a pair of jaws, a platen on one of the jaws and a plurality of needles supported on the second jaw. Generally, ink is spread over the needles, prior to each penetration of the animal's ear by the needles, as effected by a closing of the jaws. However, the ink on the needles is generally retained on the needles or fails to remain in the needle penetrations. In other words the ink applied on the ear soon wears away and the only ink effective for branding or tattooing purposes is that ink which enters and remains in the wounds or penetrations. To overcome this condition, therefore, on completion of a penetration of an animal's ear by the needles, the device is removed and the tattoo ink is manually smeared into the penetrations formed by the needles. This procedure is objectionable because it is messy, inconvenient, and results in a tattoo marking of non-uniform characteristics.

A further objection is found in the fact that in using the tattoo devices now in common use, the animals must be restrained as by tying, or in some instances by casting. As a result the tattooing procedure is a laborious and time-consuming job.

It is an object of this invention, therefore, to provide an improved device for tattooing or marking an animal's ear.

A further object of this invention is to provide a tattooing device in which the tattoo ink is ejected directly into an ear penetration formed by the tattooing needle.

Another object of this invention is to provide a branding device in which an ink pad is arranged and constructed to apply or smear ink over the ear concurrently with the penetration of the ear by the tattoo needles.

Yet another object of this invention is to provide a tattoo device which is of a simple and compact construction, and capable of performing a tattooing operation quickly and efficiently without requiring any restraint on the animal being tattooed.

A particular feature of this invention is found in the provision of a branding device for an animal's ear having a pair of cooperating jaws, in which a platen is carried on one of the jaws and a plurality of needles on the other jaw. The points of the needles are formed with ink holding cavities. When the jaws are closed the needle

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points penetrate the ear such that the cavities are substantially within the penetrations. Means are provided to separate the jaws with a snap movement such that the ink from the cavity is ejected directly into the penetrations concurrently with the removal or withdrawal of the needles from the penetrations.

Another feature of this invention is found in the provision of a device for tattooing an animal's ear having a pair of cooperating jaws, in which a platen is carried on the first one of the jaws and a plurality of needles are supported on the second jaw. An ear pressing device movably supported on one of the jaws, is movable in response to a closing movement of the jaws to flatten an animal's ear over the platen so as to facilitate the penetration of the ear by the needles. The needle points are formed with ink-holding cavities from which the ink is ejected into the penetrations concurrently with the withdrawal of the needles from the penetrations. Further, an ink pad is carried on the second jaw such that ink therefrom is transferred or smeared on to the ear about the needle penetrations. As a result ink is spread or smeared about the penetrations concurrently with an injection of ink directly into the penetrations to assure a positive distribution of the ink into the wounds or penetrations.

Further objects, features and advantages of this invention will become apparent from the following description when taken in connection with the accompanying drawings, in which:

Fig. 1 is a side elevational view of the branding device of this invention with the jaws thereof shown in their cocked or set positions;

Fig. 2 is a view illustrated similarly to Fig. 1 showing the jaws in their sprung or closed positions;

Fig. 3 is a view illustrated similarly to Fig. 1 with the jaws shown in their positions when the jaw closing spring is in its retracted or normal position;

Fig. 4 is an enlarged fragmentary perspective view of the jaws shown in their positions illustrated in Fig. 1;

Fig. 5 is an enlarged front view of the jaws looking toward the right in Fig. 3;

Fig. 6 is an enlarged perspective view of a tattoo needle forming part of the branding device of this invention;

Fig. 7 is a diagrammatic sectional view showing the arrangement of the platen, ink pad and tattoo needles relative to an animal's ear, when the jaws are approaching their closed positions shown in Fig. 2;

Fig. 8 is illustrated similarly to Fig. 7 and shows the arrangement of the platen, ink pad and tattoo needles relative to an animal's ear, when the jaws are in their closed positions shown in Fig. 2; and

Fig. 9 is illustrated similarly to Fig. 7 and shows the arrangement of the platen, ink pad and tattoo needles when the jaws have moved out of their positions shown in Fig. 2 toward their positions shown in Fig. 3.

With reference to the drawings, the ear tagging device of this invention is illustrated in Figs. 1, 2 and 3 as including a pair of pivoted operating levers 15 and 16, pivotally connected intermediate their ends at 17 and having cooperating jaws 18 and 19, respectively, at one of their ends. The jaws 18 and 19 are moved to a closed position on movement of their corresponding lever ends 21 and 22, respectively, away from each other.

The movement of the jaws 18 and 19 to their closed positions, shown in Fig. 2, is accomplished by means including a coil spring 23 which is connected between the lever ends 21 and 22. On a manual movement of the lever ends 21 and 22 toward each other, the spring 23 is compressed to set or cock the jaws 18 and 19 for operation as will appear later on. The jaws are releasably held in a set position, shown in Fig. 1, by a trigger member 24 pivoted at 26 on the lever 15 and formed with a shoulder or latch 27 adapted to releasably engage a hook or catch 28 formed at the free end of the lever end 22. The trigger 24 is biased toward an engaging position with the catch 28 by a coil spring 29 arranged in compression between the lever end 21 and a projection 31 extended rearwardly from the trigger member 24.

Integrally formed with the lever 15, and at its end 21, is a handle 32, by which the device is held in the manner of a revolver, with one finger receivable in a loop 33 provided on the trigger member 24. On actuation of the trigger the spring 23 is released whereby the jaws 18 and 19 are moved toward each other to a closed position, as shown in Fig. 2.

The free end of the jaw 19 is cut away to form a recess, shown at 36 (Fig. 2). Positioned within the recess 36 is a transversely extended support member 37 which has an upright lip 38 arranged at the forward end of the jaw 19. A needle unit, indicated generally at 39, is receivable on the supporting member 37 (Figs. 2 and 4) with its front side against the lip 38. To lock the needle unit in a desired position transversely of the supporting member 37, there is provided a clamp member 42 having its forward end 43 engageable with the rear side of the needle unit 39. A clamping or holding action of the clamp 42 is accomplished by a bolt 44 extended through the rear end of the clamp and the jaw member 19.

The needle unit 39 is comprised of a metal block member 46 (Figs. 1 and 4) which carries a plurality of needles 47 rigidly secured in the block 46 and arranged in a predetermined spaced relation. Each needle 47 (Fig. 6) is formed in its point 48 with an ink receiving cavity 49 which is open to the free end of the point through a longitudinal narrow passage or slit 50. An ink pad 51 is pressed over the needles 47 so that its lower side rests against the top side of the block member 46. The pad 51 is of a size to substantially cover the block member 46 and of a thickness such that the needle points 48 project upwardly from its inking or top surface 52.

The jaw 18 is provided with a platen 53, composed of a rubber or like flexible material and ar-

ranged so as to be opposite the needle unit 39 when the jaws 18 and 19 are in their closed positions.

A presser member, designated generally as 54 (Figs. 1 and 4) is integrally formed with an open rectangular frame 56 corresponding in shape to the platen 53 but slightly larger in size than the platen 53. The frame 56 is carried at the forward end of a flat arm member 57 formed with oppositely arranged upright ears 58 which are pivoted at 59 on the jaw 18. A coil spring 61, mounted about an adjusting screw 62 which is threadable through the jaw 18 is arranged in compression between the jaw 18 and the presser member 54 so as to normally yieldably hold the open frame 56 in a stop position spaced from the jaw 18. This stop position is defined by the engagement of the rear end 63 of the presser member arm 57 with the inclined portion 64 of the jaw 18.

During a closing movement of the jaws 18 and 19, the frame 56 of the presser member 54 is initially engaged by the forward side 43 of the clamp member 42. When this engagement is effected, the jaw 19 and the member 54 are movable together as a unit, against the action of the spring 61, to a closing position of the jaws 18 and 19 defined by the engagement of the arm 57 of the presser member 54 with the lower end 68 of the adjusting screw 62 (Fig. 2). In other words, the shank of the screw 62 is not completely extendible through the spring 61 and merely acts as a support for the upper end of the spring 61. The lower end of the spring 61 is supported on a punched out portion 73 formed in the arm 57 (Fig. 5.).

In the use of the branding device of this invention the device is initially set in its safety position, in which the latch 28 on the lever end 22 is in locked engagement with a forwardly and upwardly extended hook 74 formed at the lower end of the trigger member 24. The relative construction of the latch 28 and hook 74 is such that the latch 28 is incapable of being released from the hook 74 when a rearward pull is applied on the trigger 24. As will be readily apparent, the jaws 18 and 19 in their safety position are spaced apart a distance which is somewhat less than the distance in Fig. 1 for a fully cocked or set position of the jaws.

With the jaws in their safety position, a tattooing ink is applied by a brush or like means across the needle points 48 and the top or inking surface 52 of the ink pad 51. During this brushing operation ink is also supplied to the ink holding cavities 49 in the needle points 48. On completion of this inking operation the lever ends 21 and 22 are manually moved together, from a safety position of the jaws 18 and 19 to provide for the releasable engagement of the latch 28 with the trigger shoulder 27, as shown in Fig. 1. With the device gripped at the handle 32 an animal's ear is positioned between the platen 53 and the frame 56 of the presser member 54. When the ear is thus positioned, the trigger 24 is actuated to release the spring 23 and in turn provide for a movement of the jaws 18 and 19 to their closed positions shown in Fig. 2.

On a closing of the jaws 18 and 19 the animal's ear is initially engaged by the open frame 56, which acts to straighten or flatten that portion of the ear which is arranged opposite the platen 53 so as to facilitate the penetration of the ear by the needle points 47. On completion of the ear penetrating operation the jaws 18 and 19 are

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moved apart from each other and the presser member 54 is moved away from the platen 53 by the recoil action of the spring 23. In other words, in the closing of the jaws 18 and 19, the spring 23 extends or explodes to a length which is greater than its normal length, and then returns to its normal position. The spring thus undergoes a recoil action which imparts a snap movement to the jaws away from each other on the completion of an ear penetrating operation by the needles 47. This snap movement of the jaws 18 and 19 is utilized in the present invention to provide for a positive and efficient tattoo marking on the animal's ear, as will now be explained.

Thus, as shown in Fig. 7, when the jaws 18 and 19 are approaching their closed position, illustrated in Fig. 2, the animal's ear, indicated at 79, is loosely positioned between the platen 53 and the open frame 56 of the presser member 54. Further, the needle points 43 are projected from the ink pad 51 a distance such that approximately the lower half portions of the cavities 49 are arranged below the level of the inking surface 52.

On closing of the jaws 18 and 19, and referring to Fig. 8, the ear 79 is straightened out by the presser member frame 56. Further, the ink pad 51 is slightly compressed, by virtue of its being forced against the platen 53, through the ear 79, so that the inking surface 52 is moved down from the needle points 43 such that the cavities 49 are to the outside of the pad 51. By virtue of this pressing action of the pad 51 against the ear 79, ink is transferred from the surface 52 over that portion of the ear 79 engaged by the pad 51 and about the needle points 43. Concurrently with this action of the presser member frame 56 and the ink pad 51, the ear 79 is penetrated by the needle points 43.

On the snap movement of the jaws 18 and 19 away from each other, as effected by the recoil action of the spring 23, the ink is ejected from the cavities 49 directly into the needle penetrations, indicated as 81 in Fig. 9. Concurrently with this ink ejection action, the pressure member frame 56 is pivotally moved away from the platen 53 so as to leave the ear 79 completely free of the device on completion of a branding operation.

Thus from a consideration of Figs. 7, 8 and 9, it is seen that in the closing of the jaws 18 and 19 the ear 79 is initially engaged between the presser member frame 56 and platen 53 and then penetrated by the needle points 43 and covered with ink by the inking surface 52. On a separation of the jaws 18 and 19 the ink 80 (Fig. 9) from the needle cavities 49, is ejected directly into the needle penetrations 81. As a result, during each tattooing operation ink is both smeared or spread over the ear and ejected into the needle penetrations 81. The action of the spring 23 to remove the ink from the cavities 49 into the penetrations 81 is possibly supplemented by the creating of a vacuum in the penetrations 81 as the needle points 43 are withdrawn therefrom.

When a branding operation is completed, the device is returned to its safety position and additional ink applied to the pad 51 and over the needle points 43. On cocking of the device, it is again ready for use.

From a consideration of the above description it is seen that the invention provides a branding device which is of a simple and compact construction and automatically operable to distribute ink over an animal's ear about the penetrations

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formed in the ear by the tattoo needles, concurrently with an ejection of ink directly into the penetrations. As a result a manual smearing of the ink within the needle penetrations is completely eliminated. Further, it will be noted that the needle points 43 are relatively blunt. In practice it has been found that the blunt needle forms an ear penetration which is subject to very little bleeding and a minimum production of any healing fluid secretion so that the ink tends to remain within and about the penetrations.

By virtue of the fact that the device is completely automatic and fast in operation, it is unnecessary that the animal be tied or restrained in any way during the tattooing operation. Stated otherwise, an animal can be tattooed while it is in a stall, or feeding in a yard. Since the complete operation takes place in a very short period of time, and with the device being entirely free of the ear on completion of a tattooing operation, the entire procedure takes place before an animal is aware as to what is happening.

Although the invention has been described with respect to a preferred embodiment thereof, it is to be understood that it is not to be so limited since changes can be made therein which are within the full intended scope of this invention as defined by the appended claims.

I claim:

1. In a device for branding an animal's ear, a pair of pivoted levers having cooperating jaw members at one of their ends, a needle support on one of said jaws, a plurality of needles in said support formed with ink holding cavities adjacent their points, a platen on the other of said jaws, a coil spring for moving said jaws together connected between the other ends of said levers, means for releasably holding said spring compressed between said other lever ends, means for releasing said spring to actuate said jaw members, said spring, when released, moving said jaw members together to a closed position therefor and then recoiling to move said jaw members apart, with said recoil action providing for the ink in said cavities being ejected therefrom into the ear penetrations made by said needles.

2. In a device for branding an animal's ear having a pair of pivoted levers with cooperating jaw members at one of their ends, a platen on one of said jaws, a plurality of needles supported in a predetermined relation on the other of said jaws and having ink holding cavities formed therein adjacent to their points, a coil spring connected between the other ends of said levers so as to be compressed therebetween when said other lever ends are moved together to open said jaws, means for releasably holding said spring in its compressed position, and means for releasing said spring holding means to provide for the closing of the jaws by said spring, with the recoil action of said spring providing for the ejection of the ink from said cavities into the portions of the animal's ear penetrated by said needles.

3. In a device for branding an animal's ear having a pair of pivoted cooperating jaws, a platen on one of said jaws, a plurality of needles supported in a predetermined relation on the other of said jaws, said needles being formed at their points with ink-holding cavities, a member movably carried on one of said jaws for flattening an animal's ear over said platen, a compression spring for closing said jaws to provide for a penetration of said needle points into an animal's ear, means connecting said spring between said jaws so as to be compressed when said jaws are

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in open positions therefor, means for releasably holding said spring in its compressed position, means for releasing said spring holding means to close said jaws, means for moving said movable member in response to a closing movement of said jaws, with the recoil action of said spring, on completion of said penetration, imparting a snap movement of said other jaw away from said one jaw to provide for the ejection of ink from said cavities into the penetrations made by said needles, and means for moving said movable member away from said platen concurrently with the separation of said other jaw from said one jaw.

JOHN A. BARGER.

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