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2,514,618

BRANDING IRON

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Fig. 1

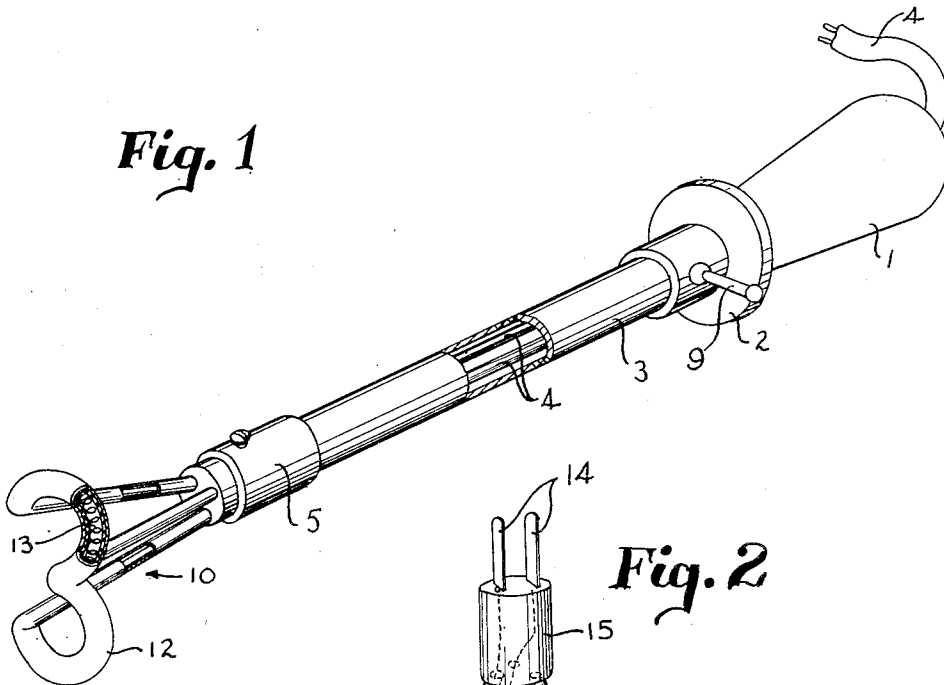


Fig. 2

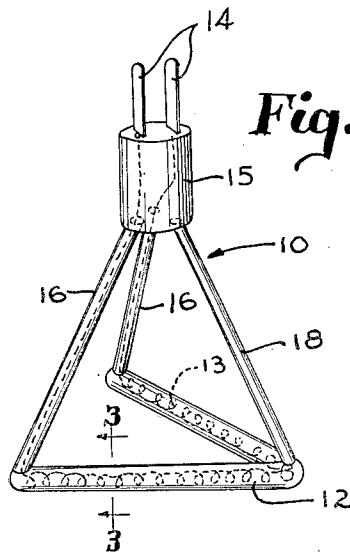


Fig. 3

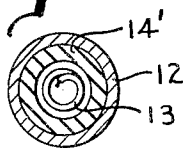
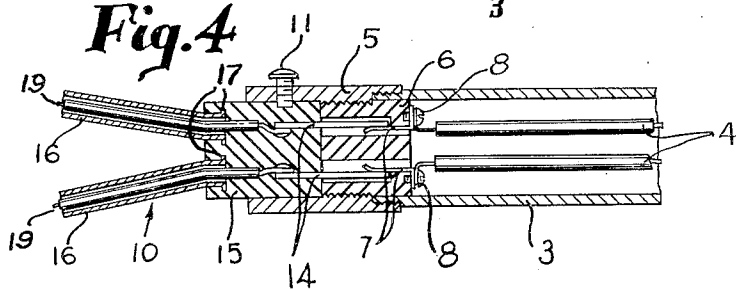


Fig. 4



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BRANDING IRON

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3 Claims. (Cl. 219—30)

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This invention relates to improvements in branding irons and more particularly to electrically heated branding irons.

Branding irons have been known and used over a long period of time as a means of branding like stock for purpose of identifying them. It is required by law in some states that each individual owning live stock have a brand and that such brand shall be registered. Therefore, it is entirely possible, that several different brands are required for the live stock running the same range and belonging to one firm or family.

Heretofore, provisions has to be made for heating the irons over an open fire, which was a laborious and time consuming process, particularly in areas where wood is a scarce commodity.

In the present invention, provision is made for heating the branding iron from any convenient source of electricity, such as an ordinary electric outlet connection, a portable generator, or from the battery of a truck or tractor. The branding iron proper is detachably connected to the handle so that different brands may be used, and the change from one to the other may be made quickly and efficiently.

The primary object of this invention is to provide a branding iron that may be electrically heated, and which is weatherproof, light in weight and easy to operate.

Another object of this invention is to provide, in an electrically heated branding iron, a detachable branding unit which is interchangeable with other branding units.

A preferred embodiment of this invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of the iron with parts broken away to show details of construction;

Fig. 2 is a perspective view of the branding head removed from the handle;

Fig. 3 is a cross-sectional view taken on the line 3—3 of Fig. 2; and

Fig. 4 is a fragmentary longitudinal sectional view of the juncture of the handle and the branding iron, showing how the branding head is detachably connected thereto.

With more detailed reference to the drawing, the numeral 1 designates a handle, which may be of suitable size and shape to be gripped by the hand of the operator. A shield 2 is disposed on the inner end of the handle between said handle and a stem 3, which shield protects the hand of the operator. The stem 3 is attached to the handle 1 and is hollow, so as to carry elec-

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trical wires 4 therethrough. The stem 3 has a socket 5 formed on the lower end thereof, which socket threadably engages stem 3 and retains an insulating electrical receptacle 6 therein. The wires 4 connect to contacts 7 by screws 8, as will best be seen in Fig. 4. The socket 5 threadably engages the receptacle 6 and stem 3 to hold these in secure relation. An electric switch 9 is positioned adjacent the shield 2 in such position as to be conveniently operated by the hand of the operator, but the shield 2 prevents accidental operation of the switch.

A branding head, generally designated at 10, is formed so as to be detachably connected with the socket 5 by screw 11. The branding head may form any desired symbol, emblem or brand, on the face thereof, the branding element of which is designated at 12, as is shown in Fig. 1. This element 12 is formed of metallic tubular construction, as illustrated in Figs. 1 and 2, and has an electric heating element 13 mounted within the center thereof and has electrical insulating material 14 therearound. The ends of the heating element 13 are attached to wires 19 extending through tubes 16 to electrical connector prongs 14, as will best be seen in Fig. 2 and 4, which prongs 14 are adapted to engage contact members 7 when the plug 15 is slipped into the socket 5. The plug 15 preferably is constructed of electrical insulating material such as hard rubber or plastic and in which the ends of the tubes 16 are embedded. The tubes 16 are shown to have flanged ends 17 so as to secure these against relative movement with the plug 15. It is preferable to have a brace element 18 extending from the plug 15 to the branding element 12, in the event that the branding iron is unusually large or unwieldy or for bracing action thereon.

It is to be pointed out that the tube 12 connects with the tubes 16 so as to enclose the heating element 13 in sealed relation; and with the plug 15 molded around the upper ends of the tubes 16 around the wires 19 leading from the heating element 13 to the prongs 14, that the electrical heating element and the electrical connections are maintained in weather-proof condition, which will prevent a short circuit therein under unfavorable atmospheric conditions, and which will permit their use in any kind of weather.

It will be appreciated that the heating element 13, of the correct resistance, will give a uniform heat to the tube 12 so as to make possible the quick and effective branding of the animal, and in this manner the branding element is kept

from overheating, which would be detrimental to the apparatus and to the branding operation; the branding element is, however, kept at a sufficiently high temperature to insure the proper branding of an animal.

It is to be understood that any number of branding heads 10 may be made up as required, and that each head is interchangeably connectable to the stem and handle part of the apparatus, as has been fully described hereinbefore. The same insulation, electrical connection, and bracing may be used regardless for the form of the branding element.

In the operation of the device, the particular brand head is selected and the plug 15 slipped into the socket 5 so that the prongs 14 engage contact points 7 so as to form a circuit through wires 4 and 19 and heating element 13, which may be of the usual Nichrome alloy. With the switch 9 in position to close the circuit, electricity will flow through the circuit thus formed and cause the heating element 13 to become hot, which in turn, heats the metallic tube 12 positioned on the ends of tubes 16 and brace 18. When the branding element becomes sufficiently hot, it is applied to the animal to be branded in the same manner as if the branding iron were heated by any of the conventional methods used heretofore.

Having thus described the invention, what is claimed is:

1. In an apparatus for branding stock, a handle, a stem rigidly secured to an end of said handle, a protective shield positioned on said stem adjacent said handle, a branding element detachably secured to an end of said stem opposite said handle, said detachable branding element having an electrical resistance element sealed therein in water tight relation and insulated therefrom, lead wires passing through tubes and connecting said resistance heating element with a pair of prongs, a dielectric plug closing the ends of said tubes and surrounding said prongs so as to form a moistureproof joint, said joint adapted to interconnect with electrical contact elements on the end of said stem, means for connecting said apparatus with a source of electric power.

2. In an apparatus for branding stock, a han-

dle, a stem attached to said handle, a socket positioned within the end of said stem and having electrical contacts therein adapted for interengagement with a plug of a removable heating element, a plug carrying a removable heating element, which plug has contacts thereon and is adapted to fit within said socket in substantially water tight relation, a tubular element carried by said plug and forming the configuration of a brand, an electrical heating element within said tubular element and electrically insulated therefrom so that said tubular element will be heated by radiation from said electrical heating element.

3. An electrical branding iron comprising a handle having supporting arms projecting from one end thereof, a hollow tube of a heat conducting material shaped to form a brand, clamping means for connecting said branding tube to said handle, an electric resistance wire having a coiled portion disposed within said tube and having end portions projecting from the ends thereof, an electric plug mounted in an end of said handle and electrically connected to the uncoiled ends of said resistance wire and adapted to be detachably connected to a source of electric current for energizing the resistance wire for heating said branding tube, said handle having a recess therein for accommodating said electric plug and a bore extending from said recess to the opposite end of said handle to provide a conduit for an electrical conductor.

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