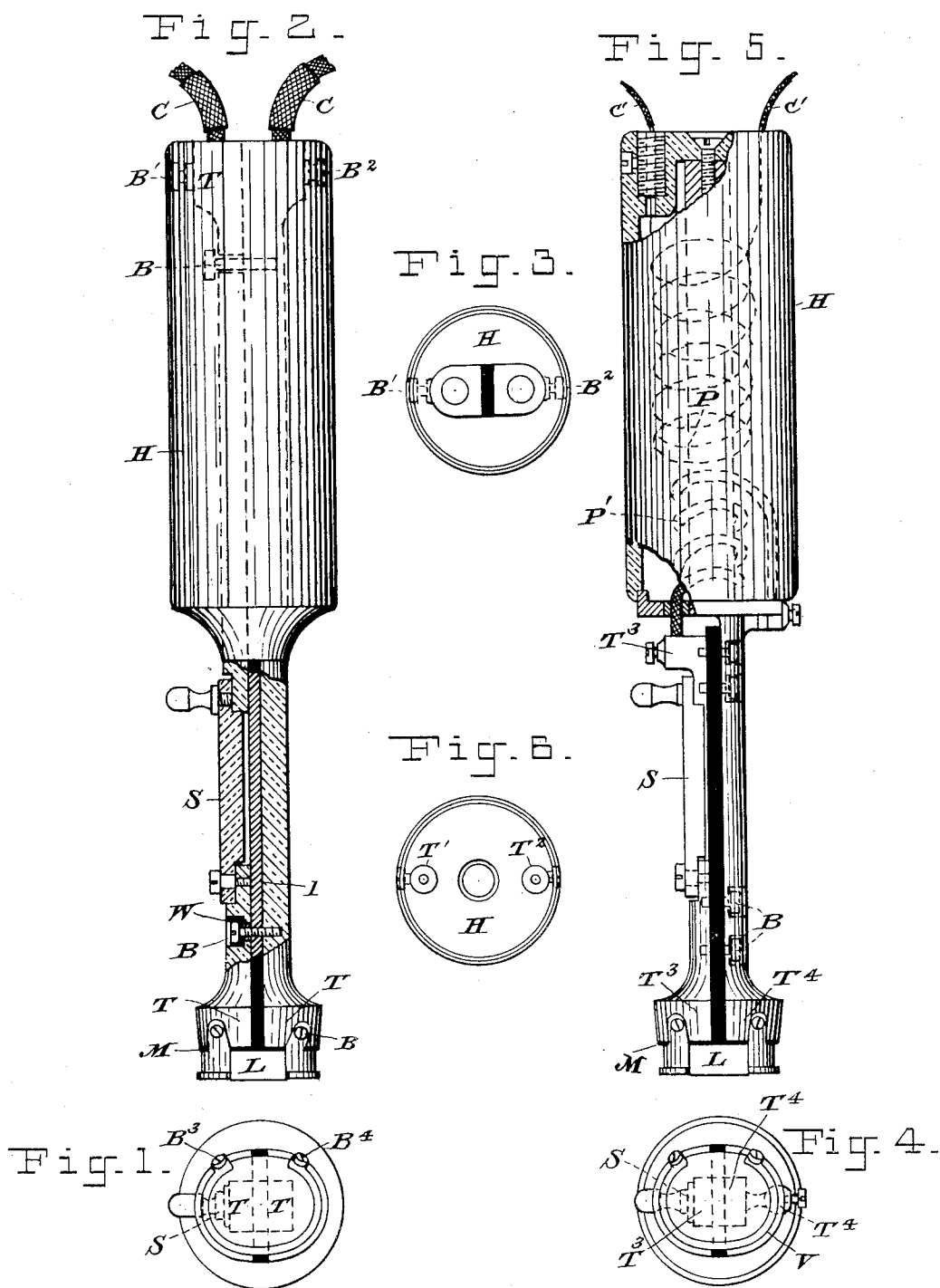


(No Model.)

J. S. FITZMAURICE.
BRANDING STAMP.

No. 483,050.

Patented Sept. 20, 1892.



WITNESSES:

E. B. Rolton

E. H. Sturtevant

INVENTOR

James Simcoe Fitzmaurice

BY

Richardson

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES SIMCOE FITZMAURICE, OF SYDNEY, NEW SOUTH WALES, ASSIGNOR
TO THE ELECTRIC BRAND COMPANY, LIMITED, OF SAME PLACE.

BRANDING-STAMP.

SPECIFICATION forming part of Letters Patent No. 483,050, dated September 20, 1892.

Application filed August 17, 1891. Serial No. 403,054. (No model.)

To all whom it may concern:

Be it known that I, JAMES SIMCOE FITZMAURICE, electrical engineer, a subject of the Queen of Great Britain, residing at Sydney, in the British Colony of New South Wales, have invented a new and useful Branding-Stamp, of which the following is a specification.

This invention relates to an improved brand or stamp or device which may be continuously and regularly heated and by means of which stock, cattle, and inanimate subjects markable by hot branding, singeing, or burning may be so branded or marked with a certainty, speed, lightness, and regularity hitherto unattainable.

This improved brand or hot stamp for live and inanimate subjects consists of a symbol or symbols or mark made of material having relatively high electrical resistance to that of conductors, which conductors connect it with a dynamo-electric machine, an electric battery, or other electric generator, so that the energy of a current from such source of electricity may be localized in and heat such symbol or symbols or mark. The symbol or symbols or mark has relatively high electrical resistance to that of conductors with which it is connected in use, and is preferably mounted on or in a non-conductor of heat and electricity or on or in a non-conductor of heat, from which it may be electrically insulated. It may further be combined and arranged in the circuit of a transformer or induction-coil, so that a high-tension alternating or intermittent electric current will be transformed into an induced current of low tension and large quantity of sufficient capacity to heat said symbol or mark; but in order that this invention may be clearly understood it will now be described in detail, reference being made to the accompanying drawings, in which—

Figures 1, 2, and 3 represent end and side views of an electric device embodying my invention. Figs. 4, 5, and 6 represent modifications of the same.

Referring to said drawings, Figs. 1, 2, and 3 represent end and side views of an electric brand, simple pattern. Two strips of any suitable metal T, forming the conductors for symbols or letters of brand, are securely fastened

together by screws B, which are insulated by washers and collars W, made of mica, asbestos, or any suitable insulating material and insulated from each other by a strip l of mica, slate, porcelain, or any other suitable insulating material. Into one end of each strip is a hole or terminal, to which is connected the cable C from the generator, and are fastened by means of screws B' and B². (See Figs. 2 and 3.) One strip or conductor is arranged so that the current may be broken at will by means of a switch S. The brand end of strips is shaped to suit the letter or symbol L of brand. (In this case it forms an oval, as the symbol shown is the letter C.) At this end the letter is secured to strip by means of screws B³ B⁴, Figs. 1 and 2; but it is insulated from strips by means of mica, asbestos, or any suitable material M, excepting at the point of connection made by screws. A handle H, of wood or any suitable material, is fitted, as shown.

Figs. 4, 5, and 6 represent end and side views of the electric brand with transformer forming portion of brand.

The transformer is fitted in handle H, as shown.

The primary or high-tension current is passed from generator by cables C' and terminals T' T² round primary coil P. A current of low tension and large quantity is induced in secondary coil P', the ends of which are connected by strips T³ T⁴ to letter L, as explained in Figs. 1, 2, and 3.

It will thus be seen that in Figs. 1, 2, and 3 a low-tension current is connected direct to brand from generator of sufficient capacity to heat the letter or symbol, whereas in Figs. 4, 5, and 6 a current of high tension is connected to one portion of the brand-mounting, and by means of a transformer or converter the current is reduced in tension and increased in quantity as to heat the letter or symbol of brand.

The brand, consisting of letters, figures, or symbols of any required design, is made of any suitable material which will have relatively high electrical resistance to that of conductors to which it may be connected in use. For instance, iron, steel, or carbon, or copper, or alloys of small section may be used, mounted on or in any suitable material being a non-

conductor of heat and preferably, also, a non-conductor of electricity—such, for instance, as asbestos, mica, or porcelain. This mounting may take any convenient form for handling or for providing attachment for a handle. Separate letters, figures, or symbols of the brand are electrically connected, preferably in series, (although of course they might be connected in parallel,) by relatively good electrical conducting material—say by metal of high electrical conductivity of sufficient sectional area to offer little or no resistance to the passage of the electrical current required to heat said letters, figures, or symbols constituting the brand. The two outside ends of the brand are then connected by means of terminals or binding-screws to conductors from the terminals of a dynamo-electric machine or battery or other source of electricity. It will thus be seen that when electricity is being generated the letters, figures, or symbols of the brand, offering a resistance to the passage of the current, become heated and may be applied to the subject for the purpose of marking it by heat singeing or burning. Preferably means of regulating the temperature of the brand are arranged in a suitable position on or in or convenient to the mounting in the form of a rheostat or other well-known electric-current regulator, through which the generated current is passed before reaching the letters, figures, or symbols.

In a modified construction of this brand the terminals of the symbols are electrically connected to a transformer independent of or forming portion of said brand or its mountings. In this transformer the primary coil is wound for a high-tension alternating or intermittent current and the secondary for a low-tension and large-quantity current, the

brand being connected to the latter and the electric generator to the former, so that when the main current is passed through said former an induced current is sent through the secondary of sufficient capacity to heat the letters, figures, or symbols.

It is to be understood that it is not desired to confine the practical application of this invention to any particular kind or shape of brand nor to any particular substance or material of which the brand may be manufactured so long as the nature of the said invention be retained.

Having now particularly described and explained the nature of this said invention and in what manner the same is to be performed, what is claimed is—

1. A brand or stamp consisting of a suitable handle, a sectional metallic shank for supporting the brand, the sections being insulated from each other, a flanged branding-iron secured to the sides of the lower end of the metallic shank, and insulating material interposed between the lower face of the metallic shank and the brand, substantially as described.

2. A brand or stamp consisting of a suitable handle, a sectional metallic shank with insulating material between the sections and across the lower ends thereof, circuit connections, a pivoted switch forming a part of one of the sections of the shank, and a brand bearing against the insulation on the bottom of the shank and having lugs or flanges forming attachments and electrical connections for the current, substantially as described.

JAMES SIMCOE FITZMAURICE.

Witnesses:

FRED WALSH,

THOMAS JAMES WARD.