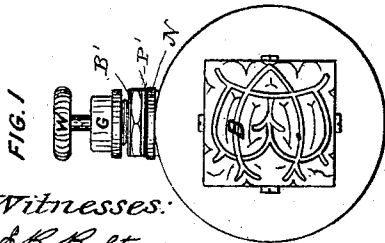
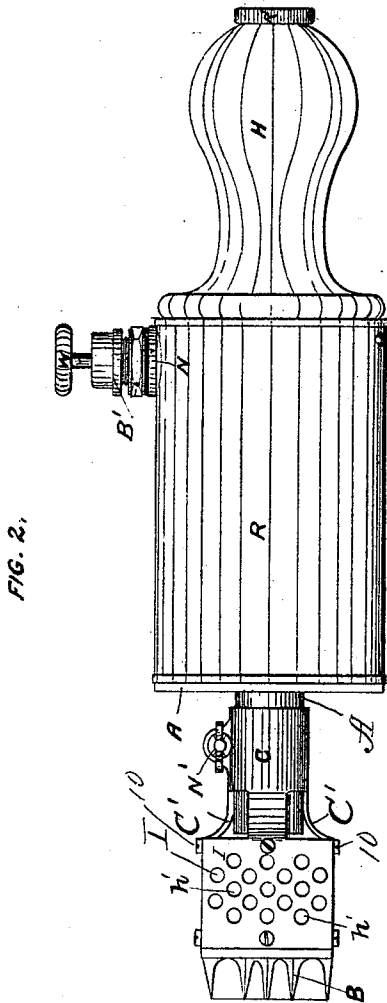
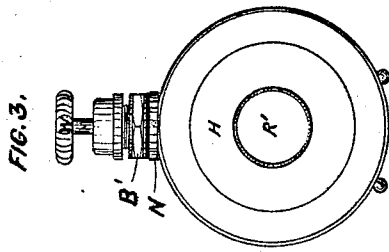


(No Model.)

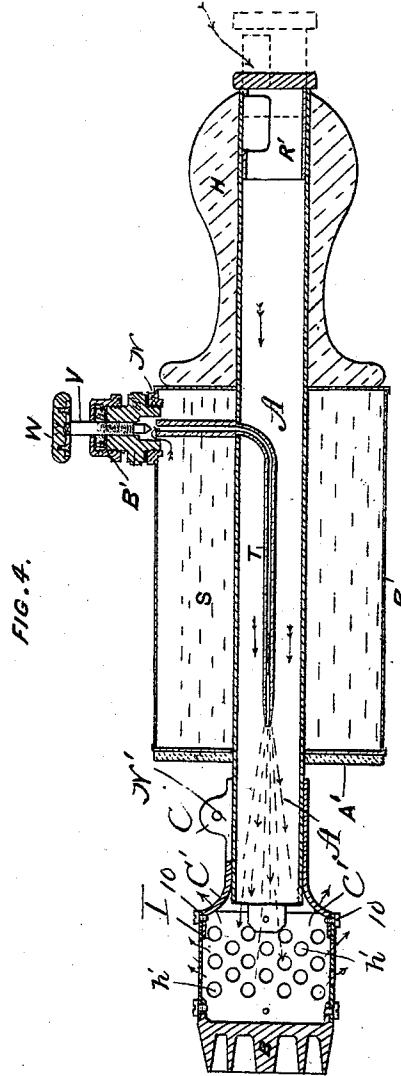
J. S. FITZMAURICE.
AUTOCALORIFIC BRANDING TOOL.

No. 493,078.

Patented Mar. 7, 1893.



Witnesses:
E. B. Bolton
D. J. Jones



Inventor:
James S. Fitzmaurice
By *Richard*
his Attorneys.

UNITED STATES PATENT OFFICE.

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

AUTO-CALORIFIC BRANDING-TOOL.

SPECIFICATION forming part of Letters Patent No. 493,078, dated March 7, 1893.

Application filed April 29, 1892. Serial No. 431,216. (No model.)

To all whom it may concern:

Be it known that I, JAMES SIMCOE FITZMAURICE, 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 Auto-Calorific Branding-Tool, of which the following is a specification.

This invention relates to an improved branding tool which is not only portable but has within itself the power or means of producing the heat required for the purpose of branding and of retaining for a comparatively very long time its stamp device or brand constantly at such temperature. This improved tool is suitable for branding in an economical effective and speedy manner all kinds of live and inanimate subjects which are capable of being marked by hot-branding singeing or burning but it is especially useful in branding live stock such as horses cattle sheep pigs &c. by quick and certain action and easy manipulation.

In carrying this invention into effect it is preferred that the improved auto-calorific branding tool should be constructed mainly as follows:—An annular vessel or chamber or reservoir or container surrounds a tube on the end of which is fixed the mark or brand. The annular reservoir has a smaller pipe leading therefrom into the central tube. The heating of the tool is started by causing the contents to gasify or vaporize by means of heat produced by burning cotton wick or soaked asbestos in the central tube or beneath the reservoir or container. The resultant gas or vapor issues from a jet on the end of the smaller pipe in the central tube and causes a draft of air there through and both issuing at the end mixed are lighted and heat the brand and at the same time keep up the gasifying or vaporization of the contents of the reservoir by reason of the proximity of the flame to the said reservoir and the heating of the central tube, which must necessarily result from the flame at its end. The smaller pipe with its jet is provided with a regulating valve, the reservoir has a screw cap feeding hole and the central tube has an air supply regulating device.

In all constructions it is preferred that the brand or mark should have the side nearest the flame or jet slightly hollowed so that said

flame or jet will impinge against said inner side and be confined in said hollow. In all cases too a convenient and appropriate handle is fitted to the reservoir burner and brand being made of heat non-conducting material and so formed that the brand when heated may be easily applied to the subject. But in order that this invention may be clearly understood reference will now be made to the drawings herewith in which

Figure 1, is an end view of the branding implement showing the brand proper and the reservoir and the gas regulating valve. Fig. 2 is a side view of the same. Fig. 3 is a view of the end opposite to that shown in Fig. 1. Fig. 4 is a longitudinal section through the entire tool including the reservoir and attached parts. Fig. 5 is a view of the wad for starting the action of the lamp.

A metal (preferably copper) brand or symbol B (comprising a monogram consisting of the letters E B C) is fixed to the end of a perforated casing or cap I preferably of sheet iron or material of less heat conductivity than the brand. This perforated casing or cap forms the hollowed out portion of the brand hereinbefore mentioned.

Attached to the nose of the central tube A of the annular reservoir or vessel R (containing preferably methylated spirits) is clamp C having arms C' to which cap I is screwed as at 10. The clamp is compressed about the nose of the tube A by the thumb screw N'.

A' is an asbestos guard or protector on burner end of container R.

In the tube is jet or pipe T having communication with interior of vessel R at what must be regarded and used as its top and at the point of communication is a regulating valve V whose screwed stem terminates in a wooden vulcanite asbestos or other heat non-conducting knob or head W and which stem passes through a stuffing box B'. The central tube A extends backwardly through a heat non-conducting handle H to an air supply regulator consisting of a covered in sliding piece R' with an orifice the extent of opening of which is regulated by said sliding piece R'. The wad torch or starter Fig. 5 consists of asbestos A² (which is soaked in spirits or oil) on a convenient handle.

In use the container R is filled with oil or spirits (preferably the latter) to say within half an inch of the top thereof and the top of jet or pipe T, and the stuffing box B' carrying the valve V is tightly screwed into nut N. The starter or wad or torch saturated with spirits is then ignited and applied under the reservoir R or under nose of tube A until the oil or spirit in such reservoir gasifies or vaporizes when valve V being opened the gas or vapor will issue from jet T and mixing with the air may be ignited at the end of the central tube. Regulator R' may then be slid outwardly to supply air for complete combustion which taking place the flame thereof will impinge on the back of the brand and the resultant gases, &c. escape through perforated cap I. While the brand B is being thus raised to the required temperature the torch or wad A² is extinguished and the combustion in tube A causes the further gasifying or vaporizing of the oil or spirit in reservoir. The flame in such tube is regulated by the valve V and the slide R' the former controlling the consumption of oil or spirit and the latter the supply of air. The brand being thus auto-calorified may be used as ordinarily in branding live and inanimate subjects being supplied with oil or spirits as required through nut N.

Having thus described the nature and objects of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination the tube (A) the reservoir connected therewith, the jet tube within the tube (A) the brand, the perforated cap secured to said brand, said cap having its end adjacent to the reservoir open, and the means for holding the cap to the tube (A) consisting of the arms C', substantially as described.

2. In combination the reservoir, the central tube extending through the same and projecting at the ends thereof, the brand at the end of said tube, the jet tube extending longitudinally of the central tube and laterally through the same at one end to near the top of the reservoir, and a valve for regulating the supply of gas, substantially as described.

3. In combination the brand, the tube A T, carrying the same, at one end the reservoir extending concentrically around the tube, the said tube projecting at its other end, the jet tube extending longitudinally of the tube A and laterally through the wall thereof, to near the top of the reservoir, the valve extending through the wall of the reservoir to control the flow of gas through the said tube, and the means for regulating the inlet of the air at the projecting end of the tube, substantially as described.

Dated this 25th day of February, 1892.

JAMES S. FITZMAURICE.

Witnesses:

FRED WALSH, J. P.,

THOMAS JAMES WARD.