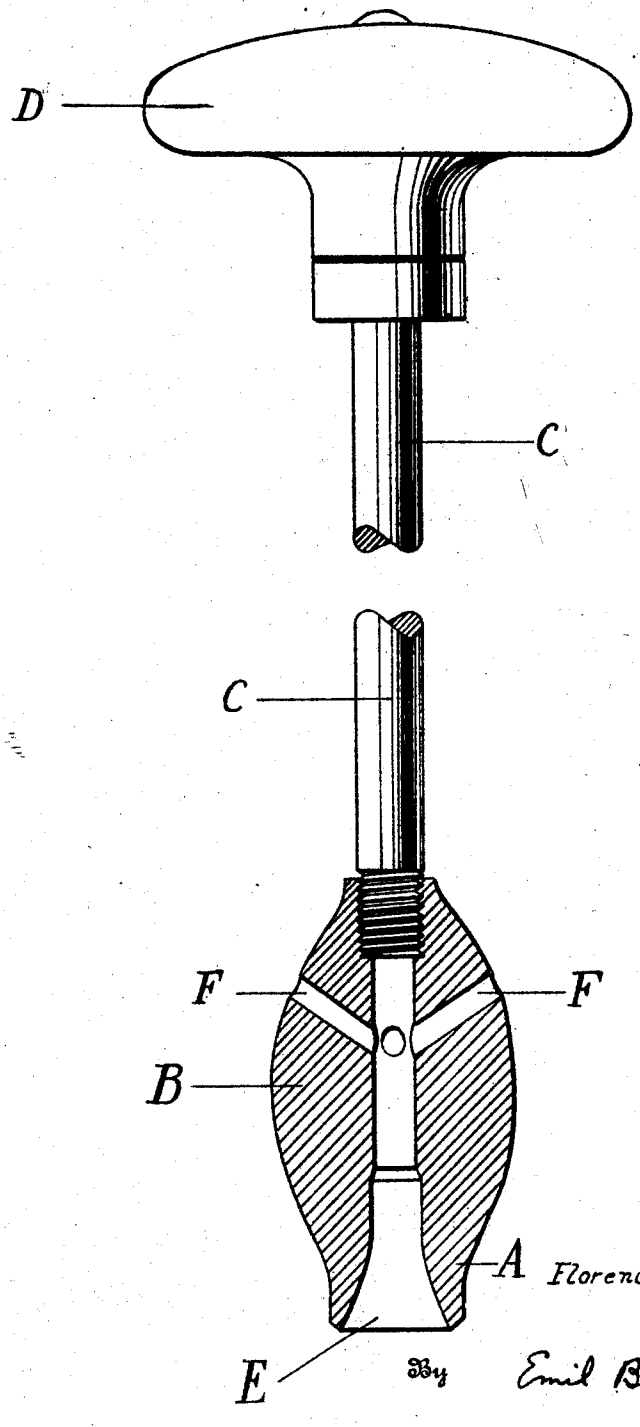
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F. M. BULA

INSTRUMENT FOR DISHORNING CALVES BY CAUTERIZATION

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Inventor
Florencio Martinez Bula

By Emil Bönnelycke
Attorney

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FLORENCIO MARTINEZ BULA, OF LA PLATA, ARGENTINA.

INSTRUMENT FOR DISHORNING CALVES BY CAUTERIZATION.

Application filed May 2, 1923. Serial No. 636,257.

To all whom it may concern:

Be it known that I, FLORENCIO MARTINEZ BULA, citizen of the Republic of Uruguay, residing at No. 573 56th Street, La Plata, Argentina, have invented certain new and useful Improvements in Instruments for Dishorning Calves by Cauterization, of which the following is a specification.

This invention relates to a new method and instrument for dishorning calves by cauterization. It provides a safe and economical method of performing the operation of dishorning cattle, which does away with all the trouble and failures found in the systems now in use, such as the breaking off or burning out of the horn with caustics.

The present method consists in burning out with a hot iron the horny cartilaginous root of the young horn which appears in calves of from one to four months old, by means of an oval shaped metal instrument of copper or steel. This instrument is so formed that the conical hollow in the part that is applied to the horn completely covers it, like a hood, down to its base in the skin which must be pierced to a depth depending upon the age of the calf and the consequent development of the horn. The instrument is made red-hot and the action of the heat destroys all the vitality of the horn, thus ensuring its complete extirpation.

There are two known methods of dishorning, as follows:—

1. By mutilation or resection of the organ by means of instruments varying in type, shape and form, but all based on the same principle, that is, the breaking off of the horn at its base.

2. By burning out the horn with caustics, such as potash, muriatic and nitric acid, etc.

The first method, which is cruel and harmful to the animal, has been practically abandoned on account of its unsatisfactory results. It is harmful to the growth of the animal and entails unnecessary work; moreover reproductions of the horn occur in 25 to 40% of the cases; infections set up; and deep and extensive wounds are caused at the break which generally require some months to heal, since a lengthy process of restoration is needed to replace such a considerable loss of substance.

The irregular and uncertain resections which the cutting instruments for dishorning make, leave fragments of the bone cartilage and the horn ring, at the site of the resection, which are soon influenced by some artery of nutrition. The resection does not prevent a complementary vascularization, sufficient to feed the remains of the cartilage left at the site of operation; and thus a stump may appear comprising a defective reproduction of the organ resected, resulting in a faulty and non-aesthetic operation, which, through a crooked growth of the horn may prove a danger to the animal itself.

Dishorning by means of active caustics such as potash or mercuric and nitric acid, etc., in addition to its unreliability, which means that the operation has to be frequently repeated, the wounds which are produced later offer a favourable place for the deposit of larvæ with the subsequent insect troubles; and further the cows are not exempt from this danger for the calves carry the caustic to their udders.

The present process has been based upon cauterization by a hot iron. This action is uniform and works deep, destroying or disintegrating all the elements in the matrix by the radiation of the heat, which at the same time checks all bleeding from the arteries and veins of nutrition, the cautery resecting and closing them up.

This complete destruction produces regressive atrophy of the horn elements, in the form of a general dry encrustation, that disappears later through the usual process of cicatrization leaving the neighbouring tissues untouched. Under this method of operation, the calves do not appear to suffer at all from dishorning, as they show no signs of passing through any pain. Their development is in no wise affected as there are neither hemorrhages, wounds nor traumatisms. Infections and insect troubles, so frequent after truncation or the use of caustics, do not appear in this system of dishorning, that is based upon a scientific study and in which cicatrization by atrophy, with a dry scab, causes no complications in healing, which is an important factor for the health of the operated animal.

The accompanying drawing illustrates the invention by way of example, the instrument being shown partly in section. The instrument comprises an oval shaped metal body, which consists of two parts: The first, is the cauterizing cone A, and the second, is the solid part B for the purpose of heating the cone A which penetrates to the root of the horn. This solid metallic part is oval

in shape. It is supported on a metallic rod C, to the end of which a wooden handle D, is so fitted that it will render it easy to operate. The penetrating cone A, is simply a hollow with a flared or funnel shaped opening, E, made in the thickness of the oval metal body. It is designed to receive the whole of the horn to be extirpated. This funnel is continued within the thickness of the oval metal body in a conduit, which branches off into four other canals F, radiating symmetrically to the upper part of the solid oval body. The central and the lateral conduits are necessary to allow the escape of the gases produced in the cone as the red hot metal gradually burns away the elements of the horn down to the root, where the operation is terminated.

The actual operation itself is simple. Once the solid metal has been made red-hot, the operator applies it vertically over the calf's horn, covering it with the hollow oval shaped metal body at the same time rotating the base and pressing it down so that it may penetrate as deeply as possible into the cartilaginous root of the horn. The resistance offered by the bony edge of the orbit tells the operator when the limit has been reached and the operation is terminated.

What I claim is:—

1. In a cauterizing instrument a metal member having a bore extending longitudinally therethrough and having branch channels extending from the bore through said member, one end of said bore being flared and the intermediate portion of said member having a greater diameter than either of the ends.

2. A cauterizing instrument comprising a metal member having a bore extending longitudinally therethrough and having branch channels extending from the bore through said member, one end of said bore being flared and the intermediate portion of said member having a greater diameter than either of the ends, and operating means secured to the end of the metal member opposite to the flared end.

In testimony whereof I affix my signature.

FLORENCIO MARTINEZ BULA.