

Specification of William Robert Lake : preserving dead bodies and carcasses.

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Publication/Creation

London : Great Seal Patent Office, 1870 (London : George E. Eyre and William Spottiswoode)

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A.D. 1869, 13th DECEMBER. N° 3597.

SPECIFICATION

OF

WILLIAM ROBERT LAKE.

PRESERVING DEAD BODIES AND CARCASSES.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,
25, SOUTHAMPTON BUILDINGS, HOLBORN.

Price 4d.

1870.





A.D. 1869, 13th DECEMBER. N^o 3597.

Preserving Dead Bodies and Carcasses.

LETTERS PATENT to William Robert Lake, of the "International Patent Office," Southampton Buildings, London, Consulting Engineer, for the Invention of "**AN IMPROVED MODE OF AND MEANS FOR PRESERVING DEAD HUMAN BODIES AND ANIMAL CARCASSES.**"—A communication from abroad by George Washington Scollay, of St. Louis, Missouri, United States of America.

Sealed the 1st February 1870, and dated the 13th December 1869.

COMPLETE SPECIFICATION filed by the said William Robert Lake at the Office of the Commissioners of Patents, with his Petition and Declaration, on the 13th December 1869, pursuant to the 9th Section of the Patent Law Amendment Act, 1852.

5 **TO ALL TO WHOM THESE PRESENTS SHALL COME**, I, WILLIAM ROBERT LAKE, of the "International Patent Office," Southampton Buildings, London, Consulting Engineer, send greeting.

WHEREAS I am in possession of an Invention for "**AN IMPROVED MODE OF AND MEANS FOR PRESERVING DEAD HUMAN BODIES AND ANIMAL**
10 **CARCASSES,**" and have petitioned Her Majesty to grant unto me, my executors, administrators, and assigns, Her Royal Letters Patent for

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the same, and have made solemn Declaration that it has been communicated to me from abroad by George Washington Scollay, of St. Louis, Missouri, United States of America.

NOW KNOW YE, that I, the said William Robert Lake, do hereby declare that the following Complete Specification, under my hand and seal, fully describes and ascertains the nature of the said Invention, and in what manner the same is to be performed, in and by the following statement:—

The object of this Invention is not merely to preserve the body or carcass from putrefaction, as that has already been most thoroughly accomplished by the introduction of antiseptic gas or gases into the venous or arterial system, substantially in the manner described in the Specification of an Invention for which Letters Patent have been granted to me, bearing date the Sixth of April, in the year of our Lord One thousand eight hundred and sixty-seven, No. 1044.

But the object of this Invention is to preserve the life-like appearance of the human body, and the fresh juicy appearance of the flesh of the animal body or carcase without making the latter deleterious as food. In the Specification above referred to I have described how to preserve the body with antiseptic gas or gases thrown into the arterial or vascular system.

Since the said former Patent was applied for experience has fully demonstrated the success of that Invention or discovery so far as the preservation of the body from putrefaction is concerned, as the introduction of some of the antiseptic gases (sulphurous acid gas for example) into the arterial and nervous system thoroughly annihilates the tendency to putrefy, bodies embalmed in this way will keep until the tissues dry up or mummify. The use of these antiseptic gases, however, although they thoroughly preserve the body against putrescence, are nevertheless imperfect in their effect upon the body when used alone or in combination with each other, for although they render the muscles and tissues of the body flexible as in life and to a certain extent restore the life-like colour, they do not make and maintain the colour of the human body uniform, nor do they maintain the fresh juicy appearance of the flesh of the animal carcass.

Now my experience has shewn that there are a variety of gases and vapors which when thrown into the arterial and vascular system of the

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body or carcass after death will restore the life-like color of the venous blood and consequently the tissues and substance of the body or carcass, and that this is especially true of that class of gases which are combustible or will support combustion. By uniting these gases or vapors,
5 which may or may not be antiseptic, with gases that are highly antiseptic, in or on the body in combination with a neutral salt or saline or alkaline influence applied to the body or carcass, I can not only preserve the body, but I can also restore and preserve uniformly the life-like color of the entire human body and the fresh juicy appearance of the
10 flesh of the animal carcass.

In practising this Invention to accomplish the objects aforesaid I proceed as follows, that is to say:—I make first either an alkaline, saline, or neutral solution, consisting of water and sulphite of soda or potash in the proportion of about ten ounces of water to from five to
15 eight of sulphite of soda or potash, adding enough soda to give the solution an alkaline preponderance; I then make a combination in a suitable retort of sugar and sulphuric acid in the proportion of about three fluid ounces of the acid to one half ounce of sugar; I then take about twenty ounces of the alkaline or neutral solution, and put it into a
20 suitable vessel or retort supplied with a small flexible tube fitted with a beak of hard rubber, non-corrosive metal or ivory, this retort containing the alkaline or neutral solution; I then connect to the retort containing the mixture of sulphuric acid and sugar; I then make a small incision in the tibial, radial, or any convenient artery of the body or carcass, and
25 insert the beak of the tube; I then put a lamp under the retort containing the sugar and acid, and generate the gases in combination in sufficient quantities to drive the solution through the tube (the end of which must be immersed to the bottom of the solution) into the arterial and venous system, and afterwards allow the gas or gases to follow the
30 fluid into the body until the sugar and acid have been depleted of their gases or until enough of the gases have entered the vascular and nervous system to neutralize the alkaline excess of the solution and to insure the preservation of the body.

The result of this process will be, first, a complete preservation of the
35 body against putrefaction; and second, the obtaining or restoring and maintaining the uniform life-like colour and juicy appearance of the body and flesh and its soft flexible consistency for comparatively a long period of time or until the fluids of the body have evaporated and the

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tissues become hard and mummified. The neutral or alkaline solution may of course be thrown into the body with a syringe, and the gas or gases introduced afterwards, either directly from the retort as fast as generated, or in any other convenient way which may best answer the convenience of the practitioner.

5

There are various other substances which may be used as substitutes for those above described ; thus, for example, the gases may be made of yellow prussate of potash, sulphuric, phenic, or carbolic acid and sugar, in the proportion of about one part of prussiate of potash to eight or ten of the sulphuric acid, and from one to two drams of phenic or carbolic acid by 10 weight, adding two or three drams of sugar, the mixtures being put into a retort and heat applied the same as before to generate the gas or gases, which are then used in combination with the same neutral, saline, or alkaline solution introduced in the same way as above described, or with any solution made of any of the neutral salts, or a solution may be made 15 of sugar water. Thenic acid, and soda or potash in the proportion of sugar one ounce, soda or potash one ounce, phenic acid one to two drams in about ten ounces of water. This solution may be used in the place of the above described alkaline or neutral solution in combination with the gas or gases made after either of the afore mentioned formulas 20 and introduced as before. The proportion of the formulas, however, should be increased for large bodies, those being for children or small carcasses. Now it will be seen that the gases generated and thrown into the veins and arteries as above described are acidulous, and that the fluids or solutions with which the arterial and vascular systems are 25 injected are neutral with a slight alkaline excess, so that when the two are united in the body the one neutralizes the other and forms a neutral salt, that is to say, the excess of the acids is neutralized by the solutions without destroying their antiseptic influence upon the tissues of the body or carcass. Here the different gases are generated together and pass into 30 the body together, but they may be generated separately and separately introduced into the body, and they may be made of an almost infinite variety of substances, and so too with the solution it may be made of many different substances which may be antiseptic in themselves, or they may or may not be antiseptic in their influence upon the tissues of 35 the body when used alone, or the solution may be made in parts and in parts introduced and united in the body with themselves and with the gases. It is difficult to explain the chemical actions and reactions which

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- take place in these combinations. The chemistry of the body is very delicate and obscure; the effect, however, is certain the body or carcass is preserved in its life-like and juicy appearance when treated as above described, and its preservation is due to the introduction of an antiseptic
- 5 gas with another gas which restores the life-like color of the venous blood, whether the latter gas be antiseptic or not, the two gases being applied to or introduced in the body or carcass when under the influence of a neutral solution slightly alkaline, whether that influence is the result of a solution thrown into the arterial and vascular system, or
- 10 whether it be otherwise incorporated with the tissues of the body or carcass, or whether it is antiseptic or not, provided the solution has the influence above described and is so applied as to bring it within reach of the gas or gases. The body may be subjected to the influence of the solution after the gases have been introduced with the same effect so far
- 15 as the preservation of the body is concerned as though the solution was applied first. The point is to bring the two influences together in the body as completely as possible in whichever way they may be applied, but the uniformity of color in the corpse is best preserved by applying the solution first.
- 20 Having thus fully described the said Invention in the art of preserving dead bodies or carcasses, as communicated to me by my foreign correspondent, and shewn how the same may be conveniently and advantageously carried into practice, I claim,—

First. Preserving the body or carcass by combining in the arterial

25 and vascular system thereof the antiseptic or preserving qualities or influences of a fluid or fluids with a vapor, gas, or gases so made, mixed, or compounded as to exert an antiseptic influence upon the body when united therein, whether the gas or vapour and fluid or fluids are antiseptic in themselves or not, or whether they would exert an antiseptic

30 influence or not upon the body when separately applied thereto.

Second. Restoring and preserving the life-like color of the venous blood, and the consequent life-like appearance of the corpse or flesh of the carcass by means of a combination of gases which are antiseptic and colour restoring in their influence when united in the vascular and

35 arterial system of the body, substantially as described.

Third. Subjecting the body or carcass to an antiseptic influence in the form of a fluid introduced into the arterial and vascular systems and to an antiseptic influence in the form of a gas introduced into the blood

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or tissue either through the lungs, the pores of the skin, or through the arterial and venous systems, so as to cause the said influences to combine in the body for the purpose of preserving the same, substantially as described.

In witness whereof, I, the said William Robert Lake, have here- 5
unto set my hand and seal, this Thirteenth day of December,
in the year of our Lord One thousand eight hundred and sixty-
nine.

WILLIAM ROBERT LAKE. (L.S.)

Witness,

H. J. GEDGE,

Clerk to Messrs. Haseltine, Lake, & Co.,

8, Southampton Buildings,


London.

10

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,

Printers to the Queen's most Excellent Majesty. 1870.



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