Reserving 82

A.D. 1867, 25th June. N° 1850.

SPECIFICATION

OF

LUDOVICO BRUNETTI.

EMBALMING.

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A.D. 1867, *25th June.* N° 1850.

Embalming.

(*This Invention received Provisional Protection only.*)

PROVISIONAL SPECIFICATION left by Ludovico Brunetti at the Office of the Commissioners of Patents, with his Petition, on the 25th June 1867.

I, Ludovico Brunetti, of Rovigno (Italy), Professor, do hereby declare the nature of the said Invention for "An Improved Process of Embalming and Preserving Animal Substances from Decay for Anatomical Purposes," to be as follows:—

My Invention has reference to an improved process for preserving the human body and animals for embalming and for anatomical purposes whereby I effect the preservation, firstly, of the elements of the primitive tissues with all their internal and external anatomical characteristics; secondly, of the capillary vessels in their natural state, but empty and accessible for microscopical examination; lastly, I effect the preservation of a certain degree of flexibility and elasticity in the anatomical preparations, which preserves them from injury when subject to pressure, to blows, or to falls.

This process, which though based on the principle of injection nevertheless leaves no trace of injection, includes three essential operations, namely, the preparations of the tissues, the tanning thereof, and their dessication.

The preparation consists of washing, the removal of fat, and the expulsion of the fluids employed for that purpose. The human or animal body is first

washed internally and externally with water, and the blood is removed by means of injections of water in the excretory vessels and ducts, providing a suitable aperture for the escape of the water, according as the injection is made in the arteries, the veins, or ducts; the fat is then removed by the injection first of alcohol and then of sulphuric ether, or of either of these alone; the ether is then expelled by injections first of alcohol and then by continued injections of water.

For tanning the tissues tannic acid is dissolved in boiling distilled water, and is then injected into the arteries, veins, or ducts.

The dessication is afterwards effected by heat applied internally and externally. For applying external heat the anatomical subject is placed in an iron oven with double sides, in which is contained water maintained at boiling point, so as to raise the temperature of the air in the oven to about ninety-two degrees centigrade (about 198° Fahrenheit). For applying internal heat hot air is compressed by an air pump in a strong receiver made to communicate with the arteries, veins, and ducts by means of india-rubber tubing, whereby the air is allowed to penetrate to the primitive tissues. The air is heated and dried for this purpose by being made to pass through a heated vessel containing any suitable dessicating substance, such as dry chloride of calcium, before entering the air pump. By this introduction of air the anatomical subject regains its natural volume and shape, and the natural internal microscopic structure of all parts is thus preserved suitable for examination.

Owing to the removal of all blood the anatomical subjects prepared by my process are deprived of colour; but they may be artificially coloured by the introduction of suitable colouring matter after the tanning.

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Printers to the Queen's most Excellent Majesty. 1867.