

Specification of Augustus de Heine : preserving animal and vegetable food.

Contributors

De Heine, Augustus.

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A.D. 1810 N^o 3310.

S P E C I F I C A T I O N

OF

AUGUSTUS DE HEINE.

PRESERVING ANIMAL AND VEGETABLE
FOOD.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

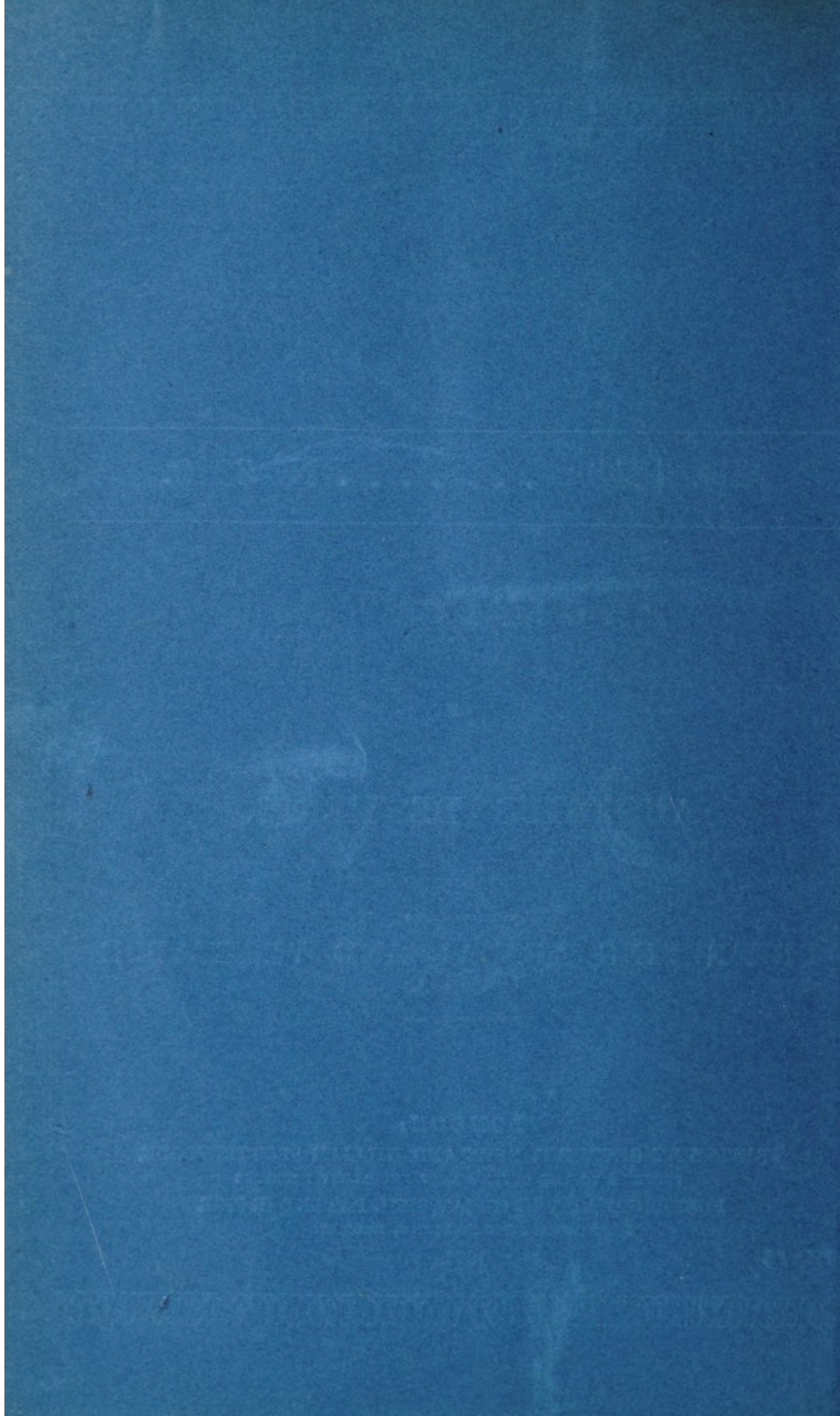
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A.D. 1810 N° 3310.

Preserving Animal and Vegetable Food.

DE HEINE'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, AUGUSTUS DE HEINE, of Burr Street, East Smithfield, in the County of Middlesex, Gentleman, send greeting.

WHEREAS His most Excellent Majesty King George the Third did, by
5 His Letters Patent under the Great Seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the Twenty-sixth day of February, in the fiftieth year of His reign, give and grant unto me, the said Augustus de Heine, my eñors, adñors, and assigns, His especial licence, full power, sole privilege and authority, that I, the said Augustus de Heine,
10 my eñors, adñors, and assigns, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, my Invention of "CERTAIN APPARATUS BY THE APPLICATION OF KNOWN PRINCIPLES TO PRESERVE ANIMAL FOOD, VEGETABLE FOOD, AND OTHER PERISHABLE ARTICLES A LONG TIME FROM PERISH-
15 ING OR BECOMING USELESS;" in which said Letters Patent there is contained a proviso, obliging me the said Augustus de Heine, by an instrument in writing under my hand and seal, to cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in His Majesty's High Court of Chancery within six calendar months after
20 the date of the said recited Letters Patent, as in and by the same, relation being thereunto had, may more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Augustus de Heine, do hereby declare that my said Invention is described in the following manner and in the Drawings hereunto annexed.

De Heine's Improvements in Preserving Animal and Vegetable Food.

My Invention consists in the construction of the vessels wherein the substances are to be preserved, and in the manner of exhausting the same vessels by an apparatus to be described. The vessels which I call the preserving vessels, may be made of iron, glass, or any other metal, or of earthenware of any shape and size required, strong enough to withstand 5 the pressure of the atmosphere when exhausted; the opening must be made as small as the introduction of the substances to be preserved will allow, the cover must be made of iron, glass, or any other metal or hard air-tight substance well fitted in the vessel. On this cover is a box or pertubérance wherein a valve is fitted that will let the air escape out of the 10 vessel, but not suffer it to come in. Fig. 1 and 2 represent the preserving vessels. Fig. 3 and 4 represent the covers to the same, with the box and the conical hole for the valve to play in. Fig. 5 represents a preserving vessel, and the manner of exhausting it by the common air, and which will do in cases where no great nicety is required; when the substances 15 to be preserved are put in the preserving vessel, the rim or joint of the cover must be well secured with cement that will keep the air out; asphaltum, pitch, rosin and turpentine make a good cement, but other substances as bees' wax, sealing wax, &c. may be used; also the box on the cover must fit in the air pump; then when the piston is drawn, the air will 20 lift the valve; by repeated strokes the vessel will be nearly exhausted, when the valve must be immediately covered with cement. The process with the common air pump is tedious and not to be relied on. Instead of the common air pump I make use of the following method. Fig. 6, A is the body of the vessel which I call the exhausting vessel, made of iron or any other 25 metal, of glass or earthenware, of any size or shape, the larger the better. B is a cistern of iron or any other metal, on which the vessel A is fixed by the open neck at C, which makes a communication between the vessel A and the cistern B; D is a valve in the cistern, over this valve the pump E is fixed; when the piston F is drawn up it will draw any fluid out of the 30 cistern, and this fluid is by the action of the pump thrown in the vessel G surrounding the pump G; H, is a small tube fixed by a flanche and screws, or fastened any other convenient way on the top of the exhausting vessel; this tube is made of brass, lead, or any other metal, and has a communication by a small opening with the exhausting vessel; at the end of this tube 35 is a vertical tube N, the bottom part of which is made to fix in the box in the cover of the preserving vessel over the valve at L; in this tube is fitted a piston M well ground in; at the bottom of this piston is a small screw that fits in the valve at I, and at the top the tube is made wider, and which

De Heine's Improvements in Preserving Animal and Vegetable Food.

is filled with mercury to prevent the air from penetrating by the piston; L is a vacuum gage; X, X, is a pipe of communication between the cistern B and the reservoir G; K is a cock in this pipe; the operation is as follows:—
 The preserving vessel Fig. 6, at W, is put under the vertical tube N, so that
 5 the bottom part of the tube fits on the box in the cover with air filled leather under it, as is well known. The exhausting vessel A is filled with water, mercury, or any other fluid, by opening the cock at K; then by working the water pump at B, the water or other fluid will be drawn out of the cistern, and consequently cause a vacuum in the exhausting vessel and of
 10 course in the pipe at H, and the air contained in the preserving vessels W will come out by the valve at I; when the exhauster is quite empty turn the cock at K and fill it again, then you can see what quantity of air there is come out of the preserving vessel, as it will prevent the exhausting vessel from filling till you draw the piston at M; repeat the operation till you see by the
 15 vacuum gage that you gain no more; when the air in the preserving vessel become too weak to lift the valve at I, depress the piston at M, and by half a turn take hold with the small screws at the lower end in the valve, and lift the valve, then the vacuum will be as strong in the preserving vessel as in the exhausting vessel, which the vacuum gage will shew; the same
 20 thing may be done by steam, as is well known and not necessary to be here mentioned; the preservation of animal food and other substances being of great consequence, and the subject of such magnitude that a great many discoveries may be expected, and will be made.

In witness whereof, I, the said Augustus de Heine, have hereunto set
 25 my hand and seal, this Twenty-fourth day of August in the year of our Lord One thousand eight hundred and ten.

A. DE HEINE. (L.S.)

AND BE IT REMEMBERED that on the Twenty-fourth day of August, in the year of our Lord 1810, the aforesaid Augustus de Heine came before
 30 our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stampd according to the tenor of the Statute made for that purpose.

Inrolled the Twenty-fifth day of August, in the year of our Lord One
 35 thousand eight hundred and ten.

LONDON:

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 Printers to the Queen's most Excellent Majesty. 1855.

ALEXANDER.

The following is a description of the apparatus and its use.

is filled with water to prevent the air from penetrating by the piston; I is a vacuum gage; K is a pipe of communication between the piston B and the reservoir C; L is a cock in this pipe; the operation is as follows:— The piston being raised to W, is put under the vertical tube K, so that the bottom part of the tube fits on the box in the cover with air-tight fastenings; it is then lowered. The exhausting vessel A is filled with water, necessary for any other fluid by opening the cock at K; then by working the water pump at B the water on either side will be drawn out of the cylinder, and consequently create a vacuum in the exhausting vessel and of course in the pipe at H, and the air contained in the preserving vessel W will come out by the valve at I; when the expansion is quite complete the cock at K will be closed, then you can see what quantity of air there is come out of the preserving vessel as it will prevent the exhausting vessel from filling till you open the piston at B; repeat the operation till you are by the 15 vacuum gage that you gain no more when the air in the preserving vessel has been too weak to fill the valve at I, depress the piston at M, and by half a turn take hold with the small screw at the lower end of the valve, and lift the valve, then the vacuum will be as strong as the preserving vessel as in the exhausting vessel, which the vacuum gage will show; the same 20 thing may be done by raising it as well known and not necessary to be here mentioned; the preservation of animal food and other substances being of great consequence, and the subject of such magnitude that a great many observations may be expected and will be made.

In witness whereof, I, the said Augustus de Helme, have hereunto set my hand and seal, this Twenty-fifth day of August in the year of our Lord One thousand eight hundred and ten.

A. DE HELME. (ss.)

AND WE IT REMEMBERED that on the Twenty-fifth day of August in the year of our Lord 1810, the aforesaid Augustus de Helme came before us our said Lord the King in His Chancery and acknowledged the Specification aforesaid, and all and every thing therein contained and specified in form above written. And also the Specification aforesaid was stamped according to the form of the Statute made for that purpose.

In witness whereof, I, the said Augustus de Helme, have hereunto set my hand and seal, this Twenty-fifth day of August in the year of our Lord One thousand eight hundred and ten.

ALBION, N. 3310.

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