

Specification of William Joseph Curtis : obtaining extracts or infusions.

Contributors

Curtis, William Joseph.

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A.D. 1871, *2nd August.* N^o. 2040.

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

OF

WILLIAM JOSEPH CURTIS.

OBTAINING EXTRACTS OR INFUSIONS.

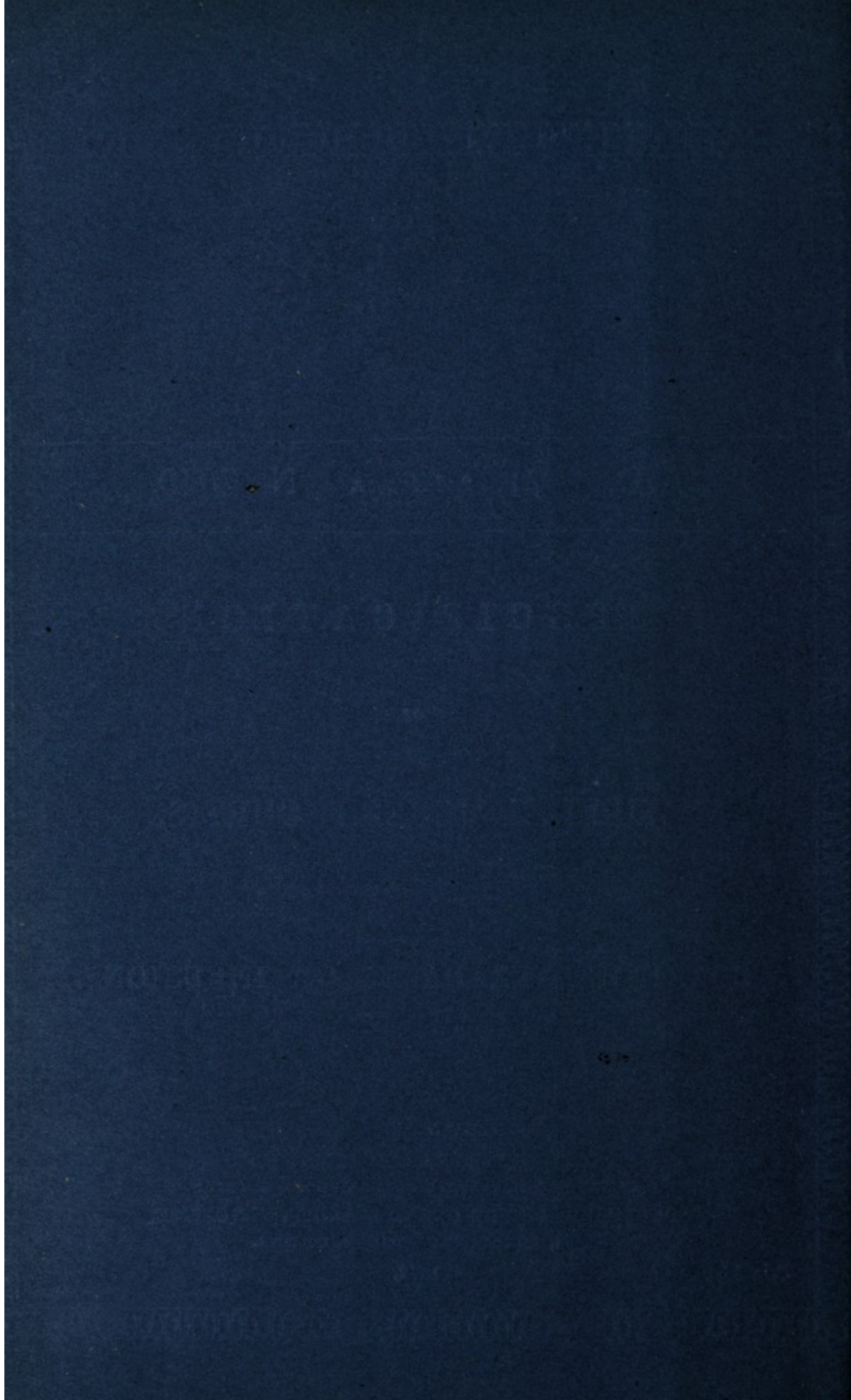
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A.D. 1871, 2nd AUGUST. N^o 2040.

Obtaining Extracts or Infusions.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by William Joseph Curtis at the Office of the Commissioners of Patents, with his Petition, on the 2nd August 1871.

I, WILLIAM JOSEPH CURTIS, of Holloway, in the County of Middle-
5 sex, Civil Engineer, do hereby declare the nature of the said Invention for "IMPROVED MEANS OF AND APPARATUS FOR OBTAINING EXTRACTS OR INFUSIONS FROM VEGETABLE OR OTHER SUBSTANCES AND FILTERING OR CLARIFYING LIQUIDS," to be as follows :—

The object of my Invention is to facilitate the obtaining of extracts
10 from or infusions of various substances, and is effected by causing a circulation of the water to be maintained through the mass until all the useful properties are extracted from the substance under operation. The Invention is particularly applicable for obtaining infusions of tea or coffee, but it is equally applicable for extracting dyeing or coloring
15 matters from various substances, or for obtaining aqueous extracts from drugs or chemicals.

Vegetable infusions have usually been obtained by steeping the substance in water of suitable temperature and thus dissolving out the

Curtis' Improved Means of Obtaining Extracts or Infusions, &c.

soluble matters. I have discovered that by causing the water or other liquid to flow continuously through the substances to be operated upon, the extractive matter can be more effectually separated and with greater facility than heretofore. The constant circulation of the water required for effecting the extraction of the soluble matters may be produced in 5 various ways.

In carrying out the Invention on a large scale, as for obtaining extracts from dyeing materials or from malt and hops in brewing, the requisite circulation of the water may be effected by means of a pump or by causing an artificial ebullition of the liquid by blowing in air, but 10 when operating upon small quantities of vegetable matter, as, for instance, in making extracts of tea or coffee, the required circulation may be produced by the use of a very simple apparatus, which consists of a vertical cylinder made by preference of metal and divided about its middle into two compartments by means of a perforated metal diaphragm, on which 15 the substance to be operated upon is placed. The sides of the cylinder immediately above this diaphragm are also perforated. Upon placing this cylinder in a vertical position in the infusion pot and filling the latter with hot water, the water will rise up in the cylinder and will pass through the substance on the perforated diaphragm, and will flow 20 out through the perforated sides of the cylinder. The circulation takes place automatically and naturally in consequence of the water in the cylinder being slightly warmer than that which is outside, and this circulation will continue as long as there is any difference in temperature in the different parts of the apparatus. An artificial circulation may be 25 kept up by applying heat to the central part or by blowing into the central part of the apparatus, but for ordinary domestic purposes this will not usually be required. The filtration or clarification of liquids is effected by causing a circulation of the liquid to take place in a similar manner, the flow of liquid always being upwards through the 30 filtering medium. The construction of the apparatus for filtering is substantially the same as that for obtaining infusions or extracts.

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