

Specification of Charles Whitlaw : administering medicine by the agency of steam or vapour.

Contributors

Whitlaw, Charles.

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A.D. 1826 N° 5336.

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

OF

CHARLES WHITLAW.

ADMINISTERING MEDICINE BY THE
AGENCY OF STEAM OR VAPOUR.

L O N D O N :

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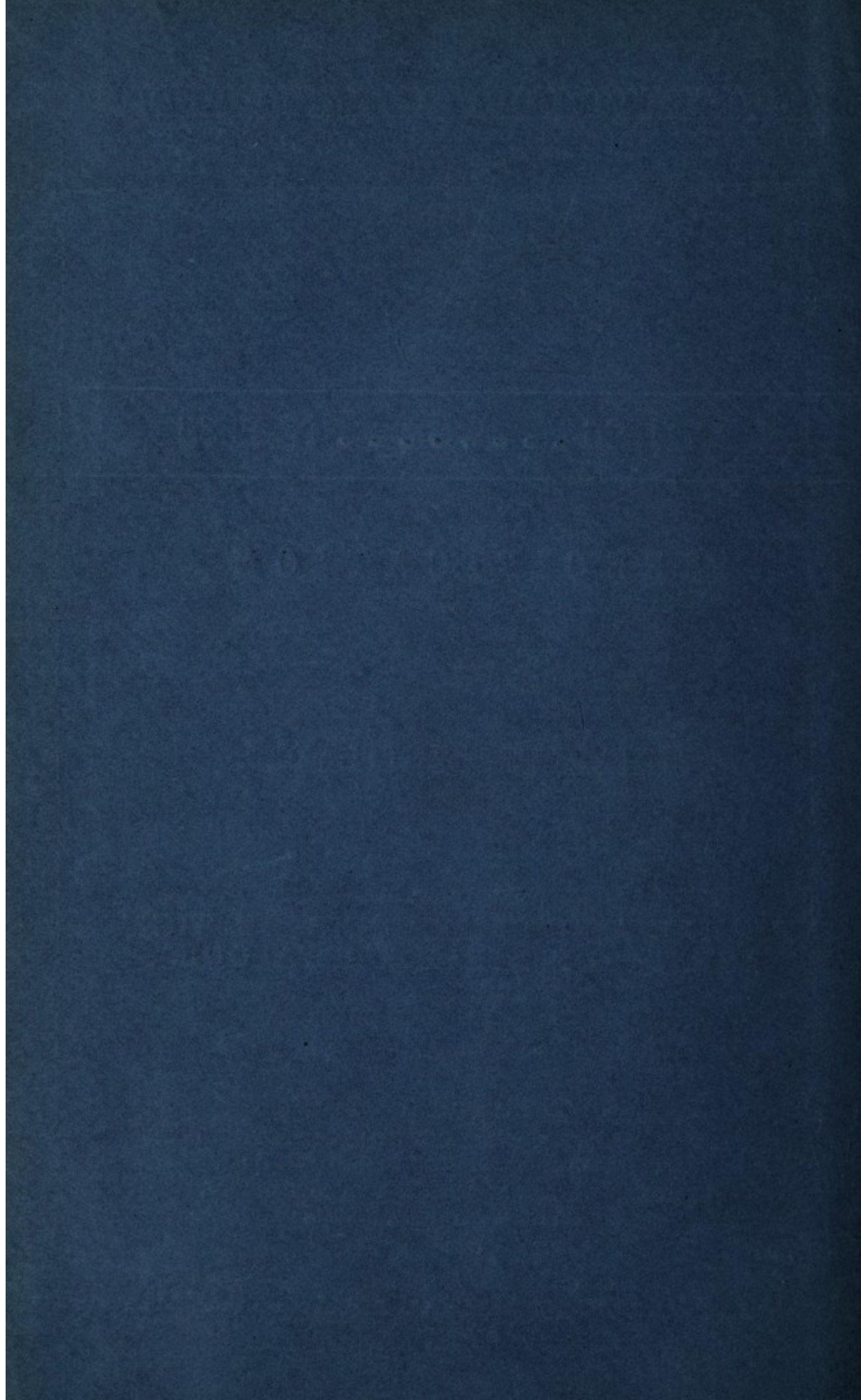
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Administering Medicine by the Agency of Steam or Vapour.

WHITLAW'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, CHARLES WHITLAW, of No. 13, Bayswater Terrace, Paddington, in the County of Middlesex, Medical Botanist, send greeting.

WHEREAS His present most Excellent Majesty King George the Fourth, by His Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Eighteenth day of February, One thousand eight hundred and twenty-six, in the seventh year of His reign, did, for Himself, His heirs and successors, give and grant unto me, the said Charles Whitlaw, His especial licence that I, the said Charles Whitlaw, my exors, admors, and assigns, or such others as I, the said Charles Whitlaw, my exors, admors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, and also in all His said Majesty's Colonies and Plantations abroad, my Invention of "AN IMPROVEMENT OR IMPROVEMENTS IN ADMINISTERING MEDICINE BY THE AGENCY OF STEAM OR VAPOUR;" in which said Letters Patent is contained a proviso, obliging me, the said Charles Whitlaw, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of my said Invention, and in what manner the same is to be performed, and to cause the same to be inrolled in His Majesty's High Court of Chancery within six calendar months next and immediately after the date of

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the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Charles Whitlaw, do hereby declare that the nature of my said Invention, and the manner in which the same is to be performed, are particularly 5 described and ascertained in and by the following Drawings hereunto annexed, and the following description thereof (that is to say) :—

The medicines which I administer consist of vegetables collected in their native places of growth, and carefully prepared by drying and packing, so as to retain their properties in the greatest state of perfection. The plants being 10 gathered at those periods when their principles have attained their proper degree of elaboration or growth, are to be carefully dried in such a manner as that, whilst their aqueous parts are evaporated, their volatile and oleaginous ones may be retained as much as may be. I prefer to spread them thinly over the floors of airy chambers, and to cover them with linen or cotton cloths 15 to prevent the light from acting upon them whilst drying. When sufficiently dried, I subject them to the action of screw or other presses, in order to compress and form them into compact masses suitable for packing with the least loss of space. I find the shape shewn in Figs. 1 and 2 of the Drawing to be a very convenient one, and I give the vegetables that form by putting 20 them into wooden frames strongly united at their corners by dovetailing them, such as is shewn in section at Fig. 3, and in plan at Fig. 4. These frames have loose bottoms fitted to them, and various wooden blocks are provided, in order that when placed in a proper press more or fewer of them may be put into the frames to fill them up, and thus convey the power of the press to the 25 masses of dried vegetables placed beneath them. When sufficiently compressed, which in the case of oleaginous plants will be known by the partial appearance of oil upon the surfaces of the masses, the frames must be removed from the presses, and the loose bottoms with the compressed masses of vegetables lying upon them be pushed out of the frames, thus leaving the 30 vegetables in a state ready to be closely packed in proper boxes, and which operation should be effected as quickly as may be, each separate mass being previously wrapped up in paper to guard it from contact with the external air.

In Fig. 5 I have given a representation of a press with a single screw and 35 lever, calculated to hold one frame only; and in Fig. 6 I have shewn a double screw press with several frames underneath its moveable beam; the sides of some of the frames being removed to shew the masses of vegetables, the loose bottoms, and the wooden blocks within them. I can also occasionally employ

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vegetables in their recent state, or when freshly gathered, without previously drying or pressing them, as above mentioned, although I generally prefer to use those so prepared, on account of their producing more beneficial effects, and being more mild in their operation. The steam or vapour employed by
 5 me in administering vegetables as medicines I can produce in any of the usual and well-known methods, but I prefer, for the sake of economising fuel and other advantages, to employ a steam boiler and furnace of the construction shewn in the Drawing at Figs. 7, 8, 9, 10, 11, 12, and 13. A, A, A, is the boiler, made of copper, wrought iron, or other fit and proper
 10 metal. I prefer to form this in an oval shape, as shewn in the different Figures, for the sake of placing the greater part of the water above the fire, leaving enough water below, however, to protect the different parts from being overheated, and for the same reason I also make the fire-place B, B, of an oval figure, and place it as low as may be in the boiler. The chief part of
 15 the fire-place is made of copper or wrought iron, but the grate C, C, is formed of cast iron, as well as the front end of it D, which is fitted up with a door E and air register F, the hinder or inner end of it being closely fitted to the lower part of the fire-place B, B, in order to compel the heated air to pass through the grate and over the end of it in its way to the flue or
 20 chimney. The fire-place is united to the boiler in front by means of flanches, screws, and nuts, as shewn in Fig. 10, and at its hinder end, which is contracted below to form a flue, by tinning it and soldering it into an inverted neck G made at the back of the boiler A, A, and which joining being kept constantly surrounded with water is prevented from becoming unsoldered.
 25 The boiler has a man-hole and safety valve fitted to it by screws at H in the usual manner, and is provided with gauge cocks at I, I, Figs. 7 and 9, for ascertaining the quantity of water in it, as well as another cock at J for drawing off the whole of the water when the fire is removed, and it is mounted upon feet K, K, with rollers or castors fitted to them for the sake
 30 of conveying it to or placing it in any convenient situation for use. The steam or vapour generated in the boiler is conveyed through the pipe L, Figs. 7, 9, and 13, furnished with a cock M and a turning joint N into the basis O of the tent P, Figs. 14, 15, 16, and 17, and either passing in its way through the three-wayed cock Q, Figs. 15 and 16, and the construction of
 35 which cock is shewn in the two enlarged sections of it, Figs. 18 and 19, in which R is the plug of the cock, and S its handle, shewn by dotted lines in Figures 18 and 19; T, the entrance tube; and U, V, the two branches leading from it; W, the hole or passage through the plug R, and which, when the plug is turned into the position shewn in Fig. 18, conveys the steam

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or vapour into the left branch, as when turned into the contrary position, and as shewn in Fig. 19, its course is directed into the right branch. When, however, the solid part of the plug R is brought opposite to the entrance tube T, the passage of the steam or vapour is entirely prevented through the cock Q. It may, however, if preferred, be delivered directly into 5 the basis O of the tent through a pipe T, as shewn in Fig. 17. When the steam or vapour is conveyed through the right branch V of the three-wayed cock, as shewn in Fig. 19, it passes directly into the basis O of the tent, and which basis is a rectangular wooden chest lined with metal plates. The lid of this chest consists of a wooden frame X, shewn by dotted lines in 10 Figs. 16 and 17, and of a metal plate Y, secured to the frame by nailing it or otherwise. This plate Y is perforated with numerous small holes, as shewn in the Figure, and the use of which is to diffuse the steam or vapour uniformly throughout the tent without suffering it to enter into it in the form of scalding streams or currents, so as to endanger the person using the tent. 15

The tent is framed to this basis O in the following manner:—In Figs. 16 and 17, Z, Z, &c. are four circular holes, one being made at each corner of the basis; these holes are surrounded by metal loops or bands *a, a, &c.*, secured to the corners of the basis by screws or otherwise, and one of which is shewn separately at Fig. 20, which is a side view of it, and in Fig. 21, which is a 20 plan of it. Four other metal loops with circular holes in them are also affixed to the basis, one at each corner of it below the above-mentioned ones, as shewn at *b, b, &c.*, in Figs. 14 and 15, and one of which is shewn separately in Fig. 22; into each pair of these loops *a* and *b* a round wooden pole *c, c, &c.* is inserted and rests upon the floor of the bathing room. At the tops of these 25 four poles *c, c, c, c,* are metal spikes, which are passed through four holes made one in each corner of a rectangular wooden frame *d*, partly shewn in Figs. 14 and 15, so as to support that frame firmly. Around and over the whole a linen or cotton cloth or other proper covering is placed, which is made to open on one side of the tent to admit the person into it, and to be closed either by 30 means of strings tied together or otherwise as required. The tent is also furnished with a chair *e*, having a reticulated bottom made of cane or other proper open work, and provided with two wooden bars *f, f,* to support it upon the basis O. A foot board *g* for the feet of the person to rest upon is also provided, and likewise a thermometer *h*, which is hung to the frame *d* to 35 ascertain the temperature of the steam or vapour within the tent.

When I wish to administer medicine by the agency of steam or vapour, I cause the steam or vapour to be delivered immediately upon the vegetables forming the medicaments, in the following manner:—In Fig. 23, *i* is a circular metal vessel

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furnished with a lid and false bottom, the sides, lid, and false bottom being perforated with small holes ; the steam or vapour is admitted into the lower part of this vessel below the false bottom, either through the pipe *j*, which passes through the side of the basis *O*, as shewn at *T* in Fig. 17, or else
 5 through the side branch *U* of the three-wayed cock, as shewn in Fig. 16 ; the steam then rises through the holes in the false bottom of the vessel *i* and acts upon the vegetables, with which the upper part of that vessel is previously filled, so as to separate and exalt their volatile parts, and which, blended with the steam or vapour, rise up through the holes made in the sides and cover of
 10 the vessel *i* and diffuse themselves throughout the interior of the tent. I can employ steam of greater or lesser temperature and pressure by loading the safety valve *H* of the boiler more or less, and I can concentrate or regulate its action upon the vegetables by putting them into vessels of greater or lesser size, and provided with more or fewer holes, or by making those holes of
 15 greater or lesser sizes ; the smaller the vessel, and the smaller and fewer the holes in it, the more is the power of the steam concentrated upon the vegetables, and vice versa. I can also obtain a similar result by making the perforated cover of the vessel *i* cylindrical and moveable, so as to rise or fall, and I load it with more or less weight according to the pressure of the steam required.
 20 This cylindrical part of the cover is either accurately fitted, by grinding or otherwise, within an external cylinder having no holes in it, or else it may be made to rise and fall in a circular channel, made by forming the sides of the external cylinder double, as shewn in Figs. 24 and 25, and filling or partly filling that channel with water or water impregnated with common salt.
 25 *i*, Fig. 26, is the cylindrical, perforated, and moveable part of the vessel, loaded with weights at *k*, and which weights have holes in their centres, which retain them in their places upon the wire stem *l*, which is affixed upon the top of the part *i*. The place of the perforated vessel *i* within the basis *O* is shewn in Figs. 15 and 16, it resting upon the two feet underneath it. When I wish
 30 to supply two baths from one steam boiler I cause the steam to pass through a forked or branched pipe, similar to that shewn in Fig. 13.

Having thus described the mode of preparing the vegetables forming my medicaments, the construction of the steam boiler, and the manner of directing the steam or vapour immediately upon the prepared vegetables, and also the
 35 construction of my improved tent or vapour bath, I shall next proceed to observe, that this improved method of exhibiting vegetables as medicine, by applying the volatile parts of them through the agency of steam or vapour to the whole external surface of the body, and causing them to be inhaled at the same time by the lungs, and thus received into the circulation, produces bene-

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ficial effects both in acute and chronic diseases not to be obtained by the ordinary modes of medical treatment now in use. In medicating the bath, the same regard is to be had to the properties of the vegetables, as in the exhibition of medicines to the stomach, and the rules of prescription under certain modifications are the same. When a physician is called to a patient, 5 he judges of the cause and nature of the disease and prescribes the kind and quantity of agents he thinks most likely to relieve it; precisely on the same principle is my improved vegetable vapour bath prescribed, with due regard to the state of constitution and habit of body of the patient at the time. I have reason to believe that, besides the agreeable stimulus of heat, one effect of the 10 bath is to relieve irritation and diffuse equable excitement over the whole system. Now, if it be conceded that a great proportion of diseases depend upon undue excitement and unnatural irritation goading the system into improper action, the agency of the bath in the cure of them is at once apparent, and a guide is afforded to the quantity and frequency of its application. 15 Having then charged the perforated vessel with the requisite vegetable or vegetables, I direct the steam or vapour from the boiler upon them until the heat in the bath is sufficient to raise the thermometer from 95° to 110°, according to the degree of heat the patient may require, and the steam or vapour holding in suspension the physical properties of the vegetables conveys them 20 at once to the whole external surface of the body, whilst they are also inhaled by the lungs, and their medical properties being thus at once carried into the circulation, produce far greater benefit and with less chance of doing injury than when received in the ordinary mode into the stomach. The usual time of patients remaining in the bath is from fifteen minutes to half an hour, 25 according to the nature of the disease and constitution of the patient. I have found, in the course of my experience with the bath, that I can eradicate most of the diseases the human frame is afflicted with, and without the aid of minerals or the employment of vegetable poisons. I do not mean or intend hereby to claim as my Invention any of the various parts of the apparatus 30 described which may have been already known or in use; what I claim is, the adaptation of the various parts to my particular object of administering vegetables as medicine by the agency of steam or vapour to the whole external surface of the body of the patient, whilst they are also inhaled by the lungs and received into the circulation. And I also more particularly claim as my 35 own Invention the perforated vessel into which the herbs or vegetables are put, and its application to the specific object of extracting, for the purposes above mentioned, the more or less volatile properties of plants, according to the peculiar construction of the vessel for the occasion which requires it, and the

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higher or lower degree of pressure and temperature which the steam or vapour within it is thus allowed to attain. The construction and adaptation of the three-wayed cock, by which the steam or vapour can either be conveyed at once into the basis of the tent, or be made to pass into the perforated vessel
 5 and become impregnated with the medicinal qualities of the vegetables. And, lastly, the perforated metallic cover of the basis, by which the steam or vapour is equally distributed throughout the tent.

In witness whereof, I, the said Charles Whitlaw, have hereunto set my hand and seal, this Eighteenth day of August, in the year of our
 10 Lord One thousand eight hundred and twenty-six.

CHARLES (L.S.) WHITLAW.

AND BE IT REMEMBERED, that on the Eighteenth day of August, in the year of our Lord 1826, the aforesaid Charles Whitlaw came before our said Lord the King in Her Chancery, and acknowledged the Specification
 15 aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

WILSON.

Inrolled the Eighteenth day of August, in the year of our Lord One thousand eight hundred and twenty-six.

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