

Specification of Emile Guenin : mustard and other plasters.

Contributors

Guenin, Emile.

Publication/Creation

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

Persistent URL

<https://wellcomecollection.org/works/vyrztee3>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



A.D. 1870, 7th MAY. N° 1315.

SPECIFICATION

OF

EMILE GUENIN.

MUSTARD AND OTHER PLASTERS.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

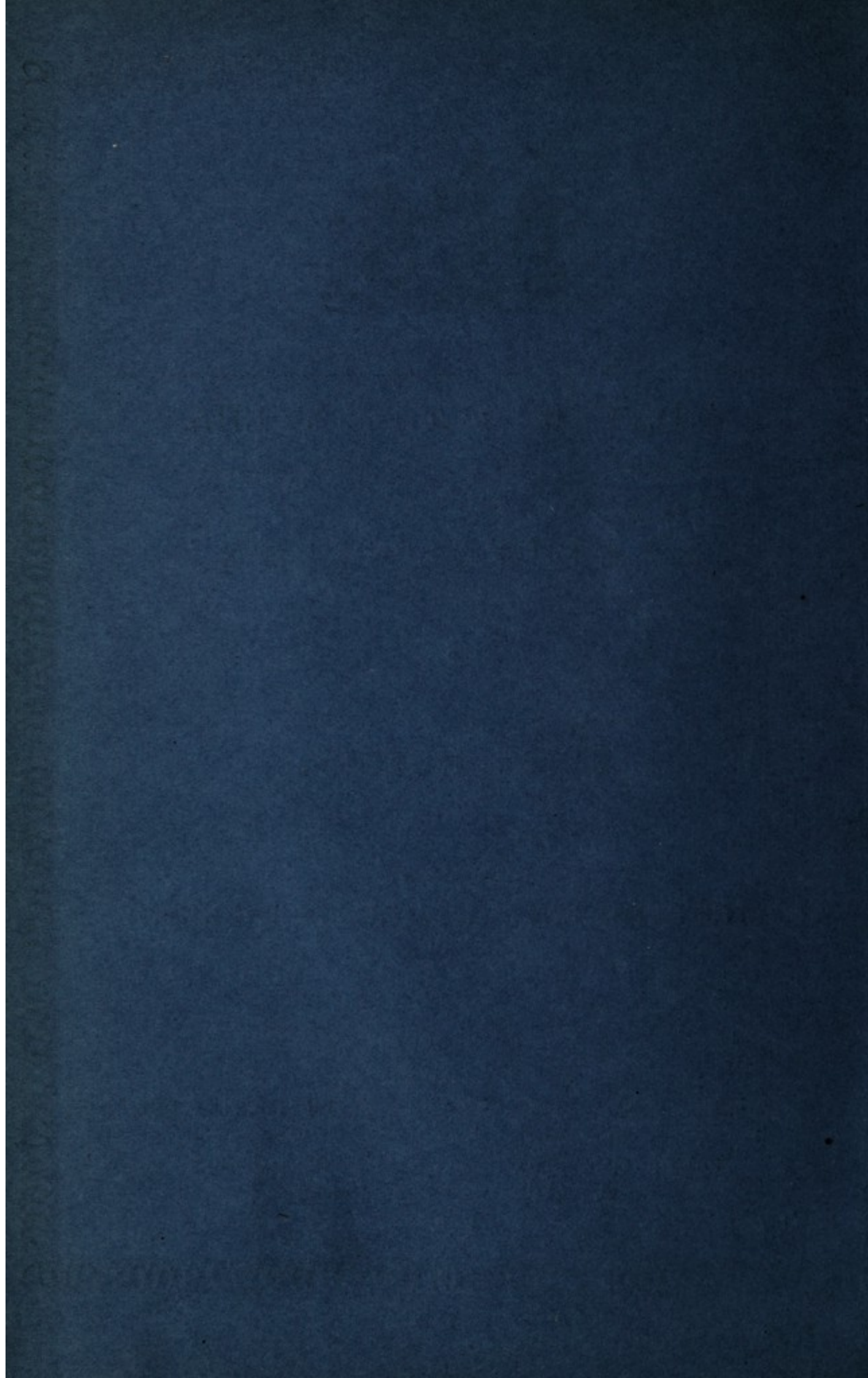
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

Price 10d.

1870.





A.D. 1870, 7th MAY. N° 1315.

Mustard and other Plasters.

LETTERS PATENT to Emile Guenin, of Henrietta Street, Covent Garden, Merchant, for the Invention of "**IMPROVEMENTS IN THE MANUFACTURE OF MUSTARD AND OTHER PLASTERS, AND IN MACHINERY FOR THE SAME.**"—A communication from abroad by Paul Rigollot, of Paris, in the Empire of France.

Sealed the 28th October 1870, and dated the 7th May 1870.

PROVISIONAL SPECIFICATION left by the said Emile Guenin at the Office of the Commissioners of Patents, with his Petition on the 7th May 1870.

I, EMILE GUENIN, of Henrietta Street, Covent Garden, Merchant,
5 do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN THE MANUFACTURE OF MUSTARD AND OTHER PLASTERS, AND IN MACHINERY FOR THE SAME,**" to be as follows :—

This Invention relates to improvements in the manufacture of mustard
plasters, such as those described in the Specification of a former Patent
10 granted to me and dated March 26th, 1867, No. 1212. I there described
the mustard flour (deprived of its oil) as being caused to adhere to the
paper or other surface on which it is applied by the aid of a solution of
india-rubber and a mixture of equal parts of sulphuret of carbon and

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

essence of petroleum. I have however found by experience that in some cases the viscous liquid obtained by the above means fails to ensure sufficient adhesion to suit the purposes of this manufacture.

According to the present improvements I substitute benzine for the sulphuret of carbon, the solution being prepared in the following 5 manner:—I place for example about $\frac{1}{2}$ lb. of Para india-rubber (this being the only kind suitable for the purpose) in a closed apparatus, and digest it at a temperature of from 80 to 90 degrees Fahrenheit in about 5 or 6 lbs. of benzine, having a density of about 17 oz. per pint. This operation is continued for twenty-four hours, after which I introduce 10 the mass into a glazed metal apparatus provided with a stirrer similar to a churn, and well agitate the contents, simultaneously with which I add in small quantities at a time about 15 lbs. of essence of petroleum. After this has been done I pass the viscous liquid obtained through a wire sieve, when it is ready for immediate use, as it loses its glutinous 15 properties by keeping and becomes unsuited for producing the adhesion of the mustard flour. Various light hydro-carburets obtained by the distillation of schists and other matters with lime and oils of naptha may also be substituted for the essence of petroleum before referred to. I also prepare a mild kind of sinapism in the following manner for 20 children and delicate or nervous persons. Blisters and other medicative plasters may also be similarly prepared by the aid of the rubber solution without affecting in the least the properties of the powders made use of. I take 40 parts of white mustard flour, 40 parts of black mustard bran reduced to a fine powder (both being deprived of their oil) and 20 parts 25 of black mustard flour. The whole being well mixed, I then prepare the plasters therewith in sheets, in the manner herein-after described. It will be understood that I do not limit myself to the precise proportions of the above ingredients, as they may be varied to suit the degree of strength desired. When prepared in the proportions indicated, the 30 plaster will have a slow progressive action requiring about twenty minutes to attain its maximum effect. It will be also understood that instead of using an inert substance, such as bran or white mustard, I may introduce into the mixture an inert powder, such as linseed, for example, but with less advantage. 35

I will now describe the machinery for the manufacture of mustard and other plasters according to this Invention. I first wind the paper or other fabric (on which the mustard and other powder is to be

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

applied) on a drum, and lead it thence into a trough disposed beneath a reservoir containing the adhesive solution, which is caused to discharge its contents on to the paper in the trough, the supply being regulated by a cock operated by a treadle or otherwise. The adhesive
5 solution may be however simply poured by hand on to the paper in the trough without the aid of a reservoir, as described. On leaving the trough the paper sheet is passed between scrapers for reducing the adhesive substance thereon to a uniform thickness, and is then caused to travel over a surface of wirework and beneath a hopper or case
10 having a perforated bottom and containing a supply of mustard flour or other substance. This hopper has a reciprocating motion imparted by means of jointed rods in connection with wheel and pinion gearing driven by a winch handle or otherwise. The mustard or other powder discharged from the hopper falls on to the endless sheet of paper, where
15 it is retained by the adhesive solution previously applied, any powder in excess falling into a receptacle placed below the wirework and forming a framing on which the gearing and hopper are mounted. The paper is caused to travel from this point on an endless web, beneath which travelling surface is disposed a steam casing forming a table for drying
20 the paper with the deposit of mustard. On arriving at a certain point the paper is conducted downwards over rollers, where it is subjected to the action of a beater for freeing the surface of any mustard flour in excess which falls on to an endless band and is conveyed to a receptacle. The paper then passes between adjustable pressing rollers for ensuring
25 the more perfect adhesion of the mustard or other powder and rendering it of a uniform thickness. The paper is then conveyed by the endless web over another steam casing to perfect the drying, and is lastly wound on a roller, and after again drying the prepared sheet or strip in a stove, it may be cut up in short lengths or pieces for use.

30 **SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Emile Guenin in the Great Seal Patent Office on the 7th November 1870.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, EMILE GUENIN, of Henrietta Street, Covent Garden, Merchant, send greeting.

35 **WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Seventh day of May, in the year of our

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

Lord One thousand eight hundred and seventy, in the thirty-third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Emile Guenin, Her special licence that I, the said Emile Guenin, my executors, administrators, and assigns, or such others as I, the said Emile Guenin, my executors, administrators, and assigns, 5 should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE MANUFACTURE OF MUSTARD AND OTHER 10 PLASTERS, AND IN MACHINERY FOR THE SAME,**" a communication to me from abroad by Paul Rigollot, of Paris, in the Empire of France, upon the condition (amongst others) that I, the said Emile Guenin, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain 15 the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Emile Guenin, do hereby declare 20 the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the Sheet of Drawings hereunto annexed, and to the letters and figures marked thereon (that is to say):— 25

This Invention relates to improvements in the manufacture of mustard plasters, such as those described in a Specification of a former Patent granted to me, and dated March 26th 1867, No. 1212. I there described the mustard flour (deprived of its oil) as being caused to adhere to the paper or other surface on which it is applied by the aid of a solution of 30 india-rubber and a mixture of equal parts of sulphuret of carbon and essence of petroleum. I have however found by experience that in some cases the viscous liquid obtained by the above means fails to ensure sufficient adhesion to suit the purposes of this manufacture.

According to the present improvements I substitute benzine for the 35 sulphuret of carbon, the solution being prepared in the following manner:—I place, for example, about $\frac{1}{2}$ lb. of Para india-rubber in

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

5 sheets (this being the only kind suitable for the purpose) previously masticated by passing between toothed rollers in a closed apparatus, and digest it at a temperature of from 80 to 90 degrees Fahrenheit in about 5 or 6 lbs. of benzine having a density of about 17 oz. per pint. This operation is continued for twenty-four hours, after which I introduce the mass into a tinned metal apparatus provided with a stirrer similar to a churn, and well agitate the contents, simultaneously with which I add in small quantities at a time about 15 lbs. of essence of petroleum. After this has been done I pass the viscous liquid obtained through a 10 wire sieve when it is ready for immediate use, as it loses its glutinous properties by keeping, and becomes unsuited for producing the adhesion of the mustard flour. Various light hydrocarburets obtained by the distillation of schists and other matters with lime and oils of naptha may also be substituted for the essence of petroleum before referred to. 15 Blisters and other medicative plasters may also be similarly prepared by the aid of the rubber solution without affecting in the least the properties of the powders made use of. I also prepare a mild kind of sinapism in the following manner for children and delicate or nervous persons:—I take 40 parts of white mustard flour, 40 parts of black 20 mustard bran reduced to a fine powder (both being deprived of their oil), and 20 parts of black mustard flour, the whole being well mixed. I then prepare the plasters therewith in sheets in the manner herein-after described. It will be understood that I do not limit myself to the precise proportions of the above ingredients, as they may be varied to 25 suit the degree of strength desired. When prepared in the proportions indicated the plaster will have a slow progressive action requiring about twenty minutes to attain its maximum effect. It will be also understood that instead of using bran or white mustard I may introduce into the mixture an inert powder, such as linseed, for example, but with less 30 advantage.

I will now describe the machinery for the manufacture of mustard and other plasters according to this Invention.

DESCRIPTION OF DRAWINGS.

35 Figure 1 is a side elevation of the machine in its most complete form; and Figure 2 is a plan of the same, whilst Figure 3 is a central longitudinal section of a simplified arrangement.

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

I first wind the paper or other fabric (on which the mustard and other powder [is to be applied] on a drum A, whence it is led beneath a roller B in a trough C, disposed beneath a reservoir D containing the adhesive solution, which is caused to discharge its contents on to the paper in the trough before it passes under roller B, the supply being 5 regulated by a cock E operated by a treadle F or otherwise. The reservoir D may however be dispensed with, as in Figure 3, the adhesive solution being simply poured by hand on to the paper in the trough; in either case the roller B serves to spread the solution over the surface of the paper. On leaving the trough the paper sheet or fabric is passed 10 between two scrapers G for reducing the adhesive substance thereon to a uniform thickness, and is then caused to travel beneath a hopper or case H, having a perforated or reticulated bottom through which the powder is sifted on to the paper, the hopper containing a supply of the mustard flour or other substance to be applied. This hopper H has a 15 vibratory or reciprocating motion imparted to it by two connecting rods I, I, each of which is pivoted at one end to the hopper H and at the other to a crank pin carried on a pinion J. These pinions J are keyed on the same shaft and are driven by the winch handle K through the train of gearing shown. The hopper H is supported and slides on 20 two parallel rods L, which pass through a sleeve bearing on the hopper, the rapidity with which the latter vibrates being regulated according to the thickness of the layer of powder required. M is an open framework of round iron, on which a number of wires are stretched lengthwise to serve as a support for the paper or fabric whilst receiving the powder, 25 and until it reaches the travelling creeper O, hereafter described. The mustard or other powder discharged from the hopper H falls on to the sheet of paper or other fabric A¹ (shown in red lines), where it is retained by the adhesive solution previously applied, any powder in excess falling into a receptacle N placed below the wirework M, and forming a 30 framing on which the gearing and hopper H are mounted. The frame or receptacle N is fitted with doors N¹, by which access may be had to the interior for removing the powder there accumulated. The paper is caused to travel from this point in the arrangement shown in Figures 1 and 2, on an endless web O, beneath which travelling surface is disposed 35 a galvanized metal casing P, forming a table in which steam is introduced by pipes P¹ for drying the solution on the paper with the deposit of mustard. Other pipes Q are provided for the exit of the steam and

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

of the water of condensation. The end of this casing P is supported on a frame on which are mounted four rollers R, R, R, R, around which the paper is conducted, the rollers being disposed as shown, so that the paper is reversed, the side which has been coated with powder
5 as before described being downwards. When in this position it is subjected to the action of a beater S. This beater is a roller furnished with whalebone blades, which when rotated strike the back of the paper or fabric to free the surface of any powder in excess. The powder so detached falls on to an endless apron T, which passes round the rollers T¹
10 and conveys the powder into a receptacle U, as shown, the paper, and with it the apron O passing between the upper and lower parts of apron T. The paper passes from rollers R between adjustable pressing rollers V, V¹, by which it is subjected to the necessary pressure for ensuring the more perfect adhesion of the mustard or other powder and
15 rendering it of a uniform thickness. The paper is then conveyed by the endless web O over another steam casing P² to perfect the drying, and is lastly wound on a roller W, and after again drying the prepared sheet or strip in a stove it may be cut up in short lengths or pieces for use. The travelling apron O passes round rollers O¹, O², being driven
20 by a winch handle applied to roller O¹, whilst the paper roller W is driven by an endless band from spur wheel K¹. Motion may also be communicated to apron T by bevel gearing from one of the rollers R. In the arrangement shown in Figure 3 the steam casing and combination of rollers are dispensed with, the apron O being wound up on
25 roller O¹ and unwound with the fabric which is laid on table X. It is then dried in a stove and cut up as before.

Having described the nature of the Invention, and the manner of performing the same, I declare that what I claim as the Invention to be protected by the herein-before in part recited Letters Patent is,—

30 1st. The improvements in the manufacture of mustard or other medicinal plasters, herein-before described.

2ndly. I claim the combination and arrangement of parts shown in Figures 1 and 2 of the Drawings, constituting a machine for the manufacture of mustard or other medicinal plasters, the whole constructed and
35 operating substantially as shown and described.

Guenin's Impts. in the Manufacture of Mustard and other Plasters.

3rdly. I also claim the simplified arrangement of machine shown and described in reference to Figure 3 of the Drawings.

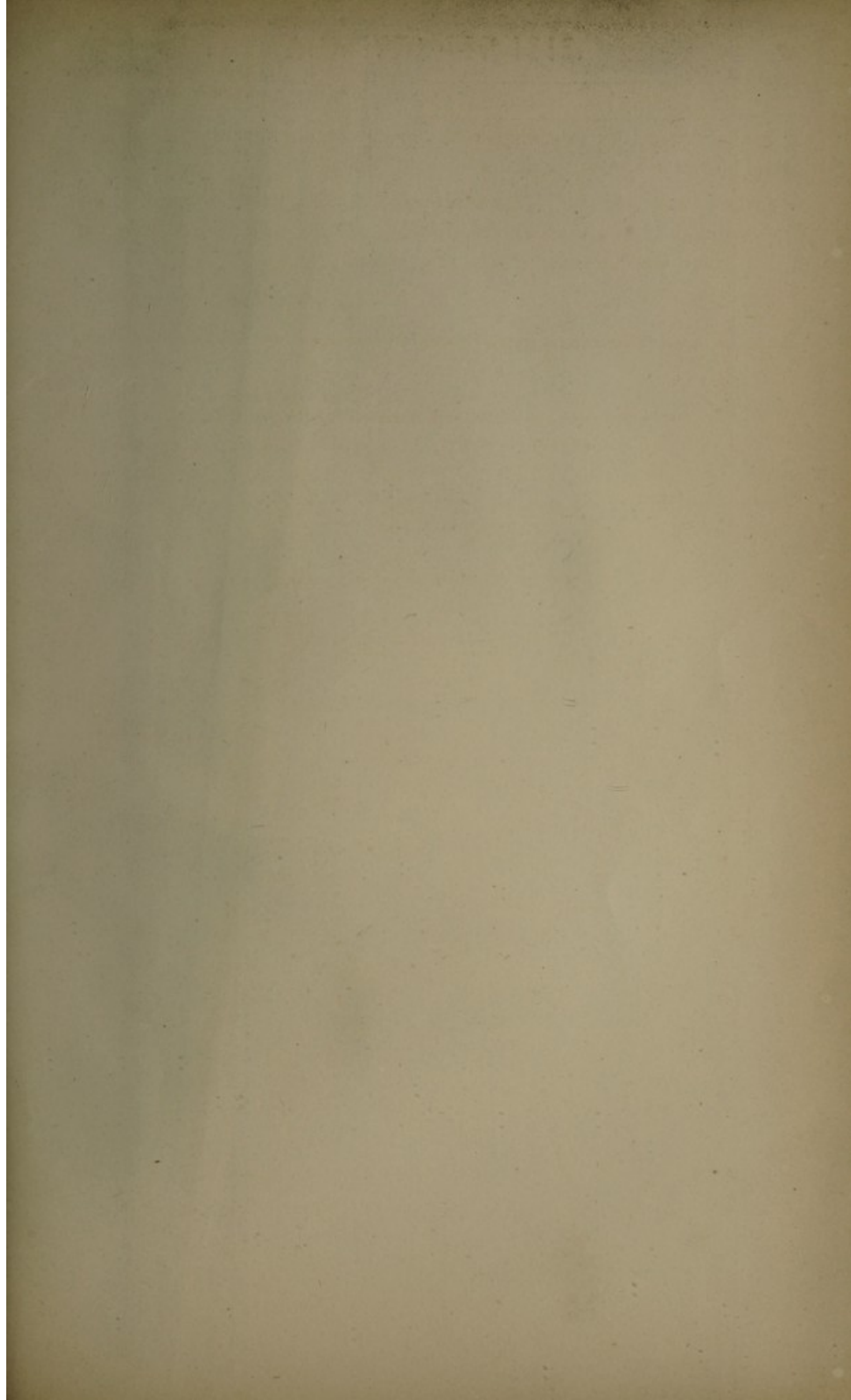
In witness whereof, I, the said Emile Guenin, have hereunto set my hand and seal, this Fourth day of November, in the year of our Lord One thousand eight hundred and seventy.

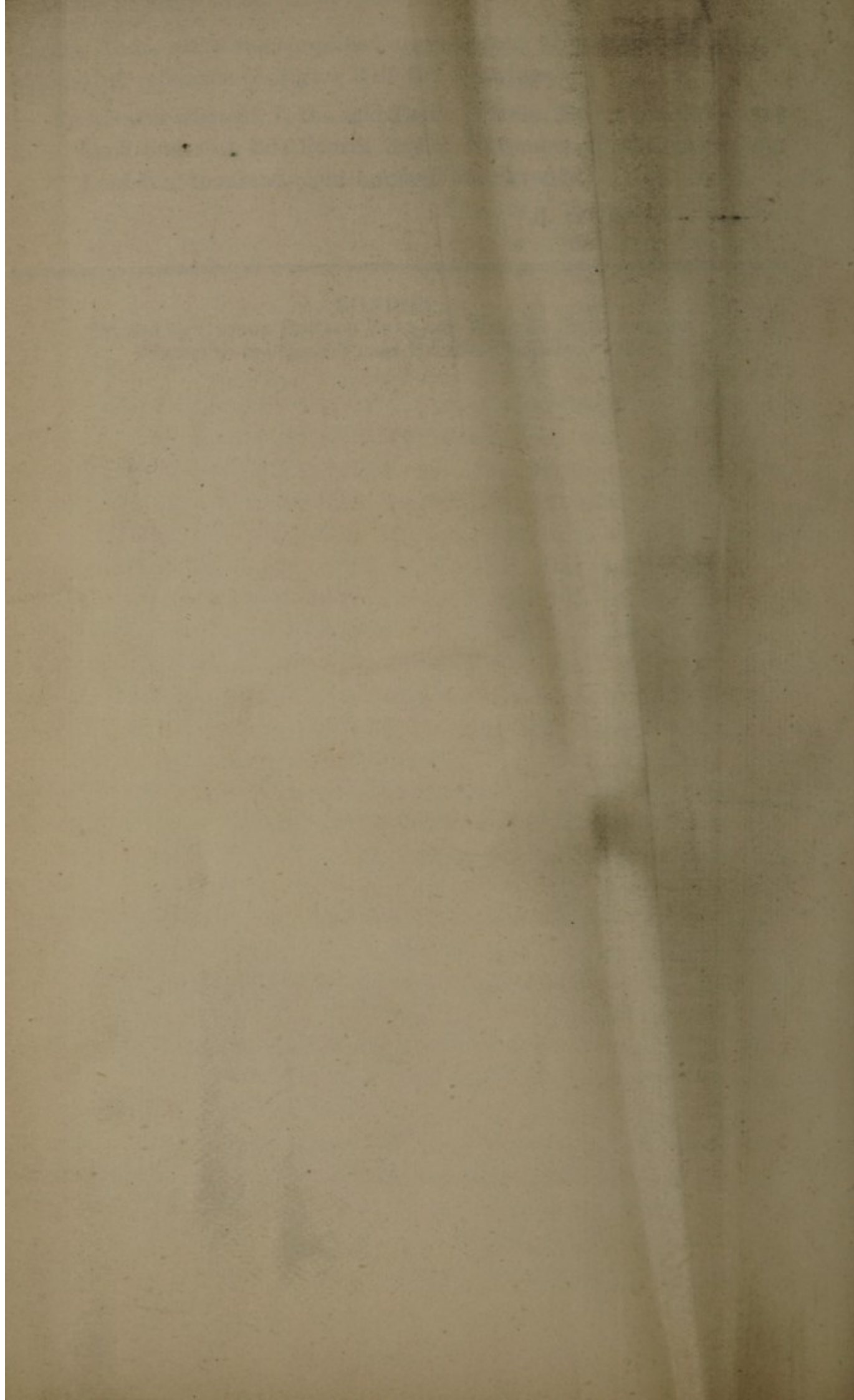
5

E. GUENIN. (L.S.)

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1870.





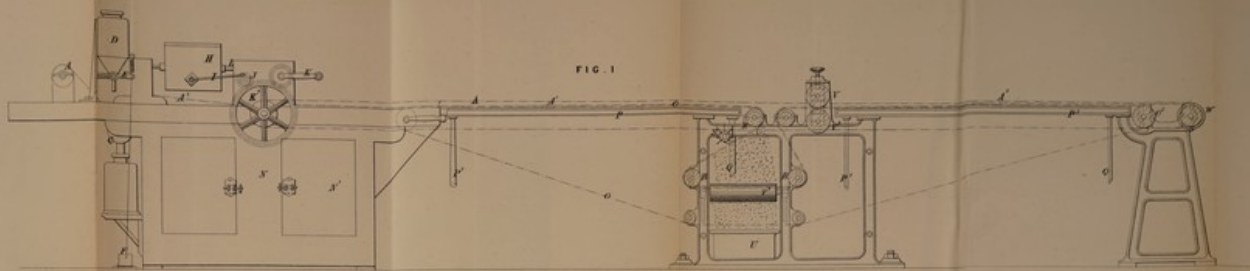


FIG. 1

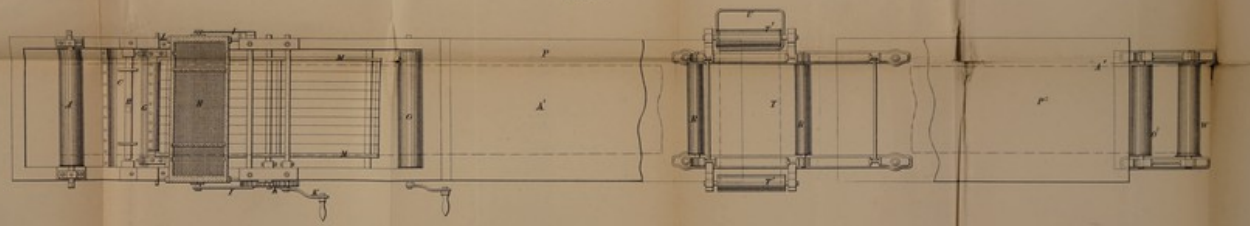


FIG. 2

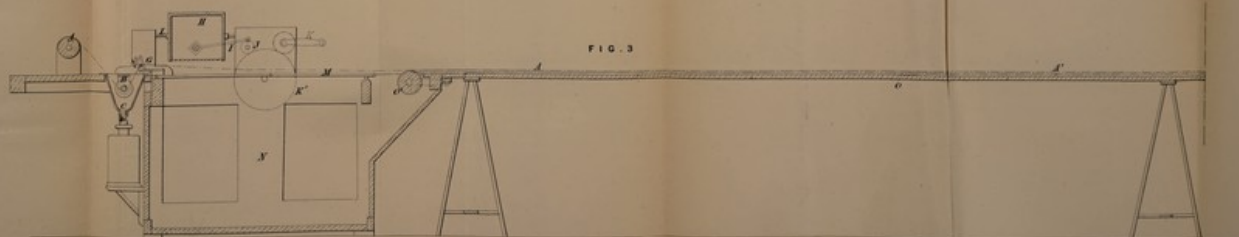


FIG. 3

The filled drawing is partly colored.

London: J. G. & Co. Printers, 15, Abchurch Lane, E.C. 4.
Printed by J. G. & Co. at the City Press, 15, Abchurch Lane, E.C. 4.

Drawn and Etched by M. J. & S.

