Specification of Robert Jackson : protective coverings to be used in cutaneous diseases.

Contributors

Jackson, Robert.

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SPECIFICATION

OF

ROBERT JACKSON.

PROTECTIVE COVERINGS TO BE USED IN CUTANEOUS DISEASES.

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Protective Coverings to be used in Cutaneous Diseases.

LETTERS PATENT to Robert Jackson, of Glasgow, in the County of Lanark, North Britain, Gentleman, for the Invention of "IMPROVEMENTS IN PROTECTING CERTAIN PARTS OF THE BODY FROM DISFIGUREMENT BY CUTANEOUS DISEASES."

Sealed the 1st January 1858, and dated the 28th July 1857.

PROVISIONAL SPECIFICATION left by the said Robert Jackson at the Office of the Commissioners of Patents, with his Petition, on the 28th July 1857.

I, ROBERT JACKSON, of Glasgow, in the County of Lanark, North Britain, Gentleman, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN PROTECTING CERTAIN PARTS OF THE BODY FROM DISFIGUREMENT BY CUTANEOUS DISEASES," to be as follows, that is to say:—

This Invention relates to the application and use of protective coverings for the face, arms, and hands, or exposed parts of the human body, to prevent these parts from being marked or disfigured by small-pox or other similar cutaneous diseases. The appliance for preventing the permanent marks of the disease from being left on the face consists of a hood or helmet made of a soft air-proof material. This hood envelopes or covers the whole of the head, face, and front part of the neck, and it is made to fit closely round the back of the neck and under the chin by means of an elastic band. A tube of vulcanized india-rubber or other yielding material having a wire passed through it, so as to retain its shape when bent, is made to fit closely round the nostrils and

mouth. The moulded tube is sewn to the face part of the hood, and suitable apertures are made in the fabric, so that the functions of the nose and mouth may not be impeded. This part of the hood is covered externally by a flap, which is kept down, except when the patient is taking food or medicine. A small aperture is made in the flap of the hood at the part opposite the nostrils, in order to allow of the free access of air for breathing. The material of which the hood is made is pulled in round the part where the elastic band is inserted, this admits of the opening being distended, so that the hood may be easily passed over the head. Protective coverings of a similar kind are also made for the arms and hands if the eruptions are numerous on those parts. During the continuance of the disease the patient is to wear the hood or other coverings night and day, so as to prevent the access of air and light to the surface of the skin, by which means the protected part will not retain any marks of the disease after the recovery of the patient.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Robert Jackson in the Great Seal Patent Office on the 28th January 1858.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ROBERT JACKSON, of Glasgow, in the County of Lanark, North Britain, Gentleman, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-eighth day of July, in the year of our Lord One thousand eight hundred and fifty-seven, in the twenty-first year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Robert Jackson, Her special license that I, the said Robert Jackson, my executors, administrators, and assigns, or such others as I, the said Robert Jackson, my executors, administrators, or assigns, 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 PROTECTING CERTAIN PARTS OF THE BODY FROM DISFIGUREMENT BY CUTANEOUS DISEASES," upon the condition (amongst others) that I, the said Robert Jackson, by an instrument in writing under my hand and seal, should particularly describe and ascertain 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 Robert Jackson, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, that is to say:—

My said Invention relates to the application and use of protective coverings for the face, arms, and hands, or exposed parts of the human body, to prevent these parts from being marked or disfigured by small-pox or other similar cutaneous diseases. The appliance for preventing the permanent marks of the disease from being left on the face consists of a hood or helmet made of a soft air-proof material. This hood envelopes or covers the whole of the head, face, and front part of the neck, and it is made to fit closely round the back of the neck and under the chin by means of an elastic band. A tube of vulcanized india-rubber or other yielding material, having a wire passed through it so as to retain its shape when bent, is made to fit closely round the nostrils and mouth. The moulded tube is sewn to the face part of the hood, and suitable apertures are made in the fabric so that the functions of the nose and mouth may not be impeded. This part of the hood is covered externally by a flap, which is kept down, except when the patient is taking food or medicine. A small aperture is made in the flap of the hood at the part opposite the nostrils, in order to allow of the free access of air for breathing. The material of which the hood is made is fulled in round the part where the elastic band is inserted; this admits of the opening being distended so that the hood may be easily passed over the head. Protective coverings of a similar kind are also made for the arms and hands, if the eruptions are numerous on these parts. During the continuance of the disease the patient is to wear the hood or other coverings night and day, so as to prevent the access of air and light to the surface of the skin, by which means the protected parts will not retain any marks of the disease after the recovery of the patient.

And in order that my said Invention may be properly understood, I shall now proceed to describe in detail one modification under which my improvements may be judiciously carried out in practice.

The essential feature of my Invention is the prevention of the disfigurement which arises from the scars left on the skin after recovery from certain cutaneous diseases. It is well known that few persons who are attacked with small-pox or variola recover from the disease without having the face or hands imprinted with the marks or "pits" left by the eruption upon the skin. From long and careful attention to the subject, I have observed that those parts of

the bodies of persons who are thus attacked which are shielded or protected to a great extent from the access and influence of light and air are not "pitted" or marked after the patients' recovery. In carrying out my Invention practically, I have covered the faces of the patients so as to prevent as far as possible the access of light and air thereto; this covering has in each case been kept on during the career of the disease; due attention being meanwhile paid to the keeping of the suppurating parts perfectly clean by frequent and careful sponging with pure water and soap. In cases treated in this manner, where the surface of the diseased part is kept moist, the suppuration is assisted and facilitated, the disease more rapidly assumes a milder form, and upon the patient's recovery the skin is entirely free from the disfiguring blemishes so commonly met with under the ordinary medical treatment. The covering I prefer for protecting the face of the patient from the influence of air and light is a hood, so contrived as to cover the whole of the head and neck, but without interfering with respiration or the taking of food. That portion of the hood which covers the face consists, by preference, of a mask of gutta percha, but any other yielding material of a non-porous or impermeable nature may be used for the purpose. The gutta percha I prefer to use is made in the form of thin sheets, resembling silk. A piece of this or other suitable material is cut of an oval form, corresponding to the size of the face; two oval apertures are cut in it opposite the position of the eyes, a triangular opening at the part where the nose projects, and an opening corresponding to the mouth. Two pieces of glass or thin plates of mica or other transparent substance are cut to a shape corresponding to the eyes; these pieces are cemented to the eye openings of the mask with a solution of gutta percha, the cemented parts being covered by slips of the sheet gutta percha, which serve to retain the pieces of glass or mica firmly in their respective places. Or, instead of this mode of securing the pieces of glass or mica, they may be fastened to the mask by sewing suitably shaped slips of the sheet gutta percha around the edges of the eye glasses or mica, when these have been placed in their proper position over the openings in the mask. When these eye glasses are duly arranged, they offer but little impediment to the free use of the patient's eyesight. A triangularly-shaped piece of sheet gutta percha conformable to the shape of the nose is cemented, sewn, or otherwise fastened to the central opening in the mask; the lower part of this nosepiece is made with openings corresponding to the position of the nostrils. Around the opening for the mouth a broad oval-shaped piece of the gutta percha is cemented, sewn, or otherwise attached; this secondary piece serves to strengthen this part of the mask, and admits of the motion

of the wearer's lower jaw, without tearing the thin gutta percha at the angles of the mouth opening. That part of the hood which covers the head is made of silk, cotton, or other suitable material; at the lower part is a string which runs loosely in a hem, so that the bottom of the hood can be drawn closely round the neck of the patient. Instead of fastening the lower part of the hood with a string, a band of vulcanized india-rubber or other elastic material may be attached to the neck part of the hood, so that by stretching this elastic band the hood may be readily passed over the patient's head; the contraction of the band securing it to the neck without further trouble. It is of importance that the mask or face portion of these protective hoods should fit as accurately as the nature of the material of which it is composed will admit. To this end the masks may be conveniently made upon plaster moulds or lay figures of different sizes, approaching as nearly as possible to the average proportions of the human features. In some instances I prefer to insert a thin cord or band of vulcanized india-rubber round the triangular opening where the nose projects; this is done in order to make that part of the mask fit closely to the face, and thereby prevent the admission of the expired or atmospheric air behind the mask. The margin of the opening which fits the lips may also in like manner be fitted with an elastic cord or band, so that the opening may expand or contract in accordance with the motion of the lips. If it be necessary in the treatment of the case to exclude the light from the patient, I prefer to do this by sewing or otherwise attaching an oval-shaped piece of cotton, silk, or other suitable fabric to the upper edge or margin of the mask. This protective covering is sewn about half way round its upper part, or rather less, so that the lower portion hangs free over the chin part of the mask; this admits of the lower part being raised out of the way as required. The colour I prefer to use for this protective covering is green, and the covering may be made of one or more thicknesses of fabric, according to its fineness or substance. With suitable modifications, the hands, arms, or other parts of the body may be protected during the continuance of cutaneous diseases by means of gutta percha or other coverings which are in like manner impervious to air. In treating small-pox or other cutaneous diseases according to this system, the hood or protective covering is to be worn by the patient night and day, removing it only for the purpose of cleansing the surface of the protected parts, the frequent sponging and cleansing of which is of the first importance in promoting the recovery of the patient.

By the timely and judicious use of the means herein-before described persons may avoid the disfiguration usually consequent upon an attack of variola or other similar disease.

Jackson's Improvements in Protective Coverings to be used in Cutaneous Diseases.

Having now described and particularly ascertained the nature of my said Invention, and the manner in which the same is or may be used or carried into effect, I may observe, in conclusion, that I do not confine or restrict myself to the precise details or arrangements which I have had occasion to describe or refer to, as many variations may be made therefrom without deviating from the principles or main features of my Invention; but what I consid to be novel and original, and therefore claim as the Invention secured to me by the herein-before in part recited Letters Patent, is,—

First, the system or mode of treating variola, or small-pox, or other cutaneous diseases of a like character, in which the affected parts are protected from the influence of the atmosphere by means of hoods or other protective coverings, as herein-before described.

Second, the system or mode of arranging and making hoods or other coverings for the purpose of protecting the faces, hands, or other usually exposed parts of persons suffering from small-pox or other severe cutaneous diseases, as herein-before described.

Third, the system or mode of preventing the injurious effects of air and light upon the face, hands, or other exposed parts of the human body during the continuous of eruptive diseases by covering or enclosing such parts with hoods, coverings, or other protective envelopes, as herein-before described.

In witness whereof, I, the said Robert Jackson, have hereunto set my hand and seal, this Twenty-sixth day of January, One thousand eight hundred and fifty-eight.

ROBERT JACKSON. (L.S.)

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