Specification of William Hibbert : respirator.

A.D. 1866, 3rd FEBRUARY. N° 339.

SPECIFICATION

OF

WILLIAM HIBBERT.

RESPIRATOR.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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1866.

A D. 1866, 3rd FEBRUARY. N° 339.

Respirator.

(*This Invention received Provisional Protection only.*)

PROVISIONAL SPECIFICATION left by William Hibbert at the Office of the Commissioners of Patents, with his Petition, on the 3rd February 1866.

I, WILLIAM HIBBERT, of the City of Manchester, in the County of Lancaster, do hereby declare the nature of the said Invention for "AN IMPROVED MECHANICAL VALVE RESPIRATOR," to be as follows:—

This Invention relates particularly to preventing the spread and accelerating the cure of rinderpest and other infectious diseases, to which animals or human beings are subject. This apparatus will secure the use of pure, medicated, or disinfected air for breathing, and is supplied direct to, and the respired air is conducted direct from the respiratory organs to any distance from the patient or hospital. As a disinfectant for filtering and purifying the air, I use chloride of magnesium, bromine, and chloride of zinc, either separately or in combination, hot or cold; if used in combination I take chloride of magnesium in solution at about 56° Twaddell, add about two ounces of bromine to the gallon of the said solution, and about ten to twenty per cent. of chloride of zinc, by the use of which in combination with the valve respirator complete isolation from infectious contagion is effected. This auxiliary lung respirator is made of strong leather or other suitable material and of any suitable conformation to suit animals or human beings. In the muzzle or

pad for the mouth or nose I punch two holes sufficiently large to ensure easy breathing. I make two valves with spreading flanges for fastening in between the folds of leather or material round the breathing holes, and with coupling worm or screw for attaching thereto tubing of any required length. One of the valve clacks is hinged to open inwards towards the mouth, the other to open outwards from the mouth, the air supply valve being opened by inhalation and closed by respiration; the other or outlet valve is opened by respiration and closed by inhalation. A bag or receiver is fastened under the end of the muzzle to receive the saliva, with a screw-capped outlet for its removal. Leather or india-rubber tubes are coupled to the supply and outlet valves, the supply tube being attached to the reserve chamber of medicated and disinfected atmospheric air; or I lengthen the tubes and insert disinfecting filters by which pure air is conducted direct to the mouth or lungs, and the respired air conducted direct from the mouth to any required distance from the shippon or hospital. For the purposes of safe removal or perambulation I couple to the valves short tubes with disinfecting filters inserted therein, one for the prevention of receiving the infected air, and the other to prevent its communicating infection. For cattle feeding I partition off the front part of the stall, with openings to admit the head, which openings are enclosed by air-proof or disinfected cloth surrounding the neck of the animal, the purified air being supplied by a down draught, and taken away by an up draught. This is partial isolation and will answer instead of the muzzle for ordinary precautions. My method of preventing contagion being communicated or received through the medium of the skin is by clothing, surrounding, or bandaging the animal with cloth or other suitable material impregnated with the above-named medicated and disinfecting solution or solutions, or impregnating the skin. If small doses of chloride of magnesium and bromine were occasionally given to healthy animals, it would lessen the violence of an attack of rinderpest or other contagious disease, if not throw off the influence altogether. My general adaptation of the auxiliary lung respirator consists in varying the conformation and material to suit the comfort, convenience, and appearance of human beings, the principle of the supply and outlet valves being the same as that for animals with the addition of one constructed upon the same principle, which I either attach to the pad or mouth-piece separately, or insert it inside the nose, or in combination with the mouth respirator. Medicating and disinfecting filters are inserted in the supply tube, whether for the mouth or nose, the latter forming an important desideratum to medical men and others visiting hospitals or other places infected by the presence of decaying or decomposed animal or vegetable matter. Cloths impregnated with the

aforesaid disinfecting and medicating solutions make painless bandages for hospitals, as they keep cool and moist and do not adhere to the hair or skin of the limb or other parts of the body, and consequently tend to keep down inflamation, also ulcers and running sores are disinfected by being bathed with a weak solution of the same. This solution makes medicated, tepid, or cold baths equal to the continental baths which cool, refresh and sweeten the skin.

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1866.