

A new serum and the method of preparing the same / [William Philipps Dunbar].

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PROVISIONAL SPECIFICATION.

"A New Serum and the Method of Preparing the same"

I, Professor WILLIAM PHILIPPS DUNBAR, of Jungiusstrasse, Hamburg, in the Empire of Germany, Doctor of Medicine and Director of the Hygienic Institute of Hamburg, do hereby declare the nature of this invention to be as follows:—

This invention relates to the preparation of serums and is based upon the fact that the pollen grains of certain plants have the property of inducing symptoms of illness in many persons.

The invention consists in causing the incorporation of pollen grains or constituents of the same in animals and thereby introducing substances into the blood of these animals which are adapted to remove or nullify the prejudicial action of the pollen grains. Thus, for example, the inventor has succeeded, by means of the pollen grains of grasses (gramineae) in inducing in certain persons the symptoms of what is called hay-fever and in subsequently removing these symptoms by means of a serum obtained from the blood of animals which have been inoculated with the pollen grains of gramineae.

Dated this 8th day of October 1902.

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COMPLETE SPECIFICATION.

"A New Serum and the Method of Preparing the same"

I, Professor WILLIAM PHILIPPS DUNBAR, of Jungiusstrasse, Hamburg, in the Empire of Germany, Doctor of Medicine and Director of the Hygienic Institute of Hamburg, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the preparation of serums and is based upon the fact that the pollen grains of certain plants have the property of inducing symptoms of illness in many persons; so, for instance, it has been ascertained by Elliotson (London Med. Gazette 1831, page 411) and Blackley (Experimental Researches on the Causes and Nature of Catarrhus Aestivus, London 1873, ref: American Journal of Medical Science 67, page 181) that the so-called hay-fever or summer-

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catarrh which was first described by John Bostock (Medico-chirurg, Transactions, Vol. X part 1 page 161) is caused by pollen grains.

My invention now has for its object to remove the symptoms of illness caused by the pollen grains of plants and I attain this object by a serum which I produce from the blood of animals in which pollen grains or constituents of the same have been incorporated. The invention therefore consists in incorporating pollen grains or constituents of the same in animals and thereby causing the production of substances in the blood of these animals which are adapted to remove or nullify the prejudicial action of the pollen grains. Thus, for example, I have succeeded, by means of the pollen grains of grasses (gramineae) or constituents thereof in inducing in certain persons the symptoms of hay-fever and, moreover, in undoubtedly proving that the hay-fever is caused by a poison (toxin) which dissolves in the lachrymal secretions, the nasal mucus, the saliva, blood-serum &c. If however, animals are inoculated with these microscopic pollen grains or their constituents, a serum may be obtained from the blood of these animals, by which, when applied to the mucous membrane or subcutaneously injected, the symptoms of the hay-fever (summer- or autumn-catarrh) in persons affected therewith are shortly removed or nullified. As experiments have proved, the serum of the blood of animals inoculated with the pollen grains of grasses or their constituents, contains an antitoxin, which prevents or nullifies the injurious action of the said toxin.

The mode of obtaining the antitoxin-serum may be explained by way of the following example:—

The pollen grains of gramineae such as rye, are triturated and extracted by a suitable solvent of the pollen-toxin. The extract, thus obtained, is then in small doses subcutaneously or otherwise injected into animals, for instance, rabbits, goats, horses, and this injection repeated at intervals until it is proved by a test of blood drawn from the animal, that the serum obtained therefrom is enabled to nullify the action of the pollen-toxin. The animal is then in the state in which a greater quantity of blood may be drawn from the same for the preparation of the antitoxic serum, which may be obtained from the blood by separating therefrom the clot in a suitable apparatus by centrifugal force. The serum thus obtained may be applied, as aforesaid to diseased persons either in the liquid state or as a powder in which latter case the serum needs to be evaporated to dryness.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. The process of preparing serums which consists in incorporating pollen grains of plants in the blood of animals, drawing a certain quantity of blood from the same and separating the serum from the clot, substantially as and for the purpose set forth.
2. The process of preparing serums, which consists in incorporating the illness-inducing constituents of pollen grains of plants in the blood of animals, drawing a certain quantity of blood from the same and separating the serum from the clot, substantially as and for the purpose set forth.
3. As a new product of manufacture, the herein-described serum, substantially as and for the purpose set forth.

Dated this 8th day of July, 1903.

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