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## THE BIOLOGIC ASPECTS OF HAY FEVER AND ASTHMA<sup>1</sup>

THE selection of hay fever and bronchial asthma for the exposition of biologic relationships may appear curious, and yet few of the many ills to which we may fall victims are as clearly dependent upon pure biological reactions. The group of so-called allergic diseases in which the biologic factors are quite similar comprise such apparently unrelated conditions as asthma, hay fever, urticaria or the hives, eczema, some cases of migraine or sick headache, of colitis and certain other less clearly defined conditions. For the sake of brevity we will devote our attention only to the first two states which are the most clearly understood.

Hay fever scarcely requires description, since the condition is so widespread that nearly every one has had some acquaintance with it. It has been fairly accurately estimated that 1 per cent. of the entire population of the United States suffers from one form or another of hay fever.

At certain times of the year, particularly the spring or early fall, some persons will experience attacks of sneezing with profuse watery discharge from the nose, irritation of the eyes and of the throat which will persist in varying intensity for weeks or months. Usually these attacks recur at the same time each year, sometimes several times during the year and occasionally at quite irregular intervals. Bronchial asthma, like hay fever, usually occurs in periodic attacks, sometimes seasonal in their distribution, separated by intervals of complete or nearly complete freedom from symptoms. The victim would describe asthma as a condition in which, beginning usually with a fit of coughing, he will rapidly become choked up, finding it most difficult to breathe either in or out. Breathing becomes labored, noisy, wheezy, the respirations become rapid, developing in a relatively short time to a state of actual air hunger which persists for a variable time. Relief comes gradually with the onset of an easier cough in which more phlegm is raised and the breathing gradually returns to normal. In the acute stages the cough is non-productive. As the patient has it, if he could only raise the mucus he would feel better, and when at last he does do so he rapidly improves.

<sup>1</sup> Invitation address before the Virginia Academy of Science, at the College of William and Mary, Williamsburg, Va., May 4, 1928.

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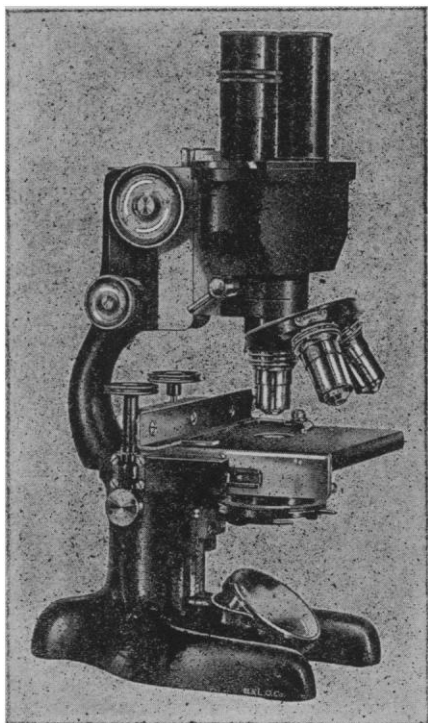
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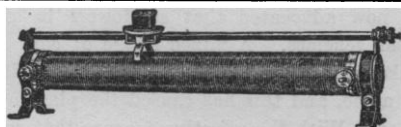
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