and choose a suitable landing place but it is dangerous at small distances from the ground and especially shortly after starting. Among 58 accidents collected by Graeme Anderson, 2 occurred in the air and 46 in landing, which is the *bete noir* of aviator students. In general accidents are due to an error in judgment or to a defect of binocular vision on the part of the pilot. Nervous fatigue, especially and quickly developed in the inexperienced, is the principal cause of "losing one's head." Thus short flights should always be enjoined at the beginning.

To provide immediate assistance in case of accident, every camp should have an observer who communicates by telephone to the surgeon on duty who has an automobile in readiness with a fully equipped surgical and medical chest. A very practical addition to this is a tool kit including cutting pincers, hammer, fire extinguisher, etc. The camp is divided into sectors with established boundaries, in order to locate accidents without delay.

Mackenzie, G. W. SYPHILIS OF THE INNER EAR AND EIGHTH NERVE.
[Am. Jour. Syph., Jan., 1918.]

Earlier investigators in this province, Mackenzie says, neglected the findings in the nerve, though it seems that the syphilitic changes occurring in the middle ear are due to the extension of the syphilitic process from the meninges or nerve via the nerve or blood vessels. Very few cases are reported as invaded from the tympanic side and then it was doubtful whether a secondary pyogenic infection was not added to a syphilitic process or found fruitful soil in a syphilitic condition. Very little is known of the deafness which appears very late in the course of syphilis. From the present knowledge based upon clinical findings and pathological studies of *tabes* and *paresis* it can probably be accepted that *parasyphilis* is accompanied by a primary atrophy of the eighth as well as the second nerve, that this results from a preëxisting *low grade* syphilitic meningitis and that eventually the *pia mater* contracts and by squeezing the nerve causes its death. More pronounced syphilitic meningitis causes also a neuritis and there may be later a secondary atrophy. *Parasyphilitic* involvement of the central nervous system is therefore the result of a low-grade meningitis present in the active syphilitic stage.

A negative Wassermann is of but little value in these tests. More dependence is placed upon local evidences of syphilis, as in teeth and eyes, loss of deep reflexes, etc., but chiefly upon the therapeutic test, *i. e.*, toleration of mercury and KI with marked improvement on their administration. Functional hearing tests must supplement the often meager history and the otoscopic tests, which latter are misleading both as to location and pathologic character of the lesion. Otoscopic evidences of middle ear catarrh are very common and may mask syphilitic conditions. The syphilitic are more prone to this affection than are others and moreover a catarrhal condition tends to excite a syphilitic

process in the region of the middle ear. Without careful functional tests, even with a striking otoscopic picture in the middle ear, the affection of the inner ear and nerve may be overlooked. The past history should not be neglected nor the Wassermann test and where warranted a careful examination of the spinal fluid from every point. Chief reliance is however upon well recognized and acceptable tests of the two functions of the inner ear, hearing and equilibration. These and their application the author then describes in considerable detail. The following findings speak strongly for syphilis: Bilateral diminution or complete loss of hearing due to a lesion of the perceiving apparatus detected by careful functional fork tests; bilateral diminution or loss of the vestibular function detected by turning, caloric and galvanic tests. Combination of the bilateral diminution or complete loss of both of these functions may be considered syphilitic as well as pronounced loss of function on only one side with but moderate diminution on the other. The hearing function as a rule suffers more than the vestibular function. The author then gives in detail the report of several such examinations. The first was a case of pronounced right inner ear and eighth nerve syphilitic involvement, in the late secondary or early tertiary stage of syphilis. The second showed a multiple neuritis involving the seventh nerve on the right side and both divisions of the eighth on both sides. There was here marked improvement through anti-syphilitic treatment. In the third case the eighth nerve did not become involved until the patient was past thirty, though the evidences were of congenital syphilis. The next case presented evidences of hereditary lues, but did not manifest itself in the ears until the forty-fourth year. Here as elsewhere the vestibular function was less involved than the hearing and responded more to treatment. Moreover there was marked improvement in both functions under KI treatment, though this was begun three and one half years after the onset of the inner ear difficulty. In this and the former case the Wassermann was negative. Middle ear catarrh had apparently been a predisposing factor here to the syphilitic process.

Lemere, H. R. LABYRINTH STIMULATION. [J. A. M. A., Sept. 14, 1918.]

The author suggests that in the study of the application of the physiology and function of the semicircular canals, in the present interest aroused by the aviation tests, there is one method of approach that has not been used, and yet offers a promising field for investigation. That is a more careful study of the actual anatomic position of these canals and their relations to the movements of the head on the body, together with the conjugate movements of the eye. To simplify matters, he says, this subject should be considered mainly in the erect position of the body. He goes over the anatomy of the canals and the mechanics of the motions of the eyes in their relation to each other, and finds that there is a direct relationship between stimulation of the following canals