

expiratory muscle are registered simultaneously, stimulation of the central end of the vagus brings out an instructive picture. Throughout the period of stimulation the thorax remains quiescent in an inspiratory position, while the expiratory muscle remains completely relaxed.

This phenomenon is another instance of the general law of "contrary innervation" (Meltzer), or "reciprocal innervation" (Sherrington). Inhibition of the expiratory group of muscles during inspiration was suggested by one of us over thirty years ago.¹

68 (1132)

A demonstration of the effects of some lesions of the nervous system.

By J. GORDON WILSON and F. H. PIKE.

[From the Department of Otology, Northwestern University, and the Department of Physiology, Columbia University.]

The effects of the lesions were shown in cinematograph films of three different animals. A rabbit which was brought into the laboratory some months ago presented constant marked torsion of the head to the *left*. There was no nystagmus, but merely a constant deviation of the eyes. The animal could move about on rough surfaces if it went slowly and carefully, or if its left side was supported by the side of the cage. If put on a smooth surface with the left side unsupported, any attempt on the part of the animal to move was followed by rolling movements to the left, about the long axis of the body. If no obstacle was placed in its way, the animal might roll for several yards before regaining its upright position. The animal was said to be about eight months old at the time it was brought into the laboratory, and to have been in the same condition from birth. The only gross changes visible at autopsy were in the left otic labyrinth. The nature of these changes was not determined by inspection. The histological report will be presented later. One interesting point in the deportment of the rabbit was its lack of compensation for the loss

¹ *Arch. für Physiol.* (DuBois-Reymond's) 1883, 216.

of the labyrinth, as compared with the deportment of cats or dogs after loss of one labyrinth.

Two cats were subjected to experimental ablation of the vermis and left lateral lobe of the cerebellum. The eye movements were different from those following labyrinthine lesions. One marked motor defect was the trembling and uncertainty of movement of the head when attempting to take food. Two different stages in recovery from the effects of the cerebellar lesion were shown, in one of the cats, with the gradual amelioration of the symptoms in the second stage taken at an interval of about one month after the first.

The film of the rabbit was made through the courtesy of Pathe Freres. The films of the cats were paid for out of the Patton Fund of Northwestern University Medical School.

69 (1133).

A separation of serum into coagulative and non-coagulative fractions.

By **ALFRED F. HESS.**

[From the Research Laboratory, Department of Health, New York City.]

As is well known, it is possible, by means of salting out with appropriate percentages of ammonium sulphate or sodium chloride, to almost entirely separate the albumin from the globulin and the pseudo-globulin of serum. This has been done in the preparation of diphtheria antitoxin, where it has been found that the antitoxin is closely associated with the pseudo-globulin fraction.

A similar procedure was carried out to determine the association of the coagulative principles of the serum. It was found that in human plasma as well as in horse plasma, these substances are linked with the euglobulin fraction. If these three proteid fractions of the serum are separated and dissolved in normal salt solution and added to plasma (with the addition of a small amount of calcium) the euglobulin will markedly hasten coagulation, whereas the two other fractions will have either no effect or a slightly inhibitory action. It is possible in this way to prepare a