offered ten shillings a week was refused, and twelve shillings exclusive of extras accepted. Had not Dr. Lawson espoused the cause of the helpless inmate with a warmth, and at the expense of much work and personal inconvenience, we would still be overhung by the crowd. To Dr. Lawson we are indebted beyond a mere expression thereof, insomuch as he not only scoured our own district, but including the county of Haddington, was enabled to provide us from personal examination and inspection with a list of suitable and willing guardians; this not only relieved us of all whom we judged staid enough at present to warrant their outgoing, but left us a reserve to fall back upon when others of a like kind came to be similarly dealt with."

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2. *German Retrospect.*

By William W. Ireland.

Tuczek on the Pathological Anatomy of General Paralysis.

Our readers can scarcely have forgotten Dr. Franz Tuczek's studies upon Ergotism which were reported in the German Retrospect of the Journal (October, 1883, p. 426). This treatise upon the Pathology of General Paralysis ("Beiträge zur Pathologischen Anatomie und zur Pathologie der Dementia Paralytica." Berlin, 1884) shows the same power of careful observation rewarded by important results.

Exner's new method of demonstrating the tissues of the brain with the aid of the preparations of osmium and ammonia had disclosed the great abundance of the nerve fibres in the cortex cerebri. In the superficial layers these fibres were found to lie horizontally, in the deeper layers to descend vertically. They were found to vary much in calibre, to be largest in the paracentral lobe, and finest in the basal ganglia.

Tuczek finds that by the use of dyes, such as fuchsic acid, methyl blue, hæmatoxilin, and ferricyanide of potassium, a differential distinction can be brought out between the nerve fibres in the grey and white substances of the brain. Sahli has indicated the existence of an "erythrophile" and "cyanophile" substance in different parts of the nerve centres, from the varying way they receive colour from fuchsic acid and methyl blue. He has thus been led to deny the existence of naked axis-cylinders. It having been assumed that the peculiar functions of the cerebral cortex lay in the nerve cells, scarcely any attention has been paid to the condition of the nerve fibres in degeneration of the brain. Availing himself of Exner's new method, Dr. Tuczek has studied the lesions in thirteen males and four females who died of general paralysis, paying full attention to the condition of the nerve fibres. These seventeen cases are described

at length, the symptoms, progress of the disease, as well as the alterations found after death, being minutely recorded. The result of the whole study is that in general paralysis the primary alteration was found to be a disappearance of "the cortical association fibres" in the frontal lobes. This wasting, as the disease progresses, goes deeper and deeper, and diffuses itself over the whole brain. The disappearance of the nerve fibres is well illustrated by six lithographic diagrams, showing the advancing stages of degeneration. It is especially the finest nerve fibres which are first affected. Dr. Tuczek compares these association fibres with the bands and connecting rods of a machine, while the wheels represent the nerve cells. He treats the functional derangements of general paralysis as the result of disturbance of association from the isolation of the nerve-cells following upon the wasting of the fibres. Dr. Tuczek is, however, inclined to rebel against the predominant function assigned to the nerve-cells in the maintenance of mental activity. He even quotes with a degree of approval Henle's view that in the white substance of the brain we have to seek the organic substratum of the soul's activity. He is disposed to think that what has been described as neuroglia is often composed of nerve fibres, and questions the view which regards general paralysis as an interstitial encephalitis. He observes that characteristic alterations in the ganglia of the brain have not yet been found in general paralysis. In this he is in accord with Westphal and Fr. Schultze. Many things he tells us indicate that at the root of this disease we have a primary degeneration of the nerve fibres of the brain. These fibres sustain the associated thoughts and movements most sorely tried in the struggle for existence. Tuczek confesses that this will not explain all the symptoms of general paralysis. To account for the rapid changes of mood, the passing from exaltation to depression, from mania to melancholia, he is content, like so many other pathologists, to call in the influence of the vaso-motor nerves.

The following passage will show how Dr. Tuczek connects the symptoms of general paralysis with the lesions which he has found:—

"In this disease we see those motor performances first and especially affected which require the most manifold associations of single muscular motions. Chief of these are speech, mimicry, and the maintenance of the bodily equilibrium. For the due execution of speech we must have the harmonious co-operation of the nerves of the respiratory muscles, of the muscles of the pharynx, palate, tongue, cheek, and lips, the finest quantitative measure of muscular contractions, and the capacity for timing the concord of associated muscular adaptations. All these working together enable us to learn to speak the different dialects of the world, and to sing all melodies. The complexity of the vocal apparatus is thus so great that one can readily understand how a slip in speaking is more remarked than in

any other muscular operation. The articulation of the consonants requires a synergy of more numerous motions than the utterance of the vowels, and we see in the difficulty of pronouncing the consonants, and in the quavering of the voice, the first derangement of motor association. This is the first striking symptom of general paralysis. We know to what stage this disturbance of speech may descend, and how often a babbling sound is all that is left of a patient's linguistic accomplishments. In these last vocal sounds only the vowels remain, especially the A, which is easiest of all to utter."

A Recovery from General Paralysis.

Dr. Tuczek devotes sixteen pages to the description of the recovery of a patient from general paralysis. This was a man of 36, employed in the Post Office. He was dismissed as unfit for his duties on the 6th of August, 1877, and was received into the Asylum at Marburg on the 27th of the same month. The characteristic symptoms of general paralysis are carefully described, and the progress of the disease and the indications of improvement systematically recorded. He was discharged on the 7th of September, 1878, and on the 13th of the next October the Superintendent of the Asylum gave a certificate that, though he had a remission, he suffered from an incurable disease, and was still in a state of mental weakness. In August, 1882, Dr. Tuczek received word that the man was quite well, and had been for a year in the employment of the Post Office. From the last account, dated May, 1884, it appears that, though suffering from swelling of the left foot, he was otherwise quite well and capable, both mentally and physically.

Lissauer on the Pathological Anatomy of Tabes Dorsalis.

Dr. Tuczek finds a parallel to his own discoveries in the observations of Lissauer (see "Neurologisches Centralblatt," 1 Juni, 1885). This pathologist examined the spinal cord with the aid of Weigert's staining method. He describes a bundle of fine nerve fibres descending the cord between the lateral and posterior columns, and sending out fine fibres to ramify among the nerve cells of the cord. This column, which Lissauer believes to have a special function, runs near the tip of the posterior cornua, and on the outside of the posterior roots of the spinal nerves. In twelve cases of tabes dorsalis, sclerosis of the posterior columns, Lissauer found a wasting of the nerve fibres which composed these pillars.

Tuczek regards the inco-ordination in the ataxic gait of tabes as probably the result of the destruction of the fine fibres of association in the cord. Lissauer observes in conclusion that the fine nerve fibres in the anterior columns of the cord do not entirely escape in the course of the disease, which advances from the posterior surface towards the middle of the cord and the anterior columns.

Anrep and Cybulski on the Vaso-Dilating and Vaso-Constricting Nerves.

Most physiologists have accepted the theories of Rouget and Goltz that the nerves which possess the power of inducing dilatation of the vessels have an inhibiting power, like that of the vagi upon the motions of the heart.

Doctors B. von Anrep and Cybulski have published some researches upon this question in the "Medical Journal" of St. Petersburg, of which summaries are given in the "Centralblatt für Nervenheilkunde" (Nos. 14 and 24, 1884), and in the "Neurologisches Centralblatt" (No. 17, 1884).

Nikoljski had stated that he found that the nerves presiding over erection in the dog could, like the vagi, be paralyzed by atropine and excited by muscarin. Using an adaptation of the plethysmograph to indicate the rising distention of the organs, Anrep and Cybulski found that 0·012 of a gramme of atropine introduced into the blood produced no paralysis or weakening of the excitability of the nervi erigentes. The experiments, however, showed that a more considerable sinking of the blood pressure had an influence on the excitability of the vaso-motor nerves.

The tongue has the dilating and constricting nerves apart from one another, as the lingual nerve gives the vaso-dilators, and the hypoglossal the vaso-constrictors. The hypoglossal nerve was first stimulated, causing a contraction of the vessels, and then on stimulating the lingual nerve the vessels were made to dilate beyond their usual calibre. The periods of latency before these effects were produced were about the same on both occasions. The authors derive from their researches the following conclusions:—

1. There is no analogy between the effects of atropine upon the nerves which contract the vessels and the vagi.

2. Nor is there any analogy between the nerves constricting the vessels and those which accelerate the heart's action, because the strongest stimulus applied to the latter cannot overpower the effect of a very weak stimulus applied to the vagus, while a stimulus applied to the vaso-constrictor nerves, both with weak and with strong electrical currents neutralises, the effect of a stimulus applied to the vaso-dilator nerves.

3. A certain amount of blood pressure is a necessary condition for any noticeable widening of the vessels.

4. The latent period for the vaso-dilator and vaso-constrictor nerves of the tongue, as well as the intensity of the induced current required for an equal effect upon the vessels, was about the same.

The authors are inclined to believe in the existence of two separate neuro-muscular apparatus, one of which regulates the contraction, the other the dilatation of the vessels. They quote with favour Exner's view that the dilatation of the vessels is caused by the contraction of the longitudinal fibres of the vascular walls. The elastic coats of the

vessels are stretched by the blood pressure; this causes them to shorten, which, by the laws of physics, increases the lateral pressure of the blood stream.

Erlenmeyer on the Effects of Cucaine in the Treatment of Morphinomania.

Dr. Erlenmeyer tells us ('Centralblatt für Nervenheilkunde,' 1 Juli 1885) that the first reports about the efficacy of cucaine came from America; 26 patients addicted to opium were stated to have been weaned of their unhealthy longings through the injection of cucaine, but from the year 1880 no fresh cases of cure have been published. In Germany Freud found cucaine very efficacious in combating the depression which follows abstinence from morphia in those who have got accustomed to this insidious drug. Wallé regards it as an antidote to morphia, and Richter published a very favourable opinion of its effects. He gave a decided preference to the preparation of Merk of Darmstadt. These recommendations induced Dr. Erlenmeyer to make experiments upon this new medicine. He tried it on eight patients who had become addicted to the abuse of morphia, using the hydrochlorate of cucaine prepared by Merk. He made 236 single observations. In 193 of these pure cucaine was used, in the remaining 43 it was combined with morphia. The highest single dose given was 0·06 of a gramme, but he gave as much as 0·1 in repeated doses in the twelve hours. He generally gave from 0·06 to 0·08 at one dose. Sometimes he found that small doses produced a better effect than large ones. The result of Dr. Erlenmeyer's investigations is given as follows:—

1. Cucaine in doses of 0·1 of a gramme in the day left the cerebro-spinal system quite uninfluenced. Neither the centres of voluntary motion nor of sensation showed the least disturbance of function. There was neither spasm nor paralysis, nor mental excitement, nor heaviness nor somnolence.

2. Cucaine in doses of 0·005 of a gramme had a paralysing effect upon the nerve-centres of the vascular system. This paralysis of the vessels showed itself by increase of the frequence of the pulse, widening of the vessels, diminution of the arterial tension (dicrotism), outburst of perspiration, and increase of temperature. The paralysis of the vessels was always very transient.

The acceleration of the pulse began from five to seven minutes after the injection of cucaine, and reached its maximum very quickly, so that from fifteen to twenty-five minutes after the injection it had entirely disappeared. The average increase was from sixteen to twenty-four beats. This increase of the frequency of the pulse is the most constant symptom following the administration of cucaine. Dr. Erlenmeyer illustrates his observations with sixteen sphygmographic tracings, in which the dicrotism is well marked. He notices the similarity of the effects of cucaine with those of nitrite of amyl.

3. Cucaine excited a feeling of heat partly referred to the region of the stomach, and felt in the whole body. In doses of 0·05 grammes, or on the renewal of smaller doses, there was a very unpleasant feeling of distress and faintness.

Dr. Erlenmeyer's experiments on the treatment of morphinomania were disappointing. He found it of some effect in diminishing the longing for morphia for a few minutes, but this was of no avail in combating the unpleasant feelings following abstinence from morphia for the first six or eight days. It had no effect upon the disquiet and sleeplessness, nor on the loss of appetite following abstinence from morphia. He quotes the observation of Panas, that pure cucaine has no effect in dilating the pupil. It does so only when, through prolonged extraction of the cuca leaves, a compound of hygrin is taken with it, probably a hygrin-ether.

PART IV.—NOTES AND NEWS.

THE ANNUAL GENERAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION, 1885.

The annual meeting of the Medico-Psychological Association was held on Tuesday, 4th August, 1885, at the Examination Hall, Queen's College, Cork, Dr. J. A. Eames presiding.

At the commencement of the proceedings, Dr. SAVAGE moved a vote of thanks to Dr. Rayner, the retiring President, for the distinguished way in which he had conducted the business of the Association during the past year, which had been one of unusual disturbance in the lunacy world. The number of Committee meetings, especially of the Parliamentary Committees, had been very many and very prolonged. He would not like to have to say how many hours' work had been continuously thrown upon Dr. Rayner, who had always done his work in a way which was beyond praise, and he was sure they would be only doing a simple act of justice in giving him a very hearty vote of thanks for his Presidency during the past year.

Dr. HACK TUKE seconded the motion, which was carried by acclamation.

Dr. RAYNER, in acknowledging the vote of thanks, remarked that it had been a very great pleasure to him to do the work, of which during the past year there had certainly been a great deal, and he only regretted that their work had had no satisfactory outcome in legislation; but although the amendments which the Parliamentary Committee had drawn up to the Lunacy Bill and submitted to the Lord Chancellor, and which were to a very large extent adopted by his Lordship, had not become law, there was little doubt that those amendments would be put into some future Bill, so that they would not be lost, but would live in future legislation.

Dr. EAMES, in taking the chair, thanked the Association for the honour they had done him in electing him President, and said that he would reserve further observations for his address.

The GENERAL SECRETARY submitted the minutes of the last annual meeting, which were printed in No. cxxxi. of this Journal (October, 1884).

The minutes having been taken as read, were confirmed.

The GENERAL SECRETARY, in the absence of the Treasurer, Dr. Paul, who was unavoidably prevented from attending, submitted the balance-sheet of the accounts for the past year, which will be found on the next page, the same

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