CONCLUSIONS.

From the results obtained in the group of over two hundred and fifty cases:

(1) That the ophtho-tuberculin reaction is of considerable value in the diagnosis of tuberculosis.

(2) It is especially valuable in cases of incipient tuberculosis with only suspicious signs of the disease in the chest, with negative or no sputum. In these cases the reaction is usually marked.

(3) It is a safe test, easy of application, and produces no constitutional symptoms.

(4) A negative reaction does not rule out the presence of tuberculous disease, as a good many cases of advanced tuberculosis fail to react.

(5) The use of the conjunctival test, in my opinion, takes the place of the subcutaneous method; in many instances is just as accurate and less troublesome to the patient.

(6) In the great majority of cases no constitutional symptoms are associated with the reaction. No alteration occurs in the physical signs, such as frequently occurs following the administration of tuberculin subcutaneously.

(7) A certain proportion of typhoid fever cases give a positive reaction. None of the fevers of the typhoid group caused by the paratyphoid and para-colon bacilli gave the reaction.

(8) Healed cases of tuberculosis do not give the reaction.

In conclusion, I wish to thank Dr. Gorgas for permission to publish this paper, and to Dr. Brem, chief of staff Colon Hospital, for his aid and suggestions in the work accomplished.

BIBLIOGRAPHY.

- ¹ Berl. klin. Wochenschr., 1907, xlv, 700.
- ² Compt. rend. de l'Acad. d. Sc., June 17, 1907.
- ³ Brit. Med. Jour., Dec. 7, 1907.
- ⁴ Jour. Am. Med. Asso., Dec. 14, 1907.
- ⁵ *Ibid.*, Jan. 25, 1908, 1, 259.
- ⁶ *Ibid.*, Nov. 28, 1908, li, 1836.
- ⁷ Lancet, London, Feb. 15, 1908.

New Instrument.

A MODIFICATION OF THE THOMAS WRENCH FOR THE TREATMENT OF RIGID VALGUS.

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WE have all met with cases of rigid valgus which do not yield as we should like by the manual manipulation, either with or without an anesthetic. In cases where the rigid valgus is of long standing, where strong ligamentous and fibrous contractures and adhesions have occurred, it is almost impossible to control the lateral motion entirely by manual force. The adhesions or contractures cannot be overcome manually, on account of the very short leverage which is afforded to the operator in the region of the os calcis and from the nature of the contractures, which in most instances are broad, thick and short obstructions which have gradually strengthened themselves for years. In cases of this nature, the external lateral ligaments hold the os calcis in such a position that

it almost joins the styloid process of the fibula. In dissection it is usually found that the external lateral ligaments are very well blended with the calcaneo-cuboidal and astragaloid ligaments, as well as the surrounding fascia. This, as we see, forms a fan-shaped structure of tremendous strength, the greater part of which is posterior to the mediotarsal joint.

In breaking up the adhesions about the ankle-joint, it is our object to bring the os calcis and the astragalus in their upright positions. This cannot be brought about unless we use the posterior part of the os calcis as the place for the counter force. Where manual force has not accomplished the desired results, the Thomas and other similar wrenches have commonly been used and in many cases with uncertain results, no matter how skillfully applied. It seems to me that the reason for this is the fact that these wrenches must be applied over the midtarsal joints, so that when

FIG. 1. Author's wrench for the treatment of rigid valgus.

the traction is brought to bear upon the handle, the force is directed to the mediotarsal and midtarsal joints rather than to the astragaloid, calcaneo and tibio astragaloid. The wrenches immediately break up any adhesions in the midtarsal joints, but the chief force is exerted on the calcaneo-cuboidal ligaments rather than on those of the lateral ligaments.

FIG. 2. Wrench applied so as to exert force on the external lateral tissues of the ankle. Note the force exerted upon the os calcis by means of the traction strap.

It is for cases of this type, which do not yield to either manual force or the ordinary wrench, that the author has devised a modification of the Thomas wrench whereby the os calcis, as well as

the tarsal bones, is under the control of the operator and by means of which force can be exerted with as great accuracy and precision as is desired. The wrench (Fig. 1) is applied in a similar way to the Thomas, but, before the force is exerted, the strap is wound around the external aspect of the os calcis and tensely adjusted to the hook on the opposite arm of the wrench, as shown in Fig. 2. The wrench is applied from the external aspect of the foot, as shown in Fig. 2, when external force is desired, and vice-versa when internal force is the object. In applying the wrench, it should be firmly approximated to the foot and care should be taken to fasten the strap firmly before any force is applied. The wrench itself is made similar to the Thomas wrench, to the lower arm of which is attached a strap about 60 cm. long with holes. On the corresponding arm there is a hook whereby the strap may be attached at any length desired.

The author has used this wrench with great success in obstinate cases that have not yielded to other methods.

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

THIRTY-FIFTH ANNUAL MEETING, ACADEMY OF MEDICINE, NEW YORK CITY, MAY 27-29, 1909.

The President, DR. S. WEIR MITCHELL, Philadelphia, in the chair.

PRESIDENTIAL ADDRESS.

DR. S. WEIR MITCHELL delivered this address, saying that he would first discuss some matters of general interest to the association and then take up the questions of the nature of nerve force and the deep reflexes, dwelling especially on reinforcement and the theory of overflow. There was a comparative rarity in the proceedings of the neurological and other associations of matters of therapeutic interest. The present was the triumphant hour of diagnosis which was the parent of logical, legitimate therapeutics. The physiology and pathology of the negro should receive more attention from neurologists. There was a rarity in the negro of this country of such diseases as chorea, tabes, migraine and exophthalmic goiter. Considering the relation of the black skin to heat and light rays, there must be in the negro some automatic compensative mechanism for regulating the body temperature other than that which we possess. Therefore, we needed for the negro a new and complete study of the blood in order that we might get clearer ideas as to his immunity from such diseases as yellow fever and malaria and help to solve the problems of protection from such diseases by immunizing serum. The physiology of persons who had lost parts of the body by multiple amputations was a subject worthy of a commission of investigators. Long ago, he had studied diseases of stumps and the psychics of lost limbs, but the subject in recent years had been neglected. He next took up one of the two main subjects of his address: neural energy, its nature and modes of transmission. He used the term "neural energy" without committing himself to any special theory. The rate of transmission of nerve energy in the ameba and lowest forms of animal life, in which it was a general diffusion, was only about 3 ft. per second, whereas,

in the higher vertebrates, where it moved along chosen pathways, it reached as high as 150 ft. per second.

There was an enormous output of energy relative to the small size of the productive sources of supply, as shown by Dr. H. H. Donaldson's contributions. In the adult human brain of 1,360 gm., the weight of nerve cell bodies was less than 27 gm. There were 9,200,000,000 nerve-cell bodies in the new-born babe and the same number in the adult. These occupied 1.37 of the volume of the cortex. Two per cent represented the proportional volume of the cortical cell bodies, including all the dendrons. Many agencies affected the delicately responsive neural conductors and their related centers, those which were most common being related to variations in atmospheric pressure and storm conditions.

The next question was that of the chemical changes which accompanied the transmission of neural energy along nerves. These living wires, the nerves, eat, drink and eject, and are fed and do work, and must, therefore, undergo chemical changes through loss and for repair.

Certain excito-contractile impulses were found in plants, and these were probably identical with those observed in animals, as was evidenced by observations upon the mimosa. He could well imagine a neurotic crusade against cruelty to plants after watching experiments on the mimosa. The analogue of the irrito-contractile muscle of animal life was in the plant cell walls, which, contracting, expelled fluid and thus caused in the leaves mechanical changes of position. Numerous observations and experiments had been made upon plants, especially the mimosa, with a view to determining the analogies between the movements of such plants and those occurring in the living animal.

He next directed attention to some facts and theories regarding what he designated the "symptom signals" which he created and called reflexes. As regarded the reinforcement of reflexes, the researches of Mitchell and Lewis, Bowditch, Howells and other American contributors to this subject showed that not only the hand grasp and other coarse movements tended to increase the muscle-muscle and the skin-muscle response, but that nearly every distinct sensation increased them. Sudden light or sound, remotely applied heat, abrupt cold, a pinch, the pull on a single hair, added to the response. The explanation of these reinforced phenomena appeared to be that the afflux of energy-giving increase of the reflex was due to the liberation of energy far in excess of the functional needs of the active organ, that is, an overflow of energy as was shown by observations and investigations. Speaking of the practical applications of this study of overflow, was it not conceivable that there were acquired conditions of the body, neurasthenic and hysteric, in which these endless normal overflows might be mischievously felt, and might account for suddenly visible symptoms of nervous excitement? An interesting clinical phenomenon which he believed illustrated the subject of overflow was to be seen in the case of violent facial neuralgia in which to talk, to laugh, to chew, evoked maddening pain. Were we not in such cases in the presence of an example of reinforcement from overflow of related motor centers affecting a sensory ganglion excitability ready to call forth the phenomenon called pain?

DISTRIBUTION OF ENCEPHALIC HEMORRHAGES.

DR. S. D. LUDLUM, Philadelphia read this paper.

A STUDY OF ERRORS IN THE DIAGNOSIS OF GENERAL PARESIS.

DR. E. E. SOUTHARD, Boston, read this paper, saying that 247 cases of mental disease had passed through the