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## Original Communications.

### THE CURATIVE TREATMENT OF EPILEPSY BY SURGICAL MEANS.\*

BY CASEY A. WOOD, C. M., M. D.

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"If I wished to show a student the difficulties of getting at truth from medical experience, I would give him the history of epilepsy to read." (1)—Oliver Wendell Holmes.

The Father of Philosophical Medicine might also have directed the student to confine his studies to the treatment of the disease and to set aside his summer holidays for the task. And as the long days "waxed and waned" he would at least be impressed by the arduous nature of the undertaking even if he did not arrive at any conclusions worthy of being regarded as *truth*.

Probably the most bewildering observation—and even the most superficial reader would make it—is that success, as the story reads, has attended remedies, both medical and surgical, that bear no relation to what

was then known or what has since been learned of the etiology of epilepsy. "There is hardly anything," as the Autocrat elsewhere reminds the student, "which has not been supposed to cure it." It might, perhaps, be pleaded in extenuation of this unsatisfactory condition of its therapeutics that the causation of epilepsy is probably as various as the proposed treatment is diversified. If one remembers the definition given by the greatest living authority upon the subject, viz: that epileptic convulsions may arise from a "discharge" of any of the gray matter of the encephalon which subserves sensori-motor processes, (2) it is cogent to recollect that practically every part of the organism is directly connected with some encephalic sensori-motor center! The clinical proofs of the truth of Gowers's definition are many and interesting. First of all we know that gross central lesions affecting motor areas may produce epileptic convulsions, giving rise to that form of the disease known as "Jacksonian" epilepsy. To these we add those definite peripheral irritations which have long been known to issue in localized cerebral "storms." Their name is legion and their *locus* every "nerve ending" of the body. They stretch all the way from

\* Revised by the author from the original article in the July No. of the *Western Med. Reporter*.

1. "Currents and Counter-currents in Medicine," p. 25.

2. "Epilepsy and other Chronic Convulsive Diseases."—W. R. Gowers, p. 171.

an ingrowing toe-nail to a scar on the scalp, and they include equally a lacerated uterine cervix, an ulcerated tooth, a spine on the nasal septum, a weary ciliary muscle or a foreign body in the meatus auditorius. Happy is the surgeon who, in a case under his care, recognizes one or other of these as the source of the convulsive seizures. It may be the chief or only *fons et origo mali* and its removal often means a complete cure of the disease.

Cases where the exciting cause was discovered and its relation to the diseased phenomena recognized, and where its removal brought about cure, are among the most interesting reading in medical literature. The reports of recent removals of brain tumors and the other advances in cerebral surgery, for which the profession is primarily indebted to the work of such men as Victor Horsley and Macewen, of Glasgow, and to the researches of Ferrier, Hughlings Jackson and others are familiar to every reader of medical journals. They constitute some of the most brilliant achievements of our art and form a most valuable contribution to rational medicine. Here the cause of the "encephalic discharge" is an irritant operating in the immediate neighborhood of, or within the motor area itself.

These examples of "central" epilepsy (which usually present symptoms that serve to distinguish them from the ordinary "idiopathic" variety), and their successful treatment belong to quite modern surgery. However, in several recent works on diseases of the brain, methods of localizing and of surgically treating cerebral neoplasms are considered at length. (3)

Last of all, inasmuch as that mental force which manifests itself through unknown molecular changes in certain parts of the cerebrum, also directly influences the sensori-motor areas, it is not to be wondered at that psychical causes, such as fright,

excitement and anxiety, cause or precipitate such a large proportion of the attacks of this disease.

Admitting this to be true and that mental disturbances are capable of producing epilepsy, it is not difficult to understand how treatment of an active kind, particularly of that active kind known to the laity as "the use of the knife," might so impress itself upon the patient's mind as to bring about a cure.

It is important to make a broad distinction between *relief* and *cure*. The cure of epilepsy (meaning always the so-called idiopathic variety, and excluding Jacksonian and "hystero" epilepsy, as well as "epileptiform" convulsions and post-paralytic epilepsy), should not be confounded with *temporary freedom* from the attacks. In this connection I do not propose to say much in reply to that extremely indefinite question, so often asked, "Is epilepsy ever cured?"

What is commonly meant by the question is this: Is the neurosis which underlies the cerebral discharges ever suppressed? instead of, "Is the exciting cause or causes of the attacks ever removed?" To the first, one might reply with a very doubtful and hesitating affirmative. To the latter query, the answer is decidedly, "yes." Clinically and practically, however, a cure means that a *reasonable* time (which will vary with the case) must have elapsed since the patient has had a recurrence of the fits. This would in all cases be at least many months.

Still more difficult is it often to decide whether a given remedy *relieves* epileptic attacks, for, as is well known, these vary greatly in the same individual, as to frequency and severity, both when no treatment has been followed as well as when he is under treatment.

That the *aura* can be cut short and the attack which it heralds prevented by mechanical means is undoubted, but to show what confidence has been and for

3. For Example, see Chaps. x. and xi. of Byron Bramwell's "Intra-cranial Tumors," 1889.

that matter is still placed in abortive remedies of might be styled the "transcendental" kind, the following description of a procedure, popular in England for over half a century, might be recorded. It is resurrected from its resting-place within the leaves of an old copy of the *London Standard* :—

A young girl fell down in the public streets of Paris in a strong epileptic fit. A crowd immediately collected around her, but for some moments nobody could think of any means of assistance. A *sergeant de ville* coming up, asked a bystander to lend him a black silk neck-cloth. With this he covered the girl's face and in the course of a few seconds she began to recover; the convulsions ceased; consciousness returned; she got up and walked home, having first thanked the officer for his kindness. A medical man, who happened to be present towards the termination of the scene, complimented the sergeant and said to him, "You have taught me a new mode of treatment."

*Quite different, however, is it with those epileptic seizures which are the result of demonstrable peripheral causes—causes generally recognized both by the patient and his physician. These are capable of lasting cure by the removal of the irritant. Examples of such happy results are numerous, and have long been familiar to the profession,*

A classical instance is that which occurred in the clinic of the celebrated French surgeon, Baron Larrey. It is to be found in *La Lancette Française*, No. 81, 1836 :

*Case 1. Removal of necrosed bone.* An old soldier had been wounded at the battle of Marengo, thirty-three years before, by a fragment of shell. The missile had struck him in the forehead and after a long convalescence he recovered, but there remained a discharge from a small fistulous opening above the brow. The patient soon became an epileptic, had daily attacks of convulsions, and when Larrey saw him more than thirty years afterwards, he was reduced to a mental and physical wreck. The great surgeon carefully examined the wound: probed it and detected with the sound a piece of dead bone. Upon the removal of the latter with a polypus forceps, the wound healed, the epileptic attacks ceased and the condition of the patient forthwith improved in every respect.

*Excision of superficial scars.* Cures brought about in this way are numerous enough. If the cases recorded in nineteenth

century literature were divided into two classes, the first class would include those in which to an unprejudiced mind there certainly was some definite connection between the cicatrix and the attack. Either the epileptic aura began by peculiar sensations in the scar itself, or it was a source of annoyance to the patient, justifying the idea that it contained imprisoned nerve fibers, which were acting as a genuine peripheral irritant. In the second category might be placed those scars the existence of which the patient and his friends had forgotten until they had their attention directed to them by the surgeon. Notwithstanding the cures that have resulted from the removal of such scars, one has a right, in view of the mysterious way in which other surgical methods (to be described later on) have produced cures, to be sceptical about the causal relation assumed to exist between the scar and the epilepsy. One example will suffice :

*Case 2. (4)* A boy, age 8, suffered from severe, frequent, and typical epileptic seizures. He had an aura which began by twitching of the muscles of the right side of the face. It then spread to the throat, and finally involved the whole body. On the right parietal bone there was a large, tender scar (the result of a fall), and it had been noticed by the parents that shortly after the wound healed, the epileptic attacks began. The cicatrix was excised, the fits disappeared and two years afterward he was mentally and physically healthy.

*Removal of splinter.* An interesting case well illustrating a cure of epilepsy by the removal of a peripheral irritant is detailed by Franz Rheins. (5)

*Case 3.* A perfectly healthy locksmith received a wound in the hand from a splinter of cast-steel, a portion of which lodged in the back of his left hand, about the head of the fourth metacarpal bone. It was not removed and the wound healed completely. Four months later the patient had an epileptic attack, which was repeated during the night. Rheins at once cut down upon the offending foreign body and removed it. The shell splinter was one ctr. long, and one-half mm. wide. A year and a half after the operation the patient had had no return of the attacks.

4. Klaatsch in *Weiner Med. Wochenschrift*, 1 und 2, 1857.  
5. *Alg. Med. Central-Zeitung*, xlvii., 23 1878.

*Case 4. Foreign body in meatus auditorius.* Schurig (6) has published the following instructive story :

An 11-year-old boy of pale aspect and stupid appearance was brought to him complaining of his ear. He heard in his right ear very badly (watch on contact only), and on examining it a very large and hard plug was found to fill the meatus. It seems that eighteen months before the child had fallen out of a "kinderwagen," and was dragged along the graveled street. Except a little scratching of the face and filling the ear with dirt he seemed none the worse for the accident. Two months after he began to have epileptic fits, which increased in number and severity during the next three or four months. Since then they were less frequent. The syringing of the meatus and the removal of the plug produced a slight epileptic seizure. In the center of a hard mass of ear-wax a small, sharp-edged stone was found. Patient had had no return of fits ten months afterward.

*Case 5. (7) Resection of diseased nerve.* A servant-girl, aged 31, suffered for a year from chronic syphilitic ulcer on the outer aspect of the left leg. It had been treated in a Hamburg hospital and had been healed. It however broke out again, and while under von Thaden had reached large dimensions. During this time she became epileptic and had severe and frequent seizures. It was noticed that in the wound lay the superficial peroneal nerve. This was extremely sensitive. Patient also complained of a dull feeling in the back of her great toe. She was chloroformed and six ctr. of the nerve resected. It was found to be the seat of a chronic inflammation and to be surrounded by indurated connective tissue. The neurilemma was also affected by the inflammation. Six months after the operation patient was entirely free from convulsions.

And so on, practically *ad infinitum*. Before leaving this subject, however, reference should be made to a paper by Dr. Archibald Church, (8) of this city, in which (among other interesting matters of the kind) attention is drawn to a collection by Dr. A. P. Brubaker, (9) of Philadelphia, of sixteen cases of epilepsy permanently cured by the extraction of diseased and irritating teeth.

6. *Jahresbericht d. Ges. für Natur und Heilkunde zu Dresden*, p. 69. 1877.

7. Von Thaden. *Deutsch. Zsch. f. Chir.*, p. 520, 1875.

8. *Peripheral Irritation in Nervous Diseases*. *Peoria Medical Monthly*, April, 1890.

9. *Journal of Nervous and Mental Diseases*. Dr. Brubaker in answer to a letter of inquiry, has also kindly drawn my attention to his valuable contribution to the *American System of Dentistry* on this subject where many cases of reflex neuroses of dental origin are recorded.

*Surgical cures of idiopathic epilepsy.* Ever since medicine ceased to be a pure empiricism a large number of surgical proceedings have been suggested for the cure of epilepsy. These were usually based upon some theory which concerned the causation of the disease; they were more or less faithfully tried; they had their advocates and opponents, and all that now remains of them is a mass of literature, a few extracts from which may be both instructive and entertaining.

Almost every one of these surgical remedies, it must be noticed, could claim its list of cures and a fairly working hypothesis to explain how these cures were brought about.

*Setons and issues.* These remedies are quite ancient, and they have their advocates even to this day. Gowers (10) thinks they often do good, but their *modus operandi* is unknown unless one explains it by the use of that *very indefinite term* "counter-irritation." Many cases of cure by this means are, however, to hand. For example Dr. T. J. Griffiths (11) furnishes several of these. He introduces a large seton (15 or 20 strands of silk or flax thread), into the back of the neck, and allows it to remain for months, removing it only when there is too much local irritation. Of five cases so treated (tonics being the only other treatment), four were cured or greatly benefited. The disturbance of the mental faculties, which is a common attendant in such cases, rapidly improves after the insertion of the seton.

The cure in the following case was undoubtedly due to the open wound and not to the electrical phenomena sought to be induced. The patient was under the care of Dr. Usher Parsons. (12.)

*Case 6.* Michael H., age 25, a stout man, never had an attack of epilepsy until two years before treatment. From that time the fits became more frequent until he had them daily. They began with an *aura*, a creeping sensation along the left arm from the fingers to the shoulder. He was

10. *Epilepsy and other Convulsive Diseases*, p. 235.

11. *Naphey's Medical Therapeutics*, p. 53.

12. *New England Medical Journal*, vol. xv., 355, 1826.

sometimes able to prevent attacks by pressing on the nerves of the arm with his right hand. Tried a great many remedies, surgical and medical, but in vain. Parsons applied an apparatus to patient's neck, which was designed to draw off "an excessive quantity of electric matter from the brain," through a blister in the back of the neck. A silver plate was placed over the latter, over that a wet sponge, and these were connected by a wire with a second blister on the knee. The raw surface on the knee was covered by a zinc plate, also attached to a wet sponge. Both the sores and plates were dressed daily.

Not a single attack of epilepsy occurred for two years after the use of this ingenious mechanism.

*Blisters and the Cautey.*—The use of the actual cautey to the nape of the neck and spine is recommended by W. A. Hammond and McLane Hamilton, but Brown-Sequard holds that cures may be also brought about by circular blistering or cauterization with a red-hot iron of a limb or even a toe or finger—just as a ligature about a limb may abort an epileptic attack preceded by an *aura* beginning in the limb aforesaid.

A case in which the patient was cured by the application of the cautey to the larynx is reported by H. Green. (13) Another by Recamier (14) is as follows:

A tailor, aged 32, was admitted to the Hotel Dieu (Paris) on account of epilepsy. Had a one-sided *aura* and numbness in his left foot. Was variously treated without effect, but finally blisters were applied not only to the affected foot but to those parts affected by the warning *aura*. He left the Hospital, after having had several dozens of blisters applied, much better, and for three months, as long as he was kept under observation, he was quite free from the attacks.

*Burns.*—Whether it is the shock to the nervous system, the counter-irritation produced by the suppurating surface or a combination of both, it is difficult to say, but it is well known that cures of epilepsy have been brought about by burns. An instance of this is recorded by R. Beveridge.

(15)

Case 7. An epileptic fell into the fire and received a deep burn of the face. Before the wound

healed, portions of the nasal, ethmoid and frontal bones came away. After a tedious convalescence the fits did not return.

Sproule, (16) Bouygues, (17) Reese (M.), (18) Pearson, (19) Langewicz (20) and many others have published similar cases.

*Amputations.*—Unless it be the result of a shock to the cerebral centers or the outcome of a lasting mental impression, it is difficult to see how amputation of limbs that have no discoverable connection with the disease, can cure epilepsy, and yet there is a number of recorded cases. Among the earliest of these are two by Aubanel. (21)

Case S. B., *æt.* 40, a member of a family which never suffered from epilepsy had, while serving in the Spanish war and without apparent cause, become an epileptic. Typical attacks came on every two or three weeks, and finally became so frequent that he was unable to attend to his duty. After several years' of misery he fell into an open fire one day and was dreadfully burned—so badly indeed that he was obliged to have his left arm amputated near the shoulder. Since the day of the operation he had but one slight fit. Had been free of them for a year, and at the date of the report had improved in all respects.

Aubanel's second instance is the following:

Case 9. Mmle. Fleury, of healthy parents and aged 50, became at the time of her first menstruation and without apparent cause, the subject of fits. At first they came on every five or six days, but at last they became so frequent that she had them very often and daily. The seizures were typically epileptic, and set in without an *aura*. She remained in this wretched state until her 25th year, when she fell into the fire and badly burned her right hand. This accident had little or no effect upon the epileptic attacks. The wound never completely cicatrized, and there continued to be a watery discharge from it. She injured the hand again, the scar burst open, cellulitis set in and the limb became so affected that an amputation was done. Previous to the operation her mental condition was pitiable; she was barely able to look after herself and could hardly speak. The operation seemed to change all this. The wound healed nicely, the fits did not return, and her general health as well as her intellectual powers, gradually returned.

16. London Medical Times, 1844, page 152.

17. Journal de Médecine et Chir. de Toulouse, 1852, p. 44.

18. Phil. Med. and Surg. Reporter, 1869, 239.

19. Ibid, 1869, 145.

20. Ooster, Med. Wochenschrift, Wien, 1846.

21. Gazette Medicale de Paris, M. 43, 1839.

13. Medical Gazette, iv., p. 96, 1853.

14. Bulletin de Thérapie, Janv., 1844.

15. Medical Times and Gazette, 1863, vol. i., page 390.

Many more such cases are on record. Cures have followed in this way amputation of the lower third of right forearm and hand (22), leg (23), left index finger, (24), etc.

*Phlebotomy.*—Of course this remedy (?) was well tried in the days of our grandfathers. It was always easy to discover a "congestion of the head" in the "falling sickness." Yet, whether it was the blood-letting, the mental impression, counter irritation or what not, apparent cures of epilepsy did follow repeated venesections, in the old days, when it was fashionable to bleed a man for almost every disease. Any one who is interested, may find details of three cases so cured, in an article by the French surgeon, Colson. (25)

*Ligature of the carotids.*—This measure was at one time recognized as a legitimate and potent means of curing epilepsy.

It was undertaken with a view of lessening the blood-flow to the "irritable" nervous centres. Unjustifiable as we now believe it to be, it yet furnishes us with a fair array of cures, many of them performed in this country, e.g., by Valentre Mott, (26) and other well known surgeons.

*Case 10.* (27) Under the care of the British surgeon Preston, a pensioner, aged 25, of a robust constitution, had suffered for five years from severe epileptic attacks which recurred about every two weeks, often without any assignable cause. Preston thought that a cerebral congestion might lie at the bottom of the trouble, and on the 4th of Feb, 1831, one of patient's common carotids was tied, after great loss of blood. The ligature fell off on the 5th of March, and two years after he had not had a single attack of epilepsy.

Two cases are reported by Dr. C. Angell, (28) of Pittsburg, Ind. The first patient had fits for three or four yeaa. These in-

creased rapidly in severity and frequency until on the day before the operation, he had 15 to 20 fits in the forenoon alone. The right common carotid was ligated. The operation was successful and the patient never had another attack. Unfortunately, however, he died on the seventh day. Dr. Angell was more fortunate in his next attempt.

*Case 11.* A man, aged 40, had seizures for seven years. He had been under treatment by a great number of physicians, regular and irregular, without benefit. The attacks later on recurred nearly every day, so that patient had not been able to work for nearly three years, and his mind was almost destroyed by the disease. Three months after the operation (from which he recovered perfectly) he had had four fits only; commenced to attend to his long neglected business, and felt much better than he had done for three years. His family and those who are acquainted with him all agree that they can see a marked change in him.

*Tracheotomy.*—A fierce controversy raged over the utility of this proposed cure for epilepsy, before it was generally abandoned. The celebrated Marshall Hall originated the idea and wrote extensively in its favor. (29) It was extensively practised both here and in England, and in spite of its irrational character, many cures and examples of relief are recorded. It was pointed out by Hall and others, that many cases of epilepsy, are of laryngeal origin (*epilepsia laryngea*) or at any rate the attack takes the form of laryngismus, (or spasm of the glottis) producing embarrassment of breathing, congestion of the brain, and even danger to life from suffocation. Of course, it was obvious that in such cases if the supply of air to the lungs could be insured, the chief source of the trouble would be removed! The tracheal tube was worn constantly, or at least until a cure had been effected.

Instances of cure are reported by Albers, (30) Neill, (31) and many others. In Albers'

22. W. Atles. *Philadelphia Med. Times*, 1870, p. 224.

23. *Gazette des Hopitaux*, Paris, xxiv., p. 95, 1851. Reported by Cazenave.

24. Lallemand. *Annales Cliniques de Montpellier*, ii, 284, 1854.

25. *Bulletin de la Societe de Medicine de Gand*. Tome 1, p. 19, 1835.

26. *New York Med. Gazette*, p. 120, 1850. See also a full report of Cases in the *N. Y. Journal of Medicine*, 1852, and 1857, p. 22.

27. *Schmidt's Jahrbcher. der ges. Med.* Bd. xx, S. 167.

28. *Northwestern Med. and Surg. Journal*, Oct. 1857.

29. *London Lancet*, May 10th and 17th, 1872. The reader will find full directions as to when and how to perform this—so far as epilepsy is concerned—now forgotten remedy in the *Lancet* for October, 1854.

30. *Archiv. für phys. Heilkunde*, 1852.

31. *Boston Med. and Surg. Journal*, 1852-3. vol. 47, p. 29.

case the tube was worn for 13 months, and the patient, a previously confirmed epileptic, never had a single seizure.

Goldhorn, (32) after carefully considering the evidence adduced on both sides, makes the following comments which one might with profit apply to other treatments in medicine and surgery: "Before this measure," says he, "can be considered as a permanent addition to the practical treatment of epilepsy, it must be shown 1st, to be correct in theory; 2nd, that it is not dangerous to life, and 3rd, that the attacks do not return after the operation has been performed."

*Ligature of the vertebral artery.*—This surgical measure, largely employed here and in England, was in some sense the legitimate successor of the more dangerous ligature of the carotid. A too great supply of blood to the brain was in some cases supposed to be the cause of the attacks. This was to be remedied by occlusion of the vertebral artery. Wm. Alexander of Liverpool was the best known if not the first advocate of the measure, and accounts of his cases may be read in the *London Medical Times and Gazette* for 1881. Another account (33) gives a resumé of 21 patients so treated. They were workhouse people and the cases were marked and severe. *Three were quite well a year after the operation; nine others were so much improved and were so free from fits that they might be put down as cured,* and eight were said to be so improved that if they got no better the operation would have been justified. In a paper (34) on the subject by Dr. J. Lucius Gray, of Chicago, an account is given of seven such operations performed in this city by E. Andrews, Brower, Fenger and others, most of which were followed by relief.

This operation has later been performed by von Baracz (35) with apparent success,

but as none of his four patients had been under observation longer than four months, no conclusions can be drawn as to the permanency of the relief.

Hun, (36) speaking of Baracz's article, says: "This is the old, old story of operative procedures, undertaken in the wildest spirit of grouping empiricism, to cure epilepsy without first becoming acquainted with the natural course of the disease."

*Trephining.*—This is a very old surgical treatment of epilepsy. I do not refer to those rational operations for the raising of depressed bone, the opening of cerebral abscesses, and removal of tumors or for providing an exit for intracranial fluids—referred to in the early part of this paper—but rather to those cases where underneath the button of bone or in the bone itself no pathological changes could be discovered. It is true that in most of such instances (where a cure was brought about) a history of traumatism was made out, but it seems to me that here there is a fallacy to guard against, because the great majority of people have at some time or other in their lives received injuries to the head (from falls and other causes) quite as severe as those ascribed to some of the patients operated on in the histories given, and yet epilepsy is a fairly uncommon disease. There were no pathological changes, so far as could be made out, in some of even M. G. Echeverra's (37) well-known list of traumatic cases treated by trephining. A case by Saxtorph (38) was certainly of this description, yet the patient was cured.

Dr. Mason Warren, (39) of Boston, trephined in two cases of *idiopathic* epilepsy. He reports one case as cured and another as relieved. Also Burnett and Gould (40) one. Probably the case of Leo's (41) men-

36. *Annual of the Univ. Med. Sciences*, Vol. 2, 1890.

37. *Les Archives General de Medicine*, Dec., 1878.

38. *Journal de Medicine et Chir. Practique*, Paris, p. 163, 1882.

39. *Surgical Observations*, with cases, 1867.

40. *British Med. Journal*, 1883.

41. *Pepper's System of Medicine*, p. 502, vol. 5.

32. In a critical review of the subject contributed to Schmidt's Jahrbuch, Bd. 85. p. 173.

33. *Brain*, for July, 1882.

34. *Neurological Review*, July, 1886.

35. *Wien. Med. Wochenschrift*, Feb., 1889.

tioned by McLane Hamilton is another, and so on.

"Counter-Irritation" will again have to be evoked to explain some of these cures, and in some other instance the psychical influence of an "operation" is not to be lost sight of. The author just quoted says, very justly I think, that operators say a good deal about the procedure itself and recovery from it to the exclusion of exact descriptions of the pathological conditions present. What one would like to know is how the surgeon justified his treatment—what relation, in other words, he supposes to exist in the cases before him between the trephining and the disease.

*Case 12.* Dr. Spinelli gives the following history (42) of a boy, age 15, who had been epileptic almost since his birth. The attacks were in frequent—about five times a year. The doctor could think of no cause except that at his birth (the labor being prolonged and severe) he had received a contusion(!) on one of the parietal bones. A year before consulting Spinelli the boy received a blow from a stone which fractured the skull. It was decided to use the trephine at the junction of the parietal and occipital bones. An attempt was made to raise what looked like depressed bone, but in vain. The wound healed, and since then there has been no return of the disease. The author ascribes the cure to the enlarged space given by the operation to the growing brain.

When one remembers the reflex relations of the reproductive system it is not to be wondered at that interference with the organs of that system has been common enough in the attempt to find a satisfactory surgical cure for epilepsy. When the attacks are plainly connected with diseased ovaries, testes, etc., the duty of the surgeon is plain enough, but, as in the cases about to be referred to, it is difficult to imagine how the removal of a *normal* organ can bring about a cure of the disease. Yet that such has been the case there is an abundant evidence.

*Circumcision.*—Congenital phimosis had been noticed in eleven out of twenty-five consecutive cases (43) admitted into the

42. Translated into German by Urban from the Genoese journal *Il Filiatre-Sebezio* for April, 1845.

43. *London Lancet*, Feb. 16, 1867. Nothing is said about the proportion of congenital phimosis in healthy people.

London Infirmary for epilepsy and paralysis. Collections of sebum underneath the prepuce may lead to balanitis and herpes. The irritation thus set up causes, in adolescents, sexual excitement, masturbation and reflex neuroses. W. Althaus thinks that if this does not actually cause epilepsy it may predispose to it, and if circumcision does cure the disease it often relieves it and is a rational adjunct to other treatment. That some cures have followed circumcision, I think, has been proved. A good article on this subject is Sayre's (L. A.) "Circumcision versus Epilepsy." (44) Gowers (45) thinks it should be adopted in all cases where there is reason to associate the disease with masturbation.

*Castration* has been performed for substantially the same reasons that circumcision is urged, and although condemned by most text-books, (46) it has its advocates and its list of cures. Rooker, (47) Ogle, (48) and Bacon, (49) are among the more modern defenders of the practice.

*Batley's Operation.*—The operation of "normal" ovariectomy has been performed extensively here and in England, but it is not generally known that one of its earliest advocates (50) argued, that if justifiable at all, its use should be restricted to the treatment of epilepsy. Batley reported among his earliest cases, one in which the operation was performed for the cure of that disease. Among three of Lawson Tait's (51) cases of "spaying," were three done for "menstrual epilepsy." How the excision of normal, or nearly normal ovaries, can cure idiopathic epilepsy, it is difficult to see unless the mental impression made upon the patient be the cause of the cure.

*Removal of the clitoris.*—It was for the

44. *Medical Record* (New York), 1870, p. 233.

45. *Loco. cit.* p. 233.

46. See, for example, Bristowe's *Practice of Medicine*, p. 1004, Robert's *Practice*, p. 923, etc.

47. Various numbers of *Cincinnati Lancet and Obs.*, 1861, '62 and '68.

48. *London Lancet*, 1859, i., 156.

49. *Journal of mental Science*, Oct., 1880.

50. Emmett (1).

51. *Manual of Gynecology*. Hart & Barbour. i., 203.

advocacy and practice of this operation for the relief of functional nervous diseases, that Mr. Baker Brown (52) got himself into trouble twenty years ago. His idea was, that *many* cases of epilepsy (for example) in females, were the result of irritation (sometimes connected with, sometimes unconnected with self-abuse) residing in the superficial pudendal nerves. To him, the removal of the cause appeared to be the correct thing, and he began to excise the supposed offenders. However it may have produced its effects, there is evidence to prove that cases of recovery from epilepsy did occur *after* clitoridectomy. Reynolds (53) thinks that an operation of severity equal to that of the removal of the clitoris, (or circumcision) might prove equally serviceable in some cases of epilepsy *if performed on the back of the neck, the mouth or the toes*. He is of the opinion that it is mainly through the strong impression made upon the mind, or a violent change in the body, that the operation mentioned, as well as tracheotomy, etc., produce their effects.

*Nerve stretching.*—That some ill-defined alterations in the nervous elements, both peripheral and central, might be productive of remedial results, is the reason given for nerve stretching in epilepsy. There are a few instances recorded where the offending (or suspected) nerve has been stretched with good results in idiopathic epilepsy. Prof. von Nussbaum (54) publishes a case of cure.

*Case 13.* A man, suffering for many years from frequent attacks of epilepsy, presented himself for treatment. He had double *pes equinovarus*. Both tibial and peroneal nerves were laid bare at the popliteal space for 7 ctr. of their course, and stretched with the forefinger. The fits ceased, and for six months after the operation—while he was kept under observation—he has not had a single attack of epilepsy.

*Spontaneous cures.*—It is natural and proper that when an operator succeeds in curing a case of epilepsy and the procedure

is a new one, that he should put forward some hypothesis to account for the *modus operandi* of the surgical treatment which resulted so favorably. But the absence of relationship in our present state of knowledge between remedy and cure, is in many cases so evident that the author wisely, it seems to me, either attempts no explanation at all, or adds his history to the accumulated list "spontaneous" cures. No room can be given here for discussing even the most interesting of these, but reference to many of them will be found in the "Index Catalogue of the Surgeon General's Library," under a special heading. A good example is given by West (55) which I am tempted to copy in full. The author does not assume that the abscess mentioned had any connection with the interior of the skull:

*Case 14. Bursting of abscess.* "A boy, aged 10, suffered from occasional attacks of *petit mal* in February. In the following August the attacks became regular epileptic seizures which increased in severity and frequency, and in the succeeding March returned several times a day, and were accompanied by marked impairment of his mental powers and by an unsteady and tottering gait.

After two months' trial of various remedies and the insertion of a seton in the back of his neck, he left the hospital worse than on his admission. On June 13 he fell in a fit and struck his occiput a violent blow. A large abscess formed here which burst of its own accord, continued discharging for a few days and then healed up. It is just two years since this happened, and from that time to the present there has been no return of the fits; the boy has recovered his power of walking and has all the cheerfulness and intelligence that befits his years."

*Tenotomy of the ocular muscles.*—If this study of the curative effect produced by operative measures in idiopathic epilepsy have any practical value it depends upon the fact that it throws some light upon the *status* of a surgical proceeding for which much is now being claimed, viz.: tenotomy of the muscles of the eye. This is the latest surgical treatment which has been proposed for idiopathic epilepsy, and its author, Dr. George T. Stevens, of New

52. Vide his small book, "Insanity, Epilepsy and Hysteria in Females."

53. Practice of Medicine. Vol. 1, p. 782.

54. *Pract. Med.* Blacker, München im Jahre 1875.

55. Diseases of Children. American Edition, p. 181.

York, as long ago as 1881, in a memoir (which was awarded high honor by *l'Academie Royale de Medicine de Belgique*), quotes numerous cases of epilepsy cured by tenotomy of ocular muscles for the relief of "insufficiencies," or "dynamic squint." Since this monograph was written, Dr. Stevens has made further claims for tenotomy. That the irritation, headache, dim vision, etc., caused by refractive errors and anomalies of accommodation have issued in epilepsy and other functional nervous diseases is now undisputed (56), but Dr. Stevens and his adherents claim to have proved that even after the patient has had prescribed for him the necessary spectacles so that there is no "eye-strain," so far as the visual acuity and ciliary muscles are concerned; even then if there exists a want of balance among the external ocular muscles, epilepsy may still be produced or perpetuated. This muscular "eye-strain" is a *common* cause of functional nervous diseases, says Dr. Stevens. Nor is it necessary, it seems, that the patient should be conscious of this want of balance (or *heterophoria* as Dr. Stevens appropriately calls it), in the working of his eye-muscles. It must be searched for and if found such treatment—especially tenotomy (graduated or partial) or series of tenotomies—is indicated as will restore the lost equilibrium. Some patients may require the operation fifteen to twenty times. Although a committee appointed by the Neurological Society in New York did not, after a long investigation of these claims of Dr. Stevens, consider that the method afforded sufficient relief to patients to warrant its recommendation by the society, yet we may consider it as still *sub judice* in view of the many well-known ophthalmologists and neurologists who have ranged themselves on Dr. Stevens' side in the controversy now going on. Numerous cases of cures more or less complete have been

published. The following one from Stevens' (57) monograph will serve as a sample:

Case 15. Mr. H. T., aged 37, consulted June 3, 1880, Dr. C. G. Clark, of Troy, N.Y. He had been an epileptic five years; has had seizures from four to six times a day. In other respects is in very poor health, and looks dull and lethargic.

He has used bromides freely up to the present time. He was found to have hyperopia of  $\frac{1}{30}$  for one eye and  $\frac{1}{24}$  for the other, with insufficiency of the externi. July 10, 1880, tenotomy of the internus of one eye was made, followed a few weeks later by similar operation of the other eye. All medicines were discontinued from the first. On the day preceding the first operation he had five severe epileptic fits, and on the morning of the operation several more. From the date of the first operation, however, the epileptic attacks ceased and not a single return of the malady had occurred seven years after the operation. His health improved in all respects.

It would, in this case, be satisfactory to know whether the prescribing of proper glasses had first been tried and whether after such prescription the patient had any symptoms of eye-strain.

Whatever may be the outcome of a general trial of Stevens' methods, he certainly deserves the credit of having introduced a needed nomenclature for designating the insufficiencies of ocular muscles—"latent" or "dynamic" squint as it was once called. These terms (*vide* supplement of Dr. Stevens' monograph) have, I think, "come to stay" in ophthalmological literature. We owe him a debt of gratitude, also, for his *phorometer*, by means of which the various forms of heterophoria can be readily demonstrated and their amount accurately measured. On the other hand, I prophesy that in time very little will be heard of "graduated tenotomy" as a cure for epilepsy, because I think its place is in the same category with tracheotomy, vertebral ligation, circumcision and other surgical cures, for each and all of which so much was claimed in times gone by. My reasons for so thinking are based upon these conclusions:

1. The majority of otherwise healthy

56. This is admitted by Roosa, an opponent of Stevens' method *vide* e. g., "Determination of Need for Glasses," page 50.

people have a want of balance in one or other set of their ocular muscles. (58)

2. Oliver (59) (*Phil. Medical Times*, 1887) made a critical examination of the eyes of 50 adult male epileptics—nearly all Americans. Extra-ocular movements were intact in all cases, except weakness of the interni—just about what would be found in any average 50 Americans who never had epilepsy.

3. When this want of balance is present (and refractive errors are corrected) the very great majority of persons in whom it exists are unconscious of its presence; it does not produce any trouble whatever; it is not a genuine peripheral irritant. These propositions prove, it seems to me, that there is not any necessary or, if any, a very rare and doubtful connection between heterophoria and epilepsy. At any rate the unprejudiced observer could hardly accept their relation as that of cause and effect in even a small majority of the cases where both occur—certainly not as Dr. Stevens would have us believe—in the majority of such instances.

Now, as to the effects of treatment:

4. In the minority only of those cases cured by operation, was absolute *orthophoria* (or equilibrium of the ocular muscles) secured. The majority of patients, cured and uncured, remained with more or less of the trouble sought to be removed by graduated tenotomies.

5. Some of the *uncured* were brought into a condition of *orthophoria* or very near it.

6. If we take the figures of the Neurological Society's committee as the true result of Dr. Stephens' work upon the cases submitted to and accepted by him it will be noticed that as good a showing can be made for several other operations now generally discarded, as the use of setons, ligature of the vertebral artery, trephining, circumcision etc. Out of fourteen suitable cases,

nine of epilepsy and five of chorea, six were reported as improved, seven unimproved and one in which the result was unknown. Of the epileptics none were cured, three were improved, five were unimproved and in one the result was unknown.

7. In view of the preceding study of surgical cures in epilepsy it seems justifiable to suppose that the hope excited in the epileptic's breast by the promise of a cure—a cure by means of a new and mysterious remedy—and the lasting mental impression produced by the knowledge that the cure involves an operation perhaps often repeated—that these factors enter as largely into the result obtained as the relief given to a heterophoria not specially recognized by the patient. It is probable that the effect upon the mind is the potent element in many cases of cure wrought by surgical interference. *Among those it seems right to place graduated tenotomies for such cases of heterophoria as do not act as a sensible irritant to the patient.*

*The Auditorium, Chicago.*

Dr. F. Peyre Porcher, of Charleston, S. C., calls special attention to the extreme value of phenacetine as a remedy for insomnia (*Med. Record* July 12th 1890), given at night, in a little water. After repeated trials, he thinks it the best and most unobjectionable substitute for morphia. It may be repeated and the dose increased to seven or ten grains. No accusations have ever been made against phenacetine, whereas sulphonal, antipyrine, and antifebrine have at times been found to possess toxic qualities. It may also be used in children who are sleepless from fever or excitement.

Dr. D. Coggin writes to the *Boston Medical and Surgical Journal*, July 10th, stating that in the March-April number of *Annales d'Oculistique* is a reference to a paper on the Comparative Action of the Two salts, Iodide of Sodium and Iodide of Potassium, read before the Paris Academy of Medicine on the 4th of March. "It is an unpleasant surprise," he says, "to those of us who have prescribed the sodic iodide, because it is more palatable and also better borne, apparently, than its displaced isomer, to be informed on high authority that it is almost inert. As to the bromide of sodium, clinical experience in the use of this salt seems to warrant the belief that its action is nearly identical with that of the bromide of potassium."

TENTH  
INTERNATIONAL MEDICAL  
CONGRESS

*Held in BERLIN, August, 1890.*

[FROM BRITISH MEDICAL JOURNAL.]

PAST CONGRESSES.

Before proceeding to give an account of the scientific and general work of the great medical gathering now being held in Berlin, it may be well to glance backwards for a moment at the similar meetings which have taken place in past years. The history of this important periodical event in the world of medicine is interesting as showing its almost casual mode of origin, and the way in which it has developed from comparatively humble beginnings into one of the most powerful factors in the advance of knowledge and the promotion of community of effort, professional solidarity, and good-will among the members of our body throughout the world. Although an international hygienic congress was held at Brussels so far back as 1852, the International Medical Congress, as we now know it, is of much more recent date. Our French neighbors claim the merit of having originated the idea, but the first meeting which was held at Paris in 1867 appears to have been little more than an accidental expansion of the annual Congress of French medical men, which was being held in the ordinary course, by the addition of a considerable foreign contingent formed by the medical practitioners who had gone to Paris at the same time to see the great exhibition of that year. The scientific guests, who numbered about 500, were received by their French hosts with all the courtesy of the *grande nation*, and representative men of the different leading nationalities were chosen vice-presidents, among them, it is interesting to recall, being Professor Virchow, some of whose later utterances recently furnished Dr. Huchard with a text for a vehement call to all patriotic Frenchmen to boycott the Berlin Congress. The proceedings at the Paris Congress were almost purely scientific, with little or none of the festive element, which has been so prominent a feature in most of the subsequent gatherings. Moreover, French was the only language recognized at the meeting. The assembly, such as it was, however, was so successful that on motion of an Italian physician, Dr. Pantaleoni, it was determined to make an International Medical Congress a regular institution, the meetings to be held every two years. In compliment to Dr. Pantaleoni, Italy was fixed upon as the place for the next meeting. It had at first been intended to hold the second Congress at Rome, but as there were some doubts as to the willingness of the Papal Government to furnish facilities for the meeting, Florence was chosen, and a gathering was held there in 1869, in which 87 foreign practitioners took part. Owing to the outbreak of the Franco-Prussian war, the third Congress was not held till 1873, when a successful meeting took place at Vienna, again contemporaneously with a Universal Exhibition. The veteran pathologist Rokitsansky was the president on that occasion, which is memorable in the annals of medicine for the part

assigned to discussions on important hygienic questions, such as the prophylaxis of cholera, compulsory vaccination, etc. At Vienna, also, it was decided that at future meetings there should be three official languages, namely, German, French and English. The fourth Congress was held at Brussels in 1875. The King of the Belgians took so much interest in the proceedings that he was present at many of the sittings. It was at this meeting that the Congress first divided into Sections. The fifth gathering was at Geneva in 1877, under the presidency of the illustrious biologist, Kar Vogt; the sixth at Amsterdam in 1879, under the presidency of Donders, whose death ophthalmology and physiology will long continue to deplore. The next meeting, which was held in London in 1881 marks an epoch in the history of the Congress. Some 3,000 practitioners, including about 1,000 foreigners, took part in it. It was divided into sixteen sections, which held 190 sittings, giving a total of 293 hours of work. The number of communications amounted to 325. The social aspects of the London Congress were not less brilliant than in the amount and quality of its scientific work. Of the meetings at Copenhagen in 1884 and at Washington in 1887 it is needless to say anything more than that, though very successful, they did not eclipse the splendour of the London gathering.

The arrangements for the Berlin Congress have been in the hands of Professors Virchow, E. von Bergmann, Waldeyer, and Leyden, with the assistance of the indefatigable General Secretary, Dr Lassar, and a strong Organising Committee. How well they have done their difficult and important work the following account of the proceeding which promises to be the most successful of all the meetings of the Congress hitherto held will suffice to show. It need only be added that the Imperial Government, the various German States, and the city of Berlin have made the amplest provision for the instruction and amusement of the members of the Congress, and have done all in their power to assure the success of the meeting.

OPENING CEREMONY.

*Professor Virchow's Address of Welcome—Report of General Secretary—Speeches by Ministers and other Dignitaries.*

The opening ceremonies took place in the Circus Renz, a vast circular building resembling the Albert Hall without its upper tiers of galleries. The Carlstrasse, in which it stands, was richly beflagged, and guarded by troops of mounted police. The short avenue leading to the principal portal was royally decked with Venetian masts bearing wreaths and festoons of laurel, and two mighty gilded tripods on lofty pedestals, and an inscription, *Universi Orbis Terrarum Medicos Saluamus*, gave a classical air to the festal decorations. As one entered the hall, the scene was dazzling. Daylight was quite shut out, and the vast expanse of the amphitheatre was flooded with electric light. Row upon row of ladies and gentlemen many in evening dress, a large number in uniform a few in academic costume, rose close-packed to the roof. The arena, crimson-carpeted, was filled with the accredited representatives of Governments, universities, and medical faculties, and members of the Diplomatic Body. Crosses and orders glittered here and there, and everywhere the dainty golden badge of the Congress, a staff of Æsculapius, caught the light. Facing the chief entrance a vast drop-scene, representing the interior of the Baths of Caracalla, as restored by the

Government architect, Jaffé, formed the background of the tribune. In front of the picture rose a golden throne, whereon sat a colossal statue of Æsculapius, by Westphal. The robes of the presiding deity gleamed white beneath the cunningly arranged electric beams, and his features wore an expression of Olympian calm and benignancy. Beneath the throne an altar-like desk or pulpit gave the orator of the moment the look of a ministering priest.

On the right the elevated orchestra was transformed into a shrine of Athene, surrounded by winged Fames and Victories, and enclosing a stately figure of the goddess, by Giustiani. On the opposite side the Imperial box was adorned in a like manner, but the central object there was a bust of the German Emperor. All round the circle stood antique statues, and shields bearing the arms of the German Kingdoms and States, while from the roof hung gigantic banners of all the nations represented at the Congress.

By 11 o'clock something like 7,000 persons filled the hall, and though the temperature speedily rose to a distressing point, there was no languor in the reception accorded to the President, Dr. Virchow, as attended by a brilliant company of Ministers, university officials, and officers in uniform, he ascended the tribune; and, as one and another of the celebrities were recognised, applause broke forth again and again. Sir Joseph Lister and "Dr. Duke Theodor of Bavaria," with the Duchess, were perhaps the most heartily acclaimed.

Professor Virchow, whose coat was loaded with stars and crosses, took his place beneath the throne of Æsculapius, and in a clear, if not strong, voice delivered his address of welcome.

It was, perhaps, a trifle lengthy and detailed, and as the heat became well-nigh unbearable many of the audience began to discover that cool air and cooler beer were to be had in the endless corridors of the Circus. The orator began by expressing his satisfaction at seeing the large number of distinguished guests who had accepted the invitation of the Organising Committee. All members of the Congress might be convinced that they would be received as beloved guests in the capital of the empire. The German people knew that medicine was one of the most sincere representatives of "humanity," and it was accustomed to see medical investigations and medical practice go hand in hand with each other. The German Emperor was sorry that he had to be absent from Berlin, and was thus prevented from receiving the Congress in person. He had, however, ordered that a member of his family should receive a certain number of members of the Congress. The Imperial Government and the Reichstag has granted a large sum for the Congress, and both the Imperial Government and those of the single German States had gladly taken part in the medico-scientific exhibition held in connection with the Congress. The great evils of mankind—poverty and war—were constantly threatening societies and States; but it was a consolation that both people and Government in Germany were endeavoring to diminish the social evils as much as possible and to preserve peace. Medicine could not interfere much, if at all, in the settlement of social and political questions, and its task was only to repair the damages caused under certain conditions, as by war. Professor Virchow here took occasion to speak of the medico-military arrangements, and said that the German military adminis-

tration would furnish to the Congress the proof that nothing appertaining to the care and prevention of diseases had escaped its attention. In the hospitals as well as in the army schools of instruction, and in the scientific exhibition of the Congress, the members would have an opportunity of seeing all the arrangements for bringing speedy help to the wounded and invalids of the army; and not only to the wounded and the invalids of its own army, for nowhere was the beneficent activity of the Red Cross so much appreciated, and nowhere was it brought into such near and constant connection with military administration as among our colleagues of the army. Nowhere were the humane feelings of the doctor more developed than among our military colleagues. The orator then proceeded to give a sketch of the relations between the civil and military medicine, and laid stress on the fact that the highest task of the International Medical Congresses was to teach all their members and all medical men throughout the world that medicine ought to be a humane science. They one and all gloried in the fact that the great personal sacrifices often made by doctors were frequently not attended with any pecuniary compensation, and the medical men of the whole world were not gathered in such immense meetings to gain personal advantages, to improve their social position, to secure a higher rate of pay and less work, but only to improve in knowledge, to render themselves strong in the power to cure, to render still greater services to their fellow-creatures than before. For this reason the article 3 of their statutes was: "The purpose of the Congress is an exclusively scientific one;" for this reason they refrained from enquiring into the social position of the physician or into the means of improving it, though they deeply felt that social misfortune was sufficiently widespread in the medical profession. The struggle for existence broke the hearts of many, and, nevertheless, when they gathered together, they left family and professional cares at home, and in their meetings only gathered around the flag of science; there they stood in the foremost ranks of the champions of humanity. In all places where this Congress met, in all the capitals of the old and new world, he found the citizens engaged in improving sanitary conditions and bringing them to that level which science required. Professor Virchow next dwelt on the sanitary conditions of Berlin, and concluded with the following words: "Pardon, me, gentlemen, this long digression. You will learn that almost all these great institutions were created at a period in which, in the opinion of many persons, Germany was not occupied with any other thing than with the preparation of new wars. Now, gentlemen, we are sincere friends of peace. We know that peace nourishes and that hostility destroys. We wish to live at peace with the whole world in order to be able to pursue the tasks of science and the aims of humanity undisturbed and after our own fashion. We are happy to see ourselves surrounded by such a vast number of distinguished colleagues, in whom we admit the same feelings exist, and whose co-operation will be a new spur to diligence and assiduity. For this reason I once more heartily welcome you to our city. May each day contribute more and more to promote mutual understanding and friendship among all of us."

Dr. Lassar, the General Secretary, followed with his report. Twenty-five governments, thirty universities, fifty learned societies had sent official representatives. The French Government, he mentioned

with special satisfaction, had requested no fewer than thirty-four delegates to appear in its name, and the Russian Government had appointed no less a dignitary than the General commanding the Army Medical Staff. Military Medicine was represented by sixty prominent officers of different countries. Dr. Lassar further stated that only the titles of the communications announced for the Congress filled up a book of seventy pages, and that more than 700 addresses had already been announced. This number was constantly increasing, and would soon exceed 1,000. Some 2,500 German physicians had joined the Congress, and an equal number from forty other countries were now in Berlin. Every hour fresh arrivals were announced, and the numbers promised to exceed 6,000. Moreover, the meeting was graced by the presence of over 1,000 ladies accompanying the members. The "world oceans" had willingly placed themselves at the disposal of science, and foreigners from Australia, China, Japan, the Cape of Good Hope, the western parts of the Cordilleras, and the far regions of Mexico, had come to the Congress. The largest contingent was furnished by the United States of America, which had sent 500 doctors; then came Russia and Great Britain and Ireland with about 300 each; then Austria-Hungary and Italy. Dr. Lassar went on to say that he could not conclude his report without mentioning a homage which physics had paid to medicine on this occasion. A layman in medical science had occupied himself with a therapeutical problem, and charged his medical representative, Dr. Bayles, to read a paper before the Congress on his experiments bearing on the electro-medical removal of calculous concretions, and the results thus obtained. Other non-medical men would scarcely be listened to, but this one would undoubtedly be heard with pleasure, for his name was Edison.

Dr. Lassar's report was loudly applauded, and then followed a long series of complimentary speeches. The minister Von Botticher, on behalf of the Chancellor of the Empire, bade the Congress welcome in the name of the Emperor and of the Imperial Government. The Prussian Minister Von Gossler and the Chief Burgomaster Von Forckenbeck spoke for Prussia and its capital; and Dr. Grap for the union of German medical associations. Then came short addresses by the medical representatives of other nations. Dr. Hamilton made some inaudible remarks on behalf of the United States; Sir James Paget, received with a thundering "bravo!" expressed the good will of England; Bouchard, speaking in French, was warmly sympathetic; Baccelli speaking for Italy, made an oration in exquisite Latin; Csatory, in German, represented Hungary; Arctæos spoke for Greece, but used the German language; as did also Paschulin, for Russia; lastly the representative of Uruguay addressed the meeting in Spanish.

The confirmation of the election of officers of the Congress was next carried by acclamation, Sir James Paget, Professor Bouchard, Dr. Csatory, Professor Billroth, Dr. Baccelli, and Professor Stokes being chosen as honorary presidents.

A short pause ensued, during which the audience greatly thinned and barely a third of the numbers reassembled to hear the addresses of Lister and Koch.

On the whole, the Tenth International Congress may be said to be the greatest collection of medical men ever brought together. The hospitality and gallantry of the Germans has been equal to the occasion. Entertainments, private and public, ban-

quets, balls, dances, open-air receptions, municipal soirees, and a function known as "a Court reception" at the Potsdam Palace make an unending round of gaieties. The arrangements for the ladies accompanying the members of the Congress are particularly good, and will be worthy of consideration for future meetings of the British Medical Association. The organization for receiving members is carefully subdivided, and is working well under the enormous strain put upon it. Dr. Lassar, the Secretary-General, is an able administrator and unflinchingly courteous, and all the Berlin profession are taking pride in showing how heartily they welcome the medical guests who have accepted their invitation. The weather is fine and not too hot, and the meeting is an unqualified and unprecedented success.

In subsequent pages will be found an account of the general meetings and of the sectional proceedings, which are overloaded with work, most of it good. With the exception of the Congress hunters, who as usual fill the German medical papers in advance with their wearisome prelections, for which, by early prearrangement, they manage in advance to secure space which others disdain to pre-engage, the general quality of the papers is of a high order. The picked men of Europe and of all the continents are here.

The reserved area on the opening day was an interesting sight; the cosmopolitan character of the gathering, the brilliant diplomatic costumes and orders, the doctoral robes (national dress of the Hungarian Delegates) gave a good deal of colour; while the European reputation of those invited to the seats of honour enhanced the interest. There were to be seen from Austria, Billroth, Notnagel, Albert, Meynert, Stork, Winternitz, Kraft-Ebing; from England, Paget, Lister, Acland, Banks, MacCormac, Dick, Notter (delegate from the War Office), Stokes, Grainger Stewart, Hutchinson, Ernest Hart, Sanderson, Lauder Brunton, Ord, MacAlister, Pridgin Teale; from France, Bouchard, Chauveau, Péan, Proust, Ollier, Riceer, Bouchat, Cornil; from Italy, Mosso, Baccelli, Cantani, Golgi; from Belgium, Van Beneden and Thiry; from Holland, Stokvis, Suelen, Rosenstein, Guye, Pekelharing; from Sweden, Holmgren, Axel Key, Retzius; from America, Wood, Billings, Knapp, Senn, Gihon, Jacobs, Osler, Loomis; and from Japan, Mexico, Chili, and all "outer-land" parts, representatives of all degrees. The function was protracted and dull, but grandiose and imposing. Afterwards began the opening of the Sections, when the concourse of eminent atoms which made up this exceptional whole was still more evident, as on all sides men whose names were as familiar as household words to each other and to the world at large were to be seen making acquaintance or renewing friendships, nourished by but few opportunities of personal intercourse.

#### FIRST GENERAL MEETING.

The first general meeting was held in the Circus Renz, under the presidency of the Duke Dr. Karl Theodor of Bavaria. Sir Joseph Lister delivered an address on The Present Position of Antiseptic Surgery, and Professor Koch one on "Bacteriological Investigations." Lister was greeted with prolonged applause, and he had to wait some time before he could make himself heard. At the end of his address the Archduke Carl Theodor shook hands with him and proposed a vote of thanks, which was carried amid loud cheering.

The proceedings of the first meeting were not

concluded till nearly half-past three, having lasted over four hours.

The sections afterwards began their work in the Austellungs-Park (Exhibition Park.)

#### SECOND GENERAL MEETING.

The second general meeting took place on Wednesday. On the platform surrounding Prof. Virchow sat the Honorary Presidents representing the various nationalities, namely, Duke Karl Theodor of Bavaria (Germany), Sir James Paget (Great Britain), and Drs. Grainger Stewart (Scotland), Stokes (Ireland), Billings (the United States), Billroth (Austria), Csatory (Hungary), Crocq (Belgium), Lange (Denmark), Bouchard (France), Rubis (Spain), Bacelli (Italy), Lavista (Mexico), Laache (Norway), Stokvis (Holland), Asaki (Roumania), Sklifassovsky (Russia), Holmgren (Sweden), Socin (Switzerland), Aretæos (Greece), and Guarch (Uruguay).

*Statistics of the Congress.*—The meeting was largely attended, over 3,500 members being present, and the fair sex was also well represented.

The proceedings were opened by Professor Virchow, who communicated to the members the statistics of the Congress. There are, it appears, 5,561 members and 11,161 associates present in Berlin. Of these 623 are Americans, 421 Russians, 353 English, 171 French, 139 Danes, 111 Dutch, 106 Swedes, besides Germans and others, and 1,379 ladies.

*Next Meeting.*—In regard to the choice of the place of the next congress, Professor Virchow stated that, after a long discussion, it had ultimately been decided that the invitation of which Signor Bacelli was the bearer should be accepted, and that the Eleventh International Congress should meet at Rome in September, or possibly at Easter, 1893. St. Petersburg was proposed, but was negatived on account of the persecution of the Russian Jews. Professor Virchow then resigned the chair to Sir James Paget, after which several addresses were delivered.

Professor Bouchard (Paris) spoke on the Mechanism of Infection, and the means of securing immunity.

Dr. Wood (Philadelphia) dealt with the question of *Anæsthesia*.

Dr. Axel Key (Stockholm) afterwards spoke on the Development of Puberty and its Relation to Morbid Phenomena among the Young. He showed that social as well as climatic causes accelerated and retarded this and all other phenomena of growth. The children of the poor, as a rule, developed more slowly than those of the rich, and puberty began later in the former than in the latter, though its conclusion in both cases was synchronous. Dr. Axel Key further showed that children gain more in weight in summer than in winter, and that they are most exposed to disease in the transition period. He drew from the facts he had observed certain very important inferences, deserving the widest attention as regards the necessary organisation of schools.

#### SECTION OF MEDICINE.

*Professor Leyden's Address.*—The section met on Monday, August 4th, for the purpose of constituting itself. Professor Leyden, the President of the Provisional or Organising Committee, in a few appropriate and well-chosen words, welcomed the members. He especially dwelt on the international character of the Congress, with its peace-bringing and humanising influences. He drew attention to

the fact that though medicine was gradually being split up into specialities, yet these, like grown-up daughters, were coming back to the mother, and in this Section, the *alma mater* of the other Sections, the fruit of their labours was made further use of. The advance of medicine had shown them that disease itself must be separated from the body. The object of medicine, however, was not only to recognise the disease germ, its great object was to heal, to comfort and to relieve. He further drew attention to the gradually increasing tendency to treat diseases constitutionally, while in recent times hygienic and dietetic therapeutics was again coming to the front.

*Election of Officers.*—The Parliament Committee, the Honorary Vice-Presidents and Secretaries were then elected, and the meeting adjourned to Tuesday, August 5th, when the regular work of the Section commenced.

*Treatment of Bright's Disease.*—On August 5th the Section met at 9 a.m. M. Lepine (Lyons) and Professor Grainger Stewart opened the discussion on the Treatment of Bright's Disease. Of the other speakers who followed may be mentioned Professor Rosentein (Leyden), Professor Senator (Berlin), and Dr. Aufrecht (Mudgebourg). The outcome of the discussion was that medical treatment could only play a subordinate part, and the best treatment was the dietetic treatment. Milk and low diet were especially recommended by Grainger Stewart, and in giving milk one ought to guard against producing gastric disturbances and constipation. This was the best obviated by giving milk diluted with water, and not in too large quantities. Iron might be given for the anæmia; diaphoretics and tapping were indicated when there was much œdema and dropsy. Professor Rosentein believed that drugs often did more harm than good, and recommended for Bright's disease rest in bed and carefully-regulated diet. Senator mentioned as the drug of which he saw some good results iodide of potassium, which, however, was only indicated in cases of intestinal nephritis which increased arterial tension.

*Treatment of Tuberculosis.*—The subject next for discussion was the treatment of tuberculosis. Dr. H. Weber (London) opened the discussion, and recommended the treatment of phthisis in institutions (Heilenstalten) after the fashion of the English hospitals at Ventnor and in other places. Without underrating the value of a good climate, he believed that proper attention to food, exercise, etc., which could be properly supervised by the medical man, was of the greatest importance. Dr. Weber advocated the establishment of these sanatoria so as to be accessible to the poorer classes, and expressed the hope that the Congress would take the matter up. Professor Leyden followed, and strongly supported the views of Dr. Weber. Dr. Dettweiler who had paid special attention to the subject, followed in the same strain. Dr. Neffzer gave an interesting account of the Hospital for Consumption in America.

*Other Papers.*—In the afternoon several papers were read, including one of Dr. Adamkiewicz, on Intracranial Pressure. His views are well known. Professor Ebsterin and Nicolater demonstrated Renal and Vesical Calculi, consisting of oxamid, albuminous matter, and urine-coloring matter, which they produced by feeding animals with oxamid.

#### SECTION OF SURGERY.

*Professor von Bergmann's Demonstration of his Aseptic Method.*—On Monday, August 4th, in a

crowded theatre, at the surgical clinic in Negelstrasse, at which all the principal surgeons from various parts of the world were present, Professor von Bergmann briefly explained his aseptic method. He stated that for the past two years he had used nothing but aseptic muslin, which is very absorbent, and is sterilized in an apparatus which is steam jacketed, and into which an electric thermometer is inserted. The bandages are kept for half an hour in the steam oven at boiling point, the same method being employed as that which is used by Koch for his experimental pathology. The dressings are then placed in aseptic bags, which are only opened at the time of the operation. The silk ligatures and sutures are prepared in the same manner, and the catgut in an alcoholic solution of sublimate. For the most part the bleeding is arrested by torsion or by catgut. The instruments before use are boiled for five minutes in a 1 per cent. solution of carbonate of soda, where they remain until they are required, when they are taken out, dried with sterilised gauze, and handed to the operator. Should they require to be purified during the operation they are dipped in the carbonate of soda and again dried. This plan ensures not only complete purity but absolute immunity from rust. The patient, before the operation, is purified by washing with potash soap, and rubbed vigorously so as to remove all loose pieces of skin, etc., after which the skin is disinfected with alcohol 40 per cent. solution and sublimate 1 in 2,000. The brushes used by the operator and his hands are sterilised in the same manner as the patient's skin. The patient, at the time of the operation, is placed on a sterilized sheet, and all except the part to be operated is covered with sterilized towels. An operation was performed by the Professor and dressed in presence of the visitors. Such wounds are not touched for seven or eight days. Another patient was shown eight days after operation, and the dressings were removed before the visitors so that the condition of the wound might be exhibited. No suppuration had occurred. Other cases were also shown in which suppuration was present at the time of operation, such as tubercular joints, etc. In these cases the wound is stuffed with iodoform gauze for 48 hours, after which it is closed by sutures. Such wounds also heal readily and without suppuration. As the patients were shown the theatre echoed with applause, and much interest was displayed by the distinguished visitors.

*Treatment of Tubercular Peritonitis.*—On Tuesday, August 5th, Professor König, of Göttingen, read a paper on the treatment of tubercular peritonitis. After giving an excellent account of the diagnosis of the disease, he insisted on several facts, to which he drew special attention. The disease occurred almost exclusively in women and children; out of 137 cases which he had collected, only sixteen had occurred in men. They were all characterised by great fulness of the abdomen from the fluid which it contained, and in most of these there was a very considerable amount of emaciation present; in some, lumps could be detected from the outside. It had been asserted that these cases were not really tubercular in origin, but there was no doubt that they were of this nature. He himself had proved it by the examination of some of the tuberculous masses which he had been able in one or two instances to scrape out. If such pieces as these were submitted to microscopical examination, they would be found to be undoubtedly tuberculous in character, and from their general character and naked-eye appearance, they would undoubtedly be recognised by the pathologist as an example of

miliary tuberculosis. On one occasion he had himself cut out a piece of omentum, and in it were abundant tubercle bacilli. His treatment now consisted in incising the abdomen, washing out as far as possible any tuberculous masses which were loose or could be easily loosened with water sterilised by boiling. Of his fourteen cases, seven remained well now, three had died from causes quite unconnected with the operation, and but one of the collapse caused by the operation itself, whilst he had lost sight of the remaining three. An inquiry into the subsequent history of all the cases of other operators as well as his own would show that the cure was at least fairly permanent. One case, the first ever opened (namely, Spencer Well's case) was well twenty-five years after, and a few others could be mentioned in which a considerable time had elapsed since the operation. In recent times, he ascertained that seventeen were alive one year after operation, thirty more two years after, and fourteen more three years after operation. At present we were not in a position to ascertain the source of infection. He thought in the majority of cases it depended on intestinal tuberculous lesions, and certainly in a great many instances it was the lungs that were the source of infection. As to the *rationale* of flushing the peritoneum in such cases, he was unable to offer any explanation that was quite satisfactory; probably it was to a certain extent due to the removal of the fluid and the consequent starving of the tubercle. Dr. O'Callaghan, of Carlow, Ireland, read a short paper on the same subject, in which he recorded the results of some eight or ten cases. He drew attention to the satisfactory character of the operation. He dwelt on the difficulty of diagnosis, and advocated a small incision into the abdomen in all doubtful cases where the abdomen was ascitic without good cause, and did not rapidly yield to medical treatment. The introduction of the experienced finger enabled a diagnosis to be readily made, and was far better than a leap in the dark with a trocar. In one of his cases, too, he had found the tubercle bacillus, so there could be no doubt of the tuberculous origin and nature of these cases.

#### SECTION OF PATHOLOGY.

The programme of the Pathological Section was one which promised to be of great interest, and it has completely fulfilled what was expected of it. Besides numerous papers, there were three discussions. One on the White Corpuscles (Leucocytes) and the part played by them in Tissue Formation, was introduced by Professors Ziegler, Marchand, and Grawitz. The second discussion on Lesions of the Myocardium was introduced by Professor von Reckinghausen and Professor Greenfield. The third discussion was on Tuberculosis, by Professors Rafick, Rollinger and Heller.

*Leucocytes in Tissue Formation.*—The discussion on Leucocytes was introduced by Professor Ziegler, on Monday, August 4th. The points raised by him may be stated shortly. When new tissue is being formed in a pathological process, it has always been a question whether it is formed by the development of the migated leucocytes or by the cells proper of the tissue. Some pathologists ascribed all the new formation to the leucocytes, some to the cells of the tissue, while others consider that both kinds of cells develop into the new formation. Professor Ziegler's inferences may be stated in the form of paragraphs: 1. In many morbid processes which result in tissue formation the growing tissue contain numerous leucocytes which come from the

blood; these form an integral part of granulation tissue. 2. The cells forming the new tissue are not the leucocytes, but cells which are formed from the tissue cells, and which in an early stage of their formation are capable of changing their position in the tissue, that is, they are capable of combined movement. 3. The leucocytes take no active part in the formation of new tissue. 4. The multinuclear leucocytes which are present in growing tissue are for the most part taken up and destroyed by the developing cells of the tissue; these leucocytes are, in fact, the food of the growing cells. 5. The mononuclear leucocytes pass into the multinuclear form, and are then destroyed by the tissue cells. Professor Grawitz agreed with Dr. Ziegler in so far that he considers that the mononuclear leucocytes, when they become multinuclear, take no part in the new tissue formation; but in acute inflammation of connective tissue there are mononuclear cells which it is impossible to distinguish from the migrated leucocytes; and this being so, it is possible that the leucocytes may play some part in the formation of new tissue. Professor Marchand stated that in acute inflammatory processes which resolve, the leucocytes are either destroyed, or they pass back into the blood stream. He agreed completely with Ziegler in considering that in the healing process the formation of the new vacuolar connective tissue is due to the recently-formed cells of the tissue. The same holds good for inflammation of surfaces, as in the organisation of a thrombus, for example. As the newly-formed tissue cells closely resemble the leucocytes, Marchand would reserve the name "wandering cells" for the latter; or a better name would be "exudation cells," while the tissue cells would be called "tissue-forming cells" or granulation cells (*Bildungszellen*). Where there is prolonged destruction of the normal tissue formation, the tissue-forming cells either die or they become giant cells.

*Pathogenic Microbes.*—On August 5th the morning sitting of the Section was devoted to papers dealing with bacteriological subjects. Some of the points raised were of great interest. MM. Cornil and Babes read a paper entitled *Des Associations Bactériennes dans les Maladies*. This is a suggestive subject, as it deals with the condition where two or more organisms are present in the disease. Their presence complicates the investigation of the disease experimentally. A simple example may be taken in the presence of an acute abscess due to the staphylococcus *dyogenes aureus* in a patient suffering from tubercle (due to the bacillus tuberculosis). Sometimes the organism which is inoculated after the first has established itself has not time to act, even if it is pathogenic; it thus generally becomes attenuated. This association the author divided into several classes, the chief of which are the following: The two microbes present may be both pathogenic and belong to closely allied varieties or to different varieties. An example of the latter condition is found in the streptococcus and bacillus which have been isolated in diphtheria. Also there may be a septic or a pyæmic organism present in the body which is primarily affected with an infectious malady. The microbe also which is secondarily inoculated may be localised in its action while the body is itself affected generally by the microbe primarily inoculated. A non-pathogenic microbe may be present with a pathogenic microbe, and may produce modified malady. Or a pathogenic microbe may be present with non-bacterial parasites.

*Actinomycosis.*—The paper and demonstration of

Professor Max Wolff on the etiology of actinomycosis were of importance. Dr. Wolff has succeeded in obtaining good cultures of actinomycosis in agar-agar. The first stage of their growth is in the form of rods, like bacilli. These rods then become elongated into fibres. In the animal disease club-shaped masses are formed, excellent examples of which were shown by Dr. Wolff. The inoculation of the culture in agar-agar of the actinomycosis into the peritoneum of the rabbit results in the formation of rounded tumors varying in size from a pea to a walnut, which show the typical club-shaped appearances of the animal disease. These club-shaped masses are then developed from the rods and fibres of the culture in agar-agar. Herr Gross (Cracow) followed later with a communication on the successful vaccination of actinomycosis in the anterior chamber of the rabbit's eye. This paper was interesting in connection with Dr. Wolff's. The case was one of actinomycosis in man, the tumour being situated in the mammary region, and attached to the ribs. It was punctured, and a few drops of blood only were obtained. This blood contained the rod-like forms described by Wolff as occurring in the agar-agar culture, and although Gross was not able to obtain an artificial culture, inoculation into the anterior chamber of the rabbit's eye produced a definite tumour with rosette forms. The eyes were shown, and presented an extremely inflamed appearance. The tumour was definite, and, in one case as large as a sixpence and about one-eighth of an inch thick.

#### SECTION OF PHARMACOLOGY.

The first meeting was held on Monday, August 4th, for the purpose of appointing officers, and Dr. Lauder Brunton was elected one of the Vice-Presidents. The early hour at which it was held prevented a large gathering, but the second meeting on Tuesday was largely attended, Schimideberg, Binz, Feihavc. Kobert, and many other German pharmacologists to be present, as well as a large contingent from other countries.

*Spermin.*—The first paper read was by Professor Pohl, of St. Petersburg, on Spermin. Schreiner many years ago discovered that certain crystals found by Charcot and others in the semen consisted of an organic base, spermin, united phosphoric acid, and Laderberg and Obel two years ago stated

that it is identical with ethylenimin  $\begin{matrix} \text{CH}_3 \\ | \\ \text{CH} \end{matrix} \text{NH}$ , which can be made by warming ethyldiamin. Pohl has extracted spermin from an emulsion of the testical of young animals. He describes it as a colourless, tasteless syrup, capable of forming salts with acid, and showed crystals of the phosphate and hydrochlorate. He affirms that spermin slows and strengthens the heart's action, and stimulates the nervous and genital systems. He suggests the odor of castorein and musk may be due to the presence of ethylenimin.

*Caffein.*—Professor Petrescu, of Bucharest, who has devoted much attention to the study of caffein, gave reasons for believing that under some conditions it should be given in much larger doses than have hitherto been used. He had given 60 grains daily with advantage; especially must the dose be large, if it be required to influence the heart muscle. In commenting on this paper, the President remarked on the advantage which would accrue if the effect of varying doses of the older drugs were carefully investigated, instead of so much attention being directed to the new medicaments.

Papers were read in the section by Paulson, of Christiania, on the Poisonous Properties of the Liquid Extract of Male Fern; by Plugge on Andromedoloxin; and Corput on Poisoning by Phosphorus.

*Chloroform.*—The discussion on chloroform, to be opened by Dr. Lauder Brunton, was deferred until Wednesday, in order that it might take place in conjunction with the Surgical Section.

#### SECTION OF OPHTHALMOLOGY.

*Capsulotomy.*—On Monday, August 4th, the scientific work of the Section was introduced by Professor Knapp (New York) with a paper on Capsulotomy. All methods were objectionable except that of peripheral section and subsequent secondary operation. The latter was quite harmless, and alone able to effect a permanent cure. The old vertical incision in the capsule left a cicatrix, and so did free scraping of the capsule, while partial removal with forceps, with or without previous capsulotomy, was either successful or dislocated the lens, and causes loss of vitreous. MM. Dufour, Wickerkiewicz, Gayet, O. Haab, and Professor Schweigger spoke, and Professor Knapp replied. The discussion showed that every method had its advocates and its detractors.

*Cataract.*—Dr. Vignes (Paris) read a paper on operations for secondary cataract, and exhibited a new scissors for dividing secondary cataracts. Dr. Chisholm (Baltimore) presented a communication on the after treatment of cataract operations by isinglass plaster, the second eye being uncovered. Dr. Roosa observed that the method was neither novel or useful. Drs. Fuchs and Greening also spoke.

*Trachoma.*—On August 5th a discussion on trachoma took place, in which Drs. Raehlmann, Schmidt-Rimpler, Ivan Burnett, Chibret, Liebrecht, Sattler, Logetschnickoff, Goldzieher, Wickerkiewicz, Heisrath-Konigsberg, Cohn, Knapp, Hirschberg, and Van Millingen took part. It seemed to be generally admitted that the principal disposing influences in the production of trachoma were race, climate, and hygienic conditions, some races and some districts being remarkably free from the disease, and the upper classes everywhere generally exempt.

*Contagious Conjunctivitis.*—Dr. Weeks (New York) read a paper on the pathology of acute contagious conjunctivitis.

*Prophylaxis of Blennorrhœa Neonatorum.*—Dr. Karl Grossmann (Liverpool) spoke on the prophylaxis of blennorrhœa of infants, and proposed three resolutions. 1. Each midwife ought to be instructed during her time of apprenticeship about the symptoms and treatment of infantile ophthalmia. This ought to be notified on her certificate. 2. In every case where the signs of an inflammation of the eyes occurs during confinement, the midwife should be compelled to give notice to a medical man (in case of the poor, to the parish doctor) or some other authority. 3. In case the midwife omits any of these points, her certificate should be withdrawn or a fine imposed. The Section was unanimously in favor of the above propositions, but it was thought wiser to leave the regulation of such matters to the authorities of each separate country, and not to come to any resolution on the subject.

*Latent Strabismus.*—Dr. Gradle (Chicago) exhibited an ingenious instrument for determining the angle in latent strabismus, and Dr. Berry (Edinburgh) showed a stereoscopic phenomenon, and Maddox's device for determining the point of

equilibrium of the ocular muscles. In the subsequent discussion, Jewal stated that astigmatism was usually the cause of asthenopia and latent strabismus, and Roosa asserted roundly that muscular insufficiency had no existence, but was always an effect of astigmatism. Landolt, Hirschberg, and Steevens protested against these views, and asserted their belief in pure muscular asthenopia.

*Other Papers.*—The following papers were also read:—1. M. Valude: A Pathogenical Study. 2. Dr. Schneller (Danzig): Contribution to the theory of squinting on the basis of Anatomico-pathological Researches. 3. Dr. Landolt (Paris): The determination of the Prisms in Ophthalmological Practice. 4. Dr. Swan M. Burnett (Washington): A Metric System of numbering and measuring Prisms with exhibition of an instrument for setting Prisms.

#### SECTION OF LARYNGOLOGY AND RHINOLOGY.

On August 4th an introductory address on the progress of Laryngology since the Congress of 1887 was given by Professor B. Frankel (Berlin), the chairman of the organizing committee for the Section. The constitution of the Section was then proceeded with, Professor B. Frankel being elected President, together with numerous honorary presidents for the different countries represented at the Congress.

*Ozæna.*—The formal business was followed by several very interesting papers on the nature and treatment of ozæna.

*Diseases of Accessory Cavities of Nose.*—On August 5th papers were read by Professor Schech (Munich) and Dr. P. McBride (Edinburgh) on the Diagnosis and Treatment of Diseases of the Accessory Cavities of the Nose, and the latter showed a photoscopic tub, which he had found to add materially to the efficacy of Professor Hering's through-illumination method in diagnosing empyema of the antrum. Dr. Volsen (Frankfort) gave a demonstration of a method of illuminating the frontal sinuses with a view to diagnosis of suppuration in them. Professor Hering also exhibited a modified form of his antral illuminator adapted for the frontal sinuses.

*Deviations of Nasal Septum.*—Dr. E. J. Moure (Bordeaux) and Dr. Hartmann (Berlin) read papers on Deviations and Spurs of the Nasal Septum. The former described an electrolytic method of dealing with these when causing nasal obstruction, and the latter showed a series of preparations illustrating the mode of development of these septal irregularities.

*Cancer of the Larynx.*—At the third sitting of the Section in the afternoon Mr. H. T. Butlin (London) read a paper on the Diagnosis and Treatment of Cancer of the Larynx, in which he compared the results of thyrotomy, partial excision, and total excision for this disease, and dwelt especially on the careful selection of cases for operation and the means of warding off the complications which have hitherto been so disastrous, especially the securing of asepsis locally and the keeping clear of the air passages. Papers on the same subject then followed from Drs. J. H. Bosworth (New York), Neumann, Pienazek, Stork, Chiari, etc.

#### SECTION OF PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY.

The opening meeting of this Section, under Professor Dubois Reymond as President, on Monday, August 4th, was of a formal character, for the purpose of electing the Committee and arranging the dates for the various papers and demonstrations.

In view of the experiments and demonstrations,

the Section met in the Physiological Institute in the Dorotheenstrasse, and not in the Ausstellungs-Park, where all the other Sections (except the Pharmacological and Odontological) meet.

*Election of Officers.*—The following officers were elected: *President*, Dubois Reymond, Berlin. *Vice-Presidents*, Newell Martin, Baltimore; Bowditch, Boston; Burdon Sanderson, Oxford; Stirling, Manchester; Charles Richet, Paris; Chauveau, Paris; Albertoni, Bologna; Mosso, Turin; Exner, Norway; Hering, Prague; Danilewsky, Charkow; Alex. Schmidt, Dorpat; Halmgren, Stockholm; Hammarsten, Upsala. *Secretaries*, Heymans, Berlin; Langlois, Paris; Shore, Cambridge; Waller, London; Munk, Berlin; Ewald, Strassburg.

*Nutrition of Medulla Oblongata.*—On Tuesday, August 5th, Prof. Adamkiewicz (Cracow) read a paper on the Nutrition of the Medulla Oblongata and its Centre (with demonstration). He said the chief vessels are constant in position and in corresponding situations at different sections of the medulla. The vessels entering the anterior fissure break up into a plexus of vessels in the substantia gelatinosa centralis, and from this the vessels radiate out into the grey matter. The hypoglossal nucleus is very richly supplied. This is the case also with the nuclei gracilis and cuneatus and the tubercle of Rolando. These all receive blood from a fringe of vessels passing through the white matter on the surface.

*Muscular Contraction and Thermogenesis.*—Dr. Chauveau (Paris) read a paper on the heat produced by muscular contraction. His chief point was that the production of heat, when a muscle contracts, is proportional to the extent of the contractions. In the discussion that followed, Von Frey (Leipzig) said he had found that with artificial circulation in a dog's muscle no simple relation existed between the heat developed and the work done. Dr. Rosenthal (Erlangen) said that when very small doses of strychnine were given the amount of heat developed was increased, but no simple relation was found between the amount of heat developed and the work done.

*Respiratory and Cardiac Rhythm.*—Dr. Meltzer (New York) presented a communication on the rhythm of respiration and heart's action. As the result of his experiments he considered that the varying results obtained by stimulation of the vagus on the respiratory rhythm depended largely upon the strength of the stimulus applied. Dr. Rosenthal (Erlangen) expressed the belief that the varying results were due rather to the way in which the vagi and laryngeal nerves were dissected out, so as to avoid an inflow of the stimulating current from one to the other.

*Law of Growth.*—Dr. Bowditch (Boston) read a paper on the law of growth, studied by Galton's method of percentile grades. He stated that the period of maximum growth, which occurs just before puberty, takes place earlier in children in the higher grades (the taller children) than in those of the lower grades. In the 90 percentile grade this maximum is at 14, in the 70 percentile grade at 15 years of age. This is true alike for height and weight. In girls the period of maximum growth occurs earlier than in boys, so that at a certain age girls are heavier and taller than boys. This female superiority occurs earlier in the higher percentile grades, but the superiority in height is not so great as in the lower grades. The reverse is the case as regards weight, the female superiority being more marked in the higher than in the lower grades.

*The Cervical Sympathetic and the Epidermis.*—Dr.

Arloing (Lyons) read a paper detailing his experiments on the connection of the cervical sympathetic nerves with the secretion and with the evolution of the epidermis. As the result of his experiments he found that there was a modification of the epidermis at the tip of the nose and round the eye after unilateral section of the sympathetic in the neck. Pilocarpin caused a larger secretion of the lachrymal gland on the side of the divided nerve. The author considered that inhibitory fibres for the gland ran in the cervical sympathetic. Professor Heidenhain (Breslau) said that the greater secretion on the cut side could be explained by the change in the circulation and the dilatation of the vessels, which assisted largely the action of pilocarpin.

*Muscular Exhaustion.*—Dr. Mosso (Turin) gave an account of his investigations on exhaustion. Experimenting with the gastrocnemius of man, he obtained different curves of the contraction after fatigue, dependent, apparently, on the development in minute quantities of some poison in the blood, and not on changes in relative quantities of oxygen and carbonic acid, or in the reaction.

At the afternoon meeting the following demonstrations and experiments were shown:

*Innervation of the Heart.*—Dr. Francois-Franck (Paris) presented a communication on external cardiography applied to the study of the heart's innervation and to cardiac poisons. In this experiment the pulsation of the ventricle and the changes of volume of both the auricles in a dog were simultaneously registered. He also showed that the auricles continued to contract during the vagus arrest of the ventricles.

*Regeneration of Frog's Brain.*—Dr. Danilewsky (Charkow), in a paper on regeneration of the cerebral hemisphere of the frog, showed that frogs which had been allowed to live six or eight months after removal of the cerebral hemisphere exhibited small white masses growing from the portion of the brain left. The new tissue consisted probably of nerve cells.

*Other Papers.*—Dr. Haycraft (Edinburgh) demonstrated the formation of Casts in Celloidin of Muscle Fibre of a Crab. The cast showed the same microscopical appearances as the fibre itself. Professor Von Frey (Leipzig) showed Hearts of Dog and Man hardened in diastole and in systole, showing the form of the cavities and orifices in different stages and the arrangement of muscle fibres. Dr. Sigmund Mayer (Prague) read a paper on the Stopping and Restoration of the Blood Current in the Head. He showed that in the rabbit, if the carotids and subclavians be ligatured and artificial respiration maintained, in some four minutes the muscular movements of the head are destroyed, while those of the rest of the body are maintained—in fact, that the condition of a dead head and live body is obtained.

[To be continued.]

Dr. A. P. Chadbourne (*Bos'ton Med. and Surg. Journal*, June 26th, 1890) thinks that alkaline intravenous injection in diabetic coma will be likely to give the patient a few hours of complete consciousness, with the possibility of recovering from this almost hopeless condition, and that the chance of a favorable result is probably better if the operation is done as soon as the first signs of coma have been surely recognized.

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**THE CANADA MEDICAL RECORD,**

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MONTREAL, SEPTEMBER, 1890.

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SHALL CONSUMPTION BE  
STAMPED OUT?

In order to answer this great question let us consider it under three separate heads: 1st. Is it worth while stamping it out? When we remember that more people have died from this disease than from all the plagues, pestilences and famines during a given period, and when we think of the tremendous expenditures of time and money which have been made in order to keep these latter from spreading, there can hardly be any but the one answer to the question whether it is worth while making this fell disease of the lungs as much a thing of the past as we have made cholera and small-pox. The deaths from small-pox in civilized countries have been reduced to almost nothing, while the death rate from consumption for obvious reasons increases with the degree of civilization. The discoverer of vaccination, as one of the greatest benefactors of his race, has been justly overwhelmed with honors and emoluments; how much more worthy of distinction would

be the discoverer of a means of staying the spread of this most fatal of all human diseases.

2nd. Can it be stamped out? To this question we make the same reply as we have already made more than once during the last two years in these columns: consumption can be cured. At the Tenth International Congress recently held in Berlin, Koch, who was the first to discover the germ or bacillus of the disease, and who has been for several years searching for a means of destroying it or rendering it ineffective, made the announcement that he had at last discovered a remedy. But he did not yet feel warranted in giving his results to the profession. We understand that he has found a germicide which will kill tubercle bacilli without killing the patient. Some seem to think, however, that his discovery lies rather in the direction of prevention by inoculation than in that of cure by germicides. For our part, we believe that in lieu of something better we have the means of stamping out the disease already within our reach. But for its application a hearty and entire belief in its infectiousness by dissemination of germs from the respiratory tract is absolutely necessary. If the profession as a body still believes that it is hereditary; or if it believes that it is a nervous disease or a visitation of providence, or that it is due to a "cold settling on the lungs," then it is useless to talk of even checking its spread. It seems so clear that it is a zymotic disease communicated by germs taken in sometimes by the stomach but in the immense majority of cases by the air passages, that we have no patience to argue with those who think differently. The evidence places the matter beyond controversy. Supposing it were possible that the whole profession at once adopted the view that the disease is infectious and that the public was at once taught that sputa and expired air of consumptives should be disinfected, just as much as the clothes of small-pox patients, and suppos-

ing that consumptives themselves could be induced or compelled to be isolated, and that the governments of every land could be sufficiently enlightened to provide comfortable hospitals and homes for consumptives, then when every one who now has the disease shall have passed away, the fell scourge would disappear forever from the habitation of man. As enlightened and philanthropic men let us each do our share towards limiting the area surrounding every known case in our respective localities, and we can thus save thousands from a sad and lingering death.

### THE CANADA MEDICAL ASSOCIATION.

The annual meeting of this association was held at Toronto, on the 9th, 10th and 11th of September, and for several reasons deserves some mention. In the first place, it was far from being satisfactory in numbers. When we consider that it occupies, or should occupy, the same position in this country as the British Medical Association does in England, surely there should be more than eighty members present on the day of the largest attendance. In fact, there were so few members present that it was deemed inexpedient to divide up into sections, as even on two of the days, the attendance was so small that many of those who had prepared papers thought that it was not worth while to read them.

Something must be done to increase the interest in this, the principal medical meeting of the Dominion. One difficulty it labors under is that no matter where it is held, it must be a long distance for the majority to travel. On the other hand, it would give us an opportunity of knowing something more about our own great country. There are many who go to Europe who would spend their time to more advantage in visiting their own native land. Another draw-back is the very ungenerous treatment extended to it by the two railway companies. The secre-

tary informs us that he had the greatest difficulty in obtaining the concession from them of tickets at a fare and a third, while anybody and everybody was buying his ticket at two-thirds of the single fare a few days later on the occasion of the exhibition. Another draw-back to the success of the meeting when held in Toronto, is the existence of the powerful Ontario Medical Association, which meets every year in Toronto, and at whose meetings there are generally two or three hundred members present. Of course, those who attend this meeting do not attend the meeting of the Dominion Association held a few weeks later. Several ways have been suggested for remedying this difficulty, but we can hardly see any practical solution of it, except to hold the Dominion meeting at the same time as the Ontario meeting, when it is Toronto's turn to have it. Another cause of failure which could be easily remedied is the non-adherence to the laws of punctuality and parliamentary debate. The president and secretary of all meetings should be instructed on two or three essential points.

Firstly.—To be there themselves a few moments before the hour on the first day for opening the meeting and to begin proceedings exactly on time. If necessary, the number required to form a quorum might be reduced to three or four, as there is no mistake greater than waiting for the last man to come before beginning the meeting. For in that case there will be no use of the first man coming.

Secondly.—The rule, that no reader of a paper should occupy more than 20 minutes and that no one in discussion should be allowed to speak more than 5 minutes, and that no one should be allowed to speak twice on the same subject, unless in explanation, should be rigidly enforced, without fear or favor. Owing to the lack of observance of this salutary rule one gentleman occupied over an hour in reading reports of cases, while two gentlemen with

short, crisp, and interesting papers, went home without reading them for lack of time.

Thirdly.—The meeting should break up into sections at a fixed hour every morning and afternoon, instead of allowing long rambling discussions at the dilatory general meeting, to use up the whole day.

Fourthly.—Work and not play should be the first order of the day. The social part of the proceedings should be relegated to the three evenings or late afternoons instead of taking valuable time, in which many of the valuable papers should have been read and discussed.

Fifthly.—If a dinner is to be held at all it should be given on the first night and not the last, when many of the members have to leave by the evening train or else lose a whole day from their practices. \*We regret to say that at the Toronto meeting owing to the dinner being held on the last night, there was only one representative of the Montreal contingent able to remain over to it. "Experientia docet sapientiam."

We trust that the secretary for the Montreal meeting next year, may profit by the above remarks.

#### THE TENTH INTERNATIONAL CONGRESS.

We devote considerable of our space in this issue to the report of the proceedings of the most remarkable gathering of medical men that has ever been held since the world began. Although there are some who hold that no real work is done at these large assemblies, we still maintain that they mark the mile posts of medical progress, for the simple reason that the great students and pioneers in research reserve their most important communications for these meetings. While it is true that the work is not done there, but during the three years of practice and laboratory research, the result of three silent years of work are then communicated to the world. Whether this is the case or not we shall

leave to our readers to judge for themselves.

The social part of the proceedings was certainly the most elaborate that have ever been prepared at any of the Congresses. From the moment of their arrival until the hour of their departure the guests, to the number of seven or eight thousand, were entertained in the most lavish manner by the Government of Germany, the Municipality of Berlin, and the Profession of Berlin. The reception in the Rathhaus was one which will never be forgotten by those who took part in it. The large hall and every other room in the entire building was thrown open to the guests. In every room there was a large table loaded with refreshments, and the best of wine was as plentiful as water. The wives of the visiting doctors were taken in charge every day by a committee of ladies, composed of the wives and daughters of the Berlin physicians, and were thus prevented from feeling lonely while their husbands were attending the meetings.

Although there were a great many more present who failed to register, there were 5,737 registered physicians present, made up as follows:—

Berlin, 1,166; Germany, outside of Berlin, 1,752; Austria, Hungary, 262; Great Britain and Ireland, 158; Holland, 112; Belgium, 62; Luxembourg, 2; France, 179; Switzerland, 67; Italy, 146; Monaco, 1; Spain, 41; Portugal, 5; Sweden, 108; Norway, 52; Denmark, 139; Russia, 429; Turkey, 12; Greece, 5; Roumania, 32; Servia, 2; Bulgaria, 5; United States, 659; Canada, 24; Brazil, 12; Chili, 14; Mexico, 7; other countries of America, 30; Egypt, 8; Cape Colony, 1; other parts of Africa, 5; China, 2; Japan, 4; E. Indies, 2; Dutch East Indies, 2; Australia, 7.

Unfortunately, the weather was excessively warm in Berlin at that time, as it was in many other countries; and the buildings for holding the general and section meetings were inadequate for the pur-

pose, either as regards space, acoustic properties, and especially ventilation, which it appears was as bad as could be. This was the more remarked upon, as hygiene is the great forte of German medicine; and it was rather paradoxical to be listening to long treatises on ventilation while one was being suffocated for the want of air.

Virchow was the President, and seems to have given satisfaction, although very few could hear what he said.

Lassar was the general secretary, and from all accounts he seems to have been unable to handle the enormous amount of work which the organization of such a meeting entailed.

Among other things of interest, the drill of the Berlin Fire Brigade was to take place at 8 o'clock on a certain morning, and no physicians present to witness it, although the men were kept awaiting the doctors' arrival until 11 o'clock,—owing to the general secretary having forgotten to announce it. One of the principal objects attained by the meeting was the bringing together of so many members of the profession, which we feel sure does more than any thing else to strengthen it. If there were more social meetings of medical men in every locality, a general improvement in their feelings towards each other would soon be manifested. Several of the English-speaking members were disappointed at their papers not being listened to by the meeting in general. But this might be expected when we consider that over three thousand of those present were German, or from German speaking countries. We would recommend any one attending Congresses in future, intending to read papers, to be particular to read them in the language of the country in which the Congress is held; the next one being convened for 1893 in Rome. The same complaint was made by the Germans and French at the last Congress held in Washington. On the whole, however, we may consider the Tenth International Congress of Berlin a grand success.

## BOOK NOTICES.

JUST READY; A TEXT-BOOK OF PRACTICAL THERAPEUTICS WITH ESPECIAL REFERENCE TO THE APPLICATION OF REMEDIAL MEASURES TO DISEASE AND THEIR EMPLOYMENT UPON A RATIONAL BASIS. By Robert Amory Hare, B. Sc., M.D., Clinical Professor of Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania; Laureate of the Royal Academy of Medicine in Belgium; of the Medical Society of London; member of the American Association of Physicians; Secretary of the Convention for the Revision of the United States Pharmacopoeia of 1890; Physician to St. Agnes Hospital and the Dispensary of the Children's Hospital, Philadelphia. In one very handsome, octavo volume of 632 pages. Cloth, \$3.75; leather, \$4.75. Lea Brothers & Co., Publishers, 706 and 708 Sansom Street, Philadelphia.

The publishers take great pleasure in announcing the early appearance of a new work on Therapeutics, planned on lines which will secure for it a leading position as a text-book and work of reference. The author's large experience in experimental, didactic and clinical work has peculiarly fitted him to produce a volume containing all that is latest and best in the application of remedial measures, and to present this material in a way which will not only impress it firmly upon the mind of the student, but which will also render it of daily service to practitioners by reason of its definite instructions as to the choice of various agents which may be employed. A feature distinguishing this work from all others in its inclusion, within one cover, of a text-book on Therapeutics proper and a text and reference-book on treatment. This latter division occupies at least one-half of the work with clear directions for the therapeutic measures to be employed in any given disease, together with the reasons for choice of drugs according to the varying stages and symptoms. It is unnecessary to enlarge upon the advantage to the physician and student, of having at instant command a statement of the properties of his agents and of the rational methods of using them, each part being written with especial reference to the other. In the portion of the work dealing with treatment, the author has secured the assistance of gentlemen well known in connection with special subjects. Thus, Dr. Barton Cooke Hirst writes upon treatment of diseases of the puerperal state; Dr. G. E. De Schweinitz upon treatment of diseases of the eye; Dr. J. Howard Reeves upon treatment of diseases of the throat and nose, and Dr. Edward Martin upon antiseptics and the treatment of venereal diseases. From these considerations it is easy to justify the confidence with which the publishers look forward to the future of this work.

THE NEW TREATMENT OF PERITONITIS. Lanphear.  
Reprint from Kausaa City Medical Index,  
July, 1890.

REFORMATION IN THE PRACTICE OF MEDICINE BY THE  
DOSIMETRIC METHOD OF PRACTICE. Or the method  
of small doses of the active principles of plants,  
mathematically measured and scientifically  
adapted to the varied abnormal conditions.  
With Biographical sketch of Dr. Ad. Burg-  
graeve, by J. E. MacNeill, M.D.

THE SEWERAGE OF COLUMBUS, OHIO. Address of  
Col. George E. Waring, Jr., at Board of Trade  
Auditorium, Columbus, O., Monday evening,  
June 23, 1890, and Discussion Following.

DOSIMETRY IN COLORADO. By Dr. J. E. MacNeill,  
Denver, Col. Member of the Institut Dosime-  
trique, Paris; U. S. Examining Surgeon,  
Pension Bureau, etc.

DRS. BOURNEVILLE AND BRICON'S MANUAL OF HYPO-  
DERMIC MEDICATION. By G. Archie Stockwell,  
M. L., F. Z. S. (Member of New Sydenham  
Society, London.)

PRACTICAL SANITARY AND ECONOMIC COOKING adapted  
to Persons of Moderate and Small Means, by  
Mrs. Mary Hinman Abel. The Lomb Prize  
Essay. Inscription: "The Five Food Princi-  
pals, Illustrated by Practical Recipes."

## PERSONAL.

Dr. John Elder, B.A. (McGill, '85), of Hunt-  
ingdon, is about to take up his residence in  
Montreal.

Dr. Roddick, who was absent in Europe, and  
unable to attend the meeting, was elected presi-  
dent for next year.

Dr. Laphorn Smith read two short papers,  
which elicited considerable discussion. They  
will appear in another column of this journal.

Drs. Shephard, James Bell, George Arm-  
strong, F. R. England, Laphorn Smith, Birkett,  
T. Rodger and A. Proudfoot attended the  
meeting of the Canada Medical Association.

Dr. James Bell having resigned from the  
office of general secretary, Dr. Birkett was  
elected in his place. He was instructed to write  
to every medical society in Canada, requesting  
it to send representatives to the next meeting.

J. A. Loring, M.D., (McGill, '83), of Chicago,  
was in town for a few days. Since settling in  
the great western city the doctor has received  
the appointment to the eye and ear department  
of the West Side Dispensary of the College of  
Physicians and Surgeons.

Mrs. M. Mills, widow of the late Major Hiram  
Mills, M.D., has been spending a few weeks in

Montreal, the guest of Dr. Reed. She visited  
the Western Hospital, and was much interested  
and pleased with the general renovation now  
going on in the institution founded by the  
Major.

There appears to be a slight feeling of jealousy  
in medical matters as well as in commercial  
matters between the cities of Toronto and Mont-  
real. Several of the doctors in Toronto object  
to the secretary being nominated from Mont-  
real for so many years, forgetting that the treasurer  
has been taken from Toronto during the same  
time.

## NEWS ITEMS.

"Friedrichshall Water has an ancient and  
established reputation amongst the aperient  
springs of Europe. Its vogue is increased by  
the care which is now taken to prevent the  
dilution which formerly occurred, owing to the  
mode of caption, so that it is now possessed of  
a strength some 20 per cent. greater than it  
could formerly claim. It has recently been  
carefully studied and warmly recommended by  
Professor Nothnagel, whose high clinical au-  
thority establishes anew its claims to favour."  
British Medical Journal, August 23, 1890.

During his stay at Homburg the Prince of  
Wales is living, as usual, at the Villa Impériale.  
His Royal Highness's life is most regular. About  
seven o'clock in the morning he goes to the  
spring, which is a few minutes' walk from the  
house, where he finds the Duke of Cambridge  
and the Duke of Teck, besides a curious crowd.  
He drinks two or three glasses of water, and  
then walks up and down among the many  
guests, listening to the band. At nine o'clock  
he returns to the house and breakfasts on the  
verandah, after which he reads the newspapers  
until ten. Lying on the chair beside him are  
always to be seen numerous pamphlets, some  
French works on strategy, and a huge pile of  
Blue-books. From ten until one the Prince  
works. At one o'clock he lunches, usually at  
the Park Hotel, but sometimes, though less  
often, on the terrace of the Kurhaus. After-  
wards he drives in the mountains or has tea on  
the balcony. At 7 he dines with about half-a-  
dozen guests, on the terrace of the Kurhaus,  
while the band plays in the Kurgarten Pavilion.  
After dinner, about nine o'clock, the Prince  
and his guests go down to the Kurgarten to  
listen to the concert, sometimes seated in one  
of the first rows of chairs, sometimes walking  
up and down. At eleven the Prince returns  
home. He seldom goes to bed later than mid-  
night. He looks exceedingly well, and every  
one is enchanted with his simplicity and kind-  
ness. Before going to bed the Prince takes one  
or two glasses of Apollinaris water with lemon  
juice.