

not be regarded as perfectly conclusive. For these higher dilutions the time limit should be extended to two hours.

6. Intensity of reaction in a given serum should be estimated by determining the degree to which it may be diluted without losing its power of giving a decided reaction, both as to agglutination and loss of motion.

7. The intensity of reaction shown by the same serum is influenced by the age, condition and virulence of the test culture and by the composition and reaction of the culture medium. For purposes of comparison the sensitiveness of the test culture should be taken into consideration.

8. The evidence so far recorded establishes that the reaction may be delayed or occasionally may not be obtained in cases of genuine typhoid infection; and also that it may be exceptionally present in non-typhoid cases, though not in an intense degree.

9. In investigating exceptional and contradictory results the following circumstances have to be considered: *a.* The uncertainty of clinical diagnosis. *b.* The absence of bacteriologic or other confirmatory methods of diagnosis during life, giving decisive negative results. *c.* The possibility of overlooking typhoid infection even postmortem, in the absence of characteristic intestinal lesions where a very thorough bacteriologic examination has not been carried out.

10. The modifying influences mentioned above suffice to explain the divergencies existing in the reports of different observers. Without being absolutely infallible the typhoid reaction appears to afford as accurate diagnostic results as can be obtained by any of the bacteriologic methods at our disposal for the diagnosis of other diseases. It must certainly be regarded as the most constant and reliable sign of typhoid fever, if not an absolute test.

N. B. The above summary, while expressing the general consensus of opinion brought out during the discussion on serum diagnosis before the Section on Practice of Medicine of the AMERICAN MEDICAL ASSOCIATION, does not claim to represent exactly the individual views of any one of those who took part.

W. H. WELCH,	E. B. BLOCK,
WYATT JOHNSTON,	H. M. BIGGS,
J. H. MUSSER,	N. S. DAVIS, JR.,
R. C. CABOT,	M. W. RICHARDSON,
S. S. KNEASS,	J. B. HERRICK,
A. C. ABBOTT,	A. R. GUERARD,
J. M. SWAN,	A. P. OHLMACHER,
	Committee.

NEUROLOGIC PROGRESS IN AMERICA.

Presented to the Section on Neurology and Medical Jurisprudence, at the Forty-eighth Annual Meeting of the American Medical Association, at Philadelphia, Pa., June 1-4, 1897.

BY C. H. HUGHES, M.D.

ST. LOUIS.

America has contributed much to the creation of modern neurology, especially to neuriatry or clinical neurology. By the term neurology I include normal neurology and abnormal neurology, which I term neuriatry, and psychology and its opposite morbid aspects psychiatry. In this great historic city one of its most honored names in medical and political history, Dr. Benjamin Rush, was the pioneer psychiatrist and neuriatrist¹ (if you will permit the coinage of this word) of the century. The consideration of mental aberration received much attention at his hands. It was here that insanity first had a hospital set apart to its victims, and inebriety was treated as a disease under the name oinomania. This great physician and statesman made a study of alcoholism, its causes and consequences and boldly proclaimed it the drink disease in advance of all the world, just as Ephraim McDowell in Kentucky had boldly cut into the abdominal cavity and made the first successful laparotomies, thus opening the way to the greatest of the present life-saving triumphs of modern surgery, as he had also opened the way for that great declaration of

¹ I certainly think the time has come for the invention and use of this term. A term I have employed for many years in my lectures, explaining its derivation and necessity.

principles that made this a free independent and invincible nation.²

No record of American medical progress, no tribute to American medical glory is complete without Pennsylvania, and no literary monument commemorative of the the profession's grandeur and honor could stand whose pedestal is not placed in this city of medical greatness and brotherly love. He not only took a seat in the Continental Congress and made a preliminary draft of and signed the final Declaration of Independence, but he laid the foundation, with his eminent colleagues, broad and deep for the first, and still living and vigorous, American medical college. But he did more in neuriatry than I have mentioned. He recognized the neuropathic diathesis which he called the "phrenitic predisposition," "a union of diffuse morbid irritability involving the nerves and that part of the brain which is the seat of the mind," and he notes the disposition and capacity of certain lunatics to simulate sanity for a purpose. He also notes how the incipient delusions of the insane are mistaken for the cause and relates a case of delusional mental infidelity in a woman "of great medico-legal significance" (*op. cit.*, p. 44). He recognized and named a phase of affective or moral insanity before the term had been invented in what he called the lying disease.

Rush's definition of illusion, "a waking dream," is the briefest on record, and his amplification of it, as "a false perception, in the waking state, from a morbid affection of the brain," is perhaps the best on record. His presentations of the morbid aspects of love, grief, joy, fear, anger, reverie, the moral faculties and, in fact, of all the passions and of the morbid state of the sexual appetite, are unique and advanced for his day; described in 1793 a sexual pervert who answered the doctor's question as to desire and excess thus: "*Dixit per annos tres, quinque vices, se coitum fecisse in horis viginti quatuor, et semper semine injecto,*" antedating the records of Arnold, Krafft-Ebing and others on this subject.³

He was familiar with sexual tabes dorsalis, hypochondriasis, etc., and from 1804 to 1807 records four cases of madness due to onanism. He took the psycho-somatic view of insanity, such as the best alienists hold today, saying that "did cases of madness reside exclusively in the mind, a sound state of the brain ought to occur after nearly every death from that disease," whereas he knew of "but two instances upon record of the brain being found free from morbid appearances in persons who have died of madness."

Here is sound modern psycho-pathology and a correct psycho-somatic conception of the nature and definition of insanity such as we hold today. He denied that insanity was "an ideal disease" and asserted that "epilepsy was a bodily affection."

He had a correct conception of aphasia as a brain trouble, though he neither knew its precise seat nor its name as we call it today. Although he believed too much in venesection, as we believe too little, his

² Though not germane it is a source of professional pride to note the historic fact as a "member of the provisional conference of Pennsylvania and chairman of the committee to which was referred the great question whether it had become expedient for Congress to declare independence," he made a "report which was adopted and sent to the Congress the same day." This was a "most animating document, most probably written by Rush, as he was chairman of the committee and ever ready with his pen." The whole committee consisted of himself and Col. James Smith, and "included all that has been so much praised in the declaration attributed to Thomas Jefferson, of which it might appear to have been the protocol" (Stone's "Eminent American Physicians and Surgeons," p. 437). Rush also went into the Continental Congress, knowing he was to vote for independence, for he was elected to fill a vacancy created by the resignation of a member who declined to remain and vote for separation.

³ Vide p. 348, "Diseases of the Mind," Philadelphia, 1812.

therapeutics for acute violent mania, venesection, solitude, seclusion and rest, acts of justice and a strict regard for truth, "everything necessary to their comfort and every promise made to them faithfully performed," is good *fin de siècle* psycho-therapy, except that we have therapeutic substitutes for blood-letting not known to this archiater in physiologic medicine. He was the American pioneer in the modern management and treatment of the insane and the world's pioneer in correctly understanding and providing for the inebriate as a brain-damaged man. He was the world's champion of the morbid inebriate's rights and demanded for him hospitals for treatment like other sick persons. "They are as much objects of public humanity and charity as other people," he said (*vide op. cit.*, p. 267). He invented the tranquilizing chair as a more humane substitute for the straight jacket, and his law of kindness with his patients is now the modern rule of action for all hospitals for the insane. Rush's record might be further extended, but enough has been said to name him among the immortals in medicine and philanthropy as he is among statesmen. His name was not born to die whether Congress builds or neglects to honor Washington with his statue.

Surely the profession of America and especially of this great city should be proud of having had in its ranks this far-seeing philanthropic physician.

Before leaving this subject we here note the fact in parenthesis that Robley Dunglison, also a Philadelphian, in earlier editions of his classic medical dictionary, has informed us that such a nervous condition as nervous debility existed and even gave us the name of neurasthenia with the long accent on the i.

The first systematic treatise devoted exclusively to the medical jurisprudence of insanity in any language was written by the friend and the benefactor of my youth, Dr. Isaac Ray of Philadelphia, a work still recognized as high authority in American and foreign courts. Ray's exposition of the clinical features of insanity are clear and concise. His delineations of its affective forms have never been surpassed, while his pleas for justice to the insane have been so masterly and forceful as to markedly modify the practice of American courts in the direction of greater humanity and justice to the mentally maimed than prevailed before his day. He so amplified and emphasized the definition of Andrew Combe: "A prolonged departure without adequate external cause from the natural modes of thought, feeling and action of the individual," as to make it plain and effective in many celebrated cases of lunacy inquiry before American courts and juries. His clear-cut description of morbid mental character as shown in the Parish and Angell will cases, the Hinchman and Bernard Cangly cases, and the trials of Rogers and Winnemore won him undying forensic fame as a faultless psychiatrist in court, while his analysis of Shakespeare's delineations, his illustration of the insanity of distinguished writers and of King George III.; in short, every chapter in his contributions to mental pathology prove him to have been the peer in power of psychologic analysis of the mind diseased, of any alienist of his day. His treatise on mental hygiene for youth further confirms this opinion, and I had opportunity in his later lifetime to personally observe his clinical ability as a very Corypheus in practical psychiatry as I, as a guest, walked the corridors of Butler Hospital with him

while he filled the place of my friend, Dr. Sawyer of Butler Hospital, then absent in Europe. Both are jewels in psychiatry's crown. Ray was the author of "The Propositions," a set of rules and regulations for the government of hospitals for the insane, which, like his little treatise on the good superintendent and the good attendant, were never equaled before and have not been surpassed since.

Since Ray, Galt, Stearns, Aul and Gray, Godding, Spitzka, Hammond, McLane Hamilton, Fisher, Webber and Folsom have made valuable contributions, also Storer and Mann, and I myself have added a few monographs, but none have surpassed or even equaled the great leader whose mortal remains lie buried in Greenwood, while immortal memories stretching over the world of psychologic science, center at his tomb.

Before passing on I stop to note the most philosophic treatise on pseudopia since "Dendy's Philosophy of Mystery," or "Brierre de Boismont's Hallucinations" appeared, and far more scientific, namely, "Visions: A Study of False Sight" (pseudopia), by Edward H. Clarke, M.D., of Boston, written, like the memoirs of General Grant, Napoleon and Thomas H. Benton, while fighting malignancy, marching remorselessly and resistlessly to inevitable victory. In this book, written in 1877 and dedicated to Dr. Oliver Wendell Holmes, the author's anatomic, physiologic and pathologic basis of cerebral visions still holds to a very considerable extent with the profession and though not wholly novel at the time, no work up to that date with which I am familiar, had so fully or so clearly presented the subject.

We go back now to an earlier date to find in neurologic annals the distinguished name of Dr. Amariah Brigham, first of Vermont, later and finally of New York, and his two treatises, the one on "Mental Cultivation and Excitement," in 1845, the other on "The Brain and Nerves," show how early and forcibly American attention* was drawn to neurology as a proper and imperative study. In an inquiry of 227 pages, "Concerning the Diseases and Functions of the Brain, Spinal Cord and Nerves," published by George Adlard, New York, in 1840, by this author, is contained a great many valuable clinical contributions to psychiatry and neurology, which have not been duly credited to him. He was the first alienist to look upon masturbation in certain cases as the result and not the cause of insanity, contrary to Rush.

The power of expectant attention and self introversion is most intelligently presented by him under the head of "Effects of Mental Attention on Bodily Organs," giving clinical illustrations of dyspepsia, melancholia and fever thus induced and of cures effected. His original view of dyspepsia as a nervous breakdown, I believe to be the most tenable view of the subject in the face of extensive clinical observation, as I have elsewhere noted.⁴ He noted cases of hysteria in the male and elucidated the subject, as well as of chorea, tetanus, hypochondriasis, delirium tremens, etc. His conceptions of the nature and causes of neuralgia were nearly up to the present date. He understood epilepsy about as well as we do today and enjoined that "the brain and nervous system of those who die of epilepsy should be examined with great care, and whenever opportunity presents should be compared with those who have never been affected with that disease." He had advanced knowledge re-

⁴ Vide Address on Medicine, American Medical Association, at San Francisco, 1894.

specting the relationship of the vagus nerve and sympathetic systems. Discussing a case of suicide in a case of recurrent delusional insanity, which, on post-mortem examination, showed "upon the nervus vagus, or pneumogastric nerve, of the left side, just before the recurrent is given off, a fixed hard jagged body about the size of a kidney bean or small wart composed of calcareous matter," he says: "When we consider that the nervus vagus rises in the medulla oblongata, but is chiefly distributed to the great organs not under our control, and that it communicates with almost the whole of the ganglionic nerves, we may form some idea of the irritation and disturbance produced in the digestive, sanguiferous and sanguific organs by a jagged calcareous mass implanted, as it were, into one of the most important nerves of the great vital viscera!"⁵ How like a modern neurologist he speaks! But hear him further. Concluding an article on the great sympathetic nerve and diseases and autopsic morbid appearances connected therewith, with regret at the paucity of knowledge of its functions, he says: "We know . . . enough to convince us that they (its functions) are important" and "we can not but lament its condition is so little regarded in disease and in postmortem examination."⁶ Tilt could talk no better. He discusses focal lesions of the brain and of all of the cranial nerves in a most intelligent manner for his time; gives a case of traumatic aphasia without, of course, having a name for it, and a case of bullet wound of the corpus callosum from Hennen with apparent recovery, but subsequent death from a bout of drinking with the wounded soldier's comrades. But we can not follow this interesting pioneer in neurology further. From what we have thus far taken from this author we are well prepared for such up-to-date expressions as appear in the preface to Brigham on the brain, notwithstanding they were spoken fifty-seven years ago. "The study of the human brain yields in utility and dignity to no other. It is the study of the most important part of the organism, of that portion for which all the others seem to be created. It is of the highest philosophic interest from the connection of the nervous system with the manifestation of mental phenomena."

"From the general diffusion of this system and its known uses we should expect it to have great influence in disease and that, as intelligence and mental cultivation, the excitement of the feelings and passions, all of which affect this system, increase, that an increase of nervous diseases and new affections of this system should be observed." And this we find to be true. Apoplexy, palsy, inflammation of the brain, dropsy of the head, insanity, etc., are far more common now than in past ages and are most observed in countries where there is the most mental excitement. We also now witness forms of nervous diseases or affections of the brain and nerves that were nearly unknown half a century since. Enjoining a more accurate knowledge of the anatomy of the brain and its connections, he regrets that "generally diseases of the nervous system are not thus investigated," and complains that "attempts to elucidate the diseases of the spinal marrow by autopsic examination are quite rare and those of the ganglionic system still more so." "Every one knows," he continues, "that certain symptoms indicate disease of the brain, or its membranes, or nerves, but until quite recently, and now almost generally, physicians rest satisfied

with merely knowing that disease is located somewhere in the skull, but we should certainly strive to know more than this. . . . Few physicians are satisfied with merely knowing that a patient has some disease within the abdomen or thorax; they seek to know what particular organ is affected and what tissue or portion of the organ is diseased. . . . We have but to pursue the same course as regards diseases of the nervous system," etc. "This field of investigation is indeed very great and will require for a long time many laborers, but ultimately, I apprehend, will richly reward those who cultivate it."

The object of his work, he tells his readers in his preface, "is to call attention of practitioners of medicine to the importance of the nervous system; and to persuade them to embrace every opportunity to study its functions and diseases," which have "vastly increased with the increase of civilization and now constitute a far greater proportion of the diseases of mankind than in past ages and consequently demand far more attention."

Here was the neurologic pathfinder who blazed the way through the unknown forests of neurology for an army with torches and banners whose bright lights have since illumined the world. By these early lights we now see why it is that American neurology has so many brilliant and sturdy devotees and contributors like its emblematic statue of Liberty, to enlighten the world. If nervousness is, as our neurologic cousins across the water assert, the American disease, it had American discoverers, and the name of George M. Beard is immortal as a later pathfinder in neurology and neurology. His untimely death was indeed a great loss to the world and that part of the world in which we delve.

His treatise supplemental to "Neurasthenia" entitled "American Nervousness," and the "Scientific Basis of Delusions" and other contributions which go to make up the pedestal of his fame, are noted elsewhere.

M. Gonzalez Echeverria, whose work on epilepsy with anatomico-pathologic notes, original plates and engravings, first appeared in 1870, had about as thorough a clinical knowledge of epilepsia as any writer of his time, and basing his views on clinical observation and the experiments of Kussmaul and Tenner, "that sudden arterial anemia of the brain, as also Faradization of the cervical sympathetic nerves which determines permanent spasms of the blood vessels, gives rise to epilepsy," he maintained that epileptic convulsions are likewise induced, as well as "when the blood rapidly assumes a venous character."

Kussmaul and Tenner's experiments, in addition to those of other physiologists, establish the chief share which the sympathetic has on the determination of spasms and confirm Brown-Sequard and Vander Kolk and he maintained that the seat of epilepsy "the *nodus epilepticus* is in the medulla oblongata, with a material modification in every case." The over-excited action of the "ganglionic cells of the medulla controlling the vasomotor elements and nutrition," were to him the seat and cause, the invariable and necessary element, of the epileptic paroxysm which he says, "may well occur without muscular spasms." Notwithstanding the exception taken by Vander Kolk to Echeverria, "cerebral anemia is among the very initial phenomena of the epileptic paroxysm."

Though the exclusive medulla oblongata origination of epilepsy is not now tenable and cortex or Jackson-

⁵ P. 222. ⁶ P. 197.

ian epilepsy is a proven fact, yet the vasomotor spasm view of this author has not yet been overthrown and his "Discussion of the Modern Doctrines of Epilepsy" is still critical and classical in the light of further and later discovery.

Next upon the scene appear in paths to American Neurologic glory William A. Hammond, Weir Mitchell, H. C. Wood, Seguin, E. C. Spitzka, McLane Hamilton, James G. Kiernan, Chas. K. Mills, J. J. Putnam, Isaac Ott, Charles L. Dana, R. W. Amidon, M. Allen Starr, J. K. Eskridge, S. V. Clevenger, B. Sachs, Daniel R. Brower, Harold N. Moyer, Frederick N. Peterson, William Fuller and a host of others whose names may come to us as we proceed, and their work appear in the supplement to this paper and in the future historian's pantheon of America's neurologic gods.

Hammond, by his indefatigable zeal and captivating style of writing, gave an impetus to neurologic medicine whose wave is still felt in the profession. In 1867, shortly after his retirement from the surgeon generalship of the United States army, he founded and for many years maintained the *Journal of Psychological Medicine and Medical Jurisprudence*, a high grade quarterly periodical which was promptly accorded and always held front rank in the literature of neurology.

In the second volume, the dynamometer and dynamograph are for the first time, in this country at least, illustrated and elaborately described by Dr. H. In this volume Hammond maintains that chlorosis is a disease of the nervous system. In this volume also appears a unique presentation of the subject of "Carnomania" by Charles F. Taylor; the "Microscopical Appearance of the Brain and Spinal Cord" by J. G. Webber of Boston; "Historical Considerations Concerning the Properties of the Roots of the Spinal Nerves" by Austin Flint, Jr.; Roberts Bartholow, then of Cincinnati, and E. C. Seguin have separate articles on "Aphasia;" T. Edwards Clark handles the subject of "Animal Magnetism;" Hammond, "The State of the Mind During Sleep;" "Organic Infantile Paralysis," S. Henry Dickson;" "The Legal Consequences of Insanity," Horatio R. Storer; "The Law of Rape, Suicide and Insanity," by T. Edwards Clark; Hammond, "Epilepsy Due to Cerebral Anemia;" Nathan Allen of Lowell, "The Law of Human Increase, or Population Based on Physiology and Psychology;" "Statistics of Opium poisoning" by Alonzo Calkins of New York; "An Improved Pocket Aesthesiometer" by Hammond, besides an interesting chronicle in each number of the world's contributions to psychiatry, neurophysiology and neurology. This ably conducted and invaluable journal was continued for years.

Hammond's classical works on "Diseases of the Nervous System," "Insanity," etc., are too familiar to the neurologic world to require elaborate portrayal here, even if we had the space and you the time for the record.

Hammond's early impress on American neurology, as it is upon the literature of medicine, is indelible. His original description of athetosis alone is an addition to neurologic discovery, as are Weir Mitchell's on "Erythromelalgia" and the cremaster reflex that have stood the crucial test; and I think I may likewise modestly claim something for the virile reflex and its clinical and medico-legal value when it shall have been further studied. The difficulty of eliciting it is its chief obstacle to acceptance, but it is an undoubted

clinical fact of great value in diagnostic neurology.

Hammond inspired a host of younger men to follow his footsteps. In January, 1874, under his inspiration the first number of the *Chicago Journal of Nervous and Mental Diseases* was started by the lamented and talented J. S. Jewell and his able associate H. M. Bannister; the first article of the first volume being an original lecture on the "Pathology of the Vaso-motor Nervous System" by Jewell, who had produced the same at a lecture in the Chicago Medical College. These lectures were continued through this volume. The articles, selections and annotations were of a high order. This journal was temporarily suspended at the death of its talented and cultured senior editor, but soon revived again and brought out in New York, where it continues to appear as a monthly of no mean merit under the editorial management of Dr. Charles Henry Brown and an able corps of well-known collaborators.

In January, 1880, my own journal, the *Alienist and Neurologist*, first appeared in St. Louis. It has never missed an issue since its first number and we continue to do business at the old stand and on the same principles of progress; regarding a proper understanding of the nervous system, anatomic, psychiatric and neuriatric, as the chief end of man in medical research and practice.

Antedating all of these periodicals, we must not omit mention of that staid and valuable old neurologic periodical, limited in its scope, however, to the psychiatric side of neurologic medicine, the *American Journal of Insanity*, which, under the editorial management of Richard S. Dewey of Chicago, continues the good work so well begun over a half century ago. In its earlier issues may be found the records of American clinical and forensic psychiatry of most of the old masters, especially of the original thirteen who founded the Association of Superintendents of American Hospitals for the Insane, from which has descended the present American Medico-psychological Association. Their names were: Samuel B. Woodward of Connecticut, first president of the association and originator of the Hartford Retreat; Samuel White, of the same State, and late Professor of Obstetrics and Surgery in the Berkshire Medical Institute, founder in 1830 of a private institution for the insane on the Hudson, and president of the New York State Medical Society; Isaac Ray; Luther V. Bell, of New Hampshire; Charles H. Stedman, of Massachusetts, a graduate of Yale and Honorary of Harvard; John S. Butler, of Hartford; Amariah Brigham; Pliny Earle; Kirkbride; William M. Awl, of Pennsylvania; Francis T. Stribbling, of Virginia; John M. Galt, of Virginia; Nehemiah Cutter, of New Hampshire—all men who made their mark well for the welfare of the insane and the advancement of American alienism.

No country ever had so enthusiastic, united and powerful a phalanx to fight for the rights of the insane. Following in the footsteps of Chiarugi, Pinel, York and Tuke, they bravely fought the foes of psychologic advance to overwhelming defeat and won a lasting triumph of humanity and science in the treatment of American insane.

Weir Mitchell's work is likewise too familiar to us all to need recalling here. He is known out west as "rest cure" Mitchell, and "fat and blood" Mitchell, though he himself at the time he was so christened was as lank and lean as hungry Cassius. But his

fame rests on more enduring laurels, though these were enough. His views of the cerebellum as a re-enforcing ganglion, first offered in 1869, have lately been reaffirmed by Italian physiologists.⁶ Besides what I have already referred to his scientific, to say nothing of his literary work, beginning in 1852 with an investigation into the "Various Forms of Uric Acid Crystals and their Alterations in Highly Acid Urine," and not yet ended, we hope, in his instructive clinic lessons of the present year, is a rich heritage of inestimable value to America's and the world's contributions to medicine. Hysteria, mental aberration, sciatica, neuralgia, neuritis, sleep jerks, ataxia, headaches and apparitions, blood pressure, double consciousness, the reflexes and too many other subjects to here enumerate, make up a volume of titles alone for the instruction of the student of neurology that will perpetuate his name forever.

The elder John K. Mitchell, father of Weir, is claimed by the latter to have antedated Sir William Gull in the description of spinal arthropathies, and the present John K. Mitchell, grandson of the senior, is walking wisely in the footsteps of his father. His recent book, "Remote Injuries of Nerves," is a valuable presentation of the subject highly creditable to modern American neurology. The younger Mitchell has added something worth considering to the classic work of Bowly to the study of section and injuries of nerves and made valuable contributions on ascending and migratory neuritis and the knowledge of contusions and commotions of nerves, and degeneration and regeneration thereof has been advanced in his recent work, "Remote Consequences of Injuries of Nerves."

No history of neurasthenia would be complete without record of the writings of my much esteemed friend, Dr. E. H. Van Deusen of Kalamazoo, Mich., whose observations on this subject made public in 1867, I called renewed attention to in the initial volume of my journal, the *Alienist and Neurologist*, in 1880. Dr. Van Deusen was at the time medical superintendent of the Michigan Asylum for the Insane, and under the caption, "Observations of a Form of Nervous Exhaustion (Neurasthenia) Culminating in Insanity," wrote as follows: "Our observations have led us to think that there is a disorder of the nervous system, the essential character of which is well expressed by the term given above, and so uniform in development and progress that it may with propriety be regarded as a distinct form of disease."

A reference to the article introducing the subject will show also the essayist's view on that subject.

Neither would the subject of inebriety be justly treated without reference to the many American contributions to its literature by Mason, Crothers, Wright and others. Dr. T. D. Crothers has contributed since 1875 over a hundred articles on this subject, his chief elucidations being of alcoholic trance states and the medico-legal aspects of inebriety.

Alcohol and drug addiction and their psychic and physical causes have been studied by Crothers, Mason, Matteson and many contributors for the *Journal of Inebriety*, a quarterly periodical which has long held the uncontested field as the only journal of the world devoted exclusively to this subject. While some of its editors' views have been regarded as too radical, others have undoubtedly been held as advanced. Its clinical records give it just claim to a prominent and

permanent sharer in neurologic progress. Valuable contributions by Gurdon W. Russell, T. L. Wright, Mason, Crothers and others, may likewise be found in the earliest numbers of my own journal. Wright's Treatise on this subject had its inception in the earlier contributions to the *Alienist and Neurologist* as Geo. T. Stevens' later book on "Eye Strain in Nervous Diseases" did. In 1877 Stevens enucleated an eye-ball and cured a case of diabetes and in 1888 another for epileptiform disease with diabetes. Both recovered.⁷ The subject of oculo-neural reflex irritation also first appeared in the (*vide supra*) *Alienist and Neurologist*.

The foundation of the American Medico-Psychological Association which was begun by the original thirteen as the Association of American Hospitals for the Insane and the organization of the American Neurological Society was the beginning of the diffusion of correct conceptions of mental and nervous diseases and their real clinical and medico-legal significance among the general profession and the people. This work has also been greatly promoted by the New York, Philadelphia and American Medico-legal Societies, and sections and societies of psychic research. The clinical lectures of E. C. Seguin gave the world new light on the spastic paralyses and paraplegia, the excellent work of Spitzka takes rank with that of Golgi and others abroad on the fine anatomy of the brain. While Sepilli was working on cerebral thermometry in Italy, Amidon and Carter Gray were engaged in the same work in New York and Bert Wilder has overwhelmed us with an almost entire recast of the nomenclature of cerebral anatomy, some of which has already and much more is destined to be finally accepted by anatomic cerebology.⁸

The late contributions of William Fuller of Grand Rapids, Mich., to the objective study of course cerebral anatomy by his unequalled sectional models and book of plates, as well as his contributions to neurosurgery, tapping the lateral ventricles and exploration for cerebral abscess, the differentiation between coma of compression and reflex arteriole spasm coma, in 1897, his enunciation of the anemia theory of convulsions, his arteriole spasm theory of the treatment of cerebral convulsions and his cranial sections for certain forms of idiocy at an earlier date, certainly entitle him to honorable mention in any record of neurologic progress. He also maintains that keloid is of the nature of neuroma and caused by injury or disease of nerve endings, and he drained off the subarachnoid in a case of convulsions, embarrassed respiration and cerebro-spinal fever in 1880.

In 1879 Dr. C. H. Hughes read before the Missouri State Medical Association a paper entitled "A Clinical Inquiry into the Significance of Absent Patellar Tendon Reflex," showing at that early date that the knee phenomenon was absent in many cases other than locomotor ataxia. Subsequent or simultaneous observations of others, including Landon Carter Gray, Bannister, Erb, Westphal and Tschirjen, have confirmed the fact. The paper maintained that the diagnostic value of the patellar tendon reflex sign was rather in its having been lost in connection with other ataxic symptoms. Dr. Gray was the first to maintain that the nerves involved in the tendon reflex phenom-

⁷ See *Alienist and Neurologist*, 1, Vol. No. 1.

⁸ The old world and ourselves may make wry faces at having to swallow the new nomenclature, as chemistry did a few decades ago, but I think we shall have to come to Wilder's terms, not all of them, but most of them in time. Wilder schemes than his have been made practicable in science.

⁶ *vide American Journal of Medical Science*, Vol. 57, p. 320.

enon belong to a variety not hitherto recognized, viz.: voluntary nerves with involuntary fibers distributed to voluntary muscles, while Gowers at the time objected to characterizing the phenomenon as periphero-central. But it is quite probable that all voluntary muscle innervation has also latent involuntary nerve fiber tracts, and that the involuntary muscles have also latent voluntary fibers, else how are we to explain the phenomena of convulsions and the control of the heart in certain persons, as in the case of Colonel Townsend, who could at will arrest his, and the control of the ears, scrotum, etc., in others.

Peripheral nerve tissue is readily reproduced. Dr. S. Weir Mitchell, in speaking of the pathologic results of neuritis after injury to nerves, long ago noticed an enormous development of connective tissue elements, and Herdman has made some confirmatory observations the present year on nerve repair after injury. But the reproduction of brain substance has been doubted. Al. M. Vitzoy⁹ (Bucharest) found in the brain of a monkey a new formation occupying the back part of the skull, after incision of the occipital lobes two years previously, which he proved to be nerve cells and neuroglia exactly comparable in appearance to those present in normal tissue. Theodore Simon, in the earlier editions of Virchow's *Archives*, reports some cases of what he denominates additional brain growth where new formations were found superincumbent upon the gray matter of the convolutions. In these new growths the gray and white matter were normal in their relations and proportions. But Dr. John B. Gray as early as 1875 (*Transactions of the New York Academy of Medicine*) records two cases of reproduction of brain tissue after brain injury, the length of time in reparation of tissue corresponding with reparation of nerves after injuries. The brain was some twenty days in completing its structure and the convolutional character of the surfaces was distinctly marked.

The case of Phineas P. Gage, who had a part of his left brain destroyed by a premature quarry blast in Vermont, and the projection of a tamping iron through his head, Sept. 13, 1848, subsequently dying on a farm near San Francisco, May 20, 1861, is the most remarkable contribution to the subject of brain tolerance of violence and the possibility of brain repair on record. The iron that went through his head was a cylindrical bar one and one-quarter inches in diameter, three feet seven inches in length and weighing thirteen and a quarter pounds. The bar tapered to a quarter of an inch and was chisel-shaped at one end. It entered the brain in front of the left lower jaw, small end first, and out through the anterior-superior part of the left parietal, destroying the anterior part of the left hemisphere, thence through the corpus callosum anteriorly to the opposite side, extensively involving the margin of the right hemisphere, lacerating the anterior and middle lobes, falx and the longitudinal sinus. Gage recovered by the sixty-second day so that he walked a half mile, and by the seventy-third day so that he went home thirty miles away, the wound being closed on the one hundred and twentieth day. This man traveled, exhibited himself and the bar, acted as a hostler, drove a stage coach in South America and worked as a farm hand, dying of epileptic convulsions after an irregular life, in which intemperance played a part, but without paralysis or mental impairment, nearly thirteen years

after; that is, he had neither paralysis nor mental impairment in the beginning. I was told by Dr. Warren or Dr. Bowditch, at the Boston General Hospital, by whose courtesy I saw the skull and tamping iron in 1868, that Gage was actually intellectually a brighter man after than before the accident. We all know that the skull of this remarkable case is now in the Warren Anatomical Museum and that the man was never lost sight of by American devotees of psychologic and neurologic science from the time of his remarkable recovery until head and history were secure in the depositories of science for the good of mankind. It will always be regretted that the brain could not have been examined microscopically. But psychiatry owes to Boston a debt of everlasting gratitude for what it has preserved in its archives of this case under such difficulties, as it likewise is indebted to the labors of C. E. Brown-Sequard for his contributions to the duality of the brain and the bromid treatment of epilepsy, though an English surgeon timidly antedated him before he took up his abode in Paris, and America antedates the world on the subject of brain and nerve repair and on the subject of neuritis. Kiernan, in 1882, and myself have contributed something to the literature of the duality of the hemisphere of the brain. I saw at the same time another remarkable case in the Boston General Hospital from Findlay, Ohio. I think it was a young man who had blown through his head, through the pontal region, a piece of gas piping about three-fourths of an inch in diameter.

Since Hammond, Allen McLane Hamilton, Landon Carter Gray, Wood, Dana, Ranney, M. Allan Starr and Dercum have given us treatises that compare with the best foreign authors. Dercum has marshaled in his treatise a galaxy of bright particular stars of the neurologic firmament, and Chas. K. Mills has in preparation a volume which we predict will be unsurpassed in any language. These, with Fuller's "Architecture of the Brain" already referred to, Shaw's "Diagnosis," Clevenger's and Moston's, would seem almost to have amply supplied the demand for neurologic literature without the many excellent translations. But the "Twentieth Century Practice," an international encyclopedia of modern medical science by leading authorities of Europe and America, edited by Thomas L. Stedman, M.D., New York city, is before us, and here is what an able reviewer¹⁰ says of one of its volumes to the credit of American neurology:

"Volume ten is devoted to 'Diseases of the Nervous System.' With the exception of Dr. Féréol of Paris, who furnishes articles on hysteria, epilepsy and the spasmodic neuroses, the contributors to this volume are all our own countrymen—the international element is less in evidence than in the preceding volume.

"Dr. Joseph Collins of New York has a long article of 300 pages on the important subject of diseases of the brain, and another on diseases of the meninges. Dr. B. Sachs of New York deals with tumors of the brain, and is sanguine enough to predict even far greater success in the diagnosis and surgical treatment of intracranial neoplasms during the next decade than has been achieved in the recent past. Dr. Charles L. Dana of New York writes on neurasthenia; Dr. H. T. Pershing of Denver on disorders of speech, and Dr. Sanger Brown of Chicago closes this volume of 859 pages with a short article on disorders of sleep."

⁹ American Journal of Medical Sciences, October, 1865.

¹⁰ Boston Medical and Surgical Journal.

Treatises like those of Wilks, Ross, Maudsley, Bevin Lewis, Obersteiner, Hirsch, Erb, Westphal, Edinger, Mendel and others, with Charcot, Sepilli and a host of other German, French and Italian confrères, will ever be esteemed in America, but it is now plain that if cut off from them, American neurologic medicine would not starve for neurologic nutrition in its psychic centers.

But let us proceed. The first medico-legal differentiation between aphasia and aphasic insanity in this or any other country, so far as I can discover, was made by myself in 1879. The first contribution on the "Simulation of Insanity by the Insane" was also written by myself in 1876. In 1880 I wrote on nitrite of amyl in differential diagnosis, on reflex cardiac gangliopathy; in 1881 on consciousness in epilepsy, in 1882 on hyocyamin and something new on the diagnosis of neuratrophia or neurasthenia. I proved the vasomotor contractile power of cephalic galvanization in 1883, maintained and established the curability of certain hitherto hopeless types of epilepsia and showed that the lesion of hemophilia and malarial hematuria is in the sympathetic system. While it is perhaps true that

"To observations which ourselves do make,
We grow more partial for the observer's sake,"

and that we do not wish our work, real or fancied, for the weal of the world forgotten, we must not overlook the fact that we have but meager space here for detail record of any one's work, so I pass over a few dozen of my own contributions to further notice those of your distinguished confrères in neurology, noting some of their work in the context and the remaining in an appendix.

Let us make a short trip to Chicago and dwell a few moments with that living neurologic and psychological encyclopedia, James G. Kiernan. Next to Kohlbaum, he has thrown more light on katatonia than any other writer in the country. His first contribution on this subject appeared in 1877. And next on the study of Shakespeare's psychiatric characters, while his psychology and psychiatry of the prominent characters of history has not been exceeded by John C. Buchnill or William Ireland. His contributions to the study of psychology and psychiatry of genius, and the neurology as contradistinguished from the neuriatry of genius, have been numerous and instructive. Insanity in nearly all of its various forms and in many novel features has been described by his fountain pen of neurologic truth. In 1882 he wrote on the duality of the cerebral hemispheres.

The relation of insanity to crime has been instructively studied by Harold N. Moyer, Kiernan and others in this country; insanity proceeding from the colon by the former and by the lamented Jewell; the medical jurisprudence of railway surgery and shock by Moyer, Clevenger, Outten; the nervous sequelæ of influenza by Moyer, myself and others; a rare form of occupation neurosis by Moyer; also paranoia, nystagmus, acromegaly, infantile chorea, neuritis with knee jerks and nystagmus, exophthalmus with nephritis, etc.

In an inaugural thesis before the American Neurological Society, entitled "A Study of Nerve Cells and their Functions," Clevenger appears to have anticipated the later neuron theory (*vide Chicago Medical Review*, March 11, 1881, and "Comparative Physiology and Psychology," 1885). Fry has made some

recent studies on the same subject. Clevenger's contributions are too numerous for detail here.

Frederick N. Peterson in 1879 made valuable studies on the posterior cerebral lobes in an inaugural thesis, and has kept up his search for new neurologic light steadily ever since. Among his later contributions are his prize essay on "Morbus Basedowii," the principles of craniometry, the study of muscular tremor, cataphoresis, electrothanesia, the colonization of epileptics, deformities of the hard palate in degenerates, the new phrenology, katatonia (with Dr. C. H. Langdon), chapters in Starr's special forms, Starr's children's diseases, Loomis', Bigelow's treatises, and the American text-book of diseases of the nervous system.

The "State Hospitals Bulletin" of New York, conducted by Wise, Brown and Reeves, has thrown a flood of new light over the pathway of our progress, Ira Van Giesen having made some startling revelations from the State Pathological Institute, of which he is director, on the relation of the auto-intoxications to neural diseases, which Nelson Teeter has followed up and elaborated on the autotoxic origin of epilepsy. Teeter's clinical studies on cerebral tumor and Courtney's on pachymeningitis also grace the first number of the first volume.

While trephining for cerebral pressure by fluid was first suggested abroad by T. Clay Shaw in 1889, and performed by Hamson Cripps in July of that year, it was done in this country on the following March by Wagner of Utica.

In 1891 Quincke first performed paracentesis spinalis for hydrocephalus. In May, 1896, Turner performed this operation for general paralysis, and in this country Dr. Warren L. Babcock in July of same year; and these bulletins contain a record of his work. Here, too, we find Hutchings following up the discovery of Huchard on cerebral meiophragias with valuable researches on this condition of arterio-sclerosis associated with certain mental symptoms.

In truth, these bulletins reveal a bewildering scope of work creditable to American clinical psychiatry and neurology, and we can not name all the works save in a bibliography. Here Somer's case of general paresis in its postmortem showing coincides with those of the West Riding Asylum's early reports, and Babcock's moral insanity confirms the contentions of our own earlier days.

Syphilitic hypochondriasis was presented in 1888 by Allen McLane Hamilton, and Carter Gray has lately added to the diagnostic signs of melancholia and intracranial syphilis, and Frank C. Hoyt of St. Joseph, Mo., pathologist to State Lunatic Asylum No. 2, gives us postmortem light on this subject.

Hugh T. Patrick, who is no more of a saint than my friend who dreams over the hookah, though he hails from the saintly city of Chicago, maintains that he has knocked out the Bryson symptom in exophthalmic goiter, showing by a study of forty cases that the diminished chest expansion frequently found in Graves's disease is in no sense pathognomonic, but is simply an expression of the general myelasthenia which he maintains is always present in this affection. An experimental and anatomic study of the course and destination of Gowers' tract by this writer, established the fact the Gowers' antero-lateral tract extends as a separate bundle as high as the corpora quadrigemina and then passes in a retrograde direction to the middle lobe of the cerebellum.

The intimate relation between asthenic and bulbar

paralysis and poliomyelitis, has been shown by this author in a recent report of a case of so-called poli-encephalitis superior and inferior with a careful microscope. Dr. Patrick's studies in trunk anesthesia in locomotor ataxia and syringo-myelia reveals a novelty in symptomatology and he maintains that "spinal irritation" is psychic and not located in the spine.

Frank G. Lydston and Eugene S. Talbot have made valuable contributions to the study of the stigma of degeneration especially in criminology, including regicides, inebriates and aristocratic degenerates. Chicago is a good place in which to study criminology and degeneracy and these gentlemen are well qualified for the work.

M. Allen Starr's atlas of the nerve cells, with the cooperation of Strong and Leaming, though published abroad, is highly creditable, like Fuller's plates and casts, to American neurologic industry, ability and ingenuity. Starr's work on brain surgery has been complimented by translation into the German and French languages. His contribution to the study of tumors of the spinal cord, 1895, and diagnosis of cerebral abscess, 1897, are valuable additions to cerebology and spinology.

We are indebted to Daniel R. Brower of Chicago, for a new surface thermometer, and many studies in medico-legal and traumatic insanity, electro-therapy and spinal neurosis; to Brower, Andrews and Hughes for separate clinical studies of hyoscyamin; to Brower, Clevenger, Kiernan and many others, for records of traumatic insanity; to Brown for the case of Mark Gray (concealed insanity) and Pendergast as a paranoiac, and too many other records and monographs for our space.

Progress in the knowledge of the localization of sensations has been made in this country, especially through the studies of Dr. Charles L. Dana, and the diagnosis of intra-cranial hemorrhage and acute softening, vertigo in temporal lobe lesions; apoplexy, the apoplectic pulse, the cause of perforating necrosis of the spinal cord, its continued sclerosis, the pathology of chorea and paralysis agitans, and studies in alcoholism, acromegaly and the pathologic anatomy of tic douloureux, besides his text book on nervous diseases, now going into the fourth edition, which has features unexcelled in any book published abroad.

The literature of multiple neuritis, paramyo-clonus multiplex, the neuron conception of the nervous system, chorea and Raynaud's disease have been written upon by Fry, of St. Louis. Bauduy has given us a book that ought to be revised; Bremer has added to the literature of microscopic blood states in disease, and Shaw's diagnostic neurology and contributions to morbus Thomsenii, are valuable additions to the literature of neurology, and my own work which appears mainly in my journal, the *Alienist and Neurologist*, founded in 1880, offer to your critical consideration. If I have accomplished but little it is not because my intentions have not been good. In addition to what has already been cursorily referred to, I claim the introduction of chloral hydrate per rectum in puerperal eclampsia, infantile convulsions and obstetric practice, besides early articles on the dual action and vicarious functions of the cerebral hemispheres and lobes of the brain, aphasia, hyoscyamin in psychiatry, moral and other forms, and the definition of insanity. If we take the wings of the morning and fly to the uttermost parts of the earth we shall find the neurologist there, so rapid has been the progress of neurol-

ogy within the short time since it began to take rank as a medical specialty, almost within the average life of a generation of men. But we read and go beyond the confines of our own country to be satiated with the richness of neurologic contributions. An examination of the psychiatric and neuriatric bibliography here appended would make one feel, after what we have thus far gone over, like "gnawing a file and fleeing unto the mountains of Hepsidam" for rest, "where the lion roareth and the whangdoodle mourneth" for our diversion, but we will stop awhile at the Rockies and here we find Pershing perched on the heights of Denver, Thombs lower down in Pueblo, and Jeremiah T. Eskridge, the lion of the tribe of Judah, who went out to Denver with one lung and developed a voice that has been heard in highest and strongest neurologic notes around the world. He has been so active there that the festive bacillus tuberculosis could not find further lodgment on his never-resting cerebral anatomy. I have before me a record of 103 contributions to the literature embracing every aspect of neurologic inquiry from diagnosis, pathology, physiology and treatment to the neural therapy of climate. His articles on retro anterograde amnesia, temporary abulic agraphia, symptoms of speech disturbances as aids in cerebral localization, on brain tumors and glioma, and chapters on insanity and feigned diseases, the latter in the "American System of Medical Jurisprudence," have commanded our attention.

Since American medical literature had its birth here and since we started our incursion here it is mete that we return. There are neurologic giants in Philadelphia whose measurements we have not yet taken. The contributions of Dr. James H. Lloyd embrace brain tumors, syringomyelia, diseases of occupations, the spinal cord in pernicious anemia, Friedrich's ataxia, etc. And here are some of the blows Chas. K. Mills has struck in opening the way to the high pinnacle on which American neurology stands today:

"The Relation of Infectious Processes to Mental Disease," *American Journal of the Medical Sciences*, November, 1894; articles in an "American Text-book of Diseases of Children," edited by Louis Starr; "The Naming Center," *Journal of Nervous and Mental Disease*, January, 1895; "The Localization of Lesions in the Pons and Pre-oblongata," *International Clinics*, vol. iii, fifth series, 1895; "Some Phases of Syphilis of the Brain," *Medical News*, vol. lxxvii, 1895, p. 606; "The Diagnosis of Intracranial Tumors," *University Medical Magazine*, March 18, 1896; "Mistakes in Neurological Diagnosis," *Philadelphia Polyclinic*, July 25 and Aug. 1, 1896; "A Case of Cerebral Abscess Situated at the Posterior Part of the External Capsule," with Dr. William G. Spiller, *Journal of Nervous and Mental Disease*, September, 1896; "Cases of Aphasia Illustrating Especially Disorders of Pantomime," *Philadelphia Hospital Reports*, vol. iii, 1896; "A Series of Reports of Cases from the Neurological Department," *Philadelphia Hospital Reports*, vol. iii, 1896; and "Treatment of Diseases of the Brain," in an American Text-book of Applied Therapeutics edited by J. C. Wilson, 1896.

Dr. Mills has nearly completed the first part of a "Practical Treatise on the Nervous System and its Diseases," a volume of about 1,000 pages, which will be issued by J. B. Lippincott Company of Philadelphia, about the first of October of the present year, and every American neurologist will be proud of it. He is the author of too many neurologic monographs

to be here enumerated; his articles, clinical and pathologic, include reports on many cases of brain tumor; numerous clinical lectures and reports on the affections of the nervous system; articles on hypnotism; medico-legal papers; the Toner "Lecture on Mental Overwork and Premature Disease Among Public and Professional Men," published by the Smithsonian Institution; articles on hysteria, hystero-epilepsy, catalepsy and ecstasy, in the "American System of Practical Medicine;" and in the same work, "Tumors of the Brain and its Envelopes" (with Dr. James H. Lloyd); numerous reports on cases of insanity and papers on cerebral and spinal localization, and "Cerebral Localization in its Practical Relations."

Besides these names those of Spiller and Marinese come to me, but a record of the work must now be deferred.

As I close this report I note that the leading articles in many of the latest issues of the leading journals of the country are on advanced neurologic subjects. Lewellys F. Barker in the *New York Medical Journal*, continues his interesting contributions on the nervous system and its constituent neurons; Allan Bonar in the *Record*, gives us new light on many disturbances in locomotor ataxia, and Henry Hun, who has contributed much in years gone by, gives an instructive study of analgesia, thermic anesthesia and ataxia, from focal softening in the medulla oblongata and cerebellum due to occlusion of the left inferior posterior cerebellar artery, further enlightening us on the course of the sensory and coördinating tracts in the medulla, and Henry M. Lyman of Chicago, in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* for May 22d, elaborates the subject of nervous dyspepsia with proofs of the position taken on this subject (though he does not name them as such) by Brigham seventy years ago and referred to in the beginning of this essay.

During the past year there has appeared in my journal alone advanced neurologic articles on the following subjects: "The Anastomoses Between the Spinal Accessory and the Vagus," by Drs. D. Mirto and E. Pusateri; "Some Current Errors Regarding Insanity," by Dr. Arthur E. Mink; "A Case of Chronic Chorea, with Pathologic Changes Similar to those of General Paresis," by Dr. E. D. Bondurant; "A Note on the Treatment of Sexual Inversion," by Havelock Ellis; "The Advancement of Psychiatry in America and the Relation of Psychiatry to General Medicine," by Dr. Edward Cowles; "Abuse of the Bromides," by Dr. Harriet C. B. Alexander; "An Ataxic Paranoiac of Genius," by Dr. J. G. Kiernan; "Hysterical Analgesia," by Dr. C. C. Hersman; "State Care and State Maintenance for the Dependent Insane in the State of New York," by Dr. Carlos F. McDonald; "Nervous Shock and Disease of the Nervous System as a Cause of Pernicious Anemia," by Dr. James B. Herrick; "Differential Diagnosis of Insanity," by Dr. C. B. Burr; "Observations on the Histologic Development of the Cerebellar Cortex in Relation to the Faculty of Locomotion," by Dr. Aurelio Lui; "Scrivener's Palsy not Solely Pen Fatigue," by Dr. C. H. Hughes; "Are Americans Degenerates?" by Dr. Jas. G. Kiernan; "Sociology and the Realistic Novel," by Dr. Ingeborg Taustrom; "The Surface Thermometry of the Head in Diseases of the Brain," by G. W. McCaskey; "Syphilis as an Etiologic Factor in the Production of Locomotor Ataxia," by Dr. C. Travis Drennen; "The Psycho-Neural Factor in Medical Practice," by Dr. C. H. Hughes; "Psychical Hermaphroditism," by Dr. William Lee Howard; "Preputial Reflex Epileptiform Convulsions, with Report of a Case," by Dr. Alex L. Hodgdon; "Intemperance, Consanguine Marriages and Educational Overpressure, as Factors in the Genesis of Nerve Disease and Degeneration of the Race," by Sir Frederick Bateman, M.D.; "What is Meningitis?" by Dr. W. S. Christopher; "The Case of Sturgeon Young, a Question of Hypnotic Injury and Death," by Clark Bell, Esq.; "Encephalitic and Late Epilepsy," by Dr. J. G. Kiernan; "Psychoses of Old Age," by Harriet C. B. Alexander; "The Auto-toxic Origin of Epilepsy," by Dr. J. Nelson

Teeter; "Insane Heredity," Dr. H. P. Stearns; "Analgesia of the Ulnar Nerve in the Insane," by Dr. Arrigo Giannone; "Report of a case of Brain Syphilis Heroically Treated with Mercury, Followed by a Mercurial Neuritis and Recovery," by Dr. William C. Krauss; "Interaction of Somatic and Psychic Disorder," by Dr. James G. Kiernan; "Imperative Conceptions," Dr. C. H. Hughes; "Defence of Modern Psychiatry," Dr. Wm. Hirsch; "Cyclone Neuroses," Dr. C. H. Hughes; and the Effect of Extirpation of the Parathyroid Glands," by Prof. G. Vassale and Dr. F. General; while the list for the past ten years is a complete record of neurologic progress.

It is thus that American neurology and psychiatry moves up to the mountain top. If you do not concede that it is already there, you see we are getting there. The labors of the past three decades, as well as the work of the pioneers, have won for us a place at least beside our worthy brothers abroad in the world's neurologic progress. We at least are lending a helping hand, of which we need not be ashamed, in making its history. We are moving up with the world and moving the world up with us.

NOTE—The author wishing to make the report complete would be obliged for further facts with accurate bibliographic references.

SOME OBSERVATIONS AND EXPERIENCE IN THE TREATMENT OF EPILEPSY ACCORDING TO THE METHOD SUGGESTED BY DR. FELIX VON NIEMEYER.

Presented to the Section on Practice of Medicine at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, June 1-4, 1897.

BY MATTHEW WOODS, M.D.
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So much has been said and done within the past few years in attempted elucidation and cure of that complex series of phenomena commonly known as epilepsy or "fits," that the preparation of another paper on the subject might be deemed an impertinence, but for the fact that the disease and its treatment, judging from printed current opinion on the matter, is still as much of a problem as it was twenty years ago, and that the treatment I am about to elucidate produces better results than that of any treatment with which I am acquainted.

It is not the intention of this paper, nor is it at all necessary to my purpose to discuss the cause and nature of the disease—a sort of "Pigrogromitus of the Vapians" among diseases, no one seeming to know who or what they were—so of epilepsy. The old theories are familiar enough, yet so little still is known of its etiology and pathology, that correct classification of its various forms is almost impossible. The familiar terms, *grand mal*, *petit mal*, traumatic, central, idiopathic, peripheral, congenital, laryngeal, gastric, Jacksonian, post-paralytic, hereditary, acquired, imbecilic, genito-neuropathic, senile, nocturnal and the like, *ad infinitum*, are mere pedantries of nomenclature bearing but slight relation to its causation factors and throwing no light upon the origin of the disease. One of the many merits of the treatment, according to the effective way suggested by Niemeier, consists in the fact that, combined with various adjuncts, it is about equally efficacious in traumatic and non-traumatic epilepsy, in the variety due to organic disease where the spasm is but a symptom, and also in what may be called true epilepsy, where, as far as we know, the convulsion is the disease.

It is not likely that any one is able to tell much