SOUTHERN

MEDICAL AND SURGICAL JOURNAL.

EDITED BY

I. P. GARVIN, M. D.,
PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS AND MEDICAL JURISPRUDENCE, IN THE MEDICAL COLLEGE OF GEORGIA.

Medical College of Georgia.

"Je prends le bien où je le trouve."

VOL. VI.—1850.—NEW SERIES.

Augusta, Ga.
JAMES McCAFFERTY,
PRINTER AND PUBLISHER.

1850.
Thoughts on the Present State of Medicine. By Charles Todd Quintard, M. D., of Roswell, Ga.

"Scribimus indocti, doctique."—(Hor.)

"We prescribe whether doctors or not."—(Free Translation.)

The present state of Medical Science presents to the lover of the ars divina, an aspect at once encouraging and perplexing—encouraging if he considers the progress it has made within the last few years, by the adaptation of true inductive philosophy to the machinery of the science—perplexing, if he considers the systematized empiricism which invades it, or the futile legislation which hinders it. Time was when fear restrained the hand of ignorance—when the laity contemplated with awe the erudite mysteries of medical knowledge.

Navem agere ignarus navis timet; abrotonum agro.
Non audet, nisi qui didicit, dare; quod medicorum est,
Promittunt medici.

But the superstitious respect for the practitioners of medical art has given way before the utilitarian spirit of our age. The world in its search after facts, exhibits a radical intolerance of abstract enquiries, and hence often mistakes base metal for pure gold. Hence the quackery in politics and religion, as well as in medicine. Pretenders succeed in the ratio of their boldness. Pretenders to medical skill are to be distinguished by the arts they employ to conceal their ignorance, and to impose that igno-
rancé on the unwary. The physician is one really skilled in the
art of healing diseases—one who prescribes a certain method
and certain medicines, because he knows the disease and its
cause—one whose accurate observation and knowledge of the
laws of animal life in its various phases, have taught him the
means of controlling their operation. Let it not be supposed that
we intend to add another to the many essays against quacking,
which, however good in themselves, fail in their object, be-
cause of the credulity of mankind. Nor do we intend to write
a regular essay on medical reform, (watchword of empirics,) nor
would we presume to point out the means of securing a
proper esteem and respect for the great science. This respect
and this esteem will be awarded to it "as sure as wood grows
and water runs." It may be years hence, but it will come "for
a' that." We have jugglers within and without the profession
—quacks who pretend to cure all diseases by the use of one or
two remedies—quacks of the Hahnemann and Von Bonningen-
hausen school, who associate in all the mystery of superlative
incomprehensibility. We have to deal with the aquatic disci-
ples of Priesnitz and the stroking philosophers of the Elliotson
school. These all go to make up the mess of quackery as it
at present exists, galvanized into a life of more than ordinary
vigor; but which, sooner or later, system by system, must de-
compose from the rottenness at its centre. Ages rolled away
while the certain and the uncertain—the true and the probable
were being sifted, and the lines drawn between hypothesis and
fact. Empiricism was the only mode of practice for centuries.
Practitioners used remedies because they had been known to
be effectual in removing certain forms of disease. Nor have
we indeed much to boast of the science of medicine till towards
the close of the 16th century, except, indeed, the works of the
great father Hippocrates, which for their truthfulness, valid
worth, and actual merit, have withstood the revolutions of
centuries. Let us just glance at the history of medicine from
the period when the Aristotelian philosophy was rejected for
the system of Bacon. This taught that the most certain way
of arriving at the knowledge of truth was by making accurate
observations and judicious experiments, carried on by just in-
ductive reasoning and confirmed by other experiments.
It is true, before this time Andrew Vesalius had discovered and corrected various anatomical errors which Galen had made. It is true Eustachius had published his Opuscula Anatomica, and that Dr. Thos. Linacre had translated and published the fourteen books—De Methodo Medendi—and by the assistance of Cardinal Woolsey, had procured letters patent from Henry the VIII, for the foundation of the Royal College of Physicians. Dr. Cains had also published his Ephemera Britannica, but it was impossible for the science of medicine to progress. The practice was still in the hands of ignorant monks, who managed to evade the edicts of the Council of Louis (1139), of Pope Alexander the III, (A. D. 1103; A. D. 1216.) Except here and there a lay-gentleman, whose fancy prompted him to the study, there was really no one who even understood the practice as taught by Galen, and the Alexandrian school, much less any who were capable of detecting the fallacies and errors with which it abounded. Not only did the monks hinder the progress of medical art by the basest tricks, but when one of the laity prosecuted the study in any degree beyond their ignorance, they became fierce in their resentment, and unscrupulous in their revenge. The story of Andrew Vesalius will illustrate the dangers which surrounded laymen who attempted to practice the healing art. Vesalius was born in Brussels, A. D., 1514. After studying the languages and philosophy at Louvain, he went to Paris, and gave himself to the pursuit of Medical science under the guidance of Sylvius. When only eighteen years of age he composed his treatise De Corporis Humani Fabrica, and returing to Louvain, delivered lectures on Anatomy. He afterwards visited Italy, and by his lectures and demonstrations at Pisa, Bologna, and other Italian cities acquired great reputation. These were sufficient reasons for the priests and monks to look on him with an evil eye, but he, understanding their ignorance, not only treated them with contempt, but exposed them. They resolved to be revenged upon him, and either created or found opportunity. While Arclicator to the king of Spain, he attended with other physicians, a gentleman of the royal household, the cause of whose disease they were unable to discover. Vesalius, therefore, obtained leave to make a post mortem. On
opening the body, the monks who insisted on being present, either did, or pretended to see, the breast of the deceased move. He was at once accused of homicide and impiety before the Inquisition of Spain. Nor could the supplications of the king save him from priestly rage and tyranny, until his Aulic Council united their petitions with his, and he was allowed to expiate the supposed crime by a pilgrimage to Jerusalem. From this pilgrimage, made in the height of his fame, he never returned, but was shipwrecked on the Island of Zante, and died there from hunger and hardships in 1564.

Eustachius, a contemporary of Vesalius, could only obtain from the Inquisition a license to publish his Opuscula Anatomica, but not his other anatomical works and tables. Nor was it until 150 years after his death that they were given to the world, when Boerhaave wrote to Dr. Lancicius, the Pope's physician, to solicit an order to search the Registers in Italy to find where Eustachius died, and see, if possible, if the anatomical tables could be recovered. But we need scarcely record these examples of individual persecutions, when we recall to mind the fact that superstition rose to almost as great a height under the shelter of pseudo Christianity, as under the religion of the ancients—that of the Greeks and Romans least of all excepted—we cease to wonder at the slight progress of science, particularly of that science to which "old wives and stores were councillors." Never was the folly of witchcraft in such credit as in the reign of Henry III of France. A magician, condemned to be burned, declared on his examination that there were above thirty thousand of the same profession in France. In the year 1609, six hundred sorcerers were condemned in the jurisdiction of the parliament of Bordeaux, and most of them were burned.* In 1554, Bonner, bishop of London, forbids "a mydwife of his diocese to exercise withcrafe, charmes, sorcerye, invocations or praiers, other than such as be allowable and may stand with the laws and ordinances of the Catholic Churche." And in 1559, an enquiry was directed to be made "whether you knowe any that doe use charmes, sorcery, enchantementes, invocations, circles, witchecrafe, southesaying, or any like craftes or imaginations invented by the devyl."† It were indeed vain to write

* Vide Priesly's Lect.  † 1st Eliz.
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the history of all the superstitions which have clung to medicine, and in the popular mind seem a part of the science itself. Every age has had its own order of quacks, but they and their remedies silently go down in the sea of time. There has hardly ever been an epidemic which has not produced hosts of empirics, and nostrums. At the time of the great plague in London, according to Defoe, incredible quantities of nostrums were sold. "It is incredible," says he, "and scarce to be imagined how the posts, and houses, and corners of the streets were plastered over with doctor's bills and papers of ignorant fellows quacking and tampering in physic, and inviting the people to come to them for remedies, which were generally set off with such flourishes as these, viz: "Infallible preventive pills for the plague," &c., &c. In the space of twenty years, from 1662 to 1682, there were 92,107 persons touched by the King of England for the cure of scorfula—yelept "Kings evil." The royal gift of healing commenced with Edward the Confessor, and was continued to the close of the reign of Charles II. The London Gazette, No. 2180, Oct. 7 and 11, 1686, contains an advertisement stating that his majesty would heal weekly for the evil upon Fridays, and commanding the attendance of the King's physicians and Surgeons at the Meuse upon Thursdays in the afternoon, to examine cases and deliver tickets, and we learn from Evelyn's Diary, March 28, 1684, that so great was the eagerness to obtain tickets that six or seven were crushed to death at the surgeon's door. Every age too has exclaimed at the monstrous evils of quackery; but, cui bono! Has it grown less? We are told not. Since the 17th century, we have had quite as many marvels as before. Some of them have indeed changed names, and that is all. No, not all, for it has become systematized. The world has been blessed with the Tractors of Dr. Perkins, and a Perkinian Institute—the learned Dr. Thompson, whose glory was to have no learning, and whose practice is yet pursued—the almost as great Hahnemann, who proclaimed to the world that his system was the "great gift of God to man." We have had "Natural Bonesetters," and there are still a few of them extant. We have Chrystie's galvanic rings, Old Jacob Townsend's Sarsaparilla. We have All Healing Ointments, Life Bitters, Indian Vegetable Pills, and hosts of
nostrums, id omnes genus. But what must be the end of all these falsities? Can they be put down? Never—cut off one head and two will come in its place. These devil-tricks must indeed have an end, but others will spring up in their places so long as human credulity can be tickled with the straws of quackery. "You take wheat to cast into the earth's bosom; your wheat may be mixed with chaff, chopped straw, dust, and all imaginable rubbish; no matter, you cast it into the kind, just earth—she grows the wheat—the whole rubbish she silently absorbs." So will it be with science—

Quicquid sub terrâ est, in apricum proferet ætas;  
Defodiet, condetque nitentia.

Nature only requires truth, and astrue seeds are sown broadcast, so they will grow, and bear fruit, some an hundred fold, and the rubbish and chaff of quackery will serve only to nourish the good seed. We cannot see that the present age is in any way remarkable for its quackery; but we do indeed consider the progress of true philosophy, and, as a consequence, true science, since the introduction of Bacon's system, unparalleled in any previous age. Sum up all that has been done in science from the days of Galen to the 17th century, and what does it all amount to when thrown in the balance with what has since been accomplished. Is it not true, that very little had been done in the practical departments of philosophy before that time, and is it not quite as true that since then, medical philosophers have ascertained by what the Rev. Robert Hall calls, "a sublime process of experiment and induction," the relation which the corporeal frame sustains to the various objects, both natural and artificial, with which the stores of nature are fraught. That they have extorted her secrets and summoned from the bowels of the earth, and the caverns of the ocean, and from the boundless fields of air, the most powerful antidotes to disease—that they have levied a contribution from all the departments and provinces of nature, and compelled them to yield their service to man in all the varieties of physical disorder to which he is exposed. The effect of Bacon's system was at once to change not only the routine practice of the physicians of that day, but all formulæ of thought, and modes of reasoning. We need only mention the name of Sydenham, whose improvements are said to form an era in the history of medicine, to illustrate the
effect of the newly introduced philosophy. He applied himself to an attentive observation of the phenomena of morbid action and founded his practice on the obvious indications of nature, rather than on any prevalent theory then extant. Indeed he seems to have thrown aside all theory, nor did his mind admit any auxiliary to the exercise of its own observation. According to Boerhaave, he "was the ornament of England, and the Apollo of the art; whom I never consider but my mind presents me with the true picture of a Hippocratic physician." His mind seems to have been incapable of gaining any thing second-hand which it could gather fresh from the reality; and he appears to have had a bold confidence in that wonderful faculty of observation with which he was endowed, and so resolved to use and trust it to the uttermost, unaided and unencumbered by any foreign helps. In 1666 he gave to the profession the result of his observations, in a work entitled Methodus curandi Febres propriis Observationibus Superstructa, which was reprinted with considerable additions in 1675. Among his principal works are Epistolæ Responsoriarum, 1. De Morbis Epidemicis, a 1675, ad 1680; 2 De Lues venereæ Historia et Curatione, 1680; De Pedagra at Hydrape, 1683, and Processus integri in Morbis fere omnibus curandis, published posthumously. He met with considerable ill treatment and opposition, as all innovators on old established systems do, but he nevertheless established for himself a reputation which will be lasting as the art of medicine. Sydenham's mind is not indeed to be taken as the guage of intellectual endowment and capability for medical men, because we cannot estimate the power of observation in the generality by what it was in Sydenham. This would be to take the measure of all mankind by the proportions of a giant, and make the single wonder of an hundred years the common expectation of every day. Nor is this all, for, if the faculty of observation and the power of analogies were developed in each of us in all perfection, we should still require something more. There are objects beyond the reach of observation—objects which are beyond and uncontrolled by the ordinary laws of vital phenomena—and yet the knowledge of these, has, in the progress of our art, come to be considered as essential to the safe and successful practice of physic, as those which
lie strictly within its sphere. This is true of morbid processes in all their variety, as they affect the structure and functions of our bodies. This knowledge must be derived from other methods of research—from anatomy—from chemistry, and from experiment. The effect of the Baconian system was to induce a degree of research and activity in every department of physic. Discoveries were made and useful improvements introduced into the art of medicine, which added new dignity to every one of its branches. Cotemporary with Bacon lived the eminent and ingenious Harvey, who, by observation, experiment and inductive reasoning, discovered the circulation of the blood. At the same time lived Sanctorius, Professor at Padua, who, by a course of experiment which continued some thirty years, shed much light on what before was dark. Dr. Lower wrote on the Heart; Ridley and Willis on the Brain; Glisson on the Liver; Wharton and Steno on the Glands; which were afterwards much improved by Prof. Nuck in his Adenographia et Siolographia; Bruner on the Pancreas; Pequet on the Lacteals, Receptaculum Chyli, and Thoracic Duct;* Leal Lealis on the Spermatic vessels; Drilincourt on the Spleen; De Graafe de Organis Generationis Mulierum, et de Pancreate; Swammerdam de Utero; Malpighius de Glandulis, et de ovo Incubato; Viensens in Neurographia et de novo vasorum systemate corp. Heim.; Haeras and Palsin on the Bones; Gagliardus on the Teeth; Hovius on the Eye; Valsalva, Du Verney, and Shelamere on the Ear and on Hearing; Peyerus on the Intestinal Glands. These all made considerable improvement in Medicine, although they made not much in its practice. From Sydenham we must come down to Boerhaave, who was not less eminent in the profession of Physic than Sir Isaac Newton in Philosophy—only mentioning the names of Ruysche, Morgagni and Albinus—as persons who made important discoveries. An ardent admirer of Boerhaave says that "he was the ablest and greatest Physician that any age has produced since the great Hippocrates; and that Hippocrates and Boerhaave were the two greatest physicians that ever adorned the profession or the world produced."

Boerhaave began his medical education by studying anato-

* Discovered by Eustachius, A. D. 1564.
my, to acquire a knowledge of which he read the works of Vesalius, Fallopius and Bartholine, and attended the demonstrations of Professor Nuck. He read the Greek and Latin writers in succession, and especially the works of Hippocrates, for which he entertained a great veneration. He examined all the theories which has prevailed from that of the great founder of medicine to the "divine Sydenham," and formed from them a theory which, if far from perfect was much less exceptionable than any that had preceded it, and which, when matured, superseded them and became the ruling doctrine all over Europe for more than a half century. But there were others who at this time were assisting in the diffusion of sound and practical doctrines. Stahl maintained that the chief duty of the physician was to watch the healing efforts of nature, to leave the cure of diseases to them, when they seemed adequate to its accomplishment, but to assist them when they were too feeble, and to moderate their violence when they were too powerful. The basis of Hoffmann's doctrine is, that matter is essentially and necessarily passive and inert, and that all its active properties or powers are derived from an immaterial animating principle which is superinduced or added upon it. His observations of the operation and influence of the mind on the body led him to reject both the chemical and mechanical theory as inapplicable to the phenomena of life, and he consequently bestowed all his energies on what he terms vitalism. Hoffmann, who was a close reasoner, endeavored to controvert the theories of Stahl and to exhibit their supposed atheistical tendency. He considered the human body a machine, governed by the laws of mechanics, and put in motion by a nervous fluid, or ether contained in the brain, the nerves, and the blood.

Medicine, he believed, was to be improved, not so much by experience as by the skilful application of mechanical principles, and by the sedulous study of proximate causes. All diseases he held to consist in irregularity of action: when too violent, spasms were produced; when too weak, atony was the consequence. And yet he agreed with Stahl in referring much to obstructions of the humours, particularly in the vena portae; but maintained that they always implied relaxation or atony of the vessels. To this triumvirate, as they have been called, to
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Boerhaave, Stahl, and Hoffmann, pathology and therapeutics owe many of their greatest improvements. The fanciful views of Stahl had the effect of fixing the attention of physicians on a most important branch of the economy, the influence of the nervous system upon the other organs of the body, and its co-operation in the production and cure of diseases, and although we may be tempted to smile at the wisdom Hoffmann ascribed to the ethereal fluid, there can be no doubt that by this very hypothesis he was led to the discovery of the relations which he pointed out between the different functions of the living frame, and the sympathies which are the consequence. Such was the popularity of Boerhaave, so extensive his research, and so erudite in all that appertained to the science of medicine, and the philosophy of his time, that he attracted students from all countries. The majority of physicians having studied under him, or his immediate disciples, were followers of his system. The experiments and splendid discoveries of Haller obscured the brilliancy of Boerhaave's. After the death of Boerhaave, in 1738, Haller published his Prelections with considerable original matter, in six volumes, and in 1747, he gave to the world the first edition of his Primæ Lineæ Physiologia, which rendered Boerhaave's prelections almost obsolete. The innate powers of natural force of the constituents of the body, which had been seen by Glisson and Hoffmann, were examined by Haller with a characteristic acuteness, and the result of his long and well directed efforts, was the establishment of his theory of irritability and sensibility, as specific properties, attached to the muscular and nervous systems. The manner in which Haller conducted his investigations, gave an impulse to science, and was not less important than the actual discoveries which he made. He carefully abstained from all opinions founded merely on speculative grounds, and deduced his general principles exclusively from experiment and observation. The same kind of service which Haller rendered for the science of Philosophy, was performed for that of the practice of medicine by Cullen.

His duties, as a teacher of medicine, led him to review and examine the theories and systems which were then in vogue, and he abandoned, after strict investigations, the humoral doctrines of Boerhave, the "perturbata idea" of Stahl, and the me-
chanical hypothesis of Hoffmann, although he did assent to and adopt some of the fundamental principles of the doctrine of Hoffman, such as those relating to spasms and debility, from which he deduced all the phenomena of febrile disorders. No one can investigate the writings of Cullen without being forcibly struck by the earnestness and sincerity of his searching after truth. He pursued the path he deemed best for its obtainment and while he detected the defects of former hypotheses with shrewdness and sagacity, he proposed his own views with a degree of candor and modesty which tended to render them the more acceptable. Philosophical doubts are inseparable from philosophical research. But the well organized mind of Cullen discriminated much that was true from much that was false, and much that was certain, from much that was conjectural. Still later discoveries in the sciences of chemistry and philosophy, have indeed proved that certain parts of his system are not tenable, and that others require to be considerably altered and modified; but it may be asserted that no one has produced a more powerful and lasting effect upon the state of medical science than Cullen.

When a mathematician arrives, in the course of his reasoning, at a principle so evident that no arguments could either illustrate or enforce it, he knows that his reason can carry him no further, and if he can satisfy himself that the whole investigation is fairly conducted and does indeed terminate in this self-evident principle, he is persuaded that his conclusion is true—that it cannot be false. True science aims at this demonstrative solution—it aims at an analysis of the immensity of facts which flourish in the rich domain of truth. Thus, Cullen, while he exhibited a becoming deference for the wisdom of his predecessors, and in nothing overstepped the boundaries of scientific authority, was nevertheless ever on the alert, for those frequent facts which had never yet been the subject of critical examination. By him, old truths—truths consecrated by the experience of ages—were brought into proximity with the recently adduced facts of his predecessors. These he studied in all the minutia of their relation—not only the relation they bore the one to the other, but to the observation, the experience, and the undoubted accuracy of the philosophers who had gone
before him—and his great merit, and that which entitles him to the admiration and gratitude of posterity, is the sagacity and diligence which he manifested in the description and discrimination of the phenomena of disease. In this talent he may be considered as rivaling Sydenham or any of his most distinguished predecessors, while the recent improvements in physiology and other branches of medical science, gave him advantages which he did not fail duly to improve. His career forms an era in the history of medicine. His "First lines on the Practice of Medicine," are even yet received as a safe guide in the mysteries of the art, although his doctrines, like those of Hoffman, with which they more nearly agree than with those of any other modern author, have become, in the advance of anatomical and physiological knowledge, nearly obsolete. At this period, the progress made in medicine by such men as Gregory, Black, the elder Monroe and Cullen, (who were collaborators in the University of Edinburgh, and who elevated it to the zenith of its reputation) must arrest the attention of every reader of the history of the science. Opinions and theories become more settled as we advance. Truths which had been glimmering in the misty light of hypothesis and superstition, for ages, begin to shine with a pure light and drive away the masses of credulity which had floated over the wit of centuries. The diamond facts with which Hippocrates had engraved his immortality, are re-set and sparkle in the casket of the more revered wisdom of modern times.

[To be concluded in next No.]

ARTICLE XXXIII.

Malarial Fever, the result alone of physical causes. (A chapter from an unpublished manuscript.) By J. C. Harris, M.D., of Wetumpka, Alabama.

SECTION I. Perfectly aware of the difficulties that surround our subject, and knowing that we may talk and write as much as we please about the insalubrity of the air of the maremma, or pestilential vapours, generated in other localities, under varying circumstances of heat and moisture, from organic matters undergoing decomposition, and even being forward arguments
apparently based on experiment in support of our opinions, and then signally fail of success, from the want of accuracy in some even of the minor details, we have been induced (for the purpose of making what has been already advanced more plain) to attempt to show the disease producing power of all of them in excess, with perhaps the exception of *malaria*, thereby giving greatly the preponderance to atmospheric variations over the locality. For this purpose, we know of nothing to compare with the observations made by Lieut. Lynch, in his explorations of the Dead Sea.* Observations, it will be recollected, too, that were commenced and carried out at the peril of life; and amidst the most discouraging circumstances, must be somewhat enhanced in value from the fact that they were made by one who made no pretensions whatever to medical acquirements, and therefore had no preconceived opinions in this particular to warp his account. Notwithstanding, therefore, then, we are told by this truly good man, and more than veteran explorer, that there could be nothing pestilential in the atmosphere of the sea, there being but little verdure upon its shores, and by consequence but little vegetable decomposition to render the air impure; still this very want of learning in the particular already alluded to, rendered him but badly qualified to determine what were really elements and circumstances necessary for the production of disease, and in support of which assertion we herewith submit, carefully compiled from the *narrative*, the following analytical account of the exploration, and in so doing cannot refrain from the expression of the opinion that the account, as a whole, from which the analysis is made, perhaps will scarcely ever be equalled, either as regards accuracy of detail or elegance of style, and in which we are informed that this sea—the creation of God's wrath, together with the whole plain of the upper shore, has probably sunk down some fifteen hundred feet below the original level, with the greatest depression abreast of Wady Shuwier, and that the streams which formerly run through to the Red sea, were thereby barred an outlet, and submerged the plain; the cities of which, from the abundance of bitumen that prevailed, were most probably the theatre of a preceding conflagration. The opinion

* This party consisted of Lieut. Lynch and fifteen others.
that the vale of Siddim was thus submerged, is, we think, very strongly supported by the fact that the soundings made, ascertained the bottom of the sea to consist of two plains, an elevated and a depressed one, averaging, the former 13 and the latter 1300 feet below the surface; through the northern and largest and deepest one runs a ravine, which seems to correspond with the bed of the Jordan to the north, and with another at the southern end of the sea.

But leaving here the study of this part of the narrative for those who may feel an interest in such matters, we will proceed with a description of the sea, and in so doing will merely observe that, from lake Tiberias to the sea, the course of the Jordan, although extremely crooked, is nearly due south; the Dead sea extending down on the same parallel of longitude, and lying entirely between the thirty-first and thirty-second degrees of north latitude, may be described when undisturbed by winds, as a sheet of placid salt sulphureous water of some forty-five miles in length, and varying in width from three to eleven miles, and bounded on the north, north-west and west, at no great distance from its shores, by the high precipitous cliffs and mountains of Jordan, and on the south-east and east by those of the lands of Moab and Ammon, and the recipient at all times, but more particularly during the rainy season, of a large amount of water discharged into it, through the Jordan, the Kidron, the Arnon, and the warm springs of Callirrohoe through the Zerka Main; through this latter next to the Jordan, during the rainy season, is certainly discharged the greatest amount of water.

The saltness and specific gravity of the water was found by experiment to be considerably greater than that of the Atlantic ocean, and on analysis gave as solid constituents in certain proportions, the chlorides of magnesium, sodium and calcium, and the chloride and bromide of potassium, with a small amount of the sulphate of lime; but failed under the most powerful microscope to show any animalcule or vestige of animal matter. Its temperature, as ascertained by a series of experiments made with the self-regeristering thermometer, was found to be at the depth of 1044 feet, 62°—at the surface immediately over it 76°; at the depth of 10 fathom, there was an interruption to the gradual decrease of temperature, by a stratum of cold water, the
temperature of which was 59°; after this, the diminution was gradual. The increase of temperature below 10 fathoms was attributed to the evolution of heat during crystalization: its water, as it mixed with milk, had the color of diluted absinthe, and over its surface hung continually throughout the day, and of various colors, being sometimes blue, purple, or yellow, a thin mist of evaporation.

For the purpose of preventing any unnecessary confusion, we have thought proper, before entering on a topographical description of its shores, to state that the exploring party entered the sea through the mouth of the Jordan at the northern extremity; on the evening of the 18th April, 1848, and after encountering a heavy squall from the north-east, landed and encamped for the night at Ain el Feshkhah, on the north-eastern beach; they then continued their explorations around the north-western shore, to Ras el Feshkhah, and from thence, along the western shore, to Ain Jidy. From this point, on the 24th of April, they crossed over to the eastern shore, and landed on the Peninsula; and after examining its shores, returned again the evening of the same day to the western shore; and from thence sailed around the western shore to Sabbeh, spending the night at Mubughghik; thence to Ras Hish and the extreme south point of Usdum and the sea; thence around the south-eastern shore, landing and encamping on the southern side of the Peninsula, near Wady Humeir; from this place, sounded across, and landed at Wady Muhariwat, on the south-western shore; passed up from this point, April 27th, keeping parallel with the western shore, and encamped for the night on a fine pebbly beach of a spacious bay at the foot of Rubtat el Jamus. From this point, returned to Ain Jidy, remained there through the 29th, and on the morning of the 30th, commenced operations by steering over to point Castigan, and from thence, in a s. s. east direction, landing and spending the night on the eastern shore, a short distance from a shallow stream descending the Wady Beni Hamed. May 1st, completed the topographical sketch of the shore lines of the bay, and verified the mouth of Wady Kerak. May 2d, left the shores of the sea, and visited the walled town of Kerak, returning on the evening of the 3d to the boats, launched the same, and all hands going aboard,
steered down the bay, and landed and spent the night on the Delta, at the mouth of the river Arnon; from thence, they coasted along the eastern shore to the warm springs of Callirrohoe and the Zerka Main; from Callirrohoe, Lt. Lynch crossed over to Ain Terabeh, sending Mr. Aulic with Dr. Anderson to complete the topography of the Arabian shore, and determine the position of the mouth of the river Jordan. This done, they rejoined him at Ain Terabeh, where, after spending twenty-two days and nights upon this sea, they, on the morning of the 10th of May, took up their line of March for Jerusalem.

With this brief outline of the route of the party, marked on the map with red lines, we will be somewhat better prepared to understand the following topographical sketch of its shores. The northern shore* is described as an extensive mud-flat, with a sandy plain beyond, and the very type of desolation, having scattered over its surface in every direction the branches and trunks of trees; some charred and blackened as by fire—others white, with an incrustation of salt—the north-western as an unmixed bed of gravel coming in a gradual slope from the mountains to the sea; and the eastern as a rugged line of mountains, bare, of all vegetation—a continuation of the Hauran range, coming from the north, and extending south, beyond the scope of vision, throwing out three marked and seemingly equidistant promontories from its south-eastern extremity. Their first encampment was pitched in a cane-brake, beside a clear but brackish spring, with a strong sulphurous smell, and near a foetid marsh, the miasm from which was anything but agreeable. Between this point and Ain Jidy, the mountain sides and shores were almost entirely devoid of vegetation, with the exception of a low, narrow plain near Ras el Feshkhab, skirted with canes; from Ain Jidy, to five or six miles north of the salt mountain of Usdum, with the exception of the cliff of Sebleb, which is removed some distance from the margin of the sea, by an intervening delta of sand and detritus of more than two miles in width, there is but little variety in the scenery, and nothing in a medico-topographical point of view worth notice.

† April 26.—Started, and steered in a direct line for

Ras Hish, the north point of Usdum, sounding every few minutes for the ford, stretching out occasionally from the shore line, and returning to it again when the water deepened to two fathoms. At 8.12, stood in, and landed on the extreme point of Usdum. Many dead bushes along the shore, which are encrusted with salt, as at the Peninsula; found it a broad, flat, marshy delta, the soil coated with salt and bitumen, and yielding to the foot.

At 8.30, started again, and steered east s. east, sounding every five minutes, the depth from one to one and three-quarter fathoms; white and black slime and mud. At 9, the water shoaling, hauled more off shore; soon after, discovering a lofty round pillar, supposed to be the identical one into which Lot's wife was transformed for her disobedience, we immediately pulled in shore and landed, for the purpose of examining it. We found the beach a soft slimy mud, encrusted with salt, and a short distance from the water covered with saline fragments, and flakes of bitumen.

* "Intending to examine the south end of the sea, and then proceed over to the eastern shore, in the hope of finding water, we discharged all our Arabs but one, and sharing our small store of water with them, and giving them provisions, we started again, steering south."

"11.28. Unable to proceed any further south, from shallowness of the water, having run into six inches, and the boats' keels stirring up the mud. The Fanny Skinner, having less draught, was able to get a little nearer the shore, but grounded three hundred yards off. Mr. Dale landed to observe for the latitude: his feet sank first through a layer of slimy mud a foot deep, then through a crust of salt, and then another foot of mud, before reaching a firm bottom; the beach was so hot as to blister his feet. From the water's edge, he made his way with difficulty for more than a hundred yards over black mud, coated with salt and bitumen."

† "The southern shore presented a mud flat, which is terminated by the high hills bounding the shore to the southward. A very extensive plain, or delta, low and marshy, towards the sea, but rising gently, and farther back, covered with luxuriant

* Nar. of the Expd., p. 203.† Ibid, p. 204.
green, is the outlet of 'Wady el Safish,—anxious to examine it, we coasted along, just keeping the boat afloat, the in-shore oars stirring up the mud. The shore was full three-fourths of a mile distant, the line of demarcation scarce perceptible, from the stillness of the water and the smooth shining surface of the marsh; on the flat beyond were lines of drift-wood, and here and there, in the shallow water, branches of dead trees, which, like those at the Peninsula, were coated with saline incrustations. The bottom was so very soft that it yielded to everything, and at each cast the sounding lead sank deep into, and brought up a soft, marshy, light-colored mud."

"It was indeed a scene of unmitigated desolation: on one side, rugged and worn, was the salt mountain of Usdum, with its conspicuous pillar, which reminded us at least of the catastrophe of the plain; on the other, were the lofty and barren cliffs of Moab, in one of the caves of which the fugitive, Lot, found shelter. To the south, was an extensive flat, intersected by sluggish drains, with the high hills of Edom semi-girding the salt plain where the Israelites repeatedly overthrew their enemies; and to the north, was the calm and motionless sea, curtained with a purple mist—while many fathoms deep in the slimy mud beneath it, lay embedded the ruins of the ill-fated cities of Sodom and Gomorrah. The glare of light was blinding to the eye, and the atmosphere difficult of respiration. No bird fanned with its wing the attenuated air through which the sun poured its scorching rays upon the mysterious element on which we floated, and which alone, of all the works of its Maker, contains no living thing within it.

"12.21. * In two hours, we were close in with the eastern shore, but unable to land, from the soft bottom and shoalness of the water. At 2.50, a light breeze from west n. west; hauled to the north, towards the base of the Peninsula. A long, narrow, dry marsh, with a few scrubby bushes, separated the water from a range of stupendous hills two thousand feet high. Steering along a low marshy flat, we landed on the south side of Wady Humeir, the most desolate spot upon which we had yet encamped."

Opposite the mouth of the Wady Beni Hamed is quite an

* Nar. of the Expd., p. 205.
extended plain, having scattered over it groves of Acacia, Tamaisk and Osher trees; and on which were found growing millet, tobacco, and some indigo. On this plain, stands the town Megra-ah, and in the near vicinity of which are found the suppose ruins of Zoar.

Besides the deltas at the mouths of the different streams and ravines, and the stagnant pools of water on the northern shore, may be mentioned the small Post Plioceve or Allevium islands, at the mouth of the Jordan, and which are subject to overflow.

Now, when we take into consideration, in connexion with the foregoing account, the fact, that the rivers Jordan and Arnon are continually discharging, through their waters, into this great reservoir, large quantities of organic sedimentary matters, in various stages of decomposition, which are carried and deposited along the northern shore, and at the southern extremity of the sea, by the action of a central current that has always been observed setting south, we cannot be surprised at the result, when we reflect that during the great evaporation consequent upon the dry season, there is always presented to the action of the sun, at the southern extremity, and around the shores, a surface varying from a few hundred yards to several miles in extent, and containing these organic remains under favorable conditions for the evolution of malaria.

Plants, fruits, flowers, grasses, grain and trees, found growing in the immediate vicinity, and on the shores of the sea. Near Ain Terabeh, were found the lily, the yellow henbane, the night shade, the lambs quarter, and a species of kale. On the plain, near Ain Jidy, the rock rose, the common pink, the alleppo senna, the common mallow, and yellow migniotte; on the upper part of the plain, near Wady Sudier, the prickley gherkin, and two patches of barley; and near the north-west of Usdum, a melon, resembling the cantelope, and very bitter. Canes and grasses—the former at many places along the shore, and particularly at the mouths and along the banks of the different rivers and ravines. The dhome or spina christa and its fruit, resembling a dried crab-apple; the fountain of Ain Jidy is concealed in a grove of these. The pistachia, the zamariah, the acacia, the osher, and shurrha, together with a few willows at the mouth and along the shores of the Zerka Main. On the
south-east shore, there were some fields in cultivation, in which
were growing millet, tobacco, and indigo.

Section II.—Meteorological Observations. Temperature.—The thermometer, we are informed, ranged during the
day, in the shade, from 79° to 110°, never falling through the
night below 68°, and on but one occasion, near the upper end of
the sea, during a clear and calm night, as low as this point.
The highest temperature experienced, was from the 1st to the
10th of May, during the explorations around the southern
shores of the sea, the thermometer varying here, in the shade,
from 80° to 110°, and never sinking, during the night, below
74°. It was, during one of these cold nights, at the mouth of
the Arnon, under the influence of a cold north-west wind, that
George Overstock, one of the seamen, had a chill.

Barometer.—As we feel more deeply interested with the
oscillations of pressure, as given by this instrument, on the same
level, than the mean pressure, at different elevations—we ac-
cordingly find these, as given by Lieut. Lynch,* varying from
79.26 to 80.345 cent., with a gradual diminution in elevation
and oscillation, as he approached the heated and varied atmo-
sphere of the southern extremity of the sea.

Dew and the dew-point.—Upon this subject, we are informed
that, "although the nights were mostly cloudless, there was
scarcely any deposit of dew, the ground remaining heated
through the night, from the intensity of the solar rays during
the day." "On the first of May, although the wind was high—
too high to take observations of polaris—the night was sultry,
thermometer 81°, and the dew so heavy as to filter through the
tent awnings and drop upon our faces." This is noted as the
second time that dew had been observed, and each time it had
been attended with a hot wind from the north; the first time
it was succeeded by a sirocco, and the last by a thunderstorm.

For the deposition of dew, we know that the atmosphere must
be either charged to saturation by evaporation, or cooled down
to condensation; and although we have no account of its hav-
ing been charged to saturation more than twice, we have every
reason to know that during the frequent calms, from the rapid

* Report to the Sec'y of the Navy, p. 33.
evaporation that was continually going on from the surface of the sea, that the circum-ambient air must have been loaded with watery vapour, the deposition of which, as dew, was prevented by the frequent hot, dry winds that swept it from the west, south, south-east and east.

Winds.—These were evidently of two kinds, local and general: that the former were no less the result of inequalities in the temperature of the air of the two extremities of the sea, than were the latter of similar causes, on a more extended scale, we have an abundance of evidence; hence, by the rarified columns ascending at the south, currents of warm, moist air were set in motion from the north, but of an entirely different character from the general ones, blowing from the same direction, and coming from the snow-capped summit of Mount Hermon and the Lebanon ranges. Up to April 23d, each day, in the forenoon, the wind had prevailed from the southward, and in the afternoon, until about midnight, from the northward. The last wind quite fresh, and accompanied with a smell of sulphur; after midnight it generally fell calm.

The general winds, that came from the north and north-west, over the sterile plains of Judea, and those from the south, over the desert of Zin, were as completely robbed of their moisture as those that came from the south-east and east, across the great deserts of Syria and Arabia, and over the barren plains and calcined cliffs of Moab and Ammon. These hot, dry winds were always unrefreshing, and, from their low dew-point, must have been exceedingly unhealthy. The approach and effects of a sirocco, at the southern extremity of the sea, is thus described. "Clouds in the east, nimbus seemed to be threatening a gust; presently the light wind subsided, and it became oppressively hot; air 97°; water twelve inches below the surface, 90°; a thin purple haze over the mountains, increasing every moment, and presenting a most singular and awful appearance: the haze so thin that it was transparent, and rather a bluish than a distinct color. Apprehending a thunder gust or an earthquake, we took in sail. At 3.50, a hot, blistering hurricane struck us from the south-east, and for some moments we feared being driven out to sea. The thermometer rose immediately to 102°—the men, closing their eyes to shield them
from the fiery blast, were obliged to pull with all their might, to stem the rising waves, and at 4.30 physically exhausted; but with grateful hearts we gained the shore. My own eyelids were blistered by the hot wind, being unable to protect them from the necessity of steering the boat. After landing, one man mounted spectacles to protect his eyes, but the metal became so heated that he was obliged to remove them. Our arms, and the buttons on our coats, became almost burning to the touch; and the inner folds of our garments were cooler than those exposed to the immediate contact of the wind."

Shortly after the subsidence of this sirocco, saw appearances of sand pits on the surface of the sea, doubtless the optical illusion which has so often led travellers to mistake them for islands. On the next day, from the same cause, the great refraction of the atmosphere, the Fanny Skinner* around the point, seemed elevated above it. Her whole frame, from the surface of the water, was distinctly visible, although the land intervened.

Section III. Having now concluded all that is necessary to be said in relation to the medical topography and meteorology of this most remarkable locality—we come next to enquire, what were the immediate and subsequent effects upon the health of those exposed to its vapours and atmospheric variations. Upon this subject, we are informed by Lieut. Lynch, that there is a tradition among the Arabs that no one can venture upon its waters and live, and that repeatedly were the fates of Castigan and Molyneux cited to deter him from the undertaking. Undismayed, however, by these reports, and knowing no other object than the faithful execution of his orders, fearlessly himself and party at once launched upon its waters; and although we are told that there had been symptoms that had caused him some uneasiness, still, up to the 30th of April, all, with one exception, had enjoyed good health. About this time, the figure of each one had assumed a dropsical appearance: the lean had become stout, and the stout almost corpulent; the pale faces had become florid, and those which were florid, ruddy: moreover, the slightest scratch festered, and the bodies of

*Fanny Skinner and Fanny Mason were the names of the copper and iron boats.
many of the party were covered with small pustules—all had good appetites, and these sores were evidently the result of the greasy acrid water of the sea. Shortly after this, and while the party were asleep, we have the following description of their condition:—“My companions had yielded to the oppressive drowsiness, and lay before me in every attitude, of a sleep that had more of a stupor in it than of a repose. . . . . Some with their bodies bent, and arms dangling over the abandoned oars, their hands excoriated with the acrid water, slept profoundly; others, with heads thrown back, and lips cracked and sore, with a scarlet flush on either cheek, seemed overpowered with heat and weariness, even in sleep; while some, upon whose faces shone the reflected light from the water, looked ghastly, and dosed with a nervous twitching of the limbs, and now and then startling from their sleep, drank deeply from a breaker, and sank back again to lethargy. Subsequently (but after leaving the immediate shores of the lakes) every one of the party were attacked with a fever of a low nervous grade, attended with great exhaustion, and partial delirium, the same which carried off Castigan and Molyneux, and of which Mr. Dale unfortunately died. We are also informed, that of the three thousand Egyptians sent to the shores of this sea, by Ibrahim Pasha, some time during the year 1838, for the purpose of making a settlement, every one of them died within two months after their arrival.

Section IV. Effects of the foregoing facts, as regards the origin of fever, upon the animalcular, vegeto-animalcular and cryptogamous hypothesis.—Aware that it is contended for by philosophers, that the class of infusoria prove life generally diffused, and that under the most powerful magnifying glasses, almost all fluids, and even earths and stones, are shown to possess more or less of it; still, as no animalcula, or vestige of animal matter, could be detected by the most powerful microscope, in the water of the Dead seas, renders it highly probable, nay, almost certain, that nothing of the sort did exist there, or any where else, either in the mud and slime along its shores, or in sufficiently close proximity to the same, as to be brought, through the agency of the dews, within the influence of its life
destroying properties: hence, the vegetable matters entangled with the mud, washed down from the surrounding countries of the different streams, and supposed to contain animalcular life, must have had every vestige of vitality thus destroyed, long before reaching and being deposited at its southern extremity, and along its shores—thus furnishing evidence of the fallacy of the doctrine, alike conclusive, either as regards the animalcular or vegeto-animalcular origin of fever. As regards the other hypothesis, we are informed by Dr. Mitchell, in his essay on the Cryptogamous Origin of Malarious Fever,* that "just on the line which faintly marks the division between the animal and vegetable kingdoms, lie the lichens, the algae, and the fungi: these cryptogamous plants are so closely allied to each other, as to be indistinctly separated by naturalists, some of whom include under one division, species, which are found differently disposed of by other phytologists. Lindly, following the great continental cryptogamists, admits that the location, rather than the structure of these plants, affords a final distinction, and that while the lichens live on dry and scanty soils, and algae in water, salt or fresh, the fungi occupy the intermediate place, loving a damp and unsound or loaded atmosphere, and feeding on organized matter, the vitality of which is gone, or going.

In all of them, the element is a very minute cell, not often distinguishable, when isolated, from the elementary cells of even animal organisms: indeed, some of the confervæ, obviously vegetable in one state of existence, as the anthrodieæ, offer in another the plainest character of animal life, supposing that animal life is to be inferred from motions indicating a well-marked power of volition. Some of the oscillarias have oscillatory movements extremely active and perceptible, and the ulva labyrinthi formis and anabaine, with all the other conditions of a vegetable, have, according to Vauquelin and Chaptal, all the chemical characters of an animal. We have, therefore, chemically constituted plants with animal motions and volition; and those of animal composition, with the exclusive habitudes and structure of vegetables. Now, as regards the animal motions and volitions of the first class, and animal composition of

* Nar. of the Expd., p. 35-6.
the second, the facts already stated are perfectly fatal, as nothing of the sort could exist, within the waters, or in the immediate shores of the sea. In fact, Dr. Mitchell, in the work from which the foregoing extracts are made, in his eager search for a new cause of malarial fever, seems to have entirely forgotten that the handful of dust, which he picked up whilst standing at St. George’s, Delaware, filled with the spores of what he supposed to be the polyporus distructor, and merulius vartator cryptogamous plants, whose active existence had been bought at the expense of the old stumps, might have already, or even then, under well established chemical laws, been disengaging into the surrounding atmosphere a gas, the cause of all the previous mischief. That such a result as this is nothing but natural, and what was to be expected, will, to the student of nature, not appear so strange, when he learns that a law once established forever remains, operating always upon the same general principles, and forever producing similar results; and that attraction and gravitation are no more an illustration of the law, than is malaria, under certain circumstances, the result of vegetable matter undergoing decomposition; and that the one is as susceptible of proof as the other.

Having, in the preceding chapters and sections, defined our geographical limits, and given their geographical structure and physical features, and endeavored to show, in connexion with topography, the influence in the production of malarial fever, of heat, light, electricity, moisture, elevation and winds, in varying proportions, but determinate quantities, over surfaces unequally supplied with vegetable matter undergoing decomposition; and having seen them not only greatly modified in malignancy and type, but prevailing in almost exact proportion to the presence or absence of one or all of these elements—has brought us rather to view them in the light of bearing towards each other the relation of cause and effect, than otherwise.
The "Mange" communicated to three persons by a pig. Reported in a letter to the Editor, by H. R. Casey, M. D., of Columbia county, Ga.

I will give you the particulars of a conversation held a few days since with a gentleman of this county, and if the deduction I have drawn from the facts as reported is correct, we have presented to us (so far at least as my observation extends) a new disease of the cutaneous system—one hitherto undescribed by dermatologists.

Mr. S. asked me "if I had ever known a man to have the mange?" to which I gave a negative reply: having always understood that it was a disease peculiar to the quadruped—He then asked me "if I thought it possible for a man to catch it from a hog?" I replied, that there are a great many things regarded as impossible, which are not found to be so when subjected to the test—and that this might be one of the cases. He then proceeded to give me the following particulars:

He states that about the first of May last, having a pig badly diseased with the mange, and being desirous to cure him, he had some soap and water got and went to work on him with his hands—and that after giving him a good washing, he stripped him almost of his entire external with his nails. That he was entirely well at this time; but that in about three hours thereafter, he felt an itching on his hands and wrists, and an eruption which commenced spreading upwards; that about the same time, his ankles began to itch him and the eruption there made its appearance, which also spread upwards and met the eruption from above at the half-way house—the umbilicus; that it reached its height in about two weeks; that the eruption was characterized by great heat and intolerable itching, composed of small vesicles, which, though not confluent, stood close together over his entire tegumentary tissue. Thus was he at the time of his commencement with the ablution—a sound and healthy man—but in a very short time thereafter, he was transformed into a Lazarus. He thought he had contracted his disease from the pig, and went to work to cure himself, using first the soap and water. This not benefiting him, he
was bled and took salts. This failing, he tried pot-liquor—then the grease from fried bacon—then a solution of blue-stone. He does not think that any of the means used had any control whatever over the disease, but that it seemed to pursue its course, knowing no conqueror, until it finally wore itself out, in about five weeks.

Now, from the above narrative, I can but infer that the disease in question was one identical with the mange, and that it was communicated from the quadruped to the man. And I am further strengthened in this view of the case, from the fact—that a female and the negro boy who held the pig while being subjected to treatment, became in like manner affected. The view I have taken of this case, I know to be in direct conflict with the long-established dogmas of the veterinary school, but I think I am sustained in my position from the facts of the case—and "facts are stubborn things." By reference to the "History of the Horse," I find the following language. The author, in speaking of the contagiousness of the mange, goes on to say—"If the same brush or curry-comb be used on all the horses, the propagation of mange is assured; and horses feeding in the same pasture with mangy ones, rarely escape, from the propensity they have to nibble one another. Mange in cattle has been propagated to the horse—and from the horse to cattle—but there is no authenticated instance of the same disease being communicated from the dog to the horse. There is as much difference in the character and eruption of mange in the horse and dog, as between either of them and the itch in the human subject; and the itch has never been communicated to the quadruped, nor the mange of the quadruped to the human being."

My only reply to the above quotation, is the presentation of the case related; and if I am not sustained in my corollary from the facts of the case, this article will go for nothing. I pretend to no familiarity with cutaneous diseases; but if I were called upon to classify the mange, I should locate it in the group dermatoses scabienses of Wilson, not only from the pathology, but also from the therapeia of the disease; for I find sulphur the anchor of safety to the veterinary surgeon. Nor do I think there is any thing very strange in all this; and the only reason
why we have never before had the mange communicated to man arises simply, I think, from the fact, that in all probability more caution has hitherto been experienced than was in the case before us. We have examples of other diseases occurring in the human subject, the result of propagation from the lower order of animals. In the Revue Médicale of July, 1845, we have detailed a case of an officer who took the glanders and farcy from a horse, and in which experiments were made by M. Andouard, to test the contagiousness of the human fluid introduced into other animals—the results of which experiments went to prove that the disease was not only communicable to man from the horse, but that the disease was again transmissible from the human subject to the quadruped. In the Southern Medical and Surgical Journal, Nov., 1847, we have a case of Glanders in the human subject, derived from the horse, reported as occurring in your own city. Other diseases might be mentioned occurring in the great paragon of animals, communicated from the lower order; but I have already spun out this article to a greater length than was designed at its commencement, and will conclude by merely advising those persons who may have to treat the mange in stock, to touch it lightly, and never make a curry-comb of their hands: to which injunction I know my friend F. will say amen.

ARTICLE XXXV.


At 9 o'clock on the evening of the 21st inst., a negro woman, the property of R. H. Patton, of this place, was seized with what was supposed to be "a fit," with evidences of alarming prostration. When I arrived, about 10 o'clock, found her in a complete state of insensibility, breathing rather heavily; pulse full and firm, but not unnaturally frequent; eyes rolled back; pupils contracted and insensible to light, and occasional spasmodic movements in the extremities. Upon inquiry, learned that for the last two days the patient had complained of sore throat, with a sense of constriction about the fauces and diffi-
culty of swallowing. Negro ordinarily healthy, save occasional catamenial irregularities, for which she had been often bled. It immediately occurred to me that the case was one bordering upon apoplexy, consequent upon a plethoric condition of the system. With this view, I bled freely from the arm, applied sinapisms to the extremities, with the cold douche, and continued cold cloths to the head: after which the spasmodic movements were less frequent, and the patient regained a slight degree of consciousness and partial amelioration of the symptoms for about two hours, when the convulsive movements in the extremities entirely ceased, but was followed by a very distressing symptom, not unlike the hiccough, which seemed to be occasioned by an obstruction in the air passages. At first it occurred about every third inspiration, but gradually became more frequent, attended by fits of suffocation, during which it was necessary to raise the patient and shake her, when large quantities of glary mucous and froth would flow from the mouth, followed for a few minutes by very slight relief. These paroxysms continued to recur with increased violence until they became alarming. The patient, during the paroxysm, would grasp at whatever was in reach—an instinctive effort to aid the muscles of respiration. When water was handed her, she would eagerly snatch it to her mouth, but the effort to swallow occasioned strangulation, and the water would be ejected with a violent struggle. I now became satisfied that the case was an unusually severe attack of hysteria, and that these symptoms arose from spasmodic constriction of the glottis and paralysis of the muscles of deglutition. Uncertain whether the bleeding in the first instance had been beneficial, I hesitated as to the propriety of repeating it. A warm bath was ordered and Dr. W. Hardy called in consultation. The violent and almost fatal fits of suffocation had well nigh induced a resort to tracheotomy; but as this was rather a novel procedure in such cases, it was determined first to try the effects of the bath. She was immersed wholly in warm water for 15 or 20 minutes—removed and rubbed dry, and a sinapism applied to the cervical and dorsal vertebrae. This was followed by partial relief for two or three hours, and the patient enjoyed occasional moments of repose. Dr. H. now left, under the impression that
the patient would improve; if not, he thought the lancet should be resorted to. About day-break the symptoms of suffocation again returned and became at intervals more alarming than ever. In this condition she continued until 6 o'clock, growing evidently worse and worse. My co-partner, Dr. Underwood, was now called. Sinapisms were again applied to the extremities and to the whole course of the spine, but the patient was insensible to their effect. The inhalation of ether was then tried—which seemed to have no other effect than to render the patient more comatose and insensible. It was now determined to bleed to relaxation. Before the arm was untied, relief was apparent—a large quantity of viscid, ropy mucous was ejected from the throat and the patient fell into a calm sleep, from which she awoke after a time writhing under the effects of the sinapisms. She could now swallow and make herself understood by whispering. An enema was administered, which added to the improvement. All the distressing symptoms gradually subsided, and to-day (24th) she can articulate freely and is able to set up and take nourishment.

PART II.

Reviews and Extracts.

On some distressing Sequelae of the Diseases of Infancy.—Purulent Discharges from the Aural, Nasal and Vaginal passages. By Thomas Weeden Cooke, Esq. (London Lancet.)

The very slight reference made in systematic works professing to treat of the diseases of children to an annoying and, in its consequences, serious discharge, to which the passages above named are liable during childhood, has for a long time struck me as an extraordinary and curious fact, considering the numbers of children who suffer from this form of disease. Feeling, some three years since, the want of information upon this subject, and finding no resource but the book of Nature, I was induced to take notes of every case that came before me, and to watch this particular class of cases carefully. The notes thus taken, both in hospital and private practice, have now so accumulated, that I believe I have acquired accurate data upon which to found a short paper, that may perhaps
prove of some interest to those who are engaged in the treat-
ment of the young. Amongst the poor, these affections are
very rife indeed, and although less prevalent in the wealthier
classes of society, their offspring are still by no means exempt
from a disgusting, fetid, debilitating discharge from some of
the passages named, which, if neglected, or not properly
treated, will lay the foundation of diseases which medicine may
essay in vain to eradicate.

Dr. Abercrombie, in his great work on the brain; Mr. Solly,
in his; and Sir B. Brodie, in the Medico-Chirurgical Transac-
tions; have each recorded cases, showing the positive and
absolute connexion between abscess of the brain and diffuse
meningeal suppuration, and a neglected suppurative discharge,
commencing in the external auditory passage. A similiar dis-
charge from the nasal passages, although of less frequency, is
not the less disagreeable, and will, if neglected, lead to periost-
teal inflammation and bony exfoliation. Vaginal discharges
have received more attention than either of the others, having
especially obtained the careful investigation of Sir Astley
Cooper, and of most surgeons who have written on sexual dis-
ases, as well as of those gentlemen who have devoted them-
selves to legal medicine. Worms and intestinal irritation have
been suggested as the most probable cause of this complaint,
but it appears to me that all have failed to attribute it to that
origin which my own investigations lead me to believe is the
true one, and to which the two other affections are likewise at-
tributable.

Scarlet fever, measeles, remittent fever, and occasionally
hooping-cough, sufficiently destructive as they are in them-
selves, mowing down weekly sometimes a fourth of the children
that are born, are still more dire in the evil after-effects they
produce upon the tender saplings they attack; rendering a pre-
viously healthy child a miserable, puny, "grizzling" creature;
tiresome and unhappy itself, and a source of painful and anxious
concern to its parents. For a longer or shorter period this
state of things is allowed to continue without any supposition
that medical aid is necessary—the cross temper of the child
being looked upon by some as an indication of returning health;
and that, consequently, the vis medicatrix natureœ will do all
that is needful. The infant, however, continues peevish, rest-
less at night; its appetite is capricious; it wastes; the mouth
is hot, the lips are dry, the eyes unnaturally bright, and the head
becomes burdensome, so that the poor little creature is often
glad to rest for a time from its continuous moan by laying its
head in its mother's lap. In this stage two things may occur:
either the cerebral irritation will increase, and subacute inflam-
mation of the brain or its membranes be set up, (with which we have at present nothing to do,) or the membrane lining the external auditory passage will begin to secrete a puriform discharge, varying in its consistency according to the strength of the subject of it, being sometimes very nearly laudable pus, but more frequently approaching the flour-and-water looking fluid of the true scrofulous diathesis, not unfrequently having a bloody tint, and exhaling an odour such as scrofulous secretions only are capable of producing. This discharge being set up, the head symptoms become relieved, and there is less of the peevishness which was previously so distressing. Some slight treatment in the shape of warm water injections into the ear is directed; an opening powder or two are prescribed, the ear is plugged with cotton wool, and there the treatments ends; until the ulceration of the external canal extends to the tympanum, eats through it, and running into the external auditory passages, and destroying the auditory apparatus, produces caries of the temporal bone, abscesses within the cranium, and, as a consequence, the loss of hearing, convulsions, sometimes paralysis of the facial nerves, exfoliation of bone, and certain death. These are the frightful consequences of a neglected purulent or strumous discharge from the ear, coming on after some great disturbance of the system, such as that arising from an attack of fever—eruptive or otherwise. Frightful indeed to witness, most painful and unsatisfactory to treat, after the suppurrative process has gained the internal ear, but entirely under surgical control whilst it is confined to the outer side of the tympanum: and this I am emboldened to say should ever be the case if the child has the opportunity of obtaining—and who has not?—surgical aid.

In the treatment of this very distressing and important sequelæ of the exanthemata, I have almost invariably found it necessary to support my little patients with a nourishing diet, including a modicum of animal food, in some form, once a day; whilst I have thrown into the system as much of the sesqui-oxide of iron as the stomach could take without discomfort. I am partial to this form of administering iron to children, because they take it very well in treacle or honey; and although I have used iron largely in all forms, I am positive not with the same beneficial results that have been obtained from the old red carbonate, as it used to be called. As an injection, I never have occasion to use anything but a solution of sulphate of zinc, from three to five grains to the ounce, and this it is necessary should be so injected that it may reach the tympanum. General cleanliness, free ablutions of the the whole body, sea-bathing and out-of-door-exercise, are of course, at all times, highly con-
ducive to the restoration of diminished power of life, such as this suppurative discharge loudly indicates.

Desirious as I am to give a few selected cases, showing the various stages of this malady, the perfect ease with which slight cases are managed, and the difficulties we have to contend with when it has proceeded to the destruction of the tympanum and bony structure of the ear, I yet fear to swell my paper to too great a bulk. Before, however, quitting this part of my subject, I may mention that it is in the advanced stage of this affection of the ear, when the tympanum is destroyed by ulceration, that the glycerine is found serviceable. This substance, which has proved so valuable an addition to our therapeutical agents in aural medicine, it is well known, was first introduced to the profession by Mr. Thomas Wakley, jun., in a communication to the journals last year, and the extensive employment of it proves how justly the virtues of this agent were even then described. The impure lees of the soap-boiler is called glycerine, and had been previously employed as a useful application in squamous diseases of the skin; but the bright pure liquid, for which the profession is so much indebted to Mr. Thomas Wakley, jun., and which was accurately chemically described by him in his paper, is altogether different.

The suppurative discharge from the lining membrane of the nostrils is likewise a sequela of the exanthemata, but one neither so constant or important, although equally as disagreeable, as that from the ceruminous membrane of the ear. In some cases, there is a constant flux of muco-purulent matter, occasioning a continual sniffling and blowing of the nose; in others, the muco-purulent matter hardens, and collects in very large scales, which irritate for a long time, and after much blowing come away in huge masses. Upon careful examination, the Schneiderian membrane will be found denuded in some parts, and in others (especially that lying over the turbinated bones,) thickened and inflamed; sometimes the discharge has a very offensive odour, and sometimes not, and this will be the case with the same child at different periods. I have now cases before me exemplifying these variations, which at some future time I may copy out and publish. It has never occurred to me to see any formidable evil result from this affection of the nostril in children, but I can call to mind many cases in adults where a chronic inflammatory condition of the Schneiderian membrane has been allowed to go on until the turbinated bones and even the vomer itself, have become carious; and who shall say but that timely surgical aid would have saved the nose and averted the misery of many a now disconsolate mortal. With children suffering from this affection, I have pursued the same
plan which I employ for discharges from the ear—supporting tonic treatment, meat and iron, and the sulphate-of-zinc injection; that failing, I have used the red nitrico-oxide-of-mercury ointment, melted, and introduced by means of a small mop, and, in very obstinate cases, one or two applications of the nitrate-of-silver ointment of Guthrie have effectually healed the ulceration.

In approaching the consideration of discharges from the vagina, I cannot but remember how large an attention this subject has received from some of the most distinguished members of our profession, and what stories we have heard of the sad consequences of attributing this very common and innocent affection to causes which, happily, are of but rare occurrence in this country. Connected officially, for the last six years, with the Royal Free Hospital, where there is so large an outpatient practice, I have had ample opportunity of learning the merits of these cases, and am proud to say, that in one instance only during that period was there any evidence of a criminal attempt. The muco-purulent discharge to which little girls are obnoxious, is as frequently to be traced to the exhaustion produced by fever as are those other fluxes previously spoken of. There is the same flaccid condition of the muscles, the same peevishness and constant restlessness; in general, a disinclination for food; the bowels are inclined to be confined; the pulse is quick and weak, and the tongue is coated with a whitish fur. These general symptoms are accompanied by some redness around the nymphæ; the discharge is profuse, slightly yellow, full of pus globules, and occasionally acid, since it produces excoriation, if the nurse be not very cleanly. It is very rare that the child has ardor urinæ—a symptom which would be looked for if gonorrhæa were expected, and which, together with laceration or ecchymosis would be the only signs by which the surgeon could positively conclude that a criminal attempt had been made. The large number of cases of this sort which have come before me is surprising, and equally so the unanimity of their histories. All these patients have, but a short time before, recovered from some of those febrile disorders whose sequelæ are so often neglected by parents, and the consequences of which are more fatal than the parent disease. Happily, the expectant timid treatment commonly pursued in the two forms of the same disease already discussed, has, in this particular instance, not been followed, owing partly to Sir Astley Cooper's example, and partly, I suspect, to the parts affected being considered less susceptible of injury. I believe that the zinc injection, or one composed of Goulard extract and water, together with iron, and an occasional aperient, is as uni-
versally the plan adopted as my experience would lead me to hope for; whilst my out-of-door exercise, and good nourishing diet, will be acknowledged as necessary as in the other forms of this very disagreeable and sometimes dangerous malady.

In tracing the history of these affections of the mucous passages, it has been already said that they are to be found following some exhausting fever, and very frequently accompanied by the presence of worms in the intestines. This latter circumstance led to the inquiry, if there be any truth in the commonly received opinion, that the irritation produced by the presence of parasites in the intestines was sufficient to account for the discharges mentioned? I conceive that this opinion cannot be held, inasmuch as ulcers are constantly seen in various parts of the body, produced by poorness of living; and we likewise know that it is only in the intestines of weak children that parasites retain their hold. Both the suppurative discharge and the worms may, and do, exist together, but not as cause and effect; the origin of both must be traced to the atrophied condition of body produced by the wasting fever.

In concluding these few crude remarks upon a class of diseases which has no place or name in any nosological table, and which has been generally looked upon as unworthy of much consideration, I would beg to urge the evil results arising from an absence of early treatment as a moving cause why we should not overlook things apparently, and only apparently, so trifling. Allow an ulcerated condition of the aural, nasal, and vaginal membranes to continue unchecked, and you will certainly lay the foundation for deafness, loss of the sense of smell, disfigurement of the features, incurable cerebral disorders, and all those distressing diseases to which the internal organs of generation in the female are from so many causes peculiarly obnoxious. One great cause of neglect I believe to have arisen from a fear, lest in treating these discharges from delicate passages in the same manner we do indolent asthenic affections of the body generally, some fancied but undefined ill should arise to the organ itself, or that by suppressing the discharge, neighbouring parts, equally important, should become congested. This fear, I beg to assert, after much careful experience, is not warranted by facts, whilst the magnitude of the evils resulting from non-interference is daily demonstrable.

Habitual Use of Opium.—(American Journal Med. Sciences.)

The number of the Monthly Journal of Medical Science for June, 1850, contains an abstract of a highly important paper by Mr. R. Little, of Singapore, in which is given a very inter-
esting account of opium-smoking in China, the mode of preparing the opium for that purpose, and the effects of the practice on health and longevity. From this paper, we make the following extract:—

"A difference of opinion prevails as to the ultimate effect on the health, when opium is used in this way so often as to constitute a habit. It was long universally thought to undermine health and abridge life. But in recent times doubts have been raised on this head. Dr. Burnes was led to conclude, from observation when at the court of Lahore, in the time of Runjeet Singh, that the habit of eating opium does not tend to shorten life. More lately Dr. Macpherson came to the same conclusion, from what he saw of opium-smoking among the Chinese at Canton. And in Europe, since the inquiries on the occasion of the jury trial at Edinburgh in 1832 connected with the assurances of the late Earl of Mar, it has been thought by not a few persons of weight that the habit of eating opium, or drinking laudanum, may be by no means so injurious to health and longevity as its immediate effects on digestion and the nervous system would lead one to prognosticate. It may be true, as these skeptics have stated, that some people, long abandoned to the vice, have lived to a good old age, miserable from its immediate effects, yet not unhealthy. But the experience of most travellers, who have witnessed its effects on a large scale in the East, is directly the reverse; and although this proposition may be in some measure liable to the objection that it is the statement of casual observers merely, it is amply born out by the results of careful and extensive inquiries at Singapore. These inquiries were made by personally examining the owners of opium shops, the smokers who frequented them, the prisoners in the house of correction, and the paupers of a poor-house supported by voluntary contributions. The following information is the result.

"As the habit grows upon its unhappy victim, the first evils experienced are disturbed sleep, watchfulness, giddiness, sometimes headache, capricious appetite, a white tongue, frequently costiveness, indescribable oppression in the chest, and haziness of the eyes. Afterwards, a copious secretion of mucus takes place from the eyes, and often from the nose also; digestion becomes much impaired, and micturition difficult; a mucous discharge begins to flow from the organs of generation; the sexual organs, at first preternaturally excitable, gradually lose their tone; the body wastes, the muscles lose their torosity, and the bones are affected with dull gnawing pains for some hours in the morning. By and by, the figure stoops, and a peculiar shuffling gait is acquired, by which alone a practiced eye may recognize an
old opium debauchee. At the same time, the eyebrow droops, the lower eyelid becomes dark, the eye itself seems to sink and grow dim, and the whole expression is that of premature old age. In both sexes, the procreative power is greatly lessened, and in those women who nevertheless do bear children, the secretion of milk is defective. The influence of the habit on the generative functions is indeed so decided that were it not for fresh arrivals from China and other parts of the East, the population of Singapore would very soon be seriously diminished.

"Still there may be no structural derangement. At length, however, food and drink are vomited almost constantly when the system is not under the primary action of a dose; there is incessant gnawing pain in the stomach when its effect is off; diarrhoea comes on, relieved only by fresh indulgence, and dysentery sometimes supervenes; a turbid mucous urine is discharged with unusual frequency, the result sometimes of renal disease; and, among affections of the kidneys, Bright's disease is not uncommon. In others, difficulty of breathing is a prominent symptom, increasing gradually to an urgent sense of suffocation, and depending generally on oedema of the lungs, or effusion into the pleural sac. In others, irregularity and feebleness of the pulse, with pain in the cardiac region, indicate the supervision of organic disease, or severe functional disturbance of the heart. Some suffer excessively from boils and carbuncles, from the latter of which few confirmed opium smokers recover. Foul, indolent ulcers are extremely common among the poor; strumous affections of all kinds are apt to be developed, and the constitution is prone to succumb without resistance under all violent diseases.

"The influence of opium-smoking on the morals of its victims is not inferior to its impression on the bodily health. Indolence and inaction, neglect of business or work, and consequent poverty, though the most obvious, are not the worst results. Deeper depravity often follows in the train of these evils. Wife and children are disregarded; frequently, however, not before they are inoculated by example or positive encouragement with the same unhappy vice. Misery leads at last to crime, and crime to deeper misery. Not unfrequently theft supplies the only resources for persevering in the fatal pleasure. Of forty Chinese prisoners in the Singapore House of Correction, no fewer than thirty-five were opium-smokers. Seventeen of them, who had earned on an average eighteen shillings of wages monthly, spent nearly twenty-four shillings upon opium, the difference being necessarily made up by the gains of stealing. One of them, who earned twelve, but smoked twenty-four shillings, on being asked how this was—how it was possible? aptly replied,
Habitual use of Opium.

[November.

‘What am I here for? The sedative action of the drug is well exemplified in the crimes for which these people were imprisoned. In Europe, where the habit of intoxication with ardent spirits adds fearfully to the contents of prisons, it is well known that crimes are committed chiefly during the excitement caused by the poison, and are therefore generally directed against the person. But the opium-smoker knows no such state of existence. His intoxication is quiescent. It is not till this stage passes off that he begins to think of crime; his object is to supply the means for the next debauch; and accordingly offences against property constitute a large proportion of the causes of imprisonment in this class of the population of Singapore. Of twenty-two opium-smokers in the prisons of Singapore and Penang, nineteen were condemned for offences against property and only three for offences against the person. Opium-smokers constitute 80 per cent. of those confined in the House of Correction at Singapore for vagrancy and police misdemeanours, but only 40, or at most 50, per cent. of those in prison for larceny, highway robbery, burglary, and other similar offences requiring boldness and enterprise.

‘Unfortunately, the effects produced on the health by abandoning the habit of smoking opium, after it has become deeply rooted, are even worse than the perseverance in it. A gloomy despondency is added to the usual symptoms of the ordinary stage of depression; a state ensues somewhat like a low state of delirium tremens, attended with extreme prostration of strength, and often with exhausting diarrhoea and vomiting; all pre-existing diseases are aggravated, dropsy frequently ensues, and death may soon result, most generally by effusion into the great cavities, and general anasarca. When these effects have begun to show themselves under a compulsory cessation of the habit, the most marked improvement of health is produced by resuming it. Hence no one who has once fairly given himself up to this unhappy vice will surrender it voluntarily. The result of the examination of several hundred opium-smokers on this point was, that, by their own confession, the extent of their indulgence was limited only by their means, and the spontaneous abandonment of it impossible. The writer of an essay on the opium trade says, ‘There is no slavery on earth to name with the bondage into which opium casts its victims; there is scarcely one known instance of escape from its toils, when once they have fairly enveloped a man. Mr. Marsden also says it is almost impossible to shake off the habit. And Sir Stamford Raffles gives it as his opinion ‘that the use of opium is all the more dangerous, because a person once addicted to it can never leave it off.’
“Nevertheless, under medical advice, with due caution on the part of the physician, and some exercise of resolution on the part of the patient, the habit may sometimes be effectually and safely broken. Its abandonment, either suddenly or without due precaution, is attended with danger. But that recovery is practicable and safe under a methodical treatment, the following case will sufficiently show: A Malwah opium merchant and opium-eater had often endeavoured to abandon the habit, but always in vain. On one occasion, when wrecked on the coast of Cochin-China, his strength of mind enabled him to observe his religious dietetic principles, so as to live for weeks on dry rice and water, because he could not cook food according to his creed. But when he wished to give up his opium, this man of iron nerve was like a child for feebleness of purpose; he could not encounter the sufferings of the stage of probation. At length, on arriving at Singapore, and learning that the habit could be broken by means of a wonderful medicine, he resolved to subject himself to treatment, on condition that he was to undergo, neither the rending of the bones nor gnawing at the stomach, which he experienced in all previous attempts. At this time, he ate twenty grains of opium, morning and evening. He was directed to use twice a-day a mixture containing a drachm of Battley's solution, a drachm of laudanum, and two drachms of tincture of gentian, and to wash down each dose with a mixture containing essence of ginger and two drachms of some aromatic stimulating tincture. He was likewise enjoined to take gentle walking exercise morning and evening. He felt no inconvenience, although his daily allowance was thus reduced at once from forty to about twenty-four grains; on the contrary, he felt stronger and more comfortable. The quantity of the preparations of opium was then gradually reduced, while that of the bitter and aromatic tinctures was increased; and after the opium was thus all withdrawn, the tinctures were gradually exchanged for decoctions of black pepper, ginger, and quassia. In this way, he recovered entirely without any suffering; and twelve months afterwards he continued scrupulously to abstain from the drug, and enjoyed the best of health.

“From this and other parallel cases, there is no reason to doubt that the habit may be broken off with safety by a gradual progressive reduction of the dose of opium, and the substitution of strong bitters and hot aromatics for a time, especially if with this change be combined free air, regular and increasing exercise, and a good nutritive food. But it is impossible to give up the habit at once with safety.”

Prof. Christison, in a supplement to this paper, has added some interesting information to that furnished by Mr. Little.
Prof. C. says: "Important as the inquiries of Mr. Little unquestionably are, they do not absolutely settle the question of the influence produced on health and longevity by the habitual use of opium, as indulged in by inhabitants of this country. The subject still requires more extended European observation.

"I am sorry to add, after this introduction, that my opportunities of adding to existing information have not been so considerable as might be desired. But I have met with one case which would undoubtedly have proved fatal in early life, had not the habit been broken; and which, on that as well as on other grounds, well deserves to be made known: and, having had some little experience in the treatment of the habit with a view to its cure, I have thought the particulars may prove both useful to the profession and encouraging to the unhappy victims of the vice; more especially as my observation does not correspond with that of Mr. Little, as to the great danger arising from its abandonment.

"The first case was that of a seaman, of the age of twenty-eight, who had contracted the habit while in the mercantile service in the Eastern seas, in consequence of being obliged to use opium for a protracted dysentery. He had continued it for two years. His daily allowance was a drachm of solid opium, which he took in divided doses in the day-time. Immediately on his return from a voyage to the islands of the East Indian seas, he applied for admission into the Edinbrgh Infirmary, to be cured of the habit. He had a sallow yellowish complexion, which, however, is well known to be occasioned by the climate merely of the parts he usually visited. Further than this, nothing remarkable could be observed in him; and he assured me that he could follow his occupation well enough, but that it cost him a great effort to do so, and that his misery was great on awaking in the morning, until he commenced his doses. The bowels were little liable to constipation; but he had been long free of the remains of his dysentery; and he had not the affection of the eyes and nose, described by Mr. Little to be generally observed among the smokers of opium at Singapore. His constitution being obviously little impaired as yet by the habit, I contented myself with simply withdrawing his allowance of opium at once and entirely, and with substituting a draught, with two drachms of tincture of hyoscynamus, in the evening, as a soporific. Great prostration of strength ensued; he either lay in bed motionless, or wandered about the ward with a languid gait, and woe-begone countenance; he was affected with incessant loathing of food, nausea, and indescribable uneasiness in the stomach, but not with pain
there, or in his limbs; and he slept none, notwithstanding the hyoscyamus. This state of matters continued for three days and nights, during which no change of treatment was made, except that a little brandy was given to assuage the uneasy feeling in the stomach, and that an attempt was made, but in vain, to obtain sleep by increasing the hyoscyamus to three drachms. On the fourth night he took no hyoscyamus; nature asserted her sway, and he slept soundly; in the morning, he felt revived, took some food with relish, and had no uneasiness afterwards. From that moment, he quickly recovered strength and spirits, under no other treatment than a generous diet; and, in the course of a fortnight after his admission, he left the hospital quite well. This instance may perhaps serve as an example of what may be expected when the habit, as seems often to happen under the counteracting effects of an active occupation, has not materially undermined the constitution.

"Subsequently, I was consulted in a very melancholy case, which, although its result is not known to me, is worthy of mention, on account of its remarkable circumstances. A medical gentleman in England had long been dissatisfied with his wife, on account of her neglect and indifference, so that at last a separation was contemplated. But he continued from time to time to put off the evil day. At last, he was one evening hurriedly sent for home, to find her in a state of deep sopor, and in circumstances which left no doubt that a large dose of laudanum had been swallowed. By the application of the usual remedies, she was with some difficulty roused, and eventually recovered. To the consternation of her husband, however, he then for the first time discovered that she had been long in the habit of drinking laudanum to excess, and that on this occasion she had merely taken, by some accident, a more potent dose than usual. He came to Edinburgh to consult me what was to be done, as she expressed a willingness to be cured of her fearful habit; and more particularly he was anxious to know whether it might with safety be abandoned abruptly; because he despaired of accomplishing a gradual reform. The narration of the previous case determined him to adopt a similar treatment. I have never heard the result. Should these pages meet his eye, he may perhaps be induced to communicate it still.

"Some years ago, I had for a patient a gentleman who had cured himself successfully of the habit, which he had contracted while engaged in a literary undertaking of some duration, and requiring protracted fatigue of the mind. I do not know the particulars, however; but he had recovered from the
vice without danger; and, when I saw him, several years had elapsed without inconvenience or relapse.

"The last case I have to mention is the most instructive that has yet occurred to me. An English gentleman, twenty-five years of age, whose pursuits rendered him somewhat migratory, consulted me, while in Edinburgh early in the spring of 1848, on account of ordinary stomach complaints. The pulse being very frequent, his body emaciated, his complexion anaemic, and his expression of countenance haggard, I suspected something more than stomach complaints in one of his age. My suspicions naturally turned to phthisis; and although they were not confirmed by a stethoscopic examination of the chest, I advised him to repair at once to his friends in the south of England, whom he intended to visit in no long time at any rate, and there to put himself under medical advice. After this, I heard no more of him till near the end of last August (1849), when I was requested by Dr. Ebenezer Skae to see him here, on account of a return of his stomach complaints, in a very urgent form. In the spring of that year, they had assailed him with increased severity. During the summer, they got progressively worse, though with occasional brief intermissions. Latterly, chronic organic disease was suspected; and, after various remedies had been used without any permanent advantage, a gentle course of mercury was recommended by one of his physicians, and had been commenced before I saw him. I found him much emaciated, and extremely prostrate. He vomited most things he took; but for three weeks had taken scarcely any food. The pulse was frequent and feeble; the tongue whitish and clammy; the bowels rather confined; the skin cool; the urine scanty, natural in colour, not coagulable by heat or nitric acid. The abdomen was very lank; and in the epigastric and both hypochondriac regions there was no fulness, firmness, tenderness, or dulness on percussion. The countenance was bloodless and sallow; the eyes clear, large, ring-eyed; the expression anxious and dreamy. There was no unusual secretion from the eyelids or nostrils. Suspecting organic disease. I recommended perseverance with mercury, and for the vomiting medicinal naptha and hydrocyanic acid. In three days more, as he had become worse, I was sent for again; but, on my arrival, I was surprised to find him much more comfortable since the morning, and this without napththa, hydrocyanic acid, or apparently any other remedy. Meanwhile, however, Dr. Skae had learned that a suspicion was entertained that he took opium in excess. I therefore undertook to tell him that the symptoms resembled the after-effects of opium in those accustomed to use it, and that he must put
Habitual and neither but G83 and that before, would his weeks broken toothache; large druggist of daily was necessary he and druggist's opium removed additional He without any ledge and his it at irritability red had he retained from excessive vomiting, had retching under England taken him from the lodgings, of miles any discharges; and, from the first, the brandy relieved the irritability of the stomach for a time, and the Indian hemp was retained in the form of extract, though not in a draught. On the fourth morning, the vomiting and retching ceased. But the diarrhoea continued; neither infusion of catechu nor gallic acid made any impression on it; on the sixth day, there were ten watery evacuations; and therefore a little opium with
acetate of lead was used in the way of injection. This had at once the desired effect. On the sixth day, he was able to dress and sit up for half an hour occasionally; which he had not done for two months. Next day, he walked out for half a mile. The pulse had now fallen from 120 to 90; the tongue was moist, and tolerably clean; the appetite, which had begun to return as soon as he ceased to vomit, was good, and digestion undisturbed; he slept well; thirst was his only uneasiness, and his countenance, although still haggard, was nevertheless greatly improved in expression. Medicines were now abandoned. On the eleventh day, having still continued free alike of sickness and of diarrhœa, he set off for England, and made out the journey comfortably. Three months afterwards, I heard that he went on favourably, gaining strength, and abstaining from opium, and also from stimulating liquors, except sparingly for medicinal purposes.

"This case is probably a good illustration of the usual phenomena, when the constitution has been seriously undermined by the use of opium. It is not easy to imagine a worse case, short of the production of organic disease. The habit evidently could not have been continued much longer without imminent danger to life. Nevertheless, it was broken off abruptly, without hazard. No one can answer for such cures being permanent. An insane craving, as in the instance of the insane abuse of spirituous liquors, may lead to the habit being resumed. But, at any rate, it would appear from the instances given in this paper that the habit may be easily broken; and that there is no danger in suddenly breaking it, in so far, at least, as we see it in Europe. The knowledge of this fact may give to the physician in like circumstances a confidence and determination, which might otherwise be shaken by the symptoms of alarming exhaustion, but without which he can scarcely inspire his patient with the resolution necessary for encountering the trial which must be undergone. It is true, that in some instances, the opium may be withdrawn gradually, in the way recommended by Mr. Little; but I apprehend that, in general, as in the case of habitual excess in the use of spirituous liquors, patients may be found ready to submit to the physical evils of an abrupt abandonment of the opium, who will not undertake the moral trial of a gradual reduction."

On a peculiar Form of Gonorrhœa. By W. Colles, F. R. C. S. I., Surgeon to Stevens' Hospital, &c.—(Dublin Journal.)

There are few diseases occurring so frequently in medical practice, the treatment of which has undergone so little modi-
fication, while the result of that treatment has been so uncertain and variable, as gonorrhœa. Thus we meet with two patients whose symptoms are apparently similar; we subject both to the same routine of practice, and the result will be, that one will be cured in the space of two or three weeks, while the other will continue to labour under the disease for months, if not for years.

It has been the habit of the surgeon to consider the disease to be the same in both cases, and to attribute the different results of his treatment to some peculiarity of constitution, which either will not tolerate the remedies proposed, or resists their effects. I think, however, that if we examine the subject more closely, we shall find that there may be various affections or morbid dispositions in the several organs concerned in the disease or in the neighbouring parts, which added to the original inflammation of the urethra, will contribute to keep up the discharge, and which must be removed before the patient can be perfectly cured. I had proposed alluding to such of these affections as I have found most frequently complicating the disease, and to the treatment required for each, before the gonorrhœa can be cured; but from the limited space that can be allotted to this communication in the present Number of the Journal, I find that I must postpone doing so until a future opportunity. I shall, therefore, confine myself now to the consideration of one which I have frequently found co-existing with and conducing to the severity of the original disease, rendering it much more intractable in its nature and progress, requiring a modification in its treatment, and one which has not yet attracted the attention from surgeons that its importance and frequency would seem to merit.

Gonorrhœa was considered by Mr. Hunter to be a peculiar inflammation of the lining membrane of the urethra, which never extended beyond the first two inches of the canal, and this he named its specific distance; he seems to have come to this conclusion from observing that the patient always referred the pain to this one part. Subsequently to him, surgeons seem to have adopted this opinion, without much consideration, for it will be found, on inquiry, that there is scarcely a disease of the urinary organs, however remote, in which the patient will not fix on this spot as the seat of pain: I need only refer to calculus of the bladder as a striking example.

Contrary to this received opinion, I have no doubt that this peculiar inflammation, with secretion of pus from the lining membrane of the urethra, may commence at the orifice, spread along the entire of the canal, and very often attack the lining membrane of the bladder itself, and at times extend, I suspect,
even to the ureters and kidneys: while thus progressing, a very slight cause might direct it towards the testicles, constituting the disease termed hernia humoralis. That such is the fact as regards the bladder, is evinced both from the general symptoms and from the appearance of pus in the urine. The symptoms are, I believe, never so severe as in that form of disease called catarrh of the bladder, when a thick ropy mucus is secreted in great quantity; they are at times so slight as scarcely to attract the patient's attention, who will merely consider that with him the symptoms are more severe than usual. I have seen this attack of the bladder ushered in with a severe rigor, and on close inquiry we may find that the patient labors under a slight degree of feverishness or uneasiness coming on or increasing towards evening; and that he will complain of a dull heavy pain across the pubis, extending round to the sacrum and anus, and at times even to the region of the kidneys. The calls to pass water will be somewhat more frequent than usual, and when they do occur they are irresistible, attended with considerable pain and forcing, which continue for some time after the last drops have passed away, and which are referred chiefly to the neck of the bladder, and extend from thence to the perineum and anus. The urine, when passed, at times appears clear and natural; in general, however, we can observe a slight cloudiness through it, and on allowing it to settle in a glass vessel, we shall perceive, after one or two hours, a copious yellowish or cream-coloured deposit, consisting entirely of pus. If we take a drop of this urine immediately after it has been passed, before any alteration can occur in it, and place it under a microscope, it will be found to be loaded with pus globules. In some instances in this affection, a number of yellowish, shready particles will be seen floating through the urine, which at times alarm the patient, causing him to suppose he is laboring under seminal weakness: on examination, these particles will be found composed of clusters of pus-globules and epithelial scales adhering together.

That the pus thus equally diffused through the urine has its source from the bladder, cannot, I think, admit of a doubt. It cannot be from the urethra alone, for I believe that there is a peculiar action of this canal on its contents, which tends to drive them forwards, and resists any retrograde movement. Besides, the urethra alone could not pour out the quantity of pus we meet with in some of these cases.

My friend, Dr. Fleming, at my request examined the urine with the microscope in some of these cases, and the result of his observations is contained in the following extract from a letter I received from him on the subject:
"As regards your views respecting those inveterate cases of gonorrhœa, which are so annoying to the patient and so puzzling to the surgeon, no second opinion can be entertained but that the lining membrane of the bladder furnishes a portion of the purulent fluid, and, as you remark, at a much earlier period than at a first view would be suspected. To test the direct passage of the pus from the bladder, I have made the following experiments, both on the male and female. In the latter it is often most important to do so. I introduced a catheter, allowed the first ounce or so of fluid to escape, so as to get rid of the urethral discharge, then collected some of the urine in a clean glass, examined it forthwith with the microscope, and found pus globules. I have applied the same test in equivocal cases of hematuria, and found equally satisfactory results, as regards blood-globules."

In the case which first drew my attention to this subject, the patient a few days after infection had a severe rigor, with considerable pain and irritation of all the urinary organs, attended with a copious deposit of pus, exceeding eight or ten ounces in the twenty-four hours. He soon began to waste, became emaciated, and even symptoms denoting hectic set in; and it was only by great attention he ultimately recovered. I at first feared that an abscess must have burst into the bladder; but his previous good health, and the absence of any symptoms indicative of a collection of matter, soon removed this impression. Since then, having suspected that this purulent state of the urine was at times both a consequence and a cause of the continuance of the disease, I have sought for its presence in several cases of gonorrhœa, and have met it much oftener than I had any reason to suspect; though I cannot form any conclusion as to the comparative frequency of its occurrence. I have observed the urine thus loaded with pus in two or three days after the commencement of the gonorrhœa, and afterwards keep pace with the original disease. I have also in two or three cases known the discharge from the urethra to continue, and pus to be found in variable quantities in the urine, for the space of nearly two years after the original infection.

I have no specific remedy to offer for the removal of this affection; in its treatment we must rely on, and be guided by the general principles of surgery. And first, as to the value of that plan of treatment, called by the French abortive, I have no means of forming an opinion. I doubt not but that the injection of strong stimulants, as nitrate of silver or corrosive sublimate, may at times prevent the extension of the inflammation; yet, if they fail at first, they cannot but materially aggravate the subsequent stages of this disease. When the
Asthma has once appeared in the urine, we must follow the antiphlogistic plan more strictly than is generally done; low diet and rest being strictly enjoined, and purgatives, diluents, and such remedies as tend to lessen the inflammatory condition of the blood being exhibited: when the inflammatory symptoms have subsided, and not till then, should we resort to those remedies considered as specifics,—the balsams, or cubebs. Of these I think the former have more influence over this form of disease, and do not add so much to the irritation, as the latter.

Should these means fail, it is customary to resort to the various tonics, astringents, acids, alkalies, oils, preparations of iron, &c. I must, however, confess, I have been often surprised to find what little influence medicine of any sort has had over this secretion of pus from the bladder. Each seemed for a time to benefit, yet no single remedy appears to possess any specific control over this disease. Should general remedies fail, and the case become chronic, surgeons resort to injections; but in this form of disease they must prove ineffectual. However, I would consider it a very justifiable proceeding, and one which I believe has often succeeded, to apply the remedies to the entire diseased surface; to inject, not only the urethra, but also the bladder itself with any of those numerous applications which are used in diseases in many respects similar, such as weak solutions of sulphate of zinc, of nitrate of silver, or even of balsams.

I have been induced to offer these crude and imperfect observations on this one form, or rather complication, of gonorrhoea, because it has not met the attention it merits; and I trust, by having called the notice of the profession to it, a body of facts and observations may be collected, which will speedily enable us to arrive at a more perfect knowledge of its diagnosis and treatment.


The following five cases of asthma, cured by the use of nitric acid, have occurred in my practice since the summer of 1847. It is not my desire to attempt any explanation as to the modus operandi of this remedy in the above disease. Its beneficial effects were accidentally discovered, and, after a fair trial in five consecutive cases, with the most entire success, I am induced to bring it to the notice of the profession, trusting that in other hands than my own it may prove a potent agent for the
relief of a disease which so often resists the best-directed treatment. Several of these cases were from twenty-five to thirty-five miles distant from my office. Most of them were not seen by me from the time of my first visit and prescription until a cure had been effected. I describe them as I found them at the time of my visit, and from the history given by parents and masters, which I think can be depended upon.

Case I. Emma, negro girl, aged five years, belonging to Mr. T. G., had been asthmatic almost from birth. Nightly paroxysms of dyspnœa, cough, &c., were represented as most distressing. During the day, she would be up and about the yard with the other children. At the time that I saw her, her respiration was somewhat embarrassed, with slight elevation of the shoulders during inspiration, and a very distinct mucous râle. Her appetite was impaired, and her countenance cheerless.

I ordered nitric acid, three drops, to be increased to five, three times daily, in a wineglassful of sugared water. A month elapsed before I again saw this patient, at which time every symptom of disease had disappeared. I prescribed for her in December, 1847, and up to date no symptom of asthma has returned.

Case II. I was called in November, 1848, to see W. S., aged about six years, son of a planter of Glynn county. I was informed that this boy had been a subject of asthma, for four or five years; that no expense had been spared in seeking for relief in his case; and that all the efforts of the best physicians in the neighbourhood in which he had resided, had been in vain. When I saw him, had cough, slight dyspnœa, with mucous râle distinctly audible at the distance of several feet. By walking up and down the steps of the house, once or twice, the difficulty of breathing and cough would be much increased. He was very lively and cheerful, with a good appetite, and had had no fever for months. His father informed me that, upon the least exposure during the day, he would be attacked at night with the most fearful symptoms. Wheezing, panting, incessant cough, distressing dyspnœa, with impending suffocation, were the inevitable consequences (at night) of exposure during the day.

I ordered nitric acid, five drops, three times daily, in a wineglass of sugared water, with a strict avoidance of exposure.

In a fortnight, he had been so much relieved that his parents imagined him cured, and discontinued the acid. In a few days, he relapsed, and I was again sent for. I ordered the acid to be continued, as before, and in one month from the time of my first visit he was cured.
Up to date there has been no return of disease.

This boy’s father died of phthisis pulmonalis. Several of his mother’s family have died of the same disease; and all of his brothers and sisters, without an exception, have in early childhood been sufferers from enlargement of tonsils and ulcerated sore throat. He is now the picture of health.

Case III. A mulatto girl, belonging to Mr. W. D. T., aged four years. This was a case of congenital asthma.

The symptoms in this and the following case (aged about four years) were so similar to those of Case I. that I shall not describe them.

The treatment was nitric acid, three drops three times daily, in a wineglass of sugared water.

The case resisted the treatment rather longer than the other cases, but was cured in about six weeks.

In Case IV., the immediate effects of the acid were perceived in a few days; and in eight or ten days she was cured.

Case V. I never saw. It was a negro girl belonging to Mr. C. of Camden county. She was seven years of age. Her master applied to me for a prescription, after giving some of the most prominent symptoms, which convinced me that the case was asthma, as he had declared it to be.

I prescribed five drops of nitric acid, three times daily.

I heard nothing more of this case for several months after I had prescribed, when I was informed by her master that she was well.

A sufficient time has elapsed, in all these cases, to convince me that they have been radically cured."

Should you deem the above remarks and cases worthy a place in your valuable journal, you will please to insert them. It is at least something new in the treatment of asthma.

PART III.

Monthly Periscope.

Comparative size and shape of the Typhoid Foramen in the Male and Female Innominatum. By Dr. Neill. (Trans. Philad. Col. Phys.)—He believed that many teachers of Anatomy and of Obstetrics were in error upon this subject, while others had failed to point out the difference in the male and female pelvis in this respect; that this was the case especially in this city, and perhaps in this country generally.

He had learned that Dr. Wistar and Dr. James taught that in the female the foramen was oval, and that in the male it was triangular, although there was no statement upon the subject in the old edition of
Wistar's Anatomy which he had examined, nor in the more recent edition known as Pancoast's Wistar. Dr. Horner also stated, in his work, that "in the male it is triangular, in the female, rather oval." On the other hand, Meckel, Cloquet, Cruvielhier, Harrison, and Quain and Sharpey make a statement precisely the reverse of this.

The lecturers upon obsteterics with whom he had conversed, either teach the former view, or are silent upon the subject. Denman, Baudeloque, and Maygrier say nothing. Neither do Monroe or Cheselden, both high authority on the bones, nor Winslow, Bell, Bartholin, &c., &c.

Scemmerring says "the foramen is elliptical in children, and triangular in adults." Wilson and Von Behr say it is triangular in women.

In order to satisfy his own mind on the subject, Dr. Neill had, up to this period, examined thirty-two skeletons, and the result was so contrary to the view which he, and perhaps most of the Fellows had been taught, that he had thought it worth while to prepare a chart, exhibiting diagrams of the male innominata in one column, and those of the female in another, to show at a glance, the distinctive difference.

He believed from an inspection of this, every one would be convinced that the foramen in the male is oval, while in the female, it is triangular.

It will also be observed that the male foramen is longer and narrower, and that the line representing the long axis is more vertical, and nearly parallel to the rami of the pubes and ischium; whereas, in the female the foramen is not only smaller and triangular, but that the apex of the triangle is downward, that its internal side is nearly parallel to the rami of the ischium and pubes; and that the base of the triangle is proportional to the chord of the arch of the pubes.

He remarked that the establishment of this fact, by investigation or by authority, would not interest the Fellows of the College in a practical point of view, its only value consisting in its affording another mark of distinction between the male and female skeletons.

Administration of Opium in Strangulated Hernia in Infants. By Joseph Reid, M. D., L. R. C. S. I., Southam. (London Lancet.)—On Monday, the 29th of April last, I was requested to visit an infant (eleven months old,) on account of its having been attacked on the previous evening with continued vomiting, pain in the abdomen, and inability on the part of the mother to reduce an oblique inguinal hernia. The vomiting continued throughout the night, and the child was sleepless and exceedingly restless. On making an examination, I found the integuments over the protruded parts red and inflamed; the tumour hard and tense, and very tympanitic on percussion; pain and uneasiness much increased by pressure. My friend Mr. Smith had seen the case in the early part of the day, and ordered a mixture containing a considerable quantity of opium, for the purpose of getting the patient fully under its influence: he had also ordered cold to be
unremittingly applied to the tumour. When this treatment had been persisted in for some hours, I endeavoured to reduce the hernia by the taxis, which having failed at Mr. Smith's first visit, I did not wish to employ, until the medicine had had time to produce its relaxing effect. My endeavours were alike unsuccessful, the protruded parts being in a state of close strangulation—a rather rare occurrence at this very early period of infancy. I now, with Mr. Smith's consent, directed the medicine to be continued, an enema to be administered, and the child to be placed in a warm bath: in the event of these measures not succeeding, I determined at my next visit to proceed to operation. The first part of my instructions alone was carried into effect—namely the continuing the opium treatment, and with the most satisfactory results, for on repeating my visit I found the infant fully under the influence of the drug, and the protruded parts entirely returned into the cavity of the abdomen. This case argues strongly in favor of the opium treatment in similar instances; and I consider it to be better adapted to strangulated hernia in infants than to cases of the same description occurring in the adult. No doubt opium diminishes pain and sickness of stomach in both young and old; but pain in the child is always accompanied by crying and convulsive sobbing, which cause a bearing-down, and therefore a greater pressure on the protruded parts; thus affording no slight obstacle to the successful performance of the taxis, and consequently to the recovery of the child without undergoing the pain and dangers of an operation.

On Chloroform in Orchitis. By M. Buisson. (L'Union Médicale.)—As surgeon to a venereal military hospital, M. Buisson has had ample opportunity of testing the value of the different modes of treating this painful disease; and he has come to the conclusion, that of all these, the local application of chloroform is by far the best, whether used in the simple, the blenorrhagic, or the rheumatic variety of the affection. It is chiefly in very painful cases that he resorts to it, after the use of leeches; but used as soon as pain appears, it may even act as an abortive. A compress of several folds is wetted with the chloroform and accurately applied to the testis, covering this with oiled silk, and placing the whole in a suspensory. The first day this is renewed every three hours, and continued the next day if required. For some minutes after it causes great heat and redness of the part, which is soon followed by a diminution of the original pain. The relief of pain is, in orchitis, the first step towards a cure of the disease; and with the proper combination of internal means this is accomplished in half the usual time, the chloroform being suspended as soon as an improvement is visible. The number of cases M. Buisson has thus treated now amount to about sixty, and he has found the remedy no less efficacious in what he calls ileo-scrotal neuralgia.

Removal or destruction of Wens and analogous Tumors. (Journal des Connaissances Médicales.)—At the sitting of the Academy of Sciences, on the 22d July, M. A. Legrand read a memoir on the re-
moval or destruction of wens and analogous tumors, without resorting to the knife. His method consists in dividing the skin, as with the bistoury, by a linear and often-repeated application of a solution of pure potash as strong as can be made. By repeating the cauterization always on the same points, the linear eschar which is produced becomes deeper, until the tumor may be seized with the forceps, and removed. The solution of continuity closes as when made by cutting instruments, and a cicatrix is obtained which differs in nothing from that which follows a wound made by the knife. If the cyst adheres too strongly, if it is multiple, or if the tumor is not enclosed in a cyst, the morbid products must be destroyed by successive cauterizations. In this process, as in the ordinary one, the membrane proper to these tumors must be entirely removed or destroyed, otherwise the disease will reappear.

M. Legrand has employed this method in thirty-two cases, and in no instance has it given rise to any symptom which could induce a fear of erysipelas.

Consecutive Arterial Hemorrhages. (Archives Générales.)—In an essay read before the Academy of Medicine, on 9th July, Dr. Nélatore has arrived at the following conclusions: 1. The mechanism of the spontaneous obliteration of arteries on the surface of suppurative wounds, differs essentially from that which effects the obliteration in recent wounds. The term occlusion is proper to the first, that of obliteration to the last. 2. This occlusion consists essentially in the adhesion of fleshy excrescences or granulations (bourgeons) which develop themselves in the mucous sheath after the retraction of the artery, in the same mode as in other parts when there is a solution of continuity. 3. The ligature in the method of Anel may effect a suspension of a secondary hemorrhage, provided it interrupts the course of the blood in the divided vessel until the fleshy excrescences have effected a union sufficiently intimate to resist the impulse of the blood brought below the ligature by collateral ways. 4. If the arterial wound is situated in a region where anastomoses permit the circulation rapidly to resume its course—in the hand, for example, or the foot, or the neck—the return of the hemorrhage, under the method of Anel, is almost inevitable, should any cause, either local or general, retard the process of cicatrization. 5. The ligature of an artery may be effected in a suppurating wound without any danger of a separation of the vessel or premature coming away of the ligature. 6. This mode of ligation as certainly effects the obliteration of the vessel, as when applied in a
recent wound; it should therefore be preferred to that of Anel, in all cases where it is practicable.

Statistics of Amputations that have been performed at the Massachusetts General Hospital, from January 1, 1840, to January 1, 1850. By Geo. Hayward, M. D. (Boston Medical and Surgical Journal.) During the year ending on January 1, 1850, there were 76 amputations performed on 74 patients, two patients having two limbs removed at the same time. One of them had one leg taken off above the knee, and the other below; the other had one arm amputated above the elbow, and the other arm below.

There were 35 amputations of the thigh, and 10 deaths.

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The aggregate therefore is 76 amputations and 17 deaths. One of the deaths was from tetanus, and one from phthisis. Ten of the amputations of the thigh were performed in consequence of injury, and 25 in consequence of disease. Of each of these two classes of patients, five died. In every case of death after amputation below the knee, the operation was performed in consequence of injury. The deaths after amputation of the arm were in cases of severe compound fractures.

Forty of the patients had amputation performed in consequence of disease, of whom 5 died, or 1 in 8; thirty-four had been injured, of whom 12 died, being over one-third. In one-half of the operations, the circular amputation was adopted, and in the other half, the flap; nine of the former died, and eight of the latter. Forty-eight of the patients inhaled some anaesthetic agent, and of this number 12 died. In no case did fatal effects follow the use of these agents, nor even any serious ill consequence.

The number of amputations of the large limbs performed in this Hospital, from its establishment to Jan. 1, 1850, amounts to 146, in 141 persons. Of these, 69 had the thigh amputated—19 deaths; 50, the leg below the knee—10 deaths; 11 above the elbow—1 death; 11 below the elbow—2 deaths.

Vaccination. (Proceedings Mobile Medical Society. N. O. Journal.)—Dr. W. H. Anderson having read a very interesting paper on vaccination, Dr. Fearn observed that it brought to his mind a very interesting experiment that he was witness to in Mobile some years ago. Twenty persons in one family were exposed to the contagion
of small-pox. In thirty hours after the first exposure they were all inoculated from the person ill with the disease. The day after the inoculation and two days after the first exposure, they were all vaccinated. The vaccine took in every instance, after the vaccine pustule run through its usual course and declined the inoculated pustule, rose, dried prematurely and fell off; not one of the subjects of the experiments had small-pox. Dr. Fearn explained, that these facts were observed under the following circumstances:—The head of a family was attacked with the small-pox, the children and other members of the family were necessarily exposed to it; no vaccine matter could that day be procured, and it was thought better to inoculate all who were exposed to the contagion than have them take the disease in the natural way; the day after they were inoculated, some vaccine virus was procured from New Orleans and the result of its use was as above stated.

Mode of Administration of Tannic Acid. By Dr. Alison. (Rank. Abstract.)—For administration, tannic acid is well suited. It possesses no great bitterness, is free from odour, and does not induce nausea. A little sugar or syrup will suffice to cover all unpleasantness. It is perfectly safe, and may be continued for months without any evil effect; in moderate doses, it does not reduce the secretions below the healthy standard. It may be administered at all hours, before, or during, or after meals.

Tannic acid may be employed alone in the treatment of disease, but it is capable of exercising its virtues harmoniously with other remedies. The use of this medicine does not preclude the employment of iron, cod-liver oil, and other such means; but on the contrary, I believe it will make them more available to the patient. It may be given at one time of the day, and the other remedies at another; or a week or a fortnight may be given alternately to each medicine. Tannic acid, moreover, may be advantageously combined at the same moment with other means; it may be prepared with bitters and aromatics, or conjoined with astringent wines.

For diseases of the mouth, tannic acid may be dissolved in water; three or four grains to the ounce of water make a strong styptic lotion. It may be reduced to a fine powder, and dusted over the parts. Mr. Morson has prepared a lozenge, which is well adapted for the mouth and throat. Each lozenge contains about half a grain of tannic acid. Some have added to them essence of cayenne, the more to fit them for relaxation of the fauces and glottis. For the stomach, the aqueous solution is well adapted; and when a pure bitter is required, some infusion, such as that of gentian, may be used instead of water. When it is intended to influence the bowels, tannic acid is suitably exhibited in the form of pill; and as circumstances indicate, in combination with opium and other remedies. If we desire it to enter the circulation, or to act quickly, at a distance from the stomach, on some internal part, the form of solution or powder should be employed. As a styptic for the rectum, uterus, vagina, or urethra, the aqueous solu-
tion, used as an injection, will generally prove most serviceable. For local skin diseases, requiring an astringent, tannic acid may be advantageously used, either as a lotion, or in the form of ointment. As, however, the application is really effective, it will be well to attend, at the same time, to any requirements that the general system may demand. Reduced to a very fine powder, I have found that tannic acid may be inhaled into the lungs and air-tubes. It has produced no irritation or cough when tolerably well managed. I have not had much experience of it in this form; but I believe that a cautious trial might be made of it in cases of disease of the lungs and air-tubes, in which the local application of a non-irritant styptic is indicated.

The dose of pure tannic acid must vary according to the circumstances under which it is employed. For urgent disease, such as hemorrhage from the stomach, bowels, or lungs, five to ten grains should be used every few hours. For chronic fluxes, wherever situated, two or three grains, given twice a day, will generally suffice. When the general improvement of the health is simply desiderated, one or two grains, two or three times daily, are enough, but the remedy should be long continued. For children afflicted with rickets, half a grain to one grain answers well, given night and morning.

Tannic acid is contra-indicated in hemorrhages and fluxes, wherever situated, which are only the relieving of an obstructed circulation, or of inflammatory or congestive action. It is, under such circumstances, calculated to do mischief. In obstinate constipation of the bowels, when circumstances render a lax state necessary, tannic acid is contra-indicated in large doses, as a general rule. Irritability of stomach and gastritis are liable to be aggravated by tannic acid.

Several preparations of tannic acid have been carefully prepared, at my suggestion, by Mr. Morson, the eminent pharmacist, of Southampton Row. These preparations are the tannates of quinine, cinchonine, alumina, bismuth and lead. They are all coloured, possess more or less the styptic taste of tannic acid, and are inodorous. I have not had time to make sufficient trial of them, so as to be enabled to report at present upon their virtues. I shall now only hazard an opinion that they, as well as tannic acid itself, will be found, upon full trial, to possess very considerable power, and to form valuable acquisitions to the resources of the physician, wherewith he may render himself more formidable to disease, and still more serviceable to the sick.

Therapeutic action of the Liquor Ammonia. By Dr. M. B. Tessier. (Bulletin Général de Thérapeutic.)—We extract the following conclusions from an interesting article of Dr. Tessier on the therapeutic action of the liquor of ammonia, when given internally.

1. Liquor of ammonia may be given with benefit in diseases caused by the emanations from tobacco leaves.

2. It also affords great advantages in the remote accidents resulting
from a prolonged use of alcoholic drinks, especially such as are characterized by great nervous derangement. It is a mistake to suppose that this article is only useful in cases of slight or occasional drunkenness, for it is highly beneficial in more permanent lesions, as in the case of Amblyopia already referred to.

3. The action of the ammonia is not confined to its stimulant and sudorific effects. To restrict the circle of its action thus, renders it impossible to explain its happy effects in a number of diseases, in certain neuroses, in hooping-cough, in fevers accompanied by a recrudescence of eruptions, in poisonous bites, and in other kinds of poisoning.

4. Ammonia possesses antidotal properties of a higher order than is generally supposed. It may be justly regarded as an alexipharmic. Its antidotal properties explain its good effects, not only in a great number of poisoning and by narcotics, but also the good results obtained in a great number of diseases in which noxious principles are to be neutralized or eliminated, such as suppressed eruptions, malignant fevers, chronic rheumatisms, poisoned wounds, and the pains that precede painful menstruation. This proposition, of course, has not the value of a demonstration, but it flows logically from the facts observed, and merits a careful examination.

5. The doses usually recommended in therapeutical works are in general too large. It is best to give no more than ten to fifteen drops per day, if we do not wish to expose the patient to the dangers of hemorrhage and a feeble cachectic state.

**Prolonged Tepid Baths as sedatives.** (Gaz. des Hôp. British and Foreign Med. Chir. Rev.)—M. Rostan, while ordering a tepid bath for two hours, to allay palpitation in a case of organically diseased heart, for which purpose digitalis had been of no avail, observed that he usually derives far more advantage from the employment of prolonged tepid baths as sedatives than from the use of any internal medicines whatever.

**Arsenical Paralysis.** Reported by F. P. Colton. (New York Journal of Medicine.)—Charles Wilson, 41, Swede, seaman, was admitted into hospital Dec. 1st, 1849. He states that, accidentally, about five months ago, he swallowed some arsenic, which had been laid aside for the purpose of killing rats; that remedies were promptly used, which counteracted the primary effects of the poison: felt perfectly well for seven days afterwards, was then attacked at night with a violent cramp in index finger of right hand; successively invading the other fingers, and lastly the thumb, then attacking the other hand in the same manner, and finally the feet, the pain in hands subsiding as the feet became affected: that the whole duration of cramp was
about thirty minutes, after which he fell into a sound sleep, which continued until morning; that when he awoke felt free from pain, but on attempting to rise, was surprised to find that he had lost the use of the affected parts, and was, in fact, perfectly helpless; and that this paralysis has continued unchanged to the present time, accompanied with a feeling of heat and numbness, which invaded the upper extremities, from tips of fingers to a point about three inches below the elbow, and the legs, from the toes to a point a little below the knee. Has also had lancinating pains in these parts, regularly commencing about 5 P. M., and continuing until midnight.

July 14th. Has used for a time Quin. Sulph. Strychnine, in ordinary doses, and Electricity, persevered in for a considerable time. Has slowly and pretty steadily improved. About Jan. 7th, first began to walk with a shuffling, unsteady gait; soon after could use his hands in feeding himself. Now can walk quite well, grasps the hand with some firmness, but cannot yet button his own clothing: has had no pain for some time, save in the approach of stormy weather, when peculiar painful sensations are perceived in fingers. On Jan. 10th, his urine, as tested by Professor Reid, was found to contain arsenic, estimated at $\frac{1}{170.000}$ th part, but on May 18th all trace of the poison had disappeared.

July 15th. Discharged relieved.

Phlegmasia Dolens. (Medicinisches Corresponding-Blatt. Gaz. Médicale.)—Dr. Camerer has reported the results of eleven cases of this disease. All were cured with the exception of one, who died of a typhoid fever consecutive to the phlegmasia alba. In the other cases the cure was perfect, save in one in which a compact cedema (œdema schirrosun) of the inferior portion of the thigh remained for a considerable time. The disease in no instance was followed by suppuration, or any sensible elimination of any morbid product. Two of these females were between 23 and 28 years of age; one was 40; all the others were in their thirtieth year.

In seven cases the disease appeared after easy deliveries, from the tenth to the fourteenth day after accouchement; in one case, on the eighth day, in one after six weeks, and in another after twelve weeks: the right leg was attacked in seven cases, the left in four. Some of these women had been previously affected with rheumatism—others, either at the beginning or close of the malady, had a miliary eruption, and exhibited other conditions connected with what has been called the atmospheric rheumatismal constitution. May we not suppose that this constitution favors the development of phlegmasia dolens?

In his treatment, Dr. Camerer endeavored to diminish the tension of the vascular system by the use of antispasmodics associated with antiphlogistic agents, not debilitant in their action, such as digitalis in
combination with calomel. Dr. C. also employed the digitalis in infusion, combined with the nitrate or acetate of potash. at the same time he employed frictions with the oils of juniper and henbane. Generally he obtained a resolution of the engorgement in the course of three weeks, without any apparent critical phenomena.

Another medicine, which appears to merit a preference, because it calmed the violence of the pains with great promptness, is opium, in the form of a watery extract, or in combination with nitre. Dr. C. in no instance found it necessary to employ an energetic antiphlogistic treatment, or to resort to general or local sanguine emissions.

Turning by External Manipulation. (Dublin Medical Times, from Froriep's Notizien. Medical Examiner.)—The endeavor to rectify the faulty position of the foetus in utero, by external manipulation, engaged much of the attention of the older practitioners, and especially of Wigand in 1807, but is scarcely alluded to in modern works on midwifery. Prof. Martin, of Jena, has recently published an interesting essay upon the subject, based upon twenty-seven cases related by other authors, and seven which have occurred to himself. In these all the mothers did well, as also all the children but four, of which number, too, one was already dead, and another was delivered by perforation.

It is evident that an exact knowledge of the position of the child must be obtained before the attempt is made, and Professor Martin believes it is preferably acquired by external examination, although this implies a certain amount of dexterity. It is only prior to, or immediately after, the discharge of the waters, that the foetus will be found possessed of sufficient mobility. As long as the os is undilated, and the pains irregular, the patient is kept on the side upon which the part desired to be forced into the pelvis is placed, so as to afford a moderate support. When, however, the os has become dilated, and the waters are expected to be discharged, she is laid (the bladder and rectum having been emptied) on her back, the lower part of her body being somewhat raised. With one hand the operator presses the part of the foetus which lies nearest the os, whether it be the head or breech, downwards, while with the other, he presses the rest of the body upwards. This simultaneous pressure is begun during the interval of a pain, and continued during its commencement, while, during the height of this, the uterus is firmly supported on every side. After a short pause, the manipulation is again recommenced, and, if the operator's hands become tired, an assistant may, during the intervals of the pains, support the belly on each side, whereby the ovoid configuration of the uterus is better secured, and the child more easily brought into a proper position. If the pains are long absent, she may often be advantageously placed on her side, supporting the projecting part by the hand or a firm cushion. Especially is this position advantageous if manipulation has already somewhat improved the position, and it
should, if possible, be continued after the head has entered the pelvis. For the purpose of retaining the head within the pelvis, when the improvement of the position is not durable, the rupture of the membranes, after the head or buttocks have been brought over the os, is a very efficacious procedure.

Among the rules to be observed, there is that of never employing a cold hand, for, not only is it disagreeable, but it may give rise to spasmodic action and a premature discharge of the waters. The pressure, too, should be moderate and continuous, and applied sometimes in a diffused manner with the flat hand, and at others by particular fingers, to various parts of the child. It must be always a double and simultaneous pressure, exerted equally towards the fundus and upon the part we are seeking to engage in the pelvis. A change in the position of the woman is often an important aid to the manipulation.

There are certain conditions requisite for rendering the operation of external turning an eligible one. 1. Absence of reasons for a rapid termination of labour, as hæmorrhage, presentation of funis. 2. Mobility of the child. Generally this ceases after a discharge of the waters. If, however, few pains have occurred, the presenting part has not become far forced down, or the uterus firmly contracted around it, a trial is justifiable. 3. Absence of great sensibility of the womb or abdomen. 4. Sufficient capacity of pelvis. A moderate degree of contraction is no contra-indication. 5. A normal activity of pains has been set down as a condition. It certainly is a very favorable one, but it is rare in faulty presentation, and not an essential one for external turning. Spasmodic or crampy pains which render the first two stages tedious, if due to cold, are best treated by mustard poultices and small doses of ipecacuanha. The very rectification of the position sometimes imparts a normal activity to the pains. External turning is rarely successful when the defective pains are dependent upon a rheumatico-catarrhal affection of the lower portion of the uterus giving rise to a softened state and premature rupture of the membranes. 6. The child being alive is a subordinate condition; for, although in the case of its death, internal turning may usually be advised, yet we very frequently cannot be certain of this.

Collodion in Mammary Inflammation. By Prof. Jno. Evans. (North Western Med. and Surg. Journal.)—Disheartened by the general want of success in preventing suppuration by the ordinary means of treatment, and satisfied that the most prominent indication of cure was to overcome the freedom with which the blood is forced into the mamma, and, by compression, cause the absorption of the lymph, as is done by the roller applied on the extremities, in various forms of inflammation, I determined to use a complete coating of the collodion to obtain the benefit of its contraction; the result of which will be more fully illustrated by relating the following cases in which it has been used.

Case I.—Dec. 18th, 1849; called to see Mrs. J., suffering from Mammary Inflammation during lactation. Found she had bathed
with liniments, applied poultices and kept the milk well drawn from the breast, but without apparent benefit. I could detect decided fluctuation at the point of greatest suffering. I ordered a coat of the liquid adhesive plaster which gave very prompt relief, and the inflammation speedily subsided. A few days after I opened the abscess which pointed, but it discharged a very small quantity and rapidly recovered.

CASE II.—Mrs. S. was confined June 5, 1850, with her third child. On the 7th, she was attacked with a chill, followed by high Fever and active inflammation of both mammæ. She had suffered, after each of her previous confinements, with extensive abscess of the left breast. The secretion of milk was very profuse, and notwithstanding strenuous efforts to keep the milk drawn off by the assistance of a little girl who drew it very freely, the left mamma became extensively indurated and was acutely sensitive and painful at the point of the former abscesses.

I applied the collodion so as to cover the indurations completely, with the effect of promptly relieving the suffering of the patient; and by repeating the coating morning and night for a few days the indurations were removed. The only additional treatment used was Seidlitz Powders given to produce a laxative effect.

CASE III.—Mrs. McC. eight days after confinement, was attacked with mammary inflammation attended with chill and high febrile excitement on the 8th of June, 1850.


June 9th. This morning the breast is very painful and extremely tender to the touch, great thirst, dry mouth, frequent but compressible pulse and a troublesome cough. The bowels had not been moved. Ordered Sul. Mag. 3ss. and an application of the collodion to the breast, and free abstraction of milk.

June 10th. Much better; says the application of collodion to the inflamed breast gave immediate relief to the pain, and the soreness has rapidly diminished. Ordered the application to be repeated.

The recovery was rapid without suppuration.

CASE IV.—Mrs. P., three weeks after confinement, was attacked with inflammation of the mamma on the 24th of June, 1850. She had been previously under treatment for uterine phlebitis, from which she was recovering.

The breast was swollen, indurated and very painful. The colloidion was applied so as to cover the induration and swelling, with almost instant relief to the pain. By repeating the application the swelling subsided gradually, without suppuration.

CASE V.—July 15th, 1850. Mrs. M. had an attack of inflammation of the right mamma, about ten days after confinement. I was called the next day and found it swollen, indurated and painful, notwithstanding the milk had been kept freely drawn and the breast well fomented. A coating with collodion, as in the preceding cases, promptly gave relief to the pain, and gradually removed the swelling.
In no case where I have used the collodion, except the first one reported, has the slightest suppuration taken place.

In every instance the relief from suffering has been prompt, and no inconvenience has resulted from its use in any case, except the slight smarting that attends its application.

On the Application of Ligatures to Uterine and other Polypi.—(Lond. Journ. Med. Amer. Journ. Med. Sciences.)—Prof. Langenbeck, of Berlin, in an interesting paper on this subject in the Deutsche Klinik, remarks: The numerous instruments which have been contrived for ligature of polypi of the uterus and pharynx, show the great apprehension of hemorrhage from their excision or evulsion. Even the assurances of Siebold, Dupuytren, and other distinguished surgeons, that there is no greater danger of hemorrhage from the excision of polypi than from other operative methods, have not removed this apprehension; and the ligature of uterine polypi is rapidly gaining ground, in spite of the difficulty of its performance. It is true that the excision of large fibrous tumours from the pharynx and uterus may be complicated with considerable hemorrhage; but this generally ceases of itself when the operation is ended, or may be quickly and surely restrained by the continued injection of cold water, by compression with the finger, or, in the most obstinate cases, by plugging. The cases in which actual danger arises from the patient becoming exhausted by hemorrhage through the cut pedicle of the tumour are very rare. But the dangers attending on ligature of the polypi are far greater; and this operation would certainly be had recourse to only in exceptional cases, if the fatal cases following it were not less apparent than those from the much-dreaded hemorrhage. A death occurring some days or weeks after a bloodless operation seems less terrible than one occurring suddenly from hemorrhage under the hands of the operator. The danger of purulent infection, after the application of a ligature to uterine polypi, is so obvious that I have not yet been able to determine on performing this operation. During the last ten years, there have occurred to myself alone ten fatal cases of pyaemia after ligature of polypi. The larger polypous (fibroid) tumours of the uterus and pharynx are furnished with large veins with thin parietes, doubtless arising from the impediment to the return of blood caused by the dependent position, or constriction by the os tinae, of the tumour. As the firm parenchyma of these tumours can only be slowly cut through by a ligature, the blood must still circulate in one part, while another is in a sloughed and softened state. As long as the pedicle is not entirely cut through by the ligature, pyaemia is to be feared. Entirely independent then of the danger of convulsions, suffocation (in polypi of the pharynx), secondary hemorrhage, etc., the application of the ligature ought to be entirely rejected on account of the danger of pyæmia. But if it be still determined, in spite of the marked success attending the excision of polypi, and in opposition to which scarcely a single case of unrestrainable hemorrhage can be related, to apply a ligature, I con-
sider it indispensable that the polypus should be immediately excised, that the ligature should be used only as a preliminary measure, and that it should be removed as soon as the danger of hemorrhage appears to have been obviated.

It is not my purpose to enter on a critical examination of the various methods and instruments employed in applying the ligature to uterine polypi, as, for the most part, they possess only a historical interest. With very few exceptions, they are all faulty in being difficult of application, in tending to produce violent irritation of the neighbouring parts, and in the ligature being unable to be removed until the pedicle of the tumour is entirely divided.

Medical Miscellany.

*Medical College of Georgia.*—Dr. Paul F. Eve has resigned the Professorship of Surgery in this Institution, and accepted the same Chair in the University of Louisville, Kentucky. The vacancy thus created has been filled by the appointment of Prof. L. A. Dugas, and Prof. H. V. M. Miller has been appointed to the Chair of Physiology and Pathological Anatomy, vacated by the transfer of Prof. Dugas.

The eminent qualifications of Prof. Dugas for the position he is to occupy, and the well established reputation of Prof. Miller as an orator, a teacher, and a man of great scientific attainments, furnish a satisfactory assurance to the friends of the Institution, that the chairs of Surgery and Physiology have been most satisfactorily filled.

*Singular Revenge.*—In a memoir of Sir B. C. Brodie, the Editor of the London Lancet relates the following remarkable circumstance:

"Late one evening a person came into our office, and asked to see the editor of The Lancet. On being introduced to our sanctum, he placed a bundle upon the table, from which he proceeded to extract a very fair and symmetrical lower extremity, which might have matched

"Atlanta's better part," and which had evidently belonged to a woman "There," said he, "is there any thing the matter with that leg? Did you ever see a handsomer? What ought the man to be done with who cut it off?" On having the meaning of these interrogatories put before us, we found that it was the leg of the wife of our evening visitor. He had been accustomed to admire the lady's leg and foot, of the perfection of which, she was, it appeared, fully conscious. A few days before, he had excited her anger, and they had quarrelled violently, upon which she left the house, declaring she would be revenged on him, and that
he should never see the objects of his admiration again. The next thing he heard of her was, that she was a patient in Hospital, and, had, had her leg amputated. She had declared to the surgeons that she suffered intolerable pain in the knee, and had begged to have the limb removed—a petition the surgeons complied with, and thus became the instrument of her absurd and self-torturing revenge upon her husband!

Correction.—In our editorial notice of the Break-bone fever, in the October number of the Journal, Dr. Fenner’s name was inadvertently substituted for that of Dr. Hester.

### METEOROLOGICAL OBSERVATIONS

<table>
<thead>
<tr>
<th>Sun Rise.</th>
<th>2, P.M.</th>
<th>Wind.</th>
<th>Remarks.</th>
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<tbody>
<tr>
<td>75 20 65-100</td>
<td>88 23 61-100</td>
<td>W.</td>
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<td>70 77-100</td>
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<td>N. W.</td>
<td>Fair.</td>
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<td>67 87-100</td>
<td>90 87-100</td>
<td>s. W.</td>
<td>Cloudy—much thunder.</td>
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<td>81 78-100</td>
<td>s.</td>
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<td>91 70-100</td>
<td>N.</td>
<td>Fair—breeze.</td>
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<tr>
<td>70 75-100</td>
<td>89 72-100</td>
<td>N. W.</td>
<td>Fair—sprink. at 10 P.M., 10-100.</td>
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<tr>
<td>69 77-100</td>
<td>89 79-100</td>
<td>N. E.</td>
<td>Showery, 15-100.</td>
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<td>78 76-100</td>
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<td>Cloudy.</td>
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<td>78 80-100</td>
<td>N.</td>
<td>Fair—very foggy morning.</td>
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<td>65 82-400</td>
<td>85 83-100</td>
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<td>88 86-100</td>
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<td>71 83-100</td>
<td>86 80-100</td>
<td>N. W.</td>
<td>Fair—breeze.</td>
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<tr>
<td>71 70-100</td>
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<td>e.</td>
<td>Fair—sprinkle at 9 P.M.</td>
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<td>Old’dy morning—gale at 10 P.M.</td>
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<td>78 87-100</td>
<td>w.</td>
<td>Fair—breeze.</td>
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<td>84 78-100</td>
<td>s. W.</td>
<td>Fair morning—shower 20-100.</td>
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<td>87 60-100</td>
<td>s. W.</td>
<td>Cloudy.</td>
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<td>88 60-100</td>
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<td>Cloudy—breeze.</td>
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<td>70 79-100</td>
<td>81 81-100</td>
<td>n. E.</td>
<td>Cloudy morning.</td>
</tr>
<tr>
<td>64 90-100</td>
<td>70 93-100</td>
<td>n. E.</td>
<td>Cloudy—dry gale.</td>
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18 Fair days. Quantity of Rain 60-100. Wind East of N. and S. 12 days. West of do. do. 12 days.

* 21st, 9 a.m., Ther. 73, Bar. 83-100. Wind N., breeze, clearing up.
  12 m. " 77, " 84-100. " N. E., breeze, very cloudy.
  6 p.m. " 74, " 86-100. " E., very cloudy, sprinkle at 4, no wind or breeze.