

health can do to prevent adulteration of foods and drinks and the sale of dangerous illuminants,' by W. R. Newton of Paterson. Dr. Newton was elected president for the ensuing year. The association adjourned to meet at Trenton next year.

NOTES AND NEWS.

THE limits of glacial action in Russia appear on all our maps, according to the observations of Murchison and his colleagues many years ago, at a time when the glacial theory was in its infancy, and when the investigation of glacial records was in a very crude state. It is therefore welcome news to students in this branch of geology to learn that Nikitin, chief of the Russian geological bureau, has lately reviewed the question, utilizing all local information, so difficult of access to American readers from its being largely in Russian, and adding many special observations of his own. His discussion is published in the ninth number of Petermann's *Mittheilungen* for the current year, and is accompanied by a small-scale map showing the margin of the glaciated area, in which the characteristic indented outline clearly appears, though not on so remarkable a scale as in this country. The subdivision of the drift is not carried so far as it has been with us, and its influence on the topography is hardly considered: much further information may therefore be expected from later investigations.

— Although Mont Blanc has for a quarter of a century been French soil, its climbers have not usually shown an annual majority of Frenchmen; yet this has been the case this year. The ascent was made by 31 French (three of them ladies), 25 English (one lady), 10 Americans, seven Swiss (two ladies), six Germans, two Russians, two Swedes, one Italian, and one Belgian, — total, 85.

— Glanders is still quite prevalent in Brooklyn. But a short time ago the officers of Bergh's society found that a horse which had been transporting meat from a slaughter-house to the butcher-shops for eight months, had during all that time been suffering from glanders. The owner of the horse was arrested, and fined a hundred dollars, and, in default of its payment, was sent to jail. Three other horses have been attacked with the disease in the same stable, and all four have been killed. The number of horses which have been exposed during these many months is incalculable, and, unless rigid measures are taken, a widespread epidemic may be expected.

— The pharmaceutical society of Brooklyn has permanently established a course of lectures to be given annually to the drug-clerks of that society.

The course for the coming year includes lectures on poisons and their mode of action, antiseptics and disinfectants, chemistry as related to pharmacy, the microscope and its uses in pharmacy, and other subjects of importance and interest. The plan is an admirable one, and is worthy of reproduction by the pharmacists of other cities.

— The superintendent of buildings in Kansas City says that he finds very few buildings in that city in which the plumbing is as it should be. He finds that in some cases the only escape for sewer-gas is through the sink, the bath-tub, or the water-closet. He recommends the appointment of an inspector, whose duty it should be to examine the plumbing of all houses.

— Dr. Cyrus Edson's vigorous inspection of the food-supply of New York City is kept up with unabated vigor, and is undoubtedly preventive of much disease among the lower classes of the population. Recently Mr. Edson visited a wine-manufactory in Front Street, and reported that wine was being made by the following process: dried fruits, such as raisins, currants, and peaches, of low grade, are macerated with water, to which a certain amount of sugar is added. The mixture is then fermented, and, when fermentation is considered sufficiently advanced, it is checked by the addition of salicylic acid. The so-called wine is then clarified, flavored, and colored to resemble port, claret, or any other desired kind, the object being to imitate and undersell natural native wines. Dr. Edson claims that salicylic acid taken constantly, even in small doses, produces a depressing effect on the nervous system, and he believes the adulteration dangerous, and liable to cause illness. The manufacturer uses $4\frac{1}{2}$ grains of acid to a pint, and Dr. Edson condemned and seized all the wine that he found on the premises.

— M. Paul Janet has in press a new and revised edition of his valuable and suggestive work entitled 'Histoire de la science politique dans ses rapports avec la morale.'

— The French demand for English and German philosophical works seems to increase rather than diminish. M. Alcan has now in press translations of Spencer's 'Principles of sociology,' and of Preyer's 'Die seele des kindes.'

— In Belgium a royal decree of recent date has established at Ghent an academy of scholars and literary men, having for its object the study and cultivation of the languages and literature of the Netherlands. It is named Koninklijke vlaamsche academie for taal-en letterkunde. The king of the Belgians is the patron of the academy, which

is composed of three classes of members,—regular, honorary, and corresponding. The regular members are twenty-five in number, and the first eighteen nominations were made by the king. He named MM. Claeys, de Hondt, Delaet, Delcroix, de Pauw, de Potter, Gaillard, Genard, Gezelle, Hiel, Nolet de Brauwere van Steeland, Roersch, Rooses, Snieders, Stroobaut, van Beers, Vanderhiesen, and P. Willems. M. Willems is president, and M. de Potter secretary, of the academy. It was opened on Oct. 10 by the minister of agriculture, industry, and public works.

—The London *Times* notices that Signor Costanzo Stella, one of the Italian deputation which visited Spain last summer, has written an interesting account of what he saw, and in it shows that Spain, though behind most nations of western Europe, is not by any means absolutely unprogressive. Signor Stella says that in 1799 the population of Spain scarcely reached ten millions, but at the end of 1882 it exceeded eighteen millions, this being tantamount to an increase of 8.40 per 1,000 inhabitants every year. The agricultural population, which was only 3,615,000 eighty-five years ago, is now 9,328,000, and the area under cultivation has increased from 53,000,000 to 193,750,000 acres, while there are now 38,000,000 head of cattle as against just half that number at the beginning of the century. The industrial population of Spain has risen from 1,035,000 to 3,038,000, and the number of manufactories, etc., from 883 to 13,911. The trade of the country has increased in proportion, the progress during the last twenty-five years being particularly remarkable, as, while the imports and exports together amounted to only £25,800,000 in 1860, they have been gradually increasing, and now reach £56,000,000. The increase extends to all branches of trade; for while Spain now produces 461,256,000 gallons of wine, of which about two-thirds are consumed in the country and the remainder exported, her railway system, which but five years ago did not reach 4,200 miles, is now not far short of 6,000 miles.

—The new edition of the 'Lectures and essays' of the late Professor Clifford brings the delightful writing and acute thinking of that wonderful intellect within the reach of a large number of readers. In this edition the introduction has been revised by its author, Frederick Pollock, and two essays which were included in the former edition have been omitted. They were those on 'Types of compound statement' and 'Instruments used in measurement,' and are to be found now among the 'Mathematical papers' published in 1882. We are glad to notice that Professor Clifford's portrait is retained.

—From the *Medical gazette* of Nantes, we learn that the Japanese have a remedy for hydrophobia which they call hoang-nan. It has recently been tried in twenty-four suspected cases. The daily dose of the drug in the form of the powdered root was from a hundred to a hundred and fifty grains. It is stated, that, up to the time of the last report, none of the patients had died. The histories of the cases are so incomplete that no inferences of any value can be drawn from them.

—A death has recently occurred from hemorrhage of the lungs, brought on by the irritation caused by the presence in that organ of six pine-leaves. Under what circumstances they found their way into the lungs is not reported.

—Professor Poncet, at a meeting of a medical society in Lyons, France, narrated an extremely interesting case in which pieces of bone were taken from a kid and grafted on to the tibia or leg-bone of a boy who had so suffered from the death of the bone as to necessitate the removal of a considerable portion of it. The wound in the leg healed, and the boy has now a firm and solid tibia.

—According to the *Medical record*, Dr. Louis Jobert has published a work on the cause and frequency of left-handedness. No purely left-handed race has ever been discovered, although there seems to be a difference in different tribes. Seventy per cent of the inhabitants of the Pendjab use the left hand by preference, and the greater number of the Hottentots and Bushmen of South Africa also use the left hand in preference to the right. Dr. Marro, as a result of his study of criminals, has found that from fourteen to twenty-two per cent of those who have been convicted of crime were left-handed, the highest ratio among people of all classes being only nine in the hundred.

—The contagiousness of leprosy has for a long time been a mooted question. The Royal college of physicians, in order to obtain the best information on this subject, sent inquiries to physicians throughout the world, whose practice had brought them in contact with the disease, and whose opinions would therefore be of value. Thirteen of these have no doubt of its contagiousness, and thirty-four entertain no doubt of its non-contagiousness. Twelve regarded leprosy and syphilis as being intimately related; twenty-one believed there was no relation. Most of those to whom the inquiries were sent regard leprosy as hereditary, and also that it may originate spontaneously under suitable conditions.

—During a recent voyage of the U. S. S. *Juniata* to South America, observations were

made as to the height and length of waves, with the following result, as reported by Commander Davis: height of wave from hollow to crest, 25 feet; length from crest to crest, 375 feet; wave-period, 7.5 seconds. The wind-velocity at the time was 10 miles per hour. The height of wave was measured by the elevation at which an observer could see over the crest when the ship was in the hollow. The wave-period was estimated by counting the average number of waves per minute. The wave-length was determined by the time occupied by the crest in passing a measured portion of the vessel's length.

—Mr. George A. Bacon of Syracuse, editor of the *Academy*, writes to tell us that the claim made in the newspapers that New York, Brooklyn, and Buffalo were the only cities in New York state without female representatives on the school board, to which we referred (*Science*, viii. No. 197), is without foundation. Mr. Bacon had before him, at the time of writing, the list of members of the school boards of Troy, Watertown, Saratoga, Ithaca, Auburn, Kingston, Syracuse, Poughkeepsie, Rochester, and Binghamton, and in no one of them did the name of a woman appear.

—The volume on Hume by Professor Knight of St. Andrews has been issued in Blackwood's series of 'Philosophical classics for English readers.'

—The report that Professor Tyndall would be able to give the course of Christmas lectures at the Royal institution proves to have been unfounded. It has been arranged for Professor Dewar to give them, and the subject will be the 'Chemistry of light and photography.'

—Dr. Thomas Dwight, the successor of Dr. Oliver Wendell Holmes as professor of anatomy at Harvard, has just published in the memoirs of the Boston society of natural history an article on the structure of bone. It is concerned chiefly with the arrangement of plates in the spongy bones as seen in sections made after maceration and drying. It is illustrated by three very beautiful photographic plates, and makes known a series of interesting observations. In the concluding section the author presents some general views, the character of which is indicated by the following quotations: "It is customary now to quote rudimentary organs and anatomical anomalies as evidences of descent; but it seems to me very improperly, occurring, as many of them do, quite out of the line of inheritance." "Clearly, the crude notion that accidental, purposeless, external forces should be sufficient to change by slow degrees one such organism into another of a different species, is untenable. The doctrine of chances alone shows it to be impossible. There

is, moreover, the unanswerable argument of the inevitable uselessness of incipient structures. Where we see the need, we see the structure to meet it already perfect. We see also the combination of homology with teleology." "The changes must be, for the most part, comparatively sudden, and therefore due to an implanted, internal force acting in predetermined directions. On the theory of external accidental forces, the preservation of homology is incomprehensible." It will be seen that Dr. Dwight is frankly opposed to what might be called the orthodox evolution of the day.

—The detailed programme of the course of lectures on Roman archeology to be delivered at the Johns Hopkins university by Prof. Rodolfo Lanciani of Rome, of which mention was made in *Science* (viii. No. 194), is now published. The lectures will begin on Tuesday, Jan. 4, and continue on successive Wednesdays, Fridays, and Mondays until Jan. 24. The subjects of the lectures are as follows: I. The foundation and prehistoric life of Rome; II. Fora and parks of ancient Rome; III. Public libraries of ancient and mediaeval Rome; IV. The Tiber and maritime trade of Rome (quays, wharves, emporium, Ostia, *Portus Augusti*, treasures of the bed of the river); V. Police and garrison of Rome; VI. Palace of the Caesars; VII. House of the Vestals; VIII. House of the Vestals (continued); IX. The bronze statues of Rome, especially those lately discovered; X. The campagna (aqueducts, etc.).

—Alfred R. Wallace, LL.D., of London, is delivering a course of four illustrated lectures at the Peabody institute, Baltimore. His subjects are 'The theory of development,' and 'The origin and uses of color in animals and plants.'

—The Johns Hopkins university announces some new appointments to minor positions on the teaching staff. Adam T. Bruce, Ph.D., has been appointed instructor in osteology and mammalian anatomy, and Cameron Piggot, M.D., and Charles L. Reese, Ph.D., have been made assistants in the chemical laboratory.

—The water-tower near Coney Island which gave way while being tested recently, as mentioned in *Science* at the time, was 250 feet high, with a diameter of sixteen feet for the lower fifty feet. It then 'coned,' or decreased in diameter, in a length of twenty-five feet, to eight feet, which was continued to the top. The foundation, of concrete and brickwork, was twenty-two feet in diameter. The tower was constructed of steel plates, varying in thickness from one inch, in the plates at the lower part of the structure, to one-

fourth inch in those at the top. Ten wire-rope guys were used to steady the tower. When the test was being made, the water had reached a height of 227 feet, when a crack appeared near the bottom, running up about twenty feet, accompanied by a sharp rending sound. This was followed instantly by the total shattering of the lower part, and the fall of the tower, large fragments of the plates being thrown fifty or sixty feet from the foundation. The scene was visited soon after the disaster by an expert in water-tower construction, who states that "there was a distinct circular impress in the ground, overlapping the base somewhat, which would indicate an almost vertical fall of the upper part of the tower before it toppled over." The *Engineering news* says that this agrees with other statements made, as well as with the appearance of the wreckage about the base. The utter destruction of the lower part, and the general appearance of the fallen tower, which was broken in two just above the cone, and presented an almost clean square cut below the cone, resembled the sudden smashing of the lower part of a high glass cylinder, and the vertical drop and then toppling over of the upper part. The guys may have had some effect in maintaining the structure in a vertical position for a moment after the plates in the lower part had given way. These plates, it is said, were defective, and could not have stood any considerable test for tensile strength.

—The exports of printed books from the United Kingdom during the first six months of the current year show an increase in quantity, but a decrease in value. The totals are 54,299 hundredweight, valued at £496,768, as against 52,858 hundredweight, valued at £516,266, in the corresponding period of last year.

—A report on the newspapers of the world has recently been laid before the Imperial German diet. It would appear that there exist 34,000 newspapers, the total issues of which, during the year, amount to 592,000,000. Of these, 19,000 papers appear in Europe, 12,000 in North America, 775 in Asia, and 609 in South America; 16,500 are in the English language, 7,800 in German, 3,850 in French, and about 100 in Spanish.

—It will be remembered that Francis R. Brooks, formerly a student at Harvard, commenced suit against the authorities of that university to recover fifty thousand dollars damages for injuries which he received at the bursting of a retort containing sulphuric acid, which occurred during some experiments being made before the class last spring. The defendants have just filed their answer, in which they charge the plaintiff with lack of care,

negligence, disobedience, and neglect of instructions.

—In the winter of 1884 a fatal case of typhoid fever occurred in Brooklyn in a house the plumbing of which was in a defective condition. The widow of the deceased has commenced suit against the owner of the house to recover five thousand dollars for the loss of her husband, on the ground that the disease was contracted from the sewer through the defective house-drains.

—Dr. Hesse of Leipzig finds that bakers are especially liable to suffer from decayed teeth, and explains it by the lodgement of the dust from the flour in the teeth, where it undergoes acid fermentation.

—Dr. Foster Pratt, in the *Medical record*, estimates that our foreign-born population furnishes the great proportion of our criminal and diseased population. In 1850 they constituted one-tenth of the population, and furnished one-seventh of the insane; in 1880 they formed one-seventh of the population, and furnished one-third of the insane. The proportion of insane to the sane among natives, in 1880, was 1 to 662; among foreign-born, 1 to 250. He considers that the country is being loaded down with the defective classes of Europe, and believes that the matter is of so much importance as to demand serious attention.

—Koch's museum of hygiene in Berlin has been opened.

—One of the methods employed for the detection of defects in the sewer-pipes of houses is by introducing the oil of peppermint, diluted with water, into the pipes, preferably on the roof of the house, where the soil or waste pipes terminate, and to search within the house for the odor of the peppermint, which will be detected at or near the point where the defect exists. The *Sanitary engineer* figures and describes an apparatus consisting of a receiver, a rubber ball or bellows, and rubber tubing, by means of which the test solution can be injected into the waste-pipes of the house in which defects are suspected to exist. How this works practically we do not know, but it certainly has some advantages over the old method, for, as is often the case, the pipes have no opening at the roof, or other convenient place, into which the solution can be poured. The tubing of the apparatus we here refer to can be passed into the soil-pipe through the trap, and the peppermint then injected.

—Cholera, whose presence in Hungary we had occasion to chronicle some time ago, appears to be still raging in that and neighboring countries. But one case has, so far as is announced, occurred in Vienna; but of its true nature there is no

doubt. At Szegedin, in the first nine days of its existence, 284 persons had been attacked, of which number 124 had died. In Trieste in one week there were 70 cases, of which 39 were fatal. The disease has existed in this city certainly since June, during which time it has attacked 859 persons, 271 of whom have succumbed. The disease has also ravaged Istria, having had since July, in that province alone, 662 victims, with 368 deaths. The appearance of this malady in Buenos Ayres seems to be well authenticated, and some of the southern ports of our own country, notably Galveston and New Orleans, which are in commercial intercourse with that country, have already instituted a quarantine against it. It is said that there are a number of vessels due in these two ports from Buenos Ayres about Christmas.

— The St. Petersburg *Oriental review* of Nov. 4 says that the eminent Mongolian explorer Potanin returned safely on the 22d of October to the Siberian frontier town of Kiachta, after an absence of three years spent in the exploration of Mongolia and China. Throughout his long and difficult journey, Mr. Potanin was accompanied by his wife. The expedition was undertaken by order and at the expense of the Imperial Russian geographical society; and the *Oriental review* says, "We expect the richest and most valuable results from this scientific exploration of China and Mongolia."

— The meeting of the next oriental congress has been postponed until 1890. The executive committee of the congress is preparing a memorial, which will be signed by the Archduke Renier, to the trustees of the British museum and the British secretary of state for home affairs, praying that a bill be introduced into parliament empowering the museum to lend the oriental manuscripts in its possession to foreign *savants*.

— The physical hydrographic field-work of the coast survey in New York bay and harbor has closed for the season, and Professor Mitchell is now at the home office working up his notes. The computations of pendulum work of Lieutenant Greely's party at Lady Franklin Bay are expected to be completed by Dec. 1. The coast survey report for 1885 will be ready for distribution about Jan. 1. It contains a number of valuable appendices, among them 'The magnetic dip intensities,' by C. A. Schott, and 'The currents and temperatures of the Gulf Stream,' by Lieut. J. E. Pillsbury, U.S.N. Owing to the lack of funds to prosecute the topographic work in California, all operations there will be closed for the season about Dec. 15.

LETTERS TO THE EDITOR.

**Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

Laws against quacks.

My attention has been called to an editorial note on p. 447 of *Science* (viii. No. 198), in which, apropos of a recent arrest of one violating the law regulating the practice of medicine in this state, injustice is done to the Medical society of the county of New York.

I assume that this injustice, which seems to have arisen out of a misapprehension both of the law and the facts of the case, was of course unintentional, and that you will give equal publicity to the statement of the counsel of that society, who caused the arrest, and was successful in the action, which, as you said, was brought against him for damages.

The part of your note to which I except runs as follows: "It is absurd as a matter of common sense that registration in one county should not be sufficient, rather than that a man should be required to register in all the counties of the state if he desires to practise in them; and, as appears from an unwritten opinion given by two judges of the supreme court of this state, it is equally absurd as a matter of law." As to the absurdity, from the stand-point of common sense, of requiring registration in every county in which a physician regularly practises, I venture to differ with you: that is a mere matter of opinion. The object of the law is to provide in every county a list of physicians regularly practising therein, for the information of the public and the protection of physicians against prosecution. The construction you give the law would necessitate the examination of the records in the offices of sixty county clerks, before any prosecution could be commenced; and you might with as much justice declare it a hardship to require a judgment to be docketed in every county in which it is to be enforced. The only theory on which it is absurd to require a physician moving from one county to another to register in the latter, is this: that the act of registration *per se* has some saving grace whereby a physician who performs it becomes wiser and more skilful in his calling. But, unless registration is analogous to baptism, I fail to see the absurdity you declare exists; although I readily admit that a state registration law, like that provided for in the medical act of Great Britain, would be a great improvement over the present clumsy system. The second part of your sentence, however, is a statement, not of opinion, but of fact, and is absolutely incorrect. No judge or judges in this state have rendered any such opinion as you mention. On the contrary, four years ago, in the case of *Hayes vs. Webster*, — an action against the president of the county society for malicious prosecution in causing the arrest of a practitioner registered in Queens county, — Judge Freedman, of the superior court of this city, directed a verdict for defendant on the ground that not only was the arrest on probable cause, but that it was President Webster's duty to make it. In the case against myself, to which you refer, Judge Lewis of the supreme court directed a verdict in my favor on the plaintiff's own testimony, upon the same grounds. The criminal courts have held in the same way. In Texas, under a statute like ours, the court of appeals has held, that, on removal from one county to another, a physician must register anew. The court said, "The object of the law was to protect the