## THE SCIENTIFIC VALUE OF THE CENTRAL PARK.

Twenty years ago, Ambrose C. Kingsland, the Mayor of the city, transmitted to the Board of Aldermen a special message setting forth the limited extent of the places devoted to the public on the island of New York, and urging the importance of prompt action towards the creation of a great park for the moral, scientific, and sanitary benefit of the people. His message attracted much attention and originated the movement which finally ended in the establishment of the Central Park. The Mayor and Street Commissioners were a few years later, created Commissioners of the Central Park, and they associated with them "certain well-known citizens, whose public reputation, peculiar avocations, and cultivated taste, gave assurance that their opinions would possess the force of a clear, unbiased judgment."

Invitations were extended to Washington Irving, George Bancroft, Stewart Brown, and others, and these gentlemen met on the 29th of May, 1856, and organized by electing Washington Irving as President of the Board, and settled the preliminaries for carrying into effect the objects of the commission,

It is not necessary to pursue the history of this important work, as it is fresh in the memory of the youngest inhabitant, and down to a recent period was the pride and glory of our city. Our object is to call attention to the value of the Central Park as an agent in the scientific education of the people. We have before us the thirteen annual reports of the Board of Commissioners of the Central Park, and are gratified to trace in them the progress of public opinion in favor of the establishment of Museums, Zoological Gardens, Historical Collections, and Art Galleries, within the Park, for the instruction as well as the amusement of the people. The Commissioners have all the time recognized the value of such aids to knowledge, and have done all in their power to promote them.

As early as 1861, the Legislature chartered the American Botanical and Zoological Society, and gave the Commissioners of the Park authority to set apart a portion of the grounds, not exceeding sixty acres, for the use of the Society, for the establishment of a Zoological and Botanical Garden; and subsequently the Board, in compliance with the provisions of an act passed March 25, 1862, made to the New York Historical Society, a conditional appropriation of certain grounds about the Arsenal building for the purposes of establishing and maintaining therein, by the said society, a Museum of Antiquities and Science, and a Gallery of Art. It does not appear from the records that either of these societies ever availed itself of the opportunity thus afforded of obtaining a permanent foothold in the Park, and we fear that this neglect will result in a permanent loss to our community.

The Legislature of the State, at its last session, authorized the Board "to erect, establish, conduct, and maintain on the Central Park, a Meteorological and Astronomical Observatory, and a Museum of Natural History, and a Gallery of Art, and the buildings therefor, and to provide the necessary instruments, furniture, and equipments for the same."

In the meantime we have, in the city, the Lyceum of Natural History, chartered more than fifty years ago, the American Institute, founded forty years ago, and two new societies —the American Museum of Natural History, and the Metropolitan Museum of Art—they occupying, with the Historical Society, pretty much the whole field of letters, arts, and sciences.

So many societies and so many men of many minds, have evidently perplexed the Commissioners of the Central Park, and after waiting more than ten years to see what propositions these various organizations had to make, they appear to have taken the matter into their own hands, and to have had the act of Legislature, above cited, passed, to enable them to go to work on their own authority and in their own way.

The distinguished architects of the Park, Messrs. Olmsted and Vaux, and the efficient comptroller, Mr. Green, have, to our personal knowledge, been in constant communication with the leading thinkers and workers in this country and in Europe.

They have all of them traveled over the continent of Europe for the purpose of studying the construction of museums, zoological gardens, pleasure grounds, and galleries of art, and they have had the advice and assistance of the officers of all the organizations named above; and, as a result, have planned and carried forward the best laid scheme that was ever yet devised for the instruction and amusement of a people. As a part of this scheme, the Commissioners employed Professor B. Waterhouse Hawkins to reconstruct some of the extinct animals of this continent, and to establish a paleozoic museum. Their action in this matter has been highly commended by the scientific societies abroad, and by the unanimous approval of the best minds of our country. It has been said by geologists in England that no one thing has exerted so great an influence upon the study of geology and natural history in England, or has done so much to give popular information upon the origin of the plants and animals on the globe, as the restorations made by Professor Hawkins in the gardens of the Sydenham Palace. As soon as it was understood that this celebrated naturalist had come to the United States, a rivalry at once arose in the large cities to secure his services for their respective parks, but as he first landed in New York, the Central Park Commissioners were so fortunate as to make arrangements to have the work done in our city; and Mr. Hawkins had made considerable progress, when the work was summarily stopped by the new Commissioners, who, having just been appointed, naturally enough did not know what great value the scientific men of the country put upon the success of this particular undertaking. Under the management that has made the Central Park what it now is, there is no question that we should soon have had the best organized Zoological Garden, the most complete Museum of Art and Natural History, to be found in this or any other country. The Commissioners, after a study of many years, were in possession of all the requisite information to enable them to push the whole scheme to perfect success; and under their direction the Park would have become the right hand of our public schools as an aid to amusement, health, and instruction. They ought never to have been removed, and their departure from the conduct of affairs awakens the fear that the artistic and scientific value of the Park may be considered as gone forever.

How long will it take the present Commissioners to acquire as much knowledge of all the details of a great park as was obtained by the gentlemen who have just been removed from office, after a service of nearly fifteen years? Is there such a thing as scientific administration in this country, or must we always be subject to the whims and caprice of the moment? Surely if there were ever a public undertaking requiring knowledge and experience, it is the Central Park; and yet we see old public servants removed, and new men appointed, without any regard to the lessons of the past, or to services already rendered. And as a consequence we read that the work on the Paleozoic Museum is to be stopped, the Zoological Garden to be removed from the site which had been selected after years of study and consultation with experts. And what is to become of the other museums, we do not know; but we may be justified in predicting a foreclosure of the whole concern. What are the names of "the well-known citizens whose public reputation, peculiar avocations, and cultivated taste give assurance that their opinions would possess the force of a clear, unbiased judgment," who are in consultation with the present Board of Public Parks? What artists and men of science are members of the advisory board?

## THE ECLIPSE EXPEDITIONS.

So far as heard from, the Eclipse expeditions seem to have been, if not total failures, unsuccessful in doing very much useful scientific work. Bad weather interfered with the operations of nearly all of them. We shall summarize as briefly as possible the news received up to the present date in regard to them.

Our European exchanges inform us that the Oran, Gibraltar, and Cadiz expeditions accomplished very little. The private expedition of Lord Lindsay had better luck, and, being favored by a break in the clouds at just the right moment, obtained, by means of long exposure, two pictures of the corona, and, by means of shorter exposures, seven photographs of the prominences, including one of Baily's beads. The official expedition at Cadiz, under the leadership of Father Perry, detected some bright lines in the spectrum of the corona; also that the light of the corona was polarized. The work of the Gibraltar expedition was spoiled by clouds, and Mr. Buckingham, who went to Estepona, thirty miles north, with a great heavy telescope and portable house for photographic operations, had all his labor in vain, for rain came on during the total phase. Some of the observers near Gibraltar had a glimpse of the total phase, and in that short instant detected bright lines in the spectrum of the corona. The Oran expedition was a total failure, because of bad weather. The expedition to Sicily also could do little, because of the clouds and bad weather; a telegram from Mr. Norman Lockyer says that the American observations of last year are confirmed.

The *Gibraltar Chronicle* publishes communications from a number of private observers on the Rock, one of whom writes:

As the moment of "totality" approached, and the moon's shadow, perceptibly traveling from west to east across the sun's disk, veiled his light more and more, earth and sky began to assume a weird, unnatural aspect; and the effect was so solemn and fascinating that it was with painful anxiety one saw one of the dense clouds, with which the sky was largely covered, moving speedily from the west in the direction of the sun, and threatening to hide the whole phenomenon. Heavy and looming, on it came, and at seven minutes before totality the view was completely lost. It was fortunately blowing hard. The friendly gale soon swept off the interloper, and at about four minutes before the eclipse the brilliant crescent again appeared. At 11h. 34m. 30s. ($1\frac{1}{2}$ minutes before totality), the clouds having left a considerable space of pretty clear sky, an extensive halo of deep shadow, with a faintly luminous fringe of prismatic rays, became visible. It was concentric with the sun, and in diameter about one third of the arc between the zenith and the horizon, seemingly about fifty times the apparent diameter of the moon's shadow. This halo, visible only for half a minute, was effaced by another cloud, which again obscured the view. After a minute's breathless anxiety, the "curtain again rose," revealing the longed-for *tableau*, a grand, impressive sight! It presented itself through a rent in the clouds not greater in area than ten times that of the disk of the moon's shadow. That part of the opening which was above the eclipsed orb was clear like the sun at twilight, and in it were visible to the naked eye the planets Venus, Mercury, and half a dozen stars. The remaining part was covered with a thin haze. The moon's shadow appeared to the eye, assisted by a somewhat weak binocular glass, to be a dark circular disk, with an even boundary and of uniform shade. Within the corona, and touching the circumference of this shadow, appeared five or six spots of brilliant carmine, varying in form and size, and at irregular distances apart. Two of these spots, or "red flames," as they are called, on the eastern side of the disk, and at about fifty-five degrees and eighty degrees, respectively, from the vortex, seemed decidedly the largest and most prominent; they were tongue-shaped, and protruded about one sixth the width of the corona. In their neighborhood the corona was brightest and widest. There, too, the rays of the corona appeared to be gathered more distinctly into groups than elsewhere, faint shadows being visible between the groups. The corona consisted of brilliant rays of extremely faint prismatic hues; these rays, at first sight, appeared pretty evenly distributed all round, but closer examination seemed to detect the fact of their being bundles of rays in nearly regular groups. The width of the corona was about one eighth the apparent diameter of the moon's shadow. It was very nearly concentric with the disk of the shadow; its boundary was well defined, but "jagged;" the perimeter, except opposite the two most prominent red flames above mentioned, where the boundary slightly protruded, was circular. It was blowing a gale of wind while these notes were taken, which interfered somewhat with the steadiness of one's sight, either naked or assisted by glasses.

The scientific world will feel great disappointment at the results of these expeditions. It was hoped that the success, of last year in America might be followed with equal success this year in Europe, and that more light would be shed upon the great scientific problem of the sun's constitution, and the origin of solar heat and the mystery of the corona. As it is, another opportunity must patiently be waited for.

The results of Lord Lindsay's expedition will, in view of the failures attending the others, be of double importance. Some substantial results are reported, by Mr. J. Norman Lockyer, of the Sicilian expedition, so that the astronomers will have something to discuss and speculate upon during the interval that will elapse before other observations of a similar character can be made.

So far as we can gather from the news now received, the results obtained seem to indicate that the corona is a real appendage of the sun, not ether made luminous by the sun's light, and whether it shine by its own, or by reflected light, that it is the origin of the green line in the spectrum, which has been supposed by some to indicate the presence of some substance yet unknown to chemistry.

## THE PRESENT AND THE PAST.

### NO. II.—FACTS OF THE PRESENT—DESTROYING AGENCIES.

As a preliminary step towards the right comprehension of geological history, man must endeavor to realize his own insignificance in the vast scheme of creation. A may-fly coming into perfect existence with the morning sun and perishing before the close of the day, may well imagine, as she reposes for a few moments upon the water-lily, that no change is going on within the plant; she has not seen the gradual growth of stem and leaf, the formation of the bud and its blossoming, nor can she be cognizant of the movements that are in progress within, whereby in a few hours the flower, scarcely less ephemeral than herself, will fade away and perish. Yet the years of the whole human race do not bear as great a proportion to the periods of the earth as the moments of the insect to the days of the lily; and man has remained for thousands of years as unconscious of the mutations around him, as the may-fly is of the vital actions of the growing plant.

The next point with which the student must familiarize himself is, that in Nature there is no such thing as rest and repose; laws alone remain unaltered, but the matter which they control is forever shifting its forms and its combinations. That gases and liquids are forever in motion is easy of comprehension, but you must also unfix all your notions of the stability of solids, you must become vividly alive to the fact that the land and the hardest rocks are undergoing incessant changes; change from without and change from within; mechanical change and chemical change; change of form and change of substance. Both these kinds of change take place alike on the surface and within the crust of the earth; they are intimately blended together and incessantly react on each other. For instance, the chemical action of the atmosphere eats into a rock, mechanical abrasion detaches an eroded fragment; the fragment is mechanically reduced to sand and deposited in the depths of the ocean where chemical action cements many such fragments again into a solid rock.

With mutations taking place at or near the surface, the geologist may make himself familiar by observations in the field or in the laboratory, but with deep-seated actions he must remain more or less in doubt, as the conditions under which they are effected are so different from any that he can see in operation or that he can hope to imitate. For these he must rely upon inferences from circumstantial evidence. But even of most superficial changes, man can only hope to see the full proof in their accumulated effects; for his earliest lessons will teach him that Nature's transformations are often of the slowest. She has infinite time at her disposal, and she uses it without stint; her might and power are none the less therefore. It requires as great an exercise of Omnipotence to build up a continent in a million of years as in the twinkling of an eye; but in the latter case we miss the workings of that infinite foresight which provides that every atom throughout time shall fall at the exact moment into its exact place, and which has peopled the vast past as it has done the present, with an endless succession of living forms, each coming in when required and dying out when its day of service has expired.

Now, let us see what are the most remarkable of these geological changes that are in progress incessantly around us.

It has been a dry summer; the roads are covered with dust; the fields are dried up, and the soil is cracked and pulverized. It is the fall of the year—every plant has been robbing the dry land of some of its constituents, and now that the season of growth is over, its leaves strew the surface. Presently heavy rains will turn the dust to mud, every roadside be but fluid mud, every brook will be foul with it, every river will be dense with sediment, all bound with their common burden on one course onward to the estuary, and thence to the open sea, whose waters will be stained for many a league from shore by the abundance of earthy particles. Leaves and branches, and dead trunks of trees, and the carcasses of animals will mingle with them in the tide.

Then, for awhile, let us leave them and return to the land, where the parched earth and dried, but porous, rock are greedily drinking up the rain as it falls. By and by every crack and crevice will be full of moisture, and every rock will be saturated; then comes the winter's frost, and all the moisture is congealed—with congelation there is expansion, each moistened grain is forced apart from its neighbors, each scale of rock is moved a trifle more from the main mass; for a time icy moisture holds altogether, but with the thaws of spring the bonds are reft—the banks crumble away, mass after mass falls crashing from the precipice, long-weathered blocks are at last reduced to dust, and the earth is strewed with fresh particles, which are swept away in pursuit of those whose course we have already traced.

And again—

" Listen! you hear the grating roar
Of pebbles, which the waves suck back and fling
At their return, up the high strand,
Begin and cease, and then again begin
With tremulous cadence slow, and bring
The eternal note of sadness in."

Those waves are at this same work of change, and, to the ear of the geologist, their "note of sadness" is a wail over the land in time to be no more, the land they themselves are doomed slowly, but surely, to destroy. The pebbles are but fragments of the cliff around in process of destruction; adamantine granite, or soft chalk, or crumbling clay; low banks, or mighty walls of rock, all alike must yield in the end to the incessant battering of the breakers. It is only a question of time. The foundation of the cliff, be it what it may, is slowly sapped; if its material be soft the process of destruction is rapid, and every storm stains the waves for miles and miles with the *débris;* but if the rock be hard, the siege is a protracted one; deep caverns are formed in the cliff, and in every hollow the waters ply their ceaseless task, until at last a portion undermined topples over on to the shore beneath. A pause in the attack occurs, the breakers have to demolish the fallen mass which for a times serves as a breakwater to protect the cliff; slowly, but surely, the largest of the fallen masses are ground down and broken up —the smaller fragments are hurled hither and thither in the heavier storms, until, by constant attrition, they are reduced to more manageable size when they are tossed by the sport of lesser waves. Smaller and smaller they become, and more and more rapidly does the constantly-increasing friction tell upon them, until we hear their grating roar as every swell rolls in upon the beach. But their destruction is not yet complete; each time the pebbles are flung in and sucked back they lose a portion of their substance, the pebbles become fine gravel, the gravel is worn done to sand, which is finally swept away by the tides and currents, to be mingled with that which has been brought down by the river. And when the hungry waves have devoured the fallen mass, they resume their attacks upon the cliff, and thus by slow degrees the land is swallowed up by the sea.

"Why tell us all these common-places? Each one of us has seen or read of these things." Granted, good reader! but have you *thought* of them? have you carried the argument of these commonplace facts out to its legitimate conclusion? For the last three thousand years these phenomena have been going on beneath the gaze of generations of philosophers—yet it is only within the last century that geology has sprung up to interpret their meaning in the Book of Nature. And we venture to say that there are thousands of educated beings at this day who have never thought to ask themselves what becomes of the earth washed away from the hillside. Enough for them if it rested for a few years on its onward course in the plain beneath, where grow their crops; they care not to note that this mud is the wreck of the land they live on; much less do they dream that its particles are

" The dust of continents to be.'

Emerson, we believe, somewhere says, "Most persons do not see the sun—at least they have a very superficial seeing." And so it is with the rain and the frost and the waves; we see them, it is true, but how few of us recognize the work they are engaged upon, or endeavor to estimate its magnitude!

## THATCH MADE BY SEWING MACHINES.

The difficulty of getting farm laborers capable of putting a good, durable, and waterproof thatch on a rick or building, will, in all probability, disappear, if the following method be adopted: Construct a sewing machine, with two motions, and two needles sufficiently large to carry strong tarred yarn; and the needles must be long enough to go through the required thickness of thatch. The straw is fed to the machine on an endless belt, and the needles, working alternately, stitch the straw into heavy matting. This is rolled up, and applied to the roof, or the rick, until it is covered. The sheets of matting should overlap each other as shingles do, and may be fastened to ricks or stacks with wooden pegs, in the usual way. Fifteen hundred square feet can be made in an hour, and can be applied without the aid of any skilled labor. If properly made and carefully taken off the ricks, it can be used for two or more seasons. This method is simple, and, after the first cost for the machine, is cheap. It is particularly advantageous in use where straw is scarce, as it wastes nothing. And the portability of the thatch in rolls is another recommendation, as thatching frequently is wanted for haystacks at a distance from the homestead.

THE size of the tracts of land under tea-cultivation will be readily conceived when we say that an acre, on which are 1,200 plants, will yield about 1,200 pounds of dry tea yearly. Four pounds weight of green leaves are required to make one pound of dry tea.

## OBITUARY.—HON. DAVID LYMAN.

Died in Middlefield, Conn., on Tuesday, Jan. 24th, Hon. David Lyman, a prominent manufacturer and most worthy citizen, whose public and private labors have rendered his life one of continued usefulness, and who will be long remembered as one of those "whose works do follow them." Mr. Lyman had built up an extensive manufacturing business, in the washing and wringing machine line, in Middlefield, and through his efforts in the State Legislature that place became an incorporated town. Towards the close of his life, he became greatly interested in the Air Line railroad enterprise, and his efforts in its behalf are thought to have brought on the attack of typhoid fever of which he died, after a brief illness. In all his social relations, Mr. Lyman was greatly esteemed. His business talents and enterprise were of that rare kind which yield to no obstacle, and his success in life is a brilliant example of what perseverance and integrity can accomplish, when coupled with sound judgment and good sense. He had amassed quite a fortune in his business, and it is said his life was insured to the amount of $80,000.

## CRYOLITE AND ITS USES.

There is only one place in the world where this stone is found, and that is in Southern Greenland, at Ivigtuk. On account of its resemblance to frozen water it was called by the early settlers, "ice-stone," or in Greek, "cryolite," just as a magnesian stone, from its resemblance to the foam of the sea, was called meerschaum.

In 1850, Professor Thomsen, of Copenhagen, analyzed the rock, and found that it could be decomposed by lime by fusion or by boiling, and he must thus be regarded as the father of the cryolite industry. He found that pure cryolite was composed of

| | |
|---|---|
| Fluorine | 54·2 |
| Sodium | 32·9 |
| Aluminium | 12·9 |
| | 100·00 |

After complete decomposition, 100 pounds of the mineral will yield 24 pounds of alumina and 44 pounds of soda—both anhydrous. Large quantities of cryolite are now sent to this country and Europe, and are worked up for the following purposes:

1. Sulphate of alumina, also called concentrated alum, because it contains 14 per cent alumina, against 11 per cent in the ordinary crystallized alum.
2. Hydrate of alumina, as a basis for the manufacture of salts of that oxide.
3. Crystallized and caustic soda.
4. Metallic aluminium.
5. Cryolite fluorspar as incidental product, used as a patent flux.
6. In the manufacture of white glass.
7. Cryolite, oxide of zinc, and quartz for artificial marble.
8. Hot cast porcelain.
9. Hydrofluoric acid.
10. In the analysis of minerals.

It will be seen from the above that the Greenland stone is capable of extensive uses, and it is to be regretted that other deposits of it have not been found in more accessible regions.

### A Warning to Inventors.

The New York *Tribune* of the 25th ult., utters the following warning:

"All who have business with the Patent Office or any of the Departments at Washington are warned that they are surrounded by "agents," who do not hesitate to borrow the names of M. C.'s and others to adorn the circulars wherein they spread nets for the unwary. Many of them are arrant swindlers; others simply inefficient and bankrupt, so that money sent them is simply thrown away. Don't mind their begging, hiring, or stealing some M. C.'s frank—that doesn't help the matter a bit. A correspondent suggests that all such agents should be required to procure a license. We are not sure that this would do any good, but we throw out the suggestion."

### Annual Meeting of the Society of Engineers and Associates.

The annual meeting of this association was held on the evening of January 26, at No. 9 Lafayette Place, New York. The meeting was designed to be a social reunion only, and no business was transacted. A large number of the most eminent engineers and manufacturers of steam-engine work in New York and vicinity were present. At 9 P.M. the gentlemen sat down to a splendid collation, and the evening was passed in a very pleasant manner. The number present was smaller than would have been the case had the night been less inclement, but notwithstanding the storm, the efforts of Messrs. George H. Reynolds, President, A. S. Cameron, Vice-President, and M. B. Smith, Secretary, with the cooperation of other members, rendered the meeting a complete success.

### Cheap Hydrogen.

A correspondent asks the cheapest way of hydrogen gas. We believe the method of Du Motay gives in the SCIENTIFIC AMERICAN, August 27, 1870, to be the best.

Take quicklime, slake it, let it cool, and crumble into a dry hydrate; then mix it with charcoal, coke, or peat, and heat in a retort. The hydrate of lime (slaked lime) gives up the water that was used in slaking it, and becomes quicklime. The water is decomposed into hydrogen and carbonic acid, and these two gases can be separated by passing them through water, or the carbonic acid may be economized by employing it in the manufacture of bicarbonates. The quicklime can be again slaked and used as often as required. In a small way, hydrogen can be made from water by means of zinc and sulphuric acid.

### The Effect of Watered Stocks.

Rufus Hatch, of this city, publishes a circular in which he discusses the subject of watering stocks by the process so successfully carried out by Vanderbilt in connection with his railroads. Referring to the capital stock of the Lake Shore and Michigan Southern Railroad, which has been raised from $3,300,000 to $8,750,000, Mr. Hatch declares with great force that "if the State and General Government should impose a tax of one cent a bushel on grain it would create a revolution, and yet Commodore Vanderbilt taxes the producers ten cents a bushel, that an eight per cent dividend may be paid on his watered stock."

This is a very clear illustration of the character of the imposition now being heaped upon the heads of a patient and long-suffering people. These railroad monopolists get possession of some important line of communication, and no sooner is this accomplished than they set about to double the stock, and then, in order to make the earnings pay on the increased stock—which often has no real basis of value—the fares and tariffs are also largely increased, while the people bow their necks in submission. The public would almost mob the man found guilty of watering their mess of milk, but these railroad stock waterers and tax increasers do worse things and escape serious censure. The people seem rather to enjoy the thing than otherwise.

### Sulphurous Acid.

The *British Medical Journal* reports the publication, by Professor Gamgee, of a new and convenient mode of using sulphurous acid, the disinfecting qualities of which are universally known. Cold alcohol, the Professor asserts, will dissolve three hundred times its own volume of the gas; and a fluid possessing such powers of concentration cannot but be as efficient as it is portable and convenient. A few drops of the sulphuretted alcohol in the bottom of a trunk, will disinfect any clothing that may be put into it; and fungous germs, such as must in casks, etc., may be destroyed by the use of a very small quantity. The Professor does not tell us the price at which it can be produced; but it must be a very low one, if the new preparation is to supersede permanganate of potash (Condy's Fluid).

### Novel and Convenient Mode of Using Lunar and Other Caustics.

The extreme danger of conveying infection on the point of a frequently used pencil of caustic, will recommend this simple device to the medical profession: Take a bundle of splints of wood, similar to lucifer matches; dip the ends in melted caustic, separate them, and allow them to dry. A fresh match of caustic may be used for each application, and a fine caustic point is thus always at hand. Lunar and carbolic acid, and all the solid caustic bodies, may be used in this manner, of which the original suggestion appeared in a London newspaper.

ILL EFFECTS OF HYDRATE OF CHLORAL.—Certain ugly facts concerning the fashionable sedative, hydrate of chloral, will probably diminish the frequency of its use. We have the high authority of Dr. Habershon for the statement that its action on the pneumo-gastric nerve produces bronchial and pulmonary congestion. A fatal case recently happened in Guy's Hospital, London. Another English physician, Dr. Shettle, of the Royal Berkshire Hospital, stated, in his recent lecture to the Reading Pathologic Society, that formiate of soda is frequently produced in the blood by the use of chloral, and that, from its tendency to decompose the blood, it will render hemorrhage very dangerous. Obstetric practitioners will not fail to notice the last fact. As a hypnotic, there is much to be said in its favor. It is powerful and safe, equalling opium in its pain-relieving power. But like all anesthetics, the continued use of it is sure to be hurtful; and if it aid congestion it were better for a patient to suffer weeks of sleeplessness than to habituate himself to its use.

PHOSPHATE OF LIME AS A MORDANT.—Dr. Reimann has lately communicated the following, which will correct a very erroneous impression as to the use of phosphate of lime as a mordant: A thick, sirupy solution of phosphate of lime (boneash) in hydrochloric acid having been recently recommended as a mordant to be used after a previous sumaching of the goods, I find that, according to my experience, the phosphate of lime solution is altogether superfluous, since a sumaching with 4 lbs. of sumac to 20 lbs. of cotton is of itself a sufficient mordanting to fix aniline colors excellently. The application of the phosphate of lime solution as a mordant for cochineal colors upon cotton, is equally superfluous.

SPONGIO-PILINE is the name of a very ingenious contrivance, recently introduced abroad, which may be used either as a poultice or as the means of fomentation. It consists of wool and small particles of sponge, apparently felted together, and attached to a skin of india-rubber. It is about half an inch in thickness. It will be found of great value and convenience for either of the purposes referred to. It retains heat for a considerable time, and vinegar, laudanum, camphor, hartshorn, etc., can be, by its means, placed on the skin, accompanied by heat and moisture, much more readily, and with greater cleanliness, than by means of ordinary poultices.

CHEESE, MILK, AND BUTTER contain caseine in large proportions. This important member of the organic chemical world is a powerful counteragent to lead in the human system, and may be freely taken in all cases of lead poisoning with great benefit. Lead colic, an unfortunately common disease among workmen employed in white-lead factories, may be entirely prevented by the free use of pure milk as a daily beverage.