Scientific American

NEW YORK, FEBRUARY 2, 1850.

Respiration--Ventilation.

Having been unfortunate enough, a short time ago, to experience the most disagreeable sensation, in a densely crowded, ill-ventilated room, we think that a few practical remarks on the subject, will not be out of place at this time, as we perceive that, for all we and others have said and written, it has been, to some people, like "water spilt upon the flinty rock."

It cannot now be denied, that the heat of the human body is kept up by a process of slow combustion, like that of fire in our stoves :—the body is supplied with carbon in the shape of food, and the slow combustion of it producing heat, consists in its combination with oxygen, supplied by respiration. The heat of the human body, by a law of the great Creator, is the same in all countries, viz., 99°; and whether man be a dweller on the snow-capped cliffs of the Andes, or basks under the red brazen sky of the tropics, the heat of his body, if tested by a thermometer, is the same to a degree. The combustion of carbon, then, being the means of animal heat, every man requires a supply of oxygen for the lungs; in proportion to the carbon (fat) consumed in food. In warm countries less carbon is required, because internal combustion need not be so rapid. This is the reason why vegetable and lean food is most healthy in warm climates, and why the people at the Northern and Southern poles can devour, without hurt, tallow and oil. In the combustion of our food, or act of respiration, our lungs absorb oxygen and give out carbonic acid gas, and water. It is therefore positively necessary to inhale pure oxygen, and drive away the carbonic acid as fast as possible, out of the room in which people are assembled for any purpose—either in public or private dwellings. Each grown up person takes about twenty respirations in one minute, or 28,800 in twenty-four hours. Sir Humphrey Davy estimated the emission of carbonic acid gas from the lungs every minute to be about 26½ cubic inches. We can, therefore, very easily judge how soon the atmosphere of a crowded room becomes vitiated; and this accounts for the faintings and sick headaches, so common to many people in such cases. When the same air is breathed over and over again, about ten times, respiration becomes oppressive, and insensibility takes place. Such air, when submitted to chemical tests, is found to contain 79 parts of nitrogen, 10 of carbonic acid, 4 of oxygen, and 7 of a peculiar oxide of carbon. How necessary, then, to health, is a good and plentiful supply of fresh air for ventilation. In crowded meetings, where the apartment is illy ventilated, no person can find enjoyment, for the lungs soon become oppressed, and the unoxygenized blood knocks with terrific blows upon the brain, as a warning of danger. Carbonic acid gas produces suffocation, hence the oppression on the chest, and pressure on the brain, in close apartments. Nitrogen gas is also the occasion of death, by producing deleterious effects upon the blood. Surely, then, it is essentially necessary that every house and hall, where there are living beings, should be well supplied with fresh air. Yet in this nineteenth century, in this enlightened land, and in the great city of New York—the more than London of the New World—the laws of ventilation seem to be less understood by many than by the wild Indian that roams with bow and spear on our Western wilds.

It is well known that one individual, constitutionally as well as by the nature of his occupation, requires more atmospheric air than another. Those who labor hard require more than those engaged in sedentary occupations. Those employers who neglect good ventilation, are ignorant of that philosophy which leads to the greatest amount of product. During our winter seasons, it would greatly promote the health of our women folks, if they depended more for heat on warm clothes and exercise than close apartments and red hot stoves. We commend this subject to their attention, with the positive assurance, (if they obey its teachings) of a perfect preventative for many headaches and other maladies—of mind as well as body.

A Caveat.

"Does, or does not, a Caveat give any sort of protection after one year? If A should enter a Caveat for an invention, but should find himself unprepared to attend to it, would the Patent Office grant B a patent for the same thing, if he should apply two years after A put in his Caveat? I am aware that A would be entitled to a notice during the first year, but would he not be entitled to a patent at any time, and would not others be prevented?"

The above are a few queries of a correspondent, who adds, "the public want some light on this point of the Patent Laws." The Law should be rendered more plain; but after the first year from the filing of a caveat, the Patent Office must issue a patent to another person for the same thing, if applied for. No defence against granting a patent can be set up for a caveat, when another is not entitled by law to a notice of three months. Our Patent Laws, however, are very defective in drawing clear lines of distinction between the time when an inventor forfeits all title to receive a patent. According to the present law, the Caveat should cover a period of two years instead of one, for it is specifically provided in Sec. 7, Act of Aug., 1842, that a machine may be in use for two years before applying for a patent, without invalidating the inventor's right. Any person can, at any time, contest the right of a patentee to priority of invention by a Bill in Equity. See Sec. 16, Act. 1836. If a person files a Caveat, and allows it to expire (one year), and another secures a patent afterwards for the same invention, the only remedy is to apply for a patent, when he will be rejected, provisionally. He then must request the Commissioner of Patents to "declare an intereference, and allow evidence to be submitted to prove priority of invention. The Caveat is then of benefit. The Commissioner will appoint a day for the hearing of evidence, and make his decision on the facts of the same. If either of the parties are displeased, an appeal can be taken to the Chief Justice of the District of Columbia. Interfering applications are decided only upon evidence—the first inventor has the right by law to the patent, but by the strict construction of law, no patent of a machine would be valid, if in public use more than two years, before application was made for a patent. The secret use of a machine, cannot be offered in evidence to establish prior right. Any judicial Court, however, has the power to annul a patent—to declare it void, in whole or in part.

Cheap Postage.

The New York Cheap Postage Association has expressly stated that one of its original and fundamental objects, is to effect a postal reform by which pre-paid letters, under half an ounce, shall be carried to any part of the United States for two cents. We hope that Congress will pass such a Bill this Session. We have no fears of a decrease in the revenue—not the shadow of a fear.

We also advocate an ocean two cents postage law for the whole world. We heartily concur in the views of Elihu Burritt, in regard to the limits of such a system. A letter from New York to Liverpool costs 24 cents—nearly as much for carriage as a barrel of flour. In the name of common sense, how is it that a letter becomes so heavy on sea beside what it is on land? In England, a letter of half an ounce will be carried for one penny from Dover to John O'Groats, but whenever it gets on board an ocean steamship, somehow or other it gets very heavy all at once—passing into the scale at half an ounce, and out on the other side six times heavier. It is a strange process, that of postal transformation. Chemistry has its wonders, and so has Geology, but none to equal this. It surely must be built on that scientific deduction, ascribed to Faraday, that "a drop of water contains as much electricity as would sink a ship."

There were 3114 admitted into the Bellevue Hospital last year :—Irish, 2,050; Americans, 616; Germans, 193; English, 138; Scotch, 63, other countries 50.

Works on Science and Art.

MANUFACTURE OF IRON.

By Frederick Overman, published by Henry C. Baird, successor to E. L. Carey, corner of Market and Fifth streets, Philadelphia.

This Book stands alone in its peculiar field. The author is a Mining Engineer, and the publisher deserves great praise for the neat and beautiful manner in which it is executed. It is a complete octavo volume of 500 pages, illustrated with 150 excellent wood engravings. It treats of the manufacture of iron in all its various branches; and the aim and spirit of the author, was to make it a work of practical utility, and he has succeeded. The first part of it is a chemical classification of the Iron Ores, describing their nature, locations; their behavior before the blow pipe, when treated with alkalies and acids: also the theory of reducing the ores to metals—embracing the roasting of them, cleansing of the roasted ores, &c., and has a very excellent section devoted to the art of mining; concluding with instructions for assaying the ores. Of this no man, who has charge of a mining establishment, or a blast furnace, should be ignorant.

The next chapter is a treatise on Fuel—the manner of mining coal, charring it, and wood also. This section is beautifully illustrated with engravings of all the various kilns and modes of charring.

The next section is on the Reviving of Iron, or Smelting the Ores. All the various kinds of furnaces are shown and described. The best kind of fluxes for the different ores set forth, and the fuel best adapted for each, considered. This is a part of the iron manufacture, which is of the utmost consequence to be well informed upon. On the skillful management of the smelting, the success or failure of every *iron* manufacturing enterprise depends. We are sure that something new will be found in this section, for the most experienced.

The next section treats of the manufacture of iron—making wrought iron. The different kinds of forges are illustrated—American, English and German, and the various modes of operation described. This embraces the puddling furnaces, both for anthracite and charcoal, and the different processes of manufacturing the various kinds of iron. This is an exceedingly valuable section. The next treats of the forging and rolling, illustrating the subject with cuts of the different machines.

The next five sections treat of Blast Machines, Hot and Cold Blast, Waste Heat and Gas, Fire Brick and Refractory Stones, and Motive Power, and concludes with a splendid and practical treatise on the Manufacture of Steel—Damascus, German, Blistered, and Cast.

We have been thus particular with this book because we have had many enquiries made asking "Whether there was a good American work on the subject or not." This is the *work*. The price is $5.

THE SEVEN LAMPS OF ARCHITECTURE.—This is a work published by John Wiley, Broadway, New York. It is a remarkable book, quite original; in fact it is unique in itself. The author of it is John Ruskin, author of Modern Painters. It is divided into seven sections :—1st. The Lamp of Sacrifice; 2. The Lamp of Truth; 3. The Lamp of Power; 4. Lamp of Beauty; 5. Lamp of Life; 6. Lamp of Memory; 7. Lamp of Obedience. The object of the author is to elevate the mind of the architect with a sense of "the sublime and beautiful," as connected with his profession, to lift him up to study other objects than the mere mechanical and mathematical details of it. He makes a grand distinction between Architecture and Building, and views the former, as "the Art which disposes and adorns the edifices raised by man, for whatever uses, that the sight of them contribute to his mental health, power and pleasure," while building is but "to put together and adjust the several pieces of any edifice." The nature of the different styles of architecture is admirably treated, and no man who looks above the mere drudgery of his profession, can fail to acquire many new, excellent and original ideas from it. The price is $1,25.

DICTIONARY OE MECHANICS, ENGINE WORK AND ENGINEERING.—No. 2 of this excellent work, by D. Appleton & Co., New York, is a very beautiful and good number. It finishes the article on the Croton Acqueduct. It has engravings of the Archimedian Screw Propeller, Machinery for Boring Artesian Wells, with all the appropriate tools, and has some excellent cuts and descriptions of engines, among which are Richard Coffin's and Wm. Ash's, which appeared in our last volume. There are also good engravings of the axles for turning narrow curves, invented by Messrs. Morse & Mansfield of Canton, Mass., described in our Vol. 4. These inventions, selected from the Scientific American—the American Repertory of Inventions, shows that the work is edited with judgment and ability. It will no doubt have a very extensive circulation and it deserves it.

New York Institute of Civil Engineers.

This Institute, which was organized January, 1840, as noticed by us in our last volume, has furnished a set of rooms in the City of Albany, and laid the foundation of a large and valuable collection of books, maps, models and geological specimens. Its members are men of no common stamp, both for scientific attainments and respectability of character. We are informed by our friend Mr. Saml. McElroy, C. E., Albany, that "of some 300 engineers in the State, the Institution now numbers about one-third." Our President, he says, "is a gentleman who never deserves an enemy nor loses a friend."

The officers for the ensuing year are : President, Richard V. De Witt, Esq.; Vice Presidents, E. W. Serrell, C. W. Wentz, G. W. Carpenter, and C. R. Babbitt; Actuary, Wm. Pitt.

We believe that this institution will yet be eminently useful, and confer honor upon the Empire State. The President is a Civil Engineer of great experience, and is a son of old Simeon De Witt, whose name and fame gilds the pages of our nation's history.

New York State Agricultural Society Prizes.

At the recent meeting of the State Agricultural Society, a Report was presented and read by Mr. Delafield, (Vice President,) on essays, experiments and works for schools. Mr. Delafield remarked that the science of Force and Motion was essential and important to the perfection of the farmer's work—that some knowledge of practical mechanics was necessary to a right understanding of the tools used in cultivating the earth, their uses, strength and proper construction : that the forces of fluids as well as solids, were useful and needed his study, as facilitating operations in draining, in irrigation and protecting his soil from injury by running streams :—that the common occupation of loading wagons and other farm operations, evidence the need of knowledge of the laws of gravity; with these impressions, it was urged that a premium be offered for the best essay on Mechanics, on the science of Force and Motion, to be divested as far as practicable of technicalities, and illustrating the importance of this branch of science, in prosecuting successfully the ordinary pursuits of agriculture.

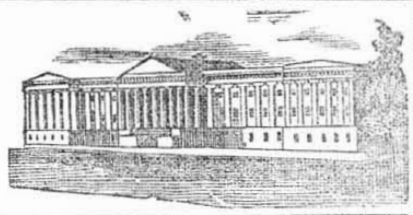
We learn that the society determined, at a subsequent meeting, to offer a premium as recommended.

A good Water Wheel

There is in the village of Walden, Orange Co., N. Y., an over-shot wheel, of 16 feet diameter, 12 feet buckets, (30 horse power) which was built in 1822, at a cost of $600, and has only cost $50 for repairs in 27 years. It is completely protected from ice. The whole cost of the wheel, dam and repairs, has not exceeded $150 per annum.

The Telegraph Controversy.

We have received a printed circular defending the Morse's Lines of Telegraphs, and which is somewhat severe on the House and Bain's Lines. We are sorry to see so much controversy and ill-feeling existing between the different lines. The question is, "who began the war?" We know something about it. We do not know who the author of this circular is, —it is signed L. G., and we had to pay the postage.



LIST OF PATENTS CLAIMS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending January 22, 1850.

To Wm. R. Battle, of Powelton, Ga., for improvement in Trusses for Hernia.

I claim the peculiar bend of the elliptical springs, as described in the foregoing specification, so as to cross them in front, and make the spinning on one side support the opposite side, thereby giving a better pressure with more ease and comfort to the wearer.

To Hiram Camp, of Dunkirk, N. Y., for Candle Mould Apparatus.

I claim the before described mode of making candles by using the candles previously drawn from the moulds, to hold the wicks for the succeeding candles, in the centres of the moulds, until the latter become sufficiently hard to sustain their own wicks, as described.

Second, I claim the combination of the frames, recesred candle holders, frames, and spools, containing the continuous wicks with the candle moulds, as described.

Third, I claim the employment of the rerevolving platform in combination with the hinged mould, constructed as aforesaid, arranged and operated in the manner and for the purpose set forth.

Fourth, I claim the manner of raising the outer end of the spout of the vat, simultaneously with lowering the gate for the purpose of stopping the dripping of the tallow whilst turning the frame of moulds, by combining the spout with the gate by the stirrup, roller, and lever, as described.

I do not however, intend to confine my claim to the precise construction described, in the foregoing specification, but to use such a form of construction as may be the best adapted to accomplish the desired objects, by means substantially the same.

Neither do I claim any portion of the machine above described, that has been practised successfully by others, prior to its being invented by myself.

David Eberly, of Strasburg, Pa., for improvement in gearing and ungearing seeding apparatus.

I do not claim the four double bevel cog wheels, nor the horizontal bevel cog wheels, as my invention, as they have been heretofore used in machinery, and are old devices, but I claim the devices used herein for gearing and ungearing the seeding apparatus, as described.

To Matthew Elder of Mansfield, Ohio, for improvement in Bedstead Fastenings.

I claim the giving the portion of the fastener that is secured to the ends of a rail, of a tubular shape and of such a size that the portion thereof that projects from the end of a rail will embrace the fastening plate that is secured to the side of a post; when this arrangement is combined with the lugs, projecting inwards from the extremity of the fastener and notches, and inclined planes on the plate, substantially as herein set forth, by means of which the respective parts of the bedstead fastener can be secured to the posts and rails of a bedstead, without forming a mortise in either the one or the other.

To Daniel Hoats, of Milton, Pa., for improvement in the concave of cornshellers.

I claim, first, connecting the opposite sides of the concave, substantially as herein described, whereby they may be moved simultaneously towards or from the cylinder, without changing their relative distances from the same.

Second, I claim the combination of the screen or grate with the punches for freeing its meshes from obstructions, substantially as set forth.

To Wm. W. Hubbard, of Boston, Mass., for improvement in the gridiron slide valve.

I claim the peculiar arrangement of the exhaust mortises or spaces, (six) in the sliding valve, between and around the inducting and educting passages, (4), through said valve, in combination with the elongated side slots or passages, through the valve seat, leading to the exhaust chamber, the whole arrangement and operation being substantially as herein above set forth.

To John Pawling, of Morgantown, Pa., for improved Tuyere.

I claim placing within a chamber, having numerous apertures at the top, and a discharge valve at the bottom, an upright pipe open at beth ends, in the manner described, whereby a blast of the greatest intensity is delivered at the centre of the fire, and the vertical pipe may be readily freed from ashes, cinders, &c.

To M. F. Potter, of Charlemont, Mass., for improvement in Portable Furnaces.

I claim my portable furnace, constructed with a diving flue, open at the bottom, so as to adapt it readily for use to the boiler holes of cooking stoves, in the manner above specified.

To James Radley & J. W. Hunter, of New York, N. Y., for improvement in Spark Arresters.

We claim, first, the arranging of a series of chambers and channels between two conically shaped plates, the channels being so formed as to cause the products of combustion to impinge against that side of each of the dirt chambers, which has the openings and caps, and thereby force the sparks, dirt, &c. &c., into them, in the manner described herein. We also claim he combination of the double conical cap or cover, for the formation of the second series of dirt chambers, with the pipe, the whole being combined and operating substantially as described.

To Ann F. Stiles, of Southbury, Conn., for improvement in cases for daguerreotype pictures.

I claim the new manufacture of daguerreotype cases, to wit, securing the pictures in a glass tube or case provided with a magnifying lens, said tube being blackened on part of its inner surface, and admitting the light through another part, to the plate in the manner herein described.

To Geo. Welsh, of Washington, D. C., for chain and flange apparatus for opening and closing window shutters.

I claim the combination of links and a centre nut with a stationary curved flange, exterior to the chain, to guide the links in such a manner that they may be operated to turn the centre pulley or nut, either by pushing or pulling as herein set forth.

I also claim, in combination with the sliding bar and links, herein set forth, the arm on the centre nut, and the notch on the bar for locking the shutter and taking the pressure off of the links when the bar is pushed in and the shutter fastened, as described.

To Wm. B. Willis, of near Charlestown, Va., for improvement in Seed Planters.

I do not claim the frame, hopper, stirrer, slide, drills, nor any of the parts heretofore used in seeding machines. I only claim the employment of the flanged, supporting, conveying, cleaning and covering wheels, made as described, in combination with the rest of the machine, when made in the manner as above set forth, for planting cotton and other seeds, and for other purposes.

To E. K. Wisell, of Warren, O., for improvements in chucks for boring and mortising machines.

I claim the self-centering chuck, constructed substantially as herein set forth.

To J. Young, of West Galway, N. Y., for improvement in Atmospheric Churns.

I claim the combination of the inverted vessel, and the disc on the stem of the dashers to prevent the splashing out of the cream at the churn lid.

To A. D. Brown, of Clinton, Ga., for improvement in the Cotton Press.

I claim the pulley, with its axis eccentric to its centre, in combination with the stock or follower of the pressure block, to compress cotton, &c., in the bale box, in the manner substantially as herein described.

RE-ISSUES.

To James Root, of Cincinnati, Ohio, for improvement in Cooking Stoves. First patented July 18th, 1848.

I claim the movable back plate for contracting the fire and protecting the oven plates, as herein set forth; and I wish it to be undertood that I do not claim the employment of double plates at the back of the fire, when such plates are stationary, but only when made movable, so that the front and top plates of the oven are always protected back as far as the flanch on the moveable plate extends.

I also claim, in combination with the elevated fire chamber and projecting oven under a part of said fire chamber, the ash pit, formed by projecting the bottom and sides of the stove under the sunk hearth, which is level with the bottom of said fire chamber.

For the Scientific American.

The Electric, and Artificial Light.

Good and cheap artificial light is one of our greatest social blessings. Discoveries in science and art enable the masses of the present day to enjoy luxuries of artificial light, that were denied to Princes, no farther back than 1558. At that period the courts of the Kings of France were illuminated with vases containing pitch, tar, and such like substances—a mode of illumination that would now be despised by the humblest retailers of fruit at the corners of our streets. Our city is now lighted with a subtle, invisible fluid, which courses through its secret channels like the life-blood through our veins. By a touch of the hand we can command a light of dazzling brilliancy, or reduce it to a feeble glimmer—languid as a dying smile. We have lights without smoke, and lamps that need no watcher, like the ancient Magi, to feed the sacred flame. Oil lamps are of great antiquity, being used by the children of Israel, and the Romans used, (in cases of festivals,) to illumine their streets with resinous wood ignited in chaffing vases. London and Paris contend for the honor of introducing street lighting, but to an humble engineer, Mr. Murdock, belongs the high honor of first successfully introducing it into public use on a large scale, at Soho, England, in the shape of gas light. When this was first done it created as great astonishment among the masses, as the electric telegraph at a later day. Since Mr. Murdock first introduced coal gas, its use has been gradually extending, and now it may be said to embrace the whole world. It is employed even in the Wild Island of New Zealand, as well as in the Metropolis of this Republic. As artificial light consumes a vast amount of capital every year, various plans have been proposed, and various discoveries asserted to have been made, to supersede it, by providing a cheaper and as good a substitute. Solar gas companies (making gas from oil) were organized in Britain, but were unable to compete with coal gas. Where coal is cheap the gas is cheap, but in some countries oil gas might be made cheaper. When the oxy-hydrogen light was discovered, many prophecied the death of all the gas companies, but instead of any substitute being yet discovered to supersede coal gas, its sway is extending rapidly. Since the discovery was made that water was a compound of two gases, various alledged discoveries have been brought forward from time to time, to use it as an illuminating power. The power of the galvanic current in giving the brilliant Electro Carbon light, has been frequently trumpeted before the world, as a cheap substitute for coal gas; and recently in our own land the water gas light, as a cheap substitute for *all lights*, has been heralded to the world by the pen of the discoverer, and more recently by that of Mr. R. Porter.

Whenever an alledged discovery is brought before the public, it then becomes a sort of public property—a fair subject of criticism.

I have seen an article in the Philadelphia Ledger, copied from the Washington Union, under the signature of R. Porter, lauding the wonderful discovery of Mr. Paine. Mr. Porter says: "I am authorized to announce the discovery and practical test of the most important scientific invention ever yet produced or brought to light, since the world has been inhabited by man." This invention is nothing less than that already heralded by Mr. Paine, *the* discoverer, in the columns of the Scientific American. Mr. Porter says that it will "revolutionize commercial intercourse, break down monopolies, and contribute hundreds of millions to the benefit of mankind." He farther states, that "without the use of acids, batteries, or the application of anything but a mechanical power of less than 1-300 part of a horse power, Mr. Paine's machine will decompose water and produce 200 cubic feet of hydrogen gas, and 100 cubic feet of oxygen gas per hour, at an actual cost of less than one cent, and that this will furnish as much heat as the combustion of 2,000 feet of coal gas, and sufficient to supply light equal to 300 common lamps for ten hours." Now the great beauty of all this extravagant communication to the *Union*, lies in this, that after stating he was authorized to announce this wonderful discovery, Mr. Paine, in an article to one of the Boston papers, says that Mr. Porter makes this statement, so far as it relates to the application of the gases, "on his own authority." There is a wide breach between the statements of these two gentlemen. If it is really a fact that such a great amount of water can be decomposed at so little expense, the discovery is a wonderful and a valuable one. Mr. Paine built a tower in Worcester, and burned his light, it seems, till last September, when an explosion took place. The light is a *Drummond Light*, judging from Mr. Paine's statements. The combustion of the elementary gases of water, must be managed with great care, or they will explode like gunpowder. Mix hydrogen and oxygen in a bladder, in the proportions, bulk 2H+1O., puncture the bladder with a needle, put a match to it, and it goes off like a *shot*, tearing the bladder in fragments. Mr. Porter states, in the Union, that "a steam engine furnace, and a parlor stove have been invented to burn these gases." What a very foolish thing to invent a parlor stove at all, when a few jets is quite sufficient both to heat and illuminate any parlor, according to his story.

The combustion of these gases will not produce a good white light, but of this Mr. Porter seems ignorant. The proper proportions, for the best kind of light yet discovered to be burned in the open air, are carbon and hydrogen, of an equal number of equivalents, H+C. Long practice and many experiments have demonstrated this. That some other combination may prove better, I will not deny, but the public has yet to be enlightened upon the subject, to judge of the same. And why is the public not? In the month of November, 1848, Mr. Paine published a circular, announcing his discovery to the different scientific bodies of America and Europe, in which he stated that he would exhibit his apparatus one year, at the termination of which he "would make public the mechanism of the Generator." Has that promise been kept? Why in New York? Why in Boston? Why in Washington, is the public yet to be informed of this discovery, which is to annihilate all the wealth of the Pennsylania coal fields, and all the camphene trade of North Carolina? All that he cared for at that time was the honor of the discovery.

There is one application of this discovery which is really a good one, as Mr. Porter states in his Washington letter. It is no less than "the removal of the only obstacles which have hitherto existed to ærial navigation—the difficulty of procuring hydrogen gas and carrying a cheap supply of fuel;" and he says, "it may be considered a matter of certainty that men will be seen swiftly and safely soaring in various directions before the first of May next." This gentleman found no such obstacle to his navigating the air during the California fever last winter. He was to make a passage from New York to California in three days. Passengers were invited by handbills to take their tickets for seats in his balloon. He asserted that "200 passage tickets, at $50 each, had been engaged prior to February 15th." His balloon was to start for California about the first of April, "cruising along by the steep and rugged sides of the rocky mountains, astonishing the grisly bear, frightening the antelope and terrifying hordes of buffaloes." After the failure of that æriform enterprise, it will require more than mere assertion to warrant the reposing of any confidence in any project got up by such a savan. If this Electric Light is so cheap, why not bring it to New York at once. The inhabitants here are aroused against the present gas companies, and would at once patronize any other cheaper mode of illumination.

I have not said any thing reflecting personally; my object was to deal with public things, and I have so confined myself.

CARBURETTED HYDROGEN.

New York.