

able insignia of toil about with him, while the clerk may sometimes keep clean hands, and dress neatly, and show a white shirt front, and carry only a pencil behind his ear; consequently the choice of the show with its accompanying drudgery, rather than the substance with its independence.

Within two weeks we have had calls from young men who have studied for the "professions;" two had studied law, one medicine. Each wanted advice, and, if possible, aid; but although neither could succeed in his chosen profession, neither was willing to attempt manual or mechanical labor. What each wanted was either an insurance agency, a clerkship, traveling agency, or place as copyist—anything rather than soil the hands. We can point to men who write "M. D." after their names who cannot compose a parseable English sentence. We know of members of the "bar" who do not understand the constitution of their country or the principles underlying it. These might have made good blacksmiths, or machinists, or carpenters, or ship-builders (though we much doubt it), but they might have been usefully employed in shoveling gravel.

But after having chosen a mechanical profession, it is not seldom the case that the apprentice looks upon his term of apprenticeship as so many years of lost or wasted time. He does not care to learn. He seems to suppose that the practical knowledge of his business is, somehow, to grow into his apprehension without effort on his part. To worry through the years of apprenticeship, with the least labor or effort to themselves and the least benefit to their employers, is really the principal study of some apprentices. They are not the only ones who look upon the years of apprenticeship in the same light. A letter received from a young man says he wants to become a machinist, but his father objects to his giving (?) three years to a trade.

Possibly the time will come when mechanical labor and mechanical skill will be valued at their true worth, as compared with other employment and other aptness; but so long as our young men prefer to preserve soft and clean hands as something more valuable than personal independence and a means of usefulness, we look for no abatement in the number of applications for "genteel" places.

ART OF COLORING MARBLE.

Did the ancients practice the art of coloring marble, or is it a recent American discovery? The New York Times, of February 15, 1869, in an editorial headed "Marble Coloring," says: "The art of coloring marble, through the entire mass, is supposed to have been known to the ancients, inasmuch as among the ruins traces of colored marbles and stones are found."

The Metropolitan Record, of February 20, 1869, in an article headed, "A New and Important Discovery in the Fine Arts, and its Special Application to Church Architecture," thinks there are plausible reasons why some writers have ranked the art of coloring marble among the lost arts, because "among the ruins of ancient temples and monuments, colored marbles and stones have been found, of whose original sources no trace can be obtained. If they came from quarries, the quarries are unknown in our day."

In Venice and other cities of Lombardy are columns and altars of a translucent white marble, *marmo statuario*, which resembles the Parian, but is not quite so opaque. The quarries of this kind of marble are as yet unknown. Might it not be said with equally plausible reasons that the Italians knew the art of making this marble, but they lost it?

That analogues and quarries of ancient colored marbles have not been found, is hardly a sufficient reason for classing the art of coloring marble among "the lost arts," for it may safely be asserted, that in all the countries which constituted the ancient world, Egypt, Asia Minor, Greece, Turkey, Italy, Northern Africa, and the Mediterranean Isles, have been in a state of stagnation since the fall of Rome and Constantinople; and that whenever accurate geologic and mineralogic surveys are made, the quarries may be re-discovered.

A synopsis of what the ancients knew and did as to marble, will conclusively show that the art of coloring marble through the entire mass was neither known to, nor practiced by them.

The word *marmaros* was applied by the earliest Greek writers to any rock, stone, block, or fragment, with the idea of shining, sparkling, bright. B. C. 800 Homer ("Iliad," xii, 380) and Euripides (B. C. 450, in his "Phoeniss," 673) used the term in that sense. It was evidently derived from *marmarein*, to shine, sparkle, gleam, glitter. B. C. 270, Theocritus first applied *marmaros* to works of art in marble.

The word *marmaron*, marble, also rock crystal, or feldspar, on account of their shining appearance, was of later date. The Latin word *marmor* is formed from it, and is nearer like its original, in spite of its termination *or*. The German, *marmor*; Italian, *marmo*; French, *marbre*; English, *marble*, are but so many Graeco-Latin derivatives. Mineralogists have limited the word to rocks and stones, whose sole or chief ingredient is carbonate of lime, susceptible of polish.

There were at Rome, as early as 493 B. C., two ediles, architectural engineers, whose duty was to superintend the erection, adorning, and repairing of public buildings, streets, markets, etc. B. C. 366, two more were added, styled *curule ediles*. Julius Caesar joined to them two *ediles cereales*, B. C. 44. The ediles had precedence in the Senate; their office was one of the most honored in the State. Would not one of these distinguished Roman savants and engineers have somewhere alluded to the art of coloring marble if such an art had been known and practiced?

Polygnotus, who was surnamed "The Prometheus of painting," and whose works were so highly esteemed, no doubt knew all the colors and coloring of his epoch, B. C.

469. Yet, in connection with him or his paintings, we find nothing of the art of coloring marble. Neither do we find any mention of such an art in connection with Polyclethus, the famous sculptor and architect who built the theater at Epidaurus, which Pausanias pronounces, in symmetry and elegance, superior to every other theater, and not excepting those at Rome.

Vitruvius, the ablest Latin writer on ancient architecture, does not allude to the art of coloring marble through the entire mass in his ten books. Yet he lived under Augustus, who zealously patronized the arts, and was wont to say, "That he found the city built of brick, and left it constructed of marble."

Pausanias (A. D. 120) visited Greece, Macedonia, Asia, Egypt, and even Africa, as far as the temple Jupiter Ammon, then retired to Rome, where he wrote his ten books on the edifices, monuments, and works of art he had examined, and contrasted them with those of Rome. In the work of this author, who is the highest authority on ancient archeology, there is no allusion to any art of coloring marble through the entire mass; yet this erudite writer not only describes the edifices and works of art, but furnishes historical records, anecdotes, and legends connected with them.

Not even Belzoni (A. D. 1818), describing the vivid colors of his "Room of Beauties," "Researches and Operations in Egypt," p. 227, pretended to assert that the ancients knew the art of coloring marble and granite through the entire mass, though he may have thought they could beautifully color and stain it on the surface.

Hence, as neither the ediles from B. C. 493 to A. D. 476, a period of one thousand years, neither the ancient painters, sculptors, and architects, nor the ancient writers on archeology mentions the art of coloring marble through the entire mass, we may fairly conclude that the ancients knew nothing of this art, and that it is simply and purely an American discovery.

No doubt, Winkelman, author of the "History of Art among the Ancients," and Quatremère de Quincy could not help indorsing such a conclusion.

As a synopsis of the finest marbles known to the ancients might throw more light on this subject, and be a guide to American explorers and pioneers, we shall give it in a future issue.

VELOCIPEDE NOTES.

There are some who think, or pretend to think velocipedes are a frivolous invention, only calculated to subserve purposes of amusement, and soon to be superseded by some other ephemeral claimant for popularity. To such it perhaps seems a waste of time and space to record the progress of this most prominent mechanical invention of the time. We, on the contrary, have avowed and still avow our belief that the velocipede, as now improved, is destined to mark an era in the history of vehicles, an era that will last long after present cavillers and devotees have passed off the stage. We therefore continue our notes on the progress of this invention, and are confident from the many letters of approval we receive, they prove very acceptable to a large number of our readers.

A young mechanic in Dubuque, Iowa, has invented and constructed a vehicle which he terms the "velocycle," and which he claims will supersede the velocipede. A local paper describes it:

"The reader must disabuse his mind of all the forms common to the velocipede, and imagine a wheel 5 feet 10 inches in diameter. Nay, the imagination must go further and comprehend this wheel to be, as it were, two wheels of this diameter, and of a proportion not unlike a driving sulky's—that the two are made a unit by a light rim twelve inches wide, running around and within two inches of the outer circumference of the two supposed wheels. This comprehension will enable the reader to understand that this wheel is in reality a rim 5 feet 10 inches in diameter and about 14 inches wide, with two flanges, of two inches depth, projecting over the edges. Having entertained this form, we proceed further. Inside of this rim or wheel, a light but strong frame is hung, by a novel device, which keeps it independent, so far as not to obstruct its (the wheel's) motion. From the bottom of the frame, which is square, and running to the top of it, at an angle of nearly ninety degrees, is a band that may be properly called an endless ladder. The band, it will be understood, passes over a pulley below and a pulley above. On the edges of this endless ladder, in close proximity and parallel to each other, like strings of great beads, are a series of friction pulleys. These pulleys are so arranged as to unhinge on similar peculiarly contrived pulleys on the inner circumference of the main wheel or rim, near to the intersections of the flanges. The revolution of this band or endless ladder, through the medium of these pulleys, causes the main wheel or rim to revolve."

While the velocipede is still having its run in Paris, the other cities and towns of France are putting spokes in its wheels in the way of municipal restrictions. At Lyons no one can appear in the public streets or highways on a velocipede, and at Bordeaux, if a velocipedist goes out after sunset, he must carry a lantern, lighted.

A velocipede race took place at Worcester, Mass., a day or two ago. There were eighteen competitors, eight of whom were thrown. The remaining ten finished a course, of a little less than half a mile, in various periods of time; the fastest rider making the course in seventy-two seconds.

It is said that the first velocipede made its appearance in Minneapolis, Minnesota, on Tuesday, Feb. 16, and created a great excitement.

There are at the present time some twelve or fifteen schools in Boston where the use of the velocipede is taught, and they are increasing in number every day. At these halls from four

to twelve machines are kept, and the arrangements whereby one pays for learning differ at the several places.

Some charge so much for a series of ten lessons, while others charge a small admittance fee and a certain price per hour for using the machine, as is the case in playing billiards. In either case they all made money, and a machine pays for itself in a very short time.

The hall velocipedes are for the most part slim built affairs, not suitable for roads, where a strong machine will be required to withstand the jar of uneven roads. It is estimated that upwards of one thousand young Bostonians are taking lessons in riding, with a view of going on the road when the spring opens.

Mr. Nat Perkins, of Riverside Park, will offer prizes for a series of velocipede races to come off on his race track early in the spring.

Walter Brown has opened the velocipede rink, number 10, in Boston, on Court street, near the Revere House.

A few evenings since, Mr. Hiram Henlin, of 720 Broadway, New York, and Mr. Samuel Keeler, the well-known and popular treasurer of the New York Theater, while at the velocipede school of Mr. C. Witty, engaged on a tilt at riding, which ended in rather a novel wager, Mr. Henlin agreeing to ride a velocipede against Mr. Keeler, from New York to Chicago, in less time than Mr. Keeler could, for the sum of \$1,500 a side. Articles of agreement were drawn up, and a forfeit of \$250 each placed in the hands of Mr. Charles H. Bladen, the final deposit was made at the house of Mr. Henlin, 720 Broadway, on the evening of Thursday, February 16, 1869—umpires and starting day then named. We suppose this will be the forerunner of several matches of the same kind, as the velocipede mania is on the increase. The affair is creating considerable excitement in sporting circles, and a large amount of money is already staked upon the result.

A new style of bicycle—the first specimen of which was completed about a fortnight since, and several of which have since been manufactured, and subjected to a variety of tests as to strength and susceptibility of easy propulsion and control—is, we are informed, the recipient of many encomiums from those who have learned to ride it. It is called the Improved American Velocipede, invented by A. T. Demarest, of this city. It differs from the styles best known to the public, in important respects. The iron arms, between which the front wheel is held, are inclined back at an angle of forty-five degrees from the perpendicular, which inclination brings the seat in such a relative position to the fore wheel that a man of medium height can with his feet reach the treadles of one of these velocipedes, the front wheel of which is forty-five inches in diameter, with as much ease as he can those of the ordinary velocipede, the fore wheel of which is of a diameter seven or eight inches smaller. This peculiarity gives likewise great facility in describing sharp curves and circles of small diameter, the body being inclined in the direction in which the rider wishes to propel himself, and in the direction in which the driving wheel is inclined. Those who have become expert in the use of this new machine, claim that the movement of the body in propelling and guiding it is more nearly analogous to that in skating than is that employed in controlling the ordinary bicycle. Indeed, they claim that it can be guided by the mere inclination of the body without perceptibly varying the pressure upon the handles to the one side or the other. It is also claimed that by the peculiar rakish arrangement referred to, three obvious advantages are secured—that the driving wheel never touches the pantaloons to soil them; that however formidable an obstruction may be encountered, whether it be a curb-stone or anything else of equal height, the arms holding the driving wheel will never be bent back in such a way that the wheels will lap each other (as those of the other styles of velocipede sometimes will), for the reason that those arms point directly toward such obstruction, the sole effect of striking it being to lift the front wheel and the rider; and that the hind wheel—whether a straight line be followed or a circle described—remains in an upright or nearly upright position.

The Milwaukee Sentinel, of the 18th February, says that "Mr. Cubberley, the inventor of the new velocipede, gave an exhibition of its speed and mode of operation at the Chamber of Commerce yesterday. The 'new-comer' made a favorable impression, and will doubtless supersede the treacherous 'bicycles.'" This machine is described as a tricycle, the rider sitting over and between the main wheels, as upon a sulky. These are about the size of the hind wheels of an ordinary carriage. The third, or guide wheel, is of small size, and serves merely to support the forward part of the machine.

Its most striking peculiarity is the ingenious contrivance whereby the weight of the rider is made to contribute to the propelling power, thus materially relieving the strain upon the muscles of the arms and legs. The apparatus for guiding, in addition to its main purpose, is so connected that the arms may assist in imparting motion to the wheels when not engaged in giving direction. The movements of the body in riding are very similar to the gentle rise and fall of a person riding on horseback, the rapidity of the motions increasing with the velocity.

The following remarks upon learning the velocipede are based upon practical experience and will be found of use to those who have not yet "broken their colt."

"To learn the velocipede, where possible, it is advisable to use a velocipede not too elevated, so that the soles of the feet touch the earth. To start with the velocipede it suffices to run with the machine, so as to master well in the mind the action of the fore wheel, for all depends on this wheel. Half an hour of this is all that is requisite. Then one only of the feet is placed on the pedal, keeping the other leg on the ground, and one guides oneself in pushing this pedal a few moments. When one has by this acquired the notion of gov-

erning the velocipede, one lifts the leg that was on the ground and places it on the other pedal. Then cause the legs to regularly and alternately turn the pedals; speed of course is increased by quickening the action. After an hour or two one will certainly thus have acquired the means of attaining a medium speed. To get off, the feet are at once and simultaneously lifted off the two pedals, which diminishes the speed, upon which both feet are put at once to the ground.

"There is no danger, with a little caution, in using this machine in this way, even for a novice. The pedal is so constructed that the foot of the rider can at once leave it, and he has only to put the foot to the ground at the side upon which the machine inclines to gain a resisting point: one must not let the handles go; these serve to maintain and restore the balance of the machine when the rider has got off it.

Should the velocipede be too high to practice it in the mode above indicated, the learners should get some one to hold the machine, the hands on the extremity of the bar upon which the rider sits, so as in no way to impede the action of the fore wheel. It is well to choose a sloping ground to learn on.

So far, accidents have been neither numerous or serious, and the predictions that these machines would prove dangerous have not been verified. A Cincinnati paper gives the following account of a velocipede accident, resulting, however, from no defect in the machine:

A lad by the name of George Grier, having a desire to learn to ride the velocipede, engaged one of the machines at the velocipede school on Seventh street, and commenced his lesson in the fourth story of the building. He proved to be a very apt pupil, and having made the circuit of the large room several times with the assistance of his teacher, was anxious to try it alone. Mr. Miller acquiesced, and gave the novice a good start. The lad ran the machine eight or ten yards very skillfully, but after that distance had been gone over, the velocipede became unmanageable, and made for a large hatchway in the middle of the room. The machine going at full speed, ran against the wooden guard around the opening, crashed through the boarding, and precipitated the rider to the cellar of the building, four stories and a half beneath. His fall was somewhat broken by the velocipede, which it seems struck the ground first, with him clinging to it; but notwithstanding this favorable circumstance, he received injuries which it is feared may prove fatal.

The junior editor of the Mauch Chunk *Gazette* has been experimenting on the velocipede, and gives an amusing account of his experience. The difference between these new-fangled horses and the orthodox quadrupeds seems to be about this: In the case of the former, the animal has to be broken before it can be ridden, while with the latter it is the rider who must undergo the breaking process.

ABOUT EARTHQUAKES.

On the 13th of August last, and the three successive days, fearful earthquakes occurred on the coast of Peru and in the interior of Ecuador, extending from Ibarra, a town of Ecuador, fifty miles to the north of Quito, to Arica, Arequipo, and Iquique, along the coast for a distance of 1,200 miles, and over a wide, but as yet unascertained region of the interior. The particulars of the catastrophe are familiar to our readers. An English exchange, in discussing this disaster in connection with earthquakes in general, gives some interesting details, from which we condense the following:

"Of all the great and overwhelming evils to which men are exposed, there is no one so sudden, so terrible, and so destructive as that produced by earthquakes in those regions in which the great internal fires of the earth, or the vapors produced by chemical or other action, are still in full force. It is the opinion of the great Humboldt that if we could obtain daily intelligence of the condition of the whole surface of the earth, we should probably arrive at the conviction that the surface is almost always shaking at some point, and that it is incessantly affected by causes working at one point or other in the interior of the earth. Earthquakes probably owe their origin to the high temperature of deep-seated molten strata in the interior, and are quite independent of the nature of the rocks or of the earth near the surface. Earthquake shocks have been felt even in the loose alluvial soil of Holland; and the great earthquake which destroyed the city of Lisbon on the 1st of November, 1755, was felt as far north as the shores of the Baltic and the mountains of Scotland. But it is one great happiness which the natives of the British Islands and Northern Europe possess that they have long been free from earthquakes of destructive violence. The great internal fires or forces, of whatever nature they may be, by which destructive earthquakes are produced, seem to have exhausted their strength, at least for some hundred years now past, in Northern Europe. Yet our distance from these great centers of commotion is not so great as we generally suppose. The earthquake of Lisbon in 1755 was probably one of the greatest convulsions in modern times, and attended with the most terrible loss of life. That at Messina, in Sicily, in the year 1783, was scarcely less terrible or fatal, and nearly the whole of the south of Spain, of Italy, and of Greece have at various times been shaken and convulsed with earthquakes. Happily, however, they do not appear in modern times to have exercised any destructive influence north of the chain of the Alps, although tremblings of the earth were felt almost every hour, for months together, in the month of April, 1808, on the eastern declivity of Mont Cenis, a portion of the chain of the Alps at Fenestrelles, and Pignesol. Beyond that point these great internal forces, though often felt, have never produced any dangerous convulsion in modern times, and the natives of France, Germany, and the British Islands may regard it as one of the many great advantages for which they have reason to be thankful that they are now, and have been for many generations, free from destructive ravages of forces by which so many other portions of the earth are

periodically laid waste. The people of the United States have, to a great extent, the same reason for gratitude; for, although there were very destructive earthquakes in the valley of the Mississippi in the years 1810-11, there never yet has been an earthquake by which any considerable city of the United States has been destroyed.

"From the West Indies southward, over the greater part of South America, the causes by which the earthquakes are produced appear still to be in action. In the earthquake of Rio Banba, in the same district of country which has just been laid waste, the whole city of Rio Banba, with 30,000 or 40,000 inhabitants, was destroyed in a few minutes by a sudden explosion like the blowing up of a mine. Humboldt states that this terrible event was unaccompanied by any noise, but that a great subterranean detonation was heard twenty minutes after the catastrophe at Quito and Ibarra, one of the towns or cities destroyed in the recent earthquake in Peru. It was not, however, even heard at Tacunga, another of the places destroyed, although that place is (or rather was) nearer to the great convulsion of 1797. In the celebrated earthquake of Lima and Callao (Oct. 28, 1746), a noise resembling a subterranean thunderclap was heard a quarter of an hour later at Truxillo, but unaccompanied by movement. In like manner after the great earthquake of New Granada (Nov. 16, 1827), subterranean detonations were heard with great regularity at intervals of thirty seconds throughout the whole Cauca Valley, while at a distance of 63½ miles to the north-east the crater of the volcano of St. Vincent, one of the small islands of the West Indies, was pouring forth a prodigious stream of lava. During the violent earthquake in New Granada, in February, 1835, subterranean thunder was heard as far north as the islands of Jamaica and Hayti, as well as the lake of Nicaragua. Wonderful as these distances are, they are not greater than the vibration produced by the great earthquake of Lisbon, which was felt over a space four times as large as the whole of Europe. In that great convulsion the sea rose at Cadiz, in consequence of the commotion of the earth, above sixty feet; and in the West India Islands, where it usually does not rise more than three feet, to an elevation of at least twenty feet. There is no manifestation of force yet known to us (including the murderous inventions of our own race) by which a greater number of human beings have been killed in the short space of a few seconds or minutes than in the case of earthquakes. Sixty thousand were destroyed in Sicily in 1693; 30,000 to 40,000 at Rio Banba, in South America, in 1797; and perhaps five times as many in Asia Minor and Syria, under Tiberius and the elder Justinian, in the years 19 and 526. We fear that this new calamity in Ecuador and Peru will prove, when all the results are known, nearly equal to some of the above."

New American Pigment.

The London *Mining Journal* in noticing some extraordinary puffs of a pigment, known here as "Bartlett's Lead," says: "The process described, and the resulting product, are alike improbable, if not impossible. The mine from which the raw material is derived was described as being first in New Jersey and then in North Carolina; yet the removal of the mine would be much more simple than the production of the pigment stated by the process described. An ore, which contains various metals—lead, silver, zinc, copper, gold, iron, and manganese—is treated so as to remove the silver, lead, and gold, and when the residuum has been subjected to a white-red heat, the powder becomes impalpable and delicately soft, and of a pinkish chocolate color—this seems to be a common impure iron paint. This powder is made into white lead by burning it with small hard coal in a closed furnace, from which the mineral is drawn off by large rotary fans in minute and delicate flakes, which prove upon analysis to be composed of lead and zinc, with a small percentage of cadmium. In this process, the transmutation of metals is an accomplished fact; and, assuming that it can be carried out in practice, it must be admitted that all existing chemical knowledge is absolutely worthless."

Editorial Summary.

A CURIOSITY.—At the dining rooms of Messrs. Crook, Fox, & Nash, Park Row, this city, we saw last week a curiosity in the form of a smelt inside the shell of an oyster. The oyster shell (lower valve) measured four and a half by three inches and the smelt was five inches long, lying curved to conform to the mouth of the shell and in a good state of preservation. As the food of the oyster consists of nothing larger than the animalcules of the salt water, it must therefore be inferred that the smelt was on an exploring expedition while the oyster had his shell open for an airing, and when that representative of the family *clupeidae* intruded, the oyster imprisoned him for ransom.

THE PATENT SANDSTONE.—The recent fall of the church built of this material at Morrisania has set people to thinking what is likely to happen to the Freedman's Bureau buildings at Washington, built of the same worthless stuff at a cost of \$200,000. The material is the very last we should adopt for any structure required to be permanent, but perhaps permanency was not contemplated for the Freedman's Bureau.

It is said that contracts have been made with a French Company for opening a canal across the Isthmus in Nicaragua and with an American Company for an Isthmus railroad. Work on the latter is to begin in the spring, and the first thirty miles of the canal are to be finished in eighteen months. The contract price is ten millions of dollars.

INTERESTING EXPERIMENTS BY PROF. TYNDALL.—Dr. Tyndall has made some very surprising experiments by passing vapors of different chemical substances into an exhausted glass tube, and then sending through them a beam of electric light. The vapor is at first invisible, but after the light has shone through it for a few seconds, it forms clouds of a blue, green, red, or mauve color, which break up into the most fantastic and beautiful forms, endowed with a rotary motion, which adds greatly to their effect on the eye. In some instances, the cloud takes the shape of funnels overlapping each other, and, curiously enough, the inner ones can be seen through the outer ones. The most surprising of all is the vapor of hydriodic acid. The cloud is seen cone-shaped, supporting vases of exquisite form, and over the edges of these vases fall faint clouds, resembling spectral sheets of liquid. Afterwards, a change takes place—roses, tulips, and sunflowers appear; then come a series of beautifully shaped bottles, one within the other, and on one occasion there was seen the shape of a fish with eyes, gills, and feelers. What, it may be asked, is the use of all this fantastic beauty? The answer is, that Dr. Tyndall finds therein illustration of chemical decomposition, examples of molecular physics, and explanations of the formation of cloud and the blue color of the sky, whereof we shall hear more by-and-by, and by which science will be enriched.

TEST FOR THE STRENGTH OF ALCOHOL.—Alcohol dissolves chloroform, so that when a mixture of alcohol and water is shaken up with chloroform, the alcohol and chloroform unite, leaving the water separate. On this fact Basile Rakowitsch, of the Imperial Russian Navy, has founded his invention. The instrument he uses is a graduated glass tube into which a measured quantity of chloroform is poured, and to this is added a given quantity of the liquid to be tested; these are well mixed together and then left to subside; the chloroform takes up the alcohol and leaves the water, which being lighter than the chloroform will float on the top; and the quantity of water that has been mixed with the spirit will be at once seen.

N. F. BURNHAM, of York, Pa., in a recent letter, says: "I shall shortly send you an advertisement for my wheel; I have already received over one hundred letters from your description of it in your paper of the 9th Feb." This is a valuable endorsement of the *SCIENTIFIC AMERICAN* as an advertising medium.

THIS WINTER although a very mild one has been a very hard one on proprietors of Skating Rinks in New York and Brooklyn, who have only saved themselves from ruinous losses by adopting the velocipede.

MR. FRANK BUCKLAND states that the skin of the salmon will make leather as tough as wash-leather and about the thickness of dog-skin leather. The scale marks give a very neat pattern to the leather.

MANUFACTURING, MINING, AND RAILROAD ITEMS.

QUICKSILVER.—It is asserted that the increased production of the California quicksilver mines has stimulated the workings of the old Almaden mines in Spain, and the Austrian mines of Idria, and that the price of this metal has fallen in consequence in London, where it is fifteen per cent lower than it was four or five years ago. California now sends quicksilver to various places in the following order of their importance—the first mentioned taking the smallest quantity; British Columbia, Australia, South America, Great Britain, New York, Mexico, and, during the past year, China, which was the best customer.

The Central Pacific Railroad Company finds it exceedingly difficult to keep their employes from deserting, on account of the White Pine gold excitement. They ship car loads of workmen who get their ride for nothing, and strike for the gold region when they get as near as the road can carry them.

An item stating that the first cotton mill erected in New England was at Putnam, Conn., recently found its way into our manufacturing items by mistake. The first cotton mill erected in the United States was at Pawtucket, R. I., built by Samuel Slater in 1793.

The amount of petroleum remaining unsold in the United States on the first of January last is stated at 520,588 barrels; afloat and in Europe, 439,688 barrels; total 960,276, showing a decrease of 312,925 barrels as compared with the first of January, 1868.

St. Thomas' Church, in New York city, is to have a full chime of bells, the largest of which will weigh 5,500 pounds and be the heaviest harmonic bell ever cast in the country.

A valuable sulphur deposit has been found in Louisiana, near Lake Charles, 500 feet beneath the surface.

One thousand stationary engines are employed in the manufacturing establishments of Philadelphia.

The revolution in Cuba has raised the price of sugar and greatly depressed the hoop-pole business in Maine.

The first piano shipped to Japan was sent recently by a New Haven manufacturer.

One of the Oriental Powder Company's mills, in Gorham, Maine, blew up on Saturday. A Prussian named Shaiel had his leg broken. No one else was hurt.

A transparent agate inclosing a drop of water has been found in Willamette river, Oregon.

The product of the Nevada mines for 1868 is stated as being sixteen millions of dollars.

Seeds of the cork tree have been brought from Portugal to Florida with a view to test its cultivation there.

A seventy-five pound nugget one-third gold, is said to have been recently found in an Oregon mine.

Earth is stated to have been found frozen in a Colorado mine at a depth of 125 feet.

An Illinois beet sugar company uses fifty tons of beets a day, and will soon increase its consumption to sixty tons.

A world's fair, to be held in San Francisco in 1870, is talked of.

Gold diggings have been discovered in Scotland.

A canal across the State of Georgia is talked of.