The chief field for inventors must, then, continue to be in the future as it has been in the past, in the employment of machines as intermediate links between molecular motion and other molecular or mass motion, which it is desired to make minister to the wants of mankind.

If we now accept the modern view that light, electricity, and gravity are, as well as heat, but modes of molecular motion, who shall dare to say that machinery may not be made the connecting link between them and other modes of molecular motion, in the future, as successfully as it is now between heat and work.

It sounds odd to speak of a light engine, or a gravity engine, although we are familiar enough with caloric engines, steam engines, and electric engines; and a water wheel is but a gravity engine, although we know that previous to the action of gravity it was, so to speak, "wound up" by the action of heat upon the water of the sea.

There is yet an almost unlimited field for lesser lights in the invention of improvements on present forms and devices, but the geniuses of the future have more glorious work before them. When the vast coal-fields upon which the world at present relies shall have been consumed, there will be just as much carbon as before, only it will exist in another form. The mass motion which it will have produced in assuming that form, will in its turn have been converted into molecular motions of some kind, which will be capable of re-conversion without loss into mass motion again, and the world's great workshop will keep running—no fear about it.

Where, then, shall invention stop? When man ceases to want anything to minister to body or mind, then will invention cease. What is there left to do? So much, which is possible, that the ages to come will never see it all accomplished.

THE CONSTRUCTIVE FACULTY OF THE MIND.

Perhaps no one of the powers of the human mind is more widely and uniformly distributed among mankind than the power to control and guide the muscles in the shaping of crude materials into objects of utility and beauty.

Phrenologists have classed constructiveness as a distinct faculty, and have given its supposed external indication a location upon the skull. It is evident, however, that it is not the simple control of muscle by the will that phrenologists mean by the term constructiveness. As illustrations of the prominent development of this faculty their books contain principally heads of such men as have distinguished themselves by great feats of mechanical skill and genius in invention.

Now we maintain that if what is meant by constructiveness in phrenology be anything more than mere power to guide the muscles in making imitations of existing things (and of course more is meant), it can no more be justly considered a single faculty of the mind than the power to become scientific in the most general sense of the latter term. To be scientific a man must have not one but many "bumps" well developed. To become a skilled constructor in anything but the imitative sense of the term, he must have not merely the bump of constructiveness, deemed necessary by phrenologists, but the rest of his skull must contain some brains, as well. Take away his causality, his calculation, his ideality, his sense of color, form, and weight, and he will never make even a horseshoe, not to mention a steam engine. And though he may possess all the faculties which go to make a skilled constructor, he will never become such without knowledge.

To construct, one must have mental as well as physical materials. To become skilled in the working of any material and fashioning it into that which better fits it for the use of man, it is necessary to know in some measure the properties of that material, and the means by which it may be so fashioned.

Savages perform marvels of imitative skill, when the rude character of their implements are considered, but they invent little. Much invention and a savage state are incompatibles. When man begins to invent he has progressed, and it would not be hard to show that the progress of civilization has gone hand in hand with invention.

We see then that mechanical skill may be reduced to three subjective elements; namely, good natural powers of mind and body, cultivation of those powers, and knowledge.

Brutes have not the first of these elements, they can therefore not have the others, and hence it is absurd to speak of their being skillful in their works. The beaver's dam, the honey-comb of the bee, and the tailor-bird's nest, are often spoken of as works of skill, but they are only so by comparison with the feeble mental and physical faculties of the beaver, the bird, and the bee. To form wax into much more complex forms than a honey-comb, would not be a surprising feat if done by a boy six years old. To build a dam as substantial as it is done by the beaver, or to stitch leaves together like the tailor-bird, is far within the power of the lowest and most ignorant savages on the face of the earth. Savages do even more remarkable things than these, but they are not feats of constructive skill in a broad sense of the term; a watch or a steam engine is, because all the requisites above enumerated are necessary to its construction. True, an ignorant man may imitate, but he could not devise, or improve it. An educated man might invent improvements, but lack the power to construct his improvement, but neither of these could be called skillful.

How absurd, then to consider constructive skill as a peculiar faculty of the mind, like the phrenologist, or mere deftness of the hand like the workman, who will none of books because he esteems most the judgment of practical men, and likely thinks himself a practical man.

Of all absurd terms, this "practical" is most misunderstood. What does it mean? Clearly, it means pertaining to practice, and practice signifies the practice of something, the application of knowledge or theory. Hence, theory precedes practice. A theoretical man may not be practical, but a practical man must be theoretical in spite of himself, and just as he is deficient in theory, in just so much he must be deficient in practice. There is a lesson to be drawn from this, but it must form the subject of a future article.

MEN OF PROGRESS---GREAT INVENTORS.

We continue this week our biographical sketches of the lives of the great inventors whose portraits are offered (see another column) as one of our subscription prizes.

At the extreme left of the picture stands the dignified Dr.

WILLIAM THOMAS GREEN MORTON,

who was born in Charlton, Mass., August 19, 1819. His youth was passed on a farm. At the age of seventeen he spent some time in a publishing house in Boston. In 1840 he commenced the study of dentistry in Baltimore, and eighteen months after established himself as a dentist in Boston. Among other improvements introduced by him was a new kind of solder by which false teeth are fastened to gold plates, preventing galvanic action. In order to render his work complete, it was desirable that the roots of old teeth should be removed. This was a tedious and painful operation, and there seemed little prospect of the success of the invention, unless he could devise means to lessen the pain. He tried by stimulants, intoxication, and magnetism, but in vain; yet still he clung to the idea that there must be something to produce the desired effect. He entered his name as a medical student in Boston in 1844. About this time the idea was suggested to him, in a lecture at the college, that sulphuric ether might be used to alleviate pain in his operations. He studied chemistry, and experimented on animals. Learning from books and lectures that the ether could be inhaled in small quantities, but that in large amount it was dangerous, he experimented on himself, and, satisfied of its safety, he administered it to a man, on September 30, 1846, producing unconsciousness, during which a firmly-rooted bicuspid tooth was painlessly extracted. At the request of Dr. Warren he administered the ether to a man at the Massachusetts General Hospital, from whose jaw was removed a vascular tumor, October 16, 1846, with perfect success. Dr. Morton obtained a patent under the name of letheon, November, 1846, in the United States, and the following month in England. The Paris academicians awarded 5,000 francs to be equally divided between Drs. Jackson and Morton; the latter declined receiving this joint award, but in 1852 received the large gold medal, the Monthyon prize.

From this time Dr. Morton labored incessantly for years to induce surgeons to adopt the ether, and, when its anæsthetic qualities were demonstrated, chloroform in their practice. His efforts secured him small profits, but brought upon him bitter persecution. His claim to the discovery of anæsthesia was disputed, and even the value of his efforts in behalf of its introduction was denied. In 1867, after witnessing a very successful, though severe surgical operation, in which Dr. Morton administered with his own hands the anæsthetic, we listened to an able and eloquent statement of his claims to the discovery of anæsthesia, as applied to surgery, which had the effect to establish in our mind the entire justice of that claim, and which, whether allowed by posterity or not, in our opinion entitles him to head the list of the world's benefactors. The full value of this discovery can only be appreciated by those who know how much suffering is saved by its now general application, and this value cannot be expressed in language, or estimated in dollars and cents. After many fruitless applications to Congress for some pecuniary recognition of his services to the world, some of them made at a time when the agony of thousands of wounded and maimed soldiers on the battle field, was being mitigated by his discovery, to the eternal shame of an ungrateful country be it said, he died July 15th, 1868, a poor man.

Immediately in front of Dr. Morton, stands

COL. SAMUEL COLT,

who was born at Hartford, Conn., July 19, 1814, and educated in his own native city. When a child, he preferred the work-room to the school-room. He remained in his father's factory from the age of ten to fourteen, when he was sent to school at Amherst, Mass., but ran away from the school, and, in July, 1829, shipped as a boy before the mast on as East India voyage. On his return, he served a short apprenticeship in a factory at Ware, Mass., in the dyeing and bleaching department, where he learned something; after which, under the assumed name of Dr. Coult, he traversed every State and most of the towns in the Union and British North America, lecturing on chemistry. In this way he earned considerable money, which he devoted to the prosecution of the invention of his revolver, the germ of which he had already devised while on his voyage to Calcutta. The first model of his pistol, made in wood, in 1829, while a sailor boy, is still in existence. At the age of twenty-one, he took out his first patent for revolving firearms. Before obtaining his patent here, he visited France and England and secured patents there. He returned to the United States and succeeded in inducing some New York capitalists to take an interest in the invention, and a company was formed in Paterson, N. J., in 1835, with a capital of $300,000, under the name of the Patent Arms Company. The revolvers were first introduced into use in the Florida War of 1837. In 1842 the Patent Arms Company were forced to suspend. The Mexican War commencing in 1847, General Taylor sent Captain Walker of the Texan Rangers to procure a supply; there were no arms to be had, not even could he obtain one to serve as a model; so that he was compelled to make a new model, which he did with several improvements. The first thousand were made at Whitneyville, Conn. Other orders immediately following, Mr. Colt procured more commodious workshops at Hartford, and commenced business on his own account. The demand for revolvers greatly increasing, and more room and greater facilities being required, he purchased a tract of meadow land south of Mill River, within the limits of the city of Hartford, surrounded it with a dyke or embankment about two miles in length, one hundred and fifty feet at the base, from thirty to sixty at the top, and from ten to twenty five feet in hight. He erected within this his armory, consisting of two main buildings, with others for offices, warerooms, etc., in which armory he could manufacture one thousand firearms per day. He also manufactured the machinery for making these firearms elsewhere, and supplied a large portion of the machinery for the armory of the British Government at Enfield, England, and the whole of that for the Russian Government at Tula. The entire expenditure upon his grounds and buildings amounted to more than $1,000,000. He did not forget the comfort of his workmen, having good dwellings provided for them, besides a public hall, a library, courses of lectures, concerts, etc. Mr. Colt subsequently invented a submarine battery of great power, and was one of the first to lay a submarine cable. He amassed an immense fortune in his manufacture of arms; and died in 1861.

By his side stands

CYRUS HALL M'CORMICK,

of Scotch descent, though born in this country, in the State of Virginia. The constant employment of his active mind in pursuit of mechanical improvements, has resulted in one of the most important inventions of agricultural machinery. His automatic mowing and reaping machine, was exhibited in the World's Fair, held in Hyde Park, London, in 1851, and like many other pioneers in the van-guard of progress, was greeted with ridicule. The *Times* called it "a cross between an Astley chariot and a flying machine." Its first trial, however, at Tiptree farm, changed the current of public opinion, and even the *Times* recanted. A still more satisfactory acknowledgment of its merits was the award to it of the Grand Prize medal of the year by the jury of the Exhibition. In the New York Exhibition of 1853, it also won a gold medal. Mr. M'Cormick, not content with this great success, continued his investigations and experiments, until he achieved another important improvement in this same machine, the automatic "raker." This machine, called by its inventor the "M'Cormick," attracted a great deal of attention at the last Great Exhibition in London, in 1861; even crowned heads and the highest nobility considered it worthy of their examination. At every trial in all parts of Great Britain and the Continent, it elicited applause by its admirable performance of the operations for which it was constructed. At the Lancashire Agricultural Meeting, at Preston, it triumphed over nine competitors. Mr. M'Cormick has a large factory in Chicago, Illinois, where, as an inseparable result of such indomitable perseverance and inventive genius, his success is firmly established.

In front of Mr. M'Cormick sits, with vulcanite cane in hand, and large vulcanite pin on his shirt-front,

CHARLES GOODYEAR,

who was born in New Haven, Conn., Decmber 29, 1800. He there attended public school. When not studying he assisted his father Amasa Goodyear, who was the pioneer in the manufacture of hardware. He subsequently joined his father in the hardware business in Philadelphia, and made many improvements in agricultural tools. The firm being overwhelmed by the commercial disaster of 1830, Goodyear selected a new business, the improvement in india-rubber. His early experiments were made in New Haven, Conn., Roxbury, Lynn, Boston, and Woburn, Mass., and the city of New York. The first important improvement made by him was at New York, 1836, being a method of treating the surface of native india-rubber by dipping it into a preparation of nitric acid. This discovery enabled the manufacturer to expose an india-rubber surface in his goods, which, on account of adhesiveness, was before impracticable. The nitric acid gas process, as it was called, was introduced into public use and met with great favor, especially in the manufacture of shoes. Sulphur had been noticed as producing remarkable drying effects on rubber, and in 1838 and '39 Goodyear made at Woburn, Mass., many experiments with compounds of india-rubber and sulphur. In the course of these experiments, about January, 1839, he observed that a piece of rubber mixed with ingredients, among which was sulphur, upon being accidentally brought in contact with a red-hot stove, was not melted, but that in certain portions it was charred, and in other portions it remained elastic though deprived of adhesiveness. From 1839 to the day of his death vulcanization occupied Mr. Goodyear's whole attention. More than sixty patents were taken out by him. The first publication to the world of the process of vulcanization was Goodyear's patent for France, dated April 16th, 1844. He was unfortunate both in France and in England, in being robbed of both patents at the Paris Exhibition of 1855. He obtained the grand gold medal and the ribbon of the Legion of Honor, presented by Napoleon III. His whole time night and day appeared to be taken up with improvements in india-rubber. For years he suffered from poor health. He died in the city of Washington 1861.

ELIPHALET NOTT, D.D., LL.D.,

is represented as seated by the right of Professor Morse in the middle foreground. Although for more than half a century President of Union College, he was to a great extent self-educated, having never received a collegiate training. He was born in Ashford, Connecticut, June 25, 1773. He studied divinity in his native county, and at the age of twenty-one was sent out as a domestic missionary to the central part of the State of New York. On passing through the old settlement of Cherry Valley, he was requested to take charge of the Presbyterian Church at that place; he accepted the call, and in addition to his pastoral duties became the teacher in the Academy. Two or three years afterward he was called to the Presbyterian Church, at Albany, where he took a prominent position as a preacher. In 1804 he was chosen President of Union College, Schenectady, N. Y., which place he continued to fill for 58 years. More than 3,500 students were graduated during his presidency, and in their number may be found some of the most eminent men in the country. Union College was emphatically of his own formation. He came to it in its poverty and infancy, and raised it to wealth and reputation In 1854 the semi-centennial anniversary of his presidency was celebrated, when between 600 and 700 of the men who had been graduated under him came together to do him honor. Dr. Nott was an earnest advocate of the temperance cause, and published "Lectures on Temperance" in 1847. Though he has written much, his other publications are confined principally to occasional addresses and "Counsels to Young men." He gave a great deal of attention to the laws of heat, and besides obtaining thirty patents for applications of heat to steam engines, the economical use of fuel, etc., was the inventor of a stove bearing his name, which has been very extensively used. He died in Schenectady, January 29, 1866.

Immediately behind Dr. Nott stands

CAPT. JOHN ERICSSON,

whose great genius as an inventor and engineer are universally acknowledged. He was born in the province of Wermeland, Sweden, in 1803. The son of a mining proprietor, his earliest impressions were derived from the engines and machinery of the mines. In 1814 he attracted the attention of the celebrated Count Platen, and in 1820 he entered the Swedish army as an ensign, and was soon promoted to a lieutenancy. His regiment being stationed in the highlands, where government surveying was in progress, Ericsson surveyed upwards of fifty miles of territory, detailed maps of which, executed by his own hands, are yet in the archives of Sweden. He visited England in 1826, with a view of introducing his invention of a flame engine; not succeeding, he abandoned the idea, and numerous other inventions followed. He joined the house of Braithwaite, London, where he introduced several improvements in steam boilers. In the fall of 1829 his invention was applied to railway locomotion on the Liverpool and Manchester Railway. The directors had offered a prize for the best locomotive engine, and within seven weeks of the time of trial Ericsson heard of the offer, planned an engine, executed the working drawings, and completed the machine. The lightest and fastest engine started on this occasion was the "Novelty," which, guided by its inventor, Ericsson, started off at the rate of fifty miles an hour. A similar engine, of great power, he subsequently constructed, for the King of Prussia. For this invention he received the prize medal of the Mechanics' Institute, in New York. In 1833 he reduced to practice his long cherished project of a caloric engine, and submitted the result to the scientific world in London. Ericsson's attention was next directed to navigation; the result revolutionized the navies of the world. He was employed through Capt. R. F. Stockton, of the U. S. Navy, in the construction of the U. S. ship of war, *Princeton*, the first steamship ever built with the propelling machinery below the water line. In the United States division of the great exhibition in London, 1851, Ericsson gained the prize medal for a large number of important inventions there exhibited. In 1852, he was made Knight of the order of Vasa, by King Oscar, of Sweden. The same year brought out his caloric engine in the ship *Ericsson*. It propelled a ship of 2,000 tuns from New York to Alexandria, in the winter of 1853. It was visited there by the President and heads of the departments. His caloric engine has been perfected, and a large number are in successful operation. His greatest triumph was the invention and construction of the *Monitor*. He is still designing and improving naval batteries, and at the same time conducting extensive researches on the subject of solar heat, with a view to its application as a motive power, and also in other scientific fields. Probably no man in America has a better appreciation of the value of time than Capt. Ericsson. He economizes every moment. We are informed, that he has for thirty successive days, worked eighteen hours each day. He rarely leaves his house unless obliged to do so, and allows himself no leisure for social recreation. The speed with which he masters details and throws off designs, is said to be probably unparalleled. His manners are simple and dignified, but, without any assumption, he impresses every one with whom he comes in contact, by his broad views and rich stores of learning. His inventions are numerous and various, but they all bear the true stamp of genius.

FREDERICK E. SICKLES,

seated a little to the left of Dr. Nott, was born in the State of New Jersey in the year 1819. While an apprentice at the "Allaire Works," New York, he invented a "Cut Off," which improvement has become extensively known, not only from its great value in the saving of expense for fuel in the working of steam engines, but also from the litigation that existed during the lifetime of the patent. Although in controversy during the entire fourteen years, for which term the patent was granted, Mr. Sickels could obtain from the courts but partial protection to his rights, and it was not until after the patent had expired, and its extension had been refused by the Patent Office, that he obtained a decision from the highest court that he *was* the inventor of the improvement known as the "Sickels' Cut Off." Mr. Sickels has taken out twelve patents for as many distinct improvements in steam engines, all which have gone into extensive use. His latest invention for steering vessels by steam power has been successfully applied to government and merchant steamers, and was favorably received in England at the great exhibition in London, 1862, where it received the Great Medal.

The most prominent figure in the group occupying the middle foreground of the picture is that of

SAMUEL FINLEY MORSE,

who was born in Charlestown, Mass., April 27, 1791. He graduated at Yale College in 1810, and went to England with Washington Allston in 1811, to study painting under his tuition and that of Benjamin West. In 1813 he received the gold medal of the Adelphi Society of Arts, at the hands of the Duke of Norfolk, for an original model of a "Dying Hercules," his first attempt at sculpture. He returned to the United States in 1815, and in 1824-25 with some other artists of New York, organized a drawing association, which, after two years' struggle against various obstacles, resulted in the establishment, in 1826, of the present "National Academy of Design." Mr. Morse was chosen its first President, and was continued in that office for sixteen years. In 1829 he visited Europe the second time to complete his studies in art, residing for more than three years in the principal cities of the continent. During his absence abroad he had been elected to the professorship of the literature of the arts of design in the University of New York, and in 1835 he delivered a course of lectures before that Institution on the affinity of those arts. While at Yale College, Mr. Morse had paid special attention to chemistry and natural history to such a degree, that, from being subordinate as recreations, they had become a dominant pursuit with him. The electro-magnet on Sturgeon's principle (the first ever shown in the United States) was exhibited and explained in Dana's lectures, and at a later date by gift of Professor Toney, came into Morse's possession, and this same magnet is used in every Morse telegraph throughout both hemispheres. It was on board ship bound for Havre in 1832, and in a casual conversation with some of the passengers concerning recent discoveries in France, regarding the means of obtaining the electric spark from the magnet, that Morse's mind conceived not merely the idea of an electric telegraph, but of an electro-magnetic recording telegraph, as it now exists. The testimony to the paternity of the idea in Morse's mind, and to his acts and drawings on board the ship is ample; so that the court and judges before whom he appeared were satisfied with his claim; the date of 1832 is therefore fixed by this evidence as the date of Morse's conception of the telegraph system which now bears his name. In the latter part of this same year he reached home, prosecuted his studies, and prepared portions of his apparatus. The first instrument was shown in successful operation to many persons in 1835 and 1836, for the purpose of communicating from and to a distant point. In 1837 he completed and exhibited his whole plan at the University of New York. Application was made to Congress in 1842 without success. But in March of 1843 he was startled with the news that Congress, near the midnight hour of the last session, approved his plans and had placed at his disposal the sum of $30,000, to make the experiment between Washington and Baltimore; all know the result. Submarine telegraphy originated also with Professor Morse. He laid the first submarine telegraph lines in New York harbor in 1842, and received a gold medal for that achievement. One of the most prominent figures on the right of the picture is that of

HENRY BURDEN,

an inventor and mechanic, who was born at Dunblane, Scotland, April 20, 1791. His father was a farmer, and it was while a youth engaged on the farm that the son gave evidence of inventive genius, by making with his own hands labor-saving machinery from the roughest materials, and with but few tools and no models. The first marked success was in constructing a thrashing machine. He afterwards engaged in erecting grist-mills and making various farm implements. During this period he attended the school of William Hawley, an accomplished arithmetician; and afterwards, having resolved to try his fortunes in America as a machinist and inventor, he went to Edinburgh and entered upon a course of studies, embracing mathematics, engineering and drawing. Arriving in this country in 1819, he devoted himself to the improvement of agricultural implements. His first effort was in making an improved plough, which took the first premium at three county fairs. In 1820 he invented the first cultivator in the country. In 1825 he received a patent for his machine for making the wrought spike, and in 1835 for a machine for making horseshoes. 1840 he patented a machine for making the hook-headed spike, an article which is used on every railroad in the United States. In the same year he patented a self-acting machine for reducing iron into blooms after puddling. In 1843 he patented an improvement in his horseshoe machinery. In 1849, he patented a self-acting machine for rolling iron into bars. In June, 1857, he patented a new machine for making horseshoes. This may be considered his greatest triumph in mechanics; it is self-acting and produces from the iron bars sixty shoes per minute. He has obtained patents for this machine from every prominent government in Europe. Mr. Burden's suspension waterwheel is another of his inventions. In 1833, he built a steamboat 300 feet long, with paddle-wheels 30 feet in diameter; from its shape it was called the "segar boat." It was lost through the mismanagement of the pilot. In 1836, Mr. Burden warmly advocated the construction of a line of ocean steamers, of 18,000 tuns burden. In 1845, when the steamer *Great Britain* was crippled by breaking one of her screw blades, Mr. Burden went to England for the especial purpose of inducing her owners to adopt the sidewheel, but was unsuccessful. He is now a resident of Troy, N. Y., and is highly esteemed as a citizen.

The remaining portraits are those of Richard March Hoe, Erastus B. Bigelow, and Elias Howe, biographical sketches of whom will be given in a future number.

MICROGRAPHS.

The microscopist often desires to secure in permanent form, the beautiful and curious objects which are revealed to his eye. Recourse is frequently had to the pencil and the prism, success being in direct proportion to the skill. Photography affords the best means, and by its employment we obtain exact copies of the magnified objects. Such pictures are called micrographs, and are produced by combining a microscope with a photographic camera. These combinations are generally expensive; but their operation is simple, and they are easily managed.

Mr. Louis Edward Levy, of Milwaukee, Wis., sends us some micrographs of his own production, which are creditable to him as an amateur, especially when we consider the simplicity and cheapness of the apparatus by which they were produced. Over the eye-glass tube of an ordinary achromatic microscope, he places a sleeve or ferule, to which is attached a small box, having its rear part open so as to receive the plate-holder which fits nicely into the box. The interiors of box and plate-holder are painted black. In focusing, a frame with ground glass takes the place of the plate-holder. With a microscope and camera, thus made, all objects visible by means of the microscope may be readily photographed. Mr. Levy states that his box was made of tin, and the whole expense was only $3.

Report on Steam Boilers Exhibited at the Recent Fair of the American Institute.

THE HARRISON SAFETY BOILER—FIRST MEDAL AND DIPLOMA.—1st. Safety. 2d. Economy of space. 3d. Economy of fuel.—This boiler was the only one which was found reliable and capable of driving the engines at the Exhibition, and which did furnish all the steam for the competition tests of the engines.

Root's Wrought-Iron Sectional Boiler—Second premium and diploma for facility of repairs and economy of space.

If any of our readers have been kept awake by the problem we gave them last week in regard to this report, they may now rest easy—the report is made.

How about the evaporation power of these boilers? How about the quality of steam produced? How about the boilers exhibited, not mentioned in the report? We recommend any who wishes to see how much can be said without saying anything, to put the report on engines and this on boilers side by side, and study them together.

The Gold Hill Fire Still Burning.

The terrible and fatal fire which broke out in the Gold Hill (California) mines on the 7th of April last, and which resulted in the destruction of a large number of lives, is still smouldering. After it had been reduced to close quarters, it was carefully walled in, and work was again started in different directions around it. It was thought to have been extinguished long ago; but such, it appears, is not the case, for a few days since some miners working between the 600 and 700-foot levels of the Kentuck mine suddenly picked through into a space where there was plenty of fire, finding large brands of it. The place was at once closed up again. Being as far as possible shut in and kept from the encouragement of atmospheric air, the fire merely smoulders, but it is there, nevertheless, and may keep on burning for many months to come. It can do no particular harm, however, as it is merely burning out the old timbering where the mine has been worked out.

Obituary--Death of Mr. John Degnon.

We regret to announce the death of Mr. John Degnon, whom our readers will recollect as the engineer who took the locomotive *Best Friend* to Charleston in 1836, and set it running, and therefore claimed to be the first man who ever ran a locomotive in the United States. When we saw him last he appeared in good health, but he died of paralysis, at Boston, on the third of December, aged 59 years. He was a skillful mechanic. He learned his trade at West Point Foundery, and has been successively engineer on the steamships *Arctic* and *Re d'Italia.*

REMITTANCES should be made in money orders, bank checks, or drafts, if possible. When neither of these can be procured, send the money in a registered letter. The present registration system is virtually an absolute protection against losses by mail, and all postmasters are obliged to register letters whenever requested to do so.

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