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der in 6 months.

RAIL-ROAD NEWS.

Prevention of Accidents on Railroads. On Saturday evening, the 25th inst., the pas senger train from New Haven, and the freight train from New York, came into terrible collision about two miles above Williams' Bridge. on the New York and New Haven Railroad. One fireman and a brakeman were killed instantly, and five or six persons were severely wounded. The passenger train was behind time, and running at the rate of 30 miles per hour; the freighttrain was running at the rate of 16 miles per hour. The engines, tenders, and some cars, were smashed to pieces. The scene was a terrible one. The freight train should have waited at Williams' Bridge, but from what we can learn, there was a misunderstanding, either on the part of the engineer. signal-man, or the superintendant of the road. The conductor of the freight train says he believed the New Haven train had passed." The order of arrangement appears to us to have been too loose and indefinite; there was but a single track where the collision took place, and that had a narrow curve, which prevented the approaching trains from seeing one another in time to reverse the engines. The engineer of the freight train is greatly to blame for not stopping, for the flag-man swung his red light, and he should have stopped to inquire the reason of such a signal; but no, on he went, from the double to the single track and in three minutes afterward the terrible collision took place. No excuse can palliate this reckless conduct.

There should be no single tracks allowed without a railroad telegraph to signal from one station to another. By this means no collisions would take place, for, in a minute, the news whether a down train had left the next station, and vice versa, could be communicated, and thus the detentions of one train could soon be known along the line, and also the place where the other one was, so as to prevent two trains running, like madmen, one against another. Orders could also be communicated from the superintendant to direct the movements of trains along the line. We have advocated a system of railroad telegraphs before; and we now call the attention of our railroad companies to the subject again. The cost of the telegraph would be far less than the expense of collisions. The mere wreck engines by the above collision ha estimated at \$10,000, but the company will yet have to pay, and justly too, a large sum to the relatives of the killed, and those of the wounded. Double tracks and railroad telegraphs would at least prevent collisions.



the improvements invented by Mr. H. A. hung upon the same shaft; the brake wheel and friction of the pulley on the spur wheel, and Luttgens, of this city, for regulating the speed spur wheel are secured together and fitted cause it (the spur wheel) to be driven at the of engines, for which a potent was granted on loosely on the shaft, so as to turn upon it, but same speed as the shart, and make the ecthe first of last month, (Oct., 1851).

Fig. 1 is a side elevation, and fig. 2 is a section of a front elevation. The same letters wheel, and is made to drive the brake and refer to like parts. To render the description the spur wheel by friction, itself being driven more easily understood, we will first describe by a band in the same direction with, but at the pulley exerts upon the toothed wheel, its nature. This consists in a moveable cut- greater speed than the shaft. The brake off eccentric, the stroke of which is controlled wheel is encircled by a friction band which by mechanism which depends for its action is controlled by the governor so as to produce

are confined lengthwise; the pulley is fitted outside the boss of the brake wheel or spur

Figure 2.



The accompanying engravings represent upon a pulley brake wheel, and spur wheel, strap on the brake wheel, as will balance the centric stationary, but at the same time, as soon as the speed increases or decreases, it cause the governor to exert a greater or less amount of friction, on the brake wheel than and thus cause the spur wheel to revolve at a greater or less speed than the shaft, when in either case it operates on the pinion and gives rotation to the small spindle and bevel wheels operating on the screw of the eccentric, to alter its throw, to cut off the steam earlier or later as may be required.

A is the crank shaft of the engine; B is a pulley keyed on it to drive the governor, &c.; it has got a pair of dove-tailed guides, a, secured firmly on it. C is the cut off eccentric with dovetailed, two_slides, b, (one shown) secured to its back, and fitting between a a. It has an opening in it, for the shart to pass through, of such a form as to allow its degree of eccentrici-

ty to be altered; c is the screw for altering the

throw of the eccentric, one end rests in a

City Railroad.

The Managers of the Sixth Avenue Rail road Company, in this city, have reported to the Common Council, that they are ready to reasonable dispatch. Well, we hope it will be prosecuted with dispatch, and as it will no doubt be a profitable road, we think it will soon be under headway. City Railroads are

commence the work and prosecute it with all a greater or less amount of friction upon it. tother end is a bevel wheel gearing into a like The mechanism which actuates the eccentric one made upon a screw, which screw, by being consists of a small spindle hung parallel to the turned, alters the throw of the eccentric. The main shaft in bearings secured upon its peri- apparatus is so adjusted, that when the engine hub fitted on the shaft; F is a metal disc secured phery; on one end of the spindle is a pinion, is working at its proper speed, the governor much needed in this village of 600,000 people. which gears in the spur wheel, and on the shall produce just so much friction of the brake is toothed inside and secured to the said disc.

threaded centre on the pulley, B, and the other end against the point of a centre screw, d, which fits in a nut, e, secured to the pulley; it is held perpendicular to the axis of the shaft and radial to it, and is prevented from moving end-wise. It carries a bevel pinion, S, passing through a nut, t, in a small box, q, secured to the eccentric. If the screw, c, is turned round, it being placed edgewise, it will cause the nut, t, to move along it and change the position of the eccentric, C. D is the brake wheel; E is its deep boss or by bolts to the brakewheel. G is a ring which

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The brakewheel and spur wheel are secured from moving edgewise by rings, gg. Y is the pulley which gives motion to the spur wheel or toothed ring, G. It is is of the same diameter as B, and is fitted on E. This hub has a recess fitted in its face to recive a ring, h, next the disc, F. It has a number of spiral springs, i i, attached to its back, to force it out against the disc. A A are a pair of small bearing boxesthe one is on the shaft, and the other on the pulley, B; these boxes carry the small spindle, I, which has a pinion, J, gearing into G at one end, and the bevel pinion, j gears into the one S, on the adjusting screw, c, of the eccentric at the other end. KK, fig. 1 are standards on the engine framing. M is a pulley on a small transverse shaft; it receives motion by a band, k, from pulley, B, on the main shatt N is an or ther pulley of greater diameter which communicates motion by a band, *l*, to the pulley, Y It also carries a bevel wheel, O, for driving the governor. P is the governor main spindle hung in bearings, m, in the standards. It carries a bevel wheel, Q, driven by the one, O. R R are the weighted arms, and n n (one shown), small rods through which they operate on the slide socket at the inner end of V, raising it as their speed increases and vice versa. The governor is driven at the same speed as the crank shaft, the difference between the diameters of the pulleys, B M, being compensated, by the difference between the bevel wheels. O Q. On the shaft round the brake wheel, D is encircled a friction strap (not shown in fig. 1) made of light spring steel, having a tendency to free itself. Its two ends are secured by pins, one of which forms the axis of the lever, T, which is connected by a rod, X, to the lever, U, whose fulcrum is the standard, W. The forked end of V embraces the sliding socket, P, of the governor, the slightest motion of which, up or down, causes the lever, V, to act on the brake lever, U, which tightens or loosens the steel strap on the wheel, D, around shaft A, and causing the said spring brake to produce more or less friction on the brake wheel D. The pulley, Y, being driven by a larger pulley than the one B, moves faster, and must turn upon or around the boss, E; or by the ring, h, on the disc, F, cause it and G, and the brake wheel, D, to turn round on the shaft. When less friction is produced than that described, on the brake wheel (the shaft and pulleys revolving in the same direction) the pulley. Y, drives G in advance of the crank shaft, driving the pinion, J, the spindle, I, and bevel pinion, j, in such a way as to turn the screw, c, in a direction to decrease the eccentricity and throw off the eccentric; but when more friction is produced on the break wheel than by the ring, h, on F, the wheel, G, is retarded, and the shaft moves in advance of it. The pinion, J. spindle, I, and bevel wheel, j, then revolve in the opposite direction to that last described, causing the screw, c, to increase the throw of the eccentric which is connected to the cutoff-the greater the throw of the eccentric. the quicker is the steam cut-off. The eccentric is set to cut off the steam at the ordinary pressure for the work of the engine, and the break wheel and its gearing revolving at the same velocity as the crank shaft, therefore the spineccentric, remain stationary, but as soon as the steam increases, or work is taken off the engine and its velocity increased, the arms, R R, of the governor move laterally, the forks of lever ening it, and increasing the resistance on the

by the throttle valve.

The apparatus is capable of considerable moples. The claim will be found in our list of the 1st of last month (No. 6).

More information may be obtained by letter addressed to the patentee, 161 William street this city.

Foreign Correspondence. LONDON, Oct. 16, 1851.

The Great Exhibition is closed, and that wonderful fabric, the Crystal Palace-that creation of Paxton, which was the admiration of all who saw it, and the greatest wonder of all-is no more. The hammer, the chisel, the wrench, and the driver are now busy in its demolition, and the place which lately embraced the works of art of all nations, and whose passages were sometimes thronged with the living tide of an hundred thousand souls, will soon exist in imagination only, for next Spring the grass will be growing where stood the "Mountain of Light," and the leaves of the trees will be rustling, in another month, where rustled the satins of Lyons and the shawls of Cashmere.

In looking back upon the scene, I cannot but consider the Great Exhibition as the most wonderful creation of genius ever presented to the world. It was well to remove the Crystal Palace : it will be something to speak about to future generations.

The Exhibition closed yesterday. A spacious platform was erected on the site of the great Crystal Fountain, which once sent its joyful jets dancing upwards, but which was now hushed in sleep forever. The platform was covered with scarlet, and had seats for the Royal Commissioners. In the middle was a splendid ivory throne, a present from the Oriental Rajah of Travancore. The area of the transept had been reserved for the Foreign and Local Commissioners, the Jurors, the lady exhibitors, and others entitled to a special privilege of entry, and seats for them were disposed in such a manner round the platform that they had the utmost facilities which the construction of the building afforded for seeing and hearing the proceedings. Exhibitors, members of the Society of Arts, chairmen, secretaries, and members of local committees, and all others not entitled to enter at the south entrance, were admitted at the eastern and western ends of the building, and of course took up such positions in the nave, or the galleries overlooking it, as appeared to them best adapted for securing a good view of the ceremony. To help them, the various flags and banners with which the interior was ornamented, were all struck. Precisely at 12 o'clock the Royal Commission, headed by the Executive Committee, moved in a species of procession from their apartments to the platform. They were accompanied by the Bishop of London in his robes, and on their appearance the immense assembly rose and welcomed them with loud cheers, while the choir performed the first verse of the National Anthem.

Viscount Canning, on behalf of the Juries be adhered to as closely as possible. read a report of their proceedings; it is of con-A large surplus sum has been left in charge of siderable length, giving the details of the Con-Congress should make a sufficient approprithe Commissioners, after paying all expenses. dle, I, and the screw, c, and consequently the ation to finish the whole block as soon as posstitution of the Juries, the plan of operations In a pecuniary point of view, England has alsible, as it will be all required for the use of adopted, &c. Each of the 34 Juries consisted together been the gainer. I suppose that she the Patent Office long before it can be compleof an equal number of British subjects and of is a gainer by some millions of pounds at the foreigners. The British jurors were selected ted. In less than half a century, I venture to expense of others, but at the same time she by her Majesty's Commissioners from lists fursay, the model rooms of the entire block will has made great sacrifices also, which are not V, rises with P, the rod, X, is depressed, and be densely crowded with models, designs, and nished by the local committees of various accounted for in the bill of expense. I had the lever, U, acts upon the friction strap tightspecimens. The millions of ingenious foreigntowns, each town being invited to recommend hoped that the surplus money would have been ers from the European continent who are now persons of skill and information in the manudivided among the juries to divide among exbrake wheel, D, thereby retarding the motion of hurrying to our shores will greatly increase facture or produce for which it is remarkable. hibitors, to pay some of their expenses; this I G, and giving motion to pinion, J. and spindle, the list of applicants for patents. Already The foreign jurors were appointed by authoribelieve would have been the most just way to I, so as to increase the throw of the eccentric : nearly three thousand models are annually reties in their own countries, in such relative have used it. when the steam falls, or the work is increased ceived, averaging nearly one cubic foot in size. proportion among themselves as was agreed I will continue in Europe for some time on the engine, and the speed is decreased, the In a few years this number will be more than upon by the foreign commissioners sent here longer, and may, from time to time, furnish you doubled. Then where shall we find room for force of the governor lowers the inner end of to represent their respective Governments. a letter containing things of interest relating the lever, V, raising up the lever, U, taking our models, if the Secretary of the Interior Prince Albert received the Reports, and to science and mechanics. EXCELSIOR. off the friction of the brake by loosing the takes possession of the rooms for the accommade a very excellent and well-prepared resteel strap, thereby taking off the friction, modation of his army of clerks, who have ply, at the close of which the second verse of The Patent Office in Danger---To American and allowing the spur wheel to move on nothing to do with the Patent Office ? As a the National Anthem was performed with Inventors. patentee and contributor to the patent fund, I in advance of the crank shaft to give motion great energy; after which the Bishop of Lon-As noticed by us last week, we will proceed to the spindle, I, so as to lessen the throw solemnly protest against this meditated violadon offered up an appropriate prayer of thanksto quote some extracts from the patriotic arof the eccentric. The throw of the eccentric, tion of the laws of Congress and the rights of giving. The Hallelujah chorus formed an efticle of Mr. John C. F. Salomon, published in and the cut-off are therefore governed by the inventors, on the part of the Secretary of the fective termination to the proceedings of the the Washington Union. Addressing himself pressure of the steam and the amount of work John Chs. Fr. Salomon. Interior. day, and the Prince and the Royal Commisto inventors, he says : upon the engine, thus the engine is made to [We have not the same opinion as Mr. Salosioners took their departure amid the hearty The undersigned, one of your fraternity, work with a very uniform motion-more so mon, about no blame being attached to the precheers of the assemblage. As soon as they takes the liberty of addressing a few lines to than can be obtained by common modes under were gone, the barriers were removed, the you from the seat of general government. sent Commissioner of Patents.

varying pressures, when the engine is governed | seats and other temporary arrangements were every direction told that the work of removal gold were granted; the Jury Medals were beautiful bronze. The American list is exceedingly respectable, and although our Department did not show so well as I could, or has made its impress on the world, it has spoken in deeds. Five Council Medals were have been granted, especially one for Day & Newell's Lock. I greatly blame the Americans on the Jury before which it came, for not demanding a Council Medal for it-it was a shame that one was not allowed.

> I send you the whole list of American prizes. [We have not room for their publication -the List of Council Medals we have published.]

> The Meat Bread of Mr. Borden is greatly esteemed by those engaged in nautical affairs here; they well know the value of it for long voyages. McCormick's Reaper has made the fortune of its inventor, who has been invited to English Agricultural Dinners, and toasted as a benefactor to the English Farmer. The Reaper is of greater importance to the English than the American farmer.

> It is reported that there had been some quarrelling between the Juries and Councils, but it tells well for all that there has been so little of this.

> Messrs. Paxton, Fox, and Cubitt are to be made Knights, so it is reported. Various reports have been floating round, about the Building-one that it was to be re-built in another Park, but the most singular one was a notice in the Daily News, announcing that the erection of a Crystal Palace had been commenced on a smaller scale in New York, and that communications have been entered into with Austria, the Zollverein, Italy, and various other Continental estates, suggesting the transmission of their articles to America for the purpose of exhibition and sale. This I cannot believe ; it would not be prudent to enter upon such a scheme so early after the World's Fair; I expect, however, to see a World's Industrial Exhibition in New York at some future day, and it can be made to rival the one just ended in greatness, but not without great preparation. I question if any other nation but Britain could, at present, have got up such an exhibition. The wealth at command, and prestige of power in Prince Albert to wield it, were things altogether favorable to the enterprize in England. But to-day, all that remains of the great pageant which, for the past five months, concentrated the curiosity of the whole world, lies only in its recollection, and the results which must proceed from it. I believe that its effects will go down for good to other ages. I hope it has taught all those who visited it, from whatever country, that it is perfectly possible for all men to live in peace, and to cultivate the arts of peace with a desire to excel and emulate, but at the same time to do so to mutual advantage.

I am sorry to inform you that, after all your swept away, and the stroke of hammers in trouble and expense, you are likely to lose the use of the east wing of your noble Patent dification without any alteration of its princi- and demolition had fairly commenced. For Office building, now nearly completed. It is special useful discoveries, Council Medals of now your imperative duty to be up and doing something effectual to defend your rights against the attacks of those who have no sympathies for you. Notwithstanding it is well known that this building was designed and as all Americans could have desired, still it erected for the especial use of the Patent Office, and that it was (in part) paid for out of the patent fund created by your contribugranted to Americans, and some more should tions, and that the act of Congress of 1836, authorizing the erection of the building, is very clear and explicit, yet the present Secretary of the Interior, Hon. A. H. H. Stuart, without right or reason, I regret to say, intends to deprive you of your building, and appropriate it to the use of his new Department of the Interior, created within the past three years. I understand that he has declared that it is his intention to take possession of the Patent Office building before the meeting of the next Congress, and I believe he will carry his intention into effect, unless the President of the United States forbids the commission of so great a wrong on our rights; and this, I believe, Millard Fillmore will do as soon as he examines the several laws of Congress making appropriations for the erection of this building, and becomes well acquainted with the whole subject. The President will at once perceive that the Secretary of the Interior has no more right to take the Patent Office building for the use of the Census Bureau, Pension and Land Offices, than he has to take it for the penetentiary, which is also under his jurisdiction.

Sixteen years ago I was here for a patent for a new steam boiler. Since that time I have taken out several patents for new and useful inventions. In the winter of 1835 __;36, I was in the Patent Office almost daily, and well remember the seven thousand beautiful models which were all consumed by the fatal conflagration of the 15th December, 1836, which entirely consumed the General Post Office building, wherein was contained the United States Patent Office. I also remember examining the drawings of the plans for a new fire-proof building for the Patent Office, prepared by William P. Elliot, Esq., architect and engineer, formerly of the Patent Office; and, being favorably impressed with the grandeur, simplicity, and fitness of the design, I begged the author to stick to his plan, and have it executed if possible. I was glad to learn that it was subsequently adopted by the Hon. H. L. Ellsworth, then Commissioner of Patents, the committees of Congress, and the President of the United States, General Jackson. I am much pleased to find that this plan is now being carried out by the government; and when completed according to the original plan, as published in the "Scientific American," of the first of February last, it will undoubtedly be the noblest structure of the kind in the world.

The purpose for which the several rooms and galleries were originally intended should

Scientific American.

Galvanizing Iron---Protecting Steel from Oxidation---Sorel's Patent.

The accompanying specification, is in substance that of the patent of M. Sorel, of the city of Paris, France, which was patented in the United States, in December 1837, and for which an extension is petitioned for, as noticed by us in our last number.

It is well known to chemists and scientific men, that a galvanic action is produced by the contact of two metals, different in their natures, and that the most oxidizable of the two metals brought into contact becomes positively electrified, the least oxidizable, negatively electrified. This is the case with iron covered with tin, the least exposure of the iron makes it rust much faster than if none of it was covered with the tin, but the least oxidizable metal is protected from oxydizing by its contact with the positive electrified metal. It is upon this principle M. Sorel protects iron and steel from rusting. The metal chosen for covering iron is zinc, one more oxidizable than iron, and would be totally unfit for the purpose, only it has the quality that when its surface is covered with a thin coat of oxide, all further oxidization is stopped.

The different modes he has employed to carry out his invention are as follows :-

First, applying the zinc to the iron or steel in the manner in which the tin is applied in the process of tinning.

Second, applying a galvanic powder in the manner of paint, which consists in mixing the zinc, reduced to fine powder, with oils, or resinons materials, so as to form a paint or varnish, with which the substances to be protected are to be covered, in the ordinary manner ot painting or varnishing.

Third, covering the article to be protected, with the galvanic powder, consisting of zinc finely comminuted.

Fourth, wrapping the articles to be protected in what I denominate galvanic paper.

Fifth, anointing or covering the articles with a galvanic paste, consisting of any suitable fatty matters, such as purified lard, in which the galvanic powder has been freely mixed

The first process, that of coating the articles to be protected with metalic zinc, is to be effected much in the same manner in which tinning is performed, that is to say, the articles to be coated must be rendered clean and free from oxide, by processes analogous to those followed in preparing them for ordinary tinning, such as immersing them in diluted sulphuric or muriatic acid, scouring them, and so forth, which processes being well known, need not be described. The zinc, in like manner, must be fused in proper crucibles, or other convenient vessels, adapted to the nature and size of the articles to be operated upon, special care being taken to keep the metal covered with sal ammoniac, or other proper flux; and to regulate the heat in such way as is required by the volatile nature of the metal. The articles to be coated, after being dipped into the melted zinc, are to be withdrawn slowly, that too much of the metal may not adhere to them. They are then to be thrown into cold water, rubbed with a sponge or brush, and dried as quickly as possible, as otherwise they may be injured by the appearance of dark spots, which it is desirable to avoid.

Varieties in Science. ses, are being withdrawn from the zinc, they MAGNETIC IMPROVEMENT IN RAILROADS .expeditions in search of Sir John Franklin must be shaken until sufficiently cooled to We have lately seen announced a plan to have proved the value of gutta percha in a prevent the links from being soldered together increase the power of traction in locomotives, remarkable manner, each of them took out by the melted metal. The coating of small by pressing them against the rails by means sledge-boats of this substance, for use among ing everywhere accessible." chains requires careful management, but by of an artificial loadstone. We are permitted the masses of ice. Fitted with a skate, the [The specification of this invention we the following procedure it is effected without to describe a recent discovery which the in- boat served as a sledge; floated, it would carventors hope to make still more perfect, and |ry five or six persons, with ample provisions; difficulty. Whilst in the dilute acid, they are which is just the reverse of the above. It at other times it might be folded up, or converto be moved about to expose all their parts equally to its action, they are then to be dipthe rails to a mere nothing, by an electric bat- the cold, that three or four men might sleep ped into muriatic acid, and immediately dried in a reverberatory furnace, the melted zinc tery, so arranged as to raise and very nearly under. Its weight was only eighteen pounds. being ready, and covered with sal ammoniac, suspend them in the air—a perfect suspension Moreover, after undergoing all the rough work the chains are to be put into it, and suffered to being only prevented by the necessity of a of the voyage, it returned to England not in remain there about a minute; they are next slight pressure to maintain the cars on the the least damaged, and in almost as good a condition as when it left. slowly taken out by means of an iron skimtrack. The inventors design first to apply their process to the transportation of passenmer, or other convenient instrument, which DAGUERREOTYPES ON GLASS .- A Berlin arwill allow as much of the zinc to drop from gers, and they expect to travel at the rate of tist, says a foreign exchange, has discovered them as can be got rid of in that way; the eighty miles an hour, with less expense and the art of fixing daguerreotypes upon glass, greater safety than is now done at twentywhich is covered with fusion of zinc or gold. links, however, will still retain too much zinc, and will be soldered together. To correct five miles. Their rails are in the H form, and The operation takes about five minutes.this they are to be put into a reverberatory not weighing seven pounds to the foot, and When dipped into water, or varnish, the subfurnace to be covered with charcoal, and re- supported by wooden pillars, like lamp-posts, ject taken is very distinct. The artist is ena- perusal of the said article.

tained at a red heat for about a quarter of an at an elevation of 6 feet above the ground, and bled to give any coloring to the picture he hour, during which time they are to be mo- three feet apart. The cars, only 21 feet wide, ved about by means of an iron poker; by this but 30 feet long, are suspended between them treatment the excess of zinc will be discharged; they are then to be drawn towards the mouth of the furnace where they are kept in motion until the zinc is solidified. When small nails, and such like articles, are to be coated, the process should be performed in small crucibles, this being necessary to prevent the danger of spoiling a considerable portion of zinc, which results when iron has been kept in it a considerable length of time, as it is thus rendered unfit for the purpose of a protective coating. In all cases the purest zinc should be employed. Wire may be coated by passing it through the melted zinc, as it is wound from one drum or reel, on to another.

When articles of iron have been coated with zinc, it is sometimes desirable to cover this coating with one of tin; more especially when culinary vessels are the subjects of the operation. It may also be resorted to when it is desired to give a brighter and more handsome surface than the zinc affords; such a coating of tin will not destroy the galvanic effect of zinc; and it is to be effected in the ordinary way of tinning, particular care being taken not to heat the tin too highly, or to keep the articles in it so long as to remove any portion of the coating of zinc.

The foregoing is the only part of this patent in useful practice with the exception of coating metals with zinc paint, which need not be further described than to say, it consists of zinc reduced to powder, either as an alloy or pure, and mixed with oil. A peculiar action takes place with zinc paint, as we have seen with our eyes, viz., the zinc after a time, leaves the oil and adheres to the metal, covering it with a pure metalic surface, and this it does, although the paint may have been applied as an oxide of zinc mixed with oil.

We hereby present the claim, to show the extent of M. Sorel's invention.

Having thus explained the principle upon which my process of protecting iron and steel from rusting, or oxidating, is dependant; and having also given the various modes in which I have contemplated the carrying the same into effect, I do hereby declare that what I claim as of my invention, and wish to secure by letters patent, is the employment of zinc, in various forms, as a covering to the respective articles to be thereby protected, as herein set forth. I do not claim to be the discoverer of the principle of the protection of metals from oxidation by galvanic action; nor do I claim to be the first to have proposed the employment of zinc for the preserving of iron therefrom; masses of zinc having been applied, or it having been proposed to apply it in masses, to steam engine boilers, and probably to other articles, with this intention; but from this, my plan, or mode of procedure, differs as obviously as it surpasses it in efficiency. and in its applicability to numerous purposes in the arts where its application in masses would be impossible, or altogether unavailing. We know nothing about the remuneration which the scientific Frenchman has received, but this much we can say about his process, it is one of the most useful ever introduced into our country.

upon wheels of a small diameter, rolling, of course, upon the top of the rails. At the two extremities of each car, and in the middle, at a sufficient distance from the wheels, are attached powerful magnets, made of an immense number of reels of wire, wound round pieces of soft iron, the poles placed directly below the rails, and as near them as practicable .-The effect is easily understood. As soon as the wires are united to a pile to form a circuit the magnets exercise a powerful attraction on the rail; but this being immovable, the magnet itself obeys the attraction, and the car attached following, the slight pressure which it still exercises on its wheels is just equal to its weight, minus the attractive power of the magnets. It may be observed that electricity in this arrangement will not cost much. It is not used as motive power, but as static pressure; it does not, consequently, become exhausted, and may be continued without much expense. This invention is very good in principle. We cannot yet judge whether it has been sufficiently elaborated to be practicable. The first invention, above alluded to, to press locomotives against rails, is not worth much, in our opinion, to apply to common locomotives, which may, without difficulty, be made weighty enough for any labor required of them; but in connection with the second invention, it is invaluable, as it allows the use of locomotives at least as light as the cars hemselves, and this is of great importance when the structure does not stand upon solid ground.-[New York Tribune.

[This is another static pressure deception. It comes identified with the same features as the centrifugal one. Just think of "the magnets on the cars being attracted to the rails and the cars following," and then the static pressure of magnetism to boot, surely nothing can resist the evidence of this great railroad improvement. It is a rich improvement truly, we wonder what other feat is next to be performed by static pressure? There is a great amount of ignorance displayed in the above it is wrong in principle, while the first one is right—the one condemned. If such a plan could work (but it cannot) the same advantage could be obtained by having lighter locomotives : but how in the name of common sense the author comes to the conclusion that it allows of the use of lighter locomotives, when at the same time, it is intended to raise them off the rails, is more than we can understand. It also puzzles us exceedingly to understand how the electric magnets will be made to operate; and, above all, to account for the static presure of a battery in active operation, which it must be, when the circuit is formed.

A great amount of adhesive surface is what is required in locomotives; this, we think, has been demonstrated by the recent trials at Lowell. The invention above is an improvement on a wrong principle. It very much resembles the old "Dove" scheme, to lighten steamboats-buoy them up-having huge balloons on their decks. In 1844, the scheme of the "Dove" was got up, and many shares were taken in it, as many, no doubt, as in the centrifugal scheme. The green ones got the full value of their subscriptions in 0 0 0.

When chains for cables, or for other purpo-GUTTA PERCHA BOATS .--- The late English

may like, and has even succeeded in combining two different colors upon the same daguerreotype.

BOSTON MACHINISTS IN CUBA.-Cuba is almost wholly suplied with machinists from the United States.

There is in nearly every plantation in Cuba, a sugar mill driven by steam engines, built usually in New York or Boston. In these mills it is necessary to have some one well acquainted with machinery. The Cubans are not qualified for the situation, and the planters are torced to secure machinists from our country. Accordingly during the month of October, some hundred machinists of Boston leave for Cuba. The sugar crop commences soon after their arrival, and they are busily employed till June or July. Each man has a confidential negro whom he can leave in the charge of the mill, besides having as many assistants as he wishes. He is obliged to work but little, simply overseeing and direct-

ing. For this service he receives from six to ten ounces a month, varying from one hundred to one hundred and fifty dollars a month. In June, the crop is manufactured, and as the weather grows warm and unhealthy, the machinists return home, and spend the summer in a more pleasent climate. During the absence of the overseers, the mills are closed and repaired, and when the delegation again return in October, they find everything prepared for the commencement of the new season. HYDROGEN GAS FOR ILLUMINATION .- Our attention has been called to a short article upon this subject, in the last number of the American Journal of Science, page 260, by Prof. B. Silliman, Jr. In his recent European tour he had an opportunity of seeing the successful application of M. Gillard's patent, by which he claims the production of a useful light, and great heat, from the combustion of hydrogen gas in contact with a coil of platinum wire. The hydrogen is produced by the steam through retorts charged with charcoal reduced to small fragments and heated to an intense degree. The resultant gas after being conducted through lime water, which removes the carbonic acid, consists almost wholly of hydrogen. This is burned in contact with a cage or net-work of platinum wire gauze surrounding an ordinary argand burner, protected by a glass chimney. "This contrivance," he states, "is perfectly successful, and the light given out from gas lamps of this construction is extremely vivid and constant."

The following are some of the advantages claimed by the invention :

"1. The gas so produced is cheaper than any other mode of artificial light, costing, as is asserted by M. Gillard, and sustained by others, only about one-sixteenth the average cost of coal gas. 2. The gas has no unpleasant odor. 3. This mode of producing gas may be applied to any existing gas works by a slight modification of the retorts, and without any essential change in any other portion of the apparatus. 4. the cheapness of this mode enables it to be applied with great advantage as a fuel for cooking and for numerous purposes in the arts. 5. The nuisances resulting from the presence of large coal gas works in populous districts are entirely avoided. 6. The arrangements are so simple and inexpensive that every establishment where it is desired to employ light and heat, may erect its own apparatus, all the materials employed be-

ublished on page 333, Vol. 5, Sci. Am. If hydrogen gas can be produced cheap enough, it must be of great benefit for cooking, &c. M. consists in reducing the friction of the cars on ted into a wrapper or bed-tent, safe against | Gillard, however, is not the discoverer of the platinum wire coil for the purposes stated. Sir Humphrey Davy is the discoverer of this property of platinum. This was done while prosecuting his researches upon the "safety lamp." Those who have Ure's Old Chemical Dictionary, published in Glasgow, 1821, will find a description of this in the article on combustion. It says that "when heated platinum was introduced into hydrogen, it ignited and glowed." A very beautiful and full description of the action of fine platinum wire in various gases will pay the reader for a careful

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INVENTIONS NBW

Great Improvement in the Construction of Chains.

There are some things which appear to escape general observation, as it respects the necessity of improvement; this has been the case with the one before us, for no man can question the value of it after it is made, although we believe few, if any but the inventor, ever thought it was required. The improvement is on the simple link of a chain, whereby its strength is doubled; and whoever thought this could be done, or does not wonder that it was not discovered long ago, as chains have been made from time immemorial. and in every nation on the globe. The inventor is Mr. Ledyard Colburn, of Birmingham, New Haven Co., Conn., who has taken measures to secure a patent for the same. The invention consists in simply uniting the two ends of each link together, by doubling them over one another, the same as if we should hook, "mason fashion," the two little fingers into one another. The old unwelded links, on no chain, were ever made with their ends hooked into one another, but simply brought together and formed (the most common way) like an 8. Now what are the advantages of this improvement? They are great. We have tried the old link and the new one, in a Jack; they were both made of iron rods of the same diameter, and we found that the new link stood more than double the power applied to the old link, before it gave way; in short, it is as strong as the welded link.

When we consider the usefulness and extensive application of iron chains to so many processes and operations, the value of this invention cannot be estimated; for the link can be made as fast and as cheap as the old unwelded link, while it has all the advantages of being as strong as the welded one.

Pencil Case Improvement.

Mr. J. H. Rauch, of this city, has taken measures to secure a patentfor a very excellent improvement in Pencil and Pen Cases, which cannot fail to come into general use. In all the pencil cases constructed at present, for the use of a pencil and a gold pen, it is well known that the pen has to be taken out and slid into its receptacle backwards, when we wish to use the pencil, and vice versa: this is both troublesome and inconvenient. The old-fashioned gold cases for pen and pencil required no such manœuvring, for the pen had one slide and the pencil another, and the one was made to slide past the other in the case, thus making use of both pen and pencil very convenient; this kind of case, however, was not so neat as the ones now made, for a ferrule was employed for each slide; the improved case has no ferrules like the old kind; it is as neat as the new kind, and has all the advantuges of the old convenient cases

Messrs. John Canard and John McDonough of the city of Pittsburg, Pa., have taken meapurpose.

the fire-places, R R, heaters and lower parts in a short time not the absorber-the regeneffgg are pipes, forming a direct commu-Mr. M. R. Lemman, of Jackson, Miss., has ication between the receiver, G, and the heat- of the regenerators are brought to a tempera- rator, but the generator, and to us it appears taken measures to secure a patent for a very ture of about 500° by means of a hand-pump, that the maximum between the effect and reer, H, through the regenerators : N N are two valuable improvement in the Coiling Machines or other similar means; and air is then to be sistance, will just depend, like all other caloric ordinary slide-valves, arranged to establish alto pack the cotton roving in the cans as it forced into the receiver, G, through the pipe, engines, upon the amount of fuel used continuternate communications between the pipes, ff, comes from the drawing-frame. The improve-V, until there is an internal pressure of eight ally. We cannot see how it can be otherwise. and g g, and the exhaust-chambers, O, and P: ment consists in constructing the "Coiler and or ten pounds to the square inch. The valve, It would also be easy to show chemically, that h is a pipe, communicating between the valve-Packer" with a false head, which is not only J, is then to be opened; when the pressure of heated air is decidedly objectionable as a prochamber, e, and exhaust-chamber, P; i is an made to revolve, but to fall and rise within the the air that enters beneath the piston, b, will | pelling agent, and that the non-conducting suboutlet-pipe, leading from exhaust-chamber, O; can, and which packs the sliver in an easy and cause the same to move upwards; and the air stances in S to molify its injurious effects upon Q is a pipe leading into the receiver, G, proregular coil in the can, without the assistance contained in the cylinder, A, will be forced, by the piston, packing, &c., must themselves give vided with a stop-cock; R R are fire-places of the usual feeding rollers, to feed the sliver the piston, a, through the valve, F, into the | out continually the very amount of heat which for heating the vessels, H and C: and *l l* are into the said can. receiver. The slide valves, N N, being pre- they absorb, to a colder body, or if they don't flues, leading from said fire-places and termi-Improvement in Endless Chains for Horsenating at l'. S is a cylindrical vessel, attached viously so placed that the passages, f f, are absorb heat from a hotter body, they do no open, the air from the receiver will pass good whatever. Sterling's hot air engine, is to the working piston, b, having a spherical Powers. through the wires in L, into the heater, H, said to be a good one (but we don't believe it) Mr. P. H. Kells, of Hudson, Columbia Co., bottom, corresponding to the expansion-vessel, N. Y. has taken measures to secure a patent C; this vessel, which is called the heat inter- and further into the expansion heater, C,- |yet he never pretended to get up a perpetual for an improvement on endless chains for cepting vessel, is to be filled with fire-clay at the temperature of the air augmenting, and motion, as is done in the above specification.

ing the joints of the several links with an off- and cheap materials, abounding in many parts sett in each, which causes the links of the of our country, he makes a ware resembling forced from the cylinder, A, will, in consechain, when fitted, to lie in a straight line, and free stone in appearance, but is much harder thereby allow the chain to impart a more and more durable. The ware is of a rich steady motion.

Iron Stone --- Terra Cotta. Mr. Edward Selby, of this city, has made a most beautiful discovery in the manufacture of brown stone buildings.

brown color, and can be varied to any intensity of shade. It may be employed for capitals, cornices, mouldings, and all ornaments of



Scientific American.

The accompanying engravings illustrate a the bottom, and ashes, charcoal, or other nonname of Mr. Edward Dunn, of this city for an invention of Mr. Ericsson, the well-known inventor.

" DESCRIPTION .- Figs. 1 and 2 are longitudinal sections of two arrangements of this engine which are alike in all essential points, but differ in some details. Fig. 3 is a horizontal section of fig. 2. A B, figure 1 are two cylinders of unequal diameter, but nearly alike in all points; a, and b, are their pistons; A is the supply, and B the working cylinder; a' is the piston rod; C is a cylinder with a spherical hottom, called the expansion heater, and is affixed to the working cylinder. D D are braces which connect the pistons, a b. E is a self-acting valve opening inwards to the supply cylinder. F is a similar valve, opening outwards from the said cylinder and contained within the valve box, c, which is connected by a pipe with a cylindrical vessel, G. H is a

FIG. 3.

patent recently secured in England, in the conducting substances towards the top,-the object being to prevent any intense or injurious heat from reaching the working piston and cylinder. T T represent brickwork, or other fire-proof material, surrounding the fireplaces and heaters.

> In figs. 2 and 3, the same letters of reference are used for similar parts; which are marked as follows :--- U is a rocking-shart, supported, at both ends, by appropriate pillar-blocks or bearings, m; n is a crank, projecting from the centre of such shaft, and connected, by a link, O, with the working piston, b; V, is another crank, on the extreme end of the rockingshaft, connected by a rod, W, with a crank, X on the shaft, Y; and Z, represents the circumference of a fly-wheel, paddle-wheel, propeller, or other rotary instrument to be worked by the engine. Before describing the operation of the improved engine, it should be observed, that the piston-rod, a', only receives and transmits the differential force of the piston, b, viz., the excess of its acting force over the re-acting force of the piston, a; and this differentia¹ force may be communicated to machinery by any of the ordinary means, such as links, connecting rods, and cranks ; or it may be transmitted directly for such purposes as pumping of the piston, b.

is as follows :—Before starting, fuel is put into tinually losing this character, hence it becomes M are named regenerators. Improvement in the Coiling Roving Machine.

horse-power machines, which consists in form- stone ware, by which, out of very common its volume increasing, as it passes through the heated wires and heaters : the smaller volume. quence thereof, suffice to fill the larger space in the cylinder C. Before the piston arrives at the top stroke, the valve, J, will be closed; and, at the termination of the stroke, the valve, K, will be opened. The pressure from below being thus removed, the piston will descend, and the heated air in the cylinder, C, will pass through, e h P and g, into the regenerator, M; and, in its passage through the numerous spaces or cells formed between the wires, it will part with the caloric gradually,-falling in temperature until it passes off at i, nearly deprived of all its caloric. The commencement of the descent of the piston, a, will cause the valve, F, to close and the valve, E, to open; and thereby a fresh charge of atmospheric air is admitted into the cylinder, A. At the end of the downstroke, the valve, K, is closed, and the valve, J, again opened; and thus a continual reciprocating motion is kept up. It will be evident that, after a certain number of strokes, the temperature of the wires, or other matter contained in the regenerator, will change: that of M, will become gradually greater, and that of I, diminish. The position of the slide-valves, N N, should, therefore, be reversed at the termination of every fifty strokes of the engine, more or less; and then the heated air, passing off from, C, will pass through the partiallycooled wires in L; whilst the cold air from the receiver will pass through the heated wires of M, and, on entering H, will have attained nearly the desired working temperature. In this manner the regenerators will alternately take up and give out caloric; whereby the circulating medium will principally become heated independently of any combustion after the engine shall have been once put in motion.

The operation of the engine represented at figs. 2 and 3, is like that just described ;-excepting that the regenerator is arranged in a single vessel, and that the metallic substances therein take up the caloric from the air that leaves the working cylinder or vessel. C. and return the same to the air that enters the working cylinder at each stroke, instead of transmitting and re-transferring the caloric at at intervals, as in the other figure."

The nature of this invention is to use heated air as a propelling agent, and to save the heat of this air by the devices, substances, and arrangement of machinery described, upon which are based five claims, all of which, however, are worthless, if the principles upon which the engine is built are not correct, and that they are not correct we have not the least doubt.

If a person were to say, "how absurd it is or blowing. The conical valves K, and J to let the steam of an engine escape into the (fig. 1) may be worked by any of the ordinaatmosphere after it has driven the piston to rv means. such as eccentrics or cams, provided the end of a cylinder, why not let it act upon the means adopted be so arranged that the a wheel confined in a non-conducting case, and valve, K, will begin to open the instant the cylindrical vessel with an inverted spherical thereby let the steam drive the wheel in one bottom, called the heater. J is a conical valve piston, b, completes the up-stroke, and be direction forever," he would appear to reason supported by the value stem, j, and working Improvement in Cast-Iron Car Wheels. closed again the instant the piston completes as plausibly, as any person, yea, and more in a valve chamber, which forms a communithe down-stroke; whilst the valve, J, is made so, who attempts to impart a certain amount cation between the expansion heater, C, and to open at the same moment, and to close of propelling power to machinery continually, sures to secure a patent for an improvement in heater H, by the passage, d. K is another coshortly before, or at the completion of the upwithout continual expense of the impelling Cast-iron Car Wheels, which consists in hastroke. In like-manner the slide-valve, N' nical valve, supported by the hollow stem, k, agent, and this is what the above invention ving the wheels cast with circular and eliptifig. 2, is to open and close as the piston, b, arand contained within the chamber, e. L and sets out to do. It is well known that the ecocal braces, having central openings in them, M are two vessels of cubical form filled to rives, respectively, at the termination of its up nomy of our steam engines depends upon a which unite the rim and hub together. It is and down-stroke, similar to the slide valve of their utmost capacity (excepting small spaces perfect vacuum, the above is constructed upon stated that the improvement allows of wheels at the top and bottom), with discs of wire net an ordinary high-pressure engine. It will be the very opposite principle; therefore the efbeing cast so as to make every allowance for seen, that the link, o, like the piston rod, a', or straight wires, closely packed, or with other fective power must be always on the decrease small metallic or mineral substances, such as contraction in the cooling of the metal, withonly transmits the differential or useful force from the first to the fiftieth stroke spoken of. out employing cooling flues or ovens for that asbestos, so arranged as to have minute chanfor although the cold regenerator, M, may act The operation of the engine shown at fig. 1, | like a vacuum at the commencement, it is connels running up and down; the vessels L and

Scientific American

NEW-YORK, NOVEMBER 8, 1851.

The Great Exhibition of Industry.

Last year Prince Albert projected the holding of a Great Fair in London, as an exhibition of the industrial products of all nations. Consequent upon the maturement of the project, invitations were sent to all the established governments in the world, to come there and exhibit the fruits of the genius and industry of the people belonging to the various countries connected with or attached to those governments. The invitations were responded to by every government invited, our own among the number. The Exhibition opened in the first week of last May, and closed on the eleventh day of last month, a period of five months. Since Adam was placed in Eden, history affords us no evidence of any other affair like it in utility, greatness, and grandeur. It is true that the Greek Fairs might justly be called the preludes of this modern one: for to them the Tyrian came with his purple, the Etruscan with his vase, and the Egyptian with his glass; but how different were the objects of the two. The old Fairs were instituted for the purposes of barter, the modern Great Fair merely as an exhibition of the state of the arts and manufactures of different countries. What a change has come over the world since Eschines reproached Demosthenes with trafficking like a rogue at the Olympian Games.

To receive the products of industry, in the course of a few months there was a building designed and erected, the very recollection of which will go down to posterity as one of the World's wonders. A few months before it was commenced, the materials of which it was made were lying by the sea shore, in the shape of sand and salt, and in the bowels of the earth as the crude ore of iron. But although that building was wonderful on account of the materials of which it was composed, it was more an object of wonder and admiration on account of its harmonious proportions, its rare originality of design, and its great dimensions. Some idea of its vast extent may be formed when we consider that, after its halls were filled with huge statues, monster engines, carriages, implements and goods of every description, yet sixty thousand people could freely move through its spacious avenues and corridors. In that building, from the first day it was opened until the day it was closed, there were seen, day after day, from five to sixty thousand persons, all intent upon surveying the handiworks of men who lived near and remote, and whose genius and art were as different and separate as their climes and tongues. What strange ideas, and what strange words were uttered there. The Greek and the Roman were there but how different from the Greek and the Roman of old. The Egyptian and American, the Scythian, and Saxon; the German and Gaul were there, but what a change since the Carthagenian and Greek were the princes in science and art.

The Great Fair was held in a country whose nization of the stomach was increased by it. Exhibition was awarded. inhabitants, in the days of Tacitus, dwelt in The phosphate of lime was then appliedit is a most valuable publication. It is very The jury rendered a verdict in favor of the caves and were clothed with the products of eight grains, three times a day. Its good efably edited, its details and explanations render plaintiff, with damages against the defendant the chase-savages they were, these our foreof the great sum of \$17,606. fects were soon apparent. It and the oil the most intricate piece of machinery plain and fathers, and so low in the scale of civilization were therefore administered together, and the practicable. We strongly commend it to the Telegraph Case. as to be considered unfit for Roman slaves. patient soon was restored to health. public." U. S. Circuit Court, Philadelphia.-Judge Now what are they, and what is their coun-The Vicksburg Miss. Whig say :--The second case is that of a young lady, Kane gave his decision on last Monday morntry? They are far more elevated in civilizaaged 24. Her disease was one of "unmixed "We do not hesitate to recommend it as the ing (Nov. 3rd) in the case of Morse vs. Bain tion than the Roman, and their empire is greatphthisis, which might have been expected to best paper of the kind in the United States." sustaining the claims of Morse throughout. er than was that of the proudest Cæsar. How terminate in the course of a few months," fa-'The Savannah Georgian says :—" Common different is the modern from the old ages or The case is to be taken to the Supreme Court. tally. The upper parts of both her lungs were consent of all acquainted with it, pronounces it the world. The steamboat and the railroad beginning to soften. The case was evidently work of genuine and unquestionable merit? Governor valves were then unknown, and the caravan from Ina bad one. The treatment of cod-liver oil The Portland Transcript says :- The infor-In connection with our notices last week, dia to Thermopilæ was more than a year on its mation it contains during the year on a thouwas at first used, but without marked imof Steam Engines, we intended to speak of tedious journey. Then the world was a scene provement. The phosphate of lime was then sand topics is worth many times the price or Junius Judson's "Governor Valves" on exhiof wide-spread ignorance; nations living a few administered with the oil, and the result, as subscription." bition at the Fair, for which a gold medal was hundred miles separate were often totally ig-Rev. T. F. Norris, editor of the Boston in the case of the negro, was soon apparent. awarded. Patents for this improvement have norant of one another, hence wild men of the The patient was rapidly getting well. Olive Branch, an interesting paper-has done been secured in this country and England, and woods haunted the imaginations of their poets, The third case was that of a child, seven the Scientific American good service by freit has been successfully applied to several and satyrs and strange beings peopled the unyears of age, in which the phosphate of lime quent notices. In a late number he says :--steam engines, with the most gratifying results. explored forests; yea, even in Queen Elizawas used with complete success. "This is a paper which should be in the The improvement consists in making a valve beth's time, a dead negro in London was as Whatever can alleviate or prove a curative hands of every mechanic, and every body of any form, to move without friction, by the great an object of curiosity as any thing in the to this dreadful disease—a disease which wishing a general knowledge of mechanical action of the steam, and also with apertures Exhibition. But we live no longer in "the claims more victims than any other in our science, and the improvements constantly bewhich increase in diameter as the valves open, wide, wide world ;" the agencies of modern incity, and in the whole of the Eastern and Miding made in the mechanicarts. It well deso that the same resistance will open the same serves a generous patronage, which we are vention have made all mankind next-door dle States, has great claims upon public attenarea of valve opening, or nearly; whether the neighbors. After all, however, the philosohappy to learn it enjoys." tion. Of course we cannot do anything more load upon the engine be great or small. Mr. pher standing in the midst of the Great Exhi- I than present the above statements; we have no The Journal, Reading, Pa., says :-- "This pa- Judson resides in Rochester N. Y

bition, and viewing the wonderful and various works of art displayed there, and, above all, hearing so many languages and seeing so many varieties of men, could not help exclaiming-"what a queer being man is;" how applicable the sentiment, "he is fearfully and wonderfully made;" and, after viewing all the products of his genius and skill, he could not help quoting the poet, "the greatest study of mankind is man."

The question arises, what will be the result of the Great Industrial Exhibition? If no good will be accomplished, then it must produce evil; there can be no question of this we think. We believe that great good has been done, and more will yet result from it. Our countrymen have come off with honorsgreat honors. We advocated our participation in the Exhibition, for wve knew our countrymen could excel in many things; they have excelled, and it has been admitted that "every triumph of practical utility belonged to the Americans." Although our countrymen have done well, for which we return them our sincere thanks for their heroic individual efforts to sustain the honor of their country; still we have regrets, for we know that we could have excelled in five hundred things in which we were not represented at all. The great honor which belongs to our American inventors who were exhibitors there, consists in this, they have extorted praises from those who, at one time, heaped contumely upon them.

Medical.

NEW CURE FOR CONSUMPTION .- The Mobile Tribune directs attention to a new cure of consumption described in the New Orleans Medical Register, by Professor Stone, on the virtues of the "Phosphate of Lime in scrofula and other depraved states of the system," which is of some moment. It was suggested by an essay in the London Lancet, on the 'physical pathology of the oxalate and phosphate of lime, and their relation to the formation of cells."

"The conclusions of the author (says Professor Stone) are based upon careful chemical research and results from the use of the remedv. His researches show that in man, as well as in vegetables and inferior animals, phosphate of lime as well as albumen and fat is abundantly essential for the formation of cells, and he considers that many of the pathological states of the system depended upon a deficiency of this salt. The affections in which it is advised are ulcerations dependant upon general dyscrasia, and not a mere local affection; infantile atrophy; in those suffering from rickets and consequent diarrhea and tuberculous diseases, particularly of the lungs in early stages."

Struck by this article, Professor Stone tested it, and he thus describes three cases in which virtues were very obvious. The first was that of a slave, who was admitted to the Professor's Infirmary in July, with a disease of the nose, the whole system showing great progress in scrofulous decay. The usual remedies were unsuccessfully applied until August, when cod-liver oil was used, but the disorga-

opinion to give but this, that we remember having heard, twenty years ago, of the phosphate of lime, in the form of egg shells, being prescribed successfully in two cases of consumption.

PORK AS FOOD .- The Boston Surgical and Medical Journal states that the New Hampshire Shakers have abandoned the use of pork as an article of food. It believes the Shakers gives Moses the credit of being sagacious in interdicting its use among the Jews, and believes he well understood its injurious effects upon the Egyptians. "Scrofulous affections, if not generated," it says, "are thought to be aggravated by the use of pork, and measles have been charged to its use." It states that we suffer more from skin diseases than the people of those countries where pork is not user as food. We do not entertain the same views as the "Journal." Pork made from good corn and potato-fed animals, is just as healthy food as any other. In some countries where pork is little used such as Norway, Denmark, the Highlands of Scotland, &c., cutaneous diseases are more common than with us.

INDIDE OF POTASSIUM FOR ASTIMA.-F. H. Dean, M. D., read a paper at the September meeting of the Medical Society of Virginia, in which he relates three cases of success ful treatment of asthma by the use of hydrate of potass. He was first informed of its beneficial effects by a clergyman of Illinois, who, for a great number of years, was very ill with the disease, and who had travelled and consulted the first physicians in Europe, for relief in vain. He is now able to preach, and he is enabled to ward off a paroxysm of this disease by the use of this medicine. He has prescribed eight grains as a dose, taken every four hours, in severe cases.

ALUM FOR LEAD CHOLIC .-- M. Brachet, of Paris, in a chapter on the treatment of this disease, looks to alum as the sheet-anchor in its successful treatment He has employed it since 1838, without accident or disappointment occurring, He prescribes it in doses of one and a half to two drachms, in barley-water, to be taken during the day, in drinks, to which has been added 50 drops of laudanum. (This in Chancery, with authority to examine and quantity is to last all day, not in one drink.) If the bowels do not act by the third day, a mild laxative is given, and the case is complete. More than 150 cases have been treatted thus with complete success, the alum being continued for a day or two after the symptoms had disappeared. Alum, it will be remembered, is the sulphate of alumina, and bears upon its front, a good recommendation. It is a simple medicine, and has also done good service. applied in the same way, for dysentery.

Complimentary to the Scientific American. Mr. Claiborne, editor of the New Orleans Courier, in speaking of the Scientific American, says it " is certainly one of the most valuable journals in this or any other country. and its contents are full of instruction and entertainment to the mechanic, or planter who desires to embelish, improve, and economize labor, to all classes of readers, in short

per is the best scientific and mechanical journal in the country."

The Reveille, Pekin, Ill., says :- " It gives the earliest and most valuable accounts of all the various inventions and improvements going on in this country or in Europe."

The Cultivator, Columbus, Ohio, says: This is a most valuable and reliable record of inventions and improvements. Its reputation will be gainers in health by this resolution. It is too well established to need any endorsement from us."

> The Fort Wayne, Ind., Sentinel says:-'This truly useful journal contains a larger amount of valuable information for mechanics, manufacturers, and scientific men than any periodical in this country."

> These notices are copied from journals published in various sections of our country. We select these out of a large number, and trust our readers will pardon us for accupying space properly belonging to them.

Electro-Magnetism as a Motive Power Examiner Page, M. D., of the Patent Office, has been in our city during the past and present weeks, and has delivered lectures on his Electro Magnetic Reciprocating and Rotary Engines. His reciprocating engine is of eight horse-power, and resembles a horizontal steam engine. We were highly pleased with his experiments and his lectures, but we will leave all further explanation of them until our next number, when we shall present something to our readers on the subject, both useful and interesting. A number of papers have given sketches of the lectures, but they are very unsatisfactory, and do not touch the main scientific and mechanical points. We hope to be able to do so with satisfaction to our readers.

Patent Case.

U. S. District Court, Philadelphia, Judge Grier presiding; Oct. 27, 1851.—The case was Burtis vs. Ashton, being an application for a special injunction to restrain the defendant from manufacturing mouldings by the Knowle's Moulding Machine, which is alleged to be an ment of the long-litigated Woodworth Planing Patent. The injunction was refused. The counsel for the complainant then asked that the matter might be referred to a' Master report. This was opposed, and an issue asked to try the question of infringement, which was granted by the court. An application was then made that the defendant enter into security to indemnify the complainant from damages ad interim. This was likewise strenuously opposed, and the application was dismissed. Theodore Cuyler, Esq., for complainant , Henry B. Hirst, Esq., for the defence.

Great Patent Case---McCormick's Reaper. U. S. Circuit Court, Albany, N. Y., October

31; Judge Nelson presiding .- This case occupied the court for six days: the parties were McCormick vs. Seymour & Morgan, of Brockport, N. Y. The action was one at law for the infringement of the patent of the Virginia Reaping Machine, the same which has cut such a glorious figure in England, and for which the Gold Council Medal of the Great

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Scientific American.



CP Reported expressly for the Scientific American, from the Patent Office Records. Patentees will find it for their interest to have their inventions illustrated in the Scientific American, as it has by far a larger circulation than any other journal of its class in America, and is the only source to which the public are accustomed to refer for the latest improvements. No charge is made except for the execution of the engravings, which belong to the patentee after publication.

LIST OF PATENT CLAIMS Issued from the United States Patent Office

FOR THE WEEK ENDING OCTOBER 28, 1851. To Myron Cory, of Jerseyville, Ill., for improve ment in Seed Planters.

I claim the employment of the Indicator. having its ends bent as described, or in any other manner substantially the same, and secured on the main shaft, in such a manner that it can be disengaged, or thrown into connection with the wheel, as desired, for the purpose of indicating the place where the corn has been planted, in the manner and for the purpose substantially as set forth.

To Merritt S. Brooks, of Chester, Ct., for improved means for attaching Augers, &c., to their handles.

I claim the method of securing augers and other implements to handles, by means of a socket, ferule, or cylindrical slide, constructed as described, viz., the socket being placed underneath a mortise hole in the handle, and perforated with an oblong slot, the edges of the slot being bevelled to correspond to notches in the shank of the implement, the upper surface of the socket being inclined, and the shank moved along the slot by means of the ferrule or cylindrical slide, by which the bevelled edges of the slot bind or wedge in the notches, and the taper form of the shank drawn firmly in the hole through the ferrule slide, substantially as described.

To A. C. Gallahue, of Metamoras, O., for improvement in machines for Pegging Boots and Shoes.

I claim splitting the peg from the peg-wood and driving it into the sole of the shoe, by a single blow of the plate, acting on the pegwood, and forcing it upon the knife, substantially as described.

I also claimmounting the peg-wood or block in a vertical sliding carriage, or the equivalent thereof, in combination with the stop plate, knife, and fingers, operated substantially as set forth.

To S. H. Gilman, of Cincinnati, for improvement in machines for Drying Bagasse.

I wish it to be understood that I do not claim, for such purposes, a heated cylinder, revolving upon an inclined axis, such cylinders, in various forms, having been long in use; but I claim, first, the arrangement, substantially as described, of two cylinders, one so secured by hollow bolts or rivets, concentrically within the other, as to leave between them an annular steam space, crossed by ventilating apertures, and the whole made to revolve around an inclined axis, for the expeditious drying, free from the danger of accidental ignition of bagasse and the like substances.

Second, the steam and condensed water pipes revolving together, one within the other, within a common journal bearing, and entering the steam space of the cylinder, in oppositely oblique directions, as described, for facilitating, at the same time, the discharge of the water

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that purpose. To Frederick Mathushek, of New York, N. Y., for

improvement in Pianofortes. I claim the manner, substantially as descri-

bed, of placing or arranging the strings of pianofortes, to wit, the shorter strings, or strings of the higher octaves across the narrow portion of the instrument, and the longer strings, or those of the lower octaves, crossing them in the direction of the greatest length of the instrument, so as to include the greatest possible size of string within the instrument, for the purposes specified.

To W. H. Pease, of Dayton, O., for improvemen in the method of Moulding Kettles with Spouts.

I do not claim any peculiarity either in dividing the pattern, or using a green sand core; but I claim providing the pattern, B, with two projections, or solid pieces, one, on the under side of the spout portion, to prevent sand entering the spout, when forming the green core of the body; and the other on the upper side of the spout for forming a print in the sand to receive the projection of a dry sand core, by the use of which, in connection, the said dry sand spout core can be inserted in the drag portion of the mould, after the removal of B, but before the removal of A, and be held firmly in its required position, by which means the pattern, A, is made to adjust the spout core, and greater truth secured in setting the spout core, and fewer defective casts result, in the manner set forth.

To Joel Stevens & H.J. Ruggles of West Poultney, Vt., for improvement in Dairy Stoves.

We claim the arrangement of the flues and valves, in combination with a water pan and fire, substantially in the manner and for the purpose set forth.

We also claim the combination of flues and valves, for the purpose specifically as described.

To T. B. Stout & J. F. Morell, of Keyport, N. J. for improvement in machines for taking Yeas and Nays

We claim the method of dividing the yea and nay votes and showing the vote, by weighing the yea and nay balls, or their equivalents in the opposite pans of a scale beam, substantially as set forth.

We also claim the method of enumerating the votes upon a question, by weighing the balls, or their equivalents, by spring balances, or their equivalents, whose indexes indicate the number of ballots in their respective scale pans, substantially as set forth.

We also claim the combination of the scale beam and spring balances, or the equivalent thereof, arranged substantially as described, for the purpose of showing, simultaneously, both the number of votes taken on each side of the question, and the relative values of the two sets or classes of votes, as set forth.

We also claim the employment of mechanism, for the purpose of recording the vote and showing whether it is yea or nay, at a single operation, substantially as described.

We also claim the employment of mechanism for the purpose of recording the vote and showing the enumeration thereof, at a single operation, substantially as described.

And lastly, we claim the employment of mechanism for the purpose of recording and enumerating the vote, and showing whether it is yea or nay, at a single operation, substantially as described.

To Jacob Stephan, (assignor to P. A. Schwartz & J. Stephan), of Boston, Mass., for improvement in Cements for Grinding Cylinders.

I claim the composition described consisting of the whey of milk, vinegar, glue, spirits of wine, and ether, substantially in the manner sat fort

proper relative position with the plates for its ores, as set forth, for the purpose of manufacturing zinc white for commercial uses.

> I also claim, in combination with the pro cess for manufacturing zinc white, substantially as described, the making of hydrogen gas for light, heat, or motive power, as set forth. To Euclid Rice, of Elizabethtown, N, J., for improvement in Baby Jumpers.

> I claim the combining of springs with a frame and seat, in the manner described, forming an apparatus for teaching children to stand and walk, and, at the same time, to prevent the child from bearing its whole weight upon its feet, as it sits upon the seat or saddle, and can, at its option, either stand upon its feet or sit down, and at the same time move itself in any direction with its feet, and its body securely sustained in an upright position, after the upper top is locked around its waist, in the manner described: and it can, at its option either move by a motion of its limbs, or use the machine as a jumper for amusement, as represented.

To S. W. Wood, of Rochester, N.Y., for improve ment in Apparatus for Watering Cattle.

I claim, in combination with a pump, work ed by an endless chain of elastic balls, and operated upon by the weight of cattle, the spiral spring operating between a stationary collar and the movable cogged and threaded sleeve, for the purpose of more certainly running the sleeve into gear, when the cattle step upon the platform, and for gradualling stopping the platform as it rises, and the buckets as they run back into the stock or pipe, for the purpose of carrying back the water, as described.

To Cyrus Roberts & John Cox, of Belleville, Ill. for improvement in Threshing and Separating Grain. First, we claim the method described, of

constructing threshing cylinders with curved knives, or otherwised shaped, in the end, for the purposes described.

Second, also the method already described of working the separator by means of the jumping wheels and concave tracked brackets, or by any modification of it, whereby the action is substantially the same.

DESIGN.

To Ezra Ripley,, of Troy, N. Y., (assignor to Chollar, Sage, & Dunham, of West Troy, N. Y., for Design for Stoves.

American Clippers---Cotton Sails.

McMakin's Model Courier has an excellent article on this subject, in which it attributes the most prominent advantages possessed by our clippers (and the yacht America) over others to the use of cotton canvas. It says :-

We hear it stated, that at the recent Royal yacht race at Cowes, the English yachts, to increase their speed with the America, had recourse to wetting their sails. Should Captain De Blaquire, the present owner of the America, adopt the hemp duck, as used by all the British Yacht Squadron, and have her sails cut on the old fashioned balloon principle, there is fear that the laurels she so gallantly won might soon wither in a contest with the Titania, in a suit of cotton sails made properly. The English method of cutting fore and aft sails differs materially from ours. For instance, they give the foot of their sails a greater circular sweep, which hangs below the footrope. The leeches are exceedingly hollow. caused by the stretching of the bolt-ropes, thereby sustaining an extra extent of spar. The America's sails, like all cut here, are straight in leech and foot.

The cotton canvas has now almost entirely superseded all other duck. It was invented staple. The seeds were introduced by Mr. by Mr. James Maull, of this city, and first Hayams, from Youcatan, and are styled the

with the exception of Lambert Tree, who subsequently brought it into notice among our smaller vessels. Among the first who used the cotton canvas, was Capt. Parker, for the sloop Trial, of Trenton, and Capt. Stokes, now of the sloop Planter, of Wilmington.-After a few years' wear, Captains Stokes and Parker both became dissatisfied, particularly Captain Stokes, who stated that the disadvantages were that the cotton canvas was liable to continual ripping and expense of re-sewing; and notwithstanding its advantages in other respects, would renounce its use, if there was no method of obviating this defect -which was eventually a general objection. After some reflection, Mr. Maull, suggested to Messrs. Craig and Sergeant-the then agents of Mr. Colt-the adoption of cotton twine as a ready means to remedy the objection, impressing on them the ill effects of hempen twine. They induced Mr. Colt, on these representations, to make the cotton twine for the first time. It was made, and used with the most complete success, not only for cotton canvas, but for Russian duck—its efficiency consisting in its superior durability. It was then considered as an innovation, and condemned by many as visionary. Its present and general adoption in the United States is the best commentary on the success of Mr. Maull's efforts.

Mr. Maull early imbibed the impression that a vessel sailing against the wind would sail faster if her sails were constructed upon the principle of his Patent Horizontal system wherein the least resistance to the action of the wind is practically obtained-the seams being horizontal, or in the line of direction of the wind.

The celebrated Yacht Maria, owned by John C. Stevens, Esq., of New York, has been provided with these sails, and, although nearly four years in use, they are admitted to be the best fitting sails in New York. Her contest with the world-renowned " America," the victress of Johnny Bull, has settled her superiority even over that famous Yacht, a fact admitted by Mr. Schuyler and other members of the Yacht Squadron. Mr. Stevens has stated that he was under the impression, ten years before Mr. Maull obtained his patent, that the principle was the best method of cutting sails, and he was the first to introduce them in New York on the "Maria." His other schooner, the Uncle John, of one hundred and fifty tons, has been provided with the Patent Sails, which have been in constant use four years, and from a statement of Captain Baldwin, who commands her, we have learned that they have not been repaired, with the exception of roping, and that he expects they will last two or three years longer."

[On page 20, Vol 4, of the Scientific American. will be found a defence of the claims of Mr. Maull, as the inventor of cotton duck for sails, and "the horizontal sail."

A New Cotton Plant.

The editor of the New Orleans Orleanian has seen a boll of cotton which deserves the attention of cultivators, on account of its growth and early maturity. On the first of June last a lady planted in her garden a few cotton seeds presented her by a gentleman. On the 25th of July a boll was ready for picking; and at the end of sixty days from the time of planting the cotton had arrived at maturity; being in less than one half of the time it takes the species now raised by our planters to do so. The lady was totally unacquainted with the cultivation of the great Southern

a a	nd the admission of steam, during the revo-	and for the purpose set forth.	sy set cames seally of this city, and mot	
1	ution of the cylinder.	I also claim the combination thereof, with	manufactured for him by Mr. John Simpson,	Alica.
	To Selden W. Knowles, of Middletown, Ct., for im-	emery, to construct a grinding cylinder, or	then residing at Wilmington, Delaware, du-	Oil from Popies.
u p	rovement in Swinging Cradles.	other surface, in the manner described.	ring the late war with England, at which	In Switzerland, large fields of the pop-
	I claim the combination of a cradle with	To B S Weaver of Maysville, Ky., for improve-	time, Russian, or any foreign canvas, it is	py are cultivated, not for the purpose of ma-
l r	endulum rods and balls, or weights, attached	ment in machines for Printing in Colors.	well known to those in the trade, was selling	king opium but oil. From the poppy a beau-
l t	hereto, and set in a frame so as to swing there-	I claim, in combination with receiving, dis-	at forty-five to fifty dollars per bolt.	titul transparent oil is made, which is ex-
i	n in the manner and for the purpose set forth.	tribuing, and inking rollers, arranged as descri-	The canvas was at first made by the hand-	tensively used in house-painting. It is al-
	To D. L. Latowrette, of St. Louis, No., for improve-	bed, the adjustable ink trough, provided with	loom, which rendered it exceedingly soft and	most as colorless as water, and possesses so
1	ment in Oil Presses.	removable partitions and perforated side, so as	pliable; this was obviated by Mr. John C.	many advantages over the flax seed oil that
	I claim the combination of the heating plates	to give out the ink in lines or belts, corres-	Colt, of New York, who some thirty years	it may ultimately supersede that article
	with the steam chamber, substantially as set	ponding with the lines or size of the type in	since commenced its manufacture with the	Where flax cannot be grown poppies can be
f f	orth, the plates being moved parallel, and the	the form, for the purpose described.	power-loom. Mr. Colt, and Messrs. Craig	in poor sandy soil. Linseed oil is becoming
5	steam tubes connecting them with the steam	To H. W. Adams, of Boston, Mass., for improve-	and Sergeant, were well aware of the difficul-	dearer, and the demand for paint is increasing.
(chamber, sliding in stuffing boxes, in a line	ment in the use of steam to make Zinc White.	ty Mr. Maull experienced in securing its in-	With white lead, poppy leaves a beautiful sur-
	with the motion of the plates, as above set	I claim mixing the vapor or gases of water	troduction, and it was several years before	face, which does not atterwards change, by
L.	forth, said steam chamber being placed in a	or steam, with the heated vapor of zinc or of	it was at all noticed by other sail-makers,	the action of light, into a dirty yellow.
113		144C00244831274		

TO CORRESPONDENTS.

N.S., and A. C., of R. I .- We have received your draft of a water wheel; it presents to us many defects of principle, which have before been tried and laid aside; it will not give a good percentage of power in comparison with the common turbine.

G. W. D., of N. Y .- The press, as you say, by coup ling two, can print an endless sheet, but a revolving form on an endless apron, has nearly to describe a rectangle, and it never could run fast, it would be subject to great friction and breakage. The rotary press is the fastest, and a reciprocating press the next best motion. The plan of pipes for the carbonic acid could not be natented.

R. A. S., of Louisville'-It is probable that your former agents have a power of attorney to transact the business with the department, and unless that is surrendered, and one given to us, it would be of no use for us to waste time and money in attempts to secure a hearing; some move must be effected in this respect before we can proceed unembarrassed.

C. W., of Tenn.-We have never seen a parallel motion exactly like yours, it is a mathematical problem of great beauty. The great object in engines, however, has been to get rid of bell cranks and joints to produce the common parallel motion.

J. C. P., of La .- We shall endeavor to profit by your hints.

E. B., of N. Y .- We are much obliged to you for your very beautiful problem.

W. B., of Ind .- We can send you a copy of the American Miller for \$1,50. We do not know the exact price, but think this amount will cover the price and postage. \$4 received.

A.U.S., of Pa.-No new work has been issued of late upon millwrighting, such a one at least as you wouldlike. Evan's work is too old.

J. K. J., of Pa.-It should have been \$7,50 instead of \$15 which we acknowledged. The double spiral conical spring is well known; it is employed extensively in spring matresses, several of which were on exhibition at the Fair. No patent was ever obtained and could not be.

M. McD., of Va .- We have a drawing in our possession representing a potato-digger essentially similar to yours: we should think it patentable, and in case you should apply, you have only to establish your right to the invention, and a patent would, we think, be issued.

A. N. N., of Md.-Dr. Maynard, we believe, resides in Washington, D. C.

B. D. S., of Va.-We do not see how a patentable claim can be based upon your air-tight box; it is only the application of a contrivance well known, to pro duce a new result, and we advise you not to apply \$4 received, and much obliged.

J. M. P., of S. C.-We are not wellacquainted with dealers here, but believe Messrs. Phelps & Kingman sell considerable furniture in your section ; perhaps you could arrange with them or W. S. Humphreys, 197 Chatham street: you might write them in regard to the mater.

J. P. H., of N. H .- Your suggestions were regarded, and the caveat forwarded to the Patent Office last Friday.

D. E. McD., of N. Y .- The interlineation made by you was quite proper and should have been made by us. For receipt of your fees see proper column.

A. & W. B., of N. Y -We have no blank deeds on hand, but can get you any quantity printed should you require them. You are required to furnish a new model.

E. W., of O .- Your papers were forwarded to Washington as you directed; the address of your paper has now been changed as you requested.

H. J. A., of Ct.-We have not a copy of the Spin ner to send you. We should like to receive the subscriptions you mention as having been procured for us, but we cannot offer other inducement, than those published weekly in our prospectus.

W. O. H., of Pa.-We will send you one of the mor tising machines on the receipt of \$20. You need not trouble yourself to send those odd numbers of the Scientific American which you refer to; they would be of no use to us.

J. M. B., of N. Y .- The paste of caoutchouc is made by dissolving india rubber in naptha (coal oil); turpentine will do as well; we have never tried the marine glue for belts.

J. P. L., of Selma-In the numbers of the Scientific American sent, you will find our opinion of the Annihilator fully stated.

E. W., of N. Y.-As we have not a single number of Vol. 3 on hand, the numbers you propose to send will be of no use to us. We have complete files of Volume 5; \$6 received.

Money received on account of Patent Office busi-

course of sending the back numbers issued on this Volume until No. 13, and after that time the names will be entered from the date of the reception or orders, unless the writer expresses a wish to receive the back numbers-in that case they will be promptly forwarded.

Those desiring Volumes 5 and 6 of the Scientific American are informed that we are able to furnish a few complete volumes (bound) at \$2,75 each. Also, we can send by mail sets complete, minus No. 1, Vol. 5, for \$2 each, Volume 6 being fully complete. We would also say, that whenever our friends order numbers they have missed-we shall always send them if we have them on hand. We make this statement to save much time and trouble, to which we are subjected in replying when the numbers called for cannot be supplied.

On Sending Receipts.

It is not generally understood that it is in strict violation of the Post Office Laws of this country to enclose in the paper a receipt for money on account of subscription : such being one of the restrictions with which publishers have to contend under our present odious Postal Laws, we hope our patrons will excuse us for not granting their request to send receipts in defiance of law, but consider their money has come to hand providing the paper comes to them regularly our custom being never to continue the paper after the time for which it was prepaid has expired.

Back Numbers and Volumes.

In reply to many interrogatories as to what back numbers and volumes of the Scientific American can be furnished, we make the following statement: Of Volumes 1, 2 and 3-none.

Of Volume 4, about 20 Nos.; price 50 cts

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American and Foreign Patent Agency INPORTANT TO INVENTORS.---The under-signed having for several years been extensively engaged in procuring Letters Patent for new mecha-nical and chemical inventions, offertheir services to inventors upon the most reasonable terms. All business entrusted to their charge is strictly confi-dential. Private consultations are held with inven-tors at their office from 9 A. M., until 4 P. M. In-ventors, however, need not incur the expense of at-tending in person, as the preliminaries can all be ar-ranged by letter. Models can be sent with safety by express or any other convenient medium. They should not be over 1 foot square in size, if possible. Having Agents located in the chief cities of Eu-rope, our facilities for obtaining Foreign Patents are unequalled. This branch of our businessreceives the especial attention of one of the members of the firm, who is prepared to advise with inventors and manu-facturers at all times, relating to Foreign Patents. MUNN & CO, Scientific American Office, 128 Fulton street, New York.

VALUABLE WATER POWER and Machine-ted on the Rivanna River and Virginia Central Rail-road, within one and a half miles of the town of Charlottesville, and known as the "Charlottsville Factory." The river is navigable from Richmond to the spot. The property consists of an abundant wa-ter power, about 13 acres of land, a cotton and wool-len factory, containing 552 spindles and 12 looms, with the usual accompaniment of machinery, wool cards, jack, &c., grist, plaster, and saw mills, iron foundry, brick store-house, and dwellings for some ten or a dozen families; also a variety of carpenters', machinists', and blacksmiths' tools, comprising cut-ting engine, lathes, screw tools, &c. The entire pro-perty will be sold at public auction on Thursday, Dec. 2nd next, on very accommodating terms. For further information address J. W. Saunders, J. A. Marchant, or the undersigned, Charlottsville, Va., Marchant, or the undersigned, Charlottesville, Va 8 3* HENRY W. JONES.

MALLEABLE IRON FOUNDRY, EASTON, Mass.—The subscriber continues to manufac-MALLEABLE IRON FOUNDRY, EASTON, Mass.—The subscriber continues to manufac-ture castings of every variety. for machinery and other purposes, of the best quality, at the above es-tablishment, we have facilities for making castings 5 1-2 feet in length. Persons wishing castings can send patterns to Easton Express, Boston, Mass. All letters will be promptly attended to. 8 10* DANIEL BELCHER. TRAUTWINE ON RAILROAD CURVES.— By John C Trautwine, Civil Engineer, Philadel-phia; just published and for sale by WM HAMIL-TON, Actuary of the Franklin Institute Price \$1. "This is a really good work, and we heartily re-commend it to our civil engineers."—[Scientific Am. "We have carefully examined this work, and re-gard it as the best that has yet appeared on the sub-ject, '&c.—[Am. Railroad Jour. 810*

PATENT FELLY MACHINE.—This machine. **PATENT FELLY MACHINE.**—This machine, for cutting fellys for wheels, is superior to any-thing of the kind for that object; with it, cutters are used instead of saws, and are easily adjusted to pro-duce any required circle, in common use, leaving them perfectly smooth, thereby making a great sa-ving of expense in dressing them for use. This ma-chine was patented in 1850. For machines, or coun-ty and State rights, address JOSEPH ADAMS & SON, Amherst, Mass.; J. B. Wynne, Agent for the State of S. C. P.S.—Agents wanted to travel in Southern and Western States, to sell rights for the above machine. Good references will be required. 6 4

POST'S PATENT SLIDING DOOR FRONTS —For Stores and Public Buildings; a new, cheap, and simple fixture for securing store fronts, which renders them fire and burglar proof, has been inven-ted and patented by the subscriber, who is now pre-pared to sell rights. Messrs. Quarterman & Son, 114 John st., N.Y., are general agents. Address (post paid) Wm. POST, Architect, Flushing, L. I. 6 3m

TiLTON's Patent Violin.—The undersigned having patented his Violin Improvement, is pre-pared to exhibit it to the public. Being now in New York, he may be found at No. 18 Park Place (Mr. J. Wiley's), where he will be pleased to see such gentle-men as take an interest in his invention. All com-munications addressed "Wm. B. Tilton & Co.," as above, or at Carrolton, Pickens Co., Ala. 3 12* WM. B. TIL/TON.

LEROW & BLODGETT'S PATENT ROTA-having purchased the right to use, sell, and manu-facture these machines for the States of Alabama and facture these machines for the States of Alabama and Mississippi, and their other business engagements preventing them from giving it their personal atten-tion, they are disposed to sell out their right to the above-mentioned States, or counties in them, if pre-ferred, upon favorable terms. To an energotic and industrious man we will sell upon such terms as will insure a large and handsome profit. Apply to Mr. W. SCRUGGS, of the firm of Messrs. Scruggs, Drake & Co., Charleston, S. C., or to WM. MAILLER, De-catur, Ala. 4 8*

PROFESSOR ALEX. C. BARRY'S TRICO-**PROFESSOR ALEX. C. BARRY'S TRICO-**PHEROUS OR MEDICATED COMPOUND.— Professor Barry does not hesitate to put his Trico-pherous, for the two grand requisites of efficacy and cheapness, against any preparation for cleansing, re-newing, preserving, and strengthening the Hair, that has ever been advertised or offered for sale. He chal-lenges the associated skill and science of the medical world to produce, at any price, an embrocation that will reduce external irritation, cure ordinary cuta-neous diseases and severe cuts, sprains, pains, &c. Price 25 cents per bottle. To be obtained, wholesale

CLOCKS FOR CHURCHES, PUBLIC BUILD-LATORE FOR CHURCHES, PUBLIC BUILD-LATORE FOR JEWELLERS.—The undersigned ha-ving succeeded in counteracting effectually the influ-ence of the changes of the temperature upon the pendulum, and introduced other important improve-ments in the construction of clocks, 2re prepared to furnish an article, superior inevery respect (the high-est grade warranted to vary less than two minutes in a year) to any made in the United States. Complete opportunity will be afforded to test their qualities. Glass (illuminated) dials of the most beautiful de-scription furnished. Address SHERRY & BYRAM, Oakland Works, Sag Harbor, Long Island, N. Y. "A the Oakland Works of Sherry & Byram there are made some of the finest clocks in the world."— —[Scientific American.

A CARD.—The undersigned begs leave to draw the attention of architects, engineers, machi-nists, opticians, watchmakers, jewellers and manu-factures of all kinds of instruments, to his new and extensive assortment of fine English (Stubs) and Swiss Files and Tools; also his imported and own manufactured Mathematical Drawing Instruments of Swiss and English style—which he offers at very reasonable prices. Orders for any kind of instru-ments will be promptly executed by F. A. SIBEN-MANN Importer of Watchmakers' and Jewellers' Files and Tools and manufacturer of Mathematical Instruments 164 Fulton st. 6 9*

WATTS & BELCHER, Manufacturers of Steam Engines, Lathon Distance W Engines, Lathes, Planing Machines, Power Presses, and Mechanics' Tools of all descriptions. Orders respectfully solicited and punctually attended to. Washington Factory, Newark, N. J. 720*

MACHINERY FOR SALE—Four dead spindle filing frames, 1-16 strand speeder, 1 warper, 1 lapper, &c. Also turbine water wheels, 6 ft. diame-ter, of most approved patterns, at \$275 each; a breast wheel, &c; 20 feet long, and an iron under-shot va-ter-wheel. New Haven, Oct. 22, 1851. 76*

PATENT CAR AXLE LATHE-I am now ma-PATENT CAR AXLE LATHE-I am now ma-nufacturing, and have for sale, the above lathes; weight. 5,500 pounds, price \$600. I will furnish a man with each lathe, who will turn and finish axles for 50 cents each, if desired. I have also for sale my patent engine screw lathe, for turning and chucking tapers, cutting screws and all kinds of common job work, weight 1500 lbs., price \$225. The above lathe warranted to give good satisfaction. J. D. WHITE, Hartford, Ct. 7 6m*

SCRANTON & PARSHLEY, Tool Builders, CRANTON & PARSHLEY, Tool Builders, New Haven, Conn., have on hand six 12 ft. slide lathes, 28 in. swing; also four 8 ft. do; 21 in. swing, with back and screw gearing, with all the fixtures ; one 5 ft. power planer; 12 drill presses, 4 bolt cutting machines, 30 small slide rests; 5 back geared hand lathes, 21 in. swing; 15 do. not geared; 8 do. 17 in. swing on shears 5 1-2 feet; 25 ditto with and without shears, 13 in. swing; counter shafts, all hung if want-ed suitable to the lathes. Scroll chucks on hand; al-so index plates for gear cutting. Cuts of the above can be had by addressing as above, post-paid. 47tf

BEARDSLEE'S PATENT PLANING MA-BEARDSLEE'S PATENT PLANING MA-Boards and Plank.—This recently patented machine is now in successful operation at the Machine shop and Foundry of Messrs. F. & T. Townsend, Albany N. Y; where it can be seen. It produces work supe-rior to any mode of planing before known. The number of plank or boards fed into it is the only limit to the amount it will plane. For rights to this machine apply to the patentee at the abovenamed foundry—or at his residence No. 764 Broadway; Al-bany. GEO. W. BEARDSLEE. 5tf

TO PAINTERS AND OTHERS.—American Atomic Dricr, Electro Chemical graining co-lors, Electro Negative gold size, and Chemical Oil stove Polish. The Drier improves in quality by age—is adapted to all kinds of paints and also to Printers' inks and colors. The above articles are compounded upon known chemical laws and are submitted to the public without further comment.— Manufactured and sold wholesale and retail at 114 John st. N. Y. and Flushing L. I. N. Y.; by QUARTERMAN & SON 48tf Painters and Chemists.

MACHINERY.--S. C. IIILLS, No.12 Platt-st. N. M.Y. dealer in Steam Engines, Boilers, Iron Pla-ners, Lathes, Universal Chucks, Drills; Kase's, Von SchnidUs and other Purips; Johnson's Shingle Ma-chines; Woodworth's, Daniel's and Law's Planing machines; Dick's Presses, Punches and Shears; Mor-ticing and Tennoning machines; Belting; machinery Beal's patent Cob and Corn mills; Burr mill and Grindstones; Lead and Iron Pipe &c. Letters to be noticed must be post-paid. Itf

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers-from 1 1-4 to 7 inches in di-ameter. The only Tubes of the same quality and manufacture as those so extensively used in England Scotland, France and Germany-for Locomotive Marine and other steam Engine Boilers. 'THOS. PROSSER & SON, Patentees, 1tf 28 Platt-st. N. Y.

ATHES FOR BROOM HANDLES, Etc.-We L'continue to sell Alcott's Concentric Lathe, which is adapted to turning Windsor Chair Legs, Pillars, Rods and Rounds; Hoe Handles, Fork Handles and Broom Handles

Rods and Rounds; Hoe Handles, Fork Handles and Broom Handles. This Lathe is capable of turning under two inches diameter with only the trouble of changing the dies and pattern to the size required. It will turn smooth over swells or depressions of 3-4 to the inch and work as smoothly as on a straight line—and does excellent work. Sold without frames for the low price of \$25—boxed and shipped with directions for setting un_Address (nost naid) At this Office. At this Office.

KELLY & CO., New Brunswick, N. J., Foundry and Machine shop, manufacturers of stationary Engines, India Rubber Machinery, Mill Gearing, and stove castings &c. Articles made in the machinery line to order with dispatch and in the most work-manlike manner. Parties wanting machinery or castings made will be waited on within any reasona-ble distance. Orders solicited. 47 12*

Wood's IMPROVED SHINGLE MACHINE WOOD'S IMPROVED SHINGLE MACHINE — Patented January 8th 1850, is without doubt the most valuable improvement ever made in this branch of labor-saving machinery. It has been thoroughly tested upon all kinds of timber and so great was the favor with which this machine was held at the last Fair of the American Institute that an unbought premium was awarded to it in prefer-ence to any other on exhibition. Persons wishing for rights can address (post-paid) JAMES D. JOHN-SON, Easton Coun.; or WM. WOOD, Westport; Ct. All letters will be promptly attended to. 37tf

LEONARD'S MACHINERY DEPOT, 109 stantly receiving and offers for sale a great variety of articles connected with the mechanical and manof articles connected with the mechanical and man-ufacturing interest, viz.: Machinists' Tools--negines and hand lathes; iron planing and vertical drilling machines; cutting engines, slotting machines; boit cutters; sliderests; universal chucks &c. Carpen ters' Tools--mortising and tennoning machines; wood planing machines &c. Steam Engines and Boilers from 5 to 100 horse power. Mill Gearing--wrought iron shafting; brass and iron castings made to order. Cotton and Woolen machinery furnished from the best makers. Cotton Gins; hand and power presses. Leather Banding of all widths made in a superior mauner; manufacturers' Findings of every descrip-tion. P. A. LEONARD. 48tf

MANUFACTURE OF PATENT WIRE Ropes and Cables-for inclined planes, suspension bridges, standing rigging, mines, cranes, derick, til-lers &c.; by JOHN A. ROEBLING; Civil Engineer-Trenton N. J. 47 1y*

DAILROAD CAR MANUFACTORY—-TRA-CY & FALES, Grove Works, Hartford, Conn. Passage, Freight and all other descriptions of rail-road Cars, as well as Locomotive Tenders, made to road cars, as well as Locomotive Tenders, made to order promptly. The above is the largest Car Fac-tory in the Union. In quality of material and in workmanship, beauty, and good taste, as well as strength and durability, we are determined our work shall not be surpassed. 39tf. THOMAS J. FALES.

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SCIENTIFIC MUSEUM

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For the Scientific American Horse-Shoeing---Interfering Horses.

One writer in the Scientific American recommends raising the shoe upon the inside and another the reverse; which is correct? answer-both; and I also say both are in error. The lateral motion of the fetterlock joint is small, and the effort to throw the ancle out by the method recommended by Mr. Jewett usually produces inflammation of the cartila ges and ligaments of the joint, and many times destroys the socket by absorption of the heads of the bone, leaving the ancle permanently enlarged, and ruining the horse for road or market. The paring off the hoof from the inside will have the same effect, if it is carried to an extent, to put the shoe farther under the foot than it ought to be.

Many horses in ill condition will interfere in spite of all remedies, when jaded or allowed to shack upon the road. The best remedies are the good condition of the horse-skillful shoeing, *i. e.*, neither inclining one way nor the other, but made to resemble the fair hoof of the horse as near as may be, being as light as possible. And instead of shoeing so as to have the shoe standing like a three-legged stool, allow all the shoe to touch the ground, by having a flange turned upon the whole outer edge of the shoe. The best horse-shoe ever brought into use, is one recently invented by Mr. Wm. A. Sweet, of Pompey, N.Y.; it is made of good spring steel, smooth inside, with a flange turned on the outer edge; it will soon come into general use. In applying the shoe to cure the interfering foot, the clinches should be kept close, and the nails set well into the groove ; the improved shoe protects the nails by its flange. The unnatural shoeing will accomplish all that can be expected, in a few days, but the result of such practice is too often injurious to admit of its general use. Your last correspondent requires no reply. S. A.

Syracuse, N.Y.

MACHINERY MANUFACTURED IN ALABAMA The establishment of the Montgomery manufacturing Co., says the "Advertiser," under the control and management of Messrs. Gindrat & Co., is now not only the largest of the kind in the South, but is turning out machinery, the style, beauty of finish, and strength of which, are second to none.

In taking a stroll through their extensive shops a few days since, we were shown by Mr. J. S. Winter, (one of the proprietors of the establishment) an engine, the appearance of which we will not attempt to describe-but merely affirm that it was-although yet unfinished, the handsomest piece of machinery we ever saw. We never knew before that iron could be brought to so fine a polish. It will well pay any one for the trouble to go and examine it. The engine, which is of thirty horse power, is to be sent to the Fair in Georgia. It is appropiately named the "Alpha," and if we mistake not, will receive the first premium.

This establishment commenced the con-

POISON OF THE TOAD .- It is an ancient and light, in all which respects it is superior to good tallow," are miserable in the extreme; reader, which is not treated in the most able manstill common opinion that the toad possesses a every other species of candle. This candle is they melt away with a lard-like softness very ner-the Editors, Contributors, and Correspondents being men of the highest attainments. It is, in fact, subtle venom, but at present this is deemed fanearly translucent, and can be made to exhifatal to the pockets of purchasers. The comthe leading SCIENTIFIC JOURNAL in the country. The Inventor will find in it a weekly DIGEST bulous by the scientific. MM. Gratiolet and bit the wick, when the candle is held up bemon sperm candles sold in our stores exhibit tween the eye and the light, while the surface Cloez, as appears by the reports of the Acadequalities of a near relationship to the lard talof AMERICAN PATENTS, reported from the Pamy of Sciences, have shown by experiment is as glossy as polished wax or varnish. low candle. ent Office.—an original feat that they secrete a deadly poison. They in-When I state that the principal ingredient other weekly publication. Steven's Siding and Flooring Machine. occulated small birds with the milky fluid TERMS-\$2 a-year; \$1 for six months. is our great staple, lard, the value of this macontained in the dorsal and parotid pustules of nufacture can hardly be exaggerated, and when All Letters must be Post Paid and directed to We have heard so many favorable reports MUNN & CO., this animal, and found that they died at the I say explicitly that, taking durability into oncerning the operation of this wonderful in-Publishers of the Scientific American, end of five or six minutes. Even when dried account, it can be made as cheap as any other vention, that we concluded to witness its per-128 Fulton street, New York. the fluid destroyed birds. Death occurred candle, and that there exists no single element formance, which we did to our astonished sa-INDUCEMENTS FOR CLUBBING. without convulsions, and all exhibited marked of comfort, convenience, profit and economy | tisfaction, on yesterday afternoon. It is a saw-Any person who will send us four subscribers for signs of apoplexy. in which this article has not the advantage of ing machine, and was invented for the purpose six months, at our regular rates, shall be entitled to sperm, star, wax, or tallow candles, it will be of sawing out lumber for flooring and siding THREE-DECKED MAN-OF-WAR STEAMERS .-one copy for the same length of time; or we will readily conceded that the days of all other uses, which, by the way, it does with a most An interesting experiment is in preparation at portable or table light, including lard oil, are surprising dispatch and in a most superior the seaport of Toulon. The French Govern-Ten Copies for Six Months for \$ 8 numbered. In fact, except where intense light, manner. This machine runs thirty-two saws, 15 Ten Copies for Twelve Months, ment has ordered an engine of 400 horse power Fifteen Copies for Twelve Months, 22 to be put into the man-of-war Napoleon, of as in public buildings, is an object, gas itself and is capable of sawing as many boards, ten Twenty Copies for Twelve Months, 28 cannot compete with it for public favor. I or twelve feet in length, in three minutes. It one hundred guns. It is calculated that this Southern and Western Money taken at par for am not at liberty, in this stage of the enter- promises to meet with a most welcome adopmachine will propel the vessel at the speed of subscriptions, or Post Office Stamps taken at their eight miles an hour. The attempt is looked prise, to be more explicit, but shall shortly tion, wherever sawing and building is necessal full value.

upon with considerable interest in France and tically through the ship, and in slides a cylin-England. If successful it will be imitated in other ships.

DIVING VESSELS .- Mr. Cave, the owner and manager of one of the first iron workshops in Paris, is now building two large boats to be used under water in the work of clearing away the bar at the mouth of the Nile. They are on the new plan, and better than anything An apparatus of the same kind, but on a reof the kind we have heard of. In the middle | duced scale, is now in operation on the river of the deck is a large circular hole, going ver- Seine.

der reaching to the bottom of the river, which may be shortened or enlarged at will, like a telescope. Above the opening is a large air chamber 22 feet in diameter and 16 feet high. By forcing compressed air into the air chamber the water in the tube is driven out at the lower end, leaving dry a portion of the bed.

A CHEAP COTTAGE.---Fig. 1.



The accompanying engravings illustrate A | fact, be used as a back kitchen for the rough-Small Bracketted Cottage, taken from "Downing's Cottage Houses." Figure 1 is a perspective view, and figure 2 a plan view. It is designed with a regard to cheapness, and comwould prefer to live in their own dwellings, as their own landlords, "happy and free."

The plan of the first floor of this cottage the end of the room gives space for two large Fig. 2.



closets. The bay-window measures six feet in the opening (in the clear), and is three feet deep.

On the right of the entry is the kitchen, a small room, ten by twelve feet. As the living in a great measure, the wooden houses now room of the family will, in a great measure, be also the kitchen, this small kitchen will, in er material.

Improved Candles.

struction of steam engines about 18 months stated rests upon my personal knowledge and Cist's Cincinnati Advertiser thus mentions copious Index, and from FIVE to SIX THOUSAND since, and have turned out over eighty since observation, and the statements of judgment a new species of candle recently produced in ORIGINAL ENGRAVINGS, together with a vast that time. Such establishments as this among and veracity." that city: "it is calculated to supersede all amount of practical information concerning the prous do away with the necessity of sending to gress of INVENTION and DISCOVERY throughout [We hope the above is correct in every parother kinds in use, by its beauty, freedom from the world. There is no subject of importance to Northern markets for machinery. ticular, for the candles now sold in our city for guttering, hardness, and capacity of giving the Mechanic, Inventor, Manufacturer, and general

work, washing, etc., so that in summer, and indeed at any time, the living-room can be made to have the comfortable aspect of a cottage parlor, by confining the rough work to mends itself to many of our mechanics who the kitchen proper. Back of this kitchen is a small lean-to addition, containing a small pantry, four by six feet, and a place for coal. There is a small passage between this closet shows an entry, six by twelve feet, containing or pantry and the coal-hole, and opposite the a flight of stairs to the chamber floor, under door opening from the kitchen into this paswhich are stairs to the cellar. On the left is sage, is a door which serves as a back door to the living-room of the family, fifteen by se- enter the kitchen without going in the front venteen feet. The deep chimney-breast at entrance. Planed-and-matched or rough boards may be used for the vertical weather-boarding; we should prefer to have them rough (if the cottage is filled in), and painted and sanded. In this we include a cellar under the kitchen and entry, but not under the livingroom. The foundation walls of the latter should be laid three and a half feet below the level of the ground. It is estimated that a cottage of this descrip-

tion, withing six miles of New York City could be built for \$600, but it could be built for \$100 less in the country where lumber is cheap. At the present moment "lumber is lumber," as the old saying is; it is therefore no small expense to build houses at present. It is our opinion that cast-iron must supersede built, not only as a more desirable but a cheap-

publish further details. What I have already

ry. We understand that Mr. Stevens intends taking one of his invaluable patents to the Pinery. It will be a profitable machine in that section of the country. He is going to increase the number of saws to seventy-five. We advise all who take an interest in a truly valuable invention, to give this machine a visit. Mr. Stevens will be pleased to gratify those who desire to witness its operation, if they will call at the United States Foundry, in the southern part of the city.-[St. Louis Reville.

[There may be some good improvement about this machine, not described, but if the invention consists merely in working gangsaws it is not new, for gang saws were employed in our country before the Revolution. We have never known so large a gang used as that by Mr. Stevens, but the larger the gang, the greater the power required to work them.

LITERARY NOTICES.

THE MIND AND THE HEART.—Messrs. Adviance, Sherman & Co., No. 2 Astor House, have just issued a neatvolume of 72 pages of poems, by Franklin W. Fisk, when in his eighteenth year. They would be no discredit to an older head—several of them are full of touching pathos.

full of touching pathos. SKETCHES AND STATISTICS OF CINCINNATI IN 1851: Wm. H. Moore & Co., publishers, 118 Main street, Cincinnati, pp. 363. We are indebted to Charles Cist, Esq., the author, and compiler, for a copy of this publication. It is arranged under 15 classifications, viz., Physical characteristics, Person-al Statistics, Education, Science, and Literature, the Fine Arts, Monetary, Public Institutions. Manufac-tures, and Industrial Products, Transportation, Com-merce, etc., together with miscellaneous information, the biography of eminent residents, and splendidly embellished with their portraits, executed in excel-lent style, besides views of some of the most promi-nent public buildings. Mr. Cist has done himself much credit in the production of this work, and we hope a discerning public will reward his efforts. In looking cursorily through this volume, and examin-ing some of the statistics embraced in it, we are struck with the enterprize and greatness of Cincin-nati. nati

HARPER'S MAGAZINE for November contains a continuation of Mr. Abbott's illustrated series of the Life of Napoleon; it is rich in gems of literature. The present number closes the volume. Harper & Bros., New York.

THE INTERNATIONAL, for November, Stringer & Townsend, is a beautiful number, well embellished, and ably supplied with the choicest reading.

PRACTICAL MODEL CALCULATOR .--- No. 3 of this work, edited by Oliver Byrne, and published by Hen-ry Carey Baird, of Philadelphia, has just been re-ceived It contains articles on Cuttings and Embank-ments, Calculations on the Steam Engine, &c.

MAGAZINES FOR NOVEMBER.-We are indebted to Messrs. Dewitt & Davenport, for Graham's and Sar-tain's Magazines. They are both excellent numbers.

We have received from Hon. Wm. H. Seward a pamphlet copy of his able argument in the Conspira-tor's Trial, at Detroit. It is neatly gotten up by Messrs. Derby & Miller, Auburn, N. Y.

TO MECHANICS, INVENTORS, AND MANU-FACTURERS.

SEVENTH VOLUME OF THE SCIENTIFIC AMERICAN.

MESSRS. MUNN & CO., AMERICAN & FOREIGN PATENTAGENTS, And Publishers of the SCIENTIFIC AMERICAN, espectfully announce to the public that the first number of VOLUME SEVEN of this widely circulated and valuable journal was issued on the 20th of September in AN ENTIRE NEW DRESS, printed upon paper of a heavier texture than that used in the receding volumes.

It is published weekly in FORM FOR BINDING, and affords, at the end of the year, a SPLENDID VO-LUME of over FOUR HUNDRED PAGES, with a