

Buffalo, and come away backwards about fifteen miles. It is true, they could go by the canal to Lockport, at the slow pace of some old line boat, and then take the cars, and "sail like a snail" on the miserable old railroad from that place to the Falls. All this will soon be changed; passengers will steam it right through without winding round and round by Buffalo and Schlossar's Mill-so famous in story. It passes through a beautiful and fertile country, the garden of our State,

may also be placed higher or lower, holes being made for that purpose, by which the stroke of the rod, C, may be lengthened or shortened.

less stroke, by placing the part, g, of the cam,

E, at a greater or less distance from the other

part, f. If the space between the zig-zag

projection is considerable, there will be a

shorter stroke given than if the space were

narrower. The fulcrum, or pin, d, of lever D

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and visitors will be able to go to the Falls from New York city in about 16 hours.

Dilatory Telegraph.

Smith Pyne complains, in a letter in the Washington " Republic," of the shameful delay of two messages which were sent to him by telegraph. One was an account of his sister's death : it was received by him one hour and a half atter it was sent through, and an hour too late for the cars to take him away that evening; it was a shame.

A short time ago Dr. Jackson administered a pound and a half of ether to a lion, at South Boston, Mass., and removed his claws during the twenty minutes the animal was insensible.



We will now explain how the lower ends of the teeth are thrown up when they meet with obstacles in the earth. K are draw rods (one seen) secured to the front of the side rails, l, in the usual manner, the ends of the said draw rods being forked and fitting in eyes. The opposite ends of the said rods are also forked, and in these forks the hollow teeth, J J, fit; to the front of each hollow tooth there is a lever, L, attached by a pivo , k; this lever passes up through the fork in the end of the draw rod, and is attached by a pivot, m a lever, M, which is secured to the draw ro by a pivot, l. O is a frame hung loosely by pivots, n, to the side rail, b; the ends of this frame rests upon the levers, M M.

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It will now be seen that when any obstacle comes in contact with the ends of the hollow teeth. J J, the teeth will be thrown back, and the lever, L, will draw upon the lever M, and raise it and the frame, O. When the ends of the teeth have passed over the obstruction, the frame, O, by its weight, will depress the levers, M M, and the teeth will resume their original position. These hollow teeth are also raised and depressed by the straps, P, secured to the back of the teeth. These straps are attached to the shaft, R, and by turning it, the teeth are elevated and depressed as may be desired. This is a grain drill which can be made cheaper than many now in use; it is simple, strong, and so formed as not exert any grinding action upon the grain, a fault peculiar in the distributing in some other drills.

Mr. Sanders having secured a patent, more information about rights, &c., may be obtained by letter addressed to him at his residence in Holiday's Cove.

MISCELLANEOUS

Something more about the English Engineers Strike.

The London "Weekly Dispatch" states that upwards of £30,000 (\$143,500) were lost, per week, tor fifteen weeks, making no less than \$2,282,500. The wages have been reduced greatly below the level of what they were before the strike, and there are now hundreds of workmen out of employment, their places having been supplied by more laborers during the strike. A new invention has also resulted from the strike, by which castings are made, by a firm in London, without the use of skilled moulders. The Association of employers now numbers 25,000, and it speaks well for their spirit that such sentiments as the following are embraced in a recent address issued by them to their workmen; it says :-

"To us it shall be no disqualification to employment that an artizan has tried the experiment offered by co-operative workshops. Of these laudable, if mistaken attempts to secure to associated labor the profits of individual capital and enterprize, we have only too little reason to be jealous of the competition. But whether they succeed or fail, we trust that the rival theories of competition and co-operation may, side by side, be practically applied, without interruption, to social harmony and the mutual good-will of neighborly citizenship. None shall hail the success of the solution of the industrial problem with more sincere congratulation than ourselves; and we trust that, should the experiment prove, as we fear it will, to be signally disastrous, we shall be found honestly willing to mitigate the lot of the sufferers, to the extent of our ability, and the full limit of our peculiar opportunities."

Boiler Iron.

A correspondent in this city writing to us a bottle with a ground stopper, and use as dito us here. In a letter to the London Times about boiler iron says, "he agrees with us rected. The dose for a child should be di-Singular Invention. he savs :--that boilers should be made of the best mateminished in proportion to age. We see it stated in our Western exchanges, "It may be interesting to some of your ag-This is the remedy of M. Bee, Senior, rials only, but how is this to be ascertained that a gentleman near Louisville, Ky., has ricultural readers to know that my 'irrigation who is to decide. One boiler maker prefers schoolmaster, who begs the publisher of the applied the telegraph to an entirely novel and by subterranean iron pipes with hose and jet, Echo to give it to the world as a sovereign one manufacturer's iron, one prefers another's, worked by steam power,' is completed on 170 unique use. He has nearly completed an infor reasons which are connected with price preventive of a fearful malady, and a cure vention for writing music as it is played from acres. It is not necessary here to enter into and the management of their shops. Recently for it in its earlier stages. As the constitudetails; suffice it to say that the cost, indethe piano-forte, the notes upon the sheets bethe manufacturers of iron of East Pennsylvaents are all attainable without difficulty, there ing produced as fast and to the exact time, as pendent of steam engine, is £3 15s., (\$18 18) nia petitioned Congress that no reduction be can be no peril in trying it, as every other per acre, added, as it were, to the fee simple the keys are touched by the performer. . Straspecific has proved valueless. made on foreign boiler or railroad iron, beof the estate. The working cost of conveying kosch has offered him \$10.000 for the patent cause anthracite coal could only be profitably The following is another receipt given by a and applying to each acre 15 tons of liquid right when the model is finished. used in the fabrication of nails, in other words. French physician :manure, or water, equivalent to a heavy rain That this can be done is nothing strange, "Take two table spoonsful of fresh chloride of five hours' duration, is about 1s. 6d. per "that cold and hot short iron was the consewe think, for a patent was taken out by Bain of lime, in powder, mix it with half a pint of to play on musical instruments by telegraph, acre. The liquid is distributed through a fan quence of the combination of their ores and fuel ?" Our correspondent therefore suggests water, and with this wash keep the wound but we do not see what benefits can be de- like gutta percha spreader, issuing as a broad, that in every case of explosion there should constantly bathed and frequently renewed. thin, glassy sheet, and descending in heavy rived from such an invention. be an enquiry made into the quality of the The chlorine gas possesses the power of dedrops like a thunder shower. I may be boiler iron, who was its maker, where it came composing the tremendous poison, and ren-The Ginger of Commerce. thought rather speculative when I anticipate ders mild and harmless that venom against from, of what ores it was made and by what The ginger of commerce is the produce of a that within a century from this period the whose resistlesss attack the artillery of sciprocess, Facts thus obtained, he thinks, if plant growing in both the East and West Insewerage from our cities and towns will follow carefully collected, would enable us to deterence has been so long directed in vain. It is dies. In its appearance it resembles a reed. our lines of railway in gigantic arterial tubes, mine how to prevent Coroner's inquests, and unnecessary to add that this wash should be but the stems arise from a root similar to the from which diverging veins will convey to save a vast deal of life. It is perfectly absurd, applied as soon as possible after the infliction root of the garden sweet flag, or iris. Like the eager and distant farmer the very essence he thinks, to call twelve men together to say of the bite. From 1810 to 1824, the number the root of this flower, that of the ginger plant of the meat and bread which he produced at a man was scalded, and that the explosion of persons admitted into the Breslau hospital spreads and increases in size every year. so much cost. We shall then no longer comwas caused by a flaw which could not have was 184. of whom only two died. 1783 to From the upper surface of the ginger root arimit the folly of wasting our own manures, to been detected when the boiler was making. 1824, into the hospital of Zurich, 222 persons ses, in the spring, a green reed-like stalk, replace them, at an enormous cost, by impor-They should ask, who made the iron, who bitten by different animals, were admitted, about the plant, which are white and lilac, tations of bird's dung from the Pacific." sold it, what was its price, &c. With these (182 by dogs) of whom only four died. and grow on a separate stem. The ginger Here we have an instance of a farmer exwe employ as a spice is the root, to obtain views we perfectly agree. The best makers We can say nothing of the first receipt; it pending more than eighteen dollars on every of iron sometimes manufacture poor qualities is a very complicated mixture. We believe which the plant is cultivated in much the acre tor one single improvement.

to sell a poor quality.

Art.

ENGRAVING OF HENRY CLAY.-Here we have before us a real likeness of Henry Clay, just issued by Bachia & Co., engraved by A. H. Ritchie, the eminent engraver in our city. The great orator is represented as delivering one of those impassioned speeches which so often made the hearts of thousands throb, and the Senate walls to vibrate. It is altogether the finest likeness of the great Kentuckian tually gleams with life and genius. The admirers of Henry Clay will esteem it a privilege to possess such a likeness.

PHOTOGRAPH OF THE MOON .- We have be fore us a photograph of the Moon and another of the Boston Custom House, taken with the large equatorial telescope at Cambridge Observatory, by John A. Whipple, Daguerreotypist, No. 6 Washington st. Boston Custom House is very fine-it is well done. The one of the Moon is an object of curiosity, and is deeply interesting to the lovers of science. The surface of the Moon is peculiarly striking. It looks as if it were covered, in some parts, with huge rocks, lying thick as hailstones after a storm. These pictures are an evidence of the chemical action of light independent of heat.

Hydrophobia Cures.

The following is a cure given by a gentleman in a French paper, which he asserts has been used in France for two centuries, with success, and within the last ten years; he says : "I have used it in twenty cases, and always with entire success." This entitles the thing to an experiment; and, certainly, there are enough outre ingredients in the compound to ensure a chance of efficacy among some of them. Here is the recipe :--

Wash the wound, while recent, and the adjoining parts with cow's milk, boiled hot, daily, for nine days; for the same length of time, each morning before breakfast, drink a tumbler of the following potion, lukewarm :

Gramme (15.4 grs. Troy)

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15

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	oranni	10	110 7 8	10. 1	10
Root of Angeline	-	-	-	-	
Root of Gentian	-	-	-	-	
Venetian Theriac	-	-	-	-	
Assafætida, " well	crushed	"	-	-	
Oyster Shell -	-	-	-	-	
Root of the Sweet	Briar	-	-	-	
Scorzonera, the roo	t unpee	leo	1 -	-	
Rue, fresh stems, a	good h	an	dful	-	
Sage, cut up finely	•	•	-	-	
Marine salt -	-	-	-	-	
A head of garlic, ci	rushed	-	-	•	
Three heads of leel	ks, with	tl	heir lea	ves	
Two small onions	•	-	-	-	
A few spring daisie	es	-	-	-	

Boil these together in a close vessel, with three quarts of good red wine, until one half be evaporated. Strain the liquid and put in

immediately after the person is bitten; but if have withered, the roots are dug up. The the poison has got into the system and is best and soundest of them are selected, scraworking in it, we do not see what good it can do at all. It is, however, a good wash for when they are ready for exportation, and use. putrid sores. We have known of it being The inferior roots are scalded in boiling water used successfully for a bad festered wound from the bite of a dog.

Climate of Oregon.

The Portland Oregonian of April 24th gives the following very alluring account of the climate of Oregon :-

"In looking over the papers from the Atlantic States, one would be led to suppose, from the accounts given of the intense coldness of the weather the past winter, that there must be some mistake in the geographical position sustained by the Atlantic States towards their sister territory here, on the Pacific. While the mercury in the thermometer has become frozen there, we, in Oregon, in a latitude as far to the north as any of those States, have been enjoying the mildness of spring-the warm rays of the sun experienced here during part of the months of January and February, actually reminding us of May weather in New York.

While the ground here has been covered with green glass and gaudy flowers through the winter, there it has been mantled with several feet of snow. On the 20th of January last, a triend sent us a cluster of ripe strawberries, picked on the plains, where they blossom all over the plains during the whole winter. On the 10th of January, 1851, Jesse Applegate, of Umpqua, sent us a great variety of wild flowers, and several specimens of grass, then growing as green and fresh as in June, some blades of which were eighteen inches in length. And this reminds us that while the cattle of our Atlantic friends have been freezing to death in their stalls and sheds. ours have been roaming at large over our plains-unfed, save from nature's granaryand when slaughtered, would make a New York butcher put on his broadest, proudest grin, to think himself the happy vender of such delicious beef."

Railway Accidents in England.

The returns relating to railway accidents in Great Britain, for the half year ending December 31, 1851, have just been published. The number of passengers carried was 47,509,-392; the number killed was 113; injured, 264. Eight passsengers were killed, and 213 injured from causes beyond their control; 9 passengers were killed and 14 injured owing to their own misconduct or want of caution; 32 servants of the companies or contractors we killed and 11 injured, owing to their own want of caution; 32 trespassers and other persons, neither passengers nor servants of the company, were killed, and 6 injured, by crossing or walking on railways. The length of railways in operation was 6,800.

of it. They should be taught by exposure not the last receipt is a good one, if applied same way potatoes are, and when the stalks ped quite clean, and carefully dried in the sun, instead of being scraped; and, these, when dried, form what is called black ginger, a very inferior kind. The color of black ginger, as it is termed, is yellowish grey on the outside, and orange brown within. In shape it is thick and knotty. The best or white ginger, being scraped in preparing it, is less in size not being so thick or knotty; its color is of a light yellow, and its taste is much more pungent and aromatic than that of the black kind.

> Much of the ginger root that is now sold by druggists is of a beautiful white appearance; this is done by bleaching it. No good, but evil, is the result of this process, all for the sake of appearances.

Silver and Gold.

The London Times gives some elaborate tables concerning the comparative production of gold and silver, for the last few years -From these tables it appears that the produce of gold in the world rose from 114,674 lb. in 1846, to 365,950 lb., in 1850. In those five years the increase was at the rate of 219 per cent., while silver only increased from 1,979,-084 lb. in 1846, to 2,663,386 lb. in 1850, or 344 (34.5) per cent. The former metal was in 1850, therefore, apparently increasing at the grow spontaneously. They have been in rate of 44 (438) per cent. per annum, and the latter at 7 (6.9) per cent.

The following is the estimated produce of the precious metals, in tons, in 1801, 1846, 1850, 1851, and the probable amount of 1852: Gold Silver.

	Tons.	Tons.			
1801	19	856, or 1	lb. of gold to	o 45 lb. o	f S
1846	42	727,	- u	17 lb.	
1850	134	978,	"	7 lb.	6
1851	180	1002,	٤٢	5 lb.	6
1852	242	1027,	"	4 lb.	6

Parker's Wheel.

The people in New Hampshire are determined to test the claims of Parker's Patent by an action at law, before they pay any taxes. No one can find fault with this, if too much is claimed by the plaintiffs. Pay Mr. Parker his just rights, gentlemen, but no more; if you do not infringe his patent you have no right to pay him; if you do, in good justice he should be paid; the right must first be established, and we hope the law-suit will be conducted openly, plainly, and candidly, without great counsel or much expense, so as to do justice-find out the rights of both parties.

Farming in ßig Style.

Mr. Mechie, of Tiptree Hall, England, the same gentleman on whose farm McCormicks Reaper accomplished its great triumph, goes into farming in a style altogether surprising

Scientific American.

Scientific American.

Stereoscopic Daguerreotype.

MESSRS. EDITORS-Directly after seeing the extract from the "London Mining Journal," in No. 34 of the Scientific American, I succeeded in re-producing the solid daguerreotype. My stereoscope is 9 inches long, 6 high, and 5 deep; my daguerreotypes are half sizes, placed upright in each end of the box (stereoscope); I have two mirrors, diverging at an angle of sixty degrees from the centre of the front of the box; there are two sight holes. two inches apart, in the middle of the front of the box; the light is admitted from the back. This instrument produces the most astonishing effect; it brings out the picture ln bold relief, just as if the subject were standing before you in reality. It requires to be seen to be fully appreciated.

I have made a decided improvement on the above instrument: I take two pictures on one plate, two and a quarter inches apart; or, what is still better, on two plates joined together atterwards. I always place my two cameras at an angle of thirty degrees, in taking the pictures, keeping the eye of the subject directed in a line drawn directly between the two cameras, thereby producing what we might call a right and a left picture.

When I wish to produce the solid pictures, I simply look at the so arranged plate, through a common opera-glass, having the concave glasses taken out and convex ones put in their place, although the latter are not absolutely necessary. A yet simpler mode is to look at the above-named plate through a pair of common spectacles, having glasses of short focal distances; but the opera-glass is the best, in asmuch as it can be set to any focal distance, and it prevents the reflection of surrounding objects.

I perceive that our leading daguerreotypists have taken the matter in hand, and I expect to see them produce beautiful pictures which will rapidly take the place of the old kind. J. F. MASCHER.

Philadelphia, June 13, 1852.

[A sharp controversy has taken place between Sir David Brewster and M. Claudet, about photographs taken by lenses, it has appeared in the "London Times." Sir David Brewster asserts that photographic portraits deviate more and more from truth as the lenses increase in diameter. He advised the search after more sensitive materials and the use of small lenses. He says," that while M. Claudet will continue to practice his art, as he has hitherto done, with large lenses, others," he hopes, " will not disdain to guide the light of the sun by the light of science." He is very sharp on poor M. Claudet, and says he produces a copious number of grim anamorphoses of humanity, which have the merit of showing how well people look in their winding sheets. M. Claudet replies, and has greatly the advantage of the Scotch philosopher in tem per and discreet language; in fact, he shows Sir David to be very inconsistent, for he awarded Claudet the only Council Medal at the Great Exhibition for his pictures, while now he denounces them. He says he will prove "that perfect lenses, of 34 inch aperture, and a sufficiently long focus, operating at a distance of 12 feet, are capable of giving a correct representation of the human form, and producing binocular portraits, to be raised into relief by the stereoscope without exaggeration, and he stands ready to repeat them before any scientific persons interested in the question." Here, then, Claudet marches right to the point in settling the dispute with the famous Optician-the greatest of this or any other age-and it would be nothing wonderful

scattered over Boston, are struck simultaneously with heavy hammers, by the touch of a single finger, at the Central Office, where an alarm of fire comes in over the wires from any one of the numerous signal stations in difterent parts of the city. Thus, frequently, within a few weeks, the bells all over Boston, have begun to strike the District number within a few seconds of the first discovery of a fire in some remote precinct. This is believed to be the first application of the telegraph to produce the effect of power at a distance. It is also the most thorough municipal organization which has yet been attempted, endowing the Municipality with nerves of sensation and motion, with brain and muscular apparatus.

My part in the originating of this system, dating back to 1845, has already been sufficiently stated in your journal. As early as 1848, Mr. Farmer's electro-magnetic escapement, for the liberation of powerful striking machinery, was constructed, and his attention was directed to the mechanism of the system, the right to some parts of which he has secured. After my communication, in March 1851, to the City Government of Boston, Mr. Farmer entered at once into the work of practical arrangement and adaptation, giving proportion and form to the various parts, combining their operation, devising new safeguards and instruments, and contributing so much to the system in its present effective operation, that I wish always to ascribe to him a fully equal part with myself in its production.

I may be allowed to add that the construc tion, in Boston, has presented difficulties, apart from the first application of a new system greater than would exist in almost any other city in this country. Where there a few large fire bells, with suitable tolling apparatus already provided, the application, with the experience now acquired, would be easy, and an indefinite amount of power could be obtained. Any communication addressed to Mr. Farmer, with regard to the extension of the Fire Telegraph in other cities, would receive also from me such attention as it would be in my power to give. WM. F. CHANNING.

Boston, June 14, 1852.

(For the Scientific American.) New Instrument for Navigation.

As your paper is the medium through which the public receives information of nearly all the improvements in arts and sciences, at the present day, I have taken this method to make known a valuable improvement in getting the longitude at sea ; or, the Easting from New York city to Liverpool, and the Westing from Liverpool to New York city, or any other place. With a good time-piece in hand -well regulated to mean time-and with an instrument that I have made for the purpose. I make the first observation in the seaport before the ship sails (this can be done at any time of night, if it be clear starlight) ; note down the bearing, the day of the month, the hour, minutes, and seconds, A. M. or P. M. This may be done a week or more before the ship leaves port, provided the time-piece keeps correct time. The subsequent observations can be made at sea, any time in a clear starlight night, and any time of the year, in the northern hemisphere. The subsequent observations are reckoned from the first observation made in port. each one independent of the other. I have a book, containing two tables, which are made for the purpose of saving time in the calculation; also examples made out, giving the answer in longitude, going East or West, and a diagram or figure annexed to each example,-making this method as plain to be understood as to look at the face of a clock

tained at the time of getting the latitude by the Polar Star. This instrument may also be used, in preference to the sextant, in getting the latitude and longitude by the sun. Suppose, at 10 o'clock A. M, observation made; sun's altitude 55°; bearing of the compass 70°, south-east. The sun passes the meridian and descends to 55° altitude; the compass bears 61° south-west, from 70° 9°,-4° 30' south-east or north-west is the variation of the needle.

In taking the angles by this instrument, you have no need of a line and plummet, pendulum, index hand, or vernier hand: yet every five minutes of a degree can be distinctly seen. This instrument can be separated into four parts in one minute, and placed in the cabin for security. JOHN STINSON. Danville, Warren Co., N. J., June 8, 1852.

Recent Foreign Inventions.

TO PREVENT WOOD FROM WARPING .- C. Francoia Tachet, of Paris, has taken out a patent for the following method of preparing wood to prevent it from warping or shrinking. The ordinary method of doing this is to employ two or more thin pieces which are united together with the grain cross-wise, by means of glue or liquid cement, but this only partially answers its intended purpose. as glue, or cement, applied in a liquid state, is always liable to be affected by a moist atmosphere, and the expansion produced thereby, and the subsequent unequal contraction in drving, causes a certain amount of warping Now the object of the patentee is to unite pieces of wood together, as to render them independent of atmospheric influences, and this he effects by employing the cement in a dry and powdered state, and applying heat to the exterior of the pieces of wood to be united, so as to effect the melting of the cement by transmission. The cement which the patentee employs is gum lack, alone or in combination with other materials. This he reduces to a powder, and sprinkles evenly over the surface of one of the pieces of wood to be united. He then lays the other pieces of wood on the cement-covered surface, and repeats the process of sprinkling cement and applying thicknesses of wood according to the ultimate required thickness to be produced. He then clamps the pieces of wood together and applies sand heated to about 300° centigrade to the exterior surfaces, and continues this application of heated sand until the cemert is melted, when the sand is removed, and the air admitted to cool the wood and set the cement When quite cold, the prepared wood is removed from the clamping- press, and may then be applied to any useful purpose.-[London] Mechanic's Magazine.

We commend this invention to the attention of pianoforte makers, and all cabinet makers in general.

Tomato Figs.

The following is the method of preserving tomatoes in Bermuda, and thereby manufacturing a sweet preserve something like figs :-"Take six pounds of sugar to one peck (or sixteen pounds) of the fruit, scald and remove the skin of the fruit in the usual way, cook them over a fire, their own juice being sufficient without the addition of water, until the sugar penetrates and they are clarified, they are then shaken out, spread on dishes, flattened, and dried in the sun. A small quantity of the syrup should be occasionally sprinkled over them whilst drying after which pack them down in boxes, treating each layer with

powdered sugar. The syrup is afterwards

the variation of the needle; this can be ascer- into a contract with that city, the State, or the General Government, to deepen the channel over one of the bars at the mouth of the Mississippi. He proposes to give a depth of at least twenty feet, by the lead, at low water. over the shallowest part, and to make the channel wide enough for a tow-boat with one ship on each side to pass at all times: to maintain this condition of the bar for twentyfive-years-when the same process could be again applied-for the sum of one hundred thousand dollars per annum. The first instalment to be paid only when the depth and width shall have been made. Should the depth of twenty-five feet. instead of twenty teet be obtained, the sum of \$125,000 will be paid.

> The plan of operations has been submitted, to many professional and practical engineers, and no objection has yet been made to it.

Artesian Wells in Arkansas.

The Dallas (Ala.) Gazette says that the first Artesian well of Mr. J. E. Mathews, in Cahaba, 1s completed. It is 735 feet deep and sends forth a stream of water measured at 1,200 gallons per minute. The famous French well at Grenoble, it is said. does not discharge more than half this quantity. "The water (says the Gazette) boils up, roaring like a cataract, forming a branch of considerable size, and the low grounds, some two hundred yards distant, require ditching, to carry off the immense quantity of water collected upon its surface.

Mr. Reid, the successful borer of this well. has commenced boring another, some sixty yards distant (for Mr. Mathews) which will be some 1,500 or 2,000 feet deep. To prevent injury to the first, it is necessary to make the second one much deeper, so as to reach a different stratum of water. The first well is tubed, as the second will be.

Mr. Reid is also boring a well for Dr. English, two hundred yards distant from Mr. Mathews. It is now 536 feet deep, and discharges 200 gallons of water per minute."

A correspondent of the Gazette gives the following in relation to the first well of Mr. Mathews, which was bored for the purpose of obtaining sufficient water to supply a steam cotton mill :-

First, a well was dug in the ordinary way, 32 feet through the red clay sand and gravel lying upon the rotten limestone. A large pine log was then procured, and a hole 34 inches in diameter bored through it. After sharpening the end, and putting an iron band around it, the log was put down and firmly driven and forced into the rock. The well was then filled up-the upper end of the log appearing about a foot above the surface. The boring then commenced, and, with the various tools and contrivances of the art, the earth was rapidly penetrated.

As each lower sheet of water was reached by the tools, the water was thrown up by the whole in greater quantities and with more violence. When the "first water"-that is, the water just below the first sand stonewas reached, the upward flow of the water did not exceed seven gallons per minute. It was increased to one hundred gallons when the second sand stone was perforated, and on reaching the third sheet of water, upwards of 300 gallons per minute rushed up through the orifice, seemingly impatient of its limits.

Thinking that the quantity of water would be increased by enlarging the hole, they rimmed out 94 inches in diameter, and 538 feet deep, to the sand stone lying above this third bed water, and inserted a tube from the first, and resting upon the third sand stone. They

(For the Scientific American.) (For the Scientific American.) The Electric Fire Telegraph. Your paper of June 12 contains a very kind reclamation from A. A. Pope, of Somerville, Mass, in my behalt, as originator of the Elec- tric Fire Telegraph. I wish, with your per- mission, to add a word in justice to the partta- ken in this enterprize by Moses G. Farmer, the constructor and present Superintendent of the Fire Alarm in this city. The present performance of the Fire Tele- graph, in Boston, may be first briefly stated, as the basis of its claim to scientific novelty	next, the present observation, and the exact time; then turn to the tables, there is nothing to be done in the calculation but to add or sub- tract. The observation can be made in ten minutes, if the ship runs steady, and the calcu- lation in less time. I use none of the planets, or their satelites, in my calculations, excepting the one we stand on; I would prefer that the moon should be below the horizon at the time of making the observations. This instrument is so planned that there can be a compass attached or de-	from year to year, and retain their flavor sur- prisingly, which is nearly that of the best quality of fresh figs. The pear-shaped or sin- gle tomatoes answer the purpose best. Or- dinary brown sugar may be used, a large por- tion of which is retained in the syrup. The Mouth of the Mississippi. A distinguished officer of the Engineers of the U. S. Army, who has long resided in New Orleans, and who made good use of the many	were not disappointed. The water from a small stream became a large column rushing upwards with violence, at the rate of 1,300 gallons per minute, and running off in a consi- derable rivulet. The walls of the Buffalo Republic printing office fell last week with a tremendous crash, burying several compositors in the ruins. They all escaped most miraculously, with a few bruises, the cases and imposing stones supporting the roof and bricks, and giving them time to creep out. The forms, type, &c., were all knocked into <i>pi</i> . John Cunningham, the American engineer

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Scientific American.

NEW INVENTIONS.

Improvement in Water Closets. Messrs. Daniel Ryan and John Flanagan, of this city, have taken measures to secure a patent for an improvement in Water Closets. It is well known that improvements in such apparatus are of great consequence, and therefore of no small value. The nature of the improvement consists in surrounding the upper part of the bowl seat with a chest or penstock into which the water from a supply pipe flows and discharges itself in a solid sheet around the conical sides of the seat, and flowing into and cleaning the pan at the bottom of the bowl seat. There are some other improvements of an excellent character, but we cannot render the subject so intelligible as we wish we could, witnout an engraving.

Cloth Measuring in Power Looms.

W. H. Woodworth, of Salmon Falls, N. H. has taken measures to secure a patent for measuring cloth as it is being woven in power looms. A spool of cords, tied together, of different colors, according to the length of the cuts of the web in the loom, is made to wind up on a bobbin, worked by the action of the loom as the cloth is being woven. The apparatus, with the cords, is very neat and small and is secured underneath the breast beam. Thus, for example, a blue cord will indicate 40 yards for a cut, and when this cord is wound up on its barrel, and the next cord, which may be a red one, appears, it will let the weaver know exactly where to take off the cut. It is a better plan than to mark the warp, and is very simple. Part of this invention has been assigned to A. G. Haley, of Salmon Falls.

Coiling and Packing in Spinning.

Peter McKinlay, of Wappinger's Falls, Duchess Co., N. Y., has taken measures to secure a patent for valuable improvements in coiling and packing the slivers and rovings of cotton, wool, flax, and other fibrous materials, during the operation of spinning. The improvements are four in number, but as we design to have the invention illustrated in our columns in a few weeks, we shall not describe its nature particularly at this time. The slivers can be packed in the cans or coiled around rods, or the slivers can be packed without any can at all; the rovings can also be taken away out of each can, when full, without the necessity of removing the can. This is an impor-

John Tremper, of Buffalo, N. Y., has invenof atmospheric air forced and compressed ing the bucket, E, which works within the engaged in moral and lawful pursuits; and to ted a very simple and beautiful improvement within the cylinder by air pumps, by which draught tube. This bucket may have a valve them the object is no doubt a laudable one : on Governors for steam engines. It can be arrangement, in connection with a draught a, in its bottom. Suppose the apparatus to be to us, however, it is not. We had hoped to tube, workmen may descend within the cysunk in a river, and its lower end resting on made at a very small cost in comparison with see a "World's Far" in some part of our the common governor. A vertical spindle relinder to the bottom of rivers and streams, and the bottom, it will at once be perceived that the pumps, B, can force and compress air in country in a few years hence, but this one, it there remove and pass up depositions or parts ceives motion from the main shaft; on this is is our opinion, will prevent it. The London placed a sliding collar, which is connected by of the river's bed, without permitting the air the inside of the cylinder, so as to prevent wa-Exhibition cost our country, one way or anoter from entering into it. The deposits are lifta rod to the throttle valve. The slide, however, to escape from the cylinder. ther, more than two millions of dollars, and has no flexible arms attached to it, to eleed in the draught-tube, C, and this tube acts as F1G. 3. we expected the people of Europe would, at vate the rod by centrifugal action. The cona cut-off for the air. The workman excavates some future day, return us the favor, as they so the bed of the river that is encompassed by struction and operation are different in prinno doubt would. Our New York Exhibition the cylinder, and places the deposits in the ciple, entirely, from the common governors. вО Managers have the glorious object in view of bucket, E, when it is drawn up by the wind-Two straps are attached to the top of the spin-0 making a patriotic pocket full out of their own las, D. The cylinder may be made of any redle opposite one another, and the lower ends countrymen. quired length by having it so constructed that secured to balls on horizontal rigid arms. These are our views on the subject ; it will section after section can be added to it. The which are secured to the sliding collar. The lower section. F. is made somewhat bellstraps partake in a moment of the motion of 99 mouthed or flaring, and it thus forms a good the spindle, and act upon the balls at once on base for the cylinder. The draught tube may the outer ends of the horizontal arms and lift also be formed in sections similar to that of a up the sliding collar in an instant. The actelescope. In the upper part of the cylinder noble actions characterizing every movement tion of this governor is by velocity and graamong our people. vity, the velocity of the spindle 'and the grathere are lights, b b, made of strong glass. To the pump, B, there may be attached hose, e, as Trial of Fire Engines. vity of the sliding collar. A sudden increase exhibited in fig. 2, for the purpose of convey-We have received a letter from a corresot velocity in the spindle makes the cords of ing fresh air to the bottoms of the cylinder. the arms wind around the top of the spindle, There is also an entrance closet placed un-When the apparatus rests on a clay bottom, and this lifts the sliding collar instantly, when the steam is cut off, and then the gravity ot derneath a man-hole in the top of the cylinno water will find ingress to the draught pipe. der, said closet being within the cylinder, and the balls and collar, when the velocity of the In that case there will be less pressure of air provided with a stop-cock, and also a door at within the cylinder. spindle is thus checked, soon restores the cord the lower part; the closet being for the pur-G is the man-hole on the top of the cylinto its angular rigidity. It is a unique system of checking and balancing for governing the pose of allowing the workmen to pass into der, A; immediately under it is the entrance and out of the cylinder without permitting closet, H. This closet is provided with a quantity of steam required for the engine, so the compressed air to escape. stop-cock, and it has a trap-door, d, on its lowas to preserve a uniform motion of machineer end. The object of this closet is to allow A is a large tube, cylinder, or chamber, made ry. It is very excellent for grist and saw mills and factories. The inventor has taken of any material suitable for the purpose. BB the workmen to pass into and out of the cyare air-pumps on the top of the cylinder, for 'linder without permitting the air to escape. -what they are he saith not. measures to secure a patent.

Railroad Alarm. useful improvement in making an alarm on a locomotive, to warn the engineer of the approaching train, when it is one, two, or more miles distant, and coming on the same track. The nature of the invention consists in arranging and attaching a series of springs, along the track will operate upon levers and rits, alone, can determine its utility.

D. C. Teller, of Cooperstown, Oswego, Co., from the rails as to cause the said springs to ter the cylinder, this would be a cause of N.Y., has taken measures to secure a patent for act upon a rod attached to and extending trouble. The workmen, in passing out of the down upon another locomotive running on the same track in an opposite direction. The rod is designed to operate, by wires or other means, the steam whistle or bell at the ear of the engineer. The invention is one which |f| is a light of glass placed in the centre of it; has arrested the attention of a number of enwires, and levers to an ordinary railroad track, gineers, and in many cases may be of great use in such a manner that a locomotive in passing for single tracks. A practical test of its me-

Figure 2.

H

A

E

cause springs to be thrown out sufficiently far | If the air should escape, the water would encylinder, enter the closet through the door, dthey then close this door and the stop-cock, and emerge through the man-hole, G. q is a screw bolt to fasten the man-hole cap, and it is lifted by taking hold of the two lugs.

The apparatus may be sunk by means of weights attached to it, or in any other proper manner; it may also be placed between two scows, or passed down through a scow.

The above description of the engravings will render the construction and operation of this apparatus plain to all. The inventor has taken measures to secure a patent, and more information may be obtained by letter addressed to him at his residence.

The New York Crystal Palace.

The Managers of the New York Riddle's Fair have published a card, stating that \$200,000 were required to commence the project, and that \$184,200 have been subscribed. As we have already stated, the great object of the Exhibition is not the glory and honor of our common country, but the gain of the almighty dollar. The circular signed by Theodore Sedwick, President, and all the respectable managers, presents the profits to be made, as a most complete and forcible argument for subscribing for stock. They state that 9,720 visits, at 50 cents each, may be expected every day for 150 days. Let us quote the rest from the circular :

"The exhibition of the American Institute, usually held at Castle Garden, has three or tour thousand visitors a day. It is surely not extravagant to estimate double the number for the Reservoir Square Building. Any way, therefore, this calculation will be found a safe one. Now look at the financial results:

1,458,000 visits, at 50 cts., is . . . \$729,000 The estimated cost of the building is \$150,000

Contingent expenses of freight, insurance, and

management 100,000 Add for short estimate . 50,000

300,000-300,000

Total \$129.000 Here are arguments for you: they are indeed worthy of stockjobbers, but not of those who would desire to have a World's Fair in

make no difference with us whether the atfair takes place or not; in fact we know the Exhibition will be a benefit to New York city, but we like to see good principles and pondent, informing us of a trial which took place in Newark, N. J., on Thursday afternoon, the 17th inst., between two fire engines; the one, No. 2, being built in Newark by J. & L. Allen; and the other, No. 8, by James Smith, of New York. These are both pianos. They played into one another alternately for five minutes. No. 2 washed No. 8, and then kept clear of her water. No. 2 threw a horizontal stream 168 feet ; No. 8 167 feet 5 inches. No. 3 is built with some improvements,



machine invented by Abram Bronson, of fig. 2, is the draught passage or pipe, placed North Fairfield, Huron Co., Ohio, for digging in the middle of the cylinder; this tube may and seeking for gold in the beds of streams be attached firmly to the upper part of the cy-



The accompanying engravings are views of the purpose of compressing air within it. C,

our country, upon the same principle and capalinder, or it may be attached in any flexible and rivers. tant advantage. The invention is of great ble of rivalling the London one. The gentle-Figure 1 is an outside view of the machine; manner by means of india rubber, &c. By moment to our manufacturers; the inventor men managers appear to have envied the mofig. 2 is a vertical section, taken through the having the draught pipe flexibly attached, the stands high as a thorough and skillful man ney-making taculties of Mr. Barnum, but it middle of it, and fig. 3 is a plan view. The lower end of it may be passed over the whole fully acquainted with all the defects and adwill take them all pressed together to equal same letters of reference indicate like parts. area enclosed by the bottom of cylinder A. vantages of our present spinning machinery. him in Museum Exhibitions. We certainly The nature of this invention consists in dis-Directly over the draught tube, C, there is wish them all success, for we cannot wish Improved Governor for Steam Engines. placing the water within a cylinder by means placed a windlass, D, for the purpose of raisfailure and misfortune to any person or persons

American. Scientific

Scientific American answer; ours is, "all things are done well;" there is beauty over all this delectable world.

NEW-YORK, JUNE 26, 1852.

Man and the Atmosphere.

One of the best arguments in favor of our earth being a special creation, opposed to the nebular hypothesis, or the nonsensical electrical matter theory, is derived from the atmosphere, that wonderful ocean of gas in which we live, and which we inhale at every breath. Viewing natural laws as the operations of matter (not the properties of it, which all high natural-law theorists blunderingly mix together), we cannot conceive how the moon could ever have been a part of this planet in a gaseous or fluid state, according to the nebular hypothesis. The moon has no atmosphere, no seas, no lakes, no rivers. Those men who talk of natural laws being eternal and universal, and of the whole of the planets, with their satelites, and the glorious sun, being at one time a huge mixed mass of gas, out of which they were resolved by gravity, have never profoundly reflected upon the simple question of "respiration." The same laws are not in existence throughout every part of the universe. There may be laws in active force in some of the planets unknown to our planet, and of which we cannot have the remotest conception. It must be so with respect to the solar orb; philosophers have written and talked much about the cause of solar light-how it is produced-but the subject is still shrouded in mystery. On the moon's surface no gentle dews distil their sweets, and no refreshing shower falls upon the lava rocks there; no flowers bloom, and no sweet sound nor perfume float upon the gale; there is no breeze for there is no atmosphere.--all is a lifeless dreary waste. Those who recognize moral laws as eternal principles-and none but the morally insane deny them-know that no moral law is in force in the moon, for moral principles are properties connected with intelligent and responsible beings. If our planet had no atmosphere, no living creature would be seen moving on its surface. The atmosphere must, from its very nature, have been specially created for man, and man especially created for the atmosphere. His muscles are solid pieces of the principal element of the atmosphere. It is composed of 79 parts nitrogen and 21 oxygen, and this very composition is evidence of a special design. A tull grown person takes 40 cubic inches of this atmosphere into his system every three seconds, and no person could exist for one minute if deprived of air, and if its composition were different it would be incapable of supporting life. Why this should be so, we cannot tell; we only know that such is the fact-one over which man has no control, to alter or amend, by any invention whatever. Man did not create this atmosphere for himselt, nor did the atmosphere call itself into existence for him, and the natural law that could call them into existence, apart from the fiat of a great Intelligent Being, according to some theorists, must be one they have dreamed about, for such a law has never had an existence since time be-

gan on this earth. To produce the simple act

of respiration-breathing-both the atmos-

phere and man must have been specially crea-

ted with the properties and qualities which

they possess. The oxygen performs the most

active part in respiration; it is extracted from

the nitrogen in the lungs, and combines with

the carbon and hydrogen in the system, form-

ing oxygenated compounds, such as carbonic

acid gas, and the vapor of water; these pro-

ducts are expelled from the lungs. The oxy-

answer; ours is, "all things are done well;" It has been said that "nitrogen is a poison and oxygen is the vital air :" this is a great error: oxygen is just as much a poison as nitrogen,-our atmosphere proves this. Oxygen is no doubt the active agent of respiration, but it only serves its purpose as combined with 79 parts of nitrogen to do this. In life it is the fruitful agent for sustaining our bodies, but it is also the fruitful agent which at last brings down the strong man to the grave and re-composes his frame into the clods of the valley, from which it originally sprung

Who Rules the Country?

We boast of being the most free, happy, and best governed people in the world. The boast is no doubt true, but in making it, we should always take the exceptions into consideration. We are at least the most governed people in the world, if legislation is any criterion, for it is interminable. We have universal suffrage, and the charter of our liberties proclaims the doctrine-" rulers receive their just powers from the consent of the governed." But who make, and who are our rulers-the universal people? We do not think so. If all the men in these United States were asked, 'what part did you take in electing the rulers of our Confederacy," we are confident that eighty out of every hundred would say, "we voted to elect the nominees," the other fifth part of our voters could say, "we got them elected." The great mass of our people submit to be led; they are the most patient and accommodating people on the face of the earth. The city government of New York would perhaps not be tolerated in a single city in Britain; the abuse of power, the squandering of money, the enormous taxes, are without a parallel in any city in the world. yet our people bear it with great patience.

We have a Congress at Washington, but its members do not make all the laws; they speak and vote upon them, but some of them are made in New York and other places before Congress assembles, and the members have the privilege of voting for them and making them effective, just like the eight-tenths of our people who vote for political nominees at elections. We have what is called "The Third House" in Washington; this is a selfelected body composed of what are termed "lobby members," these men make quite a number of laws, to the great disgrace, sometimes, of the Senate. The lobby members belong to every class, each having its own peculiar interests to advance; they care not for their country nor liberty, their own benefit is the sole object of their outside legislation. It is thought, here, that with plenty of brass in their pockets and faces, they can accomplish almost any object. In our last number, on page 314, we noticed a Bill which had been introduced into the Senate by Mr. Dawson, for making the acts of the Chief Clerk of the "Patent Office " legal. We merely remarked that we did not see the use of this Bill, but since then we have learned that it is a most disgraceful one. The Senate passed it and sent it down to the House of Representatives, but on Monday, the 14th, the Senate, by a vote, recalled it, for it contained the odious provision of "making all the acts of the Chief Clerk of the Patent Office, and the Commissioner of Patents, valid and effectual at law." Had this Bill become a law, fraud, corruption, and every evil deed might be made valid and effectual at law, by the Chief Clerk and Commissioner of Patents. Why is such a Bill introduced at all; there is no necessity for it? Some of the Senators must know why it was

Fresnel's Light-house Reflectors. History tells us that the grandest lighthouse ever erected was the celebrated colossal statue, which strode over the harbor of Rhodes. Ancient lighthouses, even among the maritime Phœnicians and Greeks, were merely fires made of wood, and kept burning upon tall cliffs, or else dim lamps kept burning in rude towers. It was easy, in past days to delude the weary mariners buffetting the storm and billow by the false bonfires of those land pirates, who, both in France, Spain, Ireland, and Britain, were, at one time, so numerouswhose profession was to illure, by false lights, the storm-stricken sailor to some destructive rock, then murder those who escaped the sea for the plunder of the wrecked vessel. Those days have gone past, more by improvements in marine beacons than the humanity of the age or the vigilance of governments, but it is not long since those improvements were made. In modern times, England has, for a long period, been the most eminent marine nation, consequently, as her coast is very dangerous, great attention has been paid to the construction of good lighthouses. The three most wondertul sea structures of light-houses in existence belong to her; they are the well known Eddystone Lighthouse, built by that famous engineer Smeaton, the Bell Rock Lighthouse, and the Skerrevore Lighthouse. The Eddystone Lighthouse was completed by Smeaton, in 1759. It is 68 feet high, and the base 26 feet in diameter being barely less than the surface of the rock on which it stands). It is built of stone; the stones are dovetailed together, and "joggled," as it is termed, so as to prevent the courses of stones from sliding on each other. It is situated in the midst of the sea, nine or ten miles distant from Plymouth. Tallow candles were burned in this lighthouse for forty years after it was firished. Then came lamps with twisted-cotton wicks, and then common argand lamps; all these, however, are now superseded by argand lamps and reflectors, one argand lamp with lenses and reflectors, and one argand lamp with lenses and reflecting prisms.

So satisfactory had been the result of the metal reflectors, in lighthouses, that there sæmed little room for improvement, until Fresnel devised the application of lenses, and also reflecting prisms in combination with lenses, to a single large lamp. There are great practical difficulties in fabricating a large glass ens. Condorcet and Brewster suggested, and Fresnel effected the construction of a lens of separate prisms, all unnecessary glass being removed. The great improvement made by him was the substitution of reflecting prisms for mirrors, thus introducing the principle of lighting by one argand lamp lenses and reflecting prisms. When light is falling on the second surface of a prism, it may fall so obliquely that the surface cannot refract it, this incident light is, therefore, totally reflected from the second surface. "If a ray," says Professor Cooper," enter the glass prism so as to make the angle of incidence greater than 41° 49', it is totally reflected." Fresnel tried the illuminating powers of this light, in 1843, against those of mirrors, and tound it to be as 140 is to 87. The first light of this kind, on a large scale, put up in a lighthouse, was by Stephenson. Fresnel is a Frenchman, but England, having always an eye to marine improvements, has adopted his mode of lighting more extensively than even France. It is not much we are so far behind in our lighthouse sys- during severe surgical operations. The hytem. We hope that what we have said may dropathists have thus expressed themselves. be the means of doing some good for our har- We believe that there is no danger in the use

an excellent principle. Burnet's Water Cooler, patented last year, and for sale by J. & C. Berrian, 601 Broadway, this city, is an excellent and at the same time handsome apparatus for economizing ice. The Cooler is made like a hollow cylinder, with a jacket, having its division filled with some good non-conducting material. The ice is placed inside with the water, and as the atmosphere does not come in contact with it and the water, none of the cold is absorbed by the hot air on the outside. This is the way by which the ice is saved. There is a pan for keeping fruit under the cover, and it is very convenient for offices, stores, workshops, and private dwellings. Two pounds of ice to the gallon of water will keep it at 40°-only 10° above the freezing point-all day. We have one of them in our office, and consider it to be a great improvement over the earthen jars which, at one time, were so much in vogue.

Preservation of Meats.

In Houndsditch, London, there is a large establishment for making "preserved meats." Meat and vegetables are put up in canisters, which keep for many years if the operation be performed in a proper manner. All the heating is done by steam, and by a very peculiar process. The canisters, filled with the meats to be preserved, are put into a brown-looking mixture, which looks like chocolate. No fire is visible, but the vessels containing this liquid are ramified with steam pipe. This liquid is the chloride of calcium; it will not boil under a temperature of 320°; there is a most important object in using it instead of water, which boils at 212°. A great heat is obtained without steam, and this is just what is wanted. The canisters containing the provision, before being placed in the bath of the chloride of calcium or lime, are closed permanently down, with the exception of a small hole in each, not much larger than the prick of a shoemaker's awl in the cover. The cook stands watching, with a cold sponge and a soldering tool. Whenever he sees steam issuing in a small jet from the hole in any canister, he knows the enclosed air is driven out of the canister, and whenever he is satisfied the viands are perfectly done, he squeezes from the sponge a drop of water in the hole, the steam is at once condensed, and then he drops a plug of molten solder in the opening, and thus hermetically seals the canister. All the canisters are treated in this manner. Meat put up in this way has been known to keep good for years, but if, by any accident, the air gets inside, it putrifies in a short time. It is the air which causes decomposition in all animal substances: it is the grand agent of both life and death. One sign or putrifaction, in such canisters, is their bulging outwards; those which are fresh have a concave surface. This mode of preserving meat and vegetables is a very excellent one, indeed, if proper care be taken in the selection of good meat, and the careful expulsion and exclusion of air. One defect of the system is, every canister purchased by a stranger must be by faith, for there is no way of finding out what the quality of the viands is. In this respect it is inferior to the patent 'Meat Biscuit " of Gail Borden, Jr.

The Use and Application of Chloroform.

The medical journals have been discussing the chloroform question again. A few deaths by its use has excited much attention, and some have come to the conclusion that it to the credit of our go-aheaditive spirit that should not be used to render people insensible dy sailors. We hope it will never again be of chloroform, if applied with discretion. The

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gen acts as the supporter of low combustion, introduced. There is surely something "un der the rose" here. Senator Seward, it is and the human body in life is like the "burning bush," burning but not consumed. Why, saic, knows all about it. The Committee on it might be asked, was man made to live on the Judiciary, through whose hands the Bill bread &c.? If his body be principally composed passed, was declared by Senator Geyer to be of water, and the principal element of the atunacquainted with the Patent Laws. The mosphere, why is it that he has to toil for a majority of our Senators are also, or they food to keep up life, which merely goes into would not have uttered such sentiments as his system to be quickly expelled therefrom ? are reported in the " Congressional Globe," in Why is he made to require such food as dethe debate on the Patent Laws. The Reportmands unceasing toil to procure it, or the saer for the Telegraph appears to have an uncrifice of other lives to enjoy. Why was he derstanding with the members of the "Third not made so as to teed upon air or water House," as a few lines is all that he has refor food ? These questions are all vain; | ported to the daily papers here, of one of the the nebular hypothesists, who endeavor to acmost important debates that has taken place count for all things, may be able to give some ¹ during the present Session.

said that expensive lighthouse apparatus was | deaths which have resulted from its applicaimported to this city, and lay in our Custom | tion have been very few, considering the ex-House, unheeded, until it was sold at auction tensive use which is made of it. Its uniform success and safety rendered those incautious for old metal, to some cunning fellows who knew what it was. This was done, and our under whose superintendence the deaths were produced. In every case the quantity emgovernment had no little trouble to get the ployed should be weighed or measured, but it apparatus back again; the case is still at law. is often given without the least attention be-

Burnet's Patent Water Cooler. ing paid to the exact quantity Employed. The use of ice in hot weather is indis pensable to health and comfort, when used prudently. Its employment is becoming more general in every family, rich and poor. We have often regretted the great waste of ice by the common means of using it; this has, we The two candidates are-Gen. Scott, Whig; are happy to say, been remedied by coolers on ¹ Gen. Pierce, Democrat.

Candidates for the Presidency. Gen. Scott received the Whig nomination for President on last Monday, at Baltimore ; no less than than 53 ballottings were cast.

Scientific American.



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Reported Officially for the Scientific American LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING JUNE 15, 1852.

FASTENINGS FOR GARMENTS-By E. B. Belknap CASILIAUS FOR URAMENTS-BY E. B. Belknap. of Spring Garden, Pa.: I claim the combination of the catch plate with the plates above and below it, as described. I claim the perforated bar for preventing the in-strument from turning, the whole being arranged and acting substantially as set forth.

VALVES OR GATES FOR OBLIQUE FLOAT PADDLE WHEELS-By J. C Carncross, of Philadelphia. Pa. : I claim the series of radial winged and pivotted gates for preventing the water, acted on by the paddles, being moved laterally as they move through the wa-ter, and opening to deliver the water freely at the proper time, arranged and operating substantially as described.

MILL FOR CRUSHING QUARTZ-By J. W. Cochran. of New York City: I claim giving motion to the balls between the two plates or discs, in the manner and for the purpose specified.

PIANOFORTES-By Wm. Compton, of New York City: I claim making the perforated bridge for the upbearing of the strings, a part of the solid arched frame or plate, as described.

GRANULAR FUEL FROM BRUSHWOOD AND TWIGS. --By Reuben Daniels, of Woodstock, Vt.: I claim the granular fuel produced from brushwood and twigs by cutting the same into lengths about equal to its average diameter, as described, as a new ma-nufacture. nufacture

[Would Mr. Daniels consider any person infringing his patent, who took his axe and cut twigs and brushwood any length he chose, and used them for fuel? We believe this would not be an infringe ment

CAST-IRON CAR WHEELS-By Peter Dorsch, of Schenectady, N. Y.: I claim the double reversed cor-rugations connecting the rim and hub, forming and acting as described, and the combinations of these corrugated parts with the annular cylinder between them and the hub, as described.

MACHINES FOR MAKING CIGARS-By Wm. Daw-son, of Huntington, Ct. : I claim the manner descri-bed of making cigars, viz., by combining with the cutters and followers which cut off and feed in the requisite quantity of tobacco for each cigar, the roll-ers for rolling up the fillers, and putting on the wrappers, said rollers having the requisite arrange-ment of parts, so as to open to receive the material, and close to form the cigar, and again open to deli-ver the finished article, in the manner substantially as described

as described. I also claim the making of the roller which feeds in the wrapper, of less diameter than the rollers which form the filler, so that the filler may move at an increased velocity over that of the wrapper, for the purpose of more evenly spreading out the wrap per, and winding it more tightly upon said fillers, substantially as described.

POLISHING DAGUERREOTYPE PLATES-By Town send Duryea, of Williamsburgh, N. Y.: I claim the horizontal reciprocating bed, operated in the man-ner described, or in any other equivalent way, in ner described, or in any other equivalent way, in combination with the frame, for the purpose specified.

ALARM LOCKS-By Chas. Fleischel, of New York City: I claim the combination of the slide and but too, constructed for the purpose of making and break-ing the connection of the bell and hammer with the bolt catch, latch. or fastening of the lock, substan-tially as described I also claim the combination of the lever with the bolt and catch or latch of the lock, by means of which the movement of the catch is prevented, when the bolt is projected, and the catch is drawn by the same key which has drawn the bolt, construc-ted and operated substantially as described.

PREPARING COTTON YARN FOR THE MANUFAC PREPARING COTTON YARN FOR THE MANUFAC-TURE OF DUCK AND OTHER COARSE FABRICS-BY H. N. Gambrill, of Baltinoie, Md.: I claim the pro-cess described of preparing yarns for coarse cotton good, but more particularly for cotton duck, by pussing them through, between moistening rollers, or otherwise wetting them, and then passing them over or around grooved or plain heated steam pipes or rollers, for removing their elasticity, smoothing and condensing them, whilst in a state of proper teusion, substantially as described.

ORGANS-By Albert and George Gemunder of URGANS-BY Albert and George Gemander of Springfield, Mass. We claim the use of a separate air chamber for supplying wind to all the pipes of a single stop, as described, and as opposed to the old me-thod of having a single air chamber supply all pipes of the same note or letter in the different stops.

And foally, we claim the combination of air cham-bers such as are described, with valves communica-ting with the several pipes, and operated by mecha-nical agencies, such as are shown, substantially as described.

CARRIAGE AXLES-By Kingston Goddard, of Phi-

PREPARATIONS OF ARCHIL-By Leon Jaros New York City: I claim mixing and treating lichen rocellus with a volatile alkali, urine. and clear and fully saturated lime water, in the proportions and after the manner set forth, for the purpose of pro-ducing a coloring matter known as archil.

[The lime is all that is new in this; soda lye is better.-ED.]

JOINTING STAVES-By Edwin Jenney, of Middle-borough, Mass, & David Rood, of Boston, Mass. (as-signors to Edwin Jenney, of Middleborough. Mass.): We claim, in combination with each carriage or frame. the clamping contrivance or mechanism by which such carriage is held firmly in position, after being moved outwards by a stave, and while such stave is being reduced on its edges, or has the bilge formed on it, such contrivance or mechanism con-sisting of the movable bar, the rocker bar, the lever, connecting rod, and the clamping lever, the whole applied to each carriage and made to act on it, as specified. applied t

specified. And in combination with the lever, as applied and operated in the manner above set forth, we claim the mechanism by which the fulcrum of the lever is caused to more longitudinally or towards the cam for the purpose of producing the effect, equivalent to shortening the rear arm of the lever, and leugthen-ing the front arm thereof, whereby the catter head is made to depart further from the middle of the ma-chine, so as to increase the curve of the bilge, or make it, as it were, with a diminished radius, such mechanism being the stationary slotted plate under-neath the carriage or frame, as a stranged and made neath the carriage or frame, as arranged and made to operate essentially as described. And in combination with the cutter, which pro-

duce the bilge curve, we claim the self adapting planes or plane irous, arranged in front of such cutters, and for the purpose of jointing or smoothing the edges of the bilge, as explained.

SADDLES-By Wm. S. Kennedy, of Philadelphia, Pa: 1 claim the employment of woven rattan, cane, whalebone. or other similar elastic substance, in the construction of the seats of riding saddles, said seats, so constructed, being attached to and combined with the saddle-tree, in the manner and for the purpose set forth set forth.

WIRING BLIND RODS-By F. H. Moore, of Itnaca WIRING BLIND RODS-By F. H. Moore, of Ithaca, Y.: I claim, first, the combining of clenching mecha-nism substantially such as described, with devices for feeding the rod and the wire, piercing the former, and severing, forming, and inserting the latter, whereby I make and firmly attached blind staples in their proper positions, substantially as de cribed. Second, I also claim the pivotted clencher, arran-ged and actuated substantially as described.

HANGING MILL SPINDLES-By Wm. H. Naracon, of Auburn, N Y.: I claim the combination of the bail or balance rine (of the usual shape) with the cock eye of the spindle, by means of the inverted bearing cup, whose shank presses up through, and is made fast in the centre of the said bail, and whose head is enclosed in the inverted socket, which rises above and is male fast to the top of the spindle, sub-stantially as set forth stantially as set forth

BEDSTEAD FASTENINGS-By A. S. Newhouse, of Richmood Co., Ga : I claim securing the rail to the post, by means of a pin, key, and plate, in the man-ner substantially as set forth.

MEAT CUTTERS-By Jos Potts, of Yocumtawn, Pa : I claim the mode of attaching the knives de-scribed, by which they can be taken out and replaced expeditious y.

ORE STAMPERS-By Thos. Reaney, of Philadel-phia, Pa : I claim the employment of weights upon the stamper, substantially as described, to keep up a uniformity of weight as the stamper wears, as set orth. forth.

forth. HAND SEED PLANTERS--By Gelston Sanford, of Elleuville, N. Y.: I claim the method of conveying seed from the seed box, and depositing it in the fur row or hill, substantially as described, viz.: by ha-ving the rods attached in any proper manner to a staff said staff and rods passing vertically through the bottom of the said box, the upper part of the rods having cups attached to them by elastic jointa. the cups having spurs projecting from them, which cant or turn over the cups, when the staff and rods are raised, and throw the seed into the tops of the tubes, when they catch under the projections, the lower ends of the rods forcing out the seed from the tubes when the staff is depressed, and the springs retaining it when the staff is raised. HARVESTRES-BR Wm & Thos Schuebly, of New

HARVESTERS-By Wm. & Thos. Schnebly of New HARVESTERS—By Wm. & Thos. Schnebly, of New York, Gity: First, we claim the arrangement of the bridges beneath the platform, in combination with chain bands, having accommodating knee-formed fingers or rakes, working on pivots and attached thereto. substantially as described. Second, we also claim working the vibrating cut'er between an under and an upper open guard or finger, as described.

LABEL CARDS-By James Sharp, of Roxbury, Mass.: I claim the manufacture of label cards or tickets of cloth and paper, stuck and pressed toge ther, substantially as described.

MAKING CORDAGE-By David Perry, of Fredericks-burgh, Va. (assignor to F & J. W. Slaughten): I claim, first the arrangement and combination of the parts by which the machine is enabled to stop itself

the side opposite to the direction in which the jib tends to swing, so as to make the hauling on the said tackle, or part of the tackle, swing the jib in the op-posite direction to that in which is its tendency to swing when left free. PREPARATIONS OF ARCHIL—By Leon Jarosson, of

STAMPING ORES-By Virgil Woodcock, of Swansharhed was by ungit would at a range-ment of the said arc of cogs and its wheels, the two spur wheels the shafts thereof, the drums, straps. frames, their catch levers and disengaging cams, the whole being applied to the two weights or rams, and made to operate or alternately raise them, disengage them, allow them to fall, and afterwards re engage

them, allow them to fail, and alterwards re-engage them all, as specified. And in combination with the two spur gears and the arc gear. I claim the cam on the wheel, the two spring catches, and the two pins or studs all arran-ged, applied and made to operate substantially as spe-cified.

FRICTION CLUTCH-By Wendall Wright, York City: I claim operating the segments for pro-ducing friction on the inner surface of a loose pulley by means of a thimble on the shaft of the pulley connected with segments by diagonal rods or braces, substantially as described.

DETACHING HARNESS FROM HORSES-By George Yellott, of Bel Air, Md : I claim the manner of con-structing the hames, the saddle-tree guard, and 1 stop, as described so as to enable the driver, at any time. to detach the horse or horses from the harness and buggy. carriage, or other vehicle, by a single pull, or of a cord.

Remarkable Voyage in the Air.

John Wise, of Lancaster, Pa., made his 131st aerial voyage from Portsmouth, Ohio, on the 3rd inst. His balloon voyage was a remarkable one, and the grandest he ever performed, sa far as magnificent sights are concerned. He ascended a little after 4 o'clock in the afternoon, and soon rose to an elevation of 2,000 feet. While slowly sailing along at this elevation, by the range of a hill in Kentucky, three rifle shots were fired at him, one struck the car, but so very lightly that it did no harm. He believes the striking part was mere chance. Those who fired the shots, we have no doubt, did not imagine that there was a person in the balloon. Some exceedingly useful meteorological information was obtained by Mr. Wise in his voyage. These he states are as follows :—

1st. Thunder storms have two plates of clouds, the upper discharging the contents, whatever it may be, rain, hail or snow.

2d. Sheet lightning of an orange color undulates silently between the upper and lower cloud, in a waving motion.

3d. The discharges of electricity take place in the lower cloud, (by discharges are meant thunder and lightning.)

4th. The distance between the upper and lower cloud is not less than 2,000 feet, (this is mere eye measurement.)

5th. The uprising current was not continued higher than the lower cloud, and was rising and whirling as long as I was in the margin of the storm, being in it twenty-five minutes.

6th. The storm was much wider below than above, and the deposite diverging at least 25 deg. from a perpendicular line.

7th. The deposition of hail and rain was thickest in the centre of the storm. I could not, of course, look through it, but I viewed one from its front, the other from behind its line of direction, and they both appeared the same.

8th. Under the shadow of the upper cloud it is very cold, and in the lower cloud it is quite warm.

9th. The upper cloud was moved by the current which always blows from west to east

10th. Other causes than the upper current may affect the horizontal course of thunder storms so as to increase or diminish their violence

I might deduce some data from what was so distinctly observed on this occasion, but will for the present leave that to abler heads, and particularly to Prof. Epsy and the Smithsonian Institution.

Thompson, Conn., was struck and badly injured. The telegraphic wires, which pass within a rod or two of the church, seem to have had considerable influence upon the fluid. Two of the posts which sustain the wires were split, and the wires for some distance thrown to the ground. The lightning rod of the church, by some accident, had been thrown out of place.

Extension of a Patent.

On the petition of John Brown, of Stonington, Conn., praying for the extension of a patent granted to him for an improvement in gaffs of sailing vessels, for seven years from the expiration of said patent, which takes place on the 31st of Dec., 1852

It is ordered that the said petition be heard at the Patent Office on Monday the 26th of July, 1852 at 12 o'clock M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing, must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

THOS. EWBANK, Com. of Patents. Washington, June 14, 1852.

Tunnelling the Hoosack.

A correspondent of the Springfield Republican, of the 14th inst, gives the following account of the state of operations at the projected Hoosack tunnel:-The boring machine is on the ground, but as yet hardly resolved into, its component parts. A mass of cast iron spokes, cogs, wheels, shafts, belts, &c., &c., lay around us, out of which the workmen were slowly (for nearly every piece required a derrick and pulleys to get it into place) re-constructing the ponderous wonder. The carriage for operating the machine is in place, facing a perpendicular side of solid rock, just off the actual line of the road, which has been prepared for the first actual experiment. The immense shaft was being hoisted into position, and then would come the wheel and its accompaniments, and then the driving power, which consists of engines of one hundred horse power, and for which a building was being erected. There have been many delays in getting the machine upon the ground, and in place, and we are told it would probably be six weeks at least before everything would be ready for a start.

Machine for Turning Irregular Forms.

We understand that Thomas Blanchard, of Boston, has assigned his patent for turning spokes, lasts, gun stocks, and other irregular surfaces, to the Hon. James M. Quimby, Mayor of Newark, N. J., and proprietor of the celebrated coach manufactory of that place, for a good round consideration, and that the purchaser is so well pleased with his bargain, he has presented the lady of Mr. Blanchard one of his best family coaches. Several have written us of late respecting this machine, and the above will furnish information not in our possession heretofore.

American and British Ships-A Challenge. The Boston Atlas states that two or three Boston ship-owners have sent a challenge to the ship owners of Great Britain, somewhat to the following effect :- The Boston parties will produce a ship, not less than 800 nor over 1,200 tons register, to compete with any vessel of the same capacity, now built, or which may hereafter be built in Great Britain; the



Scientific American.

TO CORRESPONDENTS.

A. H., of Geo .- Upon receipt of the model we shall proceed with your business with as little delay as possible.

J. W R., of N. Y .- Hollow grate bars, for feeding the water through them to the boiler, are not new if you look on page 204, Vol. 3, Sci, Am., you will find them illustrated and described.

J. R. M, of Fla .- Your subscription will not expire until the 15th of Sept next. W. A G, of Va .- We do not think the "Model

Calculator " would prove of any especial value to your profession. \$2 received on account of another year's subscription.

J. W. D, of Geo - We think you can obtain the mill stone shaft from Messrs. Logan, Vail, & Co., No. 7 Gold st., this city. They deal in all kinds of mill gearing. \$2 received.

J. C. S , of N. Y - An application was made for an extension and reissue of Langdon's patents, one for planing boards, the other for shingles. They both rejected on the 20th of February, but the parties interested were dissatisfied and submitted an argument for a re-examination, on the 4th of May they were again rejected-we think very justly. He claimed that which was not found in his original models or papers. The application was a sigular one, and shows how far designing men will go some

times J. H E., of Tenn - Your favor of the 11th inst. came duly to hand, and will command early atten tion.

II.C.T., of S.C.-Glad to learn of your success with the protector, and shall hope to hear from you again.

J M, of Ohio.-Messrs. M. & J. H. Buck., of Leba non, N. H. can furnish you with such a mortising machine as you enquired for.

J. E., of R. I.-It is probable that your improvement in looms for weaving counterpanes is new, we cannot, however, decide fully without a sketch.

F. B. H., of Ind .- The model we have returned to you at Indianapolis.

J. H. D., of N. Y.-The employment of a balloon to aid in sustaining a boat is an old exploded idea. No good can come out of it.

J. M., of Ohio.-A machine to peg boots and shoes would be valuable, providing it could be made effectual and cheap. We understand that machines for that purpose are in use in the Eastern States, but do not hear much of their practical character. We have no volumes back of the sixth. Price of Vol. 6 bound, \$2.75.

W. W. B, of Wis-There is an instrument named the anemoscope for measuring the velocity and consequently the pressure of the wind. We have never known of it being used on shipboard, but it could be used. The velocimeter is an old instrument. You will find an engraving of the wind measurer on page 46, Vol. 6, Sci. Am.

V. E. R., of Ill.-We think your mill is new and patentable, and advise you to send a model.

L. D., of N. Y .- There is nothing at all new in the suggestion of pressing at both ends of a bale of hay or cotton. It has often been suggested.

W. B S, of N. H -- It has been proposed to employ an india rubber bag in the air chamber. We have seen one used. It is best to have the chamber air-tight, and there is no necessity for any diaphragm.

D. T., of Canada -Mr. Scott's subscription has expired. You Canadians must not forget that it costs us 1 1-2 cents postage on every paper which we send into Canada. and that such amount has to be abstracted from your remittances. \$2 pays for only 40 numbers when sent over the line into John Bull's dominions.

A. A., of N. H.-You mistake the centrifugal force and consider it different from the applied force; it is the applied force, and there is no such a thing as centrifugal force when the body is moving in a straight line.

N. B., of R. I -- We are not familiar with the ar raugement for drying mentioned in the Cultivator, and can give no advice upon the subject.

0 L R, of Geo.-We cannot advise you to file a caveat. When the model is finished send it on, of course we shall do the best for you we can.

S. S., of Ohio.-We do not apprehend any difficulty in getting a patent on the combination as set forth in section third of your drawing. It is totally different from Mr. Brown's invention.

G. M., Jr., of Ill -You would see something about the extra bow in our last number, it is, however, very different in principle from yours. The principle of applying the air as a medium under the boat, was tried by R L. Stevens, of this city, a few years ago; it was a failure, yours is a better plan, how-

E. S. P., of Va.-Your paper has been regularly sent since the receipt of your funds, and we cannot define a reason for its not reaching you properly.

Money received on account of Patent Office busi

ness or the week ending Saturday June 19: A R., of Mass., \$20; S. A. C., of Ct., \$50; P. B., of N. Y., \$55; C. G. B., of N. Y., \$30; N. G. D., of L. I., \$30; J. W., of Pa, \$50; E. & Co., of N Y., \$40; P McK, of N. Y., \$70; G & S., of N. C., \$20; S. I., of N. Y., \$50; J. J. H., of N. Y., \$20; F. C. S., of L. I., \$30; C. W., of Ct, \$20; J. F. M., of Pa, \$30; S. W., of Il., \$10: D. P., Jr., of N. Y., \$55; B. H. M., of I.d., \$32; W. S., of Pa, \$20; H. M., of N. Y., \$3000.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday. June 19:

A. R. of Mass : J. R., of N. Y.; P. McK, of N. Y.; A. M. G., of S. C. ; J. W. H., of N. Y.; J. J. H., of N. Y.; J C., of Obio; B. H. M., of Ind.; W. S., of Pa.; C. M. M., of Pa.

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Persons desiring the claims of any invention which has been patented within fourteen years, can obtain a copy by addressing a letter to this office ;stating the name of the patentee, and enclosing one dollar as fee for copying.

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We publish, and have for sale, the Patent Laws of the United States. The pamphlet contains not only the laws but all information touching the rules and regulation of the Patent Office. Price 121-2 cts. per copy.

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WANTED TO PURCHASE-One Wool Card (single cylinder will do) for one Wool Card W (single cylinder will do) for making rolls for hand spinning. Any person having one to dispose of may state the width. number of workers and strippers, condition of clothing, price, etc.; a second-hand one would do if not much worn. Address, post-paid. JOB RUSSELL, paid, 41 3* Lewisville, Chester Dis., S. C.

MACHINERY IN THE GREAT EXHIBI-M TION-22 Copperplate Engravings of the fol-lowing subjects and numerous woodcuts, are given in the Volume of the ARTIZAN for 1851, price \$3.50: Retort Settings (Croll's Patent) and Wet Lime Puri-fiers, for the Great Central Gas Works; Comparison of recent Improvement in Permanent Ways; Ryder's Forging Machine; Brown's Blooming Machine; Cur-vilineal Planing and Shaping Machine; Ericsson's Calorice.Engine; Hydraulic Mine Lifting Machinery; Pumping Engine, by M. Mazeline; Samuel's Loco-motive Feed Engine; Jetails of the Emperor of the Strustel's Patent System; Calson's Direct Act-ing Engines for the Screw; Long's Steering Appara-tro. Detiched constructions of the Screw (Steering Appara-Steering Apparations of the Screw (Steering Apparations of the Screw (Steering Apparations of the Screw (Steering Apparations of the Screw (Steering

Scott Russell's Patent System; Carlson's Direct Act-ing Engines for the Screw; Long's Steering Appara-tus; Details of a Swedish Ornamental Villa; Wig-gington's Model Dwellings, ventilated on the best principle; large sheet of Designs for Architectural Ornaments in Fire-clay; Result of Experiments of the Commission on the Strength of Iron The four preceding volumes may also be had, con-taining an immense amount of practical information on Givil and Mechanical Engineering; Steam Navi-gation, Shipbuilding, &c. The Artizan may behad of any bookseller in the United States, by order, or any person forwarding an order for 16 shillings ster-ling (\$3,90) on any London house, will have it sent for a year by poxt. Address W. K. WHYTEHEAD. Consulting Engineer, office of the Artizan Journal, 69 Cornhill, London. 37 4eow

MARYLAND INSTITUTE FAIR—The Board M of Managers of this Institute will hold the Fifth Annual Exhibition in the Grand Saloon of the Institute Building, in the city of Baltimore, com-mencing on the 4th day of October next. The great facility thus afforded for a spiendid display of Ame-rican Manufactures, they hope, will be a sufficient inducement for the Manufacturers, Mechanics, Ar vists, Inventors, and others throughout the Uniced States, to contribute such specimens of their indus try, skill. and ingenuity, as shall be alike honorable and creditable to the mechanical genius and refined taste of the country. The Hall will be open for the reception of goods on Monday the 27th Sept next, from which time to Thursday night, Sept. 30, articles intended for competition and premium must be depo-sited. The balance of the week will be devoted to the reception of articles intended for exhibition will be subject to a charge of 50 cents to \$1. On Mon-day, Oct 4, at 7 o'clock, P. M., the Exhibition will be open for the reception of visitors. Circulars con-taining the regulations and arrangements establish-ed by the Standing Committee on Exhibitions, can be had by addressing (post-paid) JOHN S. SELBY, Actuary of the Maryland Institute, by whom any in-formation required will be promptly given. 397 MARYLAND INSTITUTE FAIR-The Board

PATENT ALARM WHISTLE -- Indicators for **P** speaking pipes, for the use of hotels, steamships, factories, store-houses, private dwellings, etc. etc. This instrument is intended to supersede the use of This instrument is intended to supersede the use of the bell, being more simple in its arrangement, more effective in its operation, and much less liable to get out of order, being directly connected with the speak-ing pipe, it requires no lengthy wires in its use, which are continually getting out o' order or break-ing. There have been several hundreds of them fit-ted up in this city and vicinity with the greatest suc-cess. They can be attached to pipes, which are al-ready fitted up without domage to buildings, and for much less than the cost of a bell, and warranted to operate. The public are invited to call and examine them at the factory of the patentees. them at the factory of the patentees. WOULCCCKS & OSTRANDER

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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 lbs., price \$600. 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. 39 26*

TO CARPENTERS AND DEALERS IN PA TENT RIGHTS-The whole right and tile to the Patent Blind and Shutter Fastener, which was illustrated in No. 37 Vol. 7 of the Scientific maximum rill bench chock to each writtener.

BEARDSLEE'S PATENT PLANING MA-BEARDSLEE'S PATENT PLANING MA-chine, for Planing, Tonguing and Grooving 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 preduces work supe-rior to any mode of planing before known. The aumber 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 Broadwaz; Al-bany. GEO. W. BEARDSLEE. 23tf

MACHINERY.--S. C. HILLS, No. 12 Platt-st. N. Y. dealer in Steam Engines, Boilers, Iron Pla-ners, Lathes, Universal Chucks, Drills; Kase's, Von Schmidt's and other Punns; Johnson's Shingle Ma-chines; Woodworth's, Daniel's and Law's Planing machines; Dick's Pressee, Punches and Shears; Mor-ticing and Tennoning machines; Belting; machinery oil, Beal's patent Cob and Corn mills; Burr mill and Grindstones; Lead and Iron Pipe &c. Letters to be noticed must be post-paid. 26 tf

W OOD'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, Bridgeport, Ct.; or WM. WOOD, Westport; Ct., All letters will be promptly attended to. 22tf

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23tf

CHARLES F. MANN, FULTON IRCN WORKS, Below the 'Iroy and Greenbush Railroad Depot, Troy, N. Y.—The subscriber builds Steam Engines and Boilers of various patterns and sizes, from three horse power upward; also, his Portable Steam En-gine and Boiler combined, occupying little space, economical in fuel, safe, and easily managed; Double Action Litt and Force Pumps; Fixtures and Appara-tus for Steam or Water; Tools for Machine Shops; Shafting and Pulleys for Factories. Brass Castings and Machinery made to order at short notice. Steam engines furnished cheaper than can be had else-where, of the same quality. 30tf

John W. GRIFFITHS-Ship Builder and Ma-tine Architect, 658 Fourth st., N. Y., furnishes models and draughts of all description of vessels, with the computation of stability, capacity, displace-ment, and necessary amount of impulsion. Propel-ling power located and proportionably adapted to the form of the vessel. whether sailing or steaming. Mr. G. also superintends the construction of vessels, and may be consulted upon all subjects pertaining to the various departments of the science or practice of ship building. Draughts forwarded by letter to all parts of the world, and to any desired scale; all letters must be post-paid. 27 18*

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A. B. ELY, Counsellor at Law, 46 Wasnington Patent Cases. Refers to Munn & Co., Scientific 13tf B. ELY, Counsellor at Law, 46 Washington American. 13tf

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Longmaid's Improvement in Separating Me tals from their Ores.

A very interesting paper was read before the London Society of Arts in their last meeting in April last, on Longmaid's Process for Separating Metals from their Ores.

When common salt and minerals containing silver, copper, iron, and sulphur, are mixed together, and exposed to the combined action of heat and atmospheric air, mutual decomposition ensues, with formation of sulphate of soda. and chloride of silver and copper, soluble in the alkaline solution thereof. Mr. Longmaid has further discovered that every description of ore containing silver and copper might be treated with great advantage by various modifications of these processes, and the silver and copper economically obtained. The waste of sulphur annually destroyed in the copper works of Great Britain, at an enormous cost of labor and coal, was stated to be from 60,000 to 70,000 tons annually. From this, the original idea was to manufacture sulphate and carbonate of soda. Taking the metals as incidental products in the original process, objections had arisen to its application to ores rich in copper. These were now obviated; and the period was confidently looked forward to when it would be applicable to copper ores generally. The chief points adduced by Mr. Longmaid are, the complete separation of silver and copper, and also lead, when these metals exist in the ore; and the great economy of the process, whereby the sulphur is rendered available for the manufacture of alkali. His late patent refers to the application of the process to ores rich in copper and silver; ores containing about 25 per cent of sulphur, and from 5 to 10 per cent. of copper, are mixed in such proportion that 32 parts of sulphur by weight are added to 100 parts of common salt. The mixture is ground sufficiently fine to pass through a ten-hole seive, the material is then calcined in a turnace of four or five beds, commencing at that farthest from the fire, and gradually being advanced by stages to a greater heat; the charge is finished at the bed nearest the fire; the calcined mass, which is called sulphate ash, is conveyed to suitable vats, in which the soluble portions are dissolved. and consist of sulphate of soda, and chlorides of silver and copper. In the rude process of smelting copper ores, as at present practiced, the sulphur of the ore is not only wasted, but a considerable degree of fuel and labor is employed to destroy this valuable product. The great objection which has hitherto retarded the introductiou of these processes into the copper-smelting works arose from a variety of causes. It could only be used practically on a large scale; the copper-smelters were wedded to a practice by which they had realized such enormous profits, they regarded with distrust schemes which they did not understand, and they had a foolish prejudice against becoming alkali manufacturers; neither could the ordinary copper-works be readily converted into furnaces and apparatus for the patent processes; but the astounding fact that the smelters are destroying property to the extent of 50 per cent. on the value of the ore in their present operations, must sooner or later force these improvements into general

ner illustrated in the engravings; signals of so as to close all the windows except the four Carbonic Acid Gas and the Atmosphere. opposite the flame. The different colored danger or safety can be conveyed to approach-Throughout the whole atmosphere there is distributed a small portion of carbonic acid ing trains. As a night signal for almost eveglass lights are signals to tell which course the world. the vessel is steering. At the top, the signal ry purpose it is the most simple we have seen, Postmasters, being authorized agents for the Scigas. It is derived from springs, volcanoes, light is red, which indicates the north course and it will at once commend itself. Mr. the respiration of animals, plants, and we might also say inorganic matter in a state of of the vessel. The light below is a mixed Dodge has made application for a patent, and warding letters covering remittances. MUNN& CO., one, composed of one half of red plate glass, more information may be obtained from him change, such as limestone when burning, and Publishers of the Scientific American, and the other half plate yellow glass, for a by letter. from all matter in a state of combustion .--128 Fulton street, New York. When mixed with water, it possesses great nor'-west course, and so on for the course of Gum Arabic. INDUCEMENTS FOR CLUBBING. In Morocco, about the middle of November the vessel, whether it is steering north, south. solvent powers. It disintegrates the hardest Any person who will send us four subscribers for granite rock; pure cold water has no effect east, or west, the course will always be indithat is, after a rainy season, which begins in six months, at our regular rates, shall be entitled to cated by the colored light or lights of the in decomposing rocks, but when mixed with July, a gummy juice exudes spontaneously one copy for the same length of time; or we will carbonic acid it becomes a powerful solvent. signal. The lamp is elevated and lowered by from the trunk and principal branches of the furnish Ten Copies for Six Months for a very simple arrangement. I is a horizontal acacia tree. In about fifteen days it thickens \$ 8 This has been demonstrated in a most beauti-15 Ten Copies for Twelve Months, pulley; on its surface the courses E., W., N., ful manner by our eminent countrymen, Proin the furrow, down which it runs, either in a Fifteen Copies for Twelve Months, 22 fessors Rogers, they found no description of S., &c., may be marked out like a compass. vermicular (or worm) shape, or more com-Twenty Copies for Twelve Months, 28 monly assuming the form of oval and round rock that would not yield to water when im- A cord, H H', passes around the groove of this Southern and Western Money taken at par for pregnated with carbonic acid gas. The fact pulley, and one end is secured to the lower subscriptions, or Post Office Stamps taken at their tears, about the size of a pigeon's egg, of diffethat bodies will not burn in carbonic acid, ni- part of the sliding pedestal, G, and the other rent colors, as they belong to the white or red full value. N. B.—The public are particularly warned against trogen, or hydrogen gas, but will when comend to the top of this pedestal. When the gum tree. About the middle of December, paying money to Travelling Agents, as none are ac bined with oxygen, has given rise to a classi- pulley is moved round in one direction, it will the Moors encamp on the borders of the forest, credited from this office. The only safe way to obfication, by which bodies that produce com- elevate the pedestal and lamp, and when and the harvest lasts six weeks. tain a paper is to remit to the publishers.

bustion are termed supporters of combustion, | face is composed-whether or rocks that rise and those which waste away are considered as combustible—hence atmospheric air is ta- whole has been produced by the combustion ken to be a supporter of combustion. These of oxygen, and some other bases with which terms are very convenient, and, when proper- it has combined. ly applied, will lead to no error; but it is now ascertained that there is no difference between supporters of combustion and combustible bodies, which mutually operate on each other, and which act reciprocally as combustible bodies, and supporters of combustion, but strictly speaking, oxygen is well denominated to the fact that water and atmospheric air find "the great supporter of combustion." When their way into the interior of the earth, which ever, and view the materials of which its sur- 'surface.

Scientific

in walls or twining veins, we find that the

American.

This explains the part which oxygen performs in changing the surface of the globe, and to which is to be attributed the reddish still going on, is made more manifest from the consideration that nearly all hot springs point we examine the structure of the earth, how- is indicated by the numerous apertures on its

The gum is packed in very large sacks of leather, and brought on the backs of bullocks and camels to certain ports, where it is sold to the French and English merchants. Gum is highly nutricious. During the whole time ot harvest, of the journey, and of the fair, the Moors of the desert live almost entirely upon it, and experience has proved that six ounces color of soils and rocks. That this process is | of gum are sufficient for the support of a man during twenty-four hours.

LITERARY NOTICES.

SPOHR'S GRAND VIOLIN SCHOOL -This is a large work, revised from the latest German and English editions, and edited by the distinguished U.C Hill. This work contains complete instructures of the distinguished 0.00 Hill. This work contains complete instructions, and em-braces the best elements of music for the violin. The violin, as a musical instrument, is the most dif-ficult of all instruments to master, if indeed it can be mastered; it is a dwarf in stature but a giant in power, and we like it better than any other instru-ment when the performance on it is good; on the other hand, it tries the temper to hear mere scraw-the cat, cut it is a recomposite the scrawlers on the cat-gut. It is very necessary that those who wish to learn the violin should commence right; this is the best work extant for that purpose 1 is published by Oliver Ditson, Boston, and J. E. Gould & Co., this city.

POETICAL WORKS OF FITZ-GREENE HALLECK: 1 Vol., 12mo.; J. S. Redfield, publisher; Clinton Hall, N. Y.-Mr. Redfield is now furnishing the public with a series of publications of a rare and vapublic with a series of publications of a rare and va-luable character. several of which we have already noticed in our columns. The volume before us is made up in faultless style, and adds another testi-monial to the well-earned character of the publish-er, and we feel assured that the public will seek with interest the poems of Halleck, a name long since ce-lebrated at home and abroad, a distinguished author and cotemporary of Bryant, Cooper, and Irving.

The July number of Graham's Magazine is a per-fect gen, and is deeidedly creditable to the cultiva-ted genius of its publisher. Aside from its brilliance as an illustrated and well edited serial, we should not omit to mention the letter press, as a superb speci-men of the art typographical. The prosent number commences a new volume. Terms, \$3 per annum. Dewitt & Davenport, agents, N. Y.

MANUAL OF GEOGRAPHICAL NAMES: by A. J. Per-kins and G. W. Fitch: published by Geo. Savage, 22 John st., N. Y.—The design of this volume is to fur-nish teachers and scholars the etymology of the sci entific terms used in the study of geography, and to explain their meaning. It is an instructive little ook of over 60 pages.

SARTAIN'S MAGAZINE, for July, is a fine number, it embraces a series of pictures illustrating the life of Gen. Jackson, besides others of less merit; it covers 112 pages of well prepared letter press, and is, on the whole, the best number ever issued of this work. Dewitt & Davenport, agents.

The "North American Miscellany and Dollar Ma-gazine," for June, is received from the publishers, Messrs Angell, Engel & Hewitt, New York. It is a cheap and excellent magazine, and deserves patronage.

BEN BRACE—A Nautical Romance; by Captain Chamier, author of "The Life of a Sailor," etc. : price 50 cts, just issued by Messrs. H. Long & Bro-ther, 43 Ann st.

GODEY'S LADY'S BOOK, for July, contains four full page engravings and 112 pages letter press; it is well and ably supplied with contributions from the very best authors, and the publication stands forth unquestioned in point of genuine merit. It is em-phatically "The Lady's Book," and is conducted by one who knows their tastes full well. H. Long & Brother, New York, agents.



Will find the SCIENTIFIC AMERICAN a journal xactly suited to their wants. It is issued regularly every week in Form SUITABLE FOR BINDING. Each number. contains an Official List of PATENT CLAIMS, notices of New Inventions, Chemical and Mechanical; Reviews, proceedings of Scientific Societies; articles upon Engineering, Mining, Architecture, Internal Improvements, Patents, and PatentLaws; Practical Essays upon all subjects connected with the Arts and Sciences. Each Volume covers 416 pages of clearly printed matter, interspersed with from Four to Six Hundred Engravings, and Specifications of Patents. It is the REPERTORY OF AMERICAN INVENTION, and is widely complimented at home and abroad for the soundness of its views. If success is any criterion of its character. the publishers have the satisfaction of believing it the first among the many Scientific Journals in

entific American, will very generally attend to for-

Fig. 1 is a perspective view and fig. 2 a verti- | moved round in the contrary direction, it cal section of an improvement in Signal Lights for vessels at sea, and other purposes, to be used at night and for other purposes. The same letters refer to like parts. The inventor is Thomas H. Dodge, of Nashua, N. H., as noticed by us last week. This is an improvement on his already-patented Marine Signal Light, which was illustrated on page 145, this volume Scientific American.

A is the base of the signal box. The signal box is a hollow pyramid, B, having a number ot colored glass windows on every side, extending from the top to the base; C repreis made to move up and down on a pedestal in the hollow pyramidical box. The light is exhibited on the whole four sides of the signal box. There is a reflector, E, above the lamp, and one placed on the upper surface of upon the colored glass windows immediately opposite the flame in a horizontal line. Slides

will lower the lamp. The lamp can thus be elevated and lowered to be brought always opposite the colored glass window which will indicate the course of the vessel. The box has a door to allow the lamp to be taken out and put in as required. J J are lugs to lift off the whole pyramidical box when required. The cord which works the lamp pedestal is guided over a small horizontal barrel, I, and small vertical pillars sustain it in its motion : F is the ventilating top of the signal box.

This signal is very simple, and can be constructed at no great cost. It will not be afsents the side glass lights; D is a lamp which | fected with water nor the motion of the vessel. In cases of distress the signal may be frequently changed, or some other plan upon the same principle adopted. The precise colors indicated above are not to be understood as embracing the whole principle, for colored the lamp, so that the light will be thrown full glass figures may be used in place of plain glass, and other modifications may beadopted. This apparatus we commend to our rail-

roads for a night signal. It can be erected above the flame and under it, so as to leave a at a small cost at every station, and by runwindow open on every side, may be made to ning the lamp up or down in the simple manmove up and down with the lamp on arms,

