NEW YORK, NOVEMBER 11, 1848.

Railroad in Broadway.

We perceive that this subject is again brought before the public—and perhaps in a a more tangible form than any heretofore contemplated. It is proposed to lay a double track of cast iron six feet in width, rails and track together, and to run a train up and down every ten minutes. The cars are to be very narrow, and the track is promised not to impede the transit of other vehicles.

We do not see the necessity of having the whole breadth—made of cast iron Broad rails would answer just as well, and could certainly be laid down at far less expence. It seems to us that there is a necessity for some plan of general conveyances to supersede the continual increase of omnibusses which have now become almost a city nuisance. The elevated Railways of Randall and De Witt are objectionable but only on the ground of unnecessary expence and inconvenience in comparison with *terra firma* locomotion. "What is the use" it has been said "of building a road above plain level ground—as reasonable would it be to build a bridge over a level and a dry plain—why not build the railway on the ground?" There is some force in these objections to the elevated railroad, and we cannot perceive any just objections to the laying of two tracks in the centre of Broadway. Carriages and carts would pass up and down on each side of the tracks—those going up on one side, and those coming down on the other. A few years would suffice, in the saving of street repairs alone, to pay for the laying of the tracks.

By such a Railroad the public would be better accommodated and there would not be the jamming and cramming scenes of omnibusses, carts, cabs, and carriages which now so frequently happen in the imperial thoroughfare.

The great difficulty will be in establishing branches. The cost of building a railway in Broadway would be small indeed in comparison with one extending from the Park up Chatham-st. and through the Bowery. The only way to remove this difficulty, would be to have a scale of prices. The main Broadway Road should charge no more than three cents from terminus to terminus, and the branch roads no more either. But we believe it would be about a fair price for the Broadway Line to charge only two cents from Whitehall slip to Canal st. and then the Eastern Lines might charge four cents.

We see no great difficulty in the way of establishing various branch lines of city Railroads connected with some Omnibus branch lines, that would entirely reform (for the benefit of all classes) the whole travelling system of our city. It is certainly no great credit to our city to exhibit the dirtiest streets and heaviest taxation of any other city in the Union. Its expenses for last year were $2,709,452, which allowing our city to contain 400,000 inhabitants amounts to the extraordinary tax of nearly seven dollars per head for every man, woman, and child in Gotham. It is no doubt easy to find fault,—but a different thing to apply a proper remedy, nevertheless it would be saying but little for our city's genius or the spirit of modern improvement, if we conclude to stick in the mud or trudge along to the mill with the corn in one end of the bag and a stone at the other on the balance insurance system. But to our tale—let us have a Railroad in Broadway.

The Planet Neptune.

Two years ago it was announced to the unlettered world that Le Verrier a French astronomer had by the dint of sagacity and calculation alone, discovered a new Planet which was named Neptune. A new planet was discovered, but American astronomers declared that it was not that pointed out by Le Verrier. There has been a controversy on this subject among the astronomers of the two worlds, and various reports have gone abroad which have shorn the French astronomer of no small amount of his sudden and high honors. But we perceive by a discussion that took place at the Paris Academy of Science on the 14th of Sept., that Le Verrier ably confounded Mr. Babinet, another astronomer, who held views opposite to the discoverer of Neptune

The controversy however, is not likely thus to end, but whatever may be the ultimate result, these gentlemen will find that all the rolling spheres are but harmonious instruments that move to praise the Great Architect.

Astronomy is a soul elevating Science. We learn that an effort is making to erect an observatory at Princeton, N. J.; this is a commendable enterprise, and it ought to shame our citizens to adopt some measures to erect one here. The city of Cincinnati is far in advance of New York in this respect—for our own credit this should not be

Prizes at Fairs.---Scientific American.

CAMBRIDGE, Ohio, Oct. 31st, 1848.

MESSRS. MUNN & Co.—Among the premiums awarded by the *Guernsey County Agricultural Society* atitslast Annual Fair, were four copies of your valuable paper, the *Scientific American*. You will address them to W. Maynard, James Davis, John Mehaffy and Cyrus Cook, Cambridge, Guernsey Co. Ohio. Enclosed you have $8. Please send from the beginning of vol. 4.

Yours respectfully, C. J. ALBRIGHT.

We publish the above letter for the purpose of making a few remarks on the benefit of awarding such kind of prizes.

A gold medal, a silver medal, a cup, a diploma, may be all very well as prizes in agricultural or mechanical exhibitions, but we confess that in many cases there is no appropriateness in such awards. It is true that they are lasting testimonials of merit, but in fitness they are often of no value. A good book, a periodical of practical and sound knowledge, as awarded in the cases mentioned in the above letter, is of far more real value to many than a medal possibly could be. We do not speak against the awards of medals and cups, by no means, but as our people are a reading people we think that our Agricultural and Mechanical Institutions should at least drop the *diploma*, and award a good book or standard periodical. Although the Scientific American costs only two dollars per annum, yet it is impossible to suppose that among the variety of useful matter contained in our columns, every person who receives a copy will not find something of such personal interest. as will be of more value ten times than the price of the work itself—and beside it is of equal value, yea more, the older it becomes, and we have no doubt but the gentlemen to whom the Guernsey County Agricultural Society awarded copies of our paper, will agree with us in all that we have said.

Mile a Minute Locomotive.

In relation to the splendid Locomotive, the "Camilla," recently built by Messrs. Hinkley Drury & others, Boston, Mass., and which runs 60 miles per hour with ease, we have learned since the notice we published, that the driving wheels are only 6 feet 2 inches in diameter. There is only one pair of them. The Camilla is the first of a new pattern for Locomotives, and it is said will perform still better after having been used for a while.—Weight with water 20 tons. The establishment of Messrs. Hinkley, Drury & others is one of the largest in the United States, and the work they produce challenges comparison with any in the world.

16 Horse Power Engine and Boiler.

Those of our readers who are in want of a first rate Engine and Boiler of the above power, will do well to read the remarks we made in reference to them under the engraving last week.

Barber's Grist Mill.

In the article which accompanied the cut of this excellent mill illustrated in our last number, we forgot to mention that the mills are made also by the Empire Co. of Troy, and that Messrs. Mathews & Felton of that place, are the sole agents for all territory except the New England States.

For the Scientific American.

Crape Shawls.

The silks, satins and crapes of China are most beautiful; but they are too costly, and too much prized in China, to form articles of any considerable trade with other countries. It is curious, that though the silks and satins surpass the looms of Great Britain and France both for beauty of color and durability of texture, yet the silk velvets are far inferior to those produced in England. The Chinese silk velvets, although possessing much substance, have the peculiarly dead hue of an English cotton velvet, and are totally void of the silky lustre of those manufactured at Genoa and Lyons.

The Canton Crape Shawls are very beautiful, but the real Chinese are not so plenty in our markets as some suppose. Plenty of shawls sold for real Canton crape, are made in Paisley, Scotland, and they successfully rival the best productions of the Oriental loom. There are many who may not know how the Canton crape is made, and a short sketch will not be out of place.

When the crape shawl comes from the weaver's loom, it is perfectly smooth and resembles gum silk cloth. But the threads of which this cloth is formed are made with one thread harder than the other, and for deeper craping the warp is harder twisted than the weft.—The difference of twist in the warp and weft as the crapes are twilled, forms all the crimping of the crape, but not until it undergoes the process of boiling. This is done by boiling the shawls in fine white soap for a considerable time, which removes the gum from the silk and by the warp swelling more than the weft, the shawls come out of the boiler with that fine crisp so much admired. All this crisp can be taken out again by stretching the shawls on stenters—hence in the dressing operation care must be exercised not to stretch them too much.

The embroidery of these shawls is performed after the gum is removed. For this purpose the pattern is printed on the shawls with fugitive blue and the flowers are then wrought with the needle. After this the shawls are sent to the dyer's to be dyed and dressed.—Sometimes they are embroidered before the gum is boiled off, but this is not a good method, as silk is deteriorated in lustre by boiling in soap any longer than merely to remove the gum, and to embroider with spun silk on the gummed fabric, would require the embroidery silk to receive too much boiling, and thus dim its lustre. Dr. Ure in his excellent work, says the shawls are dyed in the *gummy* or *raw state*. This is a mistake—except for a very few colors, it is impossible to dye gummed silk, and besides, the natural lustre of the silk is not exhibited till the gum is removed. More than this, suppose the color to be dyed on the silk in the raw state, the boiling to raise the crisp or crape would destroy all the color on the silk. The whole article in Dr. Ure's Dictionary relating to the dyeing and dressing of Crape, is entirely erroneous.

The use of soap to remove the gum of raw silk cannot be recommended, but it is the best and the cheapest with which we are acquainted. Many of our fair ones will no doubt be surprised to be told, that their crape shawls have been boiled for two or three hours in soap. Many suppose that boiling in soap would utterly destroy any silk fabric. This in a measure is true—the operation is a nice one—but there is not a silk dress worn in our city, that has not in the yarn been boiled in soap.

The reason why the Chinese finished silks have a finer lustre than the English and French, is owing to the gum being removed by a tedious and expensive process of steeping the silks in a cold spirituous liquor. In the raw state, before the gum is removed, the crape is of a dirty yellow color, but the boiling in soap removes the yellow gum and the whitish silk appears. But still it is not yet white. It has to be dyed for this purpose.—Some may think this strange, but it is a practical fact. It takes red, blue and yellow rays of light to form a white ray—a tri-unity, like the great Author who created what Milton terms—

——"Holy light,
Offspring of Heaven's first dawn."

The dyer to make his crape shawls white uses in clean soap for that purpose a little archil and fine indigo strained through a cloth. These colors mingling with the yellow of the shawl, forms a white, which is further cleared up by the shawl's being washed out of the soap in cold water, and afterwards submitted to the fumes of sulphur in a close room.

Crape veils are very expensive, and containing as they do, so little silk—this seems unreasonable—but the fine crape manufacture is in the hands of a few foreign houses, and the art of dressing the crape is both a tedious and a troublesome process.

In the last volume of the Scientific American, a patent process for dressing fine crape shawls was described. It was to use a small quantity of dissolved gum copal and borax along with liquid glue to stiffen the crape.—This composition, if rightly made and applied, we have reason to know, is good, and is worthy the attention of those in this and other cities of our country whose business is to redress damaged crape.

American Steamers for Liverpool.

There are building in this city at present five steamers of great size to ply between this port and Liverpool. They will all be about as large as the Great Britain and will measure about 3000 tons. It is calculated that two will be ready to commence their trips about the beginning of next summer. The engine for one of the ships now building, is to be made at the Novelty Works, and those for the others at the Allaire Works, and will each cost about $250,000. The cylinders will be 95 inches diameter and have a stroke of 9 feet. The cost of these steamships will exceed $500,000 each. Five steamers of similar dimensions to the above will ultimately complete the line, one being a reserve boat. The keels of the third and fourth will be laid upon the launching of the two now on the stocks.

The whole line will belong to E. K. Collins, Esq. and they are to carry the U. S. Mail.

The Old Cunard Line of Steamers.

It is reported that negotiations are pending for the sale of the four old steamships of the Cunard line to the Austrian Government, and that if the sale be effected these noble ships, which a few years ago opened so important an era in the navigation of the Atlantic and have been so eminently successful in the transmission of the mails as well as thousands of passengers and millions of money between the two continents will be delivered, so soon as four new steamships can be built to supply their places.

Machinery for Mexico.

The entire machinery for two extensive paper mills, one to be located at the city of Mexico and the other at Gaudalaxara, is about to be shipped from Norwich, Ct. A lot of cotton machinery intended for the Gaudalaxara Spinning and Weaving Company is to be sent at the same time.

Back Volumes of Scientific American.

We are constantly receiving orders for the First and Second volumes of the Scientific American, and as we have no complete sets of either on hand we feel it our duty to make a statement to the public, informing them what orders we can fill, and what we cannot, thereby saving them the trouble of ordering what we cannot furnish.

Of the first volume we cannot furnish even a single number.

Of the second Vol. we can furnish all the numbers except 1, 10, 16, and 17 neatly bound for $2,00 or the volume in sheets minus those 4 Nos. for $1,50.

Vol. 3 we are yet able to furnish complete, either in sheets or bound.—Price $2,75 bound or $2 in sheets—accompanied with an index.

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Planing Machines.

(Continued from our last.)

To make, in any piece, a cut of a given depth, which shall not go through, and which I call a score, you have only to adjust to the depth required, the height to which the saw, through its slit, projects above the bench; which is done by making either the bench or the spindle so as to raise or lower at pleasure. If, after having given any such cut, which does not go through the piece, you turn the piece, so as to give it another cut, meeting and making an angle with the former cut, you may thus cut out a portion of the piece altogether, leaving in it the sort of channel which is called a rabbet: by cutting out, on different sides, two such rabbets, you may leave between them a projecting part, such as is called a tongue; and a tenon is, at the end of a piece, the same thing as a tongue on the side.

To cut a parallel sliding groove or channel, you have only to make the circular saw, or (to use the name I call the tool by, wherever its effect depends upon a degree of thickness greater than necessary to give it strength) the circular cutter, of the thickness requisite to form the breadth of the groove; the depth being determined, as before, by the height of so much of the cutter as projects above the bench. If the groove is to be dovetailed, the cutter must be conical at its circumference, that is, the cutter, instead of being square at its edge, must bevel according to the angle of the dovetail; and the bench, or the spindle, must be inclined; or the piece so supported, as that its under surface shall be parallel to the outer edge or circumference of the cutter. If the piece be now advanced against the cutter, one side of the dovetail groove will be formed; to form the other, the piece must be reversed, end for end, and shoved along as before. Another mode of cutting out dovetail gooves may be made by a mandril, turning in a collar, and at the end of it furnished with a conical cutter, the diameter of which, at the farthest end, shall be equal to the breadth of the dovetail, and the sides bevelling according to the angle of the dovetail; suppose the mandril to be placed perpendicularly for example, in which case the cutter itself will be horizontal, with its base parallel to the bench; let that end of the mandril at which the cutter is to be uppermost, the mandril being let through, and the cutter projecting above the bench, and raised to such a height above it as the depth of the dovetail channel to be made requires: the piece now lying flat on the bench, advance it against the cutter, and a dovetail channel will be cut at one operation. It is evident that in this way, whatever be the breadth and length of the groove or channel to be cut in a piece, so much of the stuff by the removal of which the channel is formed is consumed; and the broader the channel, the greater the resistence the cutter meets with, and the greater the force which is required to make it act. To save as much as may be of this force, will be an object in every case; and so it will be to the stuff, where it is of a dear sort, and the breadth of the required channel considerable. To effect both these savings, instead of a thick conical cutter, put on the same mandril a thin saw, forming the base only of the cone. To this thin saw there must of course be a mandril for it to turn upon; which mandril must have some means of making its way through the piece, along with the saw itself, which is mounted on it. This passage may be made by either of two expedients: one is, to give to so much of the length of the mandril as enters the wood, a power of making its way through, for instance, by fluting or forming it into sharp leaves, and thus making it into a cutter in that part; the other expedient is, by a previous operation to form, for the reception of the mandril a preparatory groove or channel, the greater the saving will be in point of stuff, and in point of force; on the other hand, the narrower it is, the weaker the mandril, and the greater the danger of its not being strong and stiff enough to support the saw which turns on it. To obviate this danger, the mandril may be supported by a bar of metal, which by a perforation, transverse in respect to the length of the bar, encloses the mandril up to the very saw, and thus forms a continuation of the collar: this bar may be of any length provided only that its thickness and direction admit of its being received into the preparatory groove, as the piece is advanced against the saw. The bottom of the groove or channel thus being cut, the saw-kerf forming the sides of it may now be made according to the angle required, and two bars or slips will have been cut out entire, one on each side of the preparatory groove; or these two side cuts might have been made at the same time with the middle or preparatory one. A saw or cutter working in this manner, at the end of a mandril, within the substance of a piece, may be called a *root-cutter:* by a root-cutter of this sort, a T shaped channel, used in some cases, particularly in metal, instead of the dovetail groove, may in this manner be formed at once.

Cutting of mouldings.—If the circumference of a circular cutter be formed to the shape of any moulding and projecting above the bench no more than necessary, the piece, by being shoved over the cutter will thus be cut to a moulding corresponding to that of the cutter; that is, the reverse of it, just as a plane iron cuts its reverse; accordingly, teeth of such cutters may be considered as so many plane irons. If a plane cutter, such as that above spoken of for cutting a groove in the breadth of a piece, be made so thick, or, as we might be apt now to say, so broad, or so long, as to cover the whole breadth of the piece, it will present the idea of a roller; I accordingly call it, in this case, a *cutting roller:* it may be employed, and in many cases with great advantage, to perform the office of a plane. The recollection of what has been said of the manner of producing a waving, or winding surface, by a rectilineal reciprocating saw, may be sufficient to suggest the means by which similar effects may be produced, in much greater variety, by a rotary cutter, broad or narrow, plain or formed to a moulding. I shall speak only of the cutting-roller; it will be easy to apply the observations to the other cases. If a roller of this sort be placed with its axis horizontal, and the bench underneath it be made to rise and lower, the bench may be very readily adjusted, so as to determine the thickness to which a piece may be reduced by being passed under the roller. It is to be observed, that where the track of the piece is under the roller, the influence of the rotation, on the advancement of the piece, is the reverse of what it is where the track of the piece is above the roller: therefore if you choose that the advancement of the piece should instead of being performed in a direction the same with that of the rotation, be performed in the opposite direction, the direction of the rotation must be reversed.

Whether the axis be horizontal, perpendicular or oblique, the piece, by being passed against it, so as to perceive its figure, may be made to receive not only a flat and even surface, but any longitudinal curvature or waving, by a compound motion; the bench, during the advancement of the piece, approaching and receding from the cutter; and, by giving at the same time a tilt to the bench, or to the roller, any degree of winding may be given to the surface of the piece. To gain time, cutters may be applied to different sides of a piece at once; and such of them as make parallel cuts, may be mounted on the same spindle; if the cuts meet, a piece of given depth may be slit by cutters of but half the diameter that would otherwise be necessary.

(To be continued.)

Mines of Cinnabar in Upper California.

Rev. C. S. Lyman communicated to the last number of Silliman's Journal a letter dated Pueblo de San Jose, in March last, wherein an account is given of a Cinnabar Mine, situated a few miles from the coast, about midway between San Francisco and Monterey, and in one of the ridges of Sierra Azul Mountain. The mouth of the mine is a few yards down from the summit of the highest hill that has yet been found to contain quicksilver, and is 1,200 feet above the neighbouring plain, and not much more above the ocean.

This mine, known to the aborigines from time immemorial as a "cave of red earth," from which they obtained paint for their bodies, was first discovered to contain quicksilver about four years since, during experiments made by some Mexicans to smelt the ore for the purpose of obtaining gold, which they supposed it to contain. [Several attempts since, to work the mine, have proved futile, until recently.] Mr. Forbes, of the firm of Barron, Forbes & Co, having the present charge of the entire operations, wished to devise some way of extracting the metal without mixing lime with the ore in the 'roasting,' but was unsuccessful. At length a kiln of lime, which occurs in the immediate vicinity, was burned, and mingled with this, the ores yield a vastly larger per centage of metal. In the last three weeks (says Mr. L.) about 10,000 pounds of metal have been extracted with the same apparatus, being a yield of over fifty per cent. Between 15,000 and 20,000 pounds have been extracted in about two months, only six miners have been employed in digging the ore, and the hands of the establishment all told, miners, furnace-men, wood-choppers, &c. &c. numbering only a score. The mine is probably yielding a net profit of $100,000 a year, even with its present crude apparatus. With suitable furnaces and iron cylinders or retorts, the mine would easily yield $1,000,000 and upward. The other mines opened in the vicinity have not yet been sufficiently developed to decide upon their character.

SCIENTIFIC MEMORANDA.

FIRE APPARATUS.

A Mr. Phillips, lately exhibited in London in the Vauxhall Gas Company's grounds a gaseous vapor to annihilate fire. A model house and a reservoir of tar were ignited and soon extinguished. A new fire escape was also exhibited whereby a fireman ascended a ladder standing away from a wall, secured the hook of the hose to the topmost round, and then directed a stream of water in any direction

APPARATUS TO MANUFACTURE GAS FROM WATER.

At a recent lecture before the London Polytechnic Institution, a small gas apparatus was exhibited (a patented machine by a Mr. S. White,) for making gas from water and tar or rosin. The invention is considered to be a valuable one. The apparatus consists of three retorts placed in a stove two of which are filled with charcoal and thin pieces of iron, and the other with iron chains hanging from a centre bar. The first two retorts are for the decomposition of water which is regularly supplied by means of a syphon-pipe passing through and into the centre of the retort; the water, in passing through the heated material becomes converted to pure hydrogen and peroxide of carbon. It then passes into the third retort to receive its dose of bi-carburet of hydrogen which is prepared from common tar, or melted rosin or similar substances passing or dropping on the red hot chain from a syphon tube which regulates its supply. This causes the tar, or melted rosin to throw off an abundance of bi-carburet of hydrogen gas.—The gases being mixed in this manner are immediately conveyed into the gasometer for use without any purifying vessels whatever, none being required.

It was stated to the Institute, that gas could be made much cheaper by this apparatus than by the common plans, and we may yet live to see Sir Humphrey Davy's prophecy fulfilled, that "at some future time gas would be generated from water for general purposes, surpassing coal gas in brilliancy and purity."

NEW ELECTRIC LIGHT.

The Electric Light of Mr. Staite, which has already been noticed in the Scientific American, is beginning to come into use in England. Our foreign exchanges say that "a common apparatus will only cost about $100, and it will illuminate the largest and smallest buildings at one-twelfth the price of gas."

This we think must be a favorable calculation. We should like to see this apparatus brought over and tested here. If it is no cheaper than English gas, it would be a great benefit to our citizens The project, however, may be like many others which have come and gone. Experience is the only true judge of value and usefulness.

An elder chap, says the New Orleans Picayune, speaking of his great knowledge of the Western country, the other day, said he had "known the Mississippi river ever since it was a small creek."

Dragon's Blood.

This is a resinous juice obtained by incision from several different plants found between the tropics. It is obtained, in commerce, in three principal parts—in that of oval masses, of the size of a pigeon egg, enveloped with leaves of the pandanus; in cylinders covered with palm leaves; and in irregular masses, marked with impressions of leaves: that in oval masses is the most esteemed. It is often very much adulterated, and other substances are substituted; particularly Arabic and gum Senegal, colored with logwood, &c. Several of these substances may be detected by their dissolving in water, while dragon's blood is nearly insoluble; others require to be submitted to some chemical tests. Madagascar furnishes this resin of a good quality, but so much fixed with foreign substances as to be little used. Dragon's blood is opaque, of a deep redish-brown color, brittle, and has a smooth and shining conchoidal fracture; when in thin laminæ, it is sometimes transparent; when burnt, it gives out an odor somewhat analogous to benzion; its taste is a little astringent; it is soluble in alcohol, and the solution will permanently stain heated marble, for which purpose it is often used, as well as for staining leather and wood. It is also soluble in oil, and enters into the composition of a very brilliant varnish, which is much esteemed by artists. Its quality may be proved by making marks on paper: the best leaves a fine red trace, and commands a pretty high price. It was formerly in high repute as a medicine, but at the present time is very little used.

TO CORRESPONDENTS.

"C. C. of Conn."—You have not stated the question correctly, water will not "move freely" in a canal without a fall or incline—this should be known—but allowing water to run 160 feet and calculating the perpendicular fall 1 foot, it would take 80 seconds, but if the perpendicular fall was 16 feet, it would only take 10 seconds. You must take the square roots from 16 to 1—and use 16 as a centre—thus, if a body falls through a space of 16 feet in one second, how long will it take to fall one foot, allowing the velocities to decrease with the squares of the distance, then divide 160 by the same time of root 1.

"W. M. of N. Y."—You would perceive that we mentioned the crucibles of Mr. J. Dixon, Jersey City. You can get them by writing to the manufacturer.

"J. W. of Ky."—We have received yours and will give it attention.

"M. W. P. of N. Y."—We know of no lecture or course of lectures that was delivered before the N. Y. Mechanics Institute last winter and since published. The lectures delivered last season were not published.

"A. B. of Ohio."—Isinglass is made only from fish. We will in a few weeks endeavour to give you the information.

"E. H. Z. of Pa."—We shall endeavour to publish in the course of a few weeks some articles containing our views upon the subject you mention.

"R. L. T."—We shall send the information you desire in a few days. We are trying to find out the best. $5, all right.

"H. H. T. of Mass."—The Picket machine is sold. We could not give you the name of the correspondent to whom you refer.

"E. G. of Ala."—We intend publishing before long a series of articles of the construction of machinery for grinding grain, &c. which will embrace the information you desire.

"P. S. H. of N. C."—We should have answered your letter before this but have been unable to give you as exact an answer as we desire. You will have a letter from us soon.

"D. W. of La."—We procured a copy of Davis's Munual for you in Boston and sent it to your address by mail last Saturday.

"B. & R. of Mass."—Your letter containing — dollars came safely to hand. We will attend to your request in two weeks.

"D. Wright, Hull Prairie, Perrysburg, Ohio."—Your Scientific American has been sent regularly to Perrysburg. They must be in the P. O. Tell the Postmaster to look them up—7 back numbers. Glad to hear of your welfare.

"D. R. Jr."—We will do what we can for