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O. N. WORDEN, Proprietor.

To my Mother.

I sit in the shades of the night alone,
And list to the sound of the wild bird's moan;
I hear a voice in the forest that I love,
'Tis only the dove in his nightly glee,
I start from his song with a sudden sigh,
To dream of the light of my mother's eye,
I fancy her voice on the soft air floats—
'Tis only the wild bird's mellow notes,
I listen long—but she cometh not!
Am I by my mother's side?
Alas! she will dream of me, I know,
For I dream of her when the night winds blow.
Oh, who hath a smile mine eyes to meet,
Like my mother's smile—on half so sweet?
And who hath a lip like her own to press
My brow with so deep a tenderness?
And who hath a glance like hers to shine
On my weary heart with a power divine?
When I gaze upon other eyes to see
If they have a look that might like thee,
I turn me sad to their glance away,
And think of my mother the love-long day.
Mother! I sigh for thee eye to eye,
On me with a look that might gladden mine.
With the winds from the green woods blow—
To my weary heart they have given a glow;
Dimly they shine in the blue skies rest,
Dimly they shine on my bosom's breast;
Faintly they gleam in my bosom's leaves,
Like the low, soft song of the forest leaves,
Mother! I listen to hear thee call,
When the gentle dew on the fair flowers fall;
I hear thee—no—and I turn to weep,
And to think of thee, till I fall asleep.
I think of thee when the night winds blow,
For I think of thee when the night winds blow.

For the Lewisburg Chronicle.

Rail Road Subscriptions.

Two citizens of East Buffalo township, one of each political party, hearing much of the willingness of the Anti-Railroad men to help build the Road by individual subscriptions, recently took a subscription book, and made a tour through the Buffaloes, Hartley, Center, and Beaver. As the result of their effort, over SEVEN THOUSAND DOLLARS additional were obtained, principally in small sums. Some of the phenomena of their visits, they have furnished us for publication.

In the first place, they were well pleased with the kindness and courtesy with which they were treated, particularly by their brother farmers.

In the second place, they found that wherever they were opposed to County Subscription—except Messrs. Gulbin and Rudy, of Farmersville, and one or two others—they made no individual subscriptions, either: thus plainly showing that it is opposition to the Road, and not to the County Subscription, that actuates most of its opponents.

In the third place, the friends of the County Subscription, are the very men who will make private subscriptions, wherever they feel able. But the difficulty of obtaining enough money in these times, convinces them.

In the fourth place, that a County Subscription is the only means of getting the Road.

They also agree in the opinion, that, as the whole matter becomes better understood, it is better received, and that there is nothing like the opposition to the Road which the Times would make people believe. One old man said, he at first, opposed the Road, but when he saw the Times and Charley make so much fuss about it, he thought, as the Indian did, "There is too much bush." The Whigs especially are beginning to see that it is a political hobby of the Times and Charley, who know that the Whigs are in the majority, and therefore they are so afraid "the dear people—O, the dear people, will have their homes mortgaged," that they have devised this scheme, with that of Volunteer Candidates, as their only hope to get their favorites elected. This is the game the Times now plays. "But the people want a Railroad, and they know it can not be built without money. Where Charley and the Times saw the bugaboo, is plain to be seen, and the people also begin to see it."

The opponents of the Road universally argue, "O, we are in favor of the Road, but we want it done by individuals, and we will help in that way." Yet even Col. Ruhl, the Anti-Subscription candidate for Commissioner, a rich and independent Buffalo farmer, whose taxes are \$50 or \$60 per year, who was called upon, would not take one share! And in the wealthy town of Millburg, where they are "all for the Road, but against the County Subscription," they only got 3 shares, (\$150), and those were from men friendly to the County Subscription. In Hartley, however, which is five miles further away from the Road, about \$1000 was promptly subscribed.

One sign more. Our farmer agents took with them a subscription book for that numerous class who profess a willingness to take some stock on condition that the Company should release the County from her \$200,000 bonds. And how many shares do you think they got with that proviso? Only one! And thus ends that ignominious—demonstrating beyond cavil that the friends of the County Subscription are the true friends of the Road.

As Millburg is the home of Charley, (who preaches up the wealthy people ought to make the road,) and where there is the most "indignation" manufactured, the agents were much disappointed in not receiving one dollar from all the "indignation" railroad friends. But the reason of this, was given by a very respectable and rich citizen, who refused any encouragement, saying, "We have enough to pay for since the Railroad fever is up. We have walked these streets for forty years, without pavements, and now these young fellows in the Town Council are going to make us pave our walks with brick?" Unhappy Millburgers! after wading through mud for forty or fifty years, these young Railroaders are going to deprive them of that inestimable privilege, and compel many women, and children to walk the principal streets with dry feet! Was ever such imposition heard of before? Compel the people to have dry soles, and save health, comfort, and shoes—Charley! Charley! the Philistines are at your very doors! Up! gather an indignation meeting—repudiate! rebel! and call on Saratoga and Smoketown, Yorktown and Verdick, Concord and Cummings, Bomber Hill and Baum, to save the Millburgers from "mortgages on their homes" and pavements on their streets!—O you young Councilmen! behold the fruits of Railroadism!

Let the friends of the Railroad go calmly, quietly, kindly, patiently, but resolutely on, and they will succeed. We are apt to disagree on all important matters. There is no improvement made, which some good citizens do not at first oppose, and which demagogues do not take advantage of to serve their selfish ends. Many opposed Turnpikes, and Canals, and District Schools, and Telegraphs, who now acknowledge that they are all right, and are all doing good. The best informed and most candid men throughout the county are anxious to have the road go on, and know it must have money, and are willing the County should go security, as there is no other way to obtain the necessary funds.

Greatest Discovery of the Age.

In December, 1850, we published editorially an article with the above caption, giving an outline statement of a discovery which had been made of a new motive power, totally unconnected with steam, and which was likely to supersede steam entirely, should the expectations of the inventor as well as those of several scientific gentlemen who had been intrusted with the secret, be fully realized.—In February following, we also stated that a vessel was then preparing with this machinery, to visit the World's Fair, if it could be got ready in time. We also stated that a model engine had been in operation for some time, practically, and had given the fullest satisfaction.—We received a number of communications from various parts of the country, respecting this discovery; but as we were bound, as far as our own information went, to hold our peace, we made no reply to these inquiries privately; but said, in our paper, that when the proper time arrived, the public would be made fully acquainted with the character of the discovery. That time has now arrived—the CALORIC ENGINE OF ERICSSON, the celebrated Swedish mechanic,—whose name is so well known throughout the United States for his great mechanical improvements—is in full operation in the City of New York—there being two engines, one of four and the other of sixty horse power now, and for several months, in daily operation at the foundry of Messrs. HOGG & DELAMATER.

The friends of Mr. ERICSSON are sanguine of its feasibility, though the principle of the engine was condemned in England, in 1833, by BRUNEL, the eminent engineer, and FARADAY, the celebrated chemist; and scientific men in this country have been free in expressing doubts of its practicability. The matter, however, will soon be submitted to that unflinching test, experiment; for a ship of 2000 tons, with engines on this principle, is nearly completed in New York, where it is to be launched, about three weeks from the present time. The following description from Hunt's Merchant's Magazine, shows the construction of the engine, the principle upon which it is presumed to work, and its supposed working power.

"Two Caloric Engines are at work in the foundry of Messrs. Hogg & Delamater, foot of Thirteenth street, N. R., one of five and the other of sixty horse power,

the latter has four cylinders. Two, of seventy-two inches, stand side by side.—Over each of these is placed one much smaller. Within these are pistons, exactly fitting their respective cylinders, and so connected that those within the lower and upper cylinders move together. Under the bottom of each of the lower cylinders a fire is applied. No other furnaces are employed. Neither boilers nor water are used. The lower is called the working cylinder; the upper the supply cylinder. As the piston in the supply cylinder moves down, valves placed in its top open, and it becomes filled with cold air. As the piston rises within it, these valves close, and the air within, unable to escape as it came; passes through another set of valves, into a receiver, from whence it has to pass into the working cylinder, to face the working piston within it. As it passes through what is called the regenerator, which we shall soon explain, where it becomes heated to about four hundred and fifty degrees, and upon entering the working cylinder, it is further heated by the fire underneath. We have said the working cylinder is much larger in diameter than the supply cylinder. Let us for the sake of illustration merely, suppose it to contain double the area. The cold air which entered the upper cylinder will, therefore, but half fill the lower one. In the course of its passage to the latter, however, we have said that it passes through a regenerator, and let us suppose, that as it enters the working cylinder, it has become heated to about four hundred and eighty degrees. At this temperature, atmospheric air, therefore, which was contained within the supply cylinder, is now capable of filling one of twice its size.—With this enlarged capacity it enters the working cylinder. We will further suppose the area of the piston within this cylinder to contain a thousand square inches, and the area of the piston in the supply cylinder above, to contain but five hundred. The air presses upon this with a mean force, we will suppose, of about eleven pounds to each square inch; or in other words, with a weight of 5,500 pounds. Upon the surface of the lower piston, the heated air is, however, pressing upward with a like force upon each of its one thousand square inches; or in other words with a force of 11,000 pounds. Here, then, is a force which, after overcoming the weight above, leaves a surplus of 5,500 pounds if we make no allowance for friction. This surplus furnishes the working power of the engine. It will be readily seen that, after one stroke of its piston is made, it will continue to work with this force, so long as sufficient heat is supplied to expand the air in the working cylinder to the extent stated; for so long as the area of the lower piston is greater than that of the upper, and a like pressure is upon every square inch of each, so long will the greater piston push forward the smaller, as a two pound weight upon one end of a balance will be quite sure to bear down one pound placed upon the other. We need hardly say, that after the air in the working cylinder has forced up the piston within it, a valve opens, and as it passes out, the pistons, by force of gravity, descend, and cold air again rushes into, and fills the supply cylinder, as we have before described. In this manner the two cylinders are alternately supplied and discharged, causing the pistons in each to play up and down, substantially as they do in a steam engine. We trust our readers will be able to understand at least the general principles upon which this machine operates. Its cylinders draw their supply from the atmosphere. The cylinders of the steam engine are supplied by sealing vapor, drawn from hissing boilers. The caloric engine draws in its iron lungs, the same element which expands these of the most delicate child, and derives its motion and its power from that sustaining source upon which depends the existence of all animate life. We have endeavored to explain the construction of the caloric engine. Its most striking feature consists in what is called by its inventor the regenerator. Before describing this, we will present the idea upon which it is based. First, let it be remembered that the power of the steam engine depends upon the heat employed to produce steam within its boilers. It will be seen that from the very nature of steam the heat required to produce it, amounting to about 1,200 degrees, is entirely lost by condensation the moment it has once exerted its force upon the piston. If, instead of being so lost, all the heat used in creating the steam employed could at the moment of condensation, be re-conveyed to the furnace, there again to aid in producing steam in the boiler, but a very little fuel would be necessary, none, in fact, except just enough to supply the heat lost by radiation. The reason is obvious. Let us suppose the steam has passed from the boiler, has entered the cylinder, has driven the piston forward, and is about to pass into the condenser, there to change its form, and be again converted into water. This steam yet in the cylinder, and uncondensed, possesses all the heat it contained before passing out of the boiler. It has driven the piston forward, but in that effort it has lost no heat.—That source of power it still contains.—Let it be supposed that the heat contained in the steam could at the moment it is converted into water within the condenser, be saved, and by some device be again used to create steam from water within the boiler, with what exceeding cheapness could the power of the steam engine be employed. But it is quite impossible thus to re-employ the heat of steam; it cannot thus be saved; and hence every effort to economize in this manner would be unavailing.

Let us now attempt to describe the regenerator, to which we have referred.—Without this the machine we examined would possess, in point of economy, no advantages over the best constructed steam engine. With it the advantages are incalculable.

We have before stated that atmospheric air is first drawn into the supply cylinder, whence it is forced into a receiver, and that from this it proceeds toward the working cylinder, before reaching which it passes through the regenerator. This structure is composed of wire net, somewhat like that used in the manufacture of sieves, placed side by side, until the series attain a thickness say of twelve inches.—Through the almost innumerable cells formed by the intersection of these wires, the air must pass, on its way to the working cylinder. In passing through these it is so minutely subdivided that the particles composing it are brought into close contact with the metal which forms the wires. Now, let us suppose what actually takes place, that the side of the regenerator nearest the working cylinder is heated to a high temperature. Through this heated substance the air must pass before entering the cylinder, and in effecting this passage, it takes up, as is demonstrated by the thermometer, about 450 deg. of the 480 deg. of heat required, as we have before stated, to double its volume. The additional 30 deg. are communicated by the fire beneath the cylinder. The air has thus become expanded; it forces the piston upward; it has done its work—valves and the imprisoned air, heated to 480 deg., passes from the cylinder and again enters the regenerator, through which it must pass before leaving the machine. We have said that the side of this instrument nearest the working cylinder is hot, and it should be here stated that the other side is kept cool, by the action upon it of the air entering in the opposite direction at each stroke of the pistons. Consequently, as the air from the working cylinder passes out, the wires absorb its heat so effectually that when it leaves the regenerator, it has been robbed of it all, except about 30 deg. In other words, as the air passes into the working cylinder it gradually receives from the regenerator about 450 deg. of heat; and as it passes out, this is returned to the wires, and is thus used over and over, the only purpose of the fires beneath the cylinders being to supply the 30 deg. of heat we have mentioned, and that which is lost by radiation and expansion. Extraordinary as this statement may seem, it is nevertheless incontrovertibly proved by the thermometer to be quite true.

The regenerator contained in the sixty horse engine we have examined, measures twenty-six inches in height and width internally. Each disc of wire composing it contains 675 superficial inches, and the net has ten meshes to the inch. Each superficial inch, therefore, contains 100 meshes, which, multiplied by 675, gives 67,500 meshes in each disc, and as 200 discs are employed, it follows that the regenerator contains 13,500,000 meshes, and consequently as there are as many small spaces between the discs as there are meshes, we find that the air within is distributed in about 27,000,000 minute cells. Hence, it is evident, that nearly every particle of the whole volume of air in passing through the regenerator, is brought into very close contact with a surface of metal, which heats and cools alternately. The extent of this surface, when accurately estimated, almost surpasses belief. The wire contained in each disc is 1,140 feet long, and that contained in the regenerator is consequently 228,000 feet, or 40 1/2 miles in length, the superficial measurement of which is equal to the entire surface of four steam boilers, each forty feet long, and four feet in diameter; and yet the regenerator, presenting this great amount of heating surface, is only about two feet cube—less than 1-1920 of the bulk of these four boilers.

Involved in this wonderful process, of the transfer and re-transfer of heat, is a discovery which justly ranks as one of the most remarkable ever made in physical science. Its author, Captain ERICSSON, long since ascertained, and upon this is based the sublime feature of his caloric engine, that atmospheric air and other permanent gases, in passing through a distance of only six inches, in the fifth part of a second of time, are capable of acquiring, or parting with, upward of four hundred degrees of heat. He has been first to discover this marvelous property of caloric, without which, atmospheric air could not be effectually employed as a motive power. The reason is obvious. Until expanded by heat it can exert no force upon the piston. If much time were required to effect this, the movement of the piston would necessarily be so slow as to render the machine inefficient. Captain ERICSSON lately demonstrated, however, that heat may be communicated to, and expansion effected in, atmospheric air, with almost electric speed; and that it is therefore, eminently adapted to give the greatest desirable rapidity of motion to all kinds of machinery.

The greatest advantages of this engine over the steam engine, according to Capt. ERICSSON's showing are many and important. In the first place, the coal consumed is only one-tenth that of the steam engine. 2. Only one-fourth as many hands are required on board a vessel. 3. The machinery occupies not more than half the room. 4. There is no danger from explosions. 5. There is comparatively no danger from fire. 6. There is no smoke or dirt in consequence of the consumption of fuel. 7. The vessel is perfectly ventilated, inasmuch as the engines for a

large vessel, like the one now now almost ready for launching, draw sixty tons in weight of atmospheric air every hour, allowing 13 1/2 cubic feet of air to the pound, from the interior of the ship. These are some of the advantages claimed for the new discovery; and we, with our readers, are prepared to say, that if they are realized, the discovery will clearly be one of the greatest of the age. We await anxiously further developments, and the final verdict. But its success appears to us to be beyond contingency.—Germantown Telegraph.

The Visible Invisible.

I was one day traveling through the State of Connecticut, without a penny in my pocket. About three miles from the village of—, I suddenly and unexpectedly met an old friend, Jim Walker.

"I say, Jim, what are your prospects?" I asked. He smiled sadly.

"Bad, Beason, bad!" he replied, in a melancholy tone.

"How so?" I asked.

"Why, I haven't a cent in the world—without clothes—and haven't tasted food for nearly three days."

"What is it possible—starving amid plenty?" said I.

"True. I am too poor to buy, ashamed to beg, too honest, or else afraid, to steal."

"Ah! well, Jim, I'll have compassion on you. I must teach you a little of my philosophy. I have fared well without money—and can travel all over the Union in the same way."

"I wish I could," said Jim, sorrowfully.

"Well come along, and I'll show you how. I'll impart lesson number one."

Jim followed me into the village—and a pretty one it is, too—and after a little search we found a cake shop, which we entered. Jim looked at me to see how I would proceed. With a confidential air I approached the little Irish woman who kept the house, and ordered a half pint of rum, a loaf of bread, and some cheese.—As I was not hungry, I gave all to Jim, except a portion of the rum, which he greedily devoured all.

"Madam," said I, "this young man and myself have some business in the village. We will leave our bundles with you for a few hours, when we will call and pay you for what we have had."

The woman was well satisfied, and depositing the bundles, we sauntered forth to find the "needful" wherewith to redeem our pawns. I was not long in devising a plan. Passing up the main street, we soon arrived at the principal hotel.—Finding the landlord, I asked him if he would rent me a room for one evening, for the purpose of giving an exhibition? He said that he could suit me, and forthwith showed me a very handsome apartment, well calculated for the purpose, and capable of holding at least one hundred and fifty persons.

"Will you or I furnish the light for the room?" I asked. "For my part, I think it better for you to furnish everything, and charge it in your bill, as I don't wish to change a note for a trifle."

"Very well, sir, I'll furnish everything, and charge you ten dollars for all," said the landlord.

"Quite reasonable," I remarked.

"I am not unreasonable, you'll find."

"I hope I shall. I will want thirty candles, a table, and all the chairs and benches you can procure."

"I'll see that all is right."

Having arranged this matter, I left the hotel, leaving Jim behind. Finding the printing-office of the PEOPLE'S HERALD, I asked, "Is the Editor in?"

"Yes, sir," said a dapper little fellow, dressed in a blue vest and drab pants, his shirt sleeves rolled up, and a stick of type in his hand.

"Ah!" said I, "happy to find you in. I am anxious to have a job done, in the course of the day."

"It shall be done. This is the place for dispatch in every branch of the 'Art Preservative.' Your job, sir."

Taking a seat at the table, I commenced writing, in a legible hand, the following glaring announcement:

Grand Moral Exhibition!

MONSIEUR MORCEAU,
THE RENOWNED MAGICIAN OF THE EAST!!!!

Will have the honor of appearing before the inhabitants of this Village, at the Saloon, this evening, and go through with his most wonderful feats of Necromancy. The first and most astonishing performance, will be his astounding feat of the

Visible Invisible.

In which the past, the present and the future will be revealed, and in which Mons. Morceau will assume several distinct characters. The entertainment will conclude with the laughable Apiece of

THE GREAT DISAPPOINTMENT!!!

In which it is expected the audience will join.

Any persons visiting the Exhibition, and feeling dissatisfied, will, on application to the Magician, have their money refunded.

Price of admission, 50 cents; children half price. Doors open at 6 o'clock, precisely.

Having finished the bill, I read it to the Editor, who appeared astonished at the wonderful performances. He promised to

have all ready in a few hours. I sat down and waited for my bills. I requested the editor to call at the hotel and witness the performance, after which I would pay him. After night, Jim and myself, one with the bills and the other with the paste and brush, put up the announcement.

In the morning, crowds of persons congregated around the corners, reading the bills, and resolving to visit the "show," without further invitation. Everything was progressing favorably. The hopes of Jim were raised at the prospect of our approaching good fortune; but, for the life of him, he could not imagine how we were to get out of the scrape, for he well knew that I was not a magician. I silenced his fears and told him to be ready to do my bidding. To this he cheerfully assented.

The evening, "big with the fate of Caesar and of Rome," had come. It was six o'clock, and the people began to gather. The room was well lighted, and plenty of comfortable seats. I took my station at the door, and was happy to find plenty of customers.

In a short time, I had seventy-five dollars in my possession. Calling Jim to me, I gave him a dollar, and told him to get our bundles and wait for me at the Post Office. He started. Having conned over a brief address, I entered the room, dressed in a morning gown which I had borrowed, and took my position behind the table. I glanced around the large assemblage, ashamed, coughed, spit, gazed again, and at length, with a spasmodic effort, managed to get out the following words:

"LADIES AND GENTLEMEN: I feel highly honored by your presence this evening, and shall do my best to render entire satisfaction, as far as promised in the bills. The first wonderful feat, is that of the Visible Invisible. This renowned feat has been performed by the renowned Fakirs of the Eastern world, and has astonished all who have witnessed its exhibition. The disappearance of the Visible is followed by that of the eccentric Money Changer, and the utter astonishment of the Duped Witnesses. In a few moments the performance will commence."

Bowing low, I retired to the outside, bolted the door, threw off the gown, and dempeped. In a few minutes I joined Jim, and we hastily left the village.—This was my first and last engagement as a magician—I sent back funds to pay the printer and the landlord.

Some years afterwards, while acting in the capacity of a steamboat clerk, I chanced on one of those persons who had been a witness of my wonderful performance. He laughed heartily at my ingenuity, and said:

"I am sure, Mr. Benson, there was not a person in that room who grudged you the money they had paid. At first, we sat in silence—then, watches were frequently consulted—and every sound drew all eyes toward the door, to catch a glimpse of you, but you came not. Not until after 8 o'clock, did we dream of the game you were playing. Presently, your speech, and the words of your handbill, flashed across our minds. We were the Duped Witnesses.—We were bit—but we only laughed. You had told us your intentions, though we did not understand you at the time. A fiddle was procured.—Then we were satisfied, and went home as merry as if the Invisible had performed."—Clarion Register.

DON'T STAND ON THE TRACK.—"The train," says a railroad Gazette, "may steal suddenly upon you, and then a little trepidation, a slight mis-step, a slip of the foot, and he shudder to think of your crushed and bleeding body." So it is in the journey of life; perils are around you on every hand. But don't stand in their path and defy them; don't stand in their path and disregard them. Perhaps you now and then take a little intoxicating drink. My friend, if so, you are "standing on the track," while the car of retribution comes thundering on—moving in a right line—approaching with steady and rapid wheels—Will it not bear down and crush you?—Perhaps you spend an occasional evening with a party of friends, amusing yourselves with cards or dice, taking small sums to make the game interesting. My friend, you are "standing on the track." Thousands have stood there and perished.—Don't wait to hear the rattling of the rushing wheels, but fly from the track. At a safe distance, stand and view the wrecks which your ponderous train will spread before you. Look well to the ground on which you plant your feet, and forget not for these many days, our parting words, 'Don't stand on the track.'"

A BEAUTIFUL TRUTH.—I have been told, says a peculiar writer, by men who passed unharmed through the temptations of youth, that they owed their escape from many dangers to the intimate companionship of their affectionate sisters. They have been saved from a hazardous meeting with idle company by some engagements of which their sisters were the charm; they have refrained from mixing with the impure, because they would not bring home

thoughts and feelings which they could not share with their loving sisters.—The remembrance of some warm, confiding, pure-minded female friend, has saved many a youth from the snares so thickly set, into which, but for this, he might have fallen.

The Farmer.

Retention of Manure by the Soil.

It is not an uncommon opinion that underdrains convey off the enriching and soluble portions of manures, dissolved and carried down by rains. On this subject, Prof. Mages makes the following remarks, which as applicable to all ordinary cases are strictly just:

"To suppose that manures in a state of solution will be washed from the mouths of underdrains, is an error—for it is impossible to filter downward in the fluid form, through any fertile soil. Even the brown liquor of the barn yard will have all its available constituents abstracted by the soil, before it descends into the earth thirty-four inches. If this were not true, our wells would have long since become useless, the earth's surface would have become barren, and the raw materials of which plants are made, which now occupy the earth's surface and surrounding atmosphere, would have passed towards the earth's centre; but the carbon and alumina of the soil, each of which has the power of absorbing and retaining the necessary food of plants, are the agents for carrying into effect the laws of nature for the protection of vegetable growth."

The power of the soil to absorb manure, of which ammonia may be regarded as a chief constituent, is of course limited—but it doubtless exceeds all ordinary cases in practice. Professor Wau has found that by filtering a portion of watry drainage water through a few inches of soil, it had lost all bad odor, and contained no longer any ammonia; but he also found that by filtering fresh liquids of this sort, which had not yet begun to putrify, through such a layer of soil, they even lost all tendency to putrify. His experiments also prove that the soil has the power of absorbing potash, soda, magnesia, and phosphoric acid, as well as ammonia—and these with lime form the chief elements of manure.

The quantity of muriate of ammonia absorbed by the soil, was found to be about one grain in one hundred and fifty—of the ammonia constituting less than one-third of this salt. If, therefore, the average quantity of ammonia in yard manure is one two-hundredth part, then the amount of manure, which may be applied to land, if ploughed nine inches deep, and thoroughly intermixed, is no less than two-fifths of the whole bulk of the soil, or about five hundred loads per acre. The same fact will also show that to prevent completely any danger of loss from compost heaps, the amount of soil, or similar absorbent, should be more than twice that of the yard manure used in mixture. As the absorbing power is chiefly owing to the clay it contains, it will be understood that heavy soils will retain more manure, when very copiously applied, than those of a lighter character.

The theory of the value of gypsum depending on its absorption of ammonia from dew and rain, retains but a slender hold on probability, when it is remembered that four pounds of rain water never contain more than one grain of ammonia—and that all the ammonia that falls in our heaviest storms would be absorbed by a layer or film of soil ten times thinner than the finest bank note paper.—Cultivator.

Mode of Preserving Shingles on Roofs.

There is much for us to learn as to the best mode of covering our houses. The following is one of the modes practised to some extent, and has proved, we believe, quite satisfactory. We copy from the Spaulding City:

A gentleman in Groton gave us the other day the manner in which he prepared his shingles, before laying them on his house, some six years ago; and on examination, we found they had a perfectly sound and fresh appearance, as though they had been laid not more than a month.

He had a large boiler, which he filled with whitewash, mixing with it about one pound of potash to four gallons of liquid, also about the same amount of salt. This composition he boiled, and while it was boiling, he dipped the shingles in, taking a handful at a time, and holding them by the tips. He had boards placed so that he could set his shingles on them on end, and let the liquid, as it ran off them, run back again into the boiler. The shingles he allowed to dry in this position, before laying them; and his belief was, that by thus curing or hardening them, they would last much longer. They could be colored red or yellow, easily, by mixing red or yellow ochre with the composition.

The expenses of shingling are considerable, and something like the above is worthy of attention.