Scientific American.

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Steam and Hot Air Condensers.

It will be evident to every engineer that the Regenerator of the hot air engine illustrated on the preceding page, is exactly the same in nature as heating the feed water of a high pressure steam engine, by exhausing the steam through a tube laid in the tank. The use of the same air over and over again, as it was employed in the *first* Ericsson engine, and as has been proposed for other hot air engines, is just the application of the old surface steam condenser to the hot air engine. Both of these principles, as applied to the steam engine, effect a considerable saving of fuel, but this cannot be the case, in the same degree, when applied to hot air. The use of the Regenerator, in the hot air engine, is ostensibly to catch the heat and save it, as it exhausts from under the piston. Well, let us ask what is the amount of lost heat by the exhausted air? "Just that of the temperature, 60°, 80°, or 100°, at which it escapes into the air" it has been said. "And if the air be used at 491° (15 lbs. pressure) the loss of heat will only be about 13 per cent., with the exhaust at 60°, which is very economical working." Very economical, we must respond, but not quite so much of a saving as if none of the heat at all were allowed to escape. To make a perfect economiser of all the heat in hot air engines, as has been attempted by the use of a Regenerator, all that has to be done is simply to save all the heat entirely by exhausting direct into the heater, and using the same air over and over again. By thus economizing all the heat. (saving the 13 per cent. lost at 60° of exhaust) a hot air engine can be produced, embracing all the *effective* qualities of the famous Static Pressure (stand still) Engine, upon the principle of exhausting the steam of a steam engine direct into its boiler. By placing the question in this light, it becomes evident that a perfect Regenerator to save all the heat is also a perfect "resister" to the action of the engine.

The reason why it is economical to condense steam in an engine, is owing to its peculiar quality of shrinking suddenly, by a small expense of power, from a great to a small bulk —from 1728 to 1—by condensation in the condenser, thus forming a vacuum (when perfect) equal to the pressure of the atmosphere. I. steam condensed gradually and uniformly and lost but a small part of its bulk as it parted with its heat, it would be folly to use a condensing steam engine, because it would work so sluggishly. One reason why surface steam condensers, with many excellent qualities, have been so unsuccessful is owing to their being so slow in condensing the steam, in comparison with direct condensers. Hot air, unlike steam, contracts uniformly when exposed to cold and to only half its former bulk by parting with 491° of sensible heat; it does not contract suddenly, like steam, but sluggishly, and is, therefore, in its very nature, unsuited for the application of the principle of surface condensing; and yet, it has been attempted to apply to it the very principles of the two old steam condensers to protract its exhaust, increase resistance to the feed, and thus operate *very economically*.

The best way to employ hot air as a motive agent appears to be in working it expansively, as far as this possibly can be done, then exhausting it into the atmosphere. A "regenerator" is neither a scientific nor common-sense adjunct to an air engine. It is an attempt to impose perpetual motion upon the engine, by making the same quantity of heat do repeated duty over and over again on fresh quantities of cold air, thus creating an infinite amount of power by a definite amount of caloric—a philosophical fallacy.

There are two hot air engines now building at the Novelty Works, this city: one a huge locomotive, the other a small high pressure engine, to work at 100 atmospheres. Their authors are put upon their metal to make them successful. The locomotive is a large working engine capable of testing the principle fairly.

The Engineer.

One of our English correspondents, in a letter published in the last number of this journal, alluded to the publication in London, of two new scientific weekly papers, one of them bearing the above name. The first number of this work is now before us. In form it is somewhat like the SCIENTIFIC AMERICAN, has sixteen pages, is well printed, well illustrated, and contains a large quantity of very valuable and useful information. It is designed to occupy, in England, the same relative position as that held by our own paper in America.—Among the writers in the first number is Mr. James Napier, the eminent Scottish chemist. He furnishes an excellent article upon steam boiler incrustations. We extend the right hand of fellowship to our brethren of the *Engineer*, and most cordially wish them success in their enterprise.

Our correspondent alluded to the fact that the *Engineer* had made an extensive use of the columns of the SCIENTIFIC AMERICAN without giving us proper credit. For example, six engravings are taken from us without mention of the source whence they are derived. This, we suppose, arises from inadvertence. The SCIENTIFIC AMERICAN is the only weekly publication of its kind in the United States, and all its engravings of American inventions are original. It has been the common practice of a few monthly magazines, published in this country, whenever they want illustrations, to reproduce engravings from our columns; and this is often done without credit. This practice has perhaps confused our English cotemporary, and led him to suppose that our engravings were common property, for which the courtesy of acknowledgment was not due.—The statement we have made will, we presume, set him right on that score.

Speaking of engravings brings our attention to four diagrams, in the said number of the *Engineer*, illustrative of what is termed "Perry's Improved Printing Press." The invention consists in a method of notching the types, making them larger at one end than the other, and placing them around the periphery of a cylinder. It is stated to be the invention of Mr. T. J. Perry, of the Lozells, Birmingham, England. We presume that Mr. Perry is candid in believing himself to be the first inventor, and the editor of the *Engineer* is perhaps correct in presenting the cuts as illustrative of a new invention. For their information, however, we would state that the same invention was patented in England by an American citizen, some twelve years ago. We refer to the British patent number 9308, granted March 23, 1842, to Mr. Moses S. Beach, of New York, now proprietor of the New York *Sun* newspaper, who was then interested in the invention. The original inventor is Mr. Jeptha A. Wilkinson, now of New York, but an Englishman by birth. An American patent was granted to him for the same invention on the 4th of January, 1853. A working machine was constructed in this country some fourteen years ago, but for some reason was never publicly introduced. Within two years past some new machines have been made, but we have not heard that they were fully successful. They have not been adopted by any newspaper proprietor that we know of, although Mr. Wilkinson claims, as does Mr. Perry, that they can print from twenty-five to thirty-five thousand sheets per hour—a rapidity which exceeds, by far, any steam printing press now in use.

Exhibition of Inventions in London.

We have received a circular from the London Society for the Encouragement of Arts, inviting us to contribute to its annual exhibition, which takes place in that city on the 24th of March next. We suppose the invitation is open to all American citizens who choose to become exhibitors. The exhibition is intended for the display of machines, models, drawing, and descriptions of new inventions. They must be delivered, at the cost of the owner, on or before March 8th, at the House of the Society, Adelphi, London. The Secretary, Mr. P. Le Neve Foster, should be immediately advised by all who intend to exhibit.

If it were not for the expense of freight, we should ourselves be tempted to become exhibitors, and our show would be no mean one. We have a ship load of models of new inventions on hand in our establishment, that we should only be too happy to get rid of in the way proposed. As for drawings, we could send the last volume of the SCIENTIFIC AMERICAN. That valuable work contains about five hundred original *delineations*, and above *two thousand descriptions* of new inventions. In addition to the foregoing, we could furnish a hundred or so Letters Patent of the United States, now stored in our iron safes. Each of them contains a splendid steel plate view of the American Patent Office, and a drawing and description of some new invention.

We hereby give notice to European Scientific Societies, and Governments generally who are concerned in expositions, that whenever they wish for contributions of a nature similar to those called for by the London Society, they have only to apply to us. We will engage to give them a full dose, on the shortest notice—they paying the expense of transportation.

Copper and its Uses.

There are copper smelting works in the United States, situated at Cleveland, O., Pittsburg, Pa., Baltimore, Md., Detroit, Mich., Boston, Mass., and one in Georgia (the name of the latter place we have not obtained.) At these works the quantity produced last year was about 13,000 tuns; or the fifteenth part of that smelted in the valley of Swansea. The Lake Superior ores are smelted at Detroit, Pittsburg, and Cleveland, and are said to yield a great quantity of silver, which makes the smelting of them very profitable. This business has been steadily and rapidly increasing during the past ten years, and it must increase until the United States becomes *the* great copper smelting country. Two things only are required for this, an abundance of good ores, or native metal, and plenty of cheap coal. The native metal and ores are found in exhaustless quantities, and our coal fields are the largest on the globe. As there is no coal in the Lake Superior region, ore will have to be exported thence to the nearest navigable point where coal can be obtained cheapest. The city of Erie, Pa., may yet become a great copper smelting place, because it has a convenient harbor, and anthracite and bituminous coal—both of which are used at Swansea—could easily be obtained by railroad from the Pennsylvania mines. An improvement in smelting copper ores is said to have lately been introduced into the "Eureka Mining Co.," Georgia, by which, from a small furnace, using about 5 cords of wood per day, two tuns of pig copper, containing 60 per cent of pure metal, are obtained from ores containing only 14 per cent of metal.

East Tennessee is a great copper region; no less than 14,191 tuns of rough ore being mined there last year. About two-thirds of the copper used in our country is the product of our mines; the remaining third is imported chiefly in pigs from Chili.

Copper can be obtained pure for experimental purposes by exposing it to a stream of hydrogen in a gun barrel heated to redness. By taking 100 parts of common copper, 10 parts of the oxyd of copper (common copper scale) and 10 parts of green bottle glass, ground fine, and fusing them for half an hour in a crucible, the copper will be found at the bottom, in an exceedingly pure state. This is a very simple way of producing purified copper for experimenting.

The alloys of copper are very common, indeed it is the metal which forms almost every metallic alloy. Those alloys are too numerous to name. Good common brass is made by a mixture of 65 per cent. of copper added to 35 per cent. of zinc. The bearings for machinery are made of an alloy of 14 per cent. of tin added to 100 of copper. Bell metal is made of 20 parts tin and 100 copper. Speculum metal for telescopes is made of 50 per cent. of tin added to the copper. The bronze for statues is an alloy of copper containing 10 per cent. of tin. Cannons are made of the same alloy. Bell metal may be made of 78 parts copper and 22 of tin. This alloy is very brittle when cast into a thin plate like a gong, but if heated, when cast, to a cherry-red heat, held between two plates of iron, and plunged into cold water, the gong will become malleable. Cymbals may be made in this manner. The best way to make tin and copper bronze alloys, is to melt each metal separately, then pour the tin slowly into the copper, and stir well. Many of the alloys of copper are not chemical, but simply mechanical mixtures.—The speculum of Lord Rosse's famous telescope is composed by weight of 126·4 of copper, and 58·9 of tin, and is said to be a true chemical compound, brilliant, and nearly as hard as steel, and brittle as sealing-wax. It is 6 feet in diameter, and 5 1-2 inches thick. It was ground down with emery, and polished with crocus—red oxyd of iron. Muntz metal for ships' sheathing is composed of 62 per cent. of zinc added to 100 of copper. Soft spelter solder for brass is composed of equal parts of copper and zinc. A very strong alloy is made of tin 1 1-2 ounces, zinc half an ounce, and copper one pound. This is a good compound for engineering purposes. 1 1-2 ounces of tin, two ounces of brass, and a pound of copper make a good alloy for fine wheels. Three ounces of copper, one of zinc, and half an ounce of tin melted in a covered crucible, makes a beautiful alloy. There is no end to the alloys that may be made of metals by using them in different proportions —The following is a new metallic alloy, of which copper forms a prominent part, and for which a patent has but recently been obtained in England, by F. J. Anger, of London:—In a crucible the patentee first melts 100 parts of good copper, and while in a perfect state of fusion, he adds 17 parts of zinc, 6 parts of magnesite, 3·60 parts of ammonia or salt of ammonia, 1·80 parts of quick-lime, and 9 parts of crude tartar. The crucible is then covered, and the whole allowed to come to a complete state of fusion; when it may be poured into molds of the necessary shape, or into ingots or bars, to be afterwards shaped into articles of use. If the metal be required of a more tenacious character, tin may be substituted for zinc. According to the ductility or shade of color of the metal that may be required, the proportions of zinc, tin, magnesite, ammonia or salts, quick-lime, and crude tartar, are varied. This alloy is stated to resemble gold, not changing color by use, and being dense, malleable, ductile, homogeneous, and sonorous, to a marked degree.

Recent American Patents.

Improvement in Weighing Scales.—By S. S Mills and M. Bissell, of Charleston, S. C.—Instead of one arm or lever as employed in the common weighing apparatuses, the inventors provide three arms, with a sliding weight upon each. This arrangement, although simple, possesses several advantages. It permits the permanent attachment of the weights to the arms, and thus prevents the inconvenience that often occurs in shops from the loss or misplacing of the weights. It also affords great convenience in ascertaining the tare of the article, for one of the weights may be moved so as to indicate the tare, while another will show the gross sum. This improvement is cheap in construction, is much superior to the single lever scales, and is adapted for use in connection with nearly all kinds of weighing contrivances.

Improvement in Reaping Machines.—By Alexander H. Caryl, of Sandusky, Ohio.—This improvement relates to the raking apparatus of reaping machines. The platform is composed of wooden slats slightly separated. The rake teeth project up through the slats, and the head to which the teeth are attached is moved back and forth beneath the platform, by means of peculiar mechanism. The teeth in their forward movement project through the slats and sweep the straw that may have accumulated on the platform off on to the ground. On their return movement the rake teeth turn down below the slats so as not to touch the straw, but they suddenly rise again, when the forward movement commences. This sudden rise and fall of the rake teeth is accomplished by means of a weight, which is alternately wound up and discharged by the movement of the machine. This is a good improvement.

Machine for Bending Iron Hooks.—By Elisha Harris, of Providence, R. I.—Iron hooks of various forms are extensively used in the rigging of ships, and for many other purposes. They are usually bent into the desired form by hand, upon the horn of the anvil. The present improvement consists in an ingenious combination of two metallic rollers, whereby hooks

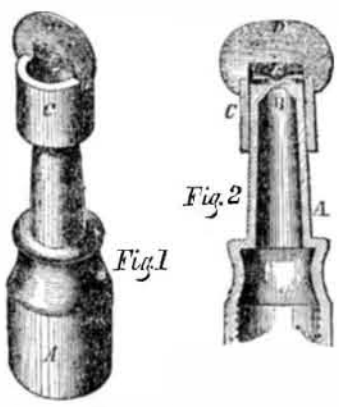
of all kinds may be bent up as fast as the straight bars from which they are forged can be placed in the machine. The apparatus is quite cheap and simple; by its use one man can bend twenty hooks where he now fashions one. When the rollers ar set to bend a given size or form of hook, all that are turned out will be exactly alike. This is an excellent in-tion.

Three-Wheeled Vehicles.—By S. French, of Binghamton, N. Y.—This invention consists in a peculiar method of attaching and connecting the third wheel, which is placed behind an ordinary pair of wheels and shaft. It is alleged that vehicles of this kind while possessing nearly all the advantages of four-wheeled carriages, are less expensive in construction, require less space in turning, &c.

Breech-loading Cannon.—By C. C. Terrel, of Shullsburgh, Wis.—In this improvement there is a sliding breech piece which moves at right angles to the direction of the cannon barrel. This breech piece is furnished with several chambers, into which the ball and powder are placed, the arrangement being such that while one charge is brought in line with the barrel and fired, the other chambers can be reloaded and prepared. The breech piece is moved by a suitable lever, and there are other contrivances for facilitating the working of the piece. There is a small water tank and perforated pipe so arranged as to wet the exterior of the cannon barrel at each discharge, and thus prevent it from becoming unduly heated. The inventor alleges that a cannon of this description may be fired ten times faster, and will not require any more men to work it than a common piece of ordnance.

Wood's Patent Oscillator—We learn that this excellent invention, noticed and illustrated by us on page 217, last volume, has been put into operation, with great success, at Russell's Commercial Iron Works, Auburn, N. Y. Mr. Russell speaks of it in high terms, and regards it as one of the most valuable improvements in steam engines that has been made for a long time. He believes it to be admirably adapted to locomotives. Mr. Geo. F. Wood, of Ulysses, N. Y., is the inventor.

Improvement in Gas Burners—By Cummings and Douglass, New London, Ct.—This invention is designed to be used in connection with burners where the flame is produced by the combustion of two jets of gas issuing simultaneously from the top of the burner. The common "fish tail burner" is an example of this kind. The improvement consists in placing a small blade of metal on top of the burners, between the gas orifices, so as more fully to separate and spread the two jets, and cause the flame to be broader; the metallic blade is also alleged to act as a heat receiver, and by becoming itself highly heated to impart additional caloric to the gas, and thus produce better combustion.



In the engraving, fig. 1 is a perspective view. and fig. 2 a section of the same. The burner, A, is made in the usual manner, having orifices at B for the escape of the gas. The improvement comprises a ring cap, C, which is slipped on to the tip of the burner, the ring being attached to the vertical dividing blade, D. The central portion of this blade is sharpened into an edge, E, having a pointed tongue, as shown. The tongue extends down between the two apertures, and serves to assist in separating the jets. The blade, it will be observed, is quite small, and the two jets unite above it into one flame, in the common manuer, the only difference being, that the flame produced when this contrivance is applied, is larger and broader than it otherwise would be.

This invention is applicable to nearly all the burners now in use; it is alleged by the inventors to effect an important purpose, viz.: that of increasing the illuminating power of the gas, without augmenting the consumption. The contrivance costs only a few cents, and may be slipped on to any burner in a moment; it is not even necessary to unscrew the burner. The inventors and patentees are Messrs. Cummings and Douglass, New London, Ct. Patent bears date Jan. 15, 1856. Mr. N. P. B. Curtiss, No. 447 Broadway, N. Y., is the agent who furnishes the improvement in this city and Brooklyn.

Recent Foreign Inventions.

Oil Colored Paper Hangings—P. Trumble, of Huddersfield, England, has obtained a patent for an improvement in paper hangings, and in his specification he points out certain objections to the use of water colors in the manufacture of paper-hangings, such as, that the expedition with which they are obliged to be printed—the paper being necessarily wet, and each color printed separately—does not admit of the proper working and classification of the colors employed; and that though when dry they may look rich and sightly, yet when varnished the colors sink, and present a harsh appearance. The patentee, therefore, though using the ordinary paper, double coats it with composition made with a solution of india-rubber, tallow, japan, soap, and size, in certain proportions, rendering the paper impermeable, strong, elastic, and durable. The paper thus prepared and dried is then (in the manner usually practiced by grainers in wood) marbled, or otherwise ornamented with colors composed of the followingingredients:—Oxychloryd of lead or zinc, japan, turpentine, and raw linseed oil, mixed in the ordinary manner to produce the desired colors. When dry they will have a gloss almost equal to one coat of varnish. Varnish can be applied to enhance the beauty of the paper, which does not require any preparation to receive it.

Coating Sheet Iron with Varnish—Messrs. Morewood and Rogers, of Enfield, England, have taken out a patent for covering sheet iron with a varnish, so as to protect it in a superior manner from the action of the atmosphere. They first take clean sheet iron plates, and dip them in a solution of the chloride of tin, by which they become covered with a thin scale of tin. They are then washed well in warm water, and dipped into a melted composition of two-thirds resin and one-third tallow, heated to 240° Fah. They are then allowed to dry, and afterwards dipped in a hot solution composed of three-quarters of a pound of shellac and one-fourth of a pound of resin dissolved in two gallons of alcohol. Any quantity may be made from these proportions.—They are then taken out and dried in an oven. Common tin plates for roofing, exposed to sea winds, where tin is liable to rust, if coated as described, will stand exposure to the weather well.

Reverberatory Furnaces for Smelting Metals—Mr. W. H. Nevill, of Llanelly, Wales, has obtained a patent for the construction of reverberatory furnaces for the collection and condensation of volatile metals. It is well known that in submitting metals that are volatile at high temperature, such as lead, zinc, silver, &c., or minerals containing substances that are similarly volatile to heat in common reverberatory furnaces, a considerable loss of such metals or substances is experienced, in consequence of the great rapidity of the current of heated air passing through the flues and chimneys leading from such furnaces. The object of this invention is to prevent, or, as far as possible, to diminish this evil by the use of the following means:—To the fire-place of an ordinary reverberatory furnace currents of air (either cold or heated) are forced, by a blast cylinder or fan, through tuyeres placed nearly at right angles to and above the fire bars. It is found that a column of blast acting with a pressure of 1 3-4 lb. per square inch, and supplied through three pipes or tuyeres of 2 1-2 in. diameter, is quite sufficient for carrying on the operation required in the treatment of metallic ores in a furnace of 45 square feet of melting surface. The main pipe, by which the blast is supplied to the tuyeres, is provided with a proper valve or stop-cock for the purpose of regulating the quantity of air supplied to the fire grate; whereby the degree of heat in the furnace may be increased or diminished at will. It is desirable to have a layer of clinkers on the fire bars, to prevent, as far as possible, the heated air from escaping downwards through the fire bars into the ash pit. By employing artificial instead of natural currents of air for keeping up the required amount of combustion, it is only necessary to maintain a current of sufficient rapidity in the flues to clear the furnace of the fumes and gases generated during the operation; or in other words, taking care to observe this last condition, the patentee is enabled to make use of any well-known flues, dampers, or collecting chambers, in connection with water, coke, and other substances, in combination with such furnace, for the purpose of collecting the fumes that would otherwise escape. Where a number of furnaces are in operation, it would, of course, be necessary to collect the flues from each into one main culvert leading to a chimney.

The Parker Water Wheel.

A correspondent writing to us from Chillicothe, O., inquires if the patent on "Parker's Water Wheel," has expired, or is still in force, and also its peculiar features. He has received a summons to attend the U. S. Circuit Court, at Cincinnati, to answer charges for infringement of the patent, the suit being brought by a professed agent of Mr. Parker. About two years ago he received a notice of the same character, from a person also calling himself an agent of Mr. Parker, and he prepared himself to stand a trial at Columbus, O., but after being at great expense, and employing counsel for the suit, the prosecutor did not appear, and the matter then dropped. Many millers in that neighborhood who had received like notices of suits, paid large amounts to the Agent rather than stand a trial. Our correspondent states that his wheel was put in by a millwright who was not aware whether it was built on the principle of Parker's or not, and that he is ignorant himself of that principle, and wishes to get light on the subject.

The "Parker Water Wheel" obtained its name from the improvements made on the old fashioned re-action wheel, by Zebulon and Austin Parker, and for which they secured a patent Oct. 19, 1829, which patent was extended for seven years in 1843, and has therefore been on the expired list since 1850—a little over five years. The great improvement claimed in the Parker patent was "percussion and reaction," in one wheel, by producing a vortex within the reaction wheel, in other words—as we understand it—giving a whirling motion to the inlet water in the direction of the wheel's motion. This patent covered three claims, but these are now public property.

On the 27th of June, 1840, a patent was granted to Zebulon Parker and Robert McKelvey—the executor of Austin Parker—for an improvement on their water wheel, which consisted in placing a wheel or wheels within air and water tight cases, commonly called *drafts*. This patent expired in 1854. We do not know which of these patents the agent of Mr. Parker asserts has been infringed by our correspondent, but as his wheel was put up in 1852, he is not liable for damages for infringement of the first patent, and perhaps he is not for the second, which merely relates to the draft boxes.

We understand that Mr. Zebulon Parker has never obtained sufficient remuneration for the valuable improvements made by him on reaction wheels; these date back beyond those set up for Fourneyron, of France, who has been called the inventor of the *turbine*. But some of the agents of Mr. Parker, we are convinced, have done wrong by the *means* they have used to *extort* (we cannot call it by any other name) "capitation taxes," from persons using water wheels in perfect ignorance of violating any patent.

Explorations in the Western Deserts.

The St. Louis *Republican*, in discussing the practicability of the Pacific Railroad, says:—"The idea generally entertained that the immense arid plains lying between the Mississippi and the Rocky Mountains must remain forever unsettled and uncultivated, on account of the scarcity of water and fuel, is likely to undergo a change. Scientific men are now exploring these plains or prairies, and from the little we hear of their researches, the prospect appears good that an abundance of coal and water can be obtained at a small outlay of money and labor. Successful experiments have been made in testing the practicability of boring Artesian wells, and the result is most satisfactory. In one instance, near the Pecos river, at the depth of six hundred and fifty feet, the greatest abundance of perfectly pure water was obtained. Besides this, the operation developed the existence of coal beds, easily accessible, and, as far as the experiments have progressed, evidently underlying the whole of that immense country.

The expedition for making these observations and experiments on the great Western prairies, was sent out by the Government only a short time since."

The Coal Trade for 1855.

The Pottsville *Miner's Journal* publishes its annual tables of the coal operations in the Schuykill region. The total amount of coal of all kinds sent to market from the Schuykill, Lehigh, Wyoming, and the semi-anthracite and bituminous regions, during the year, was 7,587,502 tuns, an increase of 684,004 tuns over the amount the previous year. There has been an increase from every region engaged in mining, during the year, the largest from the Pittston, Wilkesbarre, and Nanticoke portion of the Wyoming coal region, lying below Scranton and the Lackawanna region. The Schuykill region is prepared to increase its production 300,000 tuns this year, should there be that demand for it. The Lehigh region is prepared to furnish a considerable increase this year, as well as the Scranton region, with the new branch of their road completed leading to New York. Both these roads now open the coal region directly to New York city. The Wyoming region will also have a new outlet with the completion of the North Branch Canal and the improvement of the Whitehaven Railroad, leading from Wilkesbarre to the Lehigh. The Shamokin region has also another outlet, via the Sunbury and Erie Railroad, leading to Williamsport, and from thence into the interior of New York.

The number of engines used for mining purposes in Schuylkill County is 315, with an aggregate power of 10,653 horses. The number of miles of railroad in the county is 430. The number of locomotives running on the lateral railroads is 42, independent of those on the Reading railroad.

Singular Railroad Accidents.

Curious railroad accidents have been occasioned by the cold this winter. The Albany and Rochester papers tell of two cases. One of the best locomotives on the Central Railroad came in with the Cincinnati Express train in charge, which was safely deposited in the depot, one of the huge driving wheels of the locomotive suddenly fell to the ground, having parted from the axle close to the hub (so to speak) of the wheel. There was no unusual strain upon either the wheel or axle, and why it should break at that time is wholly unaccounted for. So, too, with a train which arrived at Rochester from Buffalo. The train was drawn by two locomotives, and after its arrival in the depot it was discovered that the hindmost engine had lost the hind part of the forward trucks somewhere on the road, but where, it was not known, and great was the mystery how they became detached from the car. Such a circumstance never before occurred on the road, and the like has never before been heard of without the train being thrown from the track. Subsequently the wheels were found three miles west of the city. They were lying against the fence, some distance from the track. How they became detached from the car is still a mystery, as the shaft was not broken, and all was in good order, with the exception of the flange to one of the wheels, which was broken off.

Lieutenant Maury.

The merchants of Boston are circulating petitions praying Congress to reverse the action of the Naval Board, which placed Lieutenant Maury, of the U. S. Navy, on the Retired List. The petitioners ask that he may be restored to the active list in consideration of his eminen services to commerce and navigation.

A bed of anthracite coal has been discovered n the Patterson Creek Valley, Va.