

Foreign Editorial Correspondence.—No. 5.

Paris Exhibition, &amp;c.

PARIS, JUNE 4, 1855.

A few days since I visited St. Germain, an ancient town, about 15 miles from Paris. The Palace of St. Germain is one of the oldest royal residences in France, and was occupied by Louis XIV., when he conceived the idea of constructing Versailles, which has cost the French people more than two hundred millions of dollars. The Palace of St. Germain has been deserted by royalty, and is now used as a prison for soldiers. It looks gloomy and inhospitable, and I pity the poor soldier who finds himself the occupant of what was once the abode of licentiousness and luxurious ease. The park is still very fine, and gardeners are busy in rendering it an attractive promenade. The view from the terrace of the park is truly magnificent—a broad sweep of landscape stretches away towards Paris, almost as far as the eye can reach, and is dotted over with little villages and pleasant market gardens.

A little distance from St. Germain is the quiet village of Rueil, where sleep the ashes of the Empress Josephine. The most interesting object at present attached to St. Germain is the atmospheric railway. The balance is scarcely worth the trouble and expense of a visit. The approach to the town for a distance of about one mile from the depot, is by an incline railroad that rises at the rate of one foot in about twenty-five. Therefore the ascension feat is difficult of performance by a locomotive; when the train arrives at the base of the inclined plane, the locomotive is detached from the cars and switched off upon a side track, and by means of a rope the train is drawn along by the locomotive for a few yards until it reaches the atmospheric tube. This tube is firmly anchored in the center of the railway, and has a longitudinal groove on top for the passage of the rod that suspends the piston of the tube to the front of the car. This groove is packed on each side with india rubber, which prevents the air from escaping, and at the same time yields to the pressure of the bar as it moves along. The atmospheric vacuum is effected by three splendid stationary engines of two hundred horse power each, costing thirty thousand dollars. The distance is made with great rapidity, and the whole arrangement is ingenious and effective, but owing to its great expense the system has not extended. If I am not mistaken there is no other atmospheric railway in use, except a short one in England.

Speaking of railways reminds me of steam carriages for common roads. As the SCIENTIFIC AMERICAN has already disposed of them in a practical manner, I beg leave to call the attention of their dogmatic advocates to a recently announced invention in England that seems likely to throw their schemes off the track. It is nothing more nor less than a steam horse intended for locomotion on common roads, and the traction of plows, carts, etc., in the field. The inventor, Mr. Boydell, of Canada, has lately exhibited his "steam horse" in various feats of strength, "on one occasion it drew a load of eight tons upon a very rough and uneven road. To this load a rope was next attached to a tun weight of iron over a pulley, when it started off with all the characteristic dignity of a steam engine, master of its work." "The engine is a seven horse common portable one reversed, the wheels being furnished with an endless chain railway; on one of the last wheels, six feet high, a driving wheel five feet in diameter is fixed, into which a small pinion on the end of the fly wheel crank shaft works, while the endless railway prevents the wheels either from slipping or sinking into soft ground. The first wheels are steered by means of a pole with wheel, chain, and pulley, the same as a steamboat, and a man at this wheel has entire control over the engine, turning it within the narrow circle of forty feet in diameter."

This curious invention is somewhat in the same line with the novelties illustrated in the first volume of the SCIENTIFIC AMERICAN, and will probably share the same fate.

Speaking of curious inventions calls up the shade of one of those ghosts who are al-

ways full of magnificent theories, and are never able to bring one into practice because of the opposition of this and that party to their schemes. It is an act of kindness to remind such persons of their faults, but usually they never seem to have any gratitude for it. A case of this kind has already come under my notice. An American inventor, now in Paris, made application for space to exhibit in the Palace a model of an improved system of constructing cabins for vessels. The object to be gained was to relieve passengers from the nuisance of seasickness, and certainly a more humanitarian subject never seized the mind of man. The following is the inventor's theory. The cabin in question formed an independent vessel and was suspended at its center to a cross rail by any convenient means within the open deck of the ship, sufficient space being allowed between the cabin and the sides of the deck for a promenade. The suspended cabin was to maintain at all times an equilibrated position, and thus prevent the passengers from disturbance. It did not occur to the inventor that the weight in the cabin must be distributed equal at all points, or otherwise the benefits intended would be lost, when told of this defect by a bystander, the inventor slipped his model behind the curtain, and declared that he would not exhibit it again until he could get an audience better able to appreciate its value.

Another adventurer from the States has a model of his "Panatechuer," which will be exhibited in the audience department. This "Panatechuer" is a war-like instrument, and is said to be able to send terror and dismay into the ranks of the enemy, scattering bones, blood, and stone walls in every direction. This formidable projectile of war was alluded to in one of the back numbers of the SCIENTIFIC AMERICAN, and was the means of some annoyance to the inventor on the part of the police, who desired to know whether he intended to assist in the bombardment or defence of Sevastopol. This subject is particularly interesting to the French government at this time. The great "Panatechuer," it will be remembered started originally for St. Petersburg, with intent to place his bone crusher in the hands of the Czar exclusively, and after enlisting as commander in chief, to destroy the Allied armies before Sevastopol at one fell swoop. On arriving at Berlin, however, our valiant hero found the water too deep; he couldn't get across to Russia. So he backed out, and next turns up at Paris under the surveillance of the street authorities. This is but another example of the sad fate that sometimes befalls great genius. S. H. W.

#### Look to your Steam Gauges and Safety Valves

The following is from the *Railroad Record* (Cincinnati) and demand the attention of engineers, and all others interested in steam engines and steam gauges:

"We ventured last week a few remarks on the importance of steam gauges to every boiler. And as we had on Friday last positive proof in our own boiler of their utility, we give our readers the benefit of our experience. In showing our steam gauge to a gentleman, he doubted the correctness of its indications, and remarking that he could tell, by the sound of the escape at the safety valve, very nearly the pressure, proceeded to raise the lever of the valve, but, for some reason, the lever did not raise, and it required one man's strength at the end of the lever to raise it from its seat. But when it did move, it went with a noise like the report of a pistol, and covered us with dust and ashes. The safety valve had got stuck to its seat, and would have stood a pressure of a thousand pounds before it raised, whereas we ought to have run at eighty, and this was the pressure indicated by the gauge. Our safety valve, while thus fast, was no protection against accident, and if the steam had been very high, would have given no indication. We have known of the safety valves of locomotives getting fast in like manner, and when fully detached, making a report as much louder than the one described, as the pressure in the locomotive boiler is greater than in the boiler of a stationary engine."

#### The American Verd Antique Marble Company.

At the October session of the Legislature, in 1853, a company of this State, and in Massachusetts and New Hampshire, we believe, were incorporated under this name, for the purpose of working marble in Roxbury.—The difference between this and other Vermont marbles, however, was not at that time, nor is it even now, generally, but very imperfectly understood. It is like no other marble in Vermont, like no other in the United States, and, indeed, it is like no other known quarry in the world. It is the green antique marble—the *verd antico* of the Italians, the same that has been found in the ruins of the Grecian or Roman temples; but from what part of the Eastern continent it was brought, or whether any more remains in its original locality, is, at this day, wholly unknown. The discovery of such a splendid marble, therefore, was no ordinary occurrence, and led very naturally, as soon as the existence of such a quarry was clearly ascertained by the discoverers, to the formation of the Company in question. The quarry was first found, it is said, by a gentleman from Bethel, in an examination, probably of the well-known Serpentine Ledge, which lies on the railroad in Roxbury, nearly a half mile South of this quarry, but which is altogether a different thing. Serpentine, however, is one of the components of the verd antique marble, and limestone the other—a combination that takes the highest possible polish, and then presents, with its irregular sprays of white, on a field of green, much the appearance of the dark green ice of a newly frozen pond, fractured by a slight blow from the head of an axe.

We recently had the gratification of visiting this remarkable quarry, and the works put in operation by the Company to avail themselves of its valuable products. There are now about twenty-five hands in employment in blasting and getting out the stone from the ledge, trucking it down on their wooden railway to the factory, fifteen or twenty rods distant, and attending the machinery, which consists of five gangs of saws and polishers, driven by a thirty-five horse-power steam engine. We were shown, by the kind and intelligent superintendent, Mr. Rundlett, a great variety of specimens of all shapes and sizes, and in all the different steps of manufacture, from the rough block to the mirror like surface of the polished cenotaph or table. Among this was a table, four feet square and about two inches thick only, which was worked to meet the order of the Governor-General of Canada, and which, we will venture to say, will be pronounced equal in finish and beauty, to say the least, to any marble table to be found either in America or Europe.

These marbles readily sell at \$1 per foot surface; and as the demand for them increases as fast as the knowledge of them extends, and as the quarry seems inexhaustible, this establishment must soon be an important and noted one, alike advantageous to the State and the enterprising Company under whom the works are being so perseveringly prosecuted.

[The above is from the *Green Mountain Freeman*. We had no idea that the working of the above quarry was carried on so successfully, and on such a large scale. The account, we have no doubt, will be interesting to our readers. There are as fine marbles in America as there are in the world, and we have no doubt but American works in marble will yet be more extensive than all the rest of the world put together.

#### California Glow Worm—Natural Lantern.

The editor of the *Placer Times*, Cal., has seen the larvæ of an insect which was exhibited before the California Academy of Natural Sciences, by Dr. Behr, who supposes it to be a species of electer. "It is about 1½ inches long, and has eleven segments or rings to its body. Where these join to each other is a ring of brilliant phosphorescent light, which illuminates the atmosphere for several inches round. It exhibits the most beautiful display of the kind that we ever saw. The common glow-worm, with which we have been so often amused in our boyish days, is

insignificant by its side. As the respiratory apparatus of the animal is at these articulations, Dr. Behr thinks it not improbable that its illuminating process may be connected with this function of the animal."

#### Discovery and Invention.

The *Springfield Daily Republican*, which, by the way, is the best daily paper published in Massachusetts, thus remarks:

"Discovery and invention have heretofore been chiefly the result of chance—a lucky thought, an accident, a dream, or perchance a fortunate blunder. To a very limited extent have men of science applied themselves to the task of evolving from the known laws of matter the great instruments for multiplying the results of labor and making the elements of nature do the work of the world. A wide field is open here, with few able or disposed to occupy it, and promising the highest results in usefulness, fame, and wealth, to which man may justly aspire. We commend it to the thoughts of ambitious young men."

#### The Ocean Telegraph Cable.

The *London Mechanics Magazine* states that the Editor recently saw at the Institution of Civil Engineers, London, a submarine cable for the Atlantic Telegraph Co., which differs from all the other submarine telegraph cables hitherto used. It combines increased conducting powers, with a diminution of weight, so that the entire cable for the Atlantic telegraph may be conveniently carried in one ship. It says the expense of constructing this cable will be but small in comparison with those heretofore laid down.

#### A New Rifle Cannon Ball.

The *Amenia Times* (N. Y.) states that A. Hotchkiss, of Sharou Valley, Conn., has invented a new kind of ball for rifled cannon, which is to overcome all the difficulties heretofore experienced in rifled cannon for firing iron balls. We are not informed wherein the improvement consists. We have seen so many different plans to accomplish the same thing, that perhaps the one of Mr. Hotchkiss may not embrace anything new.

#### To Cook Old Potatoes.

Pare the potatoes and put them to soak in cold water four hours, then drop into the water which should be boiling; a little salt added to the water improves them. Take them from the fire the moment they are done; pour off all the water and let them stand uncovered in the kettle over the fire till the water evaporates from the surface, and they are ready for the table.

#### Worcester Mechanics.

The Worcester (Mass.) Mechanics Association has commenced to erect a new hall.—The building is to be large and beautiful, and will occupy one of the best sites in the city. The cost for the lot and Hall will exceed \$90,000. This is spirited.

#### Report of the Commissioner of Patents.

While going to press, we have received the report—just published—of the Commissioner of Patents. We will publish extracts from it in the next number of the SCIENTIFIC AMERICAN. It contains much that is of great interest to inventors.

#### San Francisco Mechanics Institute.

We learn by the *California Chronicle* that the mechanics of San Francisco have organized a Mechanics Institute, which appears to be in a prosperous condition.

#### The Tamarind Tree.

The tamarind is successfully cultivated by W. G. Singleton, of Winchester, Va. It is a beautiful ornamental tree, and grows rapidly. The fruit which it produces is equal to that which is imported.

Dr. Robert Hare, of Philadelphia, once so much distinguished for strength of mind and scientific attainments, has become a believer in communing with disembodied spirits through mediums. He has addressed a letter to the clergymen of the Episcopal church on the subject.