Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME VII.] NEW-YORK, OCTOBER 25, 1851. [NUMBER 6.

THE
Scientific American,
CIRCULATION 16,000.
PUBLISHED WEEKLY
At 128 Fulton street, N. Y., (Sun Buildings),
BY MUNN & COMPANY.

Hotchkiss & Co., Boston.
Dexter & Bro., New York City.
Stokes & Bro., Philadelphia.
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RAIL-ROAD NEWS.

Rails.

We learn by the Railroad Journal that the London and North Western Railroad has recently laid down thirty miles of U rail with a longitudinal wooden sill forming a continuous wooden track. The work was done under the advice of Robert Stephenson, who was at one time the great advocate of the T rail. This is an evidence of a change in his opinion.

A section of the "compound rail" of Mr. Winslow, Troy, N. Y., is on exhibition at the fair at C stle Garden. This rail, we believe, has received the approbation of a great number of our engineers, and sections of various railroads have been laid with it. The only impediment in way of its further extension, we believe, is the greater price of American railroad iron at present, in comparison with that of the English. People may say what they will, but every one wishes to buy in the cheapest market, and when the English railroad iron can be bought in New York for $40 per ton, the American which cannot be produced for less than $50 will not be bought. It is believed that Mr. Winslow will have his rail made in England next year, when it can be sent here and sold at the common price of the English iron, The greater price of labor is the great item of expense, we are told in making the American rail.

Mr. Riddle and Carpets.

Mr. Riddle, our commissioner at the Great Exhibition, in a letter to the Hon. John C. G. Kennedy thus writes about carpets:—

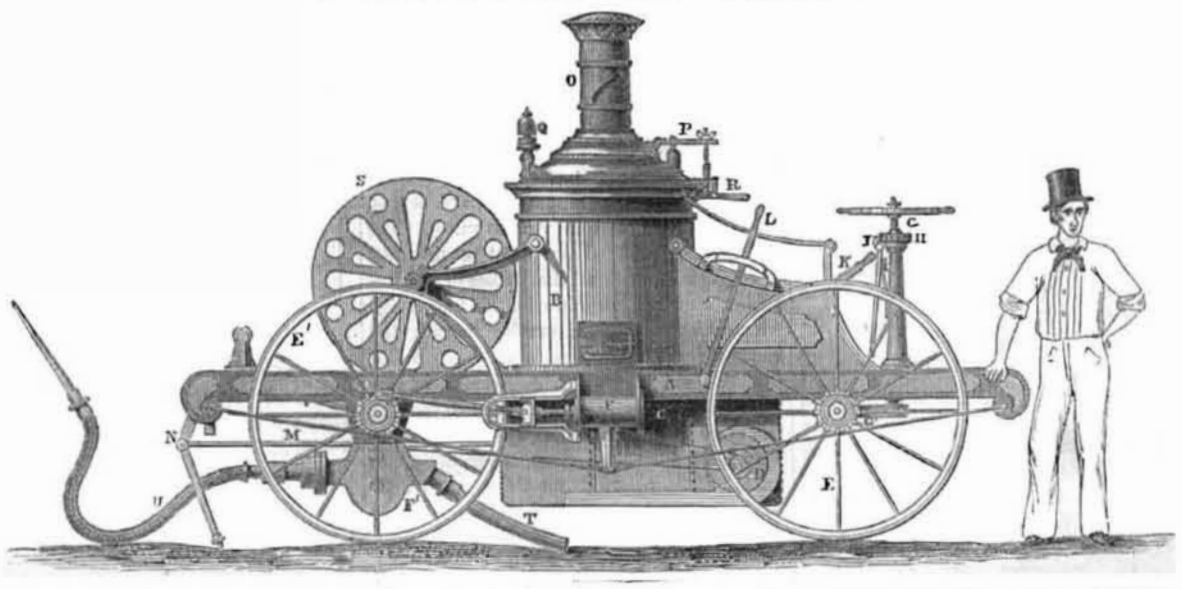
"Mr. Bigelow, of Boston, has given us an important accession of strength in the shape of some specimens of Brussels carpet woven upon power looms. Although various attempts have been made to adapt the power loom to carpet-weaving in England, there never has been any machinery perfected for that object. The loom upon which these carpets were woven has been sometime in use, and upwards of eight hundred hands are now employed in their manufacture. Each loom requires the attendance only of one girl, while, in the ordinary way of carpet weaving by hand, a weaver is required in addition to another to draw. It is capable of producing four times the quantity in the same space of time as could be woven upon the hand-loom. As many colors can be used in weaving as in the ordinary Brussels carpet, and the specimens show an even and regular thread, far surpassing the productions of the hand-loom."

[Our carpet weavers will see at once how fit Mr. Riddle was for his duties, by being so cleverly posted up on improvements. He is evidently 30 years behind the age.

The Largest Pile of Specie in the World.

According to a recent return in the Bank of France, the specie amounted to 607,000,000 francs, or about $115,000,000. This, we believe, is the largest amount of specie ever collected together. The Bank of England has not had at any time over $100,000,000. In France the legal currency is silver, and not gold.

STEAM AND GAS FIRE ENGINE.



The accompanying engraving is a view of a steam and gas engine for extinguishing fires, invented by Mr. William L. Lay, of Philadelphia, who has taken measures to secure a patent. It is intended to be the fireman's friend by doing the severe work and requiring attendance only. It is so constructed that the engine is set to working, to do this the attendant operates the lever, L, which draws back the rod, M, and acting upon the joint, N, lifts forward the support below, which raises the back wheels, F', and holds up the back end of the engine, thereby allowing the wheels to act the part of fly wheels to the crank of the piston rod. The rotary pump has two cog wheels, like Stewart's engine, and they are driven by cog gearing attached to the inside of the axle of the driving wheels—this gearing is not represented, but to those acquainted with mechanical devices, the mere mention of it is enough. The engine is operated by a lever to open the throttle valve in the usual way.

When the engine is standing in the engine house, the boiler always contains a sufficient quantity of water to get up steam, and at the same time is charged with carbonic acid gas by suitable apparatus, until it contains sufficient to work the engine for ten minutes in which time steam can be raised to take its place, when exhausted. The kindling and fuel is laid in the fire box ready to be ignited in an instant. When an alarm of fire is given, the engineer mounts his seat, and by opening the throttle valve, the engine will instantly propel itself in the direction of the fire, while at the same time the kindling is ignited, and the blower being in motion will raise steam in time to work the engine before the gas is used up. When the engine arrives at the fire, by merely choking the fore wheels, and pulling the lever connected with the standards, the hind wheels will be raised from the ground, and act as fly wheels when the rotary pump is put in motion by letting on the steam. The pump will force three or four hundred gallons of water one hundred and fifty or two hundred feet high per minute, which will extinguish any ordinary fire in a very few minutes. It is intended to use two 3 horse-power engines to do the work. The whole will weigh about one and a half tons. The Philadelphia councils are considering the propriety of having one built for the use of the city, and it is probable they will appropriate a sufficient sum for that purpose.

The inventor wishes to sell an interest in the invention to a party or parties who will introduce it into our cities.

A is the truck frame; B is a strong steam tubular boiler; C is the water tank for supply of boiler, and D is the blower for the fire. E E' are the wheels; F is the steam cylinder, and F' is the pump to throw water on the fire; this pump is a rotary one, and occupies but a small space. T is the suction hose, and U is the discharge hose with the nozzle on the same; G and G' is the steering gear; it consists of a wheel above having a vertical shaft with a pinion on its lower end gearing into a segmental rack to guide the wheels, and make them turn easily. H is a circular head with indentations round it to receive the catch rod, I, which is pressed into the indentations by a spring below, to keep the pinion of the steering apparatus secured from moving as required. K L are levers; P is the balance on the valve; R is the lever for operating the valve of the steam whistle, Q. A is a telescopic smoke-pipe which can be elevated or lowered at pleasure; S is the hose carriage. M N exhibit a combination of levers to raise up the back wheels off the ground when the

The Cause of the Potato Disease.

It is well known that the vines, in the south of Europe, have this year been affected with a disease akin to that of the potato, and the Academy of Sciences, in Paris, has lately been overwhelmed with communications upon the disease under which the vines are suffering. Most of these communications describe in detail the circumstances and peculiarities of this scourge; a few only attempt to account for it. M. Robineau-Desvoidy seems to have discovered the secret. He opposes the theory of the microscopic fungus, and declares that the cause of the malady is a mite or *acarus*, furnished with a trunk, by means of which he extracts the sap destined for the nourishment and growth of the plant. With a powerful magnifier, its eight feet, its head in the form of a beak, its shield, and abdomen, are easily distinguishable. One reason why it has never been discovered before, may be that it has always been sought for upon the affected leaves, and upon the blackened and decaying grapes. These parts, affording no more nourishment to the insect, it leaves them for more succulent localities. It is to be looked for upon fresh leaves, and at the points of their insertion into the stalk. In thus discovering the probable cause of the destruction of the grape vine, M. Robineau explains away the mystery of the diseased potato. He has discovered mites and *acarus* upon the potato as well as upon the vine. He has followed them throughout an entire season, and attributes to them, as to that of the vine, the astonishing devastation which, for the last five years, has accompanied the growth and maturity of the potato. The remedy is now to be discovered. If a microscopic insect is, in truth, the cause of these most destructive maladies, the next point is to prevent its propagation. The investigations of scientific men will now be brought to bear upon this eminently useful field of labor.

A New Feat.---Walking on an Inverted Plane.

By invitation of Mr. Wood, we yesterday had the pleasure of witnessing Mr. McCormick's experiment of walking on an inverted plane. The experiment was a private one only a few persons being present, and was made under disadvantageous circumstances, the preparations being incomplete, and the health of Mr. McC. being somewhat feeble. The experiment, however, passed off to the entire satisfaction of all present. A heavy frame was erected, with a slab of marble nine feet long at the top, the under surface being polished like a mirror. We saw the experimenter mount his platform and adjust his unwieldy boots; then placing both feet against the surface of the marble, he swung himself off with his head downwards. Disconnecting one foot from the slab, and placing it firmly several feet in advance of the other, he continued the alternate movement till he had taken ten steps, and arrived at the other end of the slab. We held our breath during the experiment, expecting, momentarily, that he would fall, but he appeared to walk as safely as a fly runs along the ceiling. After his descent, however, we noticed that he was much exhausted, owing to the excitement and exertion.—[Cincinnati Nonpareil.

[We will not believe in the above until we see it with our own eyes.

Improvement in Railroad Chairs.

Mr. Peter P. R. Hayden of Columbus, Ohio, has taken measures to secure a patent for an improvement in Railroad Chairs, which consists in forming the chair of wrought flat plate or bar iron, made with convex raised surfaces on its one side, which when the bar is cut to the required length for the formation of a chair, serve to make the lips thicker at or near the roots, when cut and bent, without incurring any extra labor, to give additional stren th at those parts.

A railway is to be built in Spain, from Santander, on the Bay of Biscay, to Valladolid. The length is about 140 miles. The line will ultimately be carried forward to Madrid, which capital, by means of a line of steamers from Southampton to the port of Santander, will then be brought in almost immediate communication with London.