



Subscribers, Inventors, and the Public.

It is a source of satisfaction to us, as publishers of the only weekly journal in this country, which is devoted expressly to the interest of Mechanics, to find that our efforts are so highly appreciated by them. This feeling is more than usually manifested by the promptness with which they have re-subscribed for a continuance of the present volume; and we would gladly give place in our columns to the gratuitous testimonials that have generally accompanied them—but the want of room forbids it. To old and new subscribers we tender our grateful acknowledgements for their generous aid, and we re-assure them that no pains or expense shall be spared on our part to render the *Scientific American* worthy its name, and the profession in which we labor. From its commencement up to the present time, we have witnessed with unbounded satisfaction the results of human ingenuity and skill and however feeble the effort or unprofitable some of the results may be, to the originator, the spirit is worthy of commendation and encouragement. We not unfrequently meet with individuals who from ignorance, and ill-breeding ridicule the zeal, efforts and productions of honest but poor inventors, they should be aware of this fact, that the poorest invention upon record doubtless cost its originator more hours of deep reflection, than they employ upon one subject in the whole course of their existence, and hence the necessity of exercising the charity due the prompting of genius which seeks the encouragements rather than the buffetings of the world. A truly inventive mind is never at rest, but is continually gathering new thoughts and devising new plans whereby they can be brought to subserve useful purposes. The history of Archimedes affords a beautiful illustration of the power and longings of the mechanical mind. We find that after having exhausted all the scientific knowledge that Syracuse his native city afforded him, he repaired to other countries to farther adorn a genius that lives in the remembrance of minds capable of appreciating his motives. Of his pecuniary condition little is known, but many of the most eminent mechanics known in history were compelled to struggle against the most overwhelming adversities of fortune, and although regarded (more in ancient than modern times) as wild enthusiasts, yet in despite of every obstacle their achievements have shed lustre upon their name and country. Whether Roger Sherman ever produced an invention or not, it is sufficient to know that his early advantages were limited to such an extent, that he toiled 6 years as an honest, and poor mechanic, but by perseverance—wholly unaided he accomplished results, familiar to every school boy. It is our highest object to stimulate and encourage mechanics to bring out the results of their genius, and to open a medium through which they can avail themselves of the general improvements going on in the industrial arts. We recognize no moral difference between the rich and the poor mechanic, the one is as equally entitled to the protection of his rights as the other, and we shall never depart from this course, so far as our influence can be exerted to sustain it.

#### Alabama Coal.

The British mail steamers stopping at Mobile have used the Alabama coal, and find it equal in every respect to the Welsh coal. The Alabamians talk of forming associations for mining and transporting it down the river, for the supply of national mail and merchant steamers plying on the Gulf.

#### Tennessee Cotton Manufacture.

The entire stock (\$30,000) in a new cotton manufacturing establishment proposed to be erected near McMinnville, (Tennessee,) is subscribed for, and measures are to be taken for procuring all the requisite materials for erecting the necessary buildings. It is the intention to run 2000 spindles and 60 looms.

#### New Application of India Rubber.

The Liverpool Albion describes an ingenious application of caoutchouc, or prepared India rubber, and which shows the expanding power of the preparation. It has been made and patented by Mr. Sangster, of Regent Street, London, for a very useful purpose. It is to supersede springs of metal for the expansion of parasols, and for compressing the ribs of them, and of similar articles. The India rubber is prepared by a chemical process, or by some process of science made into the shape of a small pipe or hose; it is also vulcanized. By these means the elastic power and the tenacity of the gum are increased to a perfectly marvellous degree. A small ring of the material so prepared, less in width than the eighth of an inch, is cut from the pipe, and placed around the top of the ribs. When the ribs are expanded, the elastic power of the ring enables it to be stretched so as to suit the exigency, while its leverage and power of contraction are so great, that directly the power is removed by which the expansion is secured, it forces the ribs together, and keeps them firmly compressed.

This prepared india rubber about which our contemporary across the water makes such a fuss about, and which is so very curious to some of our papers here, is nothing more nor less than a ring of Goodyear's American vulcanized India rubber, applied to an umbrella. Wonderful new invention truly.

#### Electro-Magnetic Clock.

Ten thousand dollars have been appropriated by Congress to Professor Locke, Cincinnati, to pay him for the use of his late invention by the government of the United States, (not, however, to make it free to individuals,) and for a Clock upon his plan, to be erected by him at the National Observatory, at Washington. Professor Locke is now on his way to the Atlantic cities, to engage such artisans as may have excelled in their profession to execute the clock for the National Observatory, having determined that it shall be a specimen of American skill and ingenuity.

#### The Gold Mines of Russia.

The constantly increasing productiveness of these mines renders them a matter of considerable interest. They were first worked in 1819, their existence having been previously proved by the presence of considerable quantities of gold in the sand of the Ural rivers; in that year upwards of 1600 pounds weight of metal was procured. This quantity has been steadily increasing during every succeeding year, and in 1846 amounted to more than 68,880 lbs. weight. The total weight obtained since 1819 is 537,400 lbs. This amount includes the produce of certain Siberian mines as well as those of the Ural mountains, and the quantity obtained by washing the sand of the Ural rivers.

By all the accounts which have as yet been received from California, the gold of the Ural mountains is as dust in the balance.

#### A Strange Animal.

Col. Fremont has recently dispatched to Corpus Christi an extraordinary animal which his party succeeded in capturing, after a three days' chase, in the neighborhood of the River Gila. A letter received from one of Col. Fremont's party by a merchant in St. Louis, describes it as an animal resembling a horse in every particular, except that it is completely covered with a close curly wool resembling camel's hair in color and the fineness of its texture. It has no mane, and its tail is like an elephant's. The animal possesses wonderful agility, leaping over obstructions ten feet high with all ease.

[This must be one of the one third horse, one third sheep and one third elephant breed—none of the alligator it seems.]

#### Large Casting.

The second bed plate for the engine of the steamship Ohio, was cast on Wednesday last week at Secor & Co.'s Iron Works, foot of 9th st. this city. Four furnaces were charged with 43 tons of metal, which were transferred to the mould by 120 workmen, by means of cranes and buckets. The weight of the casting is about 35 tons. The engines of the Ohio will be 90 inches diameter and 8 feet stroke.

#### The Epidemic in Worcester Co. Mass.

It has been already stated that an alarming disease existed at Milbury and Sutton, called by some the spotted fever and by others the cholera. A post mortem examination of one who recently died shows (according to a communication in the Worcester Spy,) that the disease is what is called by scientific men cerebro-spinal meningitis, or in common language, inflammation [of one or more,] of the membranes investing the brain and spinal marrow. Its likeness to the spotted fever or the cholera is only its likeness to all disease which makes a sudden and profound impression upon the nervous system. The inflammation in the case examined had gone to suppuration, the forming of purulent matter. A milder form would constitute what is called dropsy of the brain. A similar epidemic prevailed to a frightful extent among the soldiers of the French army in 1839.

#### Explosion of a Gasometer.

The inhabitants of Edinburg were started a short time ago by a vibration which shook many of the houses in their foundations and threw down several people in one of the streets. A gas holder of the Edinburg Gas Company, by some means caught fire and continued to blaze with great fury until gradually as the gas was consumed, the gas-holder immersed in the tank amongst the water beneath, and the conflagration was ultimately extinguished by means of wet blankets and coarse sacking being spread over its scattered remains. There was a mystery about the matter, as the gasometer was completely isolated, surrounded by a wall, and no fire or combustible allowed inside. There were in the gas-holder at the time nearly 3,000,000 cubic feet of gas, the greater portion of which would of course be consumed. The total damage was estimated at about \$2,000.

#### How to Extract Teeth.

The Wheeling Times gives the following account of tooth raising which appears to be both novel and effective.

"An individual of this town, while desperate under the toothache, resolved on the summary method of blowing up his refractory grinder. It was an immense masticator—having an excavation equal, in the extent, to the cavity of a gun-barrel. With the assistance of his helpmate, he dried out the cavity—filled it with gunpowder—pounded in a wad of cotton, and with a red hot knitting-needle, set fire to the mine, when a most tremendous explosion took place. The jaw bone was rent in twain; the offending tooth demolished, and with it three others, against which there was no cause of complaint. The poor man found himself prostrated on the floor, minus four teeth, besides having his face much burnt."

#### Camphine.

The Maine Farmer tells of a chap in Gardiner, who took a gill of camphine in mistake for gin, but whose life was saved by a most ingenious process. After the stomach pump and all common means of restoration had been tried in vain, the grocer's clerk simply run a wick down the patient's throat, touched a blaze to it and burned out the camphine! Instant restoration was the consequence.

#### Lubricating Material for Boots.

Take seneca oil any quantity, and dissolve as much gum elastic in it as it will take, warm it and apply it to your boots and shoes. It will make the leather impervious to water and keep it very soft and pliable. I have tried it and found it to answer well. The oil will dissolve the gum very slowly. Fishoil will do as well.

#### Hurricane in Kentucky.

A great hurricane occurred last week in Kentucky, passing over the beautiful villages of Shelbyville and Beardstown, and over the adjacent counties, prostrating and destroying nearly everything in its course, tearing up trees, blowing down dwellings and spreading general destruction in its course. The damage to property is said to have been terrible, and many lives were lost.

The Ballard Vale, (Mass.) Machine Shop, with all the tools, buildings, lands, &c. which cost, within two years, \$150,000, has been sold at auction for the sum of \$63,650. The purchaser was C. L. Hayward, Esq. of Boston.

#### Vermont Sugar.

The Green Mountain Freeman says, that "the amount of maple sugar made annually in Vermont, according to the best estimates we can obtain, is about five millions of pounds.—Our present population is not far from three hundred thousand. This will give a fraction over 16 pounds to each inhabitant of the State, or about 100 pounds to every family of six, and to all other families a proportional amount. This cannot be more than half the quantity which is consumed by the inhabitants. With our noble maple forests, the finest, perhaps in the world, and with the inducement to furnish themselves and others with a more sweet, pure, exquisite in flavor than can be extracted from any other substance on earth, will not our farmers this season try to swell the amount heretofore made? Let those, whose tastes so decide, use other sugars if they will; you can, after supplying yourselves, send the surplus, by our coming railroad, to the cities, where, if it is well made, it will always command handsome prices."

#### Copper and Silver in Michigan.

The Adrian Watchtower says that the Minnesota Copper Mining Company have found at a distance of 30 feet below the surface of the ground, a rich lode of copper ore, seven feet wide, with a vein four inches thick, containing considerable silver, and on one side of this, a vein of pure copper, nine inches thick. They have followed this twelve feet in depth, and 10 feet in length, and find neither end or bottom. Another shaft sunk at a distance of 160 feet, strikes the same vein of pure copper. The stock of this company is now considered worth 300 per cent premium.

#### The Sea Serpent seen Again.

Captain Adams, of the schooner Lucy and Nancy, from New York to Jacksonville, reports in a Florida paper having seen the Sea Serpent on Sunday, 18th of February, about 9 o'clock, when off the south point of Cumberland I., about 12 miles from the St. John's bar. It was seen by the Capt., crew, and passengers. The description they give of it accords with that given by the officers of the British frigate Dædalus, and reported some time since in the English papers.

#### Railroad Travel from Albany West.

The constant and vexatious stoppages and delays in changing cars on the various railroads between Albany and Buffalo having given rise to innumerable complaints, a through train will be put on this spring, which will only stop at Schenectady, Utica, Syracuse, Auburn, Geneva, Canandaigua, Rochester and Attica. An accommodation through train will follow to pick up way passengers. This is in effect, a step towards the consolidation of these various railroads.

#### Railroad in Missouri.

The bill appropriating ten thousand dollars for the survey of the Missouri and Mississippi Railroad, extending from Lexington on the Missouri river to Ohio city on the Mississippi river, at its confluence with the Ohio, has become a law. This may be considered the commencement of a prudent system of internal improvements by the State of Missouri, and as that State is out of debt, it can well develop its vast mineral and agricultural wealth.

California Prices by the last accounts were receding for some articles, though others kept up. A mercantile letter of the 28th December, reports the last sales of flour at 12 a \$14 instead of \$25, as before. Liquors of all kinds kept up; ale and porter have advanced, and sold at auction at \$18 per doz. Lumber has advanced, from 100 to \$125 per M., and will go higher. American vessels are much wanted to coast, and freights are high. Seamen's wages are 50 a \$60 per month. At least sixteen vessels were known to be on their way from Chili, loaded mostly with breadstuffs and provisions.

At the February term of the court in Montgomery county, Pa., the Judge decided that a turnpike company could not recover toll of a traveller, by suit, upon his refusal to pay after he had been permitted to pass through a gate—that the only compulsory power invested in these companies is the privilege of closing the gate upon those refusing to pay.