



NEW YORK, MARCH 10, 1849.

To Our Subscribers.

The next number will complete the half of our present volume, and subscribers whose term expires with the said numbers should forward their subscriptions on the receipt of the present one.

We take this opportunity to tender again our sincere thanks to patrons and subscribers for the liberal encouragement we have hitherto received. We assure you that we will always endeavor to make the Scientific American worthy of the name which many of our correspondents award it, viz. "the only Repository of American Inventions and Discoveries."

We have now the largest circulation of any other paper of the same nature, in the world. To you our subscribers do we owe much—to you are we indebted for the improvements we have continually been adding to the Scientific American, both in illustration and valuable matter. The information contained in our columns is more useful than entertaining, yet to the inventor, the lover of science and the intelligent mechanic it has peculiar attractions. No person in our wide country who wishes to be informed of the progress of discovery in science and art, can feel easy without a weekly visit from it. On our subscription list are to be seen the names of dwellers in every part of the civilized world. This shows that our columns are the source to which the eyes and hearts of our own people and the people of other nations are directed for information respecting American invention and discovery. We therefore, feel our responsibility for the honor of our country to be increasing with the increase of our readers, and as it is imperative that we should progress in improvement, we confidently rely on our people and our subscribers to assist us in still further extending our circulation. This costs nothing to subscribers, and a useful paper always carries a beneficial effect wherever its truths are circulated. The man who wishes to be acquainted with patent business should certainly not be without it, and those who wish to bring their inventions before the world, can find no other method so beneficial to them as to publish the same in our columns.

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Large and Small Papers.

We sometimes hear of people who after admitting this to be an excellent paper for its size, nevertheless reject it on the plea that it is not so large in proportion to the price, as some other papers. We are truly very sorry to hear that any of our countrymen are so deeply degraded in ignorance and stupidity, as to judge the value of a paper by its size merely. They might with equal propriety require a piece of rich silk at the price of coarse muslin or calico; or appraise a piece of cabinet furniture by comparing its size with that of a barn:—as well, in fact, measure a bank note, to ascertain its value. We well know that every copy of this paper costs us three times as much as it would to issue a sheet of double its size, filled with such advertisements and common-place useless matter as is found in many of the large cheap papers. We also well know that some of the smallest papers among our exchanges are worth double of others which are three times as large. We can offer no argument, however, to such people as make that plea of rejection, considering that they are wallowing in such depths of censurable ignorance, that a common sense argument would be of no avail. Let them go.

Electricity and Cholera.

It has been proved beyond doubt that our health and feelings are greatly influenced by the variations of electricity in the atmosphere and that those states of air which lessen the electricity of our bodies are more or less injurious. It is certain that a marked relation between cholera and electricity has been observed during the recent epidemic in London; facts are exhibited in the reports of the Register General which claim to be considered as something more than mere confidence.—Thus during a period of eleven weeks, beginning with September 3, on comparing the number of Cholera cases with the amount of electricity existing in the atmosphere, it was found that in the first week the number of cases was seven, while electricity could only be discovered in the air on two occasions; in the second week four cases, while the electrical state of the air was equally low; in the third week, three cases, with a little electricity in the air; in the fourth week, thirty cases the electricity state being very low; in the fifth week, forty-five cases with the same electrical deficiency; in the sixth week, thirty-four cases, electricity as before; in the seventh week, sixty-five cases, with a total absence of electricity; and in the succeeding weeks, while the number of cases varied from sixty two to twenty one per week, scarcely a single indication of electricity could be found. This remarkable absence of electric phenomena appears to be an almost unique occurrence.

And therefore the Electric Belt of Mr. C. Rogers, Jefferson, Michigan, which appeared in No. 17 this volume Scientific American, and the only one that we have seen constructed on true scientific principles, should claim particular attention.

A Cold Winter.

This has been one of the severest winters on record. The snow flakes have been dancing away far South on their cold but downy pinions. At Chicago in Illinois two men and a horse were found frozen to death on the road side, likewise a boy and a Norwegian woman. At Argyle in Washington Co this State, the thermometer has ranged for 13 days in the month from 10 to 16 degrees below zero, and has been as low as 26 degrees. It had never been above zero from the 9th of Jan. to the 16th of Feb. We do not know how the people in Franconia, N. H. have got through the winter, but some other places have been giving it a hard rub this winter.

Dr. Robbins, librarian of the Hartford, Ct. Athenæum, who is now over eighty years of age, and has kept a record of the weather from his youth up, acknowledges that the present winter beats all former ones in his record, for the extent of its coldness, as measured by the thermometer.

The First Pacific Whaler.

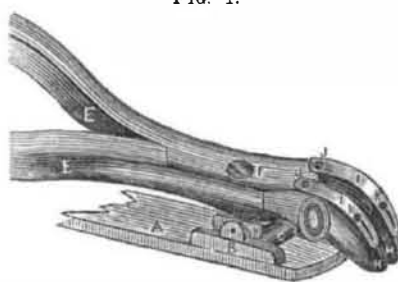
The New Bedford Mercury states that the first American whale-ship that ever visited the Pacific was the ship Rebecca, of 185 tons (then considered a very large ship.) She sailed from New Bedford in September, 1791, under the command of Capt. Kersey. It was considered an enterprise of great peril. She performed the voyage, and returned home, after an absence of fifteen months, with a full cargo of oil obtained on the coast of Chili and Peru. Capt. Joseph Kersey, now living in New Bedford at an advanced age, was a boat-steerer on that voyage.

The whaling fleet of the United States now consists of 580 ships, 20 brigs and 13 schrs.—total 613; of which 249 sail from New Bedford, 69 from Nantucket, 53 from New London, 49 from Fairhaven, 51 from Sag Harbor, 21 from Stonington, and from 1 to 15 from twenty-three other places.

The Finance committee of the U. S. Senate have settled upon the terms of a bill authorizing the coinage of gold double eagles, (\$20 in value), and also of silver two and a half cent pieces, and pennies compounded of silver and copper, instead of our present clumsy and uncouth cent pieces.—The bill will also contain provisions for the appointment of a U. S. Assayer at San Francisco, authorized to run gold of a certain fineness into bars of \$100, \$200, or \$500 in value, to be stamped with an official mark, for conveniences in trade or transfer home.

New Tooth Extractor.

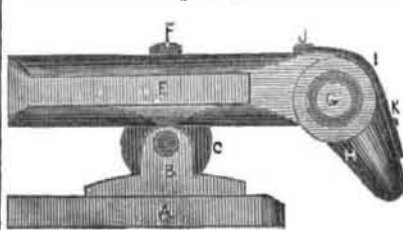
FIG. 1.



This is a new instrument for extracting teeth invented by Mr. Edward Bourne, of New Bedford, Mass. The object of it is to employ a fulcrum or rest for the forceps whereby the teeth may be extracted with much ease and the most refractory one pulled from its foundation in a twinkling. An idea of its construction and combination will be derived from the accompanying engravings.

Fig. 1 is a perspective view and fig. 2 a side view. The shanks are not engraved the full length, in order to show the principal parts more full. The same letters refer to like parts. A, is a plate or lever to which the forceps are connected by an axle C, which is of a ball shape below but flat on the top, and plays in bearings at B. E E, are the shanks which are connected to the jaws crossing one another—like those of scissors. The jaws have two motions, one to open out and the other to bend round—the latter motion being

FIG. 2.



for the purpose of enabling teeth to be drawn out straight, and to have a drawing power likewise—by a spring being attached to the top of each jaw. F, is the screw that unites the two jaws and is the axis for them to expand. H, are the jaws and they are united by an axis G, fig. 2, to allow the jaws to be bent down. The said jaws are kept in position by small steel springs I I, fixed on the top of the jaws by pins J J and K K—the last of which run in small slots when the jaws are bent down. This allows the jaws to have two motions. It is a very ingenious instrument, and the inventor has taken measures to secure a patent.

Electro Magnetism as a Motive Power.

MR. EDITOR.—As the subject of Electro Magnetism to move machinery, is now engaging some attention and as you have alluded to the experiments of Dr. Page, which have recently been brought before the U. S. Senate, I have thought that the following abstract of its history and the accompanying opinions regarding its merits would not be uninteresting to your readers.

Professor Oersted, of Copenhagen, Denmark, is generally allowed to be the discoverer of the electro magnet, and Professor Henry, now of Washington, the first person who demonstrated its capability to move machinery. In 1833 a mechanic named Davidson in Scotland, had an electro magnetic engine that turned one or two foot lathes. This ingenious mechanic constructed an electro magnetic locomotive that was tried on one of the British Railways but was a signal failure. In 1836 Mr. Davenport a Philadelphia mechanic, had an electro magnetic engine in public operation. In 1838 Professor Jaccobi, of St. Petersburg, Russia, propelled a boat on the Neva at the rate of about four miles an hour. In 1840 a paper was printed in this city by an electro magnetic engine, and in 1841 and '42, nothing was talked of but galvanic engines. Great numbers were made about that time in this city, but we believe there is not a single one of them at present in operation. In 1842 two patents were taken out in England to propel ships by electro magnetism, and at that time all the steam engines were to be dispatched to the moles and the bats. Alas for the new science, the reverse fortune has happened with it. In 1842 Dr Liebig warned his countrymen against the employment of electro mag-

netism as a motive power—viewing the question only in the light of an economist, and he proved in the most conclusive manner that it could not compete with steam.

The great difficulty in the application of electro magnetism to propel machinery, is in the decrease of attractive power according to the distance of the attracted part of the machine from the magnet. The strokes of all electro magnetic engines are therefore very short and they endeavor to make up by speed for this difficulty. All that we have seen, present as objectionable features as the majority of rotary engines.

We have seen accounts stating that Dr. Page recently delivered a lecture in Washington during which he exhibited a trip-hammer weighing fifty pounds, which produced a jarring of the whole room as it fell. Heavy blows were made in rapid succession, its motions were so easily controlled that it was let down slowly or rapidly at pleasure.

The controlling of the power of the hammer appears to be something new and useful, still we have doubts although not of a positive character regarding the economy of electro magnetism as a motive power, in comparison with steam. By late news from London it appears that a Danish gentleman named Hjorth, has constructed an electro magnetic engine of such power that one of his magnets supports 5000 lbs., but its attractive force at one eighth of an inch distant, was only 1,500 pounds—thus exhibiting the difficulty we have previously spoken of, and which presents serious objections to the employment of this power in propelling machinery. G. R.

New York March 1, 1849.

Colonization of Vancouver's Island.

The British Government has completed the grant of Vancouver's Island to the Hudson Bay Company, and they have advertised the terms upon which they invite emigrants. According to the stipulations of the grant, all profits from sales of the land or working of minerals, beyond ten per cent, are to be applied to the colonization and improvement of the Island. The price of the land is fixed by the company at £1 per acre, and it may be purchased in lots as small as 20 acres. That is five dollars per acre. Well; the British legislators are singularly defective in Colonial management. The British empire is boundless in resources and comprises every variety of soil and climate. Yet for all this, we often find thousands of her people in the very heart of Britain, starving for want. This shows how defectively her colonies are managed, and the grant of the splendid Island of Vancouver to a single company shows that she is not a whit wiser now than she has hitherto been. What emigrant will go from Britain to Vancouver's Island and pay five dollars an acre for land when he can come to the United States and purchase better for one dollar and twenty five cents. The patent grants of colonial lands, are the incubuses on the prosperity of her colonies, and our republic still feels and labors under evils arising from the old land patents. We never like to say any thing about politics—and this is not a political question but one embraced in the science of "political economy."

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