

Scientific American

NEW-YORK, OCTOBER 18, 1851.

More Improvements Wanted.

To question the great fact, of incalculable benefits having been conferred upon mankind by modern inventions, would be absurd; but with all our admiration for modern genius and improvements, it would just be as absurd to undervalue a good thing because old, as it would be to glorify a bad thing because new; all that was done of old, was neither indifferent nor bad, all that is done now is neither moderate nor good. We saw, and plane, and match with machinery, and there is cheap furniture in abundance, but it is generally as worthless as it is cheap. Our ancestors made things to endure for more than a summer's sunshine or a winter's storm, and when we wish to procure solid and durable articles, good prices have still to be paid as of old. Stockings and stuff of that kind are rattled off with surprising dexterity, and produced at reduced rates, but the knit work of our grandmothers, the idolized socks which were woven in the looms of their trembling fingers, are worth a dozen of the spider framed modern nether garments.

Our great modern improvements consist in applying the power of water and steam, as substitutes for human and animal labor; and the blessings and benefits conferred by such applications of genius and science are beyond all price; but we are not at the end of improvements yet, nor shall we ever be at the end of them, while the human mind has a wish ungratified. Our steamboats now speed along at the rate of twenty miles per hour, and our railroads at the rate of forty and fifty. Some may think that all has been done that can be done, on both land and water, to make man pass through space with a velocity rapidly coming up to that of the ball projected from the cannon. But when Fulton's first boat cleft the waters of the Hudson, at the rate of eight miles per hour, and when the first locomotive attained the speed of twenty miles an hour, men of great minds did not doubt merely, but asserted that to look for greater results was an infatuation.

The time may yet come, (and it would certainly be a desirable invention) when men will cleave the air as swiftly and as safe as they now travel over the land by the iron horse. There is no good reason to doubt this as an impossibility, any more than to doubt our existence. Who a few years ago would have believed that pictures in all their glowing natural colors, could be painted in a few seconds by a sunbeam, yet it is even so, and such a picture has been on exhibition in London. Aerial locomotion is less problematical than the daguerreotype, although it has as yet been barely practicable. The day of its triumph cannot always be distant: some new idea out of the old beaten track which every aeronaut seems to tread in, will yet be developed, and then the results upon society, no one can conjecture.

We yet want a great number of inventions to complete the catalogue of desirable improvements. We want a machine which could print as easily as we now can write; what a saving it would cause in steel pens and wretched scrawling. It would also be very desirable if a domestic loom was produced, which by turning a crank would drive the shuttle and weave the web with easy and unfailing certainty. We now have machines to sow and machines to mow, but we want a machine to make our shoes and to mend them too, as well. More attention has perhaps been given to quantity than to quality in modern improvements. Inventors have yet a wide field before them—it is the master mind which strikes out a new track. A host of new machines have yet to be invented, and a host of improvements made on those machines now in use, in order that quality may show forth as pre-eminently as quantity.

United States Steamships.

Four years ago, we believe, there were only four ocean steamships belonging to the United States. What changes a few years have wrought,—no less than six American steamships sailed from this single port last Saturday!

Patent Office Report for 1850.—No. 5.

EXAMINER GALE'S REPORT.—Mr. Gale possesses the qualification of making an excellent Report: he presents one which appears to be indited with a spirit of candor. During the year 539 cases were referred to him for examination, all of which but 42 were disposed of. He mentions it as a singular thing, that 643 applications were examined by him on the previous year, or 146 more than in 1850. He says he is anxious to explain this, because it illustrates an important principle. The explanation is, that when Mr. Ewbank went into the Patent Office he ordered the Examiners to hurry up their business, to fulfil the old adage, "a new broom sweeps clean," in order to bring up all arrears of business, at the end of the year. To meet this desire of the Commissioner, Mr. Gale states, an unusual amount of mental and physical labor was performed by the Examiners, and most of them brought up their arrears; "the business of my own desk," says this Report, "was reported as finished up to 1850." Now, mind the sequel, which is candidly stated, and which shows a daring recklessness on the part of the Patent Office, or else this Report does; here is what it says, "As generally happens in work done hastily, so it was here, much of the business had to be reviewed and re-examined, and the results showed conclusively that hasty examinations of applications for patents, like hasty legislation, are productive of great evils and little good." He believes, however, that "the business of examining patents was never done better than at the present time," which statement exhibits a world of caution on the part of the Examiner, and may mean that the examinations were never well done, or were very well done, or were moderately well done at some time. He has four classes of subjects under charge, viz., Agriculture, Chemistry, Domestic Manufactures, and Wearing Apparel.

Leather was under his charge until April, 1850. Two hundred and thirty new patents were ordered, seven re-issues, two extensions, and one additional improvement. He had ten more applications than Examiner Renwick, and passed twenty-six more for patents. There were a number of very useful inventions presented and patented; no less than one hundred and seventeen for agricultural implements; fifty-three chemical, fourteen for leather; forty-three for household furniture; wearing apparel, eleven. Of the thirty patents for churns, we cannot say much for their utility. Of thirteen patents granted for plows, one with a flexible beam is the most prominent. For seed planters no less than twenty-seven were granted; we know that much attention has been and is still devoted to such machines, thus showing that there is a general dissatisfaction either with the complexity or principles of their construction. An ox yoke of a simple and good form was patented. It consists in having two staples, about three inches from the centre, instead of one staple in the middle, for the chain. The chain branches out into two parts, one of which has an adjustable device for varying the length of the branch chain, so as to give either ox the advantage, to let the lighter or weaker one draw his end of the yoke equally with the other.

He pays Mr. Paine a decided left-handed compliment, in respect to his water gas. He states that frequent inquiries had been made at the Patent Office about Paine's patent, but no such patent was granted; the only one granted for gas apparatus of any note, was Dr. Gesner's, for making the gas out of asphaltum. Mr. Gail Borden's soup bread patent is also particularly noticed.

A patent was granted for making glucose (grape sugar) out of corn meal, which is worthy of notice. Twenty-five bushels of corn meal are mixed with 150 gallons of water at a temperature of 175°, and to this is added 25 lbs. of oil of vitriol, to which, after stirring well, 50 more gallons of water are added, and the whole run into a boiler (a leaden one we presume), when the contents are boiled by high pressure steam. The boiling is continued until, by the trial of a little iodine, with a portion of the mixture in a saucer, it does not turn blue, which shows the operation to be complete. Chalk is then added to neutralize any of the free sulphuric acid, when the whole liquor above the sediment at the bottom, is run off and concentrated to crystallize. This is

one of the wonders of chemistry; sugar is now made of corn, by boiling it along with a most virulent acid. A machine for washing dishes was patented, but this engine, if valuable, has not yet found its way into the restaurants of New York, the only good places in the world, for testing its powers. The re-issue of Hibbard's patent for Tanning is somewhat flatteringly noticed. We published the specification of this patent in our last volume and made some free comments on it, we have therefore no more to say about it at this time.

The Fire Annihilator—An Old American Invention.

We behold here and there in flaming characters "Philips' Fire Annihilator," an English invention, which has been patented here, and the patent sold for a fine large sum, it is said, and under the patronage of a fine big company, comprising Elisha Whittlesey, of Washington, and some other gentlemen of note, but mostly notable on account of the fame of the manager, the celebrated P. T. Barnum. Well, it turns out that there is a prior inventor of such an apparatus, and by establishing his just claim to the discovery and application of it, he will annihilate the annihilator, so far as Philips' patent is concerned.

We have received a communication from G. W. Michal, of Marion, McDowell Co. N. C., together with an article published in the "Mountain Banner," by Dr. Wm. H. Graham, which fully establishes the claim of the Doctor, as being the original inventor of the Fire Annihilator. He claims the invention as far back as 1837, and in November of that year, he filed his specifications at the Patent Office at Washington, and the following language of his filed papers will show that it embraces the very principles claimed in Philips' patent, which we published in No. 1, of this volume, and to which we beg leave to refer our readers:

"Your applicant claims that he has made a new and useful invention for extinguishing fire and flame with carbonic gas, in a manner new and useful; the gas to be generated by chemical process, condensed through a proper medium, in a machine; and with appropriate appendages and appliances can be directed to any spot, projected to any elevation, so as to make it a practical and efficient agent for extinguishing fire cheaply, safely, quickly, and is far superior to any other means hitherto used or known for extinguishing the flames of a steamboat on fire or a ship burning in the middle of the ocean. I declare my belief that this discovery is destined to save thousands and thousands of lives, millions multiplied by millions, in value of property.

WM. A. GRAHAM.

Now owing to the superior method of examination, so highly characterized by Examiner Fitzgerald, in his last report as having been introduced in 1836, what do our readers think was the answer given by the Patent Office to Mr. Graham? Here it is:

"Your invention does not possess that novelty and utility which would justify this office in issuing a patent. Nor is it, indeed, believed to be capable of being carried into effect."

H. L. ELLSWORTH

To this Mr. Graham returned the answer. "I think all the objections to my specifications and to granting me a patent are fully met by the fact that by a series of experiments carefully made by myself, I have fully tested the efficacy and practicability of extinguishing fire in the mode I propose, cheaper, quicker, and with more certainty than any other hitherto used or known, and I am ready to convince the Commissioner of patents and the public of its efficiency by an exhibition of its effects."

The claim of Dr. Graham was refused out and out, and Mr. Ellsworth said he might withdraw his money, but he declined, and was told that it would act as a perpetual caveat in his favor. Now if the examiners had done their duty, no patent would have been granted for Philip's Fire Annihilator—so much for the superior system of examination. At that time, says Dr. Graham, there was a distinguished individual at Washington, to whom he was introduced, who was said to have great influence with the Patent Office, and who told him he could get a patent at a word, if he would put his name as a co-inventor in the

application, and give him one half of the patent. He refused to do this—he has the handwriting of this gentleman still in his possession.

This shows how the Patent Office was managed, and can we say it is any better now? Mr. Graham says he is going to Washington this winter to renew his claim; but this is not the way to proceed. He must renew his application at the Patent Office, and demand of the Commissioner an interference, and time will be given to try the case. He will then establish his claim, a patent will be granted to him, and the other will be declared void, unless there is a distinguished difference between them. We do not think much of the Fire Annihilator, for we consider that for all effectual purposes, carbonic acid gas never will be a cheap substitute for water, but we say, "honor to whom honor is due, and justice to whom justice is due."

We have heard of the Annihilator having put out a small fire here and there; well Mr. Graham set fire to an old frame house, in which he kindled three cart loads of shavings, and with two extinguishers on a wheel barrow, himself and a boy, when the house was in flames, opened the nozzles of his hose, and let in his gas on the house, which he extinguished in three minutes. So much for its efficacy, it did as much as Philips' is capable of doing. We do not say but Mr. Philips was an original inventor, but Mr. Graham is the oldest.

A Word to Apprentices.

Since the commencement of the present volume of the Scientific American, we have been favored with nearly twice as many subscribers, who have taken advantage of the inducement offered to clubs, as up to the same number (No. 5) on any previous volume.

We are particularly happy to find apprentices so active, this year, in getting up clubs; it shows they have a taste for the right kind of reading, and we venture to assert that most of such young men will become eminent in their profession. Many apprentices, no doubt, think their incomes are too small to admit of their paying \$2 a-year for a newspaper, but let none of you abandon the idea of having the Scientific American on that account, but proceed at once and get up a club among your fellow workmen, which will enable you to receive your paper gratuitously. Appeal to your employers and get their names to head your list, then solicit the aid of your fellow-workmen, setting forth the object you strive for, and nine times out of ten we will warrant you success in your laudable effort. Let every apprentice strive to get a club, and let every proprietor and journeyman employed, encourage "The Apprentice Boy" by subscribing with him for the "Scientific American,"—it will be a satisfaction to you through life, to think you rendered your mite towards placing in the hands of a youth eager for practical knowledge, a publication from which no injury can arise, and from which much good assuredly will.

Fringe Twisting Machine.

The Editor of the Fitchburg Sentinel, who recently visited the Middlesex Mechanics' Fair at Lowell, after noticing several articles, says: "But that which seemed to attract most attention, was the machine for twisting the fringe for shawls, invented by Mr. John Nesmeth and Wesley Sawyer. Till quite recently all such fringes were twisted by hand, and two shawls were a good day's work for a smart girl. Two or three years ago a machine was got up at Lawrence, which would twist ten or twelve per day, and this was thought a great improvement. The Lowell Machine will twist 150 shawls easily—both side and end fringes, and what is of great importance, will do the work in the piece, and also before the pieces are scoured, if necessary—so that any oil which the goods may receive in the operation, may be afterwards cleaned as easily as when they first leave the loom. The apparatus for twisting a double fringe at the ends of shawls is particularly ingenious and worthy examination."—[Worcester Transcript.]

We would really like to know if this machine does anything more than merely double and twist the yarn into fringe; if not, we must say that machinery for making the French bullion fringe is old and well known. We have seen them in operation some years ago.