Scientific American

NEW-YORK, OCTOBER 23, 1852.

New York City.

From manifest indications we believe that the city of New York is destined to be the largest in the world. At present it contains more than one-sixth (520,000) as many inhabitants as there were in our middle country seventy years ago, and our whole country contains seven times more than there were in it at the same period. The City of New York has grown with the growth and strengthened with the strength of our united Commonwealths, and with the same mighty tramp of progressive population, which is now heard sounding from the Atlantic to the Pacific shores, so, from the ten thousand sources of our population, will there come those who will pitch their tents within our walls and take up their abode in modern Tyre. In the natural course ot events, the City of New York will contain a population ot 2,000,000 of inhabitants in sixty years from the present date. Nothing can prevent this but some overpowering calamity, which no one can foresee at present, and which no one anticipates. If such will be the mighty tide of population flowing through our streets in 1910, what will the City of New York be in A. D. 2,000? This is a question which no one can answer. Strictly speaking, New York is a commercial city, a mart of the sea—a port for tall ships and a caravansera for the merchants and merchandise of the world. On one side it is bounded by a narrow arm of the sea, and on the other by a broad and noble river; it is secure from all winds, and the most gigantic leviathans ot the deep can ride safely and lightly close up to our wharfs and our warehouses. Every year it is becoming more and more like a whirlpool in drawing from afar those who want to sell and those who want to buy. Its centralizing influence is immense, and it no more can be checked than can the tides of the ocean. Here men come with what is new, and here men come to see what is new. "As iron sharpeneth iron, so doth the face of man his fellow;" and the natural result of men often meeting in masses together, is both to spread and elicit knowledge. Of this we have been more sensibly impressed during the past three weeks, than during any other period within our recollection. The streets of New York have been daily trod by forty thousand strangers in search ot business and pleasure. Nowhere else have we had, or could we daily have, such opportunities of obtaining information from so many different sources, and of imparting it to so many different "lookers on in Venice." The Fair of the American Institute attracts many thousands to visit this city annually, and next year the World's Fair will attract far more than have ever visited New York before. The cities of the old world possess more interest to the traveller, because they are nearly all historical, and the association ot places with events which have become famous in story, kindles up the feelings and excites the imagination; New York cannot boast of towers, castles, venerable cathedrals, &c.; neither can it boast of towering monuments, gorgeous palaces, splendid works of art, museums of renown, and galleries of paintings; no, she can boast of none of these; but every year adds something new and more imposing, and as certainly as time wings its flight, so certainly does New York grow on, and [illegible] in grandeur and the acquisition of buildings and institutions, which will yet become as renowned as those of London or Paris.

Important Patent Cases.

There have been two very important patent cases recently tried before two separate U. S. District Courts; we allude to the famous India Rubber Case, Goodyear versus Day, and the Revolving Fire-Arms case of Colt versus Allen. These trials have impressed us forcibly with the conviction that our U. S. Courts of Chancery are founded upon a wretched system. They are termed "Courts of Equity," —the better name for them would be "Courts for the benefit of Lawyers." The case of Goodyear versus Day, for the infringement of a patent for the manufacture of vulcanized india rubber goods, has been before our U. S. Courts for some years, and it has only been brought to a conclusion within a few weeks. And yet, although an injunction has been granted against H. H. Day, we cannot strictly call it "a conclusion of the whole matter," for the defendant has published a card, stating that, under the advice of his counsel, he will appeal from the decision of the District Judges to the Supreme Court at Washington. This case may be banded from court to court, for some years to come, before it is finally concluded. The Supreme Court at Washington may reverse the decision of the District Court, and then, after that, a long trial by Jury will have to put the cap on the whole ot the circumlocutions of the courts and the speeches of counsel. The first thing that is done by a patentee to get satisfaction for the infringement of a patent, is to apply to a U. S. Court for an injunction to restrain such and such a person or persons from infringing his patent. Notice is given to the alleged infringer of this application, and he at once employs counsel, and if the patent is an important one, "lawyers of the highest fees" are engaged, and on the plaintiff's side the most forcible arguments are adduced to prove the defendant to be a pirate, while, upon the defendant's side, as plausible logic is poured forth to prove the plaintiff a thief. For this india rubber case the great Daniel Webster was employed by Goodyear, and the renowned Rufus Choate by Day; other assistant and eminent counsel were also employed by both parties, and the speeches which they made to enlighten the Judges, occupied a number of days. After they were all made, these same judges took a most patient view of the whole subject, and came to the conclusion that they would make a short day's work of it, and hence they at once shut up Day from working any longer on his own account.

We do not know, but it is our opinion, that this case must have cost each of the parties $20,000, at least, for lawyers' fees alone. Now, is this all that our republican simplicity has wrought us, in obtaining justice for alleged violation of rights? Is it not possible to erect a system of United States Jurisprudence of a more economical, conclusive, and satisfactory character than this? We think it is. While we say this much, we admit that it is far easier to pull down than build up, and we do not like to disturb existing systems for new ones, until good evidence is given that the evils will be remedied and beneficial results follow. It is our humble opinion that if our District Judges, in reference to patents, would at once, when any injunction is prayed for, order a trial by Jury, without hearing any long arguments in equity at all, the ends of justice would be more promptly and satisfactorily obtained than by holding Courts of Equity, for the benefit ot enlightening the Judges as to their duty in the case. We will not, at present, enter into a further discussion ot this subject, although we have much upon our mind to say; at some other time we will return to it; and merely say, in conclusion, that duty compels us to keep it before the people.

Poisonous Chloroform—Tests for its Purity.

On pages 3 and 16, of this volume of the Scientific American, we published the experiments of Dr. Jackson, of Boston, with chlo[illegible] and fusel oil, and stated, as we believed [illegible] a fact, that he had made a most [illegible] discovery in finding out the cause of [illegible] deaths which had occurred by the use [illegible] oroform. The chloroform which had [illegible] used was made out of whiskey, which [illegible] this oil, instead of being made out of [illegible] alcohol. We now have to state that this [illegible] not a new discovery. On pages 280 and 281, "Chambers' Edinburgh Journal," for 1850, there is a paper by Professor Gregory on this very subject, which speaks of the danger arising from making chloroform of the pyroxylic spirit of commerce. He states that this spirit of commerce contains impurities of oils, and the chloroform made of it "is extremely dangerous, because the oils mentioned are very deleterious when inspired, causing migraine, sickness, and vomiting. These effects may be produced by chloroform containing but a small portion of these oils, the vapor of which comes in contact with the internal surface of the lungs. A larger proportion of oils, such as is sometimes found, may produce very serious results, hence the necessity of perfect purification." These quoted sentences embrace the very discovery asserted to have been made by Dr. Jackson.

It is essential that every medical man should be enabled to ascertain, readily, whether any given specimen of chloroform be pure. Dr. Gregory presents some very excellent tests for detecting impure and proving pure chloroform, which are so plain that no surgeon nor dentist in our country can be excused, after this, for using any that is impure. One is, pure chloroform has the density of 1·500, but as this test is troublesome, depending on temperature and delicate instruments, two other modes are given. The next is to shake the chloroform in a well stoppered (not corked) bottle, along with one-half of its bulk of the oil of vitriol (colorless) ot the density of 1·840. If any trace of oils is present, the acid becomes more or less yellow, and when allowed to stand, a darker line appears at the junction of the liquids. When the yellow color appears, after being shaken and standing still for a short time, the chloroform is poured off into another vial, where it is shaken anew, with another and a smaller portion of vitriol. If, after a time, this appears colorless, the chloroform may be considered pure, and it only remains to remove the acid from the chloroform. This is easily done by pouring the chloroform into a third dry vial, and shaking it with a little peroxide ot manganese till its smell is quite free from that of sulphurous acid, which is very soon the case; its specific gravity is then 1·500, and it is perfectly pure. Another test, but a very delicate one, is to allow a little chloroform to evaporate from the palm of the hand; when pure it leaves no smell, but if there be a trace of oils they, being less volatile, remain and present a disagreeable odor. It is very difficult to get chloroform so pure that it will leave no odor when thus tested; but no practitioner should use chloroform if it leaves a strong and distinct smell of noxious oils, or if it colors the acid. These tests are easy, and chemists cannot be offended if surgeons refuse to use their impure chloroform, when it is so easy of purification and so dangerous to use. Pure chloroform produces none of the persistent sensations which are caused by the impure. Dr. Gregory has seen a specimen labelled "pure chloroform," which scarcely contained a trace of that liquid, and Dr. Simpson, the discoverer of chloroform, once received a bottle of apparently pure stuff from a maker ot good character, and there was not one of his patients but suffered from its use, until he suspected the cause, tried it and found it to be impure. In "Chambers Journal," for 1851, page 57, it is stated that it has been administered in Edinburgh 80,000 times without a single accident. We have now a true clue to the cause of death produced, in more than one instance in our country, on persons who had previously inhaled chloroform without the least evil effect.

"The Niagara Mail," vs. "Scientific American."

"The Scientific forgets to relate how, that Hobbs' own lock was picked in two hours, by a London locksmith; and that the reaper was invented in Scotland, twenty years ago, and re-invented by Mr. McCormick, a Scotchman in the United States, who introduced it to the World's Fair, and lastly, that the 'glorious Yacht America,' has been beaten twice in England. The Scientific American, not only denies the least modicum of praise to foreign ingenuity, but not satisfied with that, there is never an invention or improvement announced in Britain but that journal makes it its particular business to decry either it or its author. The Scientific American is no true lover of science, else such illiberality and vulgar depreciation of talent out of the United States, would not be permitted to fill its columns."—The Niagara Mail.

[There is not a sentence in the above which we cannot, with reason, contradict as an untruth. Hobbs' lock has not been picked in England; and if the reaper was invented in Scotland 20 years ago, an assertion which we do not deny, Mr. McCormick, although bearing a Scotch name, is a native ot Virginia; and if he re-invented the reaper, it was original with him, and does not militate against the remark of ours, that called forth the above, viz., "McCormick's reaper gained a triumph at the World's Fair." If Patrick Bell invented a good reaper 20 years ago, Englishmen and Scotchmen ought to take shame to themselves for allowing it to cut silently a few acres only, on the Carse of Gowrie every year. Americans ought to be thanked for bringing this useful invention into notice at the World's Fair. The "Yacht America" has not yet been beaten. No candid Englishman will contradict this assertion; there is a great difference between losing a race and being beaten.

The Scientific American, instead of denying praise to foreign inventors and inventions, has always been forward to praise them when they deserved it. When speaking of American triumphs, we never employ opprobrious epithets against others. We speak as strongly against poor or humbugging home inventions as we do against foreign ones. We endeavor to be impartial and generous, and it is very singular that while our foreign scientific exchanges have given us credit for this course of conduct, a provincial journal should see fit to speak in different terms. No paper in our country, we believe, endeavors to be so impartial when speaking of foreign inventions and inventors. Our rule is truth, and our motto is, "honor to whom honor is due." If the Mail had been as candid as it is captious, it would not have used the language we have quoted.

To All Whom it may Concern.

"GATESVILLE, Oct. 4th.

MESSRS. MUNN & Co.—Please continue the Scientific American to my former address. Enclosed find $2 in payment. Yours,

SAML. IVES."

We publish the above letter for the purpose of directing attention to one of the most serious annoyances experienced by newspaper publishers, viz., the want of proper directions for mailing papers. Sam'l Ives has no doubt been a subscriber, but not at Gatesville, and as no such place appears on any of our books, therefore the conclusion is inevitable that Mr. Ives has never received his paper at that office,—indeed we never before heard of such a place, and could never find it by the aid of Mr. Ives' letter. Gatesville may be in Maine, North Carolina, Missouri, Texas, or any other of the thirty-one States, and, for aught we know to the contrary, a ville bearing this name may be found in every State in the Union. We spent an hour in looking for Mr. Ives' name in hopes of discovering his whereabouts, and, after finding three of the same name, we are obliged to wait another letter from him, in which he may slightly hint at our rascality, because we take his money without sending the paper in return.

We have many times been so confronted by correspondents, where the fault was entirely their own. Whenever any person sends for a newspaper, great care should be taken to specify the address to which the paper is to be mailed. Write your names, with town, county, and State, in a clear legible hand. If you cannot write plainly, print the address in Roman letters, with a pen; this will always give satisfaction, and insure correctness in mailing. Sometimes we can decypher the address from the postmark, but this is not always to be regarded because we have had many letters mailed from offices at a distance from the writer's residence. We remember one from a gentleman who, we have since learned, resided in South Carolina. This letter was dated at one place, mailed at another, and contained a postscript requesting his paper to be sent to another place, and in neither instance was the State indicated. This, we repeat, is a great annoyance, not only to the publisher but also to the correspondent.

Magnetic Balloon Ascent.

Applications have, it is said, been made to the proprietors of the different places of entertainment in London, from whence balloon ascents take place, by an individual who wishes to make an ascent suspended 30 feet below the car, by magnetic attraction. The method by which he proposes to accomplish the feat is this: he possesses a magnet, the attractive power of which will sustain a weight of 150 lbs.; this is to be hung by a line 30 feet below the car; round his body is fixed an iron zone, which on being brought near the magnet firmly attaches itself thereto.