

Scientific American

NEW-YORK, SEPTEMBER 25, 1852.

Apprentices in Cities and Country.

We have been frequently asked by parents from the country about the propriety of apprenticing their sons in cities. The idea seems to be prevalent that a youth can learn to be a better tradesman in the city than in the country. We believe it is a mistaken one; they will learn to be better tradesmen in a country shop, if the employer is a good mechanic and a steady man, than they can do in a city. A small shop also has more advantages for an apprentice than a large one. He has an opportunity of putting his hand early to all kinds of work, and therefore he becomes a more general workman than the one who learns his trade in a city. It is also better for a young man to learn his trade in a shop where there is only one apprentice than when there are many of them. In a shop where there are a number of boys, they play and trifle away their time every inviting opportunity. In large shops, in cities, the boys are neglected by both employers and journeymen, they are made to do the drudgery work, and there are so many exciting things which lead away their thoughts from their business, that, with few exceptions, they do not seek for knowledge by conversing with one another, or with the journeymen, about this and that improvement, or the scientific part of their business. In spare moments their talk is principally about this fire engine beating another one, or this and that steamboat beating such another one; they do not converse about the causes which produce certain effects, but talk about effects without the least allusion to causes. An apprentice, in a city, must either run with a fire engine or belong to some military company, and thus his mind is diverted from being employed usefully in acquiring a full and complete knowledge, practical and theoretical, of his trade. There can be no doubt but what there is a greater variety of different kinds of work done in city than there is in country shops, and were all other things equal, this would claim from city shops the pre-eminence for the acquirements of a good mechanic, but the drawbacks are so numerous that we advise the young man who wishes to be a good mechanic, to serve at least the three first years of his apprenticeship in some country shop, under a good skillful and attentive employer. After that, he should come to the city and learn what he can, if he is rooted and grounded in moral principles; if not, let him not come near the alluring scenes of a city life.

We find great fault with mechanics in every shop, in country or city, for being so little devoted in searching after the very knowledge which would be most beneficial to them in their separate trades. How few of them learn to be draughtsmen and mathematicians, and yet these qualifications are essential to their rise and progress in life. It is to be regretted that so few of them read and study good works in comparison with the great many who read useless and empty books, and whose conversation is distinguished by much foolishness and little sense.

We speak thus in kindness, in order, if possible, that we might lead some to consider their ways, and rise above the evil trammels in which they fetter their minds. The time will soon be at hand when Evening Schools will be opened in our cities, and when young men will have more time to read and study. We hope they will not neglect those opportunities now, for as time misspent can never return, so neither can neglected means of improvement be purchased in any future period of life.

Colored Daguerreotypes.

The "Philadelphia Ledger" of the 14th instant, contains an extract about the discovery of producing colored daguerreotypes by Niepce St. Victor, which, it says, is taken from a communication to the "National Intelligencer." We do not know who the author of that communication is, but we do know that the very language of it is taken from an editorial article on page 3 of the last volume of the Scientific American. Curious coincident—very!

We often see communications from correspondents in our daily papers, describing things as new, which these same paid correspondents read in our columns six months or a year previously; it is the case with these colored daguerreotypes.

Let the Inventor's Name be put on his Invention.

In our article, last week, on the Ventilation of Railroad Cars, Nelson Goodyear was mentioned by a correspondent of the "New York Daily Times," as being the inventor of the system of ventilation which involves the principles of Mr. Paine's patent. Goodyear never made any invention for ventilating cars; he purchased the invention from Edward Hamilton, the inventor, and sent it forth with his own name. This is a very common custom with assignees, but it is not an honorable one. Here we see steam gauges sold with the name of "Ashcroft" on them, while the inventor is M. Bourdon, the eminent Frenchman. There is a famous feathering paddle wheel much used in England, which goes under the name of "Morgan's Wheel," while the real inventor is Elijah Galloway: Morgan was only the assignee. There is the Compound American Rail, too, which goes under the name of "Winslow's Compound Rail;" the invention is that of Alfred B. Seymour, of whom the public hears nothing. In England, when a Patent Agent takes out a patent for a foreigner, why, it is always in his own name,—the name of the inventor is never mentioned. We think men who tack their own names to the inventions of others, exercise a wonderful amount of modest merit. They have bought out the inventions of some poor patentees; and why, forsooth, have they not the perfect right to try and make the public believe they are the real inventors. "All is fair in politics," says the active and unscrupulous partizan, and is it not equally fair to be guided by the same rule in business? To be sure it is, says the purchaser of a patent, and straightway the invention of another man flourishes under the name of the purchaser. There are some assignees of patents—the majority we believe—who are honorable enough to allow the inventions, of which they have become purchasers, to go under the names of the real inventors: we give them credit for a gentlemanly spirit, and hope that all assignees, after this, may go and do so likewise.

Inventions Come and Gone.

It is sometimes wise to look behind, and from the past glean instruction for future guidance. Errors are instructive, if rightly applied, in order to prevent their recurrence. In looking over the columns of our last volume, we have been reminded of some things which had their brief day of wondering existence, dazzling for a while to delude and lead the unwary astray, as the *ignatus fatuus* has been represented to lead the weary wanderer into the fatal quagmire. It is not a little consoling to reflect, that we have endeavored to be faithful in warning voyagers against false lights, in order to save their barks from being shipwrecked. None of our readers can forget how we plainly pointed out the impossibility of the Electric Light being that which it was represented to be. A great noise was made about this light, and some with professional titles attached to their name, wrote lavishly on the subject; but now the light is out, and we see it no more.

Who can forget the Remington Bridge and the excitement created in our country about the wonderful adventures of its inventor. All the old bridges of our country were built on wrong principles; the new one was to create a new era in civil engineering. Some of these structures were erected in different parts of our country, but where are they now? ruined wrecks—broken monuments of folly. There was another asserted discovery, which made a great noise for a brief space, but now slumbers in its hollow cave of darkness and gloom, we allude to the Hillyotype. This was a discovery asserted to have been made, by which pictures could be taken by the daguerreotype process, and all the colors of face and apparel as fully developed and brought out on the plate, as they appeared on the living subject. Nay, it was asserted (but who saw it?) that the discoverer, swift as the passing thought, had taken the picture of his own child, with

its ruby cheek glistening through a falling tear. The picture in print was lovely—quite in the style of Uncle Toby; but alas for its existence, it is not. It is true that a letter was published in many papers, purporting to be from Prof. Morse, who knew something of the truth and the value of the discovery, and when eminent men like him write letters, they do impart confidence to many respecting that which they write about, but that letter, along with many others from high quarters, teaches us to "trust not in princes."

We might allude pointedly to a number of other such alleged inventions or discoveries, but we presume we have said enough; our object, in such articles, is to set forth the necessity of constant vigilance in the examination of all questions, inventions, and discoveries, which appear from time to time before the public. We think we hear one saying "what has become of the static pressure engine?" Ah, friend, it has gone where we predicted it would, along with its unscrupulous panders, namely, down into the slough of contempt, and this is all that we now have to say about it. There can be no doubt but such things will be revived from time to time, but it is not now, as it was at one period, when, without an intelligent press to warn and instruct, impostors were rife and abundant, yet they are not entirely banished from community, for, from time to time, we hear of people paying for their folly because they are too careless, or penny wise and pound foolish, to read and learn. Nothing that is new should be viewed lightly, and nothing that is old cast aside merely because of age. Everything should be esteemed for its good qualities, whether it be new or old; it is our duty, and the duty of every man, to "prove all things, and hold fast that which is good."

Hydraulic Rams.

These hydraulic machines are coming, as they should, into very extensive use throughout our country. They are of immense importance to all our agriculturists. The Planter of Virginia, and the Farmer of Ohio, are alike interested in their application and success. We have heard reports from many quarters, about their superseding other powers, for elevating supplies of water for domestic purposes, and for irrigating lands. We have before us the Report of the Committee on Science and Art of the Franklin Institute, Philadelphia, on the Hydraulic Ram of H. P. M. Birkinbine, of that city. It is stated in said Report, that Mr. Birkinbine has constructed and put into use no less than one thousand of these machines, and one has been put up in the town of Naples, New York, intended for the supply of that place with water. The fall is six feet; it forces the water sixty feet high, and discharges 20,000 gallons per day; the driving pipes are six inches in diameter. One of these rams has been erected to supply the Girard College with water; it has a driving pipe of two and a half inches in diameter, one hundred and sixty feet long, and a fall of fourteen feet. The delivery pipe is 2,260 feet long, one inch diameter, and the water is elevated 93 feet. The co-efficient of this ram is seventy-one per cent.

After enumerating a number of valuable improvements made by Mr. Birkinbine, it states that a valuable one was made by Joseph Strode, of West Chester, Pa.; this consists in laying down the driving pipe, or that which conveys the water from the fountain head to the ram, in the form of a cycloidal curve, which is the curve along which a body descends from one given point to another in the shortest time, and therefore with the greatest mean velocity. By this means the momentum of the descending column, upon which depends the effect of the ram, is increased.

A large ram has been erected at New Brunswick, N. J., on the Delaware and Raritan Canal, on which Mr. Strode has made some valuable improvements, which Mr. O'Neil, the Superintendent, states, operates far better than was expected. The improvement consists in dispensing with Birkinbine's water cushion by lengthening the driving pipe, so that the issuing water shall have its velocity diminished, and the stroke of the valve thereby softened. This, however, cannot be done by laying the driving pipe straight without losing too much per centage; it is done by laying

the pipe of the curve of quickest descent already spoken of. In a recent case, with a new ram, Mr. Strode put in a two inch iron driving pipe, 250 feet long, under a 16 feet fall, which raises water 132 feet high, and gives a high per centage. Here, then, we have evidence that the length of the driving pipe may be usefully increased if made of a right form—the proper curve. A Hydraulic Ram erected in Thornbury, Delaware Co., Pa., with the driving pipe of the proper curve, has given 94 and 97 per cent. Thus we have a most valuable improvement made on these rams, for which the inventor intends to apply for a patent, and our country will no doubt be greatly benefitted by the discovery.

Shade Trees in Cities.

In the "Horticulturist" of last month, of which the accomplished and lamented A. J. Downing was the editor, there is a sharp and slashing article against the Ailanthus, as a shade tree for cities and villages. The article recommends the axe to be laid to the root of this tree at once, and to substitute for it the native maple and the tulip tree. The reasons given for this, are two, and only two, namely its offensive smell, and its overrunning or propagating qualities. The latter *vice*, as it is termed, of this tree, is too purile a reason for its extermination; the first—its bad smell—is the only good one. The trouble of lopping down suckers, is nothing at all except to lazy people. It is acknowledged that in foliage it is beautiful, and that none of the ugly vermin, so prolific among other shade trees in cities, trouble it. It grows very fast, is straight and oriental-like, with its nodding plume of long slender leaves; should we not consider the proposition for its destruction well, however high the authority may be, before the public consents to its death? This is wisdom; and first it should be asked, "has it really such a bad odor, as will not compensate for all its good qualities?" If it has, lay the axe quickly to its root; if not, "Woodman Spare that Tree." Our olfactory nerves may not be so acute as those of some others; we therefore cannot consent to its death; but we must say, that we like our native maple and tulip trees much better; they, however, are much slower in growth to form shade trees, than the ailanthus.

We learn by the Western Horticultural Review, Cincinnati, that a spirited discussion was recently held by the Cincinnati Horticultural Society, in which the merits and demerits of this tree were freely canvassed. Its merits, as set forth by the Ohio Horticulturist, fairly threw every argument for its extirpation in the shade. Mr. Ernst, during long experience, never knew any malaria or poisonous effects to proceed from it; it was free from insects, and a beautiful tree in any situation. Mr. R. Buchanan gave the same testimony, but the majority of the Society agreed that it had an unpleasant odor, which an old gardener stated might easily be abated by cutting off the stamens, by a proper instrument just before they expanded, as all odors chiefly arose from them.

Our people are too liable to go everything by fashionable excitements, instead of individual independent taste. This is the reason why whole avenues of one kind of tree may be seen in one place, and whole avenues of a different kind of tree in another place; and how at one time one kind of tree, only, will be in demand, and at another period a different tree will be the only one in demand. We like to see variety; and the ailanthus is a beautiful, suitable, and excellent tree to give a chequered air of beauty to the scene. We do not like to see any street lined and shaded with only one kind of tree; we like to see the maple, whitewood, mountain ash, horse-chestnut, ailanthus, &c., mingled in harmonious rows.

A Safety Lamp.

A Mr. Newell, of Boston, it is asserted by the papers of that city, has invented a safety lamp for burning fluid, which can be used with perfect safety. We hope this is true, if so, it will save a great amount of suffering.

The chloride of zinc is now used in Paris for the preservation of anatomical specimens, a prize of 2,000 francs has been awarded to M. Succquet for the discovery.