

Scientific American

NEW YORK, APRIL 12, 1851.

Give us the Name of the Inventor. English Patent Laws.

Some time ago, there was no small amount of agitation in England respecting the necessity of reforming the patent laws. The agitation appears to have almost died away, and we suppose the present session of Parliament will terminate without any reform being accomplished. The subject of ecclesiastical titles is now agitating all England, Scotland, and Ireland, dwarfing the subject of making good laws, for the encouragement of men of genius—those men whose skill has built the Crystal Palace, and whose genius is about to be exhibited in a more glorious and enduring contest for old England, than Poitiers or Waterloo. The law-makers of every country, our own not excepted, are so wedded to the selfish interests of high dignitaries, titular fools, and party scheming, that they have but little time to devote, to reforming bad patent laws which hang like millstones about the necks of really great men, though not conspicuous because they are generally poor.

There is one reform which we would like to see carried out in England, and that at the earliest possible period,—it is one for which the London Patent agents must be held somewhat responsible. We mean the granting of English Patents in the names of the real inventors, the same as we do in America. Within the past two weeks, we have noticed no less than three American inventions for which English patents have been granted, but not in the name of the inventors; no, but in that of the patent agents, with the forcible inference, "communication from abroad." Let us have the names of the inventors, let them have the full credit of their inventions if they have nothing more. One of the inventions we speak of was Dr. Gorrie's machine for making ice, which has been more than once noticed in our columns; the second is the hat body machinery illustrated on another page, and the third is "Paine's Light." Specifications of patents appear in English Journals granted to A, B, C, D, the patent agents, who are no more the inventors than we are. This is not right, although it is customary. It is true that patents are granted to those who introduce improvements, but it would show some feeling of rectitude, if the names of the improvers or discoverers were inscribed on the face of the patents. We hope this subject may receive the attention which it merits, and lead to the performance of a very simple duty, but the more necessary to be performed on that very account.

Patent for "Paine's Light."

By the last number of our worthy contemporaries, the London Patent Journal and the Mechanics' Magazine, we have illustrations and descriptions, of "Paine's Light," which has recently been patented there. There is something in the descriptions given which we cannot well understand; but for this we would have given them to our readers this week. We wait to receive more full (if there can be) explanations, and then we will present the drawings and descriptions of the same, which are very different from those of Dr. Colton, that have been printed in so many of our papers. Mr. Paine is going to Washington in a few days, with a fine machine as a working model of it, and we may be able to present some views of the same.

It is our intention to pursue this subject until the whole truth is laid before our readers.

The World's Fair in America.

A meeting of Delegates of the various Railroad and Steamboat Companies, was held on Thursday last, at the Astor House, to take into consideration the increased facilities for travellers which will be required on the occasion of holding a "World's Fair of the Industry of all Nations," at New York, in 1852. Gen. John S. Darcy was appointed Chairman, Louis Perrine, and James S. Green, Esqs., were appointed Secretaries. Resolutions were passed in respect to the proposed Exhibition

being held on Governor's Island. The meeting adjourned to assemble again at 12 o'clock on the 13th of this month, at the same place. The directors of railways, steamboats, and the proprietors of stages, are invited to cooperate in this work, and send representatives to this meeting.

We sincerely hope that a "World's Fair" will be held in America; we brought the subject before our readers more than a year ago. We can have a World's Fair worthy of our great country, and one that will do honor to America, if the right kind of men take hold of the work. As the subject has now been brought before our people, we will sacrifice some honor if we do not carry it through. The French say we are a people of *splendid resolves*; let us do more than resolve in this affair. Let it not be like that mockery of a pageant, the New York Washington Monument.

Rice and its Cultivation.

Rice is the principal food of the millions of Hindostan, China, and many other nations. To provide against its rapid decomposition in those tropical climates, nature has provided it with a very indestructible coating. The haulm, or chaff of rice, is a vegetable sand paper. After being milled, rice is readily destroyed by the weevil; but rough rice is exempt from the depredation of every species of insect—if stored carefully, therefore, it will be as good for food at the end of twenty, perhaps a hundred years, as it was the very day it was gathered from the field. The indestructibility of the chaff has long been known—the ash of the chaff of rice contains ninety-seven per cent. of silica.

American rice is far superior to that of any other nation,—Georgia and South Carolina raise the best rice in the world. The Charleston rice sells for just double the price of Bengal, in the London market. When rice is sent on long voyages, it soon spoils if it has been dressed, therefore it is best to send rice in its rough state across the Atlantic. It will be seen by our list of patents, this week, that a patent has been granted to Mr. Peter McKinlay, of Charleston, for an improvement in Rice Hullers. The most improved rice dressing machines are of American invention, and have been introduced into Europe. There the rice is dressed after being sent over in the rough state. This mode of treating the grain has greatly enlarged its European consumption, as it is perfectly sweet after the voyage, when not hulled. The superiority of American rice depends either on climate or superior cultivation—the latter in all likelihood. About seventy years ago, almost all our rice was the product of inland swamps, but the greatest part of the rice crop is now grown on flats, near the sea coast rivers, which are subject to overflows. Tide swamp lands, well adapted to the growing of rice are found almost exclusively within the limits of the two Carolinas and Georgia; on the rivers emptying into the Gulf of Mexico there are lands on which rice may be planted, but the rise and fall of the tide in the Gulf being only two feet, the fall does not admit of drainage sufficient for successful cultivation. For similar reasons, that of climate being superadded, the culture has not been attempted north of Cape Hatteras, where the rise and fall of the tide is only three feet. On the coast of Georgia and the Carolinas the tide rises and falls from six to seven feet. These tide swamp lands are limited to a small extent of sea-board. They commence at that point on the southern rivers, where the salt water ceases and the fresh begins. These fields then extend up the rivers on both shores for a distance of about 12 or 15 miles, and in some places less. In hot summers, the lower lands are affected with the salt, when the planters cannot irrigate. At the upper limit, wet seasons bring down freshets, which oftentimes prove very destructive, the crops being immoderately submerged. Midway between these limits there lies a body of land, of no great extent, measurably exempt from both these causes of damage, which are usually denominated lands on the best pitch of the tide; these are the most valuable lands in those States. Of the sixteen or seventeen millions of acres included within the li-

mits of South Carolina, these tide swamp lands constitute so small a fraction, that were they abstracted from the mass of the State, their loss would scarcely be perceptible—yet the gross product of these, in an average of seasons, does not fall short of two millions of dollars per annum.

Artificial irrigation has been practiced in oriental countries from time immemorial;—in Egypt and Hindostan, artificial irrigation is performed, in many cases, by gangs of laborers handing up buckets full of water, from the river up the bank, from which it is sent away over the flat lands in small channels. Pumps and the Persian Wheel were and are used for this purpose; and bullocks working a gin, to actuate the Archimedian screw pump, forcing up water from rivers, is not an uncommon method of irrigation practiced in the East Indies. At the South, artificial irrigation has received no small attention: an improved machine for that purpose has been introduced into Charleston by our friend Mr. N. H. Leiby, which promises to confer many advantages upon the cultivators of rice. It is thus described by the Charleston Courier. "In compliance with the invitation extended by Mr. Leiby, quite a number of visitors assembled yesterday to witness this curious and successful application of machinery to a purpose in which our rice planters especially are deeply interested. It is adapted both to draining and irrigating lands, and when set in motion by a steam engine of 6 horse power, is capable of raising from five to six thousand gallons per minute, which might be greatly increased by additional motive power. It has been inspected by several experienced planters, and pronounced to be a most valuable agricultural appendage, sufficiently simple to be worked without difficulty by the negroes on plantations, and not liable to get out of repair. The credit of this clever adaptation of well known philosophical principles to the improvement of the culture of one of our great staples, belongs to a young Charlestonian, who, to a natural genius for mechanism, adds the fruits of years of laborious study and practice, in his high and honorable vocation. Mr. Leiby's industry and attention to business have been rewarded with a liberal share of constant active employment, and were his establishment extended to double its present capacity, so brisk are the openings for the efforts of this deserving class of our community, that we feel confident the increased investment of labor and capital would prove profitable and desirable to all concerned."

This machine embraces a valuable improvement of the submerged turbine wheel, which we hope will be the means of opening up a vast field for improvement by the introduction of a cheap system of artificial irrigation.

An American Machine for Turkey.

Mr. George Wright, of Washington, the inventor and patentee of a most ingenious machine for making percussion caps, being on his way to Constantinople with it, we take this opportunity of bringing it specially before our people, hoping its ingenious inventor may meet with higher rewards abroad, than he has in his native land. Elaborate drawings of this wonderful invention were exhibited to us by the inventor, in company with Klein Woodward. They intend introducing it to the attention of the Turkish Government, and purpose also to visit other foreign powers with this intent. Mr. Wright, the inventor, has been subject to the inconvenience of being destitute of the required means to secure this invention by patent, abroad. It would, however, puzzle any mechanic to construct one without the personal superintendence of the inventor.

The machine occupies a space of about 3 by 4 feet; it is supplied with copper, in sheets, 14 by 48 inches; the fulminate, or powder, is deposited in a small hopper for its distribution in the caps as they are formed. The machine, being supplied with the material, it is put in operation by steam power, and the sheet of copper is fed from right to left and left to right, alternately, rolling in at the proper interval. The star or blank, for the cap, being cut, it is quickly transferred to the form-

ing die, where it is pressed into the required form. The cap is then lifted from the die by means of a punch beneath, and lodged in the periphery of the charging plate; it is then carried around by the plate, passing under the hopper, containing the powder, where, receiving its proper charge (half a grain), it passes on under the charging punch, where the powder is firmly pressed in the bottom of the cap. The cap is then thrown from the plate, falling into a drawer beneath prepared to receive them. It then continues its operation of cutting, forming, charging and pressing, in rapid succession, until the whole sheet, as if by magic, is transformed into caps in a finished state, ready for use. One man or boy, only, is required to superintend its operation, producing 5,000 caps an hour, or 50,000 per day. This is the only invention in the world which makes a cap complete at one operation.

The copper is not required to be cut into strips, but is used as it comes in sheets from the rolling mill. These sheets may be of indefinite length.

Major A. Mordeci, commander of the Washington Arsenal, says, in his Report, for 1850, that this machine performs its work perfectly, and is the subject of admiration to all visitors at the Arsenal. Several officers of the Ordnance Department, who have examined the manufacture of percussion caps in several European countries, agree in the opinion that this is by far the most complete machine which has been made for that purpose.

The ingenious inventor has also arranged a machine for varnishing the caps, by means of which the work is done more expeditiously than it can be by hand.

Electro-Magnetic Annunciator for Hotels.

It is well known that the American Bell Crank Annunciator for hotels, whereby a number is shown in an opening in a box in the office, agreeing with the number of the room in which the wire has been pulled, possesses not a little celebrity, and justly so. The one, however, about which we are now going to say a few words, is as far superior to any other that we have seen, as we can imagine.

The numbers of the various rooms are confined in a box, blocked out with small windows, like a chequer board; behind each window is a small recess and on the back partition of it there are the numbers of the different rooms stationary—one number opposite each small window. There are a set of slides, with a notch in each (each one capable of being moved singly), which are moved up by an arm to cover the numbers of the rooms, and hide them from view. These slides are iron, and when they cover the numbers a small pin catches each and holds it in position. Behind each slide is an electro magnet, connected with a wire to a battery, and a key with the number of the room on it is placed in each room, while the box spoken of is in the bar-room. By pressing upon the key the circuit is closed, a bell is struck in the bar-room, the slide spoken of before is attracted by the electro-magnet, falls down and the number of the room is uncovered in an instant, and shown in the small window. There is a wire for each key; the action is very rapid, and none of the parts liable to wear out or be broken. A small battery, to work this Hotel Telegraph, will only have to be renewed about once in three weeks, at but little expense, and the whole can be constructed for less money than any of the old annunciators. The inventor of this is Mr. Buckley, but we saw the instrument at the Telegraph Rooms of Mr. Norton, No. 177 Broadway, the assignee and manufacturer, and where one may always be seen. It is a beautiful and ingenious instrument, and we understand that all the new hotels are adopting it, and so they should.

The Crystal Palace.

We have just received from London a splendid engraving of the interior of the Crystal Palace. It will occupy the 4th and 5th pages of our next number. It is probably the largest engraving ever published in a paper in our country. This engraving, we believe, will be very acceptable to our readers, as it can be bound up and preserved as a part of the progress of Industry.