



For the Scientific American.
Patent Laws and Business.

I have endeavored to show conclusively that the object of the Law of Patents was to cover a very extensive field for the encouragement of the Arts in the Republic. I have also thrown out some very broad hints against the narrow mindedness of some Patent Office decisions. There is certainly a great reform wanted both in the management of the Office and in our U. S. District Courts too. In the latter place—it is correct information, in the former, a right spirit.

Many applications for patents which have been rejected at first, have afterwards been granted, and no doubt many original and good inventions have been too hastily rejected—inventions which might have been secured by patents had the inventors persisted in their applications. These rejected applications are filed in the Patent Office, and many new applications are rejected, and the inventors wisely referred to the said rejected applications for reasons of the new rejections.

This is certainly not right. The claim or claims of the previous rejected application, should be sent along with the reason of rejection. The Patent Office has a fund which can well be spent for the salary of an extra clerk, to give more information than it does in such cases. Let the Patent Office give as much information on such subjects as possible, and more satisfaction will be rendered to rejected applicants, and beside, it may save considerable to inventors in applying to agents to get the information for them, or paying the Patent Office for copies of the rejected applications.

I have been informed, that a better and more candid spirit, has recently distinguished the answers to rejected applicants. This is as it should be, for, although many very absurd things, alleged as improvements, may be presented for patents, still the inventors, the majority of them at least, are sincere, and the child of invention to each man's mind, is the greatest favorite, of course, be it a sickly or sturdy nursing. Inventors should be guided by a generous spirit in reference to their rejected applications also, and not find fault without a cause.

One great benefit to inventors would be the ready means of obtaining information respecting what has been patented—what is new and what is old, so that they would expend as little as possible on old projects to reinvent them. I for one appreciate the tone of an article in vol. 2 Scientific American, which exhorted the Smithsonian Institute to publish an elaborate work on American patented inventions. The article was so free from the taint of selfishness and exhibited such a good will both to inventors and the public, that I was led to admire, yea more than admire, the spirit that indited it. It would be well now, if the hints then thrown out, were acted upon, for it is morally impossible that any man can, in the present state of things give correct information to an inventor, regarding the novelty of an improvement. The reason of this is, that the Patent Office sometimes rejects applications on the ground that they have been described in *Rabelais*, a work in a foreign language and more than two centuries old, and of which, there is not perhaps more than two copies in the United States.

It would be well to extend the patent law to the introduction of new machines and manufacture, and the necessity and policy of this action was recommended by Mr. Burke, the late Commissioner of Patents, in reference to the making of Russia Sheet Iron. We hope to see this principle carried out—that a reform will be made in our patent laws to grant a patent to a citizen who introduces something new and useful, if he is not the inventor.—Full justice might be done to foreign inventors, by allowing them to assign to the citizen

introducing, or else, allow one year for the real inventor to make the application. Here we would have a wide, new and useful field laid out before us that would be a great benefit to us as a nation, for it would be a premium paid to gather into the ample folds of our starry flag, the useful arts of every nation in the world. As this republic is yet more fully to be the centre of civilization, why should we not extend the means to accomplish this grand object in the shortest possible space of time. Physical discovery cannot be separated from progressive civilization—for those nations most distinguished for invention and discovery have been, and are, the most civilized.

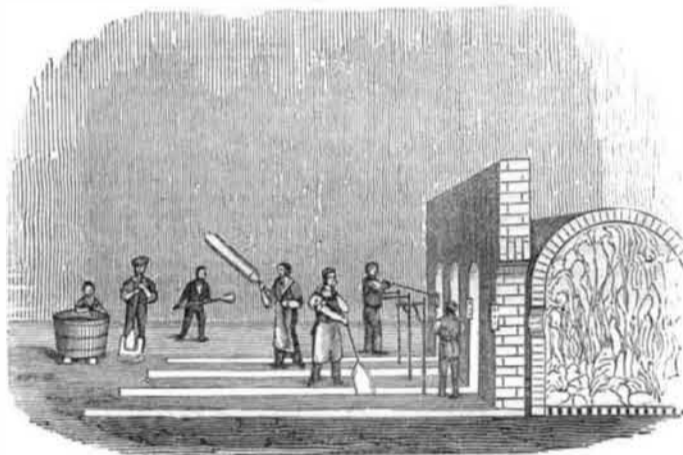
JUNIUS REDIVIVUS.

Manufacture of Glass. (Continued from page 328.)

A representation of the Glass Furnace is hereby given in fig. 4. It shows the arrangement of the circular apertures and grooves, as well as the position of the workman during this part of the process. The parallelism of the sides of the tubes or cylinder is maintained by adjusting exactly the quantity of air blown into it; whilst the circular shape, straightness, and proper thickness of the sides and ends are secured by skilful management of the vibrations, and by a continued motion of the pipe on its axis, which from the time

it is first plunged into the melted glass, until the cylinder is completed, is never stopped for an instant. Being thus made of about one half the desired length, the half formed cylinder resembles in shape a cylindrical high pressure boiler with hemispherical ends, attached at one end to the pipe end of the cylinder, and the bottom of the bottle to the end of the cylinder which is used when French shades are made, but is burst open in making German sheet. The cylinder is re-heated in the same furnace, but the bottom being too thin to elongate in a regular manner by its own weight, recourse is had to centrifugal

Figure 4.



force, the workman swinging it round, the effect of the motion being to pull out the soft glass to the length required, advantage being taken of that law of centrifugal force, by which bodies tend to fly off from the centre in direct proportion to their distance from it.

It will be readily imagined, that a man whisking about a red hot mass of glass, of nearly a yard long and a foot in diameter, apparently in a very careless and easy manner, presents not only a most curious spectacle, but one well calculated to inspire the beholder with the fear that the man will let go his hold of the thin and weak looking pipe, or that some cracking of the glass may allow a portion of the glowing mass to fly amongst the workmen in the vicinity. But accidents are of very rare occurrence, and the consummate skill of the workmen enables them to execute feats which require not only extraordinary tact, but also great bodily strength, with elegance and ease. In reality the various operations of glass blowing are a constant succession of feats of sleight of hand, and though the almost unerring certainty with which they are performed, may at first sight remove the appearance of difficulty, yet upon reflection one can hardly sufficiently admire the extraordinary skill and dexterity which are absolutely necessary to ensure success.

The cylinder is now of the right length, diameter and thickness, but is closed at the end; to open this, the pipe, close to the neck of the cylinder, is supported on a small crane and the closed end is held at a short distance from the fire; the extreme point thus becomes exceedingly hot and soft, so that by forcing air into the cylinder, the softened part expands, and becoming gradually thinner, at length bursts, leaving a hole of about two inches diameter; the cylinder being again heated for one third its length, is withdrawn from the furnace and hung down, having at the same time a rapid rotary motion on its axis communicated to it, which gradually expands the hole and at length renders the diameter of the cylinder equal throughout.

The blowing being completed, the cylinder

is laid across a tressle, and is touched on the neck with a cold iron rod which effects what cold water failed in before, viz. the cracking of the glass; the short crack thus made is sufficient to cause the neck to separate at that spot, when a slight blow is given to the pipe, and the cylinder remains in this state until the man has finished his day's work. The caps are then cut off by a process exactly the reverse of the preceding, for heat is applied to cold glass instead of cold to hot glass; the workman, by wrapping a cord or rod of red hot glass round the cylinder, causes the cap to crack off at the heated part, the process being sometimes hastened by touching the heated ring with cold water or with a piece of cold iron.

(To be continued.)

A Queer Head Dress.

Lynch, in his expedition to the Dead Sea thus describes a queer head dress, which the women about Beyrout wear:

"The most striking peculiarity of dress we saw, was the tatar or horn, worn mostly by the wives of mountaineers. It was 14 inches to two feet long, three or four inches wide at the base, and about one inch at the top. It is made of tin, silver or gold, according to the circumstances of the wearer, and it is sometimes studded with precious stones. From the summit suspends a veil, which falls upon the breast, and at will, conceals the features. It is worn only by married ones of the highest rank, and once assumed, it is worn for life. Although the temple may throb and the brain be racked with fever, it cannot be laid aside. Put on with the bridal robe it does not give place to the shroud. * * It is supposed to have some reference to the words, 'the horns of the righteous shall be exalted.'"

Chicory In Coffee.

In a debate in the British Parliament upon the use of chicory (the dandelion root) in coffee, it was stated that the revenue lost more than half a million sterling by its use. It is said that this adulteration improves the flavor of coffee, and corrects its astringent qualities.

Straw for Bonnets.

Cut wheat or rye straw while in full blossom, or as the blossoms begin to fall. Scald in a few hours after it is cut, (the head being first cut off,) in boiling water, about a quarter of a minute, then spread and dry it in the sun; take care that neither rain or dew fall upon it. It will cure in three days sunshine. Then keep it in a dry place. To split the straw after it is properly cured, so as to reduce it to a proper texture, it is only necessary to fit the point of a penknife in a piece of board, leaving about the eighth or a fourth of an inch above the board, then pulling the straw against it. Splits of any size can be made.

Ingenious Lead for Sounding the Depth of Rivers.

Duncan, in his travels through Western Africa, gives the following account of a lead which he invented to ascertain the depth of rivers. He took a bullet and bored a hole through it, and then through that he passed a small line of twine, leaving the lower side of the bullet countersunk, and into this pressed a piece of goat's tallow. The twine is then passed through a very thin piece of wood about five inches square. If the river is very wide, and the crossing made by canoe, the line of course, may be dropped overboard as on board ship; but if you are obliged to swim the ball may be dropped on the water. The bullet, of course, sinks to the bottom, and draws the twine through the hole in the wood at the same time, till it reaches the bottom; the line being marked into feet, the depth is accurately ascertained. If a river is not more than forty yards wide, it may also be measured in the same way, by throwing the wood and ball into the middle of the river, taking care to coil the line carefully up previously to throwing it.

This simple apparatus may be constructed and used by any person.

LITERARY NOTICES.

Holden's Magazine for July, is well filled with original and highly interesting matter and is fully equal to any previous issue. The engravings are well executed; abounding with interest. They consist of a view on the Erie Canal near Little Falls; likenesses of Hans Christian Andersen of Denmark, and Dr. W. B. Sprague of Albany. This number also contains an interesting sketch from a "Free Hand," of the Rev. John Pierpont, and a biography of the Rev. R. S. Storrs, Jr. of Brooklyn. This is the first number of the fourth volume, consequently a favorable time to subscribe.

We have received from W. H. Graham, of this city, the July number of Graham's American Magazine. The embellishments are very rich and beautiful. Among them is "Cross Purposes," a beautiful mezzotint; "Nature's Triumph," "The Widow of Nain," an elegant plate of fashions, and a beautifully executed likeness of Gen. Stephen W. Kearney, accompanied by a well written biography, from the gifted pen of Robinson.

The magazine is in a prosperous condition and deservedly so. We commend it to the attention of those ladies who desire to cultivate a taste for good reading.

The Water Cure Journal and Herald of Reforms.

No. 1, vol. 8 of this valuable monthly periodical, published by Fowler & Wells of this city, is just issued, and is a most excellent number. In it is an illustrated description of the whole "Water Cure Process."



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