



LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending May 22, 1849.

To C. Carter, of Manchester, Michigan, for improvements in Boring and Mortising Machines. Patented May 22, 1849.

To C. S. Beardsley & S. Wood, of New York, for improvement in Bench Planes. Patented May 22, 1849.

To David Smith, of New York City, for improved method of Manufacturing Drop Shot. Patented May 22, 1849.

To T. T. Abbot, of Manchester N. H. for improvement in Speeder Fliers. Patented May 22, 1849.

To W. McCammon, of Albany, N. Y. for Disk Cut-off acted upon and regulated by the Governor. Patented May 22, 1849.

To W. Y. Layton, of Darlington, S. C. for improvement in Cotton Gins. Patented May 22, 1849.

To E. Bancroft, of Philadelphia, Pa., for improvement in Mill Shafting. Patented May 22, 1849.

To J. W. Briggs of Cleveland, Ohio, for improvement in Hames. Patented May 22, 1849.

To W. Chase, of Buffalo, N. Y. for method of opening, shutting and fastening Blinds.—Patented May 22, 1849.

To E. Kershaw of Boston, Mass, for improved Key Hole Protector Patented May 22, 1849.

To M. W. Ruthven, of New York City, for improvements in propelling vessels by reaction. Patented May 22, 1849.

To A. Lincoln of Springfield, Ills., for improved method of lifting vessels over shoals. Patented May 22, 1849.

To W. H. Seymour, of Stockton, N. Y. for improvement in Machines for Jointing Staves. Patented May 22, 1849.

To S. W. Davis of Cincinnati Ohio, for improvement in imitations of Marble. Patented May 22, 1849.

To J. Rhoades & W. Pouley, of Shippensburg, Pa, for improvement in Spring Saddles. Patented May 22, 1849.

To J. Laird of Cincinnati, Ohio, for improved Shank for mineral Door Knobs. Patented May 22, 1849.

To D. Sawyer, of Cornish, N. H. for improvement in Scythenibs. Patented May 22, 1849.

To J. Hinton, of Monroe Co. Va. for improvement in Harvesters of Clover Heads.—Patented May 22, 1849.

To A. J. Purviance of Updegraff, Ohio, for improvement in Harvesting Machines. Patented May 22, 1849.

To H. Todd, of Columbus, Ohio, for improvement in Buckles for Harness. Patented May 22, 1849.

The Oldest Man in America.

The American Bible Society Record for May, says that :

“George Buckhart, living in Harlan County, Ky., is one of the most extraordinary men of the age, and perhaps is the oldest man now known to be living. He is ONE HUNDRED AND FOURTEEN years old; was born in Germantown, Pennsylvania, and has lived for several years in a hollow sycamore tree, of such large dimensions as to contain his family, consisting of a wife and five or six children, bed and bedding, cooking utensils, &c. The exploring agent of the American Bible Society, in his travels in Kentucky, recently found him, and also saw several respectable gentlemen who had spent one or more nights with him in this singular home. He professes to hold the Lutheran faith, being of a German family, and received the Bible with peculiar manifestations of gratitude. What a life for one man to spend! What a long train of events has marked this century through which he has drawn the thread of existence.”

By the late news from Europe, the Romans were fighting to keep out the French.

Explosions of Locomotives.

Report on the explosion of the locomotive Piscataqua, read before the Society of Civil Engineers on the 10th ult., by a Committee, Messrs. William Parrot and Simeon Borden, appointed for that purpose. The Report was published in the Boston Traveller of the 16th ult. The explosion of the locomotive took place on the Eastern Railroad, about 2½ miles from the East Boston Depot. The fireman was killed, the engineer slightly wounded and the whole engine shattered to pieces. The engine weighed 9 tons, and was ten years old, but was put in thorough repair two years ago, and supposed to be in good repair at the time of the explosion. The boiler had two pumps and two safety valves, loaded a pressure of 90 pounds. The apparatus for supplying water was in good order, in the opinion of the committee, whose conclusions we here present as being fairly, ably and candidly given, in our opinion, and they will be of no small value and interest to many of our readers.

Having stated the facts in this case as far as they have come to the knowledge of your committee, they submit the following remarks and conclusions for your consideration :

The most remarkable fact is, that the engine exploded while at rest—no aperture open to agitate the water, nor pump at work injecting cold water, nor indication from the safety valves that the boiler was unduly loaded with steam. In most recorded cases of explosion, the accident has occurred while the engine was in motion, or just started in motion. The appearance of the tubes and the testimony of the witnesses prove that the boiler was sufficiently supplied with water.

After a careful examination, we are of opinion that the explosion was not to be attributed to the weakness of any part of the boiler; but the effect was distributed generally over the whole waist; and that the dark color of the fracture was occasioned from oxidation produced by the heat of the contained steam. All the parts fractured after the explosion were bright.

It is evident that the pressure of the contained steam was greater than the resistance of the boiler, and your committee are of opinion that the iron of which this boiler was constructed was as good as the average of iron in old boilers.

Taking the average strength of old boiler iron, as stated in the report of the committee of the Franklin Institute, Vol. 20, page 107,

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at 50,000 lbs., and the formula $x = \frac{P}{D} \times r^2$ representing the pressure in pounds per square inch sufficient to burst the boiler; P strength of the iron = 50,000; t the thickness = 0.24 inch; D the diameter of the boiler, = 36 inches; and we have $x = 666$ lbs. per square inch: but as the method of constructing the boilers with rivets reduces this strength, we allow for the reduction, which gives the result of 456 lbs. per square inch, for the actual resistance of the boiler.

Your committee are well aware of the difficulty of arriving at an exact conclusion as to the value of this resistance from this data, as there may have been some parts of the boiler weaker than the strength given by the formula; and were there not other circumstances beside the simple explosion to guide them they might have doubted that there was so great a pressure of steam. But the fact that after diligent examination no parts of the boiler were found to indicate weakness or wearing away of the plates more than has been allowed for in the formula; the discolored appearance for the fracture indicating a heat not less than 400° Fahrenheit; the heated appearance of the plates themselves, the great distance to which some of the parts were thrown—all indicate a great and undue pressure of steam in this boiler.

We therefore conclude, that at the time the explosion took place, this boiler was subjected to an internal pressure of steam of not much if any less than 450 lbs. to the square inch, and a temperature of 357°; and that this extraordinary pressure was occasioned by an accumulation of steam in consequence of the safety valves being hindered in their free action.

Whether this obstruction was occasioned by carelessness, or by some defect in the con-

struction of the balances, your committee are unable to state, as they had no evidence which could be conclusive in the matter. But from comparison with other balances, said to have been similar, it was evident that a very little carelessness in screwing down the lever would render the safety valve useless; and this carelessness or inadvertency your committee are of the opinion, was the cause of this explosion. They would therefore suggest the adoption of the practical rule, that when the safety valves are loaded by means of a lever and spring balance, they should be so constructed as to render it impossible to screw down the balance beyond the limit of pressure fixed by the builder or the superintendent of the engines.

WM. P. PARROTT, } Committee.
SIMEON BORDEN, }

For the Scientific American.

Principle of Patents.—Action of Patent Office.

The writer of this has carefully perused the Prize Essay of Mr. Maher. He cordially agrees with him on some points, but not on others.—It is not his intention, however, to discuss the matter, but to take a brief view of our whole patent system and practice—to point out evils, recommend improvements and impart some knowledge, which, he humbly thinks, will be both useful and interesting to inventors and the public in general.

The whole principle of the Patent Laws lies in a nutshell. It consists in the public granting an exclusive authority to an inventor or discoverer for fourteen years to make, use, and vend his invention or discovery, upon the condition that the public will enjoy the benefits of the same after the period stated. The policy of such a law or laws, is unquestionable. Before governments were wise enough to adopt such a system, the progress of scientific and especially mechanical discovery, was very slow. This is the reason why we have so many traditions of ancient arts lost. The discoverer or inventor in ancient times preferred to enjoy the benefits of his discovery by keeping the same a perfect secret. Inventors of the olden time carried their secrets to the grave with them. From the moment the government of England established Patent Protection to Inventors, physical science has progressed with astonishing rapidity. This then is evidence of the wisdom and sound policy of Patent Protection.

The first thing therefore to be learned in examining an application for a patent, is its originality and usefulness. On the latter point there need not be much said, for an utterly worthless thing will soon find its own level, and there are but few who can really decide upon the usefulness of an invention. “The proof of the pudding is the eating of it,” and the only question in this case should be, is it new or old? Our best inventions and discoveries have been subjects of sport to professional wise men. When Franklin’s experiments and views on electricity were read before the Royal Society, they were received with shouts of laughter by the wise savans composing that time honored body. If there is evidence produced of a new result or an old result in a new and more economical manner the shield of Patent Protection should at once be thrown before it, to guard it against the malicious intrigues of selfish and unprincipled men.

The principle of action which should guide the Patent Office should be transparent on this point, in order that inventors and the public might know how to proceed without any doubts of success, or any unnecessary expense. Hitherto the action of our Patent Office has not been uniform in this respect. It has rejected applications with the reason given, “want of novelty,” when there was both novelty and usefulness combined in the invention. It has rejected hundreds of applications for patents, upon the grounds that “a mere difference of application did not constitute a patentable object,” while it has granted patents to some for the mere application of an article to a new purpose. How this was done, the reasons why it was done, is something that requires explanation and the public would not be the worse of having the mist removed from their eyes. Does one man who applies for a patent pay more than another into the Treasury of the United States? No. It could not then be for

the special tax paid there, that such favors were bestowed upon the blessed few to the prejudice of the rebuffed many. None would like to attribute either influence or corruption to any board of men but would attribute their crooked action either to carelessness, ignorance, or to that kind of action so strikingly portrayed in the parable of “the unjust steward.” On the 17th of last April a patent was granted to S. L. Croker, of Taunton, Mass., for the application of Muntz’s metal—(a British invention,) for making cut nails. No claim was set up for a new metal or alloy, or a new way of producing an old result. No, none of these, but this, “what I claim as my invention is the new article of manufacture herein above described, viz. a yellow metal nail made by cutting and heading it in a nail machine, meaning by the term yellow metal, a metal composed of copper and zinc, in the proportions in which they are usually combined in the manufacture of the well known Muntz sheathing metal.”

When the Patent Office grants a patent for a brass nail in 1849, there can be no doubt but many rejected inventions mutter their complaints to the walls of the Model Room, “on us such favors have not been bestowed.”

JUNIUS REDIVIVUS.

[Having mentioned in No. 33, that we had some articles sent us by “Junius Redivivus,” which we designed to publish at some future time, that gentleman sent us a note requesting us to suspend their publication and he would send us some other articles that would be more suitable to our columns, to follow after the Prize Essay. This article is the first of a series which he has sent us.—Ed.]

Sir John Franklin’s Expedition.

Capt. Wilkes, of the Navy, publishes a letter in the National Intelligencer in relation to the contemplated expedition in search of Sir John Franklin, the British navigator. Capt. Wilkes entertains the hope that it is not yet too late to render relief, and suggests that prompt action may be the means of saving Sir John and his brave followers from a terrible fate. He is of opinion that the search should be made through the Wellington Channel, it being the only point where adequate search is not likely to be made. Beyond Cape Walker towards the south-west, in Baffin’s Bay, in Davis’s Straits, in Lancaster Sound, or in the Arctic Ocean within Behring’s Straits, he would most likely be fallen in with by Richardson or Ross, both of whom are in search of him, or by the English, Russian, or American whale ships, which have extended their cruising grounds in those remote parts. The writer remarks:

The best practical plan, peculiarly suited to our means and the character of the navigation and service, is to fit out three or four of our small Eastern fishing vessels, (Chebacco boats,) from sixty to eighty or one hundred tons burthen, manned by those who have been brought up in them, and have them well and fully equipped, with but small crews, ten or twelve persons, including officers. For this number these vessels could be provided with fuel, provisions, and clothing for two or three seasons. There is no necessity for them to set out with the intention of wintering within the icy region; the supplies should be to guard against accident of detention. The vessels and outfit could be readily prepared for five or seven thousand dollars each, and crews would cheerfully undertake the voyage at double wages and a gratuitous supply of warm clothing; the whole sum would not exceed for these \$25,000. The reward offered by the British Government, in the event of success, would be ample compensation to excite the greatest exertion, casting aside the desire of adventure and engaging in so laudable an undertaking.

The distance of Wellington Channel from our shores is not greater than that to Europe, and the voyage may readily be performed in forty-five days.

If (says the letter) vessels were now fitted they would be in time for the season, which opens about the middle of July, and would be able to explore this channel thoroughly to its farthest extent or navigable point, and, if not to succor, they will ascertain whether Sir John Franklin had taken that route, and return safely back before winter with tidings.