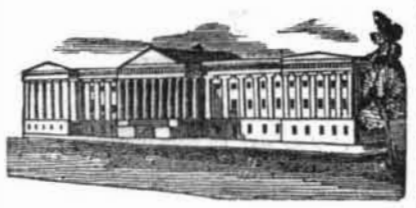

LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending July 17, 1849.

To D. L. Ewing, of Spruce Hill, Pa., for improvement in Wheat Cleaning Machines. Patented July 17, 1849.

To A. Hotchkiss, of Sharon, Conn., for improvement in Ox Yoke Fastenings. Patented July 17, 1849.

To L. B. Fisher, of Freeport, Ill., for improvement in Cutting, Crushing and Grinding Vegetables. Patented July 17, 1849.

To A. T. Linikin, of Roxbury, Mass., for improvement in Lounge and Chair combined. Patented July 17, 1849.

To A. Chapman, of Fairfax, Vt, for methed of increasing the effective length and cleansing Boiler Flues. Patented July 17, 1849.

To T. Thatcher, of Wilkesbarre, Pa., for improvement in Pump Valves and their arrangement. Patented July 17, 1849.

To A. Straub, of Milton, Pa., for improvement in Winnowing Machines. Patented July 17, 1849.

To A. Buell and T. Brown, of Lowville, N. Y. for improvement in Smut Machines. Patented July 17, 1849.

To William Avery, of Salisbury, N. Y. for for improvement in Vegetable Cutters. Patented July 17, 1849.

DESIGN.

To J. Hill and W. B. Clim, of Philadelphia, Pa. for Design for Stoves. Patented July 19, 1849.

The State of Georgia.

The following is taken from the Savannah Republican and gives a very good idea of the spirit of enterprise displayed at present in that State. Speaking of Georgia, the editor says: "When we look around us upon the great resources of our State, the fertility of its lands, the salubrity of its climate, and the varied productions of its soil, there is much cause for gratulation and pride. We have cotton lands, rice lands, grain lands, pasture lands, live oak, immense forests of pine for ship building and the turpentine trade, and a diversity of climate suited to every variety of the human constitution. We have bold and navigable rivers reaching to the mountains, a magnificent system of Railroads, between forty and fifty manufacturing establishments in various parts of the State, water power sufficient to turn all the machinery in the world, gold mines, coal mines, lime, iron, sulphur, marble, granite, &c., &c. In addition to all these, we have five colleges, for the instruction of youth, several seminaries for males and females, any number and variety of Mineral Springs, falls and rapids only surpassed by the Niagara, and a mountain of solid rock, the greatest wonder on the Continent.

If with such resources, and such improvements, and such a climate, Georgia does not become a powerful—an enlightened and powerful State, it will be the fault of her own people. We have a rich heritage. Our lot has been cast in pleasant places; and if we will but make the necessary effort, we cannot fail to secure all the benefits of such a condition. These advantages which nature and art have placed at our feet, are the five talents entrusted to our stewardship. Enlightened legislation and well directed enterprise will enable us to hand them down to posterity with a large increase. Shall we do it, or shall we bury the talents? It is for the Legislature of Georgia and the people of Georgia to answer this question. Nature has performed her part; it is for us to do the rest.

An advertising chandler modestly says that "without intending any disparagement to the sun," he may confidently assert that his octagonal spermacetis are the best light ever invented.

For the Scientific American.

The History of Steam Navigation.

Among the early experiments for propelling boats by steam was by throwing jets of water out at the stern. Rumsey in America, and Linaker in England tried this plan. A few years ago, a patent was granted to a gentleman in Baltimore, for the same thing in principle, and in the London Mechanic's Magazine for 1845, there are two drawings for propelling vessels by forcing water out at the stern of the vessels by a direct motion from the piston of the steam cylinder. Their plans are all absurd in the highest degree. In Ellsworth's Patent Office Reports for 1844, there is an account of a Ducks-foot paddle, the original inventor of which was the Earl of Stanhope, and in that report there are three other modes of propulsion different from the paddle wheel which are singular and puerile inventive emanations. The paddle as it is now made and used, has lived down an hundred proposed substitutes and has stood impregnable against every argument that has been brought against it.

To make the paddles enter and leave the water in a vertical position, various plans have been proposed from time to time. The third vessel that was built on the Clyde in Europe, was constructed with paddles on moveable axles guided by an eccentric grooved rim, or wheel to make them change their position at the right period. Mr. Robertson Buchanan a most excellent engineer was the nventor. It was a total failure, the friction was so great. This invention, has been re-invented since, but it will not do.

Another plan to make the paddles enter and leave the water without jarring in the first place, and not to lift the water, in the second place, is by feathering the paddles.—That is, to enter the water at right angles or nearly so, to the position in which the paddles enter the water in all our boats, and leave the water in the same manner. There is one paddle wheel named Morgan's, which has become somewhat famous for that purpose. Its price of construction is about double that of the common paddle wheel. Its merits have been overrated. There are four different patents in existence in England for plans to feather paddle wheels, but for ocean navigation we prefer the fixed paddles. A plan was patented 4 years ago by Mr. Byram of London to make the paddles of plate iron and set them obliquely in the wheel. Whether they are now used or not we cannot tell, but they occupied some attention when brought first before the public. All cog wheel gearing must be disadvantageous to use in combination with a paddle wheel, yet many a paddle wheel has been made with a multiplicity of cog wheel nonsense.

In 1828, Paul Steenstrop of London, patented a new paddle wheel to make the paddles enter and leave the water vertically, and to do this, each wheel had the moderate quantity of 15 small ones contained within it. It was a sublimely ridiculous affair, and its brother was exhibited in the machine room at Castle Garden, N. Y., in 1848. Perhaps it got a prize.

Paddle wheels with moveable axles and with the lower half heavier than the upper, to enter and leave the water vertically, were invented by Lieut. Skene of the British Navy in 1828, but they were worthless. There is no man who has examined the subject of steamboat propulsion attentively, but has been struck with the many palpable defective plans brought forward by men renowned otherwise for scientific attainments. In endeavoring to find out a reason for this, we have come to the conclusion that the quality—the faculty of invention like that of poetry, is not to be acquired by education, however good it may be. Well learned men have been great inventors, but so have some very illiterate men.—In poetry we have had a Lord Byron and a King James, but who has equalled the immortal Wool carder Shakespeare, or the flax hackler Robert Burns. We have had a Marquis of Worcester among our inventors, but could he compare with the immortal Watt—James Watt to be sure was a highly educated man, and were every mechanic as well educated, they would as a class stand upon a higher level to day, but we speak of him as a mechanic and an inventor—a journeyman and tradesman.

Compactness and simplicity, are the grand objects in all inventions, and the great improvements that have been made in steamboats within the past few years, is in the substitution of a great deal of wrought iron work for cast iron, bringing the power into a smaller space. For vessels that are intended for long voyages, this is a great advantage and were we to discover some metal as easily forged and worked as iron, but possessing five times its strength we would at once enhance the value of the marine engine five fold, as this is this however is not likely to be the case, we must make the best of the meterials at our command.

The first screw propeller, Hebert informs us was tried in America, but where we have not been able to learn, but in 1828 a Mr. Wm. Hale of Colchester, Eng., took out a patent for a screw propeller, but this screw was only to draw in water at the bow and force it out at the stern, but long before 1828 the screw was proposed, though not brought into use. Cowper says that as early as 1768 the screw was used by *Paucton* to propel vessels, but until within a few years, but little attention was given to the subject. But although the screw has not equalled the paddle wheel for swift propulsion, yet it has great advantages and may yet supersede the paddle, at present the number of screw propellers are on the increase.—There are no less than 30 propellers, on our upper lakes, and there are quite a number of them in the British Navy. They are more trim than the paddle wheel steamboats, and as an auxillary, such as the Sarah Sands, we believe the screw to be both advantageous and in its own place unequalled, being compact and simple. There is a great difference in the effect of different screws, Patents have been granted for the mere placing them at different angles for more effective action, and this very circumstance shows us that theory must be derived from experiment, for as doctors differ about diseases, so do engineers differ about the screw. It was a great pity that the steam propeller Great Britain was lost in Dundrum Bay—as she would have tested the value of the screw fairly. She was fitted with what is called Woodworth's screw, that is one of an increasing pitch, which is the best water screw undoubtedly. A screw of a uniform pitch is an inclined plane wrapped round a cylinder, a screw of an increasing pitch is an increasing curve wrapped round a cylinder.—Each increasing portion of an increasing pitch overtakes the disturbed water and becomes effective. It is evident that but a small portion of the blade of a uniform pitch does the duty. The Sarah Sands has a Woodcroft screw of four blades and 14 feet diameter—Ericson's propellers have a good name, but as we have stated before, the paddle wheel for 32 years has distanced all competition for speed. The term pitch means the distance between the threads of the screw.

(*To be continued.*)

Snodgrass the Inventor.

The decease of a generally little known, but useful inventor, Neil Snodgrass, is noticed by the "Glasgow Citizen," a Scotch paper. This ingenious man who has just died in his 73d year, appears to have begun his inventive career by applying steam to the purpose of heating public works, &c. Mr. Snodgrass was also the inventor of the "Scotcher," or blowing machine, commonly called in cotton mills the "Devil," by which an important saving in the raw material is effected, while the cotton is prepared in a much more uniform manner than could possibly be done by the hands. It is, however, in connexion with the steam engine that the name of Neil Snodgrass chiefly deserves to live. Notwithstanding Watt's grand invention of the seperate condenser, and the completion of his numerous other improvements, a mighty defect still existed at the very heart of the machine. How to render the piston of the steam engine perfectly steam-tight and, yet capable of moving in the cylinder without enormous friction, was, in the early history of the invention, felt to be an insuperable difficulty. This difficulty would have been considerably lessened had it been possible to construct a perfectly true cylinder; but as no skill in workmanship could secure this necessary height of perfection, the only alternative remaining was to render the periphery of the piston elastic, so as to adapt itself to the inequalities of the surface against which it was to slide. To effect this object, the piston was constructed with an upper and lower flange, between which a mass of hemp was wound, which it is necessary to renew and tighten at frequent intervals, and to keep at all times, profusely saturated with grease. In order to provide a substitute for this primitive and clumsy procees, Mr. Snodgrass passed many a night of anxious thought. Having in 1818, with the assistance of a number of master spinners who had profited by his inventions, built a mill of his own at Mile End, Glasgow, he commenced in 1823 to make experiments in packing the piston on an entirely new plan, and in 1834 his splendid invention of metallic packings was given gratuitously to the public. These packings consisted of segments of metal acted upon by springs pushed outward from the centre, and thus adapting themselves to the inequalities of surface unavoidable in the cylinder. This novel and beautiful invention of an elastic metal piston shared for a time the fate of many discoveries destined to revolutionize the world. It was ridiculed and discredited. After encountering some opposition, Mr. Snodgrass prevailed upon the late Dr. Stevenson to allow the experiment of the metallic packings to be tried in the Caledonian steamer, which was most successful. From that day up to the present time no other description of piston has been constructed. Its value is altogether incalculable. It is supposed that in the Clyde alone the saving it has effected in the mere article of tallow amounts to not less than £20,000 per annum. The importance of the invention has been prodigiously increased by the introduction of the railway system, as the old pistons would have been totally inapplicable to the locomotive.—Beyond the barren fame of the invention—and not always did he receive even that—his sole profit, if we except the premium that was awarded to him in 1823 by the Glasgow town council, from Coulter's mortification, consisted in his being employed to manufacture some 50 metallic packings at the rate af 5s per inch of the diameter of the respective pistons. In the course of his long and laborious life he introduced a variety of minor improvements in machinery, many of which continue, we understand, in general use. Among these we may mention a new application of the Mendoza pulley and wheel for leading out the mule-spinning carriage; a new plan of skeleton bars for furnaces; and an apparatus for the prevention of smoke on the Argand principle. Mr. Snodgrass also claimed to have anticipated Mr. Dyer of Manchester by two or three years in the present arrangement of the tube roving frames, for which the latter obtained a patent, by which he is said to have cleared £50,000.

[The above has been extensively copied into a great number of our newspapers. We like to give honor to whom honor is due, and to the memory of Mr. Snodgrass we pay our tributes of respect. It is true that he received a premium called the "Coulter's Premium" from the magistrates of Glasgow in 1823 for his invention of metallic packing for steam cylinders. He no doubt knew of no other at the time, but it is well known to those who are intimately acquainted with the history of the steam engine, that the Rev. Dr. Cartwright, brother of the famous radical reformer "the Major," invented the same thing in 1797, thirty years before Snodgrass, and a correspondent (an engineer) to the Glasgow Mechanic's Magazine, vol. 3, demolished all Mr. Snodgrass's claim to the invention of metallic packing. The magistrates of Glasgow exhibited the same amount of ignorance in 1823, regarding this Invention, as is now displayed in the above article of the Citizen, and by those who quote it for authentic. "Rob not one dead inventor of his honors, to decorate the tomb of another.

The letters now posted in Great Britain exceed 330,000,000 annually, a number which, taking the average length as five inches, if laid end to end, would reach 26,000 miles, a distance greater than the circumference of the earth.

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