

New Inventions.

New Locomotive for ascending Steep Grades.

During the afternoons of Thursday and Friday of last week, a very neat operative model of a locomotive and tender, weighing 1300 pounds, was exhibited on a steep model railroad, in the lot between 22d and 23d streets, 4th avenue, this city. The engine is differently constructed from any other, and its principal object is for the ascension of steep inclines, so as to lessen the great expense of deep cuts, &c. in the building of railroads.—We saw the model operate well upon an incline of 276 feet in the mile. It was perfectly under the control of the engineer during the ascent and descent of the grade, and it carried a load in triumph as heavy as could be done by any other engine of equal power on a level track, barring the increase of weight in the load being elevated above the centre of gravity. The locomotive has four cylinders, two on each side, one above the other. The lower cylinders are the same as those in common use and perform the same offices. The upper cylinders are connected by the piston rod to cranks fixed on a shaft placed a short distance behind the driving wheels and the crank works outside of the driver. The top cylinders are never used but for ascending inclines, and therefore are operated by separate valves. On the shaft or axle driven by the top cylinders there are two bevel wheels fixed near the middle; these mesh into two other cog wheels fixed on two stubby vertical shafts firmly secured to the frame of the engine by suspension sockets. On the lower ends of the said vertical shafts are friction wheels, one on each shaft. It will therefore be observed that when the top cylinders are in operation, the shaft by the bevel and cog wheels keeps the two friction wheels in motion running inwards towards the centre, and as there is an elevated central rail placed on the incline, the locomotive is thereby enabled to climb up the steep by the friction wheels pressing and rolling on the central rail, upon the same principle that a mariner climbs to the summit of the royal-mast of a ship. It will also be observed that there is no possible chance of the locomotive running backward by any weight which it may have to drag, as each cog on the bevel wheels acts the part of a brake. We believe that we have described this invention in so plain a manner (which we always try to do) that every person who reads will understand. It is far superior to rack rails and cog wheels biting into them, which have been tried to accomplish the same object. The locomotive is the invention of Mr. G. E. Sellers, of Cincinnati, Ohio, and the model is on its way to England. The only objection to it there, will be the great weight of the four cylinders placed on the outside, which from the great speed on English Railways, will give a dangerous rocking motion to the engine—but this can be avoided by placing the two cylinders inside of the wheels. The whole invention does great credit to Mr. Sellers and is another noble tribute of American genius.

New Machine for Straightening Card Wire.

The Worcester, (Mass.) Telegraph, states that Mr. W. B. Smith of that place, has invented a new and valuable machine for straightening the wire used in the manufacture of cards, which perfectly straightens all wire for cards that may be put through it, at one operation. By the old method the wire had frequently to be put through three and four times. Its particular mode of operation, and its difference from other machines in use; whether it is cheaper or not, we cannot tell, but will endeavor to describe it at some future time, as it is represented to be a very valuable invention.

A New Invention.

The St. Louis Era states that Mr. Gilbert Vanmarier is now in that city, with a plan and drawing of an invention for which he claims great powers and advantages. It is to run a wheel by weights, which are adjusted by the wheel itself—thus making it a self-propelling machine, capable of running as long as the material lasts. He is endeavoring to raise means to construct a model, and solicits subscriptions for that purpose.

These inventions can surely be tried at but little expense on a small scale, and we would recommend all inventors to do this before they bring their inventions before the public. Real utility is now the order of the day and the plan we recommend will save all mortification if there is a failure, which is often the case.

Improvement in Nail Manufacture.

A machine has been recently put in operation by the British and Foreign Nail Company, London, which is highly spoken of by the English Journals. The nails are said to be of a first class description, possessing all the qualities of the finest hammer nails,

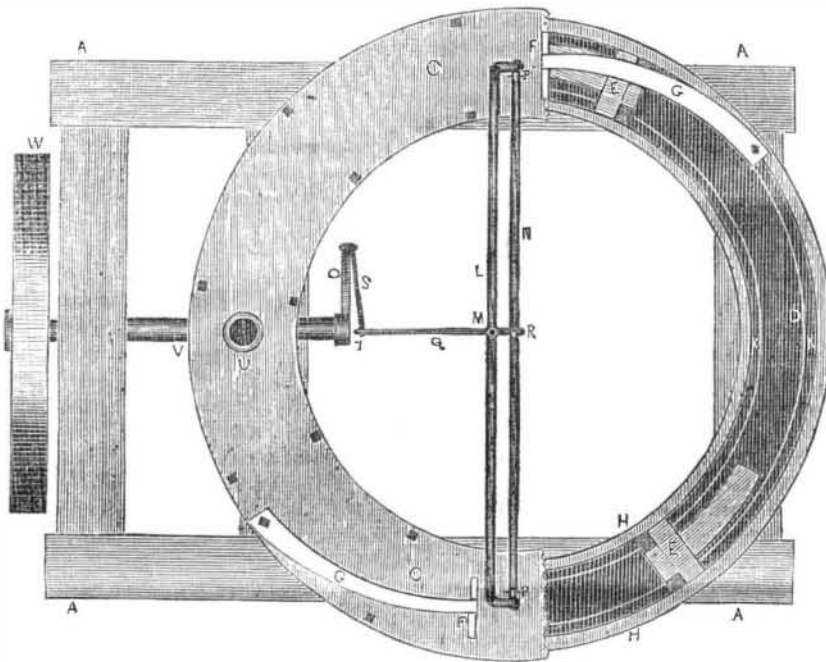
though produced at an expense which will enable them to be sold at a lower price than is paid for the most common cut nails. It seems that the whole nail, head, body, and point is made at the same time, and simply by one operation of the machine. The estimates which are apparently prepared with great care, and founded upon the present prices of iron and nails, show a return of more than 40 per cent.

Now we want to know if there are any machines in America for making wrought iron nails, and if they are in operation. We have had not a few letters making inquiries about such machines.

Marine Invention.

A lieutenant in the British Navy has invented a "Peril Indicator," to show when steamers or other ships are running into shoal water.—The apparatus consists of two bars, which project ten feet below the keel of the vessel, and as soon as they touch ground, they spring up on a level with the keel and ring a bell, which warns the engineer that he must reverse the engines and drive the ship astern.

TREMPER'S ROTARY ENGINE.

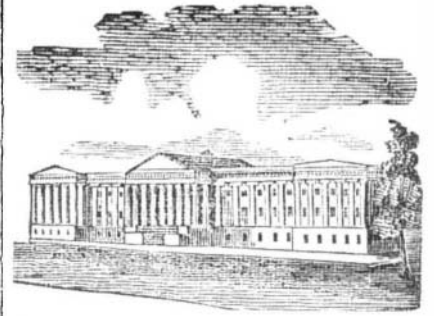


We are well aware that the most profound objections can be raised against the rotary steam engine. One of the strongest, is the great variety of forms and arrangements which the rotary has assumed in the hands of different men. We have seen no less than 60 representations of different rotary engines, and it may justly be said that "this very variety of construction and invention is strong evidence of a want of correct understanding of the principles of the steam engine, or it shows that the difficulties to be overcome to make the rotary work well, are far greater than those which belong to any other kind of steam engine." Thus premising, we introduce to our readers a new rotary engine, the invention of Mr. John Tremper, of Little Britain, Orange Co. N. Y., an operative model of which was seen by us last week at the extensive Foundry of Mr. Coffee, corner of West and Beach streets, this city. The engine is different from any that we have seen before, and for a small engine it will be very useful for many purposes, as it is simple, not expensive and occupies but little room.

This is a ground view of the engine, and is the best for explanation. A, is a stout wooden frame, to which the engine is firmly secured. The rotary is a circular steam chamber, part of which consists of a moveable circular ring D. To show the interior arrangement one half of the cover C C, of the steam chamber, is only seen. This is bolted firmly to the chamber and rendered steam tight. D, is the principal rotary part of the engine. On the under part of it, there is a rack cut or cast extending to the outside and meshing into a cog wheel on the shaft V, giving motion to the same. W, is a drum to connect with other machinery. The way in which D is driven round by the steam is as follows:—E E, are what may be termed wedge pistons, with the taper, however, only on the upper surface.

They are firmly secured to D. F F, are two steam valves which are moved up and down by the wedge pistons slipping under them, but which to do this first act upon inclined steel springs G G. The incline of the springs cannot be seen in the engraving, but they lie with the same incline of the pistons as seen moving from right outwards towards the left. The pipe from the boiler is connected with the steam pipe L, at M, and passes to each side of the engine into the chamber in front of the valves F F, and behind the pistons E E, pressing on the same and driving round the rotary ring D. The steam is cut off and let on in the chamber by a rocking bar N, which opens and closes two steam cocks inside at P P. This rocking bar is operated by a double crank O S, connected at T with Q, a reciprocating rod attached at R, to the rocking bar N, which alternately cuts off and lets on the steam at each side of the chambers. (This arrangement would require to be seen in the model to be fully understood.) The pistons are made steam tight in the chamber as seen in the engraving, therefore whenever they pass the opening U, the steam is exhausted or passes out of the chamber, and whenever a piston has passed F, one inch, or thereabout, the steam at that instant is let in behind the piston, and thus drives round the rotary ring D continually. H H, are the sides or rim, and K D K, the bottom of the chamber. The arrangement of the rocking bar and the mode by which it is operated by the rotary ring to work the steam cocks, is certainly very ingenious and novel, and really will repay an examination of the operative model. From the above description, we believe that our readers will understand the movements of this engine and will at once perceive that it is different from any other they have seen.

Measures have been taken by Mr. Tremper to get a patent for his invention.



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending August 10, 1848.

To David Culver, of New York City, for improvement in Registers for Hot Air Furnaces. Patented August 10, 1848.

To Walter Hunt, of New York City, for method of attaching a ball to a wooden cartridge. Patented August 10, 1848.

To Ezekiel O. P. Andrews, of Boston, Mass. for Spring Clutch applied to a Rudder head. Patented August 10, 1848.

To Walter Hunt, of New York City, assignor to George A. Arrowsmith, of New York City, for Loaded Ball. Patented August 10, 1848.

To James Renton and James H. Crane, of Newark, N. J., for improvement in the closed Bloomery Fire. Patented August 10, 1848.

To Richard J. Gatling, of Murphreesborough, N. C., for improvement in machines for Sowing Seed, &c. Patented August 10, 1848.

To Henry G. Clark, of Boston, Mass., for improvement in Air-heating Stoves. Patented August 10, 1848. Ante-dated Feb. 10, 1848.

To A. G. Gilbert, of the Parish of Ascension, La., for improvement in arranging and combining Valves of Steam Engines. Patented August 10, 1848.

DESIGNS.

To F. W. Allen, of Waterford, N. Y., for Design for Stoves. Patented August 10, 1848.

To Ezra Ripley, of Troy, N. Y., assignor to Johnson & Cox, of Troy, N. Y., for Design for Stoves. Patented August 10, 1848.

To Ezra Ripley, of Troy, N. Y., assignor to Johnson & Cox, of Troy, N. Y., for Design for Stove Plate. Patented August 10, 1848.

INVENTOR'S CLAIMS.

Candles.

To John A. and Alfred F. Jones, of Lexington, Ky. for improvement in machines for Dipping Candles. Patented 16th May, 1848. Claim.—Having thus fully described our candle-making machine, what we claim therein as new, and desire to secure by Letters Patent, is, first: The constructing the candle rods in two pieces and the manner of supplying them with candle wicks, substantially as herein set forth.

We also claim the use of the large vertical rotating reel, combined with the series of small rotating reels, suspended at the extremities of its arms and with the swinging frames that receive the candle rods suspended from the extremities of the arms of the small reels, arranged and operating substantially as herein set forth.

We also claim the combination of the tallow box and dipping board, with the large rotating reel, the series of small reels and swinging frames suspending the candle rods, substantially in the manner herein set forth.

We also claim the connecting of the tallow box to the platform or base of the machine by means of hinges at its sides and ends, for the purpose of preserving the box in undeviating horizontal position, whilst it is being raised and lowered.

Churns.

To Willis H. Johnson and Thomas Lewis, of Springfield, Ill. for improvement in Atmospheric Churns. Patented 9th May, 1848. Claim.—What we claim as our invention, and desire to secure by Letters Patent, is the process of making butter by the combined action of the hollow rotary shaft and the radial arms as aforesaid, the arms agitating the cream and diffusing the air through the same simultaneously, as herein set forth.