New Inventions.

Gelston's Double Force Horse Power.

Mr. Maltby Gelston, of East Haddam, Ct., has invented an improvement in horse-power machines, for which he has taken measures to secure a patent. The invention has been exhibited in this city, and has attracted considerable attention. The nature of the improvement consists in enabling the horse, or animal employed, not only to employ his drawing or muscular power, but his gravity or weight as he moves round, is also applied at every point of his progress. The lever which the horse is attached to, is connected by a crank to a vertical shaft, which communicates the power by gearing to other machinery. The circular platform on which the animal treads, does not move round, but it has a downward swaying motion, like that of a top, by the weight of the animal, which acts on the end of a lever secured to an eccentric pin attached to the driving crank of the lever, to which the animal is attached and which it draws: this is the principle of the action. Two animals may draw abreast, but it is intended for a simple and cheap single horse or dog power. This machine is now on exhibition at the Baltimore Mechanics Institute Fair.

Regulator for Hydraulic Rams.

Mr. Joseph Osborn, of Hamden, New Haven Co., Conn., has invented some improvements on hydraulic rams, which are worthy of attention, and for which he has taken measures to secure a patent. At the fountain-head he employs a reservoir, in which there is a float connected to an angle iron, which is again connected to a wire extending to a lever of the ram. This wire, by the float rising and falling, operates the valve of the machine, so that it does not require to be weighted, yet it governs the discharging orifice with the utmost exactness, as required; it also worms a hammer, which is thrown out of gear when the valve is working, but when the valve is shut for some time, and for some cause may have become fastened in its socket, the hammer, by the float being at a certain height, actuates the lever, and brings down the hammer on the stem of the valve, thus setting it free and putting it into action.

Revolving Cylinder Steam Engine.

Mr. A. A. Wilder, of Detroit, Michigan, has invented an engine, the nature of which is designated by the caption above, and for which he has taken measures to secure a patent. It has no valves, strictly speaking, the steam being cut off and let on in a pipe which forms a side gudgeon or trunnion at the middle of the cylinder. The piston rod is connected by a crank pin to a long crank, the shaft of which is set at such a distance on the other side of the cylinder as enables the piston rod and throw of the crank to obviate the dead points. An engine constructed on this principle is now in operation, and it has created no small sensation among engineers and others who have seen it. We have seen a number of certificates from distinguished men, all of whom speak in no stinted terms of Mr. Wilder's invention.

Apparatus to Measure a Ship's Leeway.

Mr. Wilder is also the inventor of an instrument for indicating the leeway which a ship makes at sea. It is a simple instrument having a vane attached to its lower end, connected by a spring and rod passing up through a tube to a pointer and index above, so as to indicate by the pointer the leeway of the ship. The vane is set on a line parallel with the keel. This instrument has been tested on Lake Erie and has been highly spoken of by the Detroit papers. Measures have been taken to secure a patent.

Dr. W. H. Stenson, practical dentist, Baltimore, has constructed a clock which keeps the time of day, day of the week, day of the month, and also the name of the month. But the most peculiar feature is, it keeps the odd days of the month, and also leap year, and the odd minutes of every moon, so that it never requires setting. The hours are struck by an armed warrior.

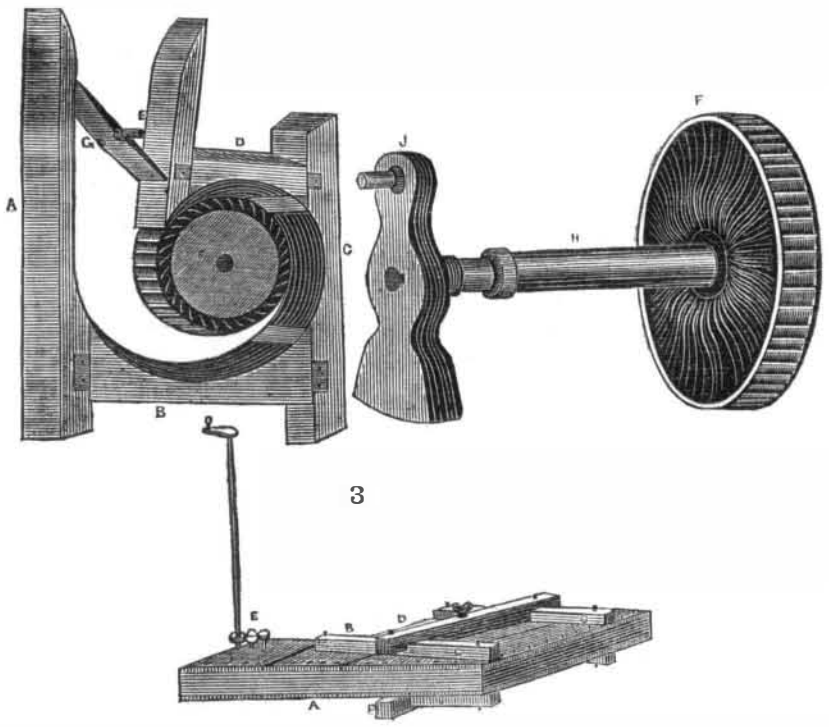
A Discovery.

According to the New York Evening Post, the Rev. Isaac Harrington, of Poughkeepsie, N. Y., says that he has discovered a process of detecting and curing disease by mere manipulation. His theory is, that every organ of the human body is magnetically connected with the spinal marrow, where each has its hole. A properly sensitive person, by passing the hand over the vertebræ, can in this way tell whether there is any irregular action in any organ, and by other passes of the hands, rectify the disturbance. The Post says it has seen Mr. Harrington's skill tested in one case with remarkable success on his part. He is about to visit this city to explain the nature of his new process.

[This we suppose is to be a revival of the old magnetic cure system, which flourished so luxuriantly for a brief space, about 40 years ago.]

REUBEN RICH'S CENTRE VENT WATER WHEEL AND SCROLL.

Figure 1. Figure 2.



Having received a number of communications about Mr. Rich's Water Wheel, some asking what kind of a wheel it really was, and others, where Mr. Rich lived, &c., we, after some searching, discovered that he lived at Salmon River, Oswego Co., N. Y., and communicated with him on the subject; the result of the said communication being a pamphlet description, by Mr. Rich, which, he states, contains the entire method of constructing his wheel. From the views sent us by Mr. Rich, and the description accompanying the same, we have prepared the accompanying engravings,—figure 1 being a plan view, figure 2 a view of the wheel shaft and balance crank, and figure 3 a perspective view of the bridge-trees and nether framing. The same letters refer to like parts.

This wheel is what is termed a "centre vent" Water Wheel—the water entering at the periphery and discharging inside below—this will account for the peculiar motion of it in relation to the form of the buckets, as set forth in figure 1.

The following is the bill of timber for a wheel No. 3, 2 feet in diameter with a 3 inch bucket. (Be it understood that the wheels are cast metal, and one or two may be used on one shaft, either horizontally or vertically):—Bill of timber for scroll 2 feet diameter, three inch bucket—1 stick timber 4 by 8 inches, 8 feet long; 1 stick timber 5 by 8 inches, 8 feet long, 5 feet of it sawed 4 by 5 inches: wheel vents 27 inches water.

Timber for finishing Scroll for upright shafts for two feet Wheels:—4 gripes 4 by 7 inches, 5 feet long, hard wood; 2 bridgetrees 6 by 8 inches, 5 feet long, hard wood; 1 plank 6 feet long, 3½ inches thick, 10 or 12 inches wide, hard wood; 60 feet 3 inch plank, pine or spruce; 1 box for step for shaft to run on, 8 by 8 inches, 3 inches thick, black oak.

A B D are the bottom and side timbers; C C are the top and bottom gripes; D D are the top and bottom bridge-trees; F is the wheel; G is the gate of the scroll or draught; E is the rod, or, as in figure 3, the rack and pinion to raise the gate. H (fig. 2) is the shaft, and J is a balance crank for saw mills. In all cases the buckets are made with the inner or discharge apertures one-third smaller than the apertures. The velocity of the circumference of the wheel should be about one-sixth slower than the velocity of the water under head, to do the best business.

To Draw the Scroll.—Draw the scroll on the floor, make your calculation to be the right distance from the wheel where you begin to scroll, and make the centre board. Scroll round the bigness to fetch the scroll within about three inches of the wheel when it comes round, and then cut your last piece of timber so as to come one inch nigher the wheel, as you will see by the draft. And on all wheels, have the sheet of water strike about one-half way off the rim where the buckets are placed between, and make your scroll pattern fitted together on the floor, and then strike the scroll on them.

Make the corners, as you will see by the draft where to place your tenons, and then number your patterns, and make the scroll according to the bill of timber as laid down in this article, for the size wheel you want. The scrolls are as many square inches in the mouth where it discharges on to the wheel, as one and a half times as much as the apertures measure—under high heads and a small quantity of water, the mouth of the scroll is as small as the apertures measure; and under low heads and plenty of water, twice as large that is right to use the water to the best advantage on all sized wheels, from high to low heads of water.

The scroll should be diamonding, to suit the corner-pieces. The height of the scroll, for wheel No. 3, is the length of timber mentioned above.

The right of this wheel is owned south of the Potomac, by Gindrat & Co., Winter & Co., Montgomery Ala., and G. W. Winter, Columbus Georgia. To those who purchase a right, they send a model and pamphlet of directions for the proper construction of the wheel. A wheel of 2 feet diameter (as set forth by the bill of timber for scroll above) under a ten foot fall, makes 22 revolutions per minute, and a three inch bucket vents 27 cubic inches per minute. Any person wishing to obtain all the necessary information about these wheels can obtain the same by addressing Mr. Rich.—Persons seeking information, should state the heighth of fall, probable number of cubic inches of water, in the running stream, and the kinds of work to which they desire to apply the wheel.

We would suggest to Mr. Rich the propriety of a complete and thorough revision of his pamphlet. There are many errors, and a want of perspicuity in it.

Commissioner of Patents.

Our readers will remember a petition that appeared in our columns some months ago, in connection with proposed changes in the Patent Office Department. As the allegations therein set forth were of a serious character, and are now used in other quarters to the prejudice of the Hon. T. Ewbank, we deem it a duty to state, that, though all that is stated in the petition is true, still no portion of the fault is attributable to Mr. Ewbank. Abuses have existed for some time in this department; and, at the time of Mr. Ewbank's nomination, the highest expectations were entertained that a reform would follow. The delay upon the confirmation of Mr. Ewbank's nomination rendered it impossible for him to act with efficiency, he not being a constitutional officer. A herd of worthless fellows had worked into the office. There are gentlemen of high attainments under Mr. Ewbank; men creditable to any station; Messrs. Page, Gale, Lawrence, (Renwick, with a little improvement, will be equal to any of them,) and others, need only be mentioned, to verify our opinion. With such gentlemen, (now that the Senate have confirmed Mr. Ewbank's nomination,) as a foundation for an efficient corps, we shall confidently look for the long expected reform. Nothing short of a radical change, can satisfy the manufacturers and inventors of the country. Clerks, who do not work a day in the week, must be sent adrift. *Examiner*, or Assistant, where they are grown hoary in the office, and forgetful of the relation they sustain to the inventor, should not, against the universal wish of the inventor, be retained in the office. We know the desire of inventors fully, and are satisfied that when changes are made, such men only can be acceptable to them as are known to be practical men, and furthermore, men having common sympathies with inventors. Such are the men wanted, and such, we feel sure, Mr. Ewbank will give. He is an inventor himself, and has fitted himself for the station, in the same school with those who appreciate his sterling worth. Let such terms cease in the office, as "cutting heads off," when a rejection of an inventor's application takes place! Shame should mantle the cheek of any man who could indulge in such ferocious remarks, when perhaps the unfortunate persons thus dealt with, has suffered a wanton robbing of his rights. Such is the course that blasts many a just hope, and blights the prospect for honorable livelihood, of many a family in our midst. Gentlemen should recollect, that their province is *only humbly to offer their opinions* on matters committed to them—not to arrogate to themselves the right to dictate, or usurp. The country will sustain the Commissioner in a thorough and manly course. Unless a change takes place, what little confidence there still remains, will be withdrawn, and the office without the countenance of inventors, would soon cease to exist.

For ourselves, we are pleased with the head of the department, and feel confident, that, although vilification and abuse has been his lot since his accession to the office, the inventors of the country are fast becomimg aware of his excellence.—St. Louis Reveille.

New Old Invention.

By the last news from Europe, by the America, we see it stated that M. La Grange, an apothecary of Paris, had invented a new bullet, which, on striking an object, explodes with a most destructive effect. This new Paris invention is an old American one: W.W. Hubbell, Esq., Attorney, Philadelphia, the inventor of the "Solar Magnetic Engine," and improvements on fire-arms, all of which have been illustrated in our columns—made experiments with the same kind of detonating bullets, five years ago.

Jenny Lind has again arrived in New York after her Boston and Philadelphia tours.