light, and the mode of connection presents no difficulty.—A swimming school was instituted by the Eton College authorities in 1836, in order that fatal accidents to the boys on the Thames might be prevented; a regulation being made that none who could not swim should be permitted to indulge in boating. Since that time, 1400 scholars have passed the swimming test. There are annual swimming school games, when professorships of swimming and diving, and medals, are bestowed on the most expert. A few days ago these games were held, and every thing went off well; 217 of the present scholars were swimmers.—The iron trade of South Staffordshire, is now in a more flourishing condition than it has been for some time. Orders have been pouring in from all quarters for railway iron. A contract has just been made by several of our large ironmasters for 8000 tons of iron for the great Menai Straits Bridge, in connection with the Chester and Holyhead Railway.—The suspension of the business of the Leeds Commercial Bank was in a quarter of an hour known in Birmingham through the electric telegraph.—The French have been carrying on some fattening experiments on ducks: those fed on rice remained lean, those fed on buttered rice became fat.

Inventions and Improvements Patented by James Bogardus Esq. N. Y.

The first patent granted to him was for improvement in clocks, on the second of March, 1830. The principle of this improvement consists in this, that the wheel which carries the hour hand, and the barrel for the chain, cord or mainspring, turns on a common centre and are combined with the two other wheels and three pinions, constructed with such relative proportions, that the three hands which mark the hours, minutes, and seconds, shall be carried on three several axes by a weight or spring applied to the barrel, and a pendulum or balance applied to the escapement wheel in any common form, so that the hands shall mark with precision their respective portions of time.

The second is for improvements in the striking part of blocks, granted on the 18th of April, 1832. This improvement relates to the striking part of the clock, and consists in connecting the two barrels together, so that the two can be wound up together; but after this is effected, they act independently of each other.

The third is for improvement in ever-pointed pencils, granted on the 17th of September, 1833. The improvement here patented consists in so arranging the parts of an ever-pointed pencil case, that the point which holds the pencil shall be obtruded and detracted without having a slot in the side, with a ferrule and pin to draw it down, as is ordinarily done. The exterior case consists of a continuous cylindrical tube, without projections or openings. To cause the point which holds the pencil to protrude, the head of the pencil-case is made to revolve; this acts upon an interior tube, by means of a quick-threaded screw, which should in preference, be made left handed.—The chamber for spare pencils, and the holding point, remain as heretofore. A competent workman will readily conceive, without the aid of drawings, how the respective parts should be arranged. In the specification these are clearly set forth, and the claim is to "the application of the coarse thread screw, either direct or back handed, and the general arrangement of the parts as herein described."

The fourth for separating gold from the ore, and other foreign matter, on the 7th of April 1834. This is for the application of his universal eccentric mill to the purpose of separating gold from the ore, and the improvements added thereto are thus described by the patentee:—

"A plank of six or seven feet in length, eighteen inches in width, and three in thickness, is to have a zig-zag or serpentine channel sunk on one surface of it, which channel may commence and terminate at the distance of a foot from the ends of the plank; it may be about four inches wide, and sunk to the depth of two inches. This plank is to be made perfectly flat, so that a second, of similar dimensions, may, when bolted to it, make a water-tight joint, under a certain degree of hydrostatic pressure.

"An excavation, to receive two mill plates, is to be made at one end of the above described channel; these mill plates are to consist of two circular sheets of copper, say one-fourth of an inch thick, and about ten inches in diameter. The excavation is to be made oval, as the two mill plates are not to be concentric; the length of the oval is to exceed its width about one-third. The lower mill plate is to have a pin projecting from the centre of its under side, which, passing into a socket formed in the plank, allows it to revolve, and there four or five holes, of about an eighth of an inch in diameter, drilled through this plate, for the free passage of mercury, with which the channel is to be nearly filled.

"The upper mill plate is to have a circular hole in its centre, of an inch or more in diameter, and to this is to be screwed a cylindrical tube of twelve or fifteen feet in length, through which the ore, broken into small pieces and mixed with water, is to pass down between the plates. The lower end of this tube turns into a collar, and it may be driven by a wheel and band at its upper end, where it widens out into the form of a funnel to receive the ore and water. The tube must be inclosed to nearly its upper end, in a water-tight case attached to the upper plank.

"The farther end of the channel terminates in a small well or excavation in the lower plank, above which the upper plank is perforated, so as to allow the water and refuse ore to rise up by the hydrostatic pressure and be discharged. This opening may, if necessary, be surrounded by a rim, to increase the depth of the well. When in use, this end of the machine is to be elevated a few inches above that in which the mill plates are contained.

"The principle of this invention consists in the combining the principle of Bogardus' said Universal Mill with a channel nearly horizontal, of convenient length, terminating in a well capable of holding a large portion of mercury which the channel will contain, with a vertical tube over the plates, of a height and capacity capable of containing water sufficient, by its own power, to force its way through the mercury in said channel, the most expedient form of said channel being zig-zag or serpentine, and the most expedient position thereof being that of a slightly elevated or inclined plane rising from the mill to the well. Said well having a spout to discharge the water and ore, and other heterogeneous substances, and being elevated as aforesaid, so that the mercury will run back to the mill plates, whenever forced away from them by the power of the water."

[To be continued.]

TO CORRESPONDENTS.

"M. K. of W."—We shall probably procure an engraving to illustrate your plan for a water-wheel, though we shall probably show that it will give less power than anticipated by the inventor.

"W. A. of Mobile."—The full length of the straightening machine, should be three inches. We have written by mail, with a drawing, addressed to W. A.

"F. H. S. of B."—Rather crowded this week but shall do you justice in our next.

"A. S. M."—It is erroneous to suppose that two small saws will require but half the power of one large one to do the same work.—Thanks for intelligence on the other subject.

"A. Y. of M."—Sorry you did not give your full name, since your neglected to pay the postage.

"G. S. R."—There would be a serious difficulty attending the employment of road-rails for telegraph conductors, on account of the communication between the rails and the earth. Could the rails be completely insulated from the earth, they might answer for that purpose.

Missouri Enterprise.

On account of the difficulty attending the navigation of the Missouri river, it is proposed to construct a railroad direct from St. Josephs Mo., to some point on the Mississippi.

Western Cranberries.

A boat containing 500 bushels of cranberries gathered by the Indians 300 miles up the Wisconsin river, recently arrived at St. Louis, where they readily command \$2 per bushel.

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THIS is the most compact, complete, convenient and useful pocket companion ever offered to the public. The multiplicity of its usefulness and the smallness of its size, renders it a perfect MULTUM IN PARVO. In the short space of 2.34 inches is contained a Pen, Pencil, and a reserve of leads, and by one motion slides either the pen or the pencil out and extends the holder to six inches, which is but little more than half the length, when shut up, of the com-

mon pen holder, but when extended is one fourth longer. This article is secured by two patents, and the Manufacturers are now ready to receive orders for them in any quantity, either of Gold or Silver, together with his celebrated ever pointed Gold Pens, which need no proof of their superiority except the increased demand for the last six years, and the numerous attempts at imitation.

A. G. BAGLEY, No. 189 Broadway, New York, Sept. 1, 1846. o24 tf

Sears' Pictorial Magazine.

The January number of this work is surpassing in excellence, and worth at least four times the cost. The engravings, 15 in number are of the first order, comprising a view of the city of Cincinnati, and several views of public buildings within that city. Lane Seminary, Kenyon College, and historical representations. The price of this work is only \$2 per annum—25 cents single. Published by R. Sears, 128 Nassau st.

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THIS paper circulates in every State in the Union, and is seen principally by mechanics and manufacturers. Hence it may be considered the best medium of advertising, for those who import or manufacture machinery, mechanics tools, or such wares and materials as are generally used by those classes. The few advertisements in this paper are regarded with much more attention than those in closely printed dailies.

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C. HAMMOND, Principal.
Monson, Mass., Nov. 14, 1846. n28

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Superintendent of Elliot Mills.
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