

THE STEAMER "SETH GROSVENOR."

The steamer *Seth Grosvenor*, built by the "New York State Colonization Society," to run between Cape Palmas or Montsonia, on the coast of Siberia, to meet the requirements of the local trade, has just been completed. The destination of this vessel is an initiatory step in an enterprise believed to be fraught with good results to African colonization; and as soon as authentic intelligence can be obtained from the coast of Africa, relating to the existing state of affairs there, she will be dispatched on her important duty. Her dimensions with particulars of engine and boiler, are as follows:—Length on deck, from fore-part of stem, to after-part of stern-post, above the spar deck, 95 feet; breadth of beam, at midship section above the main wales, 16 feet 10 inches; depth of hold, 5 feet; depth of hold to spar deck, 5 feet 3 inches; draft of water at board line, 3 feet; size of engine-room, 27 feet by 6 feet; area of immersed section (at load draft of 3 feet) 39 square feet; tonnage, 68 tons. She is fitted with a steeple engine; diameter of cylinder, 28 inches; length of stroke of piston, 3 feet 6 inches. Diameter of water wheels (over boards) 14 feet 4 inches; length of wheel blades, 1 foot 3 inches; and she has 14 blades. She has one return tubular boiler, the length of which is 12 feet 6 inches; breadth, 5 feet 9 inches; light (exclusive of steam chimney) 6 feet 10 inches; and beneath this there is one furnace—breadth 5 feet; length of fire-bars 4 feet 6 inches; there are 36 tubes—30 of 4 inches (internal diameter) and 6 of 3 inches. The internal diameter of the four flues is 2 of 8 inches and 2 of 15 inches; length of tubes above, 9 feet; length of flues below 6 feet. The diameter of the smoke-pipe is 2 feet 3 inches; height, 24 feet; draft forward, 3 feet, draft aft, 3 feet.

The cube of grate surface is 225 feet 5 inches, and possesses a heating surface of 540 square feet. The furnace will consume two tons of fuel per day. The frame is of white oak and hachmetac and square, fastened with copper and trenails; frames not filled in, solid, and moulded 16 inches apart at centers. The floors are moulded at the throats, 6 inches; rided 3 inches. The boiler is located in the hold, and protected from communicating fire by felt and iron. Her rig is that of a schooner, not coppered; bunkers of wood, and is supplied with two anchors. She is fitted with one independent (steam) fire and bilge pump, and has bottom valves to all openings in the bottom. The builder of the hull is Henry Steers; builders of engines, the Allaire Works; superintending engineer, C. H. Haswell.

EFFECT OF FOOD UPON RESPIRATION.

Dr. Edward Smyth read a paper, on Feb. 10, 1859, before the Royal Society, giving the results of over 2,000 experiments which he has been making to ascertain the effect of different kinds of food on the quantity of carbonic acid expired from the lungs. He found that most kinds of food increase the quantity of carbonic acid given off from 1 to 3 grains per minute, the effect commencing soon after the introduction of food into the system and attaining its maximum in about two hours. The most powerful stimulants of respiration are tea and coffee, which sometimes increase the quantity of carbonic acid evolved three grains per minute. The experiments showed that the following-named substances are classed as follows in their effect on the lungs:—

Exciters of respiration—Sugar, milk, cereals, potato, gluten, casein, gelatin, fibrin, albumen, tea, coffee, cocoa, chicory, alcohol, rum, ales. Non-exciters of respiration—Starch, fat, coffee leaves, brandy, gin.

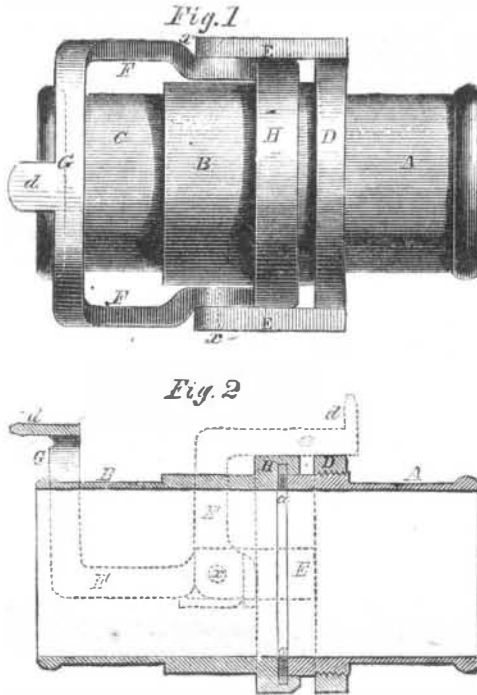
PUBLIC ART MUSEUMS.

Rev. Geo. Duffield, D.D., of Detroit, lately delivered the opening lecture before the Rogers Art Association, at Ann Arbor, Mich. The subject of his lecture was: "The Results of Research and Discovery in Egyptian and Assyrian Antiquities." He dwelt upon the importance of establishing art museums in this country, and the obligation resting upon the University of Michigan to take the lead in the matter. We are glad to know that we have such an eloquent advocate of these views in Professor Duffield. On page 401, Vol. I. (new series) of the SCIENTIFIC AMERICAN, we endeavored to impress upon the minds of the public the benefits that would result to the people by the establishment of public museums of art. It would be a high honor to Michigan if that State took the lead of all others in this great social agency of mental elevation.

SINGER'S IMPROVED HOSE COUPLING.

The hose coupling represented in the accompanying cuts seems to be a very simple, efficient, and promptly-acting device, and well worthy the attention of firemen, and all other persons interested in the ready operation of fire-engines; and who in the community is not?

To the end of one piece of hose the metallic cylinder, A, is securely attached, and to the end of the other piece to be coupled is attached the cylinder, C; the latter cylinder having the enlargement, H, cast upon its end of a size to admit the end of the cylinder, A. This enlargement is provided with a groove to admit the gasket or elastic packing ring, *a*, Fig. 2, against which the end of the cylinder, A, abuts as shown. The cylinder, A, is



inserted in the large end of, C, and to illustrate the mode in which its end is pressed firmly against the packing, *a*, and held in place, the coupling is shown in Fig. 2 as turned one-fourth round from the position represented in Fig. 1. The metallic ring, D, is secured upon the cylinder, A, and has the arms, E E, cast or soldered upon it. Connected with these arms by means of the pivots, *x x*, are the levers, F F, of which the long arms are joined together by means of the semi-circular bar, G, and the short arms are made in the shape of eccentric cams, so that when the boxes are turned down as represented in Fig. 1, and in the full lines in Fig. 2, the cams press against the projection, H, on cylinder, C, and force this cylinder against cylinder, A, while by turning the levers, F F, out from the coupling in the position shown by the dotted lines in Fig. 2, the short arms of the levers are released from their pressure against the projection, H, and the two parts of the coupling fall asunder. As the packing, *a*, becomes condensed or worn, the end of cylinder, A, is made to follow it inward by the simple plan of screwing the ring, D, further upon the cylinder, A.

The inventor claims that hose may be coupled with this arrangement while the water is flowing through it with force. At all events it appears to be a very simple and efficient coupling, by which hose may be joined very quickly indeed, and a smooth, neat, and light joint be made.

The patent for this invention was issued, through the Scientific American Patent Agency, Jan. 3, 1860, and persons desiring further information in relation to it, will please address the inventor, Joseph Singer, Drawer 376, Cleveland, Ohio.

PATENT EXTENSION CASE.

Electric Telegraph.—Samuel F. B. Morse, of Poughkeepsie, N. Y., has applied for the extension of a patent granted to him on the 11th of April, 1846, for an improvement in electro-magnetic telegraphs. The said petition will be heard at the Patent Office on Monday, the 2d of April, at 12 o'clock M.; and all persons interested in opposing the same are notified to appear and show cause (if they have any) why said petition ought not to be granted. The testimony in the case closes on the 19th of March.

FOREIGN NEWS AND MARKETS.

Although much has been said and written about the *Great Eastern*, it appears that all is not yet over in this line. A great deal has been rather hinted at than fairly charged against her builder, J. Scott Russell, for all its defects—low speed and everything else. He was really looked upon by the public as a kind of delinquent in this case, and so at last he has come out in a report to the directors, of an exculpatory character. He states as an excuse for her low speed, that she was not designedly built for a high speed steamer on a short voyage, but for a uniform speed of more than ordinary velocity, so as not to be affected by storms, and thus make long voyages to Australia and India, more rapidly and more economically than any other steamer of a less size. Respecting her qualities he asserts she has proved handy and manageable, so as to go into and out of any harbor in this or other countries that afford suitable traffic. She has ample power to stand up in sea-way or storm, without such rigid stiffness as to make the sea strike her with violence. She has proved that, in danger from external violence, or internal accident, her system of separation into compartments is so successful that no damage to one part of her affects another. She has realized the speed for which she was designed, and which is such as to enable her to reduce the time of a voyage to Australia from 59 to 30 days. She not only can carry coals for the entire passage to Australia, but find room besides for 5,000 tons of goods. Along with this she affords ample accommodation for from 500 to 800 first-class passengers, and might be fitted up for 1,000 additional berths, as first and second-class, and 1,500 third-class, if desirable. She has been proved to afford comparative immunity from sea-sickness, along with the comfort and luxury of a first-class hotel, thus rendering a passage across the sea in every way more enjoyable than a long journey by land.

James Nasmyth, the inventor of the steam hammer, has taken out a patent for a siphon motive power. In that part which connects the two limbs of the siphon, valves are fitted to cut off the connection with the limbs. In a cylinder connected with one limb there is a small portion fitted, and its rod is attached to a shaft to which it gives motion for operating the valve and driving machinery. A small air-tight chamber is connected with the piston cylinder by a valve. When water is let into the limbs of the siphon, the piston connected with the discharging limb is made to rise, and when it has reached the end of its stroke, the valve is shut to cut off the inlet water, and then the one is opened into the air-chamber, when the water flows from under the piston and it descends. In this manner a continual reciprocating motion is to be given to the piston—a perpetual power without the use of a dam or material waterfall.

The steamships of the Peninsular and Oriental Steamship Company consume from four-and-a-half to five pounds of coal per horse-power per hour, and the total cost of fuel is £650,000 per annum. By adopting the most recent improvements, this company can save one-half the expenses for fuel, as the Pacific Steam Navigation Company, whose vessels run on the coast of South America, consume only two or two-and-a-half pounds of coal per horse-power in an hour.

Many of the heavy iron rolling mills in England and Scotland have lately adopted the frictional gearing system in place of toothed wheels. The rim of the main fly-wheel is made with a groove in it, and a wedge-faced pinion gears into the groove. In most of the calico print-works in Glasgow, the same arrangement of driving gearing has been adopted; and in a few years it is supposed no other mode of connecting the wheels of machines will be in use in England.

By experiments recently made by W. Fairbairn, Esq., and Thomas Tate, Esq., at Manchester, England, to test the strength of glass vessels of various forms, it was found that the resistance of glass to a crushing force was equal to 13.460 tons per square inch. Taking flint glass at 1.000 in strength, green glass is 1.152, and crimson glass 4.124—flint the weakest.

The following rule is in force on some of the German railways: In the waiting-room of each station, and in each booking-office, books are kept open for any complaints that travelers may think themselves authorized to enter therein, accompanied with the name, rank and residence of the complainant. The German railroads

are the safest in the world; accidents are almost unknown on them.

No change has taken place in the metal market since last week. The prices are ruling favorably for the manufacturers, and business is good throughout the entire country.

NEW YORK MARKETS.

CANDLES.—Sperm, city, 38c. a 40c. per lb.; sperm, patent, 50c.; wax, paraffine, 50c.; adamantine, city, 18c. a 21c.; stearic, 27 a 28c.

COAL.—Anthracite, \$4.50 a \$5; Liverpool orrel, per chaldron, \$12; cannel, \$13.

COPPER.—Refined ingots, 24c. per lb.; sheathing, 27c.; yellow metal, 20c.

CORDAGE.—Manilla, American made, 8½c. per lb.; Rope, Russia hemp, 12c.

COTTON.—Ordinary, 9c. a 9½c.; good ordinary, 9½c. a 10½c.; middling, 11½c. a 11¾c.; good middling, 12c. a 12¾c.; middling fair, 12¾c. a 13¾c.

DOMESTIC GOODS.—Shirtings, brown, 30-inch, per yard, 6c. a 7½c.; shirtings, bleached, 26 a 32-inch, per yard, 6c. a 8c.; shirtings, bleached, 30 a 34-inch, per yard, 7c. a 8½c.; sheetings, brown, 36 a 37-inch, per yard, 5½c. a 8½c.; sheetings, bleached, 36-inch, per yard, 7½c. a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 20-inch, per yard, 6½c. a 10c.; cloths, all wool, \$1.50 a \$3.50; cloths, cotton warp, 85c. a \$1.37; cassimeres, 85c. a \$1.37½; satinetts, 30c. a 60c.; flannels, 15c. a 30c.; Canton flannels, brown, 8½c. a 12c.

DYEWOODS.—Barwood, per ton, \$18 a \$30; Camwood, \$130; Fustic, Cuba, \$35 a \$36; Fustic, Tampico, \$25; Fustic, Savanilla, \$30 a \$32; Fustic, Maracibo, \$18.50 a \$19; Logwood, Laguana, \$23 a \$23; Logwood, Tabasco, \$21; Logwood, St. Domingo, \$14.50 a \$15; Logwood, Honduras, \$16 a \$17; Logwood, Jamaica, \$13.50 a \$14; Lima wood, \$65 a \$75; Sapan wood, \$45.

FLOUR.—State, superfine brands, \$4.95 a \$5.10; Ohio, common brands, \$5.20 a \$5.30; Ohio, good and choice extra brands, \$5.30 a \$6.75; Michigan, Indiana, Wisconsin, &c., \$5.20 a \$5.30; Genesee, extra brands, \$5.60 a \$7.25; Missouri, \$5.30 a \$7.50; Canada, \$5.50 a \$6.75; Virginia, \$6.25 a \$7.25; Rye Hour, fine, \$3.75 a \$3.90; corn meal, \$3.30 a \$4.20.

HEMP.—American undressed, \$120 a \$150; dressed, from \$160 a \$200. Jute, \$95 a \$97. Italian, \$375. Russian clean, \$190 a \$200 per ton. Manilla, 6½c. per lb. Sisal, 5½c.

INDIA-RUBBER.—Para, fine, 55c. per lb.; East India, 50½c.

INDIGO.—Bengal, \$1 a \$1.55 per lb.; Madras, 70c. a 95c.; Manilla 60 c. a \$1.10; Guatemala, \$1 a \$1.25.

IRON.—Pig, Scotch, per ton, \$25 a \$36; bar, Swedes, ordinary sizes, \$35 a \$36; bar, English, common, \$42.50 a \$43.50; refined, \$32 a \$34; sheet, Russia, 1st quality, per lb, 11½c. a 11¾c.; sheet, English, single, double and treble, 3½c. a 3¾c.; anthracite, pig, \$24 per ton.

IVORY.—Per lb., \$1.25 a \$1.30.

LATHS.—Eastern, per M., \$1.75 a \$2.

LEAD.—Galena, \$3.75 per 100 lbs.; German and English refined, \$5.70 a \$5.75; bar, sheet and pipe, 6½c. a 7c. per lb.

LEATHER.—Oak slaughter, light, 29c. a 31c. per lb.; Oak, medium, 30c. a 32c.; Oak, heavy, 28c. a 31c.; Oak, Ohio 29c. a 30c.; Hemlock, heavy, California, 20c. a 21½c.; Hemlock, buff, 16c. a 18c.; Cordovan, 50c. a 60c.; Morocco, per dozen, \$18 a \$30; Patent enameled, 16c. a 17c. per foot; light Sheep, morocco finish, \$7.50 a \$8.50 per dozen; Calf-skins, oak, 66c. a 60c. per lb.; Hemlock, 66c. a 60c.; Belting, oak, 32c. a 34c.; Hemlock, 28c. a 31c.

LIME.—Rockland, 75c. per bbl.

LUMBER.—Timber, white pine, per M. feet, \$17.75; yellow pine, \$35 a \$36; oak, \$18 a \$28; Eastern pine and spruce, \$14 a \$15; White Pine, clear, \$35 a \$40; White Pine, select, \$25 a \$30; White Pine, box, \$14 a \$18; White Pine, flooring, 1½ inch dressed, tongued and grooved, \$34.50 a \$35; Yellow Pine, flooring, 1½ inch, dressed, tongued and grooved, \$29 a \$32; Black Walnut, good, \$45; Black Walnut, 2d quality, \$30; Cherry, good, \$45; White Wood, chair plank, \$42; White Wood, 1 inch, \$23 a \$25; Spruce Flooring, 1½ inch, dressed, tongued and grooved, each, 22c. a 24c.; Spruce Boards, 15c. a 17c.; Hemlock Boards, 12½c. a 14c.; Hemlock wall strips, 10c. a 11c.; Shingles, cedar, per M. \$28 a \$35; Shingles, cypress, \$12 a \$25; Staves, W. O. pipe, light, \$55 a \$38; Staves, white oak, pipe, heavy, \$75 a \$80; Staves, white oak, pipe, culls, \$30 a \$35; Staves, do. hhd., heavy, \$70; Staves, do. bbl. light, \$30 a \$35; Staves, do. bbl. culls, \$20; Mahogany—St. Domingo, fine crotches, per foot, 35c. a 45c.; St. Domingo, ordinary do., 20c. a 25c.; Honduras, fine, 12½c. a 15c.; Mexican, 13c. a 15c.

NAILS.—Cut, 3½c. a 3¾c. per lb.; American clinch, 5c. a 5½c.; American horse-shoe, 14½c.

OLIVE.—Olive, Marseilles, baskets and boxes, \$3.35 a \$3.50; Olive, in casks, per gallon, \$1.12 a \$1.25; Palm, per pound, 9c. a 9½c.; Linseed, city made, 57c. a 58c. per gallon; Linseed, English, 57c. a 58c.; whale, fair to prime, 48c. a 52c.; whale, bleached 59c. a 60c.; sperm, crude, \$1.40 a \$1.45; sperm, unbleached winter, \$1.47; lard oil, No. 1, winter, 90c. a \$1; red oil, city distilled, 57c.; Wadsworth's refined rosin, 30c. a 40c.; boiled oil for painting, 35c. a 40c.; tanner's improved and extra, 30c. a 40c.; camphene, 44c. a 46c.; fluid, 50c. a 53c.

PAINTS.—Litharge, American, 7c. per lb.; lead, red, American, 7c.; lead, white, American, pure, in oil, 8c.; lead, white, American, pure, dry, 7½c.; zinc, white, American, dry, No. 1, 5c.; zinc, white, French, dry, 7½c.; zinc, white, French, in oil, 9½c.; ochre, ground in oil, 4c. a 6c.; Spanish brown, ground in oil, 4c.; Paris white, American, 75c. a 90c. per 100 lbs.; vermilion, Chinese, \$1.12½ a \$1.22; Venetian red, N. C., \$1.75 a \$2.25 per cwt.; chalk, \$4 per tun.

PLASTER-OF-PARIS.—Blue Nova Scotia, \$3.75 per tun; white, \$3.50; calcined, \$1.20 per bbl.

RESIN.—Turpentine, soft, N. C., per 280 lbs., \$3.50 a \$3.56; Wilmington, &c., \$3.50 a \$3.56; common, per 310 lbs., \$1.55 a \$1.58; strained and No. 2, \$1.62 a \$1.95; No. 1, per 280 lbs. \$2 a \$2.75; white, \$3 a \$4; pale, \$4.50 a \$5.50.

SALTPETER.—3½c. a 12c. per lb.

SOAP.—Brown, per pound, 5c. a 8c.; Castile, 8½c. a 9c.; Olive, 7c. a 7½c.

SPELTZER plates, 5c. a 5½c. per lb.

STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5½c.; American blister, 4½c. a 5½c.

SUGAR.—New Orleans, 7c. a 8½c. per lb.; Porto Rico, 7c. a 8½c.; Havana, brown and yellow, 7c. a 8½c.; Havana, white, 9c. a 9½c.; Brazil, white, 8c. a 8½c.; Brazil, brown, 7½c. a 7¾c.

SCMAC.—Sicily, \$70 a \$80 per tun.

TALLOW.—American prime, 10½c. a 10¾c. per lb.
TIN.—Banca, 32c.; Straits, 30c.; plates, \$6.50 a \$9.25½, per box.
WOOL.—American, Saxony fleece, per lb., 55c. a 60c.; American full blood merino, 48c. a 52c.; extra, pulled, 45c. a 50c.; superfine, pulled, 39c. a 43c.; California, fine, unwashed, 34c. a 32c.; California, common, unwashed, 10c. a 18c.; Mexican, unwashed, 11c. a 14c.
ZINC.—Sheets, 7c. a 7½c. per lb.
The foregoing rates indicate the state of the New York markets up to February 3d.

There was great dullness in the markets last week; many persons have blamed the long contest for Speaker in Congress as one great cause of uncertainty, and consequent flatness in the general business. It is hoped that since a speaker has at last been fixed upon, there will be less speaking and more legitimate business done, both in Washington and New York.

The Chamber of Commerce has held two meetings to protest against the passage of what is called "The Pro-rata Freight Bill," now before the legislature. The bill provides for charging tolls on our railroads—the erection of a huge State toll-gate to injure the growing railroad interests of the State. Such a bill is not only unjust but very impolitic.

There is a very large stock of flour on hand, and as the demand from abroad is very moderate, the tendency of prices is slightly downward.

Thirty journeymen shoemakers of Lynn have petitioned the Massachusetts legislature to be incorporated as a shoe manufacturing company, with a capital not exceeding \$50,000.

The lumber trade in Maine is represented as more promising than since 1855. The operations in the woods are in excess of last year, with a promise of thrift so far.

From September last to January about 15,000 barrels of apples were brought to New Bedford, Mass., some 7000 of which were transported by the propellers *Wamsutta* and *Potomaska*.

Mr. La Mountain, the aeronaut, is constructing four new balloons, at Lansingburgh, N. Y., to be used for making local ascensions. Mr. John Wise is also building a balloon with which he proposes to make an ascension from Kingston, C. W., on the 24th of May next.

The owners of the Pemberton Mill, at Lawrence, Mass., have, we understand, made a claim upon the insurance companies for the entire amount of the insurance, \$415,000, and have retained legal counsel in case the claim is resisted.

A ship canal across Cape Cod (says the Boston *Transcript*) which would save 150 miles of dangerous navigation around the Cape, lessening the rate of freights, and doing an almost incalculable good to the commerce of the State, will soon be considered by the legislature. The expense of building such a canal has been estimated, from surveys taken, at about \$500,000.

The New Orleans *Picayune* of the 25th ult. says that the exchange market has been exceedingly languid. The supply of both foreign and domestic exchanges continues ample, and the demand for any description is little better than nominal.

WEEKLY SUMMARY OF INVENTIONS.

The following inventions are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:—

PORTABLE CANOPY.

This invention is a portable canopy from which is to be hung a musquito net. The canopy is constructed in such a way that it can be readily taken to pieces and packed away in a very compact manner, each piece forming the canopy and stand can be detached from its other piece; the canopy frame itself can be taken to pieces and the parts folded up; at the same time, when the parts are all put together, they will form a substantial firm support for the net or covering. The parts will all be light can be made of cheap material, are capable of receiving ornamental decorations, can be adjusted to suit various circumstances, are not attached to the bedstead, and can therefore be removed to one side for making up the bed, or when not in immediate use. The canopy can be raised or depressed and fixed in its adjusted position. The patentee of this invention is Isaac E. Palmer, of Montville, Conn.

BRUSH BLOCKS.

This invention consists in the employment of double-edge reciprocating cutters in connection with guides, the parts being so arranged that the cutters may act upon their work, during both their upward and downward

movements. The invention consists in the employment of a pattern in connection with the guides above-named, the pattern being so arranged that it may be rotated or turned on a center so as to admit of the shaping of the brush blocks without reversing the same from the pattern. The invention further consists in the employment of an adjustable bed and clamp so arranged as to admit of the facile manipulation of the pattern which is attached to, and centered on said bed. The object of the invention is to expedite the cutting out or shaping of brush blocks both as regards the operation of the cutters, and the manipulation of the work in presenting it to the action of the cutters. This improvement was designed by A. G. Mitchell, of Lansingburgh, N. Y.

ELECTRIC TELEGRAPHS.

This invention relates to the use for submarine and other electric telegraphs of wires or conductors which are encased with gutta percha or other insulating material, and have such insulating material enveloped with a sheathing of metal. When the wire or other primary conductor is thus encased and sheathed, the current passing through it induces a current in the metal sheathing; and the invention consists in collecting this current and using it, either in connection with the primary current passing along the inner wire or conductor, or alone, for the purpose of working telegraphic instruments. The credit of this contrivance is due to George Doyle, of Ottawa, Ill.

PRINTING PRESS.

The object of this invention is to obtain a flat impression press, that will print rapidly, be very compact, simple in construction, printing both sides of the sheets at one operation, or with but one passage through the press, and one that will admit of having certain necessary parts readily adjusted for the printing of different sized sheets, and also one that will admit of polychromatic printing with a perfect register. This device has been patented to John W. Latcher, of Northville, N. Y.

CALNDAR CLOCKS.

This invention consists in certain novel means of governing the movements necessary at the changes of the months, more especially the variable movement in the change from February to March, which are less liable to get out of order than the mechanism heretofore used for the purpose, and hence more reliable and certain in their operation. The inventors of this improvement are Eugene M. Mix, and James E. Mix, of Ithaca, N. Y.

THE RISE AND PROGRESS OF INVENTIONS.

ADVICE TO INVENTORS.

During the period of Fourteen Years which has elapsed since the business of procuring patents for inventors was commenced by MUNN & Co., in connection with the publication of this paper, the number of applications for patents in this country and abroad has yearly increased until the number of patents issued at the United States Patent Office last year (1859) amounted to 4,175; while the number granted in the year 1845—fourteen years ago—numbered 502—only about one-third as many as were granted to our own clients last year; there being patented, through the Scientific American Patent Agency, 1,440 during the year 1859. The increasing activity among inventors has largely augmented the number of agencies for transacting such business; and at this time there is scarcely a town of 4,000 inhabitants, but has its patent agent, patent lawyer, patent solicitor, or patent attorney, all of which terms are used to convey the same idea—viz., that their services are offered to the inventor or patentee for a pecuniary consideration.

In this profession, the publishers of this paper have become identified with the universal brotherhood of Inventors and Patentees at home and abroad, at the North and the South; and with the increased activity of these men of genius we have kept pace up to this time, when we find ourselves transacting a larger business in this profession than any other firm in the world. Year after year, we have increased our facilities for transacting patent business, by gathering around us a large corps of the most eminent engineers, draughtsmen and specification writers that can be procured. Among these gentlemen are those who have been connected with the United States and Foreign Patent Offices. The latest engagement we have made is the association with us of Hon. CHARLES MASON, formerly COMMISSIONER OF PATENTS, and favorably known to the inventor as their friend and advocate. The memory of his acts while holding this high position will be cherished by many an honest inventor with gratitude as long as he lives.

The arrangement made with Judge MASON renders our facilities for prosecuting all kinds of patent business complete, however ample they were before; and without being accused of egotism, we may safely assert that no concern has the combined talent and facilities that we possess for preparing carefully and correctly applications for patents, and attending to all business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c.

FREE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be patentable are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with