



GENERAL REMARKS.—The Exhibition may now be considered as complete—there is yet a very little to be arranged, but those who have been waiting to see the achievements of intellect, as manifested in the triumph of mechanical art over mere brute force, may at last come on: the poetry of motion may now be seen, not only in revolving spheres, but in the noiseless throes of the huge steam engine, in the harmonious movements of wheel and lever, of shaft and pulley. It is not that there is so much to be seen, but that he who looks with a penetrating eye upon the lathes, and looms, the gins and drills and shears—in short upon the multifarious variety of devices for accomplishing, by the power of the elements, that which human muscles and sinews once sought to perform, cannot but be impressed with the idea that intellect, not might, must rule. We can not, as American citizens, avoid a feeling of honest pride. John Bull pointed sneeringly at the empty space of the American department in the London Fair: but although we had little interest in advertising our wares among them, while America is their great market, the tables are completely turned. It would seem that there was an expectation of an immense rush towards the English Department, from the wide aisles and the empty spaces there to be found, but although they exhibit many things of great artistic merit, who can point out to us a Hobb's lock, a McCormick's reaper or the model of an America? Or where among the many statues, not of Italy, the home of the fine arts but of all Europe, indeed; is there a group that can compare even with that of Hiram Powers? But enough of this.

In taking a cursory view of the interior of the Palace the other evening, we could not but admire the Austrian Department, under the charge of Charles F. Looney, Austrian Consul at this port. Its general neatness is highly commendable,—it looks as if the most had been made of the space afforded. And we will here remark that no one should fail seeing the Palace by gas-light—the exterior view, when it is lighted up at night, brings vividly to our remembrance the tales of enchantment: the vast Naves glowing with resplendent light,—the massive dome flashing with the brilliancy of a thousand luminaries, remind one of the palace created by the magic powers of Aladdin's lamp.

We wish here to call the attention of the Directors to their catalogues: we heard many of those who had purchased the general catalogue complaining because it did not contain the paintings also. Some thought the plan of having two catalogues an intended shave,—it certainly has something of a catch-penny appearance. We complained most because we could not procure one of the latter at all.

Such has hitherto been the incompleteness of the exhibition that it has been wholly impracticable to form any systematic plan for our descriptions, but as it may now be regarded as *an entirety* we shall be enabled to proceed more definitely. We shall give our attention this week to

MACHINERY FOR MANUFACTURING COTTON.—First come cotton gins. E. Carver and Co., of East Bridgewater, Mass. exhibit a machine which, for beauty of exterior finish, resembles more an ornament for the parlor than a machine for the plantation, yet it is none the less a durable and efficient implement. The bearings of the saw-cylinder are hung in a box, suspended on the universal-joint principle. It also contains certain improvements in the manner of forming the grates, secured by Letters Patent.

Calvert & Sargent, of Lowell, Mass. show their improved gin with a burred cylinder, instead of ginning saws, which was patented in January and October, 1848; it is certainly a cheaper machine than the ordinary gin.

The Eagle manufactory of Bridgewater, exhibits a machine neatly executed, its mechanism skillfully wrought, and its plan well adapted to the performance of its duties.

Carver, Washburne & Company, of the same

place, also exhibit a very good gin. E. Kellogg and Co., New Hartford, Ct., are the manufacturers and exhibitors of a cotton picker, the only one we have yet seen in the Fair; it is a very neat machine.

Next in the order of the manufacture is a slubbing and a roving frame, invented by Jno. Mason, of Rochdale, England, and exhibited by W. C. Hickok. They are in the English Department near the Machine Arcade. These machines do great credit to the designer and constructors. They are well and skillfully made, we have never seen better machinery anywhere; we believe it was a machine similar to one of these which gained a Council Medal at the World's Fair in 1851. For the information of such of our readers as may not understand these terms, we would state that the operations performed by them are the drawing

out the rolls and slightly twisting them preparatory to their reception by the throstle frames or mules. This is all the English cotton machinery in the Exhibition—we expected to see more of it. We must say that the English Department disappoints us. With the exception of these two frames for cotton spinning, the only machines exhibited are those from Whitworth's machine shop, in Manchester. This is the largest shop for making tools in the world, and its fame is not confined to old England. The tools which they exhibit are of excellent workmanship, and well designed for the purposes intended. We do not know why it is that the English Department is so poorly represented, there must be a reason for it; at present we do not feel pleased with the squalid looks of Uncle John's wooden walls as erected in the Crystal Palace.

ORNAMENTAL TABLES.



We intend hereafter to present our readers with illustrations of some of the various articles possessing most artistic merit.

Our engraving this week represents an ornamental table, exhibited by Morant & Boyd, of London. The top is of plate glass, painted in imitation of Florentine Mosaic, and the remainder is of brass: upon the pedestal stand three storks (the artist has represented but two, however,) and the column is entwined with flags. By the side of this stands another, representing three swans in a different attitude, and not far

J. C. Dodge, of Attleborough, Mass., shows a self-acting mule and throstle equally adapted for warp or woof; this machine has been favorably noticed by us in former volumes. Its manufacturers claim an increase of work amounting to fifty per cent. B. Brundred & Son, Paterson, N.J., exhibit an improved throstle which differs from others, in driving the spindles by friction instead of belts. The spindles are arranged upon a part of the periphery of a driving wheel upon which they rest, and by the friction of which, upon their lower ends, which are bevelled and covered with leather, they are propelled. An engraving of this throstle was published by us in No. 46, Vol. 7.

Next come the looms; of these there is quite a variety:—Benjamin & Reynolds, of Stockport, N. Y., are on hand with four beautiful looms from the Empire Works: these have several new features lately patented in England through our agency. It is a good invention, and we bespeak for it the attention of our transatlantic brethren, as we think it a little ahead of anything to be found out of America.

Cotton looms for weaving checks are shown by Alfred Jenks & Son, of Bridesburg, Pa.; one of these has four shuttle drop boxes at one end of the lay, and an improved pattern wheel, which will run twelve hundred picks of any color, and can, if necessary, be extended to several thousand. This is a great improvement; they also claim a new arrangement of the shuttle boxes, by which they are neither liable to get bent nor to get out of line.—

from these, John Fletcher, of Cork, exhibits a shamrock table, on the pedestal of which recline three figures, the one a warrior discharging his arrow, another a warrior pierced to the heart and fallen, and the third an aged minstrel with his harp. The pillar is the natural limb of an oak tree, separating in three parts, and again uniting at the top. In the center is a symbolical figure of Erin. The whole is richly carved in thirteen different varieties of Irish woods. This table deserves particular notice; all the above are in the English Department.

There is a beautiful loom from the Ames Manufacturing Co., Chicopee, Mass.: it is a check loom, and has a revolving shuttle-box: this loom embraces S. & J. Eccles' patent. It is a specimen of elegant workmanship.

There are two hand looms exhibited, in which all the motions for shedding the web and throwing the shuttle, are taken directly from the lathe. One of these has been illustrated in the 'Scientific American.' J. C. Garretson, of Salem, Iowa, is the patentee of this principle: it is certainly superior to any other hand loom that we have seen.

Related to the machines we have been describing is one for manufacturing the flexible tubes or cots used for covering the drawing rollers of cotton machinery. We have no hesitation in pronouncing this the greatest piece of mechanism which has yet met our eye in the Crystal Palace. Although the object of the machine is not of a kind tending to revolutionize manufactures, yet it is by no means contemptible, as those familiar with cotton machinery well know—over 25,000 of these cots are consumed daily in the State of Massachusetts alone. This machine is of close kin to Whittemore's card machine, and we doubt not that those interested will at once introduce it to use. Charles Collins, of Hartford, Conn., is the proprietor of the patent, and Newell Wyllys is the inventor: "Honor to whom honor is due," is our motto, and we shall set down the name of Wyllys among those of the ingenious mechanics who have not only honored themselves, but have placed our

country in the proud position of the first in the world for ingenious and useful inventions. Every mechanic who visits the Palace must examine this; it stands near the power looms in the south part of the Machinery Arcade.

AMERICAN PORCELAIN.—The Sevres porcelain in the French Department is indeed beautiful—it surpasses any thing of the kind we have ever seen, but in a nook of the north-east corner of the American Department, in the gallery, there are a few specimens of porcelain, which possess an interest for us beyond all others in the Crystal Palace. The reason of this is, they are the only articles of porcelain which have been manufactured in our country. Although not numerous, comprising only a few articles of tea ware, door-plates, knobs, and decanters,—they do great credit to the manufacturers, C. Cartledge & Co., of Green Point, L. I. In design and decoration they exhibit taste and skill; in manufacture, they exhibit great experience, ingenuity, and knowledge of the art. In color and pattern they are not surpassed, and we are glad to know that the firm has been very successful, is in a prosperous condition, and employ more than a hundred operatives steadily. The manufacture of porcelain has been at various times attempted in our country, and the work of ornamenting imported foreign ware is performed in more than one place in New York; but the porcelain factory, at Green Point, is the only one in our country, where the complete manufacture of this beautiful ware is carried on. The materials for its manufacture are abundant in the United States, but it requires great experience and skill to conduct the manufacture through all its multiform operations. The reason of the failure of former attempts to establish this manufacture in our country was the want of the requisite qualifications; the reason of the success of this is, the possession of all those qualifications in the managers.—We hail the introduction of any new branch of useful manufacture into our country, and none more so than that of porcelain, requiring as it does so much scientific knowledge, ingenuity, and artistic skill. C. Cartledge's office is at 237 Broadway.

STATUARY.—We intend hereafter to notice some of the most worthy productions among the statuary and paintings, until we shall have gone through the list.

As we have already remarked, the group of Powers is acknowledged by all—Europeans as well as Americans—to be the first in excellence. From this opinion we have not heard a dissenting voice. The perfect contour of Mother Eve, the classic beauty of the Fisher Boy, and the exquisite symmetry in form of the Greek Slave, surpassingly beautiful without being voluptuous, are perfections that set criticism at defiance.

Adam and Eve, after the Fall, is a cast by Prof. Jerichau, of Denmark: Eve is represented resting her elbow upon Adam, who stands in a thoughtful mood, his brow corrugated with anxious thought; the apple has just dropped from her hand, and the serpent is stealing from their presence. Very good, but much soiled.

Ganymede and the eagle is represented in two copies of the original of Thorwaldsen, of Denmark. The marble in both is defective, but of the two, the one standing near the center of the Nave is best.

The Mendicant, by Strezza, of Rome, is excellent; the imploring expression of the upturned eyes, marble though they be, is beautifully delineated.

Lazzarini of Carrera is the artist and exhibitor of "Two Lovers going to the Well." Very good; their love seems mutual, but could not the artist sufficiently support a group of two statues without placing the stump of a tree, in a position where it could not add to the effect of the group?

"Hagar and Ishmael," by Caselli, of Florence, is a very good group. The anxiety of the mother and the exhausted condition of the child are faithfully portrayed. This is among the best of the Italian sculptures.

PAINTINGS.—No. 1 is a large-sized painting, by Van Pelt, of Holland, representing Martin Luther before the Diet of Worms. It is an elaborate piece, but although possessing some merit it has many faults. The features lack a characteristic expression. We do not believe Martin

Luther looked at all as represented, the features are those of a Dutch boor, not of the leader of a great reform; nor are those of the grave individuals sitting in judgment upon him much better.

No. 6 is a magnificent Dusseldorf, by Hesen-clever and Heppel, representing a deputation of workingmen before the City Council in the German Revolution of '48. We could not avoid contrasting this with No. 1: the noble bearing of the laborer in his homespun garments, the bloated self-sufficiency of the principal personage of the Council (the very personification of a fat Alderman); indeed, the characteristic expression of all the features, render this, in our judgment, by far the superior of the two tableaux.

No. 12 represents the Angel of Death bearing away a departing spirit: Horace Vernier, of Paris. Exceedingly beautiful; the angelic face, the golden hair, the beam of heavenly light personify the poet's brightest dreams, but amid all this loveliness, there is one fault, which we think detracts somewhat from the effect of the piece—we cannot admire the taste of the artist in bringing the wings of the dread Angel in a position where the feathers upon them are so plainly shown. His features are as they should be, shrouded in gloom, and the wings should have been in a similar situation.

No. 14 is one of the Dusseldorf school, and represents "The Old Mill," it is by Nocken. It has, for a small painting being considerably celebrated,—it is certainly fine.

No. 27 is a Night Watchman. by Hesen-clever; graphic indeed, but where in the wide world did he find the original of that face—we have never seen its like.

No. 39 is the Good Samaritan, another Dusseldorf.—A fine piece, but where did the Samaritan get that glass bottle to contain his oil; if we remember rightly the bottles of those days were made of leather.

No. 47. A Mountain View in Norway. Another excellent Dusseldorf; though it has no remarkable excellences aside from the general effect, yet we observed no glaring faults.

TO CORRESPONDENTS.

D. A. M., of Pa.—The Convention at Washington would be a good place for you, if you can make an experiment; we will publish the results when all the information is obtained.

J. R. A., of N. Y.—Your plan for preventing the toe nails growing into the flesh at the sides, was one recommended to us some years ago, and we found it to be an effectual remedy. We are much obliged to you.

R. W., Jr., of N. Y.—You had better suspend the matter at present: it requires good management to make a patent successful.

M. W. S., of Mass.—The wedge brake is old and well known; the plan shown in your sketch is anticipated by B. Burling's invention, 1849; he never made application for a patent.

A. D., of Va.—We have never seen a device for breaking cars exactly like yours, but it seems to be a crude affair—rather too complicated to answer a useful purpose. It has not much novelty.

D. F., of Me.—Webster's Dictionary contains all the terms used in mechanics. There is no special good work on this branch.

A. J. G., of Mass.—We should think your improvements in carriages to embrace novel features worthy of a patent. Send us a model.

E. W., of C. W.—The cost of an engraving will be \$10. I. W., of Wis.—Reid on Clocks and Watches, is the best work we know of in this branch; J. Blackie & Son, 117 Fulton st., sell it at about \$5.50. Your list received. All right.

S. T. C., of Mo.—We cannot give you the price of an engine: write to Aaron Kilborn, of New Haven, Ct., who advertizes in our columns.

W. W., of Ohio.—We presume you could procure space in the Palace by application to the proper superintendent.

W. H., of Geo.—The mortising machines are not sufficiently heavy for your purpose.

H. L. B. L., of Ohio.—The Index of all patents granted in England from 1815 to 1845, was published in 1849 by Alex. Macintosh. We do not know that it is for sale in this country.

J. R., of Ill.—We cannot find that any patent has ever been granted to Mr. Malony; we therefore infer that he has no patent.

A. T. D., of Ind.—Berdan employs the same device as you describe for crushing or breaking the quartz previous to submitting to the process of pulverizing and amalgamating.

J. S., of Geo.—As we understand your sketch, your saw is formed of two portions of a circular saw, made in sections, but operating on the same principle. We believe would be difficult to obtain a patent, although it may operate well. Your spider, as combined with the saw, we believe is patentable. Your blocks have been sent by Harnden's Express.

D. H. W., of Mass.—Your plan of a rotary engine is one of the oldest ever offered: it has nothing to recommend it. A. W. McL., of N. S.—It would save us much valuable time if you could furnish us with the name of the patentee. Under the designation given to the patent we cannot conveniently give the required information.

G. W. H., of N. Y.—A horse power is a power that will raise 33,000 lbs. one foot high in one minute. There is no difference in the water power if applied in the same way to the wheel.

S. F., of Me.—We do not see the least chance of obtaining a patent for your electro-magnet engine; it operates by electro magnets attracting armatures, and then breaking the circuit alternately, to give a reciprocating motion to a beam. This has been done long ago. Your sketch and description are very imperfect, but we believe we understand you fully: do not expend your money on the project.

A. K., of Grand Rapids.—There is no good portable gas apparatus for family use that we know of.

M. & T., of N. H.—We cannot tell when your case will be examined; the engravings can be published after the patent issues. The cost will not exceed \$8. Patent Laws sent.

J. Z. A. W., of Phila.—There are some people who cannot be enlightened on any subject, and those who object to the depth of water increasing the pressure on the blade of your instrument, do not know what they are talking about. Even supposing the pressure to increase vertically with the depth, which it does; how can that effect its operation, when the pressure is equal on all sides? It cannot.

B. H. W., of Ill.—In shoe-blackening, instead of vitriol use vinegar; you will find it better for the leather. For tempering drills, the oil bath will not answer; we do not know of any superior plan to that of hard-heating—the old way.

C. K. W., of N. Y.—The points of copper lightning-rods can be plated with silver, but this is only to prevent their corroding; the silver is not so good a conductor as the copper. Do not be afraid of using the copper without being plated, only let the end in the ground terminate in a moist place about three feet under the surface.

W. E. G., of Phila.—The gum paste that you speak of is British gum. It will be cheaper for you to buy it. We had a letter from a correspondent last week about preserving gum arabic sweet; he perhaps mistook "diastase," which comes from England, for dissolved gum arabic.

H. T. R., of N. H.—We have not the information you solicit about the number of spindles now running. \$1 credited for six months subscription.

A. T., of Tenn.—We are not aware of any late work on street architecture. \$8 received.

M. M. M., of Vt.—C. W. Copeland, engineer, of this city can furnish you wire cable.

Money received on account of Patent Office business for the week ending Saturday, Sept. 24:—

G. M. R., of N. Y., \$20; G. R., Jr., of Pa., \$30; C. F. P., of Conn., \$25; T. & C., of —, \$35; W. G., Jr., of N. Y., \$35; F. M., of Ill., \$40; W. & T., of Del., \$35; R. K., of Mass., \$30; J. W. S., of Mich., \$69; I. H., of N. J., \$50; J. P., of N. Y., \$30; D. & B., of N. Y., \$225; F. & R., of Va., \$30.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Sept. 24:—

W. C. W., of Mass.; I. M. H., of R. I.; E. M., of Pa.; G. C., of Me.; J. B., of Conn.

A Chapter of Suggestions, &c.

MISSING NUMBERS—Mail Subscribers who have failed to receive some of the numbers of Vol. 8, are informed that we are able to supply them with any of the numbers, from 1 to 52, EXCEPT the following, and these are ENTIRELY OUT OF—Nos. 2, 4, 10, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 48, 49.

READY FOR DELIVERY—We have just received from the Binders 100 copies of Vol. 8, Scientific American, which will be sold to the first applicants at \$2.75 per volume. We also have about 50 complete sets of Volume 8, in sheets, which will be sold at the subscription price—\$2 per set. Those who apply first will stand the best chance to get their orders filled, for after the above number are sold no more can be obtained at any price.

TO CORRESPONDENTS—Condense your ideas into as brief space as possible, and write them out legibly, always remembering to add your name to the communication; anonymous letters receive no attention at this office. If you have questions to ask, do it in as few words as possible, and if you have some invention to describe, come right to the business at the commencement of your letter, and not fill up the best part of your sheet in making apologies for having the presumption to address us. We are always willing to impart information if we have the kind solicited.

PATENT LAWS, AND GUIDE TO INVENTORS—We publish and have for sale, the Patent Laws of the United States—the pamphlet contains not only the laws but all information touching the rules and regulations of the Patent office. Price 12-1/2 cents per copy.

BINDING—We would suggest to those who desire to have their volumes bound, that they had better send their numbers to this office, and have them executed in a uniform style with their previous volumes. Price of binding 75 cents.

FOREIGN SUBSCRIBERS—Our Canada and Nova Scotia patrons are solicited to compete with our citizens for the valuable prizes offered on the present volume. [It is important that all who reside out of the States should remember to send 25 cents additional to the published rates for each yearly subscriber—that amount we are obliged to pre-pay on postage.]

RECEIPTS—When money is paid at the office for subscriptions, a receipt for it will always be given, but when subscribers remit their money by mail, they may consider the arrival of the first paper a bonafide acknowledgment of the receipt of their funds.

BACK NUMBERS AND VOLUMES—In reply to many interrogatories as to what back numbers and volumes of the Scientific American can be furnished, we make the following statement: Of Vols. 1, 2, 3, and 4—none. Of Vol. 5, all but six numbers, price, in sheets, \$1; bound, \$1.75. Of Vol. 6, all; price in sheets, \$2; bound, \$2.75. Of Vol. 7, all; price in sheets, \$2; bound, \$2.75. Of Vol. 8, all; price, in sheets, \$2; bound, \$2.75.

PATENT CLAIMS—Persons desiring the claim of any invention which has been patented within fourteen years, can obtain a copy by addressing a letter to this office, stating the name of the patentee, and enclosing \$1 for fees for copying.

ADVERTISEMENTS.

Table with 2 columns: Terms of Advertising, and corresponding rates. Rates range from 75 cts for 4 lines to \$3.00 for 16 lines.

Advertisements exceeding 16 lines cannot be admitted; neither can engravings be inserted in the advertising columns at any price. All advertisements must be paid for before inserting.

American and Foreign Patent Agency.

IMPORTANT TO INVENTORS.—The undersigned having for several years been extensively engaged in procuring Letters Patent for new mechanical and chemical inventions, offer their services to inventors upon the most reasonable terms. All business entrusted to their charge is strictly confidential. Private consultations are held with inventors at their office from 9 A. M. until 4 P. M. Inventors, however, need not incur the expense of attending in person, as the preliminaries can all be arranged by letter. Models can be sent with safety by express, or by any other convenient medium. They should not be over 1 foot square in size, if possible.

Having Agents located in the chief cities of Europe, our facilities for obtaining Foreign Patents are unequalled. This branch of our business receives the especial attention of one of the members of the firm, who is prepared to advise with inventors and manufacturers at all times, relating to Foreign Patents. MUNN & CO., Scientific American Office, 128 Fulton street, New York.

EUROPEAN PATENTS.—MESSRS. MUNN & CO. pay especial attention to the procuring of Patents in foreign countries, and are prepared to secure patents in all nations where Patents have existed. We have our own specialists in the chief European cities; this enables us to communicate directly with Patent Departments, and to save much time and expense to applicants.

EDITOR OF THE SCIENTIFIC AMERICAN.—I observe in your paper of the 17th a statement that E. H. Ashcroft has sent you a circular, with engravings, which present a steam gauge, calling it Fontain Moro's patent, similar to my gauge, which was illustrated in No. 54, Vol. 8, Sci. Am. I beg to inform you that Fontain Moro's gauge, as such, never produced a gauge like mine, until Mr. Ashcroft obtained one of my gauges of the Boston and Worcester R. R., where I sold it. Mr. A. requested an engraver to copy from it almost precisely, but put upon the dial 'Fontain Moro,' instead of J. L. Eastman. That is where the circular came from, presenting a gauge similar to mine. Will you please correct my gauge, as arranged, is the original. JOSEPH LEASMAN, East Boston, Mass.

UNITED STATES PATENT OFFICE, Washington, Sept. 17, 1853.

ON THE PETITION of James Baldwin, of Nashua, New Hampshire, praying for the extension of a patent granted to him on the 6th of January, 1849, for an improvement in shuttles for weaving cloth, for seven years from the expiration of said patent, which takes place on the thirty-first day of January, eighteen hundred and fifty-four—

It is ordered that the said petition be heard at the Patent Office on Monday, the 5th of January next, at 12 o'clock, M.; and that persons are notified to appear and show cause, if any they have, why said petition ought not to be granted. Persons opposing the extension are required to file in the Patent Office their objections, specially set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application. Ordered, also, that this notice be published in the Union, Intelligencer, and Evening Star, Washington, D. C.; Pennsylvania, Philadelphia, Pennsylvania; Evening Post, and Scientific American, New York; Boston Post, Boston, Massachusetts, and Patriot, Concord, New Hampshire, once a week for three successive weeks previous to the second Monday of January next, the day of hearing.

Ordered, also, that this notice be published in the Union, Intelligencer, and Evening Star, Washington, D. C.; Pennsylvania, Philadelphia, Pennsylvania; Evening Post, and Scientific American, New York; Boston Post, Boston, Massachusetts, and Patriot, Concord, New Hampshire, once a week for three successive weeks previous to the second Monday of January next, the day of hearing. CHARLES MASON, Commissioner of Patents.

P. S.—Editors of the above papers will please copy and send a bill to the Patent Office, with a paper containing this notice.

NEW BRICK MACHINE.—Now in successful operation at Baltimore—it is so simple that any intelligent negro can learn to manage it in two or three days. You have merely to shovel clay into a box, and attach a horse to the sweep. The machine tempers the clay and moulds the brick in the most perfect manner, such as the most experienced hands can produce. When burned they are found to be stronger and more solid than those made in the usual way, because the clay is worked stiffer under the pressure of the screw than it is possible to mould it by hand. The clay is to be dug and left in soak all night. It then requires one man to shovel it in the box, a boy to put in the empty moulds, another to pass on the clays, and another to wheel them to the floor, a fourth to discharge them, a fifth as supernumerary, to wait on the rest—in all one man, a horse, and five boys, make from eight to ten thousand bricks per day. The gold medal was awarded for it by the Maryland Institute in November, 1852. Price of the fourmould machine, \$23.50 of the five mould machine, \$28.00 patent for each machine. FRANCIS H. SMITH, Baltimore, Md.

MATHEMATICAL OPTICAL INSTRUMENTS.—The subscriber begs leave to bring to the notice of the professional community, his new and extensive assortment of the above instruments, which he partly imported direct from the most celebrated makers in Europe and partly manufactured under his own personal supervision. The undersigned would particularly invite attention to his very large and complete assortment of the justly celebrated Swiss Mathematical Drawing Instruments, for the sale of which in this country he has the sole Agency, and which he can furnish at from \$5 to \$200 per case. Orders from any part of the Union promptly executed, and price list sent if required. C. P. AMSLER, 224 Chestnut st., Philadelphia.

VALUABLE WATER POWER FOR SALE.—Situating in Stockport, Columbia Co., N. Y., 1-1/4 miles from a depot on the Hudson River Railroad, on a never-failing stream, now estimated to be of the capacity to run 500 power looms with all necessary machinery, and may be increased; dam built of stone, 19 feet fall. The improvements on one side consists in part of a building of stone and brick 118x7; over-shot wheel, nearly new, 14 feet diameter, 12 feet bucket; on the other, one of stone and wood 60x34, good over-shot wheel 14 feet diam. 7 feet bucket; with about 30 dwellings. Terms accommodating; title indisputable. Possession given immediately. For more particulars apply to R. B. MULL, of Hudson, N. Y., or H. S. VAN DECAER on the premises.

DAGUERRETYPE.—"American Hand Book of the Daguerreotype," is the title of a new work by S. D. Humphrey; it gives many new and valuable recipes; the methods of preparing chemicals used in the daguerreotype, art, also the most approved plan for producing portraits. It is purely practical work, containing more really valuable information for the amateur or practical daguerreotypist than any volume ever before published. Single copies \$2; sent by mail free of postage. Address, S. D. HUMPHREY, New York City; TRUBNER & CO., 12 Paternoster Row, London.

MACHINERY.—S. C. HILLS, No. 12 Platt-st., N. Y. dealer in Steam Engines, Boilers, Iron Planers, Lathes, Universal Chucks, Drills, Knives, Van Ehrnjid's and other Pumps; Johnson's Shingle Machines; Woodworth's, Daniels', and Law's Planing Machines; Dick's Presses, Punches, and Shears; Morticing and Tennoning Machines; Belting; Machinery Oil, Beal's Patent Cob and Corn Mills; Burr Mill and Grindstones; Lead and Iron Pipe, &c. Letters, to be noticed, must be post-paid.

PLANING, TONGUING, AND GROOVING—BEARDSLEE'S PATENT.—Practical operation of these Machines throughout every portion of the United States, in working all kinds of wood, has proved them to be superior to any and all others. The work they produce cannot be equalled by the hand plane. They work from 100 to 500 feet lineal measure, per minute. One machine has planed over twenty millions of feet during the last two years, another more than twelve millions of feet Spruce flooring in ten months. Working models can be seen at the Crystal Palace, where further information can be obtained, or of the patentee at Albany, N. Y. GEO. W. BEARDSLEE.

A. B. ELY, Counsellor at Law, 52 Washington street, Boston, will give particular attention to Patent Cases. Refers to Messrs Munnn & Co., Scientific American.

LEONARD'S MACHINERY DEPOT, 109, Pearl St., and 60 Beaver, N. Y.—Leather Banding Manufactory, N. Y.—Machinists' Tools, a large assortment from the Lowell Machine Shop, and other celebrated makers. Also, a general supply of mechanics' and manufacturers' articles, and a superior quality of oak-tanned Leather Belting. P. A. LEONARD.

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