

29,217.—Benjamin Garvey, of New York City, assignor to himself and J. B. Davol, of Brooklyn, N. Y., for an Improved Steam Generator:

I claim the form of steam generator substantially described, when employed as specified.

29,218.—Benjamin Garvey, of New York City, assignor to himself and J. B. Davol, of Brooklyn, N. Y., for an Improvement in the Distillation of Coal Oil:

I claim the economizing of calorific, in the manner substantially as described, whatever form of apparatus may be employed for carrying out said invention, and to whatever purpose the same may be applied.

29,219.—Otis Hood, Jr., of Turner, Maine, assignor to himself and H. G. Le Baron, of Portland, Maine, for an Improved Coupling for Railroad Cars:

I claim my improved railroad carriage coupling, having its separate parts constructed and arranged in relation to each other and so to operate together, substantially as shown and described.

29,220.—J. T. Van Kirk (assignor to C. A. Van Kirk & Co.), of Philadelphia, Pa., for an Improved Ice-pick:

I claim the pointed stem, A, with its weighted handle, B, in combination with the tube, D, or other equivalent guide, serrated or otherwise so constructed as to retain a hold on the ice during the descent of the said weighted stem, as set forth for the purpose specified.

29,221.—J. T. Van Kirk (assignor to C. A. Van Kirk & Co.), of Philadelphia, Pa., for an Improvement in Lamps:

I claim combining the tube, G, its rods, H, and coiled spring, a, with the flange or projection which inclines the lower end of the chimney or shade of a lamp, in the manner and for the purpose set forth.

29,222.—J. J. McCormick and J. E. Jerrold (assignors to J. E. Jerrold and Eugene Beggs), of Paterson, N. J., for an Improvement in Car Springs:

I claim, first, The employment, for the purpose of producing a car spring, of a long thin strip of sheet steel, wound up so as to form a close coil, A, and fastened in this position by clamps, B, or their equivalents, substantially in the manner set forth.

Second, The arrangement, in combination with the coil, A, of a case, C, constructed and operating substantially as and for the purpose specified.

[This invention consists in the employment, for the purpose of producing a car spring, of a long thin strip of sheet steel, wound up so as to form a close coil, and retained in this form by two clamps. Pivots projecting from these clamps form the guides for the spring in the case, which consists of two parts, one sliding over the other, and which is so proportioned in relation to the coil that it checks the motion of the spring beyond a certain limit.]

29,223.—F. W. Mallet (assignor to G. F. Kimball), of New Haven, Conn., for an Improved Felly Machine:

I claim, first, The combination of the hook, e, with the cutters, n, n, &c., with the guide or rest, F, when constructed, arranged and made to produce the result, substantially as described.

Second, I claim the combination of the cutters, n, n, &c., with the guide or rest, F, when the whole is constructed, arranged and made to produce the result substantially as described.

29,224.—Louis Planer and J. N. Siegl (assignors to Louis Planer), of New York City, for an Improvement in Shuttles for Sewing Machines:

We claim the combination, with the shuttle, A, bobbin, D, movable center, B, and spiral spring, b, or its equivalent, of a transversely arranged adjusting screw, c, formed or provided with an eccentric, e, for operating within a recess made in the movable center, or for action against the latter in a direction contrary to that of the spring and away therefrom, the same forming an adjustable stop or locking pin to the movable center, substantially as and for the purposes set forth.

29,225.—J. C. Plumer (assignor to himself and David Robinson, Jr.), of Portland Maine, for an Improved Shoemaker's Lat:

I claim, first, The longitudinal hollow or depression on the bottom of the last.

Second, The combination of the longitudinal hollow with the advanced position of the heel seat.

Third, The constructed portion of the last, e e, in combination with the longitudinal hollow.

29,226.—R. W. Sievier, of Upper Holloway, England, assignor to Wm. Lilley, of the State of Ohio, for an Improved Apparatus for Exhausting Atmospheric Air or Gases:

I claim the application to ships, mines, buildings, &c., of a jet of steam or air in a shaft or flue in connection with the fan and director, when the said devices are constructed and arranged as specified, in the manner and for the purpose set forth.

29,227.—Albert Wild (assignor to Dinkerspiel & Oppenheimer), of New York City, for an Improvement in Watchmaker's Lathes:

I claim, first, The arrangement, in combination with the shear, B, of a watchmaker's lathe, of the sliding head, G, with the vertically adjustable part, d, and with the swinging frame, H, constructed and operating in the manner and for the purpose set forth.

Second, The combination with the spiral toothed adjustable cutter, K, of the pivoted two-armed lever, M, with the set screw, o, constructed and operating substantially as and for the purpose described.

[This invention consists in arranging, on the shear of a watchmaker's lathe, a sliding head with a swinging frame, which receives the rotary cutter in such a manner that, by swinging said frame backward and forward, the cutter is forced towards and from the center of the lathe spindle or of the wheel, and thereby the cutting is produced; also, in the arrangement of a pivoted two-armed lever provided with adjustable centers to receive and hold the wheels after the same have undergone the first operation of cutting, and furnished with a set screw to determine and regulate the depth to which the teeth of the wheel are to be worked, in combination with a spiral-toothed self-feeding cutter, for the purpose of rounding off the teeth and to regulate their depth and the diameters of the wheels.]

RE-ISSUES.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim, first, Hinging the right end of the coupling arm, R, to the lugs, R', R', in combination with curving up the coupling arm as it extends toward the machine, substantially as shown and set forth.

Second, I claim the combination of the shoe or brace-bar which supports the heel of the finger-beam with the hinge by which it is drawn, arranged above the plane of the cutter and in advance of the heel of the finger-beam, substantially as set forth.

Third, I claim connecting the coupling arm to the shoe by a hinge, whose axis of motion is on a line with that of the draft hinge of the

finger-beam, in combination with so arranging said hinges as respects the main frame as that the strain due to the draft or drawing of the finger-beam forward will be borne by one end of the main frame and on one side of the axis of the driving and bearing wheels, while the lateral strain through the coupling arm will be borne by the other end of the main frame and on the other side of the axis of the driving and bearing wheels.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim, first, Extending and hinging the coupling arm, R, to the shoe which supports the heel of the finger-beam outside of the frame, in combination with the draft hinge of the shoe also outside of the main frame, whereby the finger-beam and cutting apparatus can be first raised up bodily until the coupling arm strikes against the under side of the frame and then the outer end thereof turned up towards the frame, substantially as set forth.

Second, I claim mounting the two driving gear wheels and main gear wheel on separate axles, in combination with a ratchet wheel and small gear wheel for each driving gear wheel, each ratchet wheel being fitted with a pawl that can be made to stand in gear by the forward motion of the machine and out of gear by the backward motion of the machine, the whole arranged and operating substantially as set forth.

Third, I claim the combination of a ratchet wheel, a pawl, a spring acting on the pawl and a case with one or both ends of the shaft of the main gear wheel, whereby the case is made to perform four duties, namely, a support to the pawl, a support to the spring, a cover to protect the pawl, spring and ratchet, and the connection by which motion is communicated to the shaft of the main gear wheel, substantially as set forth.

Fourth, I claim the combination of a shield, E', with each of the cases, G', and ratchet wheels, H, substantially as set forth.

Fifth, I claim the combination of the balance wheel, L, with shaft, K, and gear wheels, I, J, whereby the balance wheel is made to perform not only the function of a balance wheel to regulate the motion of the crank shaft, but also that of a guide or guard and shield to protect the gear wheels, I, J, in their proper and relative positions, substantially as set forth.

Sixth, I claim the combination of a balance wheel with each end of the crank shaft and its hangers or bearings, substantially as set forth.

Seventh, I claim making the pitman in two parts, N, N', in combination with uniting said parts, substantially as set forth.

Eighth, I claim the combination of the hinged cutting apparatus with a pitman or connecting rod swiveled at both ends, substantially as set forth.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 29, 1859:

I claim, first, The combination of the hangers which support the crank shaft and coupling arm with the central pieces, A', A', whereby the hangers are made to perform the additional function of braces to the main frame, substantially as set forth.

Second, I claim so constructing and combining a hinged finger-beam with a main frame as that no part of the finger-beam will project by the rear of the main frame, nor any part of the main frame by the rear of the finger-beam, whereby an attendant can freely approach the finger-beam from the rear and raise up the outer end thereof to avoid an obstruction while the heel of the finger-beam is free to rest on the ground and to conform to the inequalities thereof, independently of the up-and-down motion of the main frame, substantially as set forth.

Third, I claim the combination of the coupling arm and finger-beam with the slotted metallic part, S, whereby the finger-beam and cutting apparatus, when turned up towards the main frame to avoid and pass obstructions, will be prevented from falling over against the main frame, substantially as set forth.

Fourth, I claim the combination of the finger-beam with the coupling arm and a stop, whereby a portion of the weight of the finger-beam, as it is raised up bodily, after the outer end has been turned up to pass an obstruction, will rest on the left hinge of the coupling arm, substantially as set forth.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim, first, The combination with the main frame of a mowing machine of two independent driving wheels and a hinged cutting apparatus, whereby the cutters are kept in operation when the machine is turned either to the right or left, while the cutting apparatus (or either end thereof) is free to conform to the inequalities of the ground, independently of the up-and-down motions of the main frame, substantially as set forth.

Second, I claim hinging one end of the coupling arm, R, to lugs on the shoe which supports the heel of the finger-beam and the outer bar, in combination with hinging the other end of a line with the longitudinal center of the crank shaft which operates the pitman and cutters, substantially as set forth.

Third, I claim the combination of the heel of the finger-beam, P, and one end of the coupling arm, R, with a strong metallic draft shoe, substantially as set forth.

Fourth, I claim so hinging the shoe which supports the heel of the finger-beam to the main frame, as that it will permit the heel of the finger-beam to which it is rigidly attached to move freely in the arc of a circle, as it rises and falls, so as not to cramp or bind the joints of the coupling arm, R, or its equivalent, substantially as set forth.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim the combination in a mowing machine of the following elements, viz.: a rigid tongue to draw and steady the machine by, a frame to support and carry the driver and gearing, two independent driving and bearing or supporting wheels to carry the frame and give motion to the cutters, and a short finger-beam so hinged to the main frame that its progressive movement over the ground will be controlled by the main frame and the upward and downward movements of the entire finger-beam, or of either end thereof, independently of the other, by the undulations of the ground over which it is drawn.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim, first, The combination of the finger-beam and the main frame with a single yielding brace-bar or shoe, whereby the progressive movement of the finger-beam over the ground will be controlled by the frame frame and the five upward and downward movements of the entire finger-beam, or of either end independently of the other, and of the up-and-down movements of the main frame by the undulations of the ground over which it is drawn, substantially as set forth.

Second, I claim the combination of a yielding brace-bar or shoe, Q, and a yielding coupling arm, R, with the main frame, substantially as set forth.

Third, I claim the combination of the short finger-beam with the yielding connection with the main frame, substantially as set forth.

Ephraim Ball, of Canton, Ohio, for an Improvement in Mowing Machines. Patented Dec. 1, 1857; re-issued Sept. 27, 1859:

I claim, first, The combination of a binged folding finger-beam, with the main frame, whereby the finger-beam can be raised, turned or folded upon or over the main frame, without detaching the draft hinge, to facilitate the removal of the machine from place to place or from field to field, substantially as set forth.

Second, I claim so hinging the finger-beam to the main frame, as that the weight of the finger-beam when folded up thereon, shall rest on or be borne by the main frame, in front of the axes of the main supporting wheel or wheels, substantially as set forth.

Third, I claim the combination of the finger-beam with the main frame and mechanism so constructed and combined therewith, as that the finger-beam can be raised bodily, and then turned and held up to render the removal of the machine from place to place more convenient, expeditious and safe, substantially as set forth.

Fourth, I claim the combination of the finger-beam with the main frame, whereby the finger-beam can be raised, turned or folded over or above the main frame, so that its weight shall be borne by the

main frame, in rear of the axes of the supporting wheels, substantially as described.

Fifth, I claim the combination of the finger-beam with the main frame, whereby the finger-beam can be raised and turned over above the main frame with its weight resting either in front or in rear of the axes of the main supporting wheels, substantially as and for the purposes set forth.

Sixth, I claim so hinging the finger-beam to the main frame, as that the main frame shall be nearly balanced laterally, when the finger-beam is folded up thereon, substantially as set forth.

Seventh, I claim so hinging the finger-beam to the main frame, as that it can be folded under the main frame, substantially as and for the purposes set forth.

Eighth, I claim the combination of the finger-beam with the main frame, so that the finger-beam can be either folded over or under the main frame, substantially as set forth.

Ninth, I claim the combination of the following elements in a shoe or metallic device for supporting the heel of the finger-beam, viz.: A curved surface to run upon the ground like a runner, a recess or arrangement of parts, whereby the heel of the finger-beam will have a rigid metallic support in front on the bottom, and in rear: a suitable groove for the heel of the cutter bar and inner cutter to play in, two metallic lugs on the side next to the main frame between which to hinge a coupling arm, all combined in one rigid and permanent shoe device.

Tenth, I claim the combination of the following elements in a metallic shoe for supporting the outer end of the finger-beam, viz.: A curved surface to run upon the ground like a runner, a recess for the outer end of the finger-beam, whereby it can be bolted to the shoe so as to have a rigid support in front, on the bottom, and in the rear; a groove for the outer end of the cutter bar and outer cutter to work through; and two lugs in the rear, said elements being combined and arranged in relation to each other, substantially as shown and described.

Phlander Shaw, of Boston, Mass., for an Improvement in Air Engines. Patented May 2, 1854:

I claim the described auxiliary heater, constructed and arranged as set forth: the exhaust air, and the products of combustion being passed through in one direction, while the cold air from the force pump is passed through in the other, by which means the heat is extracted from the heated air and smoke, and transferred to the cold air on its way to the engine, the latter being pumped in against a pressure much less than that at which it is worked off from the main heater, as explained.

Second, I claim the arrangement described of the tubes within the piston rod, the reservoir, R, and the india-rubber tubes, S S', for the purpose set forth.

Third, I claim passing the exhaust air which has propelled the piston directly through the fire, for the purpose of economizing heat, as set forth.

ADDITIONAL IMPROVEMENTS.

Joseph Tiberi, of St. Louis, Mo., for an Improvement in Grates. Patented Sept. 6, 1859:

I claim the combination of the adjustable back, E, with the stationary back, B, when they are arranged with reference to each other and with the flue, T, behind them and under the grate, in the manner shown and described.

Frederick Yeiser, of Indianapolis, Ind., for an Improved Instrument for Taking Altitudes of the Sun. Patented Feb. 8, 1859:

I claim the arrangement of the cylinder F, with the spirally curved lines drawn upon it, and the bar, P, with the hour lines drawn upon it, in such relation to each other, and to the limb, M, and the declination arc, J, and limb, K, and plates, f f f, and the solar lenses in said plates, that it operates substantially as and for the purposes specified.

DESIGNS.

Elnathan Peck, of New Britain, Conn., for a Design for a Gridiron.

G. Smith and H. Brown (assignor to Samuel Smith), of Philadelphia, Pa., for a Design for the Plates of a Cook's Stove:



CORRESPONDENTS sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

INQUIRER, of Jersey City, N. J.—We have received an important letter for you, in reference to your own communication on the subject of "Ventilation of Mines," published on page 18 of this present volume. Please send us your full name, &c.

G. L. T., of Woodlawn, Md.—We direct your attention to claim No. 29,226, in the list of claims published in the present number.

C. C. P., of Ohio.—There is no solution for copper tubes which can withstand the action of hot brine and steam for a very long time. Copper tubing is now drawn without any seams, thus dispensing with solder. It may be that there is something peculiar about the brine at your place.

L. F., of N. Y.—You will find a very complete account of the art of enameling in Tomlinson's "Cyclopaedia." The art, for ornamental purposes, is not much practiced in the United States.

A. W. T., of N. J.—The expansion of water at 70°, as given by Kopp (perhaps be highest authority), is 1.00753. The discrepancy you call attention to is of no practical account.

L. S. E., of N. Y.—You will find a spirit varnish of bleached shellac or of copal suitable for shell-work. You can procure it of good quality without difficulty.

J. J., of Maine.—In preparing quick-drying linseed oil, add about an ounce of the sulphate of zinc, and an equal quantity of litharge, to the oil while it is boiling. You must add the oxides of zinc and lead in very small quantities or the oil will foam over. About six hours' boiling will be sufficient for your purpose.

W. G. B., of La.—We intend soon to publish a series of articles on electrical machines, from which you will obtain information about making conductors. Tomato wine is made by fermenting the juice of this plant with about two pounds of sugar to the gallon. Care must be exercised so as not to permit the fermentation to reach the acetous stage. You will be able to judge from the taste when it is fit for bottling. Some persons add two quarts of water to every gallon of juice.

W. B., of Pa.—It is quite true, as you have stated, that the common lifting pump frequently clogs, when used for pumping up tanning liquors in which there is a sediment; but we do not think that an elevator, such as that used for lifting grain, could be used as a substitute. The buckets of the elevator would be liable to leak; still we advise you to make an experiment to satisfy yourself.

G. F. L., of N. H.—In generating hydrogen gas from water by the use of zinc and sulphuric acid, you should expel all the air from the receiver before you close it to retain the hydrogen, because the latter mixes with the oxygen of the air and forms an explosive mixture. Hydrogen gas can be generated under considerable pressure.

N. H., of Ga.—Tin is not a manufacture excepting so far as it relates to the smelting of the ores to obtain the metal. Tin ore is obtained in various parts of the world, and the process of smelting is well known to all metallurgists. The best tin comes from the Island of Banca, in the Indian Archipelago; but the greatest quantity is obtained from the mines of Cornwall, in England.

W. D., of Mass.—No advantage could be gained by making balloons double, to permit the escape of expanded gas from the inner to the outer one in the higher regions. To permit the free expansion of the gas, when the atmospheric pressure decreases in ascending, balloons are never filled to extreme bursting pressure, but are somewhat slack when they arise from the ground. The balloon is also left open at the bottom, so that it is scarcely possible that it can explode.

L. P. L., of N. Y.—The best substance for cementing glass ware is a strong solution of silicate of soda. Current bushes can be kept free from aphides by the application of water in which some tobacco has been steeped. A pound of tobacco will make 20 gallons of juice, which we have also found useful for sprinkling on rose bushes and grape vines infested with bugs.

I. M. H., of Vt.—To dye feathers red, clean them well by washing in soap suds, then boil them in a liquor with hyperic and a very little alum for about half an hour. Now take them out, wash and dry. You must use a clean tin dish for boiling them in, as an iron vessel would stain them black. A red color dyed in this manner is not so bright as if dyed with cochineal and the chloride of tin, but it is the most simple method for your purpose.

W. A. J. B., of Ga.—An explosion cannot take place from carbonized oil in a boiler by the gas mingling with the oxygen of the water, as you have stated, because there is no free oxygen in the boiler. Certain kinds of water produce priming in boilers, but the water is not explosive on that account. If you had furnished us (as no doubt you can do) with any facts on the subject, it would have been of interest to publish them.

E. F., of N. Y.—Galvanized metal is sheet iron coated with zinc. Pipes made of galvanized iron are not suitable to be buried in the ground to convey water. They cannot be employed as substitutes for lead pipe, and we could not recommend their use for domestic purposes.

D. N. C., of N. Y.—The resistance to the flow of water in pipes increases with the length, and is caused by friction. There are differences of opinion as to the appropriate length of feed-pipe, under a given head, for a water ram; but we do not see why a 7-foot feed-pipe, under a 7-foot head, is not better than a 30-foot pipe (as was recommended to you) under such a head.

G. B., of N. Y.—You are correct in the practice of farming by having a rotation of crops; but you are entirely mistaken in stating that, without adding fertilizers and by simple crop rotation, "the soil of England is capable of yielding fifty per cent more than it did fifty years ago." The farmers of England manure largely; and in the vicinity of New York two crops, every season, are taken off many of the fields by high fertilization. If, according to your theory, the constituents of the plants are not derived from the soil, why do you have a rotation of crops? why not plant the same crops year after year?

A. S., of N. Y.—After applying for a patent, you can give the privilege to any number of persons to construct any number of the machines or contrivances for which you are seeking a patent without prejudice to your rights after the patent shall have been granted. The selling of a machine of the kind you are endeavoring to patent will not affect the patent, nor your rights under it, unless such sale shall have taken place more than two years prior to the date of your application. There may be other circumstances amounting to an abandonment of your invention to the public, and which would prevent your right to a patent within less than two years, but the simple sale of one of the machines would not produce this effect within less time than is above stated.

S. F. L., of N. H.—We do not know that there is any limit to the pressure under which water will be decomposed by the battery, or by sulphuric acid and iron. No experiments have been made to settle such a point. A solution of copperas will not absorb hydrogen. You ask how large a battery of zinc and copper will be required to raise ten quarts of water to the boiling point. The question is indefinite. It is like asking how large a gas flame will be required for such a purpose. Any battery or gas flame will do it, provided you give it time and lose none of the heat.

C. T. M., of S. C.—Your subscription will expire with No. 10, Vol. V. We do not think you will find it practicable to use sulphuric acid in the way you indicate, in the manufacture of turpentine and resin.

C. B. E., of N. Y.—As the water in the boiler of a steam engine is evaporated into steam, the supply can be kept up only by forcing water into the boiler against the pressure of the steam, and this is done by means of the feed-pump. If either the receiving or delivery valve should become so deranged as not to permit the passage of the water, the pump of course would not work.

J. W. S., of Mass.—The leverage of a screw-driver varies with the length of the handle, if a cross handle; but the idea that it is affected by the length of the blade is absurd.

D. S., of Ill.—To mix oil with water, dissolve about one ounce of potash in a pint of water; then pour in a wine-glass full of sweet oil, and stir them thoroughly, when the mixture will become white and opaque, like sweet milk. These proportions will answer for any other quantity.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, July 21, 1860:—

W. K., of Ill., \$25; C. M., of Wis., \$35; W. H. B., of Conn., \$25; M. M. C., of N. Y., \$30; W. M. K., of N. Y., \$30; M. & L., of Mass., \$30; C. C. G., of Ala., \$41; E. F. M. F., of Vt., \$55; J. G., of Mass., \$60; S. C., of Ga., \$30; C. & B., of Mass., \$35; J. B. McE., of Pa., \$40; A. S. B., of Iowa, \$28; F. C. K., of N. J., \$30; J. H. L., of N. Y., \$30; W. & W., of Ill., \$35; J. C. A., of Texas, \$25; J. M. T., of Pa., \$55; A. & B., of N. Y., \$250; W. M., of Minn., \$25; S. & C., of Cal., \$40; A. G. C., of N. Y., \$55; T. W., of N. Y., \$12; J. C. T., of N. H., \$30; T. & G., of Miss., \$25; B. S. P., of Ga., \$30; B. F. G., of Mass., \$30; A. W. J., of Conn., \$30; S. D. McC., of Ky., \$25; W. C., of Ohio, \$25; J. G. C., of Miss., \$20; H. L. McN., of Mass., \$30; T. S., of Cal., \$10; J. & C., of La., \$30; W. H. D., of Ill., \$25; C. P. B., of Ohio, \$35; J. E. M., of Ill., \$30; J. F. B., of N. Y., \$58; H. W. N., of Ala., \$60; J. H. H., of Ga., \$25; S. P., of N. Y., \$30; E. B., of N. Y., \$30; H. J. C., of Mass., \$250; J. B. S., of Mich., \$25; J. D., of N. Y., \$30; S. L., of Vt., \$25; J. J., of Maine, \$30; C. L., of Cal., \$45; J. W. C., of N. Y., \$165; L. S. G., of N. Y., \$30; A. & G., of N. Y., \$30; M. & B., of R. I., \$28; M. G. W., of Ill., \$30; H. R., of N. Y., \$25; A. R., of Ga., \$110; T. B., of Va., \$25; G. H. & S. F., of N. Y., \$15; J. D., of Ind., \$35; W. D. M., of Va., \$30; D. & C., of N. Y., \$25; J. S. S., of N. Y., \$25; F. A. H., of Ill., \$55; G. L. T., of N. Y., \$35; A. S., of N. Y., \$55; T. G. E., of Ill., \$30; J. H. B., of Ill., \$25; J. G. R., of Cal., \$25; L. A. B., of N. Y., \$30; H. W. U., of Ala., \$30; A. A., of Conn., \$25; J. G., of N. Y., \$25; J. C. A., of N. Y., \$57; G. P. R., of Mass., \$20; I. C. T., of Pa., \$25; A. A. R., of Mass., \$30; D. F., of Ohio, \$25; H. N., of N. Y., \$30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, July 21, 1860:—

C. P. B., of Ohio; W. H. B., of Conn.; J. H. H., of Ga.; B. A. G., of Mass.; G. W. R., of N. Y.; J. R., of N. J.; C. & B., of Mass.; A. S. B., of Iowa; J. C. A., of N. Y.; J. C. T., of Tenn.; D. F., of Ohio; L. S. G., of N. Y.; J. I., of Vt.; J. S. L., of N. Y.; W. M., of Miss.; C. M., of Wis.; T. W., of Ga.; J. B. S., of Mich.; G. L. T., of N. Y.; J. B. McE., of Pa.; J. J., of Maine; W. C., of Ohio; J. G. W., of N. Y.; J. H. B., of Ill.; J. E. L., of N. Y.; J. C. A., of Texas; J. G. R., of Cal.; J. G. T., of N. Y.; W. K., of Ill.; T. & G., of Miss.; S. G., of Ill.; M. G. W., of Ill.; H. R., of N. Y.; S. L., of Vt.; S. D. McC., of Ky.; A. S., of N. Y.; H. W. N., of Ala.; D. & C., of N. Y.; A. A., of Conn.; W. & W., of Ill.; J. F. B., of N. Y.

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IMPORTANT TO INVENTORS.

THE GREAT AMERICAN AND FOREIGN PATENT AGENCY.—Messrs. MUNN & CO., Proprietors of the SCIENTIFIC AMERICAN, are happy to announce the engagement of Hon. CHARLES MASON, formerly Commissioner of Patents, as associate counsel with them in the prosecution of their extensive patent business. This connection renders their facilities still more ample than they have ever previously been for procuring Letters Patent, and attending to the various other departments of business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c., &c. The long experience Messrs. MUNN & Co. have had in preparing Specifications and Drawings, extending over a period of fifteen years, has rendered them perfectly conversant with the mode of doing business at the United States Patent Office, and with the greater part of the inventions which have been patented. Information concerning the patentability of inventions is freely given, without charge, on sending a model or drawing and description to this office.

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Your obedient servant, J. HOLT.

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