

is allowed a large and munificent reward, not only on account of the benefits which he may have conferred upon his race, but that his brilliant success may stimulate other inventors to renewed and increased exertion. Rather than with a begrudging spirit grumble at the success of such an inventor, and fear that he may profit too much, we should congratulate ourselves that a wise provision of the law has placed it in our power to bestow a reward upon him commensurate with the benefits which he has conferred upon the public. It is a peculiar feature of this case that the opposition to the extension does not come from those persons who have adopted and paid for the improvement, but from certain rival iron manufacturers and contractors, who, during the fourteen years of the existence of this patent, have probably accumulated larger fortunes from their regular business than Mr. Hyatt has from his invention. The fate of the inventor is a hard one at best. No matter how valuable and important his invention may be, he must first overcome the prejudices of the public, before he is able to obtain any remuneration. By this time, as a general thing, the duration of his patent has already partially expired. Then, as soon as he has succeeded by his labors and perseverance in satisfying the public of the advantages of his invention, and has created a market, hundreds of greedy rivals at once by a system of piracy attempt to rob him of his property. Rich and powerful combinations are formed against him. He is compelled to abandon his invention or submit to prolonged vexations and expensive litigation. Nine inventors out of ten, unable to withstand the pressure brought against them, retire broken-hearted from the contest and finish their lives in poverty and want, while those who have robbed them reap all the profit. The applicant in this case is, to a certain extent, a living example of the truth of these statements. It was about seven years after the patent was granted before he succeeded in conquering the prejudices of the public, and rendering his invention profitable; and although he has not as yet been prevented by infringers from realizing some remuneration, still he now finds them remonstrating against the further extension of his patent.

After having devoted more than fourteen years of the best portion of his life to this invention, he has succeeded in realizing a profit of \$93,000. This covers his profit both as inventor and manufacturer, as well as all that may be properly chargeable to his other patents. A thorough investigation of the case has satisfied my mind that the profit which the applicant has received from his invention is not sufficient, when compared with the advantages which the public have experienced from it.

It is therefore ordered that the patent be extended for seven years from the 12th day of November, 1859.

W. D. BISHOP,
Commissioner.

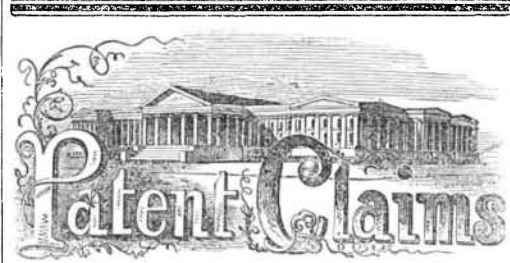
FOREIGN SUMMARY.

At the recent meeting of the British Association of Social Science, Lord Brougham, at the advanced age of 82 years, delivered an address over two hours long with all the vigor and eloquence of a young orator. At this meeting many gratifying facts were reported by Mr. A. Baker, regarding the benefits conferred by the Factory Act upon the operatives in English factories. He stated that by the reduction of the hours of labor, there had been a marked and decisive improvement in the health of factory operatives, and an entire disappearance of the physical deformity and excessive mortality which prevailed among those classes previously. In the condition now brought about by that act there was no greater amount of disease, deformity, or mortality among factory laborers than others, while for some years previous to 1832, a marked and alarming deterioration of physical strength had occurred.

The Queen had attended the opening of the new water-works for the city of Glasgow, at Loch Katrine, in Scotland, made famous in classic song as being the scene of Sir Walter Scott's "Lady of the Lake." It is a beautiful sheet of water, very deep and clear, and is conveyed about the same distance through a conduit as the Croton water at New York. Heretofore, the city of Glasgow has been supplied with water pumped from the river by huge steam-engines; it is now to be supplied by gravitation, and the expense will be much less. As a work of engineering it can compare favorably with some of the greatest achievements of ancient or modern times, and deserves to be very generally known. It embraces 13 miles of tunneling, 9½ miles of aqueduct, and 3¾ miles of huge iron tubing. There are altogether 70 distinct tunnels, upon which 44 vertical shafts had to be sunk for facilitating the work. The first tunnel is 2,325 yards long, and 600 feet below the summit of the mountain. It was excavated from twelve shafts, which had to be sunk 500 feet deep. There is another tunnel 3,650 yards long, cut through blue basalt, at 250 feet below the summit of a hill. The rock in all the tunnels is very

hard, being mostly gneiss interspersed with veins of quartz. In some places it required a new drill for every inch that was bored, and although the work was carried on night and day in some shafts, they sometimes could not make over three yards of progress in a month. The undertaking was commenced three years ago, and was recommended by Stephenson and Brunel. It is remarkable that the *Great Eastern*, the Victoria Bridge, and the Glasgow Water Works, with which the names of these great engineers are associated should have been completed just about the time they departed, and that they were denied the pleasure of seeing their designs perfectly finished. The supply of water to Glasgow will be 50,000,000 gallons per day, with a store sufficient for 120 days without rain.

The metal market has been somewhat depressed since our last. This is attributed to the unsettled state of political affairs. Banco tin has fallen slightly, but copper has somewhat advanced. The export of British coal has increased during the past year to the extent of 270,000 tons, the whole being 4,499,956.



ISSUED FROM THE UNITED STATES PATENT OFFICE
FOR THE WEEK ENDING NOVEMBER 8, 1859.

[Reported Officially for the SCIENTIFIC AMERICAN.]

* Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

26,005.—Corintha Alden, of Cassadaga, N. Y., for an Improved Clothes' Ironing Apparatus:

I claim the arrangement of the box, A, with the follower, B, or its equivalent, in combination with the tank, D, substantially as and for the purpose specified.

[With this invention the operation of ironing is rendered so easy that it requires no bodily exertion, and in fact neither particular attention nor great skill. The clothes are neatly folded in a box, and compressed by means of a follower, and in this state they are exposed to the influence of steam for a few hours. When properly folded they become perfectly smooth.]

26,006.—Ephraim C. Allen, of Le Roy, N. Y., for an Improvement in Corn-planters:

I claim the arrangement of the various parts of the seeding machine described, when the whole are constructed and combined for operation conjointly, as an for the purposes in this specification set forth.

26,007.—John Aspinall, of London, England, for an Improvement in Refining Sugar. Patented in England Feb. 8, 1859:

I claim the method described of effecting the blowing-up or melting of raw sugars; that is to say, by so supporting or upholding the sugar that successive portions will be brought into contact with the water, whereby the sugar will be melted at or near the surface, for the purposes and substantially in the manner set forth.

26,008.—Merrick Bemis, of Ashburnham, Mass., for an Improved Compensating Pendulum:

What I claim is my improved mode of making a compensating pendulum, namely, by arranging a part of the rod in the form of a bow or sectorial bend, and applying to such bend or part a clasp or bow of metal having a different expansive ratio, the whole being substantially as specified.

26,009.—Robert Blair, of Malugin Grove, Ill., for an Improved Device for Applying Steam as a Motor:

I claim the combination with a radial lever, or frame, D, and circular railway, A, and central revolving power-transmitting shaft, C, of a traction steam-engine, B, when the crank axes of said engine radiate from the central shaft, C, and the inner traction wheels are made of smaller diameter than the outer one, the whole arranged and operated substantially in the manner and for the purpose set forth.

[The object of this invention is to supersede the various horse-powers that are now used for driving portable machinery, chiefly such as are used by agriculturists, as threshing machines, for instance, churns, pumps, and the like. The invention consists in placing a traction engine on annular ways, and having said engine attached to a radius frame, the center shaft of which is provided with a toothed wheel or pulley, from which the power is taken as the engine passes around the annular ways.]

26,010.—Nelson Burr, of Batavia, Ill., for an Improvement in Corn-shellers:

I claim the peculiar arrangement of the section, e, provided with the ring, f, and placed relatively with the cylinder, A, and adjoining sections, d, f, to effect the object set forth, substantially as described.

[This invention consists in the employment or use of a rotating cylinder and a stationary shell, the latter being provided with a door and wing, and the whole so arranged that a very simple and efficient combined corn-sheller and cob-grinding mill is obtained, the machine being capable of being used in either capacity by a very simple adjustment.]

26,011.—Thos. Carpenter, of Battle Creek, Mich., for an Improved Shoemaking Table:

I claim the movable bottom, D, arranged in combination with the bench, A, and compartment box, B, constructed as described, substantially in the manner and for the purpose specified.

26,012.—R. Carkhuff and B. Chalfant, of Lewisburgh, Pa., for an Improvement in Steam Valves:

We claim the peculiar arrangement of the slide, T, and transverse bar, U, which form the valve of the steam chest, K, the bar, U, and the cross-arm, R, of rod, S, whereby said valve is allowed a lateral as well as a longitudinal movement within the chest, for the purpose set forth.

26,013.—L. C. Chase, of Boston, Mass., for an Improvement in Girth Buckles:

I claim constructing a buckle with wings, B, B, or their equivalents, and furnished with holes, b, b, substantially as set forth and for the objects specified.

26,014.—B. S. Church, of Manhattanville, N. Y., for an Improvement in Water-meters:

I claim, first, The arrangement of the partitions, g, g', in the trough G, as described, in combination with the air-tight chamber, D, chamber, F, and tubes, I, whereby that portion of the water which does not pass through the measuring buckets is prevented carrying off any of the air in the chamber, D.

Second, Arranging in the air-chamber, D, a float, J, in combination with a valve, h, or its equivalent, substantially as and for the purpose described.

26,015.—George Clay, of New York City, for an Improvement in Packing for Sliding Gas-lights:

I claim the combination with the pipe, D, shell, A, and pipe, B, of the elastic tube, C, when the latter is fitted so that its central portion will contract and press upon the burner or upon the sliding pipe, so as to form a gas-tight joint, all as shown and described.

[This packing is so simple in its application and so efficient in its action, that it recommends itself to all gas-fitters. It consists simply of an elastic tube, the ends of which are expanded over two nipples, whereby its central part collapses, thereby making a tight fit on the sides of a pipe which passes through said elastic tube, and at the same time allowing the pipe to slide up and down.]

26,016.—J. W. Cochran, of New York City, for an Improvement in Projectiles for Rifled Ordnance:

I claim, first, The band, C, of copper or other wire, applied substantially as described, in combination with the cup, or cup-like frame, B, attached to the rear of the projectile, for the purpose described.

Second, The expanding ring, D, applied substantially as described, in combination with a conical surface, F, formed behind a shoulder on the front part of the projectile, for the purpose set forth.

26,017.—J. W. Cochran, of New York City, for an Improvement in Projectiles for Rifled Ordnance:

I claim the application to a projectile for rifled ordnance of a covering, or of one or more bands, composed of a coil or coils of copper or other wire, wound upon its exterior, substantially as described for the purpose specified.

26,018.—D. W. Comstock, of Chicago, Ill., for an Improved Railroad Gate:

I claim placing the ends of two pairs of adjoining rails, B, on a rising and falling platform, C, when the latter is suspended from the short arms, d, of crank levers, c, c, the long arms, e, e, of which carry the panels, F, of a gate, substantially in the manner and for the purpose described.

[This invention is of great importance, particularly in such places where railroads pass through towns, or wherever a railroad crosses a common road. The gate opens as the train approaches, and as soon as the last car has passed it closes again, so that nothing can pass into the road which might cause an obstruction to the approaching train.]

26,019.—Wm. F. Converse, of Harrison, Ohio, for an Improvement in Railroad Car Springs:

I claim, first, The combination of a clamp, f, g, h, with a disk spring, in the manner and for the purpose explained.

Second, In junction with the above, I claim the series of annular steel disks, of unequal diameter, arranged in manner and for the purpose described.

26,020.—N. B. Cooper, of Gratis, Ohio, for an Improved Churn-dasher:

I claim the arrangement of the arms, d, d, on the two points, b, b, one on each side of the upright, B, when the upright, B, is made removable by means of the ways, x, x, substantially as set forth.

26,021.—Edward Crane, of Dorchester, Mass., for an Improved Steam Boiler:

I claim a fire-box surrounded by a water-jacket, the combination of the tubes in the fire-box, with the boxes or chambers, as described, so that a number of tubes shall have the same connections through the said boxes or chambers with the water-jacket and steam chamber, and shall also be capable of being put in and taken out of the boiler at the same time.

I claim the use of tubes coiled or folded into the fire-box, and connected with the water-jacket and steam chamber through the boxes or chambers, as described, and B, as described, of such length in proportion to their diameter that all the water entering them at the lower end shall be converted into steam in the lower portion, and the steam be superheated in the upper portion before it is discharged into the steam chamber.

I claim the use of tubes in the steam chamber for discharging the steam generated in the tubes in the fire-box, so bent that the superheated steam issuing therefrom shall be discharged into a drum around the chimney and against the chimney, in the first instance, and then against the surface of the water, as described.

I also claim the use of the drum around the chimney in the steam chamber for securing the discharge from the tubes, and checking the disturbance of the water through the whole extent of the steam chamber, arranged and constructed as described.

I claim the combination of the blow-off cocks, e, with the stop cocks, g, for the purpose of blowing off each section of tubes separately, as described.

I claim the use of the tube coiled around the chimney, for the purpose of taking the steam from the steam chamber, at the point where it has the highest temperature.

26,022.—Edward Crane, of Dorchester, Mass., for an Improvement in Railroad Car Wheels:

I claim a wheel having its rim and tire secured together by india-rubber vulcanized in place, as set forth.

26,023.—Munson C. Cronk, of Auburn, N. Y., for an Improved Clothes' Dryer:

I claim the combination and arrangement of the hollow post, A, the sliding piece, R, brace cords, M, N, P, Q, the hub, B, the stands, W, X, Y, Z, and the radial arms, C, D, E, F, G, the ring, V, substantially in the manner and for the purpose specified.

26,024.—C. A. Desobry, of Plaquemine, La., for an Improvement in Pans for Evaporating Cane Juice:

I claim the heaters, B, B, of inverted cup form, applied within the pan, in combination with the system of connections, E, E, F, F, and the two series of pipes, S, S and W, W below the pan, substantially as described.

And in combination with the said heaters, connections, and two systems of pipes, I claim the pipes, b, b, passing through the said heaters, substantially as described.

[This invention consists in a certain novel system of heaters arranged within an evaporating pan, in combination with a suitable system of connections with two series of pipes arranged below the pan for supplying steam to the said heaters and conveying away the water of condensation, whereby I am enabled to present an extensive and very effective heating surface to the liquid or substance within the pan, and to prevent effectively any collection of water upon the said surfaces.]

26,025.—Jacob Edson, of Boston, Mass., for an Improvement in Pumps:

I claim the peculiar manner in which I support the cylinder upon the flanges, L, in combination with the vacuum chamber, H, for the purpose of insuring a perfect contact between the said chamber and the induction pipe, B, and the valve, in the manner and for the purpose substantially as set forth.

Second, I claim the manner described of securing the induction pipe to the pump by means of the projecting bearing points, m, operating in the manner substantially as set forth.

Third, I claim the described combination and arrangement of the division plate, K, and the cylinder, J, whereby the body of the pump is divided into two distinct chambers, the one serving as an air or water chamber, and the other as a vacuum chamber, as set forth.

26,026.—Thaddeus Fairbanks, of St. Johnsbury, Vt., for an Improvement in Letter-scales:

I claim my improved manufacture of letter-scale as made, not only with its pendulous weight, K, connected with the scale pan, F, by a forked arm, H H', provided with bearings, h i, for receiving and resting on knife edges of a bar, I, extended from the steel yard, as specified, but with a bar steel yard, E, made without any fork, and extended into a stationary staple or stop, g; the whole being arranged in manner and to operate as specified.

26,027.—John M. Forrest, of Norfolk, Va., for an Improved Sash-fastener:

I claim the springs, C and C', and the ratchets, G and G', as constructed in combination with the levers, D, and cord, F, operating as described, and for the purposes set forth.

26,028.—Leonard D. Gale, of Washington, D. C., for an Improvement in the Manufacture of Gas:

I claim the treatment of bitumen, bituminous coal and their distillates, or their equivalent, by first converting the volatile portions to a state of vapor, at a temperature below a cherry red heat, and then forcing the vapor so generated into contact with a red-hot surface in such a manner that the gas generated may be instantaneously removed from the said heated surface, and thus be prevented from further decomposition.

26,029.—Thaddeus A. Granger, of Wilson county, N. C., for an Improvement in Machines for Hoisting Mare, &c.:

I claim the construction of the cap-timber, C, in combination with the supporting timber, D, which forms the swivel, to allow the beam, D, to be moved to any point desired.

26,030.—Leonard D. Gale, of Washington, D. C., for an Improvement in the Manufacture of Gas:

I claim the treatment of all woody, resinous and fatty bodies, as well as all fatty matters, except bitumen, bituminous coal and other distillates, by first converting the volatile portions to vapor at a temperature below a cherry red heat, and afterward forcing the vapor so generated into contact with a red-hot surface in such a manner that the gas generated thereby may be instantly removed from said heated surface, and thus be prevented from further decomposition.

26,031.—Noah E. Hale, of Nashua, N. H., for an Improvement in Applying Pressure to Top Rolls of Drawing Machinery:

I claim the arrangement and combination of the drawing rolls, C' D', straps, H, attached at the ends of said rolls, adjustable bars, C, lever, J, weight, K, rod, N, well crank lever, L, and hanger, O, as used for the purpose shown and described.

26,032.—E. H. Harris, of Palmetto, Ga., for an Improvement in Carriage-seats:

I claim attaching the seat, B, to the body, A, of the vehicle by means of the bars, a, and rods, c, or their equivalents, so as to permit of a certain degree of play of the seats, or movement thereof, independent of the body, A, for the purpose specified.

[The object of this invention is to attach the seat of a vehicle to its body in such a manner as to allow the seat a certain degree of play or movement independent of the body, so that, in case the vehicle is suddenly stopped or started, the seat will yield or give and prevent the occupants from being thrown therefrom.]

26,033.—J. P. Harris, of Byhalia, Miss., for an Improvement in Plows:

I claim the combination of the separately adjustable and removable mold-board, E, with a subsoil share, C, situated behind and below it; the said subsoil share being also separately removable, to allow the separate use of said mold-board, substantially as specified.

26,034.—Horatio F. Hicks, of Grand View, Ind., for an Improvement in Machines for Pulling and Cutting Cotton and Corn-stalks:

I claim the combination of the reel, D, paddle, H, drum, G, and cutter, I, operating substantially as and for the purpose set forth.

26,035.—Wm. Cleveland Hicks, of Boston, Mass., for an Improvement in Sewing-machines:

I claim, as my method of controlling needle-thread in sewing-machines, by a combination of mechanism substantially as described, by which a bar or wire, through which the thread passes, and by which the thread is tightened and loose need, shall have the described motion combined, firstly, to be drawn up by the needle bar, or its equivalent, during its entire upward motion; secondly, held at rest until the needle eye is at or near the material to be sewed; and, thirdly, to be discharged and allowed or caused to fall by its own gravity, or by the assistance of a spring, for the purpose of gaining the amount of motion lost by remaining at rest during the first part of the downward motion of the needle bar, all substantially as described and specified.

26,036.—N. E. Hinds, of Cooperstown, N. Y., for an Improved Horse-shoe:

I claim, first, The wider and thicker enlargement of the toe or fore part of the shoe.

Second, I claim the trough-like concave form of the underside of the shoe and the raised edges, B and C, that ensue, as a consequence of the construction of said concave form.

Third, I claim the construction of calks made in a V, or double V-form, all of which is constructed and claimed substantially as and for the purposes set forth and specified.

26,037.—A. D. Hoffman, of Belleville, Mich., for an Improvement in Cider Mills:

I claim the combination of the crushing rollers, B B', pressure rollers, E F, and endless apron, G, when the crushing rollers, B B', are provided respectively with teeth, a, and recesses, b, and the pressure roller, E, provided with yielding bars, c, and canvas covering, g, substantially as and for the purpose set forth.

[The object of this invention is to obtain, within limited dimensions, a machine that will crush apples and express the juice therefrom with but a small expenditure of power; the crushing and expressing operations being performed simultaneously and the juice separated from the pomace. The invention consists in the employment or use of two crushing rollers, one being toothed and the other correspondingly recessed to receive the teeth of the former one, and using, in connection with the crushing rollers, two pressure rollers and an endless apron; one pressure roller being provided with yielding longitudinal bars, and the whole arranged and combined to operate in such a manner as to effect the desired result.]

26,038.—S. F. Lewis, of San Francisco, Cal., for an Improvement in Pulley Blocks:

I claim, first, The arrangement and combination of the pulleys, C, shoe, D, and eccentric, E, within the block, A, as and for the purpose specified.

Second, The teeth or projections, h, and stop, c, formed respect-

ively on the pulley, C, and shoe, D, to operate as and for the purpose set forth.

[This invention consists in the employment or use of an eccentric and shoe placed within the block, and so arranged relatively with the pulley that said parts, when used in connection with stops on the pulley and a stop on the shoe, enable the attendant to control the movement of the rope, checking or stopping it entirely when the article to be elevated is at the proper height and the power is to be detached, and regulating the descent of the article as may be required. The invention is applicable to all purposes where stop-blocks are used, but is more especially designed for discharging cargoes from vessels and similar purposes where a horse or other animal is employed for elevating the articles.]

26,039.—James P. McLean, of New York City for an Improvement in Abdominal Corsets:

I claim a corset or belt with cork brackets or projections, B B B', on its side, the upper or top edge of such brackets being beveled, as shown in the drawings, in combination with the abdominal pads, A1 A2 A3, which form a part of the lower section of the corset or bandage, and are held in their places by the same, in the manner and for the purpose set forth in the drawings.

26,040.—James McNamee, of Easton, Pa., for an Improved Knife-cleaner:

I claim the upper socket, D, with its pad, I, operated by the socket, F, with its pad, and the reservoir, B, when the pad of the lower socket is rendered adjustable, in respect to the reservoir, and when the several parts are arranged in respect to each other, as and for the purpose set forth.

26,041.—Allen N. Merrill, of Batavia, Ill., for an Improvement in Seeding-machines:

I claim, first, The employment or use of a longitudinal adjustable shaft, H, provided with cylinders, J, having different sized seed cells in connection with perforated bars, g, slides, i, and plate, k, arranged to operate substantially as and for the purpose set forth.

Second, The arrangement and combination of the spout, l, conductors, k, shoe spouts, L, and elevating arms, E, on shaft, D, connected to the conductors, k, the whole being arranged substantially as and for the purpose set forth.

[This invention consists in a peculiar arrangement and combination of parts, whereby different kinds of seed may be planted with one and the same machine, and at different distances apart, as may be required.]

26,042.—John H. Miller and Samuel Albright, of Grafton, Va., for an Improvement in Portable Gas Apparatus:

We claim a portable gasometer, C, furnished with a central gas discharge pipe, E, a central guide rod, S, a flexible connecting pipe, F, and one or more ratchet bars, H H', and arranged in a frame, A A B B, which is provided with one or more spring pawls, I I, for use in a railroad cut, or other traveling apparatus, which is subject to a jolting or vibrating motion, for the purpose of supplying gas to a series of gas-burners, substantially as and for the purposes set forth.

26,043.—Charles Minzheimer, of New York City, for an Improvement in Skirts:

I claim the expanding joint, D D, and strings, E E, or their equivalents, at the back of the skirt, in combination with the openings, m m, in the other, substantially as and for the purposes specified.

26,044.—Oliver P. Moran, of Haynesville, Mo., for an Improvement in Corn-planters:

I claim the combination of the curved concentric aperture, o, in the bottom of the seed-box, G, with the sliding strike, N, and measuring holes, m m, for the purpose of charging said holes from the seed-box with the least possible weight upon and impediment to the motion of the dropping wheel, D, as specified.

I also claim the combination of the concentric vibratory arm, h, and projecting pin, l, thereon, with the measuring holes, m m, substantially as specified, for the purpose of imparting the proper movement to the dropping wheel, D.

I also claim the arrangement of the instant valve, M, upon the curved weighted hinge, t, which is pivoted to the sides of the chamber, G, in a position nearly vertically over the valve, in combination with the slotted connecting-rod, S, for the purpose of producing a superior quickness and delicacy of action on the valve, substantially as specified.

26,045.—Austin W. Moses and Joseph A. Springer, of Philadelphia, Pa., for an Improvement in Casting Car Wheels:

We claim the described method of casting railroad car wheels by pouring the central portion of the wheel, independently and in advance of the tread, to allow said central portion to cool and contract to any desired degree before adding the metal forming the tread of the wheel; when said end is accomplished by the employment of a ring, composed of any convenient number of segments, F F', or their equivalents, and arranged to operate in combination with the annular part, D, of the flask, substantially in the manner and for the purpose specified.

26,046.—Jacob H. Mumma, of Harrisburgh, Pa., for an Improvement in Straw-cutters:

I claim, first, The employment of a hawk-bill cutter, a, a, constructed and arranged as described, in connection with a cutter bar, c, of a straw-cutter, operating in the manner as and for the purpose set forth.

Second, I claim the elast bed, h, for the purposes of not only cleaning the material from dirt, but also as a feed to the rollers, substantially in the manner and for the purposes set forth.

Third, I claim the employment of the rib, d', feed-rollers for crushing and dividing the sheet of material to be cut, when arranged and combined with a hawk-bill cutter, a, a, and bar, c, substantially in the manner set forth.

26,047.—Adrian V. B. Orr, of Lancaster, Pa., for an Improvement in Sawing-machines:

I claim the oscillating lever, D B, in combination with the spring, T, and feed-lever, I l, when constructed as described, and operating either a single saw or a pair of saws, as specified.

26,048.—George R. Osbrey, of Providence, R. I., for an Improved Heating Apparatus:

I claim the combination of the alcohol reservoir and vaporizer with a lamp for heating the same, when such vessels are connected by a liquid pipe, E, and a vapor pipe, F, said pipes acting in such connection to maintain a constant level within the vaporizer, in the manner and for the purpose substantially as set forth.

I also claim, combining with such device for vaporizing, a conical disseminator, J, and a convex deflector, K, arranged substantially as specified and for the purpose set forth.

26,049.—George W. Parrott and Charles K. Bradford, of Lynn, Mass., for an Improved Machine for Cutting Boot and Shoe Soles:

We claim the combination and arrangement of an automatic feed, sole by sole, with the cutting-knives, substantially as described.

26,050.—Hiram G. C. Paulson, of Flatland, N. Y., for an Improvement in Clarifying and Refining Sugar Juices, &c.:

I claim the application of alcohol, in combination with water, in all the proportions as stated, and at the temperature of boiling of said combined liquids to the melting or dissolving, boiling or treating raw sugars or juices of saccharine substances, as described, for the purpose and to the effect of producing the intended making and refining of said sugars.

26,051.—Wm. Pellet, of New York City, for an Improved Cooking-range:

I claim the combination with a central fire-grate having openings in its side, and with the side-roasting-chambers or spits, of dampers which can be adjusted so that the roasting may either be effected in the side chambers, by direct action of the burning coals, or by the heat radiated from the sides of the fire-chambers, substantially as and for the purposes set forth.

[This invention is an improvement on a range patented by the same inventor, August 10, 1858, which is rendered thereby one of the most efficient and economical ranges now in the market. The roasting-chambers on the sides of the fire-place will be found a very valuable addition by every housekeeper, and the arrangement of the dampers commends itself by its neatness and simplicity.]

26,052.—Edward R. Pye, of New York City, for an Improved Sweat-knife for Cutting Hat and Cap Linings:

I claim the employment or use of the knife on the projection, C, of the bar, B, and secured thereto by the set screw, c, in connection with the pointed wheel, E, attached to the projection, C; the whole being arranged substantially as and for the purpose set forth.

[This invention relates to a tool or implement for simultaneously cutting out, and perforating for sewing, the trimming of hats and caps, technically termed "sweats." The object of the invention is to economize in the construction of the tool, render them far more durable than usual, and so arrange the parts relatively to each other as to insure a perfect adjustment of the same at all stages of their wear.]

26,053.—John Robinson, of Eli, of Sharptown, Md., for an Improvement in Portable Turn-table:

I claim the adjustable sliding turn-table, E E G, the whole constructed and operating substantially as specified for the purpose set forth.

26,054.—Josiah M. Read, of Boston, Mass., for an Improvement in Stoves, Ranges, &c.:

I claim the application and construction of the flue, G, with its door, h, substantially in manner as and for the purposes described.

26,055.—Peter Reynard, of New York City, and Victor Varin, of Brooklyn, N. Y., for an Improved Insect Powder-blower:

We claim, first, The ball, c, attached directly to the chamber or neck, b, and acting to blow the powder out of the neck or chamber, as set forth, and either with or without the valves, 1 and 2, for the purposes and as specified.

Second, We claim the holder, composed of the rod, c, and ring, f, when provided with the rod, g, or its equivalent, and the button, h, to act on the elastic ball, c, for the purposes as described and shown.

26,056.—C. Bird Pate, of Moore's Mill, Ind., for an Improvement in Stump-extractors:

I claim the arrangement of levers, E F and L, and spar, H, the whole being for operation conjointly as and for the purpose set forth.

26,057.—Israel M. Rose, of New York City, for an Improvement in Sewing-machines:

I claim the combination of two needles and a shuttle, or their equivalents, to operate substantially as set forth, for the purpose of producing a stitch of the structure described and represented.

[This invention consists in a novel mode of combining and operating two needles and a shuttle, or their equivalents, to make a stitch of a novel character with three threads.]

26,058.—Christian Charles Schieferdecker, of Baltimore, Md., for an Improvement in Stoves:

I claim the combination of the central air-space, f, containing material refractory to heat, with the series of surrounding ascending and descending smoke-flues, n o p, when arranged substantially as set forth, for the purposes described.

26,059.—Charles Scofield, of Adams, N. Y., for an Improvement in Sewing-machines:

I claim, first, The auxiliary feeding-plate, Q, with pins or teeth on its surface, in combination with the perforated slotted main feeding-plate, N, when said plate, Q, combines in itself the properties of a spring and of a feed-bar, and is otherwise constructed and arranged so as to operate in the manner described.

Second, The arrangement of the pivoted-lever, S, adjustable collar, q, pressure-pad, F F', and needle-lever, D, in the relation shown to one another and for united operation in the manner and for the purpose set forth.

Third, The lever, S, when made elastic, laterally pivoted at n, provided with a pin, p, and coupled to the pressure-pad, F F', by an adjustable collar, q, in combination with the needle-lever, D, and the recess, S, in the standard, C, substantially as and for the purpose set forth.

Fourth, The looper, W x U T, when the part U T is made rigid and attached to the horizontal rock-shaft, V, and the part W x is made yielding or with a spring, and formed or arranged on one side of part U T, and in the relation shown to a projection on the peripheral surface, x, of the actuating cam, in the manner and for the purpose described.

Fifth, The combination of the adjustable intermediate plate, B, with the jaws, T x, of the looper, substantially as described, for the purpose of adapting the same looper, without removing it from the machine which is used for sewing either in the double-looped or other stitch made with two threads, for sewing in the chain-stitch, as set forth.

[This invention consists in an improvement in the feeding-device of sewing-machines, whereby a more positive movement of the material being sewed, and a greater degree of uniformity in the length of the stitches, are insured; and, in sewing thin fabrics, the liability to pucker is much reduced. It also consists in a certain mode of applying the pressure-pad, in combination with the needle-lever or needle-carrier, whereby the said pad may be caused to rise at the will of the operator, while the needle is in the material being operated upon, to permit the cloth to be turned freely for the sewing of curved seams or stitching of ornamental figures, or may be allowed to remain stationary upon the material in sewing straight or very slightly curved seams. It also consists in a certain construction of looper, applicable either to the loopers of machines for sewing on what is known as the "double-looped stitch," which constitutes the subject of Letters Patent No. 9,592, or to those for sewing the "chain-stitch," by which the missing of the loops by the needle, so common in most machines, is more effectually prevented. It further consists in a certain contrivance applied to a looper, for the purpose of adapting the same looper, without the addition or removal of one of its parts to the sewing of the chain-stitch or the double-loop stitch, as may be desired.]

26,060.—James Stimpson, of Baldwinville, Mass., for an Improved Machine for Making Box Joints:

I claim, first, The combination of the hollow bit, r, the cutters, w and d2, or their equivalents, operating as set forth, to form the tenons, a.

Second, In combination with the above, I claim the augur-bit, l2, operating as described, to form the holes, c, to correspond with the tenons, a, as set forth.

26,061.—Chester W. Sykes, of New York City, for an Improved Carving-knife:

I claim the combination of a knife and shears, substantially as described, as an instrument especially adapted for carving meats.

26,062.—Harvey Trumbull, of Central College, Ohio, for an Improvement in Straw-cutters:

I claim the combination of a self-adjusting spring-pressure clasp, L, to or with an automatic rake, for the purpose of feeding the material to the knife, substantially as specified.

26,063.—Nathaniel Waterbury, of Fond du Lac, Wis., for an Improvement in Gates:

I claim the arrangement and combination of the pendulous-rod, J, and weight, K, with the axis of the pulley, H, and for the purpose shown and described.

26,064.—James Whitehill, of Frederick, Md., for an Improvement in Hot-air Furnaces:

I claim, first, A furnace constructed with two separate fire-chambers and grates, with an air passage between the chambers closed at their sides, but open at the bottom and top, substantially as and for the purposes set forth.

Second, The combination of the peculiar labyrinthian air-passage described, and the peculiar furnace described, in the manner and for the purpose set forth.

Third, The combination, with the peculiar furnace and peculiar labyrinthian air-passage described, of the curved cold-air pipe, M, substantially in the manner and for the purpose set forth.

[This furnace has two separate chambers, and thus secures the advantage of having a fire in one chamber, with a deep bed of coal in moderately cold weather, and fire in both chambers in very cold weather. The cold-air is drawn from the floor of the building into the furnace, and heated before it re-enters the same. The draft is supplied at all sides of the furnace; and thus the burning of the fuel in a perfect manner, whatever be the direction of the wind-current, is effected. This appears to be a very good arrangement.]

26,065.—Ferdinand Wuterich and Jacob Kœrber, of New York City, for an Improvement in Cotton-gins:

We claim the arrangement of the finger-shafts, C and D, operating and constructed in the manner described, and acting together so that, while the fingers of the shaft, C, during its revolution, pull the cotton out of the hopper, the fingers of the shaft, D, take the cotton from the former, and deposit the same upon the guiding-rollers, substantially as specified.

26,066.—Wilham C. Allison, of Philadelphia, Pa. (assignor to himself and John Murphy, of same place), for an Improvement in the Mode of Confining the Seat of the Driver on City Railroad Cars:

I claim the combination of the bend, D, rod, E, with its collar, F, and the catch, H, when the said rod serves the double purpose of supporting the seat, and, in conjunction with the catch, H, of maintaining the seat folded up out of the way, and when the several parts are arranged in the front of the car as and for the purpose set forth.

26,067.—Henry C. Brown, of Buffalo, N. Y. (assignor to Charles O. Brown, of Dalton, Mass.), for an Improved Handle for Smoothing-irons:

I claim a ventilated smoothing-iron handle, constructed for the purposes substantially as described.

26,068.—William E. Cooper, of Dunkirk, N. Y., assignor to Charles D. Gibson, of New York City, for an Improvement in Railroad Car Springs:

I claim the combination and arrangement of groups of four springs and with the suspension bracket or stirrup, B B, &c., constructed, arranged and operating in the manner above described.

26,069.—John Danner, (assignor to himself and J. M. Jay) of Canton, Ohio, for an Improvement in Sleeping-cars:

I claim the combination of the hinged back, d', with the hinged and reversible frame, D', and removable piece, E', constructed and arranged to operate in relation to seat, c', and false back, d, of the back, B', substantially as and for the purposes set forth.

26,070.—Pearson B. Kitchen (assignor to William H. Marshall) of Philadelphia, Pa., for an Improvement in Apparatus for Heating Hydro-carbon Liquids:

I claim the application to gas generators of a hot-air chamber as previously described, and the submerging of one or more air pipes therefrom, into and upon the chemicals, for the purposes set forth and described, or any other substantially the same and which will produce the intended effect.

26,071.—A. H. Knapp (assignor to himself, E. H. Barstow, and A. R. Trowbridge), of Newton Center, Mass., for an Improvement in Lamps:

I claim the wick portion, I, arranged and operating substantially as and for the purpose described.

26,072.—Ambrose Lovis, assignor to himself and Chas. E. Hodges) of Boston, Mass., for an Improvement in Composition for Detergent Purposes:

I claim the above-described cleansing, bleaching, and disinfecting liquid, consisting of an alkaline silicate combined with chlorine, for the purpose specified.

26,073.—James A. Whipple, of Boston, Mass., assignor to himself and George A. Stone, of Roxbury, Mass., for an Improvement in Method of Driving Piles:

I claim the method or process of driving piles by exploding charges of gunpowder or its equivalent between the pile and a fulcrum or resistance, so that the force of the explosion shall wholly or partially act to drive the pile in the direction of its length, or nearly so.

26,074.—Joseph Barrans, of Caledonia Terrace, Queen's Road, Peckham, County of Surrey, England, for an Improvement in Portable Locomotives:

I claim, first, The method herein described of supporting the front portions of traction or portable steam-engines, by means of a spring or elastic beam or lever, at or near the middle thereof; the said beam or lever being arranged constantly to occupy a position in a vertical plane passing through the axis of the boiler, by having its rear and front ends applied and jointed respectively to the bottom of the barrel of the boiler and to the fore-carriage, substantially as and for the purpose set forth.

Second, The application and use, in traction engines, of tensional rods or bars for retaining the driving-wheel centers at the proper distance asunder from the axis of the ground driving-wheels.

Third, The application and use, in traction and portable steam-engines, of ground driving-wheels, in two or more sections capable of being put in and out of working action for the purpose described, and such wheels having teeth holding projections upon their peripheries of the form and arrangement described.

RE-ISSUES.

De Witt C. Cummings, of Fulton, N. Y., for an Improvement in Straw-cutters. Patented Aug. 7, 1855:

I claim first, Operating the adjustable lower feed-roller by means of a spur-wheel hung in a vibrating frame or yoke, the axis of which is connected with the said roller by means of an universal coupling, when said roller is supported on spring bearings independent of each other, substantially as and for the purpose specified.

Second, The employment of a cylinder provided with a knife or

knives which have an upward cylindrical cut, when the same is arranged with two independent feed-rollers, the lower one of which being supported on a spring or springs in such a manner that it can be adjusted to act with greater or less pressure on the material to be cut, substantially as set forth.

William M. Henderson, of Baltimore, Md., for an Improvement in Pumps. Patented Oct. 4, 1859:

The two ball valve cages with the suction valves in their interior, attached to the extremities of a central perforated tube or its equivalent, in combination with the water-ways and discharge valve or valves; the water entering between the plunger valves and alternately discharged from the ends of the pump barrel in direction of the stroke; the whole being operated and constructed substantially in the manner and for the purposes set forth.

John H. Lyon, of New York City, for an Improved Lock and Detector. Patented Sept. 13, 1859:

I claim combining with a padlock or any lock provided with a shackle, a lead or soft metal tube or seal, so arranged as to be temporarily secured thereto and admitting of being released only by the removal or breaking of said tube or seal, which thereby serves as a detector, substantially as set forth.

[An engraving of this lock will appear soon in this journal.]

ADDITIONAL IMPROVEMENT.

Mortimer Nelson, of New York City, for an Improved Gold-washer. Patented Oct. 4, 1859:

I claim, first, Imparting to the shaft, p, and the series of pans thereon, an intermittent or oscillating movement for the purposes and as specified; and in combination with the shaft, p, and pans having the intermittent or oscillating movement set forth, I claim the cam, h, and ball, i, to give the vertical or jolting movement as specified.

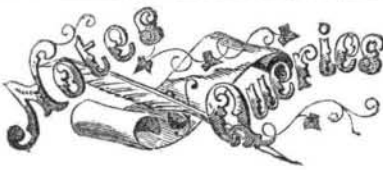
Second, The conical hoods or funnels, o o', in combination with the pans, n n, for the purposes and as specified.

EXTENSION.

Thaddeus Hyatt, of New York City, for an Improvement in Vault Covers. Patented Nov. 12, 1845. Re-issued April 3, 1855:

I claim making them of a metallic grating or perforated metallic plate, with the apertures so small that persons or bodies passing over or falling on them may be entirely sustained by the metal, substantially as described, but this I only claim when the apertures are protected by glass, substantially as and for the purpose specified.

And I also claim, in combination with the grating or perforated cover and glass fitted thereto, the knobs or protuberances on the upper surface of the grating or perforated plate, for preventing the abrasion or scratching of the glass, substantially as specified.



F. B. C., of La.—Your fear that, if you should employ us to get up an engraving and publish a description of your invention in the SCIENTIFIC AMERICAN, the printing of so large an edition from it would wear out the engraving, is unfounded. The engravings which are prepared for this paper are not printed from, at all; the impression being taken from electrotype plates, so that the engravings are furnished to the parties ordering them, just as perfect as they came from the hands of the engraver. If we printed from the type and wood-cuts as we formerly did, when our circulation was much smaller, and as every other paper of like character now does, your apprehension would be well founded; but as it is, your engraving will not be injured by us in the least, and you can judge of the benefit you will derive from having your invention brought before the public through the medium of a paper of the standing and circulation of the SCIENTIFIC AMERICAN. It is only such good inventions as yours that we solicit the privilege of illustrating in our columns, while those of indifferent merit we cannot publish. The engravings in the SCIENTIFIC AMERICAN are executed expressly for it; none are ever inserted by us after their appearance in any other American publication. So the reader, when he receives his paper weekly, may depend upon seeing illustrations of something which he has never seen before. We have a two-fold object in answering your inquiries through our correspondence column. The first is to give you the information you solicit, and the second is to answer the thousand-and-one applications we receive, requesting us to insert second-hand engravings of second or third-rate inventions in our columns. We publish a paper for intelligent readers, and we will not impose upon them or mar our pages with poor illustrations.

SPOKE MACHINES.—N. Chapman, of Lansing, Mich., wishes to correspond with some manufacturers of lathes for turning spokes.

W. G., of Ohio.—We cannot encourage you to spend money on an application for a patent on your invention.

D. D. P., of N. C.—We think it advisable not to publish your theory. It may be correct, but it might lead to a controversy suited only to a medical journal.

F. B. G., of N. Y.—We do not wish to dispose of those little engravings you refer to, but will supply you with electrotypes for 50 cents each. Your idea of a motive power is absurd. You cannot make a water-wheel pump up water to drive itself any more than you can lift yourself over a fence by pulling-up the seat of your pantaloons.

D. R., of N. Y.—Sulphite of lime is prepared by saturating carbonate or milk of lime by sulphurous acid. Sulphurous acid is produced by burning roll brimstone in the air, and milk of lime by dissolving quick lime in water. Wm. H. Hovey, who patented a corn-sheller in April, 1854, resides in Springfield, Mass. The other matter in your letter we shall thoroughly investigate as soon as we can find time.

S. S. M., of S. C.—You will find our promised article on heat, in reply to your question, in another column.

H. L. C., of Ill.—To produce the electric light, take two small pieces of the hard carbon which collects in gas retorts, sharpen them to a point, attach one to the wire leading from the copper plate of a galvanic battery and the other to the wire leading from the zinc plate, bring the two points together, and then draw them slightly apart.

H. B. W., of Conn.—Lenses are ground by machinery.

J. M. J., of La.—The statement which you cite from Ure's "Dictionary of Arts," page 458, is very curious certainly. "A smooth-bottomed pan will evaporate over flame as fast as a corrugated one, having three times the surface; while, if both pans are immersed in a fluid, the evaporation is just in proportion to the surface of the bottom." You think "the difference is due to the density of the fluid medium pressed directly in contact with the surfaces." This is a fair specimen of the "explanations" of which the old books on science used to be full, but which are less common in this day. Students of nature are very generally learning the great truth that we live surrounded by mysteries which cannot be explained. For our own part, we can understand Ure's statement, but cannot understand your explanation.

R. T. C., of N. Y.—You cannot obtain a patent for the new use or application of a well-known mechanical device. Various alloys are used for bell metal; 80 per cent of copper and 20 of tin is said to be as good as any. A steel bar, bent in the form of a triangle, gives a very clear, sharp sound when struck.

J. A. M., of Pa.—Almost every manufacturer of friction matches has his own peculiar receipt for preparing his composition. We give you one. Take 6 lbs. of fine glue and soften it with water to a smooth jelly, heat it to a temperature of 156° and rub 4 lbs. of phosphorus into it, then add 10 lbs. of saltpeter, then 5 lbs. of red lead, and lastly, 2 lbs. of smalt; mix the whole into a uniform paste. Persons employed in dipping matches in close rooms are subject to a terrible disease of the jaws, which results in the loss of the teeth, and in many cases of the jaw-bone itself. It is caused by the fumes of phosphorus.

ENQUIRER, of Quebec, Canada.—Your letter is interesting, but anonymous. If you had given us your name we should have published it.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Nov. 12, 1859:—

J. G., of Conn., \$30; R. L. R., of Pa., \$30; R. M., of Pa., \$30; G. M., of Conn., \$30; T. S. U., of N. Y., \$25; T. H. W. & Bro., of Ga., \$30; G. K., of N. Y., \$20; D. M. H., of Conn., \$25; N. L., of Conn., \$32; A. P. M., Jr., of Miss., \$55; A. G., of N. Y., \$45; H. E. W., of Mass., \$25; J. S. C., of R. I., \$30; C. R. K., of Pa., \$20; W. W. W., of Mass., \$40; J. S. C., of Pa., \$25; W. A. S., of N. Y., \$20; C. H., of N. Y., \$25; J. I. R., of Ill., \$25; H. B. J., of N. J., \$70; W. D. B., of Ohio, \$20; J. F. H., of N. Y., \$30; A. P. T., of Ga., \$20; C. & McC., of Iowa, \$30; T. Van D., of N. J., \$25; I. Y. C., of Mass., \$25; L. O. C., of N. Y., \$10; C. & Z. W., of N. J., \$30; E. A. G., of Conn., \$30; F. & I., of Pa., \$25; M. & B., of R. I., \$30; A. W., of N. Y., \$30; J. H. S., of C. W., \$25; N. J. E., of Wis., \$25; J. C. S., of Mass., \$55; D. C., of N. Y., \$30; J. A. A., of Ill., \$25; N. S., of Minn., \$30; G. W. S., of Conn., \$20; E. D., of Wis., \$30; H. F., of La., \$25; M. R., of N. Y., \$25; N. C. K., of Mass., \$20; S. T. P., of Ga., \$25; H. B. F., of N. Y., \$55; F. D. B., of Mass., \$30; J. D., of Ill., \$25; P. H., of Pa., \$57; O. M. P., of Ill., \$30; T. S. W., of N. Y., \$25; J. B., of N. Y., \$55.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Nov. 12, 1859:—

D. M. H., of Conn.; T. Van D., of N. J.; H. F., of La.; W. W. W., of Mass. (2 cases); J. D., of Ill.; S. T. P., of Ga.; J. S. C., of Pa.; J. B., of N. Y.; J. Y. C., of Mass.; W. B. D., of Conn.; J. & D., of Ala.; G. W. R. B., of La. (3 cases); C. R. K., of Pa.; H. E. W., of Mass.; N. J. E., of Wis.; J. C. S., of Mass.; T. S. U., of N. Y.; A. P. T., of Ga.; N. C. K., of Mass.; H. A. R., of Ohio; C. H., of N. Y.; J. H. S., of C. W.

Hints to our Patrons.

BACK NUMBERS.—We shall hereafter commence sending the SCIENTIFIC AMERICAN to new subscribers from the time their subscriptions are received, unless otherwise directed; the back numbers can be supplied from the commencement of the volume to those who may order them. It is presumed most persons will desire the back numbers, and such as do will please to state at the time of sending in their subscriptions; they can, however be supplied at any subsequent period.

INFALLIBLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was prepaid has expired, and the publishers will not deviate from that standing rule in any instance.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within 14 years can obtain a copy by addressing a note to this office, stating the name of the patentee, and date of patent when known, and enclosing \$1 as fee for copying.

MATHEMATICAL INSTRUMENTS.—C A S E No. 508.—Wood-box, with brass instruments set in a tray so that colors, &c., may be put below; pair 6-inch needle point dividers, with pen, pencil and bar; pair 4½-inch dividers; pair 3½-inch needle point dividers, with pen and pencil; spring bow pen, with needle point; drawing pen; brass protractor; horn protractor; ivory 6-inch scale, price \$3.75. McAlister's priced and descriptive catalogue of mathematical, optical and philosophical instruments.—116 pages, 200 illustrations.—furnished gratis on application and sent by mail free of charge to all parts of the United States. McALISTER & BROTHER (established in 1796), No. 728 Chestnut-street, Philadelphia.

FOR SALE.—SEVERAL NEW INVENTIONS (unpatented). Funds only wanting. Address A. BLAKE, Crescent, N. Y.

WHEELER & WILSON'S SEWING-MACHINE has, as usual, won the highest premium at the Fair of the American Institute, and at the principal fairs throughout the Union. Office No. 503 Broadway, New York.

\$2 A DAY.—FEMALE AGENTS WANTED, ON salary or commission, for the mammoth "Family Pictorial," now the largest and handsomest paper in the world, for only 50 cents a year. For confidential terms to females, specimen copies, &c., enclose stamp and address Misses MARE LOUISE HANKINS & CO. Publishers, New York City.

CATACT WASHING-MACHINE.—PAT-ented by T. G. Eiswald, Oct. 26, 1858.—The only complete washing-machine ever invented. Manufactured and for sale by SULLIVAN & HYATT, No. 51 Beekman-street, New York.