

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week; the claims may be found in the official list:—

Siphon for Separating Gold from Crushed Quartz.—This invention relates to a new and improved siphon for separating gold from crushed quartz, and is designed to be applied chiefly to the annular trough of what is generally known as the "Chilian mill." The object of the invention is to draw off the water at its surface in the trough where the quartz is undergoing the process of crushing, which portion of the water contains the finely pulverized quartz and fine gold in suspension, and in drawing off said water to separate, by amalgamation, the gold from the foreign substances. A. W. Hall, of New York City, is the inventor.

Stove Damper.—This invention relates to a new and improved damper for stovepipes, by which the damper, when fully closed, will admit of sufficient draught to cause the gases to be carried up the pipe, thereby preventing the escape of the gases into the compartment in which the stove is placed, the slight draught allowing but an extremely slow combustion of the fuel in the stove. The damper when opened admits of a good draught, sufficiently so to cause a proper combustion of the fuel without allowing the heat to escape up through the pipe into the flue. John A. Noble, of Florence, Mass., is the inventor.

Grain Separator.—This invention consists in the employment or use of a wheel, arranged in such relation with a hopper or grain spout that the grain as it enters the separator will fall upon the wheel and rotate it, the latter giving motion to a governor, which is connected with a valve that controls the blast; all being arranged in such a manner that the strength of the blast, which separates the light impurities from the grain, will be made commensurate with the amount of grain passing through the machine, and the grain be perfectly cleansed, whether a greater or less quantity is made to pass through the machine in a given time.

The invention further consists in a novel arrangement of a suction-blast chamber and a grain-receiving chamber, in connection with rotary fans, a rotary grain-discharging plate and a self-adjusting valve, all being arranged in such a manner as to insure a perfect operation of the blast upon the grain and a thorough separation from each other of the light grain, sound grain and light impurities. T. H. C. Mey, of Buffalo, N. Y., is the inventor.

Horse Cage.—This invention relates to a new and improved device for confining while being shod horses and other animals. The object of the invention is to obtain a device for the purpose specified which will be simple in construction, easily manipulated, and which will put the horse, even if vicious, under the complete control of the shoer or operator. William G. Hughes, Meriam, Ind., is the inventor.

Carts.—Carts of the ordinary construction in going down hill are stopped or prevented from crowding on the horse by the application of a brake, the shoes of which act simply by friction on the peripheries of the wheels, and the effect of the brake therefore depends entirely upon the power with which the shoes are drawn up against the wheels. But the wheels are generally not perfectly round, and the chains or other parts connecting the brake with the brake lever are liable to stretch, so that in going down long and steep hills, constant attention must be paid to the brake, and even then the cart cannot be prevented from crowding on the horse at short intervals and to subject the same to severe jerks. In order to overcome this difficulty, the body of the cart which forms the subject of this invention is connected to the axle of the driving wheels, so that it can rise and fall in the center, and when the brakes are applied the action of the wheels on the brakes causes the body of the cart to rise and to ride on the wheels, and the weight of the load itself assists in keeping the brakes applied, and preventing the cart from crowding on the horses. H. Holcroft and C. S. Smith, of Media, Pa., are the inventors.

Gas Apparatus.—The object of this invention is to produce illuminating gas, by passing atmospheric air through the vapors of a hydrocarbon liquid. The carbonizer which forms the subject matter of said in-

vention consists in a hollow drum, which is partially filled with a suitable hydrocarbon liquid, and which is occupied by a cylinder provided with an air induction pipe, and flannel or other suitable textile or absorbent material stretched over a skeleton wire frame, which is arranged to rotate in such a manner that the air forced into said drum has to pass through the cloth or other absorbent material, which, being saturated with oil, offers a very extensive evaporating surface, and said air is thereby impregnated with a sufficient quantity of hydrocarbon vapor to produce a good illuminating gas. Ellis S. Archer, of Mercer Street, New-York, is the inventor.

Sawmill.—This invention relates to certain improvements in the mode of hanging the saw, so that its pitch can be adjusted at pleasure; also to certain improvements in the manner of placing and adjusting the guides to prevent the saw from trembling or springing; further, to an improved mode of guiding and supporting the log, and to a sliding friction clutch, in combination with suitable levers and wheels to run the carriages in either direction, by power or by hand, as the operator may desire. Caleb Bond, of Richmond, Ind., is the inventor.

Manure.—This invention relates to the manufacture of artificial manure out of lime and fecal or refuse animal matter, and the invention consists in producing what is termed animalized lime or "manure balls," by inclosing the fecal or refuse animal matter in a shell or envelope made of lime slaked with urine or other fertilizing liquid; it consists further in a combination of urine with unslaked lime, the two being combined either under pressure higher than that of the ordinary atmosphere, or under ordinary atmospheric pressure, so that the lime is slaked by the action of the urine, and when pressure is applied the lime is caused to absorb a much larger quantity of the liquid than it does when combined with the same under the ordinary atmospheric pressure. A. F. Moselman, of Paris, France, is the inventor.

Water-elevating Device.—This invention relates to an improved water-elevating device in which a rope and bucket are employed. The improvement consists in an improvement in the means employed for tilting the buckets, and in a self-acting pawl and ratchet arrangement for preventing the casual descent of the buckets into the well, as also an improved manner of attaching the rope to the bails of the buckets. H. J. Bailey and S. S. Williams, of Pittsburgh, Pa., are the inventors.

Cheese-curd Cutter.—This invention consists in a feed-box provided with a series of stationary knives and with an automatically-feeding follower in combination with a reciprocating gate containing two sets of knives, the cutting edges of which are situated in places at right angles to each other and to the cutting edges of the stationary knives in the feed-box in such a manner that by the action of the automatically-feeding follower the curd is forced through the stationary knives; on passing these knives it is brought in contact with the knives in the reciprocating gate, and thus cut up in three different directions and in pieces of uniform size. F. G. Abbey, of Sandisfield, Mass., is the inventor.

Hop Frame.—This invention consists in the employment of sticks suspended from the main wire by means of hooks and connected by short cords or wires to a stake driven in the ground, in such a manner that the stake and sticks combined take the place of the training wire, and by the use of the sticks a firm support is given to the hops which is not liable to sway to and fro, and preserves the hops from injury by high winds; and, furthermore, the sticks can be readily reached and unhooked from the ground, and the gathering of the hops is thereby considerably facilitated. L. S. Mason, of Littlefield, N. Y., is the inventor.

Pneumatic Way.—In the pneumatic ways heretofore constructed for the transmission of letters, merchandize, etc. it has been most common to exhaust the tube in front of the carriage or of the piston attached thereto and allow the carriage to be drawn through it by the pressure of the atmosphere. It has also been proposed to drive the carriage by admitting compressed air into the tube behind it, the portion of the tube in front being open to the atmosphere. The object of this invention is to obviate some objections to which both these plans are liable, to bring the whole system under more perfect control

and to economize power; and to these ends it consists in the employment of a continuous viaduct or system of tubing, forming a complete circuit arranged to form two lines between the termini of the way, and an air pump so arranged in the said circuit, and so operated by power suitably applied that the whole volume or body of air is separated, within the said viaduct or tubes, from the external atmosphere and free from its influences, may be made to revolve like an endless belt throughout the entire circuit of the tubes passing and repassing continually through the pump, and returning to the exhausting side thereof with the same velocity that it is delivered from the opposite side without any tendency to a vacuum, and being constantly direct-acting and retro-active to an equal extent, so that it operates with equal forces in the two lines of tubing, and enables one to be used for carriages to run in one direction and the other for them to run in the other direction between the trunnions of the way. E. P. Needham, of New York City is the inventor.

Ore Amalgamator.—This invention relates to a new and improved apparatus for more effectually separating gold and silver from the crushed ore or "pulp," as it is frequently termed among miners. The invention is applicable to what is known as the Chilian crushing mill or to any of the ordinary amalgamating pans in which a rotary muler is employed; in fact it may be used in all cases where the gold and silver are separated from the pulp by means of stirring and agitating the latter in connection with amalgamated metal surfaces. The invention consists in the employment of a series of amalgamated plates secured at proper distances apart and connected with any suitable moving parts which will admit of the amalgamated plates being drawn through the pulp. A. W. Hall, of New York City, is the inventor.

Horse Hay-fork.—This invention consists in the employment of a fork constructed with two bars having two or more tines attached to each, the bars being pivoted to a standard provided with a spring catch, and all arranged in such a manner that the hay will be grasped firmly and elevated to the desired spot and then discharged by an automatic tripping arrangement. David Lippy and John H. Palm, of Mansfield, Ohio, are the inventors.

Window Blind Fastening.—This invention relates to a new and improved fastening for securing the slats of window blinds, in an open or closed state, or at any point between these two positions. The object of the invention is to obtain a simple fastening for the purpose specified, one which may be constructed at a reasonable cost, not liable to get out of repair, and one which will not interfere, at any time or in any position in which it may be adjusted, with the window sash. J. D. Burdick, Ashway, R. I., is the inventor.

Domestic Boiler.—The object of this invention is to prevent, as much as possible, the fat and gravy from the meat from dripping into the fire and producing smoke, blaze or unpleasant smell, and so enabling broiling to be performed satisfactorily over an anthracite or other fire. It consists in the combination of two series of bars arranged one above the other at a short distance apart, the lower ones having their upper surfaces of trough or gutter shape, and the upper ones upon which the meat rests being narrower and beveled toward the bottom to a thin edge, so that the fat and juices from the meat running down their sides will drop into the gutters or troughs of the lower series and not into the fire. It also consists in the arrangement of the several bars so that the gutters or troughs of the lower ones all lead to one point where the fat and gravy may be collected, and whence they can be poured off either for use with the boiled meat or to be saved for any other purpose. George T. Teel, of Hoboken, N. J., is the inventor of this improvement.

Self-centering Chuck.—This invention consists in the use of three, more or less, inclined or converging guide-ways in combination with the jaws of the chuck to which a sliding motion is imparted by a central screw or other suitable means; that said jaw, on being forced out in the converging guide-ways, will contract concentrically and clamp an article placed between them and hold it firmly, and in the true center of the lathe spindle to which said chuck is attached. Edgar B. Beach, of West Meriden, Conn., is the inventor.

Quartz-breaker—In this device the quartz is introduced within a hopper formed by the Union of two crushing jaws, one of which is stationary, the other movable. A special feature consists in imparting a downward motion to the movable jaw, as well as a lateral movement toward the stationary jaw. The quartz is thus crushed and ground in the most effective and speedy manner. J. W. Staunton, of Black Hawk Point, is the inventor.

Sorghum Evaporator.—Several novel features are represented in this improvement, one of which consists in proving the front edge of each of the evaporative compartments with a permanent skimmer, so arranged that, as the liquid flows down from one division into that next below, its floating scum will be completely arrested and removed by the skimmer. The labor of the attendant is thus very essentially reduced. L. Wright, Wapella, Ill., is the inventor.

MISCELLANEOUS SUMMARY.

THE RAVAGES OF INSECTS A CAUSE OF THEIR DESTRUCTION.—It is well known that after worms have for five or six years committed their ravages on the trees of a region, they suddenly disappear, and have no full return again for two or three or more years to come. It has been shown that the destruction is sometimes at least a result of their numbers. The larvae or worms, when very numerous, consume the leaves of the tree on which they are before they attain full maturity, and, as a consequence, they never pass to the chrysalis state; they remain for a while as larvae, often showing by their movements that they are half-starved, and then die.

MORID'S PROCESS FOR RECOVERING WRITING ON PAPER OR PARCHMENT WHICH HAS BECOME NEARLY EFFACED.—The paper or parchment written on is first left for some time in contact with distilled water. It is then placed for five seconds in a solution of oxalic acid (1 of acid to 100 of water); next, after washing it, it is put in a vessel containing a solution of gallic acid (10 grains of acid to 300 of distilled water); and finally washed again and dried. The process should be carried forward with care and promptness, that any accidental discoloration of the paper may be avoided.—*Cosmos*.

PATRIOTIC AND GENEROUS.—Borden & Co., owners of a factory for condensing milk and the manufacture of cheese, in Winsted, Conn., offered recently to condense and forward to the army all the blackberries the people of the surrounding country would furnish them. At last accounts over eighty bushels of berries had been deposited at their factory for that purpose. The company are making meat biscuit for the army, and have recently "condensed" an entire ox.

EFFECT OF ATMOSPHERIC PRESSURE IN GUNNERY.—The French artillerists in Mexico have recently found, to their surprise, that the angle of elevation used in range for their guns, for any given range, does not afford the calculated results; and have ascertained that this is owing to the diminished pressure of the atmosphere on the Mexican plateau. It follows that cannon may serve as a kind of barometer for measuring altitudes.—*Les Mondes*, July 7.

ACCLIMATION OF ENGLISH BIRDS IN AUSTRALIA.—The thrush, black bird, skylark, starling, chaffinch, various sparrows, and the wild duck, are already domesticated in Australia through the efforts of the Acclimatization Society of Victoria. Great success has also attended the Society's efforts to introduce good fresh-water fish into the rivers, and it is expected that the salmon will soon be naturalized in Tasmania.

PRIZE TO MR. RUHMKORFF.—The prize of 50,000 francs, offered by the Emperor Napoleon for the most useful application of electricity, has been awarded to Mr. Ruhmkorff for his induction coil. The king of Hanover, having heard of the award, forwarded to Mr. Ruhmkorff a large gold medal, "pour le merite," Reader.

A NATIONAL Boiler Insurance Company has been formed in London to afford the means of providing against the risks of loss, both of property and life, from the explosion of steam boilers.

[The best insurance for steam boilers is good engineers.—Eds]

PLEASURE SEEKING AT SOME PROFIT.—A Saratoga letter writer records the following novel mode of paying hotel bills:

Among the anomalies of a depreciated paper currency the following is noteworthy: There are at present at the Springs quite a number of Cubans—never before so many. They all come laden with gold, on which at home they have paid no premium. On the liquidation of their board bills they are allowed the premium, of course. The practical result is, that when a Cuban has been here a month, and feasted well, he lays down one hundred dollars in gold, and receives in return a receipted bill, with one hundred and fifty-six dollars in change! The Cubans, hence, are living gratis, and making money by it besides! Of course, they are greatly enjoying themselves at our expense.

FERMENTATION AND FERMENTS.—M. Lemaire denies that a special ferment for every kind of fermentation exists. He finds the same microscopic beings present whether sugar is being changed into alcohol, or alcohol into acetic acid. But in the case of natural animal and vegetable matters he has assured himself that microzoa begin the decomposition, which, when the matters become acrid, is carried on by microphytes. By means of a little acid, these latter may be made to appear at will, and the author consequently argues that mycodermis do not make the acid but appear in consequence of its presence. The acidity of the perspiration it is thought may cause the development of certain microphytes which are observed in some obstinate cutaneous affections.—*Dublin Med. Press*.

NEW CURE FOR CROUP.—Several cases have been reported in a French journal, in which croup was successfully treated with a mixture of perchloride of iron, in the proportion of fifteen drops in four ounces of water, given in tablespoonful doses every five or ten minutes. The effect is to detach the false membrane, which is expelled by coughing. The remedy can scarcely be called a specific, as there were several failures, but anything promising to afford relief should be known in so dangerous a disease.

EXTENSIVE FROST IN JUNE.—We have received the Bi-monthly Report of the Agricultural Department for June and July, an unbound pamphlet of 23 pages. Among the matter is a collection of reports in relation to the frost which occurred over all the northern portion of the country on the 9th and 10th of June. It extended from Maine to Minnesota, and as far south as New Brunswick, N. J.

VALUATION OF NEW YORK CITY.—The Commissioners of Taxes and assessments of New York value the real estate of the city at \$410,774,435 for the year 1864, against \$402,187,382 in 1863. The personal estate amounts to \$223,920,505, an excess over 1863 of \$31,953 34. The net increase is \$40,640,397.

The costliest Bible ever made in this country was gotten up by the people of Baltimore as a testimonial for the President in honor of his proclamation of emancipation. The cost of the book being nearly six hundred dollars—\$580 75. It is a pulpit Bible, bound in violet silk velvet.

An interesting communication from Mr. V. B. Le Van, of Philadelphia, on the "Power of a newly Patented Steam Engine," has been accidentally overlooked for a month or more. We are obliged to Mr. Le Van, and hope to hear from him on another occasion.

The young lady pupils of the Buffalo schools are to receive prizes for the "best loaves of bread." There is a good deal of common sense in that, Good loaves of bread are quite as worthy of prizes as good essays in Latin.

FASTENINGS OF ARMOR PLATES.—In the experiments at Shoeburyness, it has been found that armor plates fastened to ships' sides by large wood screws hold much better than those secured by through bolts and nuts.

It is stated that in the first two years of the present war 28,000 walnut trees were felled to supply a single European manufactory of gunstocks for the American market.

The American Wood Paper Company at Providence, advertise for 10,000 cords of wood suitable for their purpose. Success to them.

A New Alloy for Bells.

Le Moniteur Illustré des Inventions says that M. M. H. Micolon has just patented a new alloy suitable for numerous articles, such as bells, hammers anvils and other non-cutting instruments. The alloy consists of iron, manganese and borax. The proportions given in the specification are—

- 20 parts of iron turnings or tin scraps.
- 80 parts of steel.
- 4 parts of manganese.
- 4 parts of borax.

But it states that these proportions may be varied. If it is desired to augment the tenacity of this alloy, two or three parts of wolfram (Franklinite) may be added. The iron and steel are placed first in a crucible, afterwards the manganese and borax, and the crucible is then filled with charcoal. It must be poured rapidly into the molds. Bells are thus obtained possessing the sonorosity of silver and costing less than bronze.

SPECIAL NOTICE.

EDWARD HAMILTON, assignor of NELSON GOODYEAR, of Chicago, Ill., has petitioned for the extension of a patent granted to him on May 27, 1851, for an improved mode of preventing the entrance of dust, etc., into railroad cars.

It is ordered that the said petition be heard at the Patent Office, Washington, on Monday, May 8, 1865.

All persons interested are required to appear and show cause why said petition should not be granted. Persons opposing the extension are required to file their testimony in writing, at least twenty days before the final hearing.

A READY way of imitating ground glass is to dissolve Epsom salts in beer, and apply with a brush. As it dries it crystallizes.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Aug. 31, 1864, to Wednesday, Sept. 6, 1864:—

- T. T. & B., of N. Y., \$10; C. E. W., of N. Y., \$45; G. H., of N. J., \$40; L. A., of N. Y., \$40; A. E. K., of Pa., \$50; W. J. W., of Ohio, \$20; W. F. S., of N. Y., \$20; J. S., of Ohio, \$20; E. C. C., of Mass., \$20; A. W. H., of N. Y., \$15; D. N. D., of N. J., \$45; R. R. S., of N. Y., \$45; J. W. N., of Conn., \$45; W. H. G., of N. Y., \$20; F. T., of N. Y., \$15; C. & T., of Conn., \$15; E. R., of N. J., \$32; A. T., of Conn., \$25; B. & G., of Conn., \$25; H. W., of Wis., \$16; M. S., of Ill., \$20; J. A. McP., of N. Y., \$15; E. C., of Conn., \$35; F. C. W., of Conn., \$16; J. J. S., of Conn., \$25; H. G. D., of Ky., \$30; N. N., of R. I., \$25; W. F. Q., of Del., \$16; J. M. H., of N. Y., \$25; N. H. B., of N. J., \$25; J. H., of N. Y., \$20; C. J. Van W., of N. Y., \$40; V. G., of N. Y., \$15; P. L. M., of Ohio, \$10; J. H., of N. Y., \$20; H. R., of Austria, \$15; J. L., of N. Y., \$20; P. L., of N. Y., \$20; J. F., of Ohio, \$30; C. P., of Ohio, \$20; T. G. M., of N. Y., \$20; E. M. C., of R. I., \$20; C. S., of N. Y., \$20; W. E. D., of N. Y., \$35; H. C., of N. Y., \$20; J. E. S., of N. Y., \$15; H. B. M., of Mich., \$30; J. G., of Pa., \$25; T. H. W., of Pa., \$16; W. B. M., of Mich., \$15; A. W. C., of Vt., \$30; H. F. W., of Mass., \$15; C. H. N., of N. H., \$20; H. G. W., of Iowa, \$30; C. M. J., of Ill., \$35; J. S., of N. Y., \$30; T. C. W., of Mich., \$41; G. H. S. D., of N. Y., \$60; C. E. W., of N. Y., \$45; S. G., of N. Y., \$45; L. & L., of Ohio, \$20; E. S. A., of N. Y., \$45; J. N., of Ill., \$20; A. H., of Ky., \$45; A. S. H., of N. Y., \$15; W. H., of Iowa, \$20; G. L., of Pa., \$20; C. A., of N. Y., \$10; J. F., of N. Y., \$15; J. B., of R. I., \$20; W. B., of N. Y., \$15; E. L. P., of N. Y., \$40; H. W. B., of N. Y., \$25; E. R., of Mich., \$15; P. J. G., of N. Y., \$15; J. K., of N. Y., \$30; J. H., of Ill., \$25; E. W. M., of Ill., \$25; W. H. W., of N. Y., \$15; L. M. D., of N. Y., \$25; C. C. B., of Iowa, \$35; D. H. S., of Conn., \$16; L. T. D., of R. I., \$35; F. S., of Pa., \$25; C. A., of N. Y., \$12; E. H. T., of Conn., \$50; W. & S., of N. Y., \$40; S. B. H., of Mass., \$60; C. H. R., of Maine, \$16; G. E. H., of Maine, \$15; J. D., of N. Y., \$450; H. R., of N. Y., \$25; C. C. & V., of N. Y., \$20; W. B., of N. Y., \$28; J. L., of Iowa, \$25; R. & K., of N. Y., \$25; A. B., of Ohio, \$20; G. & C., of Conn., \$19; J. G., of Ohio, \$20; P. D. S., of Nevada Territory, \$25; A. K., of Ill., \$25; J. W. B., of Mass., \$10; J. R. E., of U. S. A., \$25; A. & H., of Conn., \$605; S. S., of N. H., \$20; J. A. D., of Ill., \$20; A. S. of N. Y., \$20; R. T., of N. Y., \$15.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, stating the amount and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Aug. 31, 1864, to Wednesday, Sept. 6, 1864:— G. H., of N. J.; N. H. B., of N. J.; J. M. H., of N. Y.; H. G. W., of Iowa; H. W. B., of N. Y.; D. D., of Ill.; E. R., of N. J.; E. W. M., of Ill.; J. J. S., of Conn.; H. N., of R. I.; T. C. W., of Mich.; C. E. W., of N. Y.; B. & G., of Conn.; H. G. D., of Ky. (2 cases); H. B. M., of Mich.; G. D., of Mass.; J. G., of Pa.; E. C., of Conn.; C. C. B., of Iowa; T. T. & B., of N. Y.; J. S., of N. Y.; E. L., of England; J. H., of Ill.; W. T., of Conn.; A. W. C., of Conn.; J. K., of N. Y.; L. M. D., of N. Y.; H. B. S., of Wis.; W. H. G., of N. Y.; E. L. P., of N. Y.; D. J., of England; R. & K., of N. Y.; C. A., of N. Y.; E. H. T., of Conn. (2 cases); J. G., of Ohio; S. B. H., of Mass. (2 cases); H. F. B., of Mo.; P. D. S., of Nevada; N.; W. & S., of N. Y.; A. K., of Ill.