



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING JANUARY 3, 1854.

MACHINE FOR SAWING BEVEL SURFACES.—Alfred C. Cook, of Russellville, Ky.: I claim the employment in the manner described of an adjustable bevel gaging platform provided with a sliding carriage, which has adjustable guide rails, and adjustable heel and side rest, and pointer, in combination with an index plate and cutter, the whole being constructed, arranged, and operating in the manner and for the purposes herein described.

IMPROVEMENTS IN FEATHERING PADDLE WHEELS.—Samuel Champion and Thomas Champion, of Washington, D. C.: We claim no particular shaped blades for our paddles, as various shapes may be used, but as a general principle we prefer what may be applied, the narrow oar-shaped blade reaching deep into the denser water, so as to make the engine labor in forcing it through without much disturbing the surface, we are encouraged in this view by the narrow oar, the fins of the fish, and particularly by the long deep propellers of the deer, that animal being among the very fastest of swimmers as well as runners.

We claim the continuous arm or arms through the shaft, hub, or rim, with a blade on each end thereof, placed permanently at right angles to each other, so that when one is feathered in the water, the other is placed in proper position for propulsion, by the act, also, of an arm frame in combination with the oblong projections at the shank of the blades.

IMPROVEMENT IN RUNNING GEAR OF WAGONS, &c.—Isaac Grandal, of Cherry Valley, N. Y.: I am aware that John Jones obtained a patent dated January 14, 1851, which by the introduction of a helical spring, and slot or sliding bar connecting the hounds or partial reaches between the front and rear axles, in connection with his perch swiveling on both axles; purposes to prevent the effect of whipping the horses with the tongue, and drawing it back to the line of travel when moved. I therefore disclaim any part of such device.

But I claim the arrangement of the spring bar (or partial reach) furnished with a slot, C, the bar, H, connecting the sand bar, C, and upper sway bar, K, in which is inserted a pin, S, in combination with the ordinary reach or perch and running gear of wagons for the purpose of not only giving direction and steadiness to the tongue under all circumstances, but also preserving the set of the axle at the same time, as set forth.

RULING MACHINE.—John Collman of Silver Creek, Ill.: I claim the cam alternately sliding upon and secured to the bar as specified, in combination with the cam, lever, spring and stop, arranged and operating as described, for moving the box upon the transversing bar, any required distance, substantially for the purpose herein fully set forth.

IMPROVEMENT IN STRAW CUTTERS.—William S. Dillehay, of the County of Shelby, Ky.: I claim the diagonal knife with two edges, in combination with the movable scraper, with its proper appendages, and the manner of its movements parallel with the edges of the knife, thereby cleaning the gauge table of all the cut straw.

METHOD OF FORMING PLATES FOR POLYCHROMATIC PRINTING.—John Donlevy, of New York City: I claim the method of producing intaglio graphic printing and other plates from forms of types by surrounding the types whilst in contact with a glass plate or its equivalent, with plaster of Paris or some equivalent thereof, so that when set, the surface of the plaster will be on the same plane with the surface of the types, and then stereotyping the form of types, thus surrounded substantially as and for the purpose specified.

I also claim the method of producing embossing plates by taking a cast, in plaster or its equivalent, from an intaglio graphic plate and then stereotyping such plaster cast substantially as specified, thus producing a reverse duplicate in relief as set forth.

I also claim the method of producing what are called illuminated printing plates, or printing shaded intaglio graphic letters, characters, or figures, by producing an intaglio graphic plate in accordance with the first part of my invention, from a form of shaded types, and then removing the plaster from the form of types, substantially as described, so that after printing in intaglio with the intaglio graphic plates, the shadows can be printed either with relief or in types, and the plaster has been removed, or with a stereotype taken therefrom as set forth.

And finally I claim producing polychromatic printing plates from an intaglio graphic plate by taking a cast therefrom in relief, substantially as described, and from such relief obtaining what I term a stencil plate or plates, from which the plate or plates is or are obtained, to have the letters, characters, or figures in whole or in part in duplicate of the intaglio graphic letters, &c., and in relief substantially as described, so as to register therewith as described.

IMPROVEMENT IN STEAM BOILER FURNACES.—By F. P. Dimpfel, of Philadelphia, Pa.: I do not claim lining the fire box with water tubes, nor making the tubes of water linings separately detachable, but I claim forming the walls or sides of the furnaces of steam boilers of a series of water tubes extending above and below, said spaces being so connected with each other or with the body of the water in the boiler as to allow free circulation in the manner and for the purposes set forth.

IMPROVEMENT IN QUARTZ CRUSHING MACHINES.—By J. Hamilton, of New York City: I do not claim the cylindrical pestle or roller in itself, as it has been used on a flat surface, and I am also aware that the cylindrical pestle has been used in a concave dish or basin, but in this case, so far as the rolling motion is concerned, the same operates similarly to the ordinary rollers in oil mills, &c., but the sliding motion is dependent on the weight of the pestle causing the same to slip on the inclined part and rub the ore, whereas in my machine the ore is first cracked by the grooved upper surface of the pestle, which I am not aware has ever been before used, and the grinding is performed by a pestle set on a shaft, and having a partial rotary motion, which grinds the ore against the sides of the basin, without having any rolling motion at all.

I claim the means described for cracking and grinding metallic ores consisting of the cylindrical pestle provided with grooves in its upper part to crack the lumps of ore, and set on a shaft, on which it has a partial rotary motion, and operating in connection with the basin in which said pestle moves, to grind the ore into powder by the gradual approach of the sides of said basin to the cylindrical pestle, said pestle being also provided with a scraper or agitator, its lower surface to operate as specified.

HANGING AND OPERATING SAW GATES.—By M. W. Helton, of Bloomington, Ind.: I claim the driving of the pairs of saw gates, the saws of which operate in the same way by means of a biturcated pitman hinged to the rocking cross beam by its two arms, and connected by a wrist upon its other end with the crank of the driving shaft, by which means a conical gratatory motion is imparted to the pitman, as described.

TUYERES.—By G. D. Miller, of New Berlin, Pa.: I claim the combination of the notched segment of a cylinder with two gress passages, for regulating and changing the direction of the blast, as set forth, when the apparatus is constructed with the additional passage, D.

SCREW BOLTS AND NUTS.—By Lucius Page, of Cavendish, Vt.: I claim forming the helical thread of a right-handed screw with notches or teeth, as specified, in combination with applying to its screw nut a dog catch or spring pawl to operate in the said teeth or notch, and

prevent back rotation of the nut on the screw, as set forth.

I also claim the improvement of so applying the catch lever, or dog, or catch, to the nut, that it may project beyond one prismatic side of the nut, so that when a wrench is applied to such side of the nut and its opposite side, it may press inwardly the dog or catch or lever thereof, or so act upon the same as to throw such dog or catch out of engagement with the teeth or notches of the right-hand screw so as to allow the nut to be unscrewed from the same, as specified.

CUTTING IRREGULAR FORMS.—By Jonathan Russell, of Philadelphia, Pa.: I claim so combining the spur wheel on the mandrel, which directs the pattern and the spur wheels, for controlling the rough material with the main wheel which moves or turns them, through their respective carriages, as that the carriage which carries the pattern may have an uniform or differential and receding longitudinal motion relatively with regard to the carriage for carrying the rough material for the purpose of cutting to the same to a greater or less size than the pattern, as described.

I also claim hanging the tracers in independent frames within the frames which carry the cutters, so as to allow the cutters to bring the rough material to the same, a greater or less size than the pattern in its transverse diameter, as described.

I also claim giving to the pattern and rough material a half or less than a half revolution at each traversing motion of their respective carriages, for the purpose of cutting or reducing in longitudinal sections, without revolving the pattern or rough material, as described.

FLOOR PLATES OF MALT KILNS.—By Mathew Stewart, of Philadelphia, Pa.: I do not claim the use of perforated sheet or plate iron in the construction of malt kiln floors. But I claim, first, the characteristic mode in which I construct the plates with downward edges at right angles with the surface of the plate, as described.

Second, I claim the bearing and combining block with the peculiar arrangement of the slots or grooves, or its equivalent, as described.

Third, I claim the combination of the plates with the bearing and combining blocks, or its equivalent, and the peculiar manner of securing the plates and blocks down to the wrought-iron bars by means of the wire holes in the vertical edges of the plates or their equivalents, for the purpose described.

HOT-AIR REGISTERS.—By E. A. Tuttle, of Williamsburgh, N. Y.: I do not claim the rack and pinion movement or the crown wheel and segments; but I claim the improvement upon said William Tuttle's Patent Register, which consists in the improved method of maintaining the connecting rod in its proper position, as described, namely, at the bottom by a prong or prongs of the rod inserted into and working in cast raised openings on the fans or valves, and at the top by a slot or otherwise in the register front together with the slide plate, by which arrangement the register is greatly simplified and cheapened in its cost.

MACHINE FOR STICKING PINS.—J. B. Terry, of Hartford Conn.: I claim the circular guard and circular slide in combination with the wheel and spring, or its equivalent whereby the pins are brought from the conductor and dropped at the required place as described and shown.

LOWERING, RAISING AND FASTENING CARRIAGE TOPS.—By Z. S. Ogden, of Glenn's Falls, N. Y. (assignor to L. C. Ogden): I claim the application of the lever, the shafts, eccentric circles, hooks, and the two belts, to lower, raise, and fasten carriage tops, with stationary bows, as herein before described.

BANDING PULLEYS FOR SAWS.—By D. H. Chamberlain of Boston, Mass. (assignor to himself and Nehemiah Hubert): I do not claim the combination of three pulleys, (viz. a driving pulley, and two others) and an endless belt, nor the application and arrangement of such, wherein the belt runs against, or on the periphery of the driving pulley or wheel, and is strained between the two pulleys, and pinched between them and the driving wheel, and so as to extend beyond the side thereof, and running, the endless belt around the extensions of the said two pulleys, and down by the side of the driving wheel, and without any pressure or contact with its periphery, as specified.

I also claim the combination of two endless belts (arranged on opposite sides of the driving wheel) with the bearing and belt pulleys, or their equivalents; and the driving wheel as made to operate together as described, the same enabling me to relieve the bearings of the shafts of the several pulleys from the contractile strain of the belts.

I also claim the improvement of arranging two or more endless belts on one side of the driving wheel and not only running all of the said belts around one shaft or drum, (or the equivalent) supported on the periphery of the driving wheel, but respectively around other shafts or drums, or equivalents arranged and supported on the opposite portion of the periphery as specified.

BOOKBINDERS BOARDS.—By J. H. Longbotham of Brooklyn N. Y.: I claim the use of their box or chamber endless belts for carrying the paper boards. Coil of pipes arranged therein, in combination with a blower and case, having a series of coils of pipe therein for carrying currents of air from the book binder's boards, and other substances as set forth.

CORN SHELLERS.—By G. A. Xander of Hamburg, Pa.: I claim the improvement on the cylinder disc, that is its oval shape, the spring being attached to the side all as set forth.

I would further state that by riveting two half cylinders together, the cylinder may as readily be constructed double as in fig. No. 2. A. and should I find it more practicable to construct them as in fig. 2. A. I therefore do not limit my claim, merely to the single, but also the double cylinder.

MACHINES FOR CASTING TYPE.—By C. Muller of New York City: I claim, first, suspending the mould below its axis of oscillation, as described, whereby its tendency towards the centre of gravity, will act in opposition to the momentum required in its movement towards and from the mould and its movement and degree of opening are enabled to be reduced, producing the results set forth.

Second, the combination of the cam, lever, I, rod, I, lever K, and rod L, arranged as shown, for the purpose of opening and closing the mould.

Third, tilting the matrix by means of the lever attached to the oscillating mould arm, combined as described with the lever, M, which receives an oscillating motion from the arm or lever by which the oscillating motion is given the shaft or axis upon which the mould oscillates.

BEDSTEAD FASTENINGS.—By W. H. Price of Philadelphia Pa.: I claim the arrangement of the tenon, mortise, and wedge in such a manner, that the wedge will begin to act before the tenon is inserted in the mortise, and draw it gradually into said mortise, so as to completely close it when the fastening becomes firm, for the purpose of excluding vermin, &c., as set forth.

MACHINES FOR POLISHING LEATHER.—By P. P. Tapley of Lynn, Mass.: I claim the described combination and arrangement of the crank wheel, the connecting rod K, the swing bar, the lever, and the connecting rod P, and also the improvement of making the connecting rod, P in two parts jointed together, and to operate as specified, whereby the contact of the dicing or polishing ball or surface with the leather is prolonged under circumstances as stated.

GUITARS.—By W. B. Tilton of New York City: I do not claim extending the strings from the foot to the head of the instrument; but claim depressing the strings of guitars slightly below the bridge, by passing them through perforations in the ordinary pins or pegs, or by any means substantially the same, when the strings are fastened at the foot of the instrument, for causing the bridge to act as a fulcrum in producing the tension of the strings, and so relieving the sound board as to give the instrument a richer, fuller, and a more complete tone as set forth.

TURNING THE LEAVES OF BOOKS.—By C. Desbreaux of

Paris France: I do not confine myself to the dimensions mentioned, but reserve to myself the construction of the apparatus of any material and of any dimensions; the placing of the pulleys vertically or horizontally; I may find it desirable to make the boxes of the "turn pages" of wood or of metal according to the circumstance, to cover or not to cover them with cloth or leather, to use wood or metal in the construction of the stands to produce the lengthening or shortening by means of rack gearing or of levers to change the relative proportions of the pieces if necessary, to make the stamps or discs of polished or damasked metal, in conclusion to modify the details of construction, or such limits which do not change the nature of my invention of the "Magnetic turn page" as herein set forth.

[There is certainly no claim here and there may be some mistake in reference to the matter.]

POWER LOOMS.—By John Shuttleworth, of Frankfort, Pa.: I claim first, the connecting rod and lever in combination with the reciprocating frame, for the purpose of giving a reciprocating motion and a rocking motion to the shaft.

Second, I claim the rockingshaft, arm F, the vibrating lever and arms B and T, in combination with the reciprocating frame for the purpose of giving an intermittent rotary motion to the wheel and discs.

Third, I claim the discs constructed as described, in combination with the horizontal sliding stops, for the purpose of forcing out and drawing in said stops in the manner described, and also for the purpose of operating the picker bar as described.

CUTTING SCREWS IN LATHES.—By Joseph Nason, of New York City: I claim, first, the mode of constructing and combining the stud, the tube, and the guide screw, by which guide screws of the various patterns used in screw cutting may be put on or taken off expeditiously.

Second, the mode of constructing the tool bearer generally, particularly as regards placing the slide rest behind the work, whereby the cutting tool is brought into such relative position with the shaft and mandrel that the operation of raising the tool bearer from the rail remains the tool from the work.

Third, the tool lifter constructed as described.

Fourth, the combination of the guide screw, the threaded block, and the tool bearer with the shaft as set forth, by which the requisite traversing motion is imparted to the cutting tool. The operation of releasing the block from the guide screw and removing the tool from the work are simultaneously performed, and the tool bearer may be turned back out of the way when not in use.

HAY AND MANURE FORKS.—By Reuben M. Hines, of Mentz, N. Y. (assignor to Horace C. Sibley, of Seneca Falls, and Reuben M. Hines, of Mentz, N. Y.): I claim the fork with the upper part of its prongs and its tang constructed as described, in combination with the ferrule, the sockets, and slot as described.

MACHINES FOR STICKING PINS.—By Thomas W. Harvey, of New York City, (assignor to John B. Terry, of Hartford, Conn.): I claim allowing one pin at a time to pass down the conductors by means of a vibrating slide or its equivalent, so as to supply one row of pins at a time by the conductors to the forceps as specified.

HEMMING AND CORING UMBRELLA COVERS.—By Sherburn C. Blodgett, of Philadelphia, Pa., ante-dated July 3, 1853: I claim the guide for coring or hemming umbrella covers arranged upon a stand with a curved slot to fold the hem around the cor, and a hole through which the cord is passed to its place, and thus I claim whether the guide be used alone or attached to a sewing machine.

REGULATING THE DAMPER OF STEAM BOILERS.—By Patrick Clark, of Rahway, N. J.: I do not claim operating the damper of a steam boiler fire by means of the pressure of the steam in a boiler. Nor to have invented the diaphragm, nor its use to avoid friction where fluid pressure is used to produce motion, but I claim the combination of a cylindrical diaphragm with a cylinder and piston as described, for the purpose of operating the damper of a boiler fire by means of the pressure of the steam.

[We are unable to publish all the claims this week on account of the late hour at which they were received, and their extreme length. The remainder will appear next week.]

Recent Foreign Inventions.

TANNING.—Stephen Garrett, of Surrey, Eng., patentee. The skins or hides are secured on a frame, which is made to be raised and lowered in the tan vats. This mechanical action is kept up until the hides or skins are fully tanned.

BOOTS AND SHOES.—J. Jaques Jamin, of London, patentee. The improvement is on clogs—shoes with wooden soles. The improvement consists in making grooves along the edge of the sole, and securing the upper leather in the said grooves. This kind of shoes is not used in America, but is very common in England. The peasantry of Lancashire, generally, wear clogs; they are very warm for the feet, the wood being a good non-conductor. In our severe winters, especially when the roads are so slippery under foot, it would be very difficult to walk with them, because the soles are not elastic. Were it not for this defect, we would recommend their use.

MAKING MANURE.—E. T. Simpson, of Wakefield, York, Eng. This method of making manure, consists in taking woolen rags, shoddy, and other waste products of wool, and dissolving them with an acid, such as nitric, exposed to artificial heat, and then combining the fluid so obtained with bones, coprolites, or animal charcoal.

ROASTING COFFEE, &c.—George Berry, of London, patentee. This inventor places his coffee beans, or cocoa, &c., for roasting, in a vessel, from which he extracts all the air, and during the roasting process he also draws off all the steam by an air pump. By this method he says he retains all the aromatic products in the beans, &c.

TREATING FLAX.—C. J. Pownall, of Addison Road, Middlesex, Eng., patentee. This inventor takes flax, while wet and swollen, by steeping and fermentation, and subjects it to the action of water falling from a height of 6 feet and upwards, for the purpose of more effectually washing away the gummy and glutinous matters in it.

GRATES AND STOVES.—J. L. Stevens, of London, patentee. The improvement consists in the admission of currents of hot air behind the back plates of the stove or grate, above or about the level of the fire, such currents of air being made to pass through channels formed underneath or at the sides of the fire, and partly heated thereby and partly by the back plate of the stove or grate. The object of this invention is to improve the combustion of the fuel, and to reduce the quantity of smoke given off, either by the use of wood or bituminous coal. Those who think there are no improvements to be made on our stoves, are greatly mistaken. Indefinite complexity more than simple utility, prevails in all our stoves.

EXTRACTING JUICE FROM SUGAR CANE.—J. T. Manifold, C. S. Lowndes, and J. Jordan, of Liverpool, patentees. The patent obtained is simply for reducing the cane into very minute pieces, then subjecting these pieces to the action of steam in close vessels, and after this pressing out the juice in a hydrostatic press. The sugar cane is reduced to fine pieces, like eye-wood chips, by a series of circular saws. This is certainly, so far as we are aware, a very novel mode of treating sugar cane. The reduced canes, when steamed, can be placed in bags and easily subjected to hydrostatic pressure, but what effect the steaming may have upon the sugar (its quality) so obtained, we are unable to say. The subject is at least worthy the attention of our sugar planters.

STEAM BOILERS.—C. Cowper, Kensington, Middlesex, Eng., patentee. The boiler is made of an assemblage of tapering cells connected by pipes with valves so arranged that in the bursting of a cell it can be immediately shut off from the rest of the boiler by closing the valve by hand, or by the pressure of the steam.

NEW METHOD OF OBTAINING MOTIVE POWER.—E. J. Shollick, ofilverstone, Eng., patentee. This new invention consists in obtaining powerful electric currents from a magneto-electric machine, and applying those currents to decompose water into its elementary gases—hydrogen and oxygen—then admitting them into a cylinder behind a piston, passing an electric spark through them and thus exploding them—revolving them into water again, and thus give motion to the piston, which is to work like that of a steam engine, and move machinery in the same manner. This inventor is stated to be an Esquire; this may be, but he is not acquainted with the laws of physics. Leaving out friction in the working parts of this machine—he can obtain no more power by the explosion of the gases of water than the power expended to resolve the water into its elementary gases; this is the law in physics, and no combination of machinery can alter it.

PRINTING COLORS ON TEXTILE FABRICS.—F. A. Gatty, of Accrington, Lancaster, Eng., patentee. Milk of lime is about 1.10 specific gravity, is saturated with a stream of chlorine gas, whereby a solution containing chloride of calcium is obtained; 600 lbs. of alum are then dissolved in 200 gallons of water, and to this 100 gallons of the above chloride mixture is added, forming thereby chlorate and hydrochlorate of alumina in solution, and the sulphate of lime as a precipitate. The latter is separated by filtration or decantation. This solution is employed as an improved mordant, and is used in the ordinary manner in the preparation of colors. This may be a useful mordant for bark greens—as a substitute for aluminous pyroligneous acid; also in place of the common red liquor, and it may be a good mordant for madder colors, in place of the common mordant, which is made by mixing a solution of soda or the acetate of lead with alum.

IMPROVEMENT IN LOOMS FOR WEAVING.—Robert Boyd, of Paisley, Scotland, patentee. This improvement consists in having an airtight cylinder (in which there is a piston) by the compression and exhaustion of which the shuttle is moved across the raceway of the lathe.

Le Verrier, the astronomer, in a paper which he recently read before the Paris Academy of Sciences, suggests that we may expect the discovery of a prodigious number of small planets.