398



## [Reported Officially for the Scientific American.] LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING AUGUST 15, 1854.

CLOSING THE MOUTHS OF BOTLES, &O. AIR-TIGHT-Ro-bert Arthur, of Washington, D. C. : I do not claim any method of rendering vessels air-tight by the aid of caps or stoppers screwed or cemented in places: but only the vessel as contrived as to be made tight by means of a groove or receptacle containing a yielding medium which is to be penetrated uy the caps or cover, with the receptacle so contrived that the bottle may be invert-ed to pour out its contents without spilling the liquid or yielding medium from the groove or receptacle, as set forth.

Program Boors AND SHOES-J. A. Bradshaw, of Lew-ell, Mass. I claim, first, the combination with the grooved wheel of the arm, for the parpose of present-ing the pegs to the wheels longitudinally, arranged and operated as set forth.

operated as set forth. Second, the application of the grooved wheel in com bination with the burr wheel and tube, as described. Third, the levers, pawl, and ratchet, on a grooved wheel, or their equivalents, arranged and combined as described. Fourth, the clamps or forceps to receive the peg from the wheel, in combination with the detectors, the punch-es, and the double depend for the survey of the punch-

the wheel, in combination with the detectors the punch-es, and the double channel, for the purpose of insuring the proper presentation of the peg with the pointdown-

ward. Fifth, the combination of the forceps, the wedge shaped driver and the adjustable stop screw, as set forth.

forth. Sixth, the apparatus for holding the bootor shoe dur-ing the operation of pegging, consisting of the plate revolving upon the ring of the plate, and having the clamps, or their equivalents, the whole arrangedias set

forth. Seventh, the combination of the hinge joints, the shaft, and the levers or their equivalents, as and for the purpose set forth.

GLASS MOLDS-Wm. Brooke, of Jersey City, N. J.: I claim the shoulder when used in combination with the cap plate and plunger, as set forth.

cap plate and plunger, as set forth. Hor AIR RANGE AND SIDE OVENS-John H. Cahill, of Philadelphia. Pa: I do not claim passing tresh hot air into an oven, nor radiating flues applied to a range, with an elevated side oven independently of their pe-culiar mode of construction and arrangtment. But i claim, first, the use of the fresh not air pipe, when constructed and combined with the hot air cham-ber, and elevated side oven and vent hole, especially for the purpose of preventing the fumes or vapors aris-ing from the substances being cooked in the oven when in operation, from being drawn or forced out by the oven into the hot-air chamber, as described. Secoud, I claim making the elevated side oven flues of square section, and united together by the partitions,

or square section, and united together by the partitions, as duscribed, so as to leave equal and flat surfaces in the oven and hot-air chamber, arranged so as to ra-diate heat therefrom on all sides of the oven, excepting the door side, and also so as to radiate heat into the hot air chamber from the flues on four sides of the oven, as described.

RAILROAD CAR BRAKES-M. P. Coons, of Brooklyn, N. Y. : I do not claim any particular device, or the con-struction of any plan of leverage for the purpose of operating the brake, as that may be accomplished by

operating the brake, as that may be accomplished by various modes. But I claim a lever form brake, which, when in action, shall bear and brake simultaneously, both upon the wheels and rails, the friction upon the latter supplying the braking force upon the former, and the whole be-ing adjustable and self-acting through the combined agency of an eccentric or cam, bearing, or resisting point between the brake and car, all for the purposeset forth.

TURNING IRREGULAR FORMS-A. D. Crane, of Newark. N. J. 1 do not claim the principle of the outting irreg-ular surfaces by means of a cutter or a series of cutter revolving in contact with the materials to be out, said materials also revolving in the same direction with the said cutters. said cutters. But 1 claim the cutting wheel combined to gether, guided, and controlled, as set forth.

RAKES-D. M. Cummings, of Enfield, N. H.: I claim the mode of fastening the head of the rake to the han-dle or tail by the use of the head fastener containing the socket, and the clasp, in combination with the han-dle, the head, and the screw, as set forth.

HAND PRESS-B. F. Day, of Philadelphia, Pa.: I am aware that levers and toggles have been used in a va-riety of presses; these I do net claim. But I claim so arranging the levers, toggle, and fol-lower, that by grasping the handles of the levers in the hand of the operator, one platen shall be brought down hard upon the bed, the whole being arrought for the purpose of a seal hand press, as set torth.

SECURING HUBS TO AXLES-COOK DArling, of Utica, N. SECURING HUBS TO AXLES-COOK DArling, of Utica, N. Y.: i do not claim the holding on the wheel by means of a groove encircling the front end of the axle, because that feature of the isstening has been used before:--neither do I claim operating the guard plates, or collar closing over the groove by means of the key in front, . But i claim the combination and arrangement of the several parts, vis. the axle with the conical end, the guard plates, and the means or operating the same by the use of the key in front.

3

the use of the key in front. PUNCHES AND DIESFOR PUNCHING WATCH HANDS-A. L. Dennison, of KANDURY, MASS. I claim the construc-tion and arrangement of the punca and die, as set iorth, the punch being of elementary parts, formed to throughout their whole uepth, and braced between blocks or clamps made to the figure of the article to be formed, by which construction the most delicate and complex punch can beformed in a cheap and expedi-tious manner, and readily renewed or changed, and being throughout of the same magnitude, are readily and perfectly hardened, without injury, which has heretofore been found an insuperable difficulty in punching small delicate work. COMBING WOOL-Chas. G. Sargent, of Lowell, Mass. 1 claim, first, drawing out and stapling the material, as set forth, previous, to commencing the combing operation. Second, I claim the continuous motion of the nipper or other parts which operate upon the wool, whereby or other parts which operate upon the wool, whereby I am enabled to keep a number of them in operation at the same time, the different steps in the process pro-ceeding simultaneously upon different portions of the material without the necessity of interrupting any one of them for the performance of another, and without retrograde motion of any of the parts of the machine. Lolaim the method described of opening and closing with enthusiasm. PLOWS-Joshua Gibbs, of Canton, Ohio: I claim, first, making the working surface of the mold board in the form of a section of the interior surface of a hollow opi inder, the center or axis of said cylinder being parallel board or bottom of the plow as described. I claim the method described of opening and elosing with the cam. Q, or its equivalent, whereby the inpers are closed suddenly upon the woo, whatever may be the rate of motion of the nipper cylinder. RAILROAD CAR WINDOWS-George Spencer, of Utica, N. Y. : I claim the combination with the side of a carry RAILROAD CAR WINDOWS-George Spencer, of Utica, N. Y.: 1 claim the combination with the side of a car of a revolving window, consisting of two separate circular sashes connected by hinges, so that one sash may be opened to its full extent, and having a small part of the circle cutoff, so that by revolving it upon its center a small opening may be made at the forward part of the window, whichever way the car may be moving, the residue of the window remaining at the same time cov-ered, as described. LAMPS-Joseph Harris, Jr., of Boston, Mass.: I claim the arrangement and construction of the lamp, as de scribed. Scribed. SAFETY APPARATOS FOR STEAM BOILERS-A. H. Judd, of St. Louis, Mo. : 1 claim passing the stem of the valve through an enlargement in the supporting tube, by which I am enabled to give short bearings to said stem for the purpose of preventing if from becoming fasten-ed in its bearings by oxydition, or the action of the heat upon the earthy matter driven through the same, when the valve is opened, and also for the purpose of producing a fuller and clearer sound, when the valve is opened, and also for the purpose of producing a fuller and clearer sound, when the valve is open d, than is produced by the escape of steam through the ordinary gauge cock. ered, as described. FIRE ARMS-W.A. Sweet. of Pompey, N. Y.: I claim, producing the compound longitudinal and vibratory movement of the breech, and afterwards immovably securing it nontact with the barrel, by a single for-ward and return motion of the actualing lever, with by means of the campicoe, provided with a shoulder, with by means of the campicoe, provided with a shoulder, and cribed, produces repetively the back ward longitudi-nal and vibratory motion of the breech, and finally pressed it against the barrel with immense force. T also claim the link, one end of which is hinged to the lever, and the other end provided with a slot that produced by the escape of steam through the ordinary gauge cock. I also claim removing portions of the sides from that part of the valve stem which passes through its inner bearing aperture. So as to leave narrow bearing surfa-ces to guide and steady the valve, for the jurpose of prevening said valve stem from becoming fastened within its inner bearing aperture, and also forcausing

## Scientific American.

a large volume of steam to escape and give the alarm when a lack of water in the boiler or excessive heat of the steam causes the float to sink, as set forth. I also claim combining the valve stem with the float, in such a manner that when the float shall sink and open the valve, the valve stem may be detached there-from for the purpose of again closing the same by sim-ply giving a partial turn to said valve stem by means of its handle, as described. I also claim giving an alarm whenever the steam in the boiler is allowed to accumulate to a danger ous de-gree of pressure, by placing a plug of fusible alloy in an aperture in one end of the float which is connected with my improved arrangement of gauge cock, as spe-cified.

GRINDSTONE FRAME-J. L. Lord, of Chester, Ct.: I claim the grindstone frame, constructed as set forth, that is to say, cast in two pieces of such form that when put together, as described, it shall furnish the bearings for the shaft and friction roller, both of which shall be protected from injury and from dust or water, and also from being displaced from their sositions in the frame, either by accident or design.

RAILROAD CAR BRAKES-T. G. McLaughlin, of Phila-elphia, Pa. : I am aware that many of the devices de-

A source of the set of

HARBOWS-Jacob Myers of Powhatan Point, Ohio: I claim the triangular wings upon the turned up-portion of the teeth, with their land sides so inclined as to have a tendency from the plant when the implement is moving forward, constructed and arranged as set forth, for pulverizing the earth and otherwise facilitating the cultivation of cotton.

Ling RINS-Robert Neisch, of New York City: I claim, in combination with the fire chamber, the sir-conducting passage for the purpose of bringing in the air from above the fire, as described. I also claim, in combination with the arched fire chamber, the inclined and curred berth for concentra-ting the fuel and throwing the flame or heat towards the stack. as described.

UNICATING COAL AND OTHER CARS—A. Patrick, of Al-leghany Co., Md.: I claim the manner of liberating the pin which holds the door of the car by a lever attached to said pin, calculated to lift it and open the door when the car enters upon a tilting frame. Also I claim the iron bar upon a tilting frame forming a hook to hold the car: and at the same time a means of lifting the lever to open the door of the car, or in other words, the combination of this lever and tilting frame to facilitate the unloading of mine cars.

SEWING MACHINES-B. H. Roper, of Worcester. Mash.: I claim the groove tube or thread passage, in combina-tion with a needle made to operate a thread, as descri-bed, said passage being for the purpose of supporting the thread and preventing it from kinking or injurious-ly springing back or towards the cloth immediately af-ter the release of the thread from the needle, as de-

If spinls ing back of towards the constraint mentately al-ter the release of the thread from the needle, as de-scribed. I do not claim the invention or employment of a slide or an equivalent contrivance to close down on the barb and over the opening of the hook of a needle to an dow lealing in a such manner that old a slid shall play or move the agenore machine has side of the needle, as the shan, on the 19th April 1863 while the the the slid shall be also the the the shan, on the 19th April 1863 while the the the making the shank of the needle tubular, and inserting the closing slide within the same, where by such closing slide is better protected from ac-cident, or being broken by catching in the cloth or thread, or otherwise broken, as it is liable to be when made to run in a groove formed in the side of the needle. And in combination together and used with a hook needle, I claim the two thread benders, as made to ope-rate on the thread, and lay it in the opening of the needle, as specified.

rate on the intreau, and say it is not seven include as specified. And in combination with the thread benders, I claim the lip or nipper and the spring nipper, the same being for the purpose of seising the thread, and enabling the needle to draw it closely into the cloth, as specified. I also claim the above described improved mode of connecting the two connecting rods to one orank pin, viz, by the projections from the rods and the covering tube or ferrule, as specified.

TURN-TABLES-J. C. Robie, of Binghamton, N. Y.: I claim, first, balancing the platform of the turn-table upon a transverse central shalt or other suitable axis resting upon the roller carriage in a line intersecting the line of the axis upon which the turn-table rotates, in such a manner that the table, when in an horizontal position, is elevated or has its rails above those of the track, to admit of the free swing of the table over its under supports or bearings, and so that the table may be rocked with facility from its center, or tilted to bring shaft into line or level with the rails of the track, for the purposes set forth. Second, I also claim the manner described of holding ing axle when required, by means of the came arranged to bear upon the roller carriage, and operating in con-nection with the roller carriage and table, as set forth. TURN-TABLES-J. C. Robie, of Binghamton, N. Y. laim, first, balancing the platform of the turn-ta

MACHINES FOR CUTTING IRREGULAR FORMS-O. L. Rey olds, of Dover, N. H.: I claim combining a series c atterns, and the chucks for the blocks, with each other MAGHINES FOR CUTTING IRREQULAR FORMS-O. L. Rey-nolds, of Dover, N. H. : I claim combining a series of patterns, and the chucks for the blocks, with each other and with the collar, he vertical slides, the pawls, the ratchet wheels, and the recesses in the arms, or their equivalents, in such a manner that said series of pat-terns and blocks shall have corresponding compound rotary and longitudinally reciprocating movementsim-parted to them, as set forth. I also claim supporting the weight of the outterwheel upon a series of rotating and longitudinally reciproca-ting patterns, when said patterns are combined with chucks for a series of blocks, in such a manner that cor-responding movements shall be imparted to said pat-terns and blocks, and said blocks be so situated as to be operated upon by the cutters, as setforth.

receives a pin on the hammer dog, when arranged and operated as specified, for the purpose of cocking the gun by the action of the actuating lever in operating the breech, while at the same time the hammer remains gin by the action of the actuating lever in operating the breach, while at the same time the hammer remains free to be raised in the ordinary way without moving said lever. I also claim the arrangement of a broad cavity in the face of the hammer with a sharp edge on its rear side, in combination with the compound move-ment of the breech, and the properly regulated motion of the hammer, substantially as herein described, for the purpose of removing the exploded caps from the nipple. I also claim the combination of the mouth piece attached to the extremity of the feeding tube, and provided with a notched to maue, projecting for-ward from one side, and of the short tube, which is a wedge shaped projection extending forward from the side opposite to the tongue, when the whole being sit-uated and arranged in such a manner as to receive the pipple and supply it with a cap whenever the breech is nipple and supply it with a cap whenever the breech is fully opened, as specified.

IULY OPENED, as specified. SEED PLANTERS -I. T. Wait and L. P. Wait, of Water-loo, 8. C. We are aware that two shafts have been used before, one or bothof which have been operated by gears or some equivalent device, therefore we do not claim the sqitating and delivering shafts indepen-dent of the means we use to operate them, but we claim making one wheel larger than the other, and putting them on separate axles, so as to make one operate the burr or apparatus which stirs the seed, and the other the burr or apparatus which delivers the seed, as des-cribed, without the aid of gearing or other equivalent devices.

Honsig Rargs-Moses D. Wells, of Morgantown, Va.: I am aware that various forms of spring bars are in use for holding the teeth of horse rakes. I therefore make no claim to spring bars, nor to antifriction roll-ers of themselves. But I do claim the described meth-od of regulating the action of the rake teeth, by the reverse antifriction rollers, arranged and operating as set forih.

as set forth. INSULATORS FOR LIGHTNING RODE—Timothy U. Webb, of Jersey Ois, N. J.: I do not claim making the out-side of the insulator with a horizontal groove in the middle, and a fiange on each side of the groove. But I claim making the inner surface convex in the manner and for the purposes described.

manner and for the purposes described. PRINTING LONG-NAPED FARMOS-Wm. A. White, of Roxbury, Mass.: I claim the described process of color-ing and finishing a napped fabric after the fibers have been laid in one direction by the ordinary or common process of finishing them; the said process consisting in raising and turning the fibers over and down upon the doth in a contrary direction, and printing figures or devices upon them in one or more colors, and finally position or direction, as set forth.

GOLD AMALGAMATORS-A. S. Wright. of San Francisco Cal.: 1 claim the method described for amalgamating Cal. : I claim the method described for amalgamating gold in hollow revolving cylinders upon horizontal axes, said axes, journal, or trunnion being hollow to admit the pulverized quartz or ore from one cylinder into another, the in ets through the trunnion being smaller than the end of the outlet; the said cylinders connected by fiangesor pipes with grooves tarned into the axes or trunnions, and rings fitted into the grooves and covered by the flanges; it the whole being so con-nected as to make them water or steam tight, and so arranged as to give a fall of about six inches to each cylinder, said cylinders containing rollers, knives, burnishers, and other analogous arranged ato pro-duce friction, scour the ore, and produce the amalgam with quicksilver, the whole arranged and combined, as set forth, set forth

PEGING BOOTS ARD SHOES- William Kidder, (assignor to William Kidder & Nehemiah Hunt.) of Newburyport, Mass. : I claim the combining with the handle of the machine, and the machiners for driving the pegs, a feeding mechanism by which under the movement of the awl and stock, the feeding or regulating of the feeding of the machine along on the sole is effected. I also claim the combination of mechanism by which the feeding of the machine is regulated while the ma-chine is held in the hand and pressed against and along on the edge of the sole as stated, the said combination being the serrated wheel, the spring catch, the slide, and the cam on the awl driver or stock.

and the cam on the awl driver or stock. I also claim the combination of the movable or slid-ing peg receiver with the pegwood carrier, and theaw driver or stock, the same being applied and made to perate as stated.

WINNOWERS-Henry H. Beach, of Chicago, Ill.: 1 claim the board (delivering the grain to the front edge of the blast) in its larrangement with the drum and in-clined planes, as set forth. DESIGN.

COOKING STOVES-Francis Heller & Elias Young, of Cincinnati, Ohio.

## Great Trial of Reaping Machines.

A trial between a Reaping Machine of J. L. Wright, of Chicago, Ill., and one of J. H. Many's of Rockford, Ill., took place at Squaw Prairie, Ill., on the 26th of last month. The trial was for a prize of \$1,500. The contest occupied parts of five days: the judges were M. L. Dunlap, H. Miller, and R. Emerson, Jr. The machines are known by the names of "Atkin's Self-raking Reaper," (Wright's, which has been illustrated in our columns,) and the adjustable combined Reaper and Mower of Mr. Many. Each machine was to cut 20 acres in one day, and the points to be decided were. the relative amount of manual labor in Raking, Binding, and Shocking. We have received the report of the judges,-but the result of the trial and the report are anything but satisfactory. The machines cut down their 20 acres each per day, with ease, and they did their work well; but the judges made the trial a drawn game. Each machine has superior qualities of its own, and the report speaks of both

ent day, build works which in ancient times would be considered monuments that required the whole available wealth of a nation to con struct.

Sulphuric Acid-Phosphate of Lime-Chemical Ignorance.

The French Academy of Science at a recent sitting received a communication of a discovery which may become very advantageous. In some experiments made at the laboratory of the Sorbonne, the operator has succeeded, by an ingenious employment of chlorohydric acid acting in presence of charcoal, in decomposing the sulphate of lime (plaster) in such a manner as to extract sulphuric acid from it, and to obtain from bones, either first transformed into animal black, or in a natural state, all the phosphorus they contain. With regard to the former of these results, the manufacture of sulphuric acid by means of sulphate of lime is one of the great desiderata of practical science, and there will be from the latter a great advantage in diminishing the price of phosphorus by a more simple and rapid production."

[We have seen the above paragraph in at least a dozen of our exchanges. Our cotemporaries should be exceedingly careful of such notices. The ingenious employment of "hydrochloric acting in the presence of charcoal in decomposing the sulphate of lime," is certainly a puzzler. The use of hydrochloric acid to obtain sulphuric acid from plaster of Paris would be a very foolish operation, as it would be using a dear to obtain a cheaper acid. Sulphuric acid is now used to decompose bones, to render them soluble in water, and how in the name of science and common sense the above described new discovery can be a desideratum, as stated, of practical science, and diminish the price of phosphorus, is more than we can conceive. The whole paragraph exhibits a great amount of chemical ignorance.

## To Destroy Rose Bugs.

MESSRS. EDITORS.—Under your "Scientific Memoranda" head of the 29th ult., I notice a method for destroying the rose bug, which, though doubtless an effectual remedy, is not always to be obtained, and if obtained must have a limitation in quantity. May I suggest a remedy that I have used with satisfactory results for many years, which is within the reach of all, without limitation of supply, and in point of economy to be commended to consideration.

Air-slacked lime is my remedy, and I apply it as follows, viz. :- I attach a sieve, (with rather coarse meshes) to a common cane fishing rod, the elasticity of which aids materially in sifting the lime upon the vines, trees, &c, and at night before the dew falls to any extent, sift it upon the foliage infected with the insect, and have never had occasion to repeat the application more than once, or been troubled a second time the same season. By this simple process I have saved my roses, grapes, and trees, while my neighbors have lost all.

Yours, B. T. E.

Boston, Mass., July 29th, 1854.

Boiler Feeder.

On page 323, (June 13) there were published the claims of a patent for an improvement in feeding and regulating the hight of water in steam boilers, granted to H. C. Sergeant, of Cincinnati. Having been inquired of regarding the nature of the invention, we would state that it simply consists of an arrangement and combination of valves and a float within a box, which has means of communication with a reservoir of water and with the steam and water spaces of the boiler, by means of which the boiler is continually supplied with water from the reservoir, and the desired level is

A Great Railway Bridge.

Some of our Western exchanges speak of the bridge of the Illinois Central Railway Com-

pany, over the Illinois River at La Salle, as fully equal to any structure of the kind in Amer. thus maintained.

ica. It extends across from bluff to bluff, is more than half a mile long, and seventy feet

high, supported by seventeen massive stone

Bad American Flour.

The Belfast "Mercantile Journal," an Irish paper, asserts that American flour is now losing its character in the Liverpool market, and that it is inferior to the French. It asserts that No. 1 is a disgrace to American millers. We regret this exceedingly, and hope it is not true. Our millers must not permit their an-