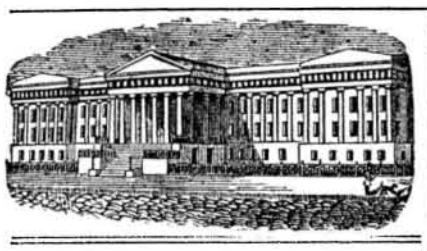

[Reported Officially for the Scientific American.]

## LIST OF PATENT CLAIMS

### Issued from the United States Patent Office

FOR THE WEEK ENDING AUGUST 5, 1856.

FLY TRAP—Samuel Arnold, of Wilson Co., Tenn.: I claim the mechanical arrangement of box, jar, springs, lever, slides, and covering described for the purposes set forth.

WEATHER STRIP FOR DOORS—J. H. Banta, of Pier mont, N. Y.: I do not claim a weather strip applied on the bottom edge of a door or window, and kept to the sill by springs, as this has before been done; neither do I claim a double inclined latch.

But I claim the bar, e, constructed with the T-head, f, and fitted into the slot in plate c, substantially as specified.

I also claim, in combination with said bar, e, the double inclined latch, h, for the purposes substantially as specified.

REEL FOR FISHING RODS—John A. Bailey, of Jersey City: N. J., assignor to John Warren, of New York, N. Y.: I claim the sliding crank shaft, F, and spring, E, arranged as shown, or in an equivalent way, so that the pinion D, and wheel G, may be placed in and out of gear, as desired, and the reel, B, connected with and disconnected from the shaft.

MORTISING MACHINE—T. R. Bailey, of Lockport, N. Y.: I do not claim a rotating and vibrating mandrel, irrespective of the construction and arrangement shown.

But I claim the mandrel, H, fitted in bearings, I J, attached to sliding plates, L M, one of the bearings, I, being pivoted to the plate, L, and the other bearing, J, allowed to slide on the other plate, M, the mandrel, H, being vibrated laterally by the screw, f, worm wheel, g, eccentric h, pitman N, and bent lever O, the whole being arranged as shown for the purpose set forth.

SPIKE MACHINES—Moody Belknap, of Boston, Mass: I claim the improvement of making the movable knife, D, with a rectangular recess, f, for the purpose and to operate substantially in manner explained.

SEWING MACHINES—S. C. Blodgett, of Philadelphia, Pa.: I claim, first, the arrangement of the crimping notch, g, in the shuttle, for the purpose of drawing the slack thread from the needle, and thus preventing the loop of thread from being taken up a second time, as described.

Second, the employment of a series of pawls or drivers around the circumference of a discoidal or circular shuttle, whereby the driving force is applied equally or nearly so, through a considerable arc of the circumference of such shuttle.

Third, the mode of driving the disk shuttle at its circumference by means of a hollow pulley or sleeve, B, revolving around a fixed shaft or axis, C.

Fourth, the mode of giving motion to the needle arm and feed rollers by direct connection with the same sleeve or revolving shaft, to which the drivers are attached, which drive the disk shuttle, substantially as described.

Fifth, the arrangement of the cams, C C', and lever k' for operating the slide k, in combination with the cam e, and arm H, for operating the pressure pad, in the manner and for the purpose described.

SEWING MACHINES—Joseph Bond, Jr., of Philadelphia, Pa.: I claim, first, the driving of the spool case G, by placing the latter on a stationary spool case holder, within a cylindrical driver, having any convenient number of internal teeth, the driver being situated eccentrically with the holder, so that the internal teeth of the former may catch into the recesses in the edge of the spool case, and cause the same to revolve, at the same time leaving a space between the holder and the driver on the side opposite to that where the teeth act on the spool case for the play of the needle and its thread.

Second, the hooked lever, L, in combination with the cam, n, on the driver, E, arranged and operating substantially in the manner and for the purpose set forth.

BRICK PRESS—John Boynton, of East Hartford, Conn. I do not claim a brick press composed of a revolvable molding cylinder or prism, having molds placed in its perimeter or cylindric surface, a mechanism for supplying or filling clay into the molds, a pressing mechanism, a discharging mechanism, and a mechanism for imparting to the molding cylinder an intermittent rotary motion.

But I claim the rotary matrices, a a, and the plate, C, in which they are formed, hopper K filling plunger L, compresser U, bed or mold plate, B, and discharger, V, arranged in relation to and in combination with each other so as to be operated by mechanism, as described.

ATTACHING AND DETACHING BOATS—J. M. Brooke U. S. N.: I claim the application to boats and their hoisting and lowering apparatus, a bolt with a hollow head, opening on and forming part of a curved channel, or deflecting surface; having also a curved slot to correspond with the channel so that a ball fitting conformably thereto will, by the force of gravity, when permitted, follow this curve and be turned aside, and moreover will be prevented from re-attaching itself to the bolt if passing up and down before the aperture.

I also claim the arrangement of a cock or prop let into the side of the deflecting surface, so as to secure the ball in the head of the bolt when required, but offering no obstacle to its entrance.

WATER CLOSETS—W. S. Carr, of New York City: I am well aware that cocks have heretofore been fitted in such a manner as to avoid any sudden motion in either opening or closing; therefore I lay no claim to so doing.

I am also aware that a given amount of water leakage has been used to prevent a sudden motion in cocks, balances, meters, and a variety of other instruments: therefore I do not claim the same.

I claim the valve, g, with its cylinder 3, and openings x, constructed and acting in the seat 2, in the manner and for the purposes substantially as specified.

I also claim the cup leather, m, in the cylinder, k, fitted with the required amount of water leakage, when combined with said valve or cock, g x 3, and spring, i, the whole constructed and operating substantially as specified.

I also claim unlatching the pan, r, from the lever, p, to empty the contents thereof, and then retaining said pan in its depressed position while being washed out by providing the notch 10, pin 11, and hook 12, the whole constructed and acting in connection with the gradual motion of the stern, h, of the valve, substantially as specified.

ENVELOPE—W. H. Coates, of Philadelphia, Pa.: Although as an extra secure means of fastening envelopes, I have shown the same as furnished with double wafers attached together by means of strings, I do not desire to confine myself to their use, as the adhesive materials, independent of the connected wafers, afford an efficient security.

But I claim the construction of envelopes with an extra turn-down, e, said turn-down being furnished with adhesive substance, and being arranged substantially in the manner and for the purpose set forth.

BAGASSE FURNACES—S. H. Gilman, of New Orleans, La.: I claim the combination of a dome covered cylindrical chamber A, having a circular base with a draft door located at E, an arch covered second square chamber B, a pit D, a heat conduit or throat K, when constructed, proportioned, located, arranged and combined in the manner and for the purpose set forth and described.

I also claim the location in a bagasse furnace of the draft, door, or opening through which the air is admitted to support combustion, at or near the hearth level or fire bed, and directly opposite the opening through the products of combustion leave the first chamber of the furnace, and in the vertical plane passing through the center of the two chambers, A and B, and the center of the opening where the two chambers unite, when the hearth of the second chamber is substantially on a level with the hearth which supports the baggasse to be burned.

ICE BREAKING BOATS—Henry and William Brown, of Philadelphia, Pa.: We claim the formation of a recess in the bows of a steamboat, said recess having inclined shelves, E and E', anguiar terminations, F and F', and angular rib, G, in combination with the guards, H and H', the whole being arranged and constructed substantially in the manner set forth, for the purpose of breaking a channel through ice, and directing the broken pieces under the ice remaining on each side of the channel.

SASH SUPPORTER—C. H. Dana, of West Lebanon, N. H.: I claim the lever, C, with roller D, on axle or pivot, a, arranged and operating in the inclined groove, d, as described and for the purpose set forth.

PRINTING PRESS—W. H. Danforth, of Salem, Mass.: I do not claim the broad use of a type form, when it is required to be run out upon a stand placed outside of the platen, between every impression, to allow the types to be inked.

But I claim, first, the traveling bed plate and its attachments, as described, substantially in combination with the bed, B, worm, C, shaft and crank, C', or their mechanical equivalent, and table A'', the whole being arranged and operated substantially as described, and for the purpose shown.

Second, I claim the improved manner that I have designed, forming the two sets of griping bars, I I', for insuring an equal gripe upon the sheets throughout their whole length, as set forth, and in the manner of arranging the two sets of endless chains to which they are attached, so as to allow the two sets of griping bars to act together continuously, upon the leading edge of the sheet from the time that they seize upon it until it is discharged, printed, from the machine. And also in the manner of insuring precision, and exactness of action to the griping bars, at the time that they seize upon and relax their hold upon the sheet, by the employment of the bar separators, m m', and brush, P, the whole being arranged and operated in a manner substantially as described and shown.

Third, I claim the movable or vibrating guide and gauge frame, f, constructed, arranged, and operated in a manner substantially as described, for the purpose of holding the ends of the curved griping bars together, while they are required to gripe the sheets, and for giving to the cross-strings, e e e, by means of the side lips or flanges 6, 6, &c., their required degree of tension to enable them to hold up the center of the sheets between the cross bars, while passing them across over the types, and also enable them to withdraw the printed sheet from off the face of the types, by not allowing the chains, H H, to be displaced from the lines that they are required to travel in, by this act, and for guiding the two sets of chains, H H', and their attachments across in a line above the face of the types, and pile of discharged sheets, substantially as described and for the purpose shown.

Fourth, I claim the employment of a series of pendants, O', suspended from movable top pieces Q, so that they can be moved in or out, to adapt them to the various widths of sheets required to be printed, and keep them always in lines that are parallel to each other, substantially as set forth, for the purpose of uniformly guiding the discharged sheets as they fall to the pile.

Fifth, I claim the device employed for giving the necessary interval of rest to the feeding chains, griping bars, &c., at the time that the impressions are to be given, consisting of the feeding pulleys, J J, feeding wheel L, ratchet wheel M, pawl h, stud h, adjustable grooved disk wheel N, wheel L', cam disks i i, pawls k, pins b b, and brake levers o o, as specified.

Sixth, I claim feeding the ink supply apron between the presure roller U, and the periphery of the ink fountain roller, V, in a manner substantially as shown, for the purpose of insuring a graduated and an equal deposit of ink upon all parts of its surface, for the purpose shown.

CARPET FASTENINGS—S. R. C. Denison, of Rochester, N. Y.: I claim my method of fastening carpets by means of the metallic cams attached to the base board, which cams not only hold the carpet firmly in its place, but afford facilities for its instantaneous removal in case of fire or other emergency, said cams being constructed and operating substantially as described.

It being understood that I do not claim the use of buttons for fastening carpets, they having been before used in other ways, as in the fastening of Wm. Loughborough, patented June 5, 1855, but claim only the manner in which they are applied, as specified.

METAL PAVEMENT—S. B. Ellithorp, of New York, N. Y.: I do not claim the use of metal blocks for pavements, nor the use of blocks with grooved arches without interstices between the arches, nor the use of cement, gravel or sand, to fill the interstices of metal blocks for pavements.

But I claim a metal block for pavements, formed of a series of groined arches, alternating in position and connected to ridge or string pieces with interstices between the arches to be filled with cement, gravel or sand, as specified.

COMPRESSED AIR R.R. SIGNALS—John W. Fowle, of Cincinnati, O.: I claim the arrangement of the valves 25 26, with the air chest 24, when acted upon by compressed air for the purpose of setting in motion the alarming apparatus for purposes stated.

I also claim the arrangement of the levers, 18, rods 22, levers 27, 20, and 23, rods 40 and lever 39, catch plates 36, 37 and 38, and springs 29 and 30, and these arranged with the shafts 9, 9, and levers 10 and 11, for the purpose of resetting the alarming and signal apparatus, as described, when operated on by the lever valve 26, for the purposes mentioned.

WRENCH—Lorenzo D. Gilman, of Troy, N. Y.: I do not claim inserting a forked piece of metal with a square shank upon one end, in the square slot of the axis of the wrench and supported by a nut; neither do I claim the teeth on the axis; neither do I claim the pad, those having been used prior to my having any knowledge of wrenches.

I claim the use of adjustable jaws, E E, as described, moving in the slot, C C, and operated in connection with the groove in the jaws, forming an adjustable socket, in the manner set forth.

BREAKING ICE—Isaac H. Giffing, of New York City: I do not claim a pointed iron or steel for breaking ice.

But I claim the looped rod, the sliding ball or weight, and the point, all in connection, as set forth, using for that purpose any metal of any size or shape that may be necessary for the purpose of ornament or for attaining the object in view, viz., breaking ice.

KNITTING MACHINES—Augustus J. and Demus Goffe, of Cohoes, N. Y.: We are aware that machines have been made which have a complete converging series of latch needles arranged in a circular plane to slide endwise and down the yarn from a yarn carrier around stops arranged between the needles to take up enough yarn for the new loops; and we know that machines are in use which have a complete converging stationary series of fixed needles arranged in a plane; but our invention, as described, is not embraced by such machines.

We claim the employment of a stationary circular converging series of hooked needles, arranged in a plane and made to slide in respect to the revolving or traveling yarn carrier and presser, and also in regard to the stationary ring of stops, c c, as described, in connection with the inside web guide, C, or its equivalent, as set forth, for knitting plain tubular work.

LOCKS—Joseph M. Lippincott, of Pittsburgh, Pa.: I claim the use of a stationary tumbler chamber with movable wards and tumblers, in combination with the fence, H, constructed and arranged substantially as set forth.

I also claim the use of an aperture, n, in the tumblers, t, into which the grooves, g'', for the passage of the fence open, but distinct therefrom, for the purpose of allowing the tumblers to resume a position in which the grooves are out of range while the fence is yet engaged in the tumblers, substantially in the manner and for the purpose set forth.

GUIDING LINE FERRY-BOATS OR FLYING BRIDGES—William A. Jordan, of Thebodeaux, La.: I am aware that James Parks proposed the employment of a grooved wheel or pulley block with a rope attaching it to a boat guided by an ordinary steering oar, when said wheel was used as a traveler on a tight cable stretched overhead from bank to bank, as a means of crossing streams by the force of the current. I therefore do not claim this as my invention.

I claim the vibratory lever, D, constructed substantially as described, and arranged and operated with a cable in the manner and for the purposes set folth.

LIGHTNING RODS—David Munson, of Indianapolis, Ind.: I claim constructing a tubular lightning rod with spiral flanges, one of which is left open or divided its entire length, for the purpose of admitting the electric current to the inner surface of the rod, to diminish its intensity and mechanical effect, substantially as described.

PENHOLDER—T. Kenton Lyon, of Richmond, Va.: I disclaim lips and all improvement in pens, also guards of any kind not forming a deep annular space around the pen, as described. I distinctly disclaim any improvement on, or application of improvement to pen and pencil cases of any kind.

I claim, on the common straight penholder, the guard, B, attached to or made part of the holder, forming a deep annular space around the pen, or that part of the holder where the pen joins it, for the purposes set forth.

CORN AND COB MILLS—Jacob O. Joyce, of Cincinnati, O. Ante-dated Feb. 5th, 1856: I claim the arrangement of the segments, I, on the upper cone, and the segments, K K', on the lower cone, so that the former shall pass through between the latter, gradually contracting the spaces between their crushing surfaces, substantially as set forth.

COLORING PHOTOGRAPHIC PICTURES ON GLASS—D. B. & A. B. Spooner, of Springfield, Mass.: We do not claim the coloring of a picture all over with a single tint.

But we claim the application of gum arabic or other equivalent material, as set forth, for the purposes described and no other.

STRAW CUTTERS—J. H. Gooch, of Oxford, N. C.: I claim providing a support, F, on the axle, B, and having the axle stationary and the knife revolve on the same, substantially as and for the purposes set forth.

BLANKS FOR BANK NOTES, BILLS, &c.—Peter Hannay, of Washington, D. C.: I claim the combination of the arts of photography and printing or writing, or both, in the manner substantially as and for the purposes set forth.

ROTARY KNITTING MACHINES—S. W. Park and Edgar S. Ells, of Troy, N. Y.: We claim combining together two annular series of hooked needles with a sinker, two pressers, and a web guide, D, or its equivalent, substantially as set forth, for use in the production of ribbed work, as specified.

And we claim the manner of arranging two annular sets of needles in relations to each other, that is, arranging them together, so that the hooked ends of the needles of one set are parallel or nearly parallel with, alongside of, and pointed in the opposite direction to those of the other series, as set forth.

We also claim the improvement of arranging the sinker, C, substantially as described, to increase the distance between the yarn and the old loops of the second set of needles, just before the barbs of the needles are pressed.

And we claim the improvement of arranging the cam, B, so as to spring out the ends of the second set of needles, substantially as described, and for the purposes specified.

And we claim the improvement of holding the needles of an annular series in place on the grooved needle block, or its equivalent, by the ring, A, constructed, arranged and operating as set forth.

DOOR STAY—Anson H. Platt, of Yellow Springs, O.: I claim the use of the bolt, 6, the lever, 7, and the dog, 5, arranged and operating in the manner and for the purposes set forth.

HEATING FEED-WATER APPARATUS FOR STEAM BOILERS—John R. Sees, of New York City: I do not claim heating the feed water for boilers in pipes placed between the feed pump and boiler; neither do I claim heating the feed water by the escape heat of the boiler.

But I claim the heating pipes, J, and the branch pipes, G and H, with the chamber containing the double-acting check valve, L, and the circulating pipe, K, all arranged below the water line of the boiler, in the manner and for the purposes set forth.

COMBINED STEAM AND HOT AIR COOKING STOVE—John Shopland, of Honesdale, Pa.: I am aware that a pan of water has been placed in an oven for moistening the air therein, and that steam has been introduced into a chamber for steaming meats and vegetables. These I do not claim.

But I claim the arrangement of the boiler outside and independent of the oven, so as to have the hot air and steam at variable temperatures, and mix them at pleasure, or as the character of the cooking may require.

BREECH-LOADING FIRE-ARMS—Gilbert Smith, of Buttermilk Falls, N. Y.: I claim, producing a flexible lip, b, from the solid metal of the rear of the chamber, to operate as and for the purpose set forth, by forming a groove, a, around the chamber at a short distance from the extreme rear thereof, substantially as described.

HEMP BRAKES—Meriwether Thompson, Jr., of St. Josephs, Mo.: I do not claim a compensating pitman as such.

But I claim the arrangement of a compensating pitman when applied to a hemp brake, and constructed substantially in the manner and for the purpose described.

I do not claim cone pulleys for varying the speed of my machine, nor the slotted arm and shifting pitman to vary the stroke of the brake.

But I claim the arrangement described of the cone pulleys or equivalent mechanism for varying the speed, and the arrangement of the slotted arm, 7 8 9, and shifting pitman as described, in such relation to each other that by the described connection between them, through the shifting lever, X, and the cord, 18, any change of speed shall effect a corresponding change in the stroke of the brake.

STUFFING LEATHER—Francis A. White of Roxbury, Mass.: I am aware that other oil has been combined with hides and skins in the process of tanning, as in the American patent of Keeler. But my mixture of tallow and oil could not be so used, because the tallow and oil, on being brought into contact with water at the temperature used, would separate from each other, and the consistence of the mass of oleaginous matter used by me is such that nothing less than the pounding operation of a fulling mill or other equivalent machine would be sufficient to fill equally the pores of the skin with such a mixture. While therefore I disclaim the use of any such rotating apparatus as used by Mr. Keeler aforesaid, or that used by Vanquelin for charging skins, &c., with oleaginous matter.

I claim the mode of stuffing leather, substantially as set forth, whereby I dispense with the usual time required in drying before stuffing, and render the neck and flank parts a superior quality of leather.

BOLT FOR VAULT AND SAFE DOORS—Linus Yale, of Newport, N. Y.: I claim an arrangement of bolts or bars, which are self-acting, in the manner or an equivalent manner to that described, and for the purposes set forth.

SECURING TYPES ON ROTARY BEDS—Hichard M. Hoe, of New York City: I claim securing or holding the column rules, a', in their places on the bed by means of the feet, a, which fit in rebated grooves in the bed, and have plates or keys, b, fitted over their lips or edges, b', substantially as shown and described; and I claim this, whether the strips or plates, B C D E, are used in the usual quoins, a, or any other device for wedging or binding the types and rules in the bed.

### RE-ISSUES.

BAGASSE FURNACES—Samuel H. Gilman, of New Orleans, La. Original patent dated Dec. 4, 1855: I claim combining with the receiving chamber a square mixing or second chamber, whose hearth is substantially level with that of the receiving chamber, B, separate and distinct from the heat conduit or flue which conducts the heat to the boilers, and located between the aforesaid heat conduit and the receiving chamber of the furnace, and combined with the bagasse furnace for receiving the products of the burning bagasse, mixing mechanically and perfecting the combustion of the gases thereof after they pass out of the first or burning chamber, and before they enter the heat conduit or flue, and thereby promoting the deposit of the solids, substantially as described, whether the said second chamber, B, is provided with a pit, D, or not.

I also claim the use and adaptation of the pit, D, located in and combined with the second or mixing chamber, B, as an auxiliary to increase the agitation and perfect the mixture and combustion of the gases, and also to promote the deposit of the solids, substantially as described.

### DESIGNS.

DRAWER PULLS—P. & E. W. & J. A. Blake, of New Haven, Conn.

STOVE PLATES—N. S. Vedder, of Troy, N. Y., assignor to G. F. Filley, of St. Louis, Mo.

PARLOR STOVES—Samuel Pierce & J. J. Dulley, (assignors to Fuller, Warren & Morrison,) of Troy, N. Y.

COOKING STOVES—Samuel Pierce and J. J. Dulley, (assignors to Fuller, Warren & Morrison,) of Troy, N. Y.

### The Morse Telegraph in Europe.

Prof. Morse who is now in Europe, has received great attention from the most scientific men, and the most eminent electricians in England. At a dinner recently given by Mr. Brett to the gentlemen connected with the telegraph, Mr. Brett toasted Prof. Morse, and in a speech bestowing upon him the highest encomiums, declared that his system of telegraphing was now the universal system. Dr. O'Shaughnessy, who is Superintendent of all the East India Telegraphs, seconded Mr. Brett's remarks, and stated he had made a report to the East India Company, recommending the substitution of Morse's instruments on all the lines for the Needle Telegraph they have hitherto used. He pronounced Morse's system not only the simplest, but the best ever invented, and the only one worthy of universal adoption.

A correspondent of the Philadelphia *Ledger* says:—

"In Paris, also, Prof. Morse was received by Count de Nourhy, the Director General of Telegraphs, with the utmost courtesy, and being ushered into the telegraph rooms of the central station, about thirty instruments of his invention welcomed him with the music of their filial voices.

A reminiscence made this scene peculiarly interesting. These instruments were in the building which formed the central station of the French Semaphore Telegraph, by whose outstretched but now unmeaning arms, it is still surmounted. In that same building, eighteen years ago, Prof. Morse exhibited his instrument, and endeavored, in vain, to satisfy the managers of the Semaphore that he had brought them a superior system. What he could not do for his instrument it has done for itself, and now it constitutes the only telegraph in the French empire."

### Submarine Blasting.

A ridge of hard concrete, near Governor's Island, in the harbor of New York, is now undergoing demolition, by the simple process of submarine blasting without boring. The ridge—named Diamond Reef—is 300 feet long and 40 wide, the water is 16 feet deep on it at low water; the reef is to be reduced 6 feet, leaving 22 feet depth of water, at low tide.

The contract, to reduce it was taken by Messrs. Husted & Kroehl for $35,000, and there is every prospect of these contractors accomplishing their object, with promptitude and profit. Large tin cannisters attached to the lower ends of strong pointed stakes, and filled with powder, are sunk to rest on the face of the reef, and are discharged with a galvanic battery. The weight of the superincumbent column of water, when the blast is discharged, assists to make the expansive force of the powder act powerfully on the reef in a downward direction, and laterally, thereby riving and disintegrating it with rapidity. Some of our cotemporaries call this blast the "Paisley Blast," instead of the *Pasley*—after Col. Pasley, who first applied it some years since to remove concrete shoals in the river Thames. Mons. Maillefert first introduced it, we believe into our country, and he obtained a patent for it, although, as we then pointed out, the invention was quite old. This system of submarine blasting is one of the most useful inventions ever discovered, for removing concrete shoals in navigable rivers and harbors—its value is but beginning to be properly appreciated.

### The Telegraph in the East Indies.

In two years four thousand miles of telegraph wire have been erected in India. Calcutta, Bombay, Madras, Delhi, Lahore, are now telegraphically united, and six thousand miles of new lines are in the course of erection. No. 1 galvanized iron wire is used. The wires are erected on strong durable posts, like those in our own country.

### An American Block for Watt's Monument.

A fine monument is about to be erected to the great improver of the steam engine, James Watt, in his native town, Greenock, in Scotland, and a fine large block from the Seneca quarry on the Potomac, Md., has been received for it from Gilbert Cameron, the builder of the Smithsonian Institute, Washington.