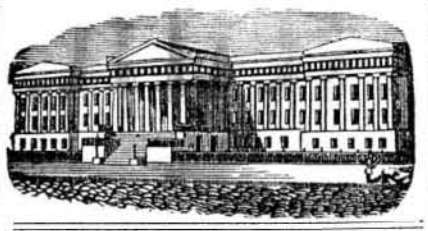

[Reported officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING JANUARY 20, 1857.

GUIDES FOR SEWING MACHINES—Wm. B. Bishop, of Brooklyn, N. Y.: I am aware of the patent of H. W Dickinson, of May 15, 1855, wherein are used grooves in the under or bottom side of the pressure pad, for the purpose of stitching cords in work, and I therefore claim no part, device or thing, claimed by him.

I am also aware of the patent of John B. Nichols, Jan 30, 1835, for a binding attachment, which has a semi-elliptical groove, through which the binding passes, to double it around goods preparatory to sewing it thereon, and that said gauge is rendered adjustable, and I therefore claim nothing patented to him.

I claim an elongated pressure bar or foot having therein a flat groove to rec ive the edge of the center or button hole plait of shirt bosoms; and also a straight bearing surface forming the under and guiding surface for the other seams, or plaits of shirt bosoms, whereby I am enabled to stitch continuous straight seams in shirt bosoms, at a rapid speed, and perfectly straight, without any care or help from the operator—the whole being constructed, arranged and operating as set forth.

MAKING PAPER—John S. Blake, of Claremont, N. H.: I do not claim expelling or forcing the moisture from the pulp, by means of atmospheric pressure, irrespective of the means employed for effecting that purpose as herein described:

I claim, first, the employment or use of the pump I, vacuum chamber, f, and vacuum chest C, provided with the two compartments, a b, and communicating with the pipes, D G, by means of the cocks, e d, the parts being arranged, substantially as shown and described, for the purpose set forth.

Second, I claim the air and water trunk or reservoir, F, provided with the pipe, K, and communicating with the external pipe, L, as shown the reservoir communicating by means of a pipe, O, with the pipes, PP, having the tubes, i j, connected to them—the whole being arranged, substantially as described, for the purpose of trimming the edges of the paper or pulp; and I further claim trimming the edges of the pulp by means either of air or steam, when ejected through tubes, i j, arranged as shown.

Third, I claim the pipe, Q, with the tubes, K, attached and arranged as shown for the purpose of discharging the margin or strips of pulp from the wire cloth apron E.

Fourth, I claim the curved rod, W, with the rollers, s s, placed on it, the roller, s, being connected with the springs, t, and arranged as shown and described—whereby the felt upon S is stretched or distended, transversely, and also guided, or properly retained in position as it operates.

Fifth, I claim the cylinder U, in combination with the wet press cylinders T T, when the speed of the cylinder U, and cylinders T T is made variable for the purpose of stretching or distending the apron S, longitudinally as herein described.

Several very valuable improvements are embraced in this invention; but it would not be possible to convey a clear idea of these without engravings. They embrace a superior method of trimming the edges of the paper cut from the pulp, the proper discharging of the strips cut from it, and the keeping of the felt apron that conveys the paper to the pressure cylinder properly distended, to prevent creasing the paper, so as not only to improve the quality of the paper, but to prevent considerable waste now involved in its manufacture.

FORMING BATS FOR BELTING—John H. Bloodgood, of New York, N. Y.: The combination of the rollers B and C, with the vibrating drum A, in the manner and for the purpose described.

I also claim the combination of the rollers B and C, with the vibrating drum A, and the roller T, substantially, in the manner and for the purpose specified.

ENTRE VENT WATER WHEEL—E. G. Cushing, of Durden, N. Y.: I do not claim any particular shaped bucket, as I am of the opinion that one stated curve is not adapted to all heads with equal results.

But I claim making the bucket with a back of such a curve that it forms a space of regular contraction from the outside to the inside of the wheel.

Second, I claim hanging the buckets combined with a spring, in such a manner that the discharge orifice is regulated by the quantity of water let into the scroll, and the amount of power required, and closing together when the gate is shut.

ARTIFICIAL TEETH—Alfred A. Blandy, of Baltimore, Md.: I claim constructing artificial teeth with a hole, a, passing vertically through them, for the reception of the molten metal, and with a neck, b, and projecting sides in the manner and for the purposes set forth,

SAWING MACHINE—Geo. Gregg, of Lowes, Mill, Va. I do not claim any of the parts separately; but claim the whole when constructed and operated as set forth.

SEWING MACHINES—Elias Howe, Jr., of Brooklyn, N. Y. Patented in England, July 26, 1848. I claim drawing the thread through the cloth, by means of a finger, or its equivalent acting in connection with mechanism which passes the needle through the cloth, substantially as set forth.

STEAM PRESSURE GAUGES—E. G. Allen, of Boston, Mass., Assignor to Henry O. Allen, of Boston, aforesaid: I am aware that the use of elastic bags or capsules, in steam gauges, is old. It is seen in the rejected applications for patents of J. Lowe, Oct 17, 1851, and R. Lapham, Aug 2, 1855; I therefore distinctly disclaim the use of an impervious bag or capsule composed of rubber or other pliable material.

But the employment of a metallic helical spring dome D, in connection with a capsule in steam gauges, forms an important and highly valuable improvement, and therefore disclaiming the use of springs in steam gauges, unless constituting a dome, D, and disclaiming every part of my device described, which is seen in any other steam gauge or analogous instrument.

I claim the helical dome, D, constructed,, arranged and operating in the manner and or the purposes substantially as described.

This guage is constructed with a helical spring, wholly or partly dome shaped, combined with a capsule of vulcanized India rubber, lining its interior or covering its exterior in such a manner that the spring is acted upon to extend or contract it by the differential pressure, between the steam and the atmosphere, the capsule serving as an impervious medium through which the differential pressure acts upon the spring which also sustains the capsule. The spring is connected with an index. It is stated to be an excellent improvement.

DOUBLE PILE CARPETS AND RUGS—John Goulding, of Worcester, Mass.: The fabric made or woven in the manner described; that is to say, crossing the top ground warp once only for two shoots of binding filling, one of which passes through and binds the pile warps and crossing the ground warp of the bottom fabric once only for four shoots of the binding filling, three of which pass through and bind the pile warps.

TREATING PHOTOGRAPHIC PICTURES—John Bishop Hall, of New York, N. Y.: I claim producing in pictures to be seen by direct light, a high artistic and stereoscopic effect, by combining with a white light or reflecting back ground or its equivalent, two or more identical pictures of the same subject, rendered more or less tran parent, and executed on, or attached to plates of glass, in the manner substantially as set forth.

SEWING MACHINES—James E. A. Gibbs, of Mill Point, Va.: I claim making the chain stitch with a vibrating needle in combination with a stationary hook.

GRAIN SEPARATORS—Geo. Heberling, of Quincy, Ill.: I distinctly disclaim the invention of the separate devices described, as no one of them is new; but—

I claim the arrangement in a grain-cleaning machine of the plate, C, armed with teeth, d, and rubbers, e, the conical cylinder, D, with beaters and fans, F and G, attached chute or rim, M, plate, N, tubes b, and fan H—all constructed and operated, substantially in the manner set forth.

DIE FOR MAKING SPIKES—E. T. Henry, of Scranton, Pa.: I claim the lip C, formed at the point end of the groove, a, in the die A, substantially as shown for the purpose specified.

By forming a cutting edge at the point end of the die, as embraced in this invention, the spike machine of A. M. George, which was very defective, is converted into a most excellent machine for making railroad spikes.

HARVESTERS—M. G. Hubbard, of Penn Yan, N. Y.: I claim the combined cutting standard and inclined track clearer, when constructed and operating, substantially in the manner and for the purpose set forth.

I also claim hinging the cutting standard and track clearer forward of the finger bar, and near the front end of the shoe, and supporting the same against lateral pressure by means of the fulcrum post, b, as above specified.

CUTTERS FOR HARVESTERS—M. G. Hubhard, of Penn Yan, N. Y.: I do not claim forming the edges of cutters, by bending a plate of steel at its edge, and thus making an offset for the cutting edge—for this has before been done by Hazzard Knowles many years since.

I claim the cutter when formed in one piece, as seen in figure 2, constructed substantially as and for the purposes set forth.

PARING APPLES—Jared O. M. Ingersoll, of Ithaca, N. Y.: I do not claim the untomantic movement of the knife, or the various devices connected therewith, which are in common use, but confine myself to this specific claim, viz.:—

The peculiar form of the rod M, operated by pins on the face of the wheel G, in connection with the transverse bar P, arranged and operated, substantially as described.

BLAST FURNACE—Wm. Kelly, of Eddyville, Ky.: I do not claim blowing blasts of air into a liquid mass of iron, so as to refine it, as that is a well known process. Nor do I now claim, in the process to refine the iron separate and apart from fuel, as the iron, when being so worked, as above described in a blast furnace, has a large body of fuel to cover it, in a manner substantially as in a finery fire:

I claim the combination of the hearth of a blast furnace with the auxiliary tuyeres, B B and C, for delivering a blast of air into the fluid iron in said hearth; the whole constructed and operating in the manner and for the purpose specified.

HARVESTERS—Pells Manny, of Waddams Grove, Ill.: I claim as connecting the leading board, D, to the main frame, A, by means of the curved elastic shoe, C, rigidly attached at its front, to the leading board, and at its back to the under side of the main frame, by joint, C, in rear of the finger bar, and in front of the driving wheel, when said leading board serves to carry the fulcrum of the seat lever, F, by which the front of the mainframe is raised and lowered, substantially in the manner specified.

And I further claim the combination and arrangement for operation together of the seat lever, F, and foot lever, or treadle, E, essentially as set forth for the purposes described.

BRIDGES—D. C. McCallum, of Owego, N. Y.: I claim is so combining the arch brace with the arched cord or beam, the top horizontal surface of the abutment, or pier, and the lower chord, or tie, by means of the iron shoe and tension rods, as that the thrust of the arched chord shall be thrown down upon the abutment and any deflection in the lower chord be counteracted by an upward force at each end of the tension rods, substantially as described.

I also claim the method of lengthening or shortening the braces of a bridge truss or girder by which the truss may be elevated, or depressed, as required by means of the yoke, a, the plate, b, on the end of the brace, and the straining pieces, c c, with their nuts, d, substantially in the manner described.

HYDRANT—James G. Morgan, of Brooklyn, N. Y.: I am aware that hydrants have been constructed with cisterns to receive and retain the water at the discharge pipe, at a point below the surface of the ground where it will not be frozen: and that they have been provided with flexible and metal pistons, or valves to force the water again into the discharge pipe when the cock is about to be opened, and to receive the water from the discharge pipe when the cock is closed

I am also aware that air chambers have been applied to discharge pipes to break the force of the water, and maintain a constant stream; I, therefore, do not broadly claim such as my invention.

I am not aware that air chambers have been applied to hydrants, in such a manner as to admit of being compressed, and thereby forcing the water from the cistern into the discharge pipe, and by releasing them from the compression, allowing the water in the discharge pipe to run back into the cistern, and the air in the air chamber to fill the discharge pipe: whereby the machinery and cock can be placed above the ground convenient to access, and whereby the flexible air chamber, (which takes the place of the flexible valve or metal pistons, used by others,) is subject to no greater leakage pressure, than what is due from the height of water in the discharge pipe above the cistern.

I claim the combination of a cistern to receive and retain the waste water of a hydrant with one or more air or gas chamber, or chambers, arranged in such a manner that by compressing the air chamber, the air therein will be forced into the cistern, thereby forcing the water in the cistern into the discharge pipe, and by releasing the air chamber from such compression, the water in the discharge pipe will run into the cistern. Nor do I limit my claim to a flexible air chamber, as I consider a piston and cylinder a mechanical equivalent.

I also claim the peculiar method of compressing and releasing the flexible air chamber, in connection with the opening and closing of the cock, substantially as described.

BRICK MACHINES—B. F. Nave, of Roanoke, Ind.: I claim the peculiar manner of operating the said gauge, T, by means of bent levers, U U, in combination with cross cross bars, V, and shields, W, when the described parts are constructed and arranged for joint operation in the manner and for the purposes set forth

HOSE COUPLING—Lodner D. Phillips, of Chicago, Ill. I claim the combination of the sections, a a, of the hose coupling, (having conical tubes, b b, on the exterior ends thereof,) with the conical sleeves, d d, as herein described and for the purposes set forth.

REFLECTORS FOR VAULTS—Emil R. Pichler, of Boston, Mass.: I am aware that glass plates, with single corrugations have been used. I do not claim such plates.

But I claim the so arranging of the glass plates herein described in a frame or frames, as to have the appearance and effect of double corrugations, when said plates are backed by any reflecting material as set forth.

LAYING TOPS FOR CORDAGE MACHINES—Wm. Robinson, of Warsaw, N. Y., assignor to Amenzo W. Beardsley and Wm. Robinson aforesaid: I claim, in laying tops, the use of a moveable cone, or its equivalent, so constructed and arranged, as to yield to the larger strand, or strands, and be pressed by them against the smaller strand or strands, substantially as described for the purposes set forth; whether said moveable cone is pressed against the strands by a spring screw, or otherwise.

MACHINE FOR BENDING TIMBER—James D. Sarven, of Maury County, Tenn.: I claim the bending frame, A, or its equivalent, arranged and operating substantially as described and for the purposes set forth.

I also claim, in combination therewith, the mechanism and arrangement described, or other equivalent devices for the purpose of operating the bending roller, I, or its equivalent, as specified—the whole being constructed and made to operate together, substantially as specified and for the purposes set forth.

I also claim, in combination with the bending frame, A, or its equivalent, the mechanism and arrangement described, or other equivalent devices for the purposes of bending timber in regular or irregular forms or curves, if the same is used in combination with a revolving mold, or mold operating or arranged in any other manner.

WINNOWING MACHINES—Jos. and Jas. Montgomery, of Baltimore, Md.: We claim the application of an adjustable sieve, M, above the auxiliary screen box, D, when arranged in combination therewith, in such a manner as to separate the large impurities before the grain is subjected to the action of the blast, in order to render said auxiliary screen-box more efficient in its action, and thereby allow it to be made as limited in extent as desirable, substantially as set forth.

FEEDING LUMBER LATERALLY IN SAWING MACHINES—Saml. R. Smith, of Florence, Mass.: I claim the combination of mechanism, by which the lateral adjustment of the log is affected, as described; such consisting of the spring, g, the stationary bearing roller in, or its equivalent, the lever, l, the toggles, n, i, the slide bar, f, the catch mechanism, T, the pinion, t, and the rack or racks applied to the carriage, V, substantially as described the whole being arranged and operating together essentially as specified.

And I also claim making the carriage or head block, V, movable, independently of the ways or frame, on which it is supported, and combining with said carriage and its movable rack, a lever and pawl, or an equivalent device, whereby said carriage may be moved towards the saw, by the hand of an attendant applied to the said lever.

COOKING STOVES—John G. Treadwell, of Albany, N. Y.: I claim in stoves with elevated ovens, having an escape flue below the elevated oven and none above it: the construction and arrangement of the damper, so that by turning it in one direction, it shall compel the flame and smoke to pass around the oven, and by turning it in another, may shut off the flame and smoke entirely from the oven, substantially as set forth and described.

BENDING SHEET METAL—John Wright, of Plantsville, Conn., Assignor to the S. Stow Manufacturing Company of same place: I disclaim every part of the machine described, which is seen in other analogous machines; but I claim the plate, D, when arranged and employed in the manner and for the purposes substantially set forth.

Machines hitherto employed for bending the edges of sheet metal to form locks bend the sheets at too great a distance from the edge where the lock is formed, because there is no support or device employed to prevent the sheet bending there. This invention obviates this defect, thereby producing superior locks of sheet metal.

ROOFING CURRENT—R. H. Smith, of Cincinnati, O.: I do not claim any or either of the above mentioned ingredients when used of themselves, or when combined with each other, broadly.

But I claim a cement, formed by materials prepared in the manner and in the proportions set forth, whereby a cement may be made and applied to roofing and other purposes, without the aid of fire to render it fluid, and by which the offensive smell, arising from the use of coal, tar, &c., is neutralized, as described.

MAKING CORD—Re-issue—Wm. E. Nichols, of East Haddam, Conn.—Patented Dec. 11, 1849. I claim, first twisting or controlling the twist of the strands, while the main frame is revolving to lay them into cord, by causing an even faced wheel attached concentrically to, and revolving with the bobbin frame to travel over a fixed and smooth surface—friction causing the frame to revolve.

Second, Revolving the bobbin frames on their own axes, to twist the strands, at the same time that they are carried around a common center, to twist the cord, by rolling them on the surface of a stationary annular inclined track, towards the inner or outer periphery of which they can be adjusted to run, so as to vary the relative twist of the strands and cord, substantially as herein set forth,

But I make no claim to the mere twining of the bobbin frames, by friction, by any of the devices usually employed for similar purposes.

Third, I claim the construction and arrangement of the central stem or spindle of the bobbin frame, operating substantially as herein set forth, whereby the yarns are collectively subjected to progressively increasing tension and twist, from commencement to the end of the process of laying them into the strand, whereby the latter is rendered smooth and regular in its figure, and uniform density and strength, and subjected to uniform tension, while being laid into the cord.

HARVESTING MACHINES—Additional Improvement—Robert J. Morrison, of Richmond, Ind.: I claim in addition to the claim heretofore granted to me, 16th Dec., 1856 allowing the roller, c, to come against an elastic or yielding stop, when the machine returns to its position, after passing any inequality in the ground, for the purpose of saving the machine from sudden jars, as set forth.

Quartz—Solid and Liquid.

Quartz is pure silica, and in its purest condition, in the form of white sand or rock crystal, is extensively employed for manufacturing crystal wares and the finest qualities of glass. It is a constituent of many rocks, and composes most of the pebbles of gravel beds. There is no mineral which appears in so many forms and colors. It is insoluble in sulphuric, nitric, and hydrochloric acid, hence the great value of glass vessels, in chemistry, for containing these acids; it has no cleavage, and is a very refractory, not melting in the heat obtained with the blow-pipe.

Although it resists the action of intense heat to reduce it to a liquid state, yet it is a fact, and a most useful one to scientific men, that by combining it with an alkali, it will melt like wax, and can be formed into threads fine as those of the spider's web, and into any form whatever. By mixing quartz with soda or potash, it will melt in a furnace and become glass. If too much alkali is combined with quartz in the manufacture of glass, the surface of the glass will often appear cloudy, by the excess of the alkali in the glass attracting moisture.

Although quartz is not acted upon by the strongest nitric acid, nor melted by the common heat of the blow-pipe, yet it can be dissolved in a solution of a common salt.

Silica is an acid, just as much so as the oil of vitriol. It is composed of a base and oxygen (Si. O^3); and sulphuric acid is composed of a base, sulphur, and oxygen (S. O^3) in the same proportions. In combining with an alkali like soda, therefore, it forms a neutral salt.

In our last number we illustrated a method of manufacturing the silicate of soda—quartz reduced to a liquid condition—by caustic soda under a high pressure of steam. The application of this vehicle or agent to the arts in the manufacture of artificial stone, as a binding agent, and for coating the outside of walls, &c., is attracting considerable attention at present, and everything we published on the subject has been carefully perused.

Soluble quartz, or glass, as it is more commonly termed, can never be rendered useful in the arts unless it can be converted into neutral insoluble salt, composed of equal parts of silica and soda. Common soluble or liquid quartz contains an excess of alkali three times the quantity of silica; this is the reason why it is soluble in water. Why is common liquid quartz unsuited to cover or coat the surface of walls, or to form a cement for making artificial stone? It contains an excess of an alkaline salt, which is deliquescent, and which will attract moisture and crumble away, when exposed to the atmosphere, when combined in any artificial stone, or employed as a coating on the surface of any wall. As an agent to be used in the arts, as a wall coating or cement, it would be of great value could it be deprived of its deliquescent property. By the process of Mr. Ransome, described in our last Number, more silica is taken up, held in solution in the liquid than by the common process heretofore employed; hence, the liquid quartz which he obtains by it, is brought more near to the condition of an anti-deliquescent salt when dry; yet it is not perfectly non-deliquescent. By employing powdered flint in his artificial stone, then submitting it to a high heat, he has succeeded in making it non-deliquescent, but this application of it to the arts is very contracted. Something more is wanting, namely, the discovery of some cheap substance to combine with soluble glass, to render it a non-absorber of moisture, whether applied as a coating to outside walls where it cannot be dried by heat, to inside walls, or to the manufacture of artificial stones and other articles. We have no doubt but such a discovery will yet be made.

Monetary Intelligence.

For the benefit of our readers, as well as for our own benefit, we are induced to copy the following item from *Thompson's Bank Note Reporter* of the 24th inst., in regard to banks whose bills are discredited in this city:

"It was our intention to have given the circulation and securities of the Illinois and Indiana Banks that have discredited, but the storm has prevented our doing so this week. The troubles in Illinois and Indiana have been precipitated by the failure of the Gramercy Bank, which concern, or its backers, owned several other banks, which, of course, all went over like a row of bricks. The Gramercy Bank owners, we see, are at the head of one of the branches of the Bank of the State of Indiana.

The discredited banks, as far as we are posted, are:

Gramercy Bank, Lafayette, Ind.
Shawnee Bank, Attica, Ind.
People's Bank, Carmi, Ill.
Stock Security Bank, Danville, Ill.
Prairie State Bank, Washington, Ill.
Rushville Bank, Rushville, Ill.

The Exchange Bank, Bangor, Me., has gone into the hands of Receiver—"Tomb of the Capulets."

The people of Gordon County, Geo., have resolved, in public meeting, that they will not receive as money any of the following wild cat issues in Georgia:—Bank of Columbus; Bank of Middle Georgia, at Macon; Cherokee Insurance and Banking Co., Dalton; Interior Bank, Griffin; Manufacturers' Bank, Macon; Merchants' Bank, Macon; Southern Bank, Bainbridge; nor any other that are not bankable at the city of Augusta or Savannah."

Being in daily receipt from our patrons of bank bills from every State in the Union, we publish the above list of banks whose bills are unsaleable in this city, that our friends may save themselves the trouble of remitting them to this market, for such as we receive we shall be obliged to return to the sender until an agency is opened here for their redemption at the usual discount.

Liquid manuring having been very successful in 1856, in the practice of some farmers in England, the system will be greatly extended during the next season.