Scientific American.

NEW YORK, JULY 8, 1854.

Review of the New Patent Law.

During the past ten years, a number of Conventions, composed of inventors belonging to different parts of the country, have been held in various places for the purpose of discussing the defects of our present Patent Laws, and instituting measures for reforming them. Committees of gentlemen, distinguished for their experience in patent matters, were appointed by those Conventions for the purpose of draughting such Bills, (and presenting them to Congress through the proper channels,) as in their judgment would effect the desired objects. Two Bills were adopted by separate Conventions, and these with slight amendments were brought before the Senate. With some alterations, either of these Bills might have answered a good purpose, but it is a singular fact, that both of them, although expressing the sentiments and opinions of a large number of inventors, have been suffered to fall to the ground, while a new Bill—which will be found on another page—has been introduced into the Senate, unsolicited by, and unknown to but few, if any, of our inventors. It always affords us pleasure to see our legislators consulting the interests of such a worthy class of men as our inventors, for we well know that whatever protection is afforded, and whatever privileges are granted them, the benefits ultimately redound to the whole people. The *New Bill* contains many very excellent provisions, and these we desire to see become the law of the land. On the other hand, it contains so much that is hostile to the interests of inventors; so anti-democratic in its nature,—so confused and so curious—so complex and so confutable, that we hope and believe Senators will strike the same out of the Bill upon further examination.

The first twelve sections are very good; the 10th, in relation to returning models of rejected applications, is one we have always advocated. The last clause of the 12th section, however, we think, is decidedly bad. Instead of increasing facilities for inventors in conducting business with the Patent Office, it takes away from them certain rights, which they have enjoyed since the first patent law was enacted, more than sixty years ago. The objectionable clause confers authority upon the Commissioner of Patents, to admit only such persons to become patent attornies, as *he may deem* qualified to act for inventors, and that none will be allowed so to act unless by license received from him.

The strict rendering of this clause would prevent competent inventors from acting as their own agents and would take away all power from inventors to select those persons whom they may deem most capable of acting for them, unless they have received a license from the Commissioner of Patents, to practice in his Court. We advocate the greatest liberty of the people consistent with intelligence and good morals, and we believe that every man who is competent, has the natural right to act as agent for another in any capacity whatever, without being dependent on the *ipse dixit* of a third party. Every inventor has the perfect right to select the person whom he deems most competent to present his case to the Patent Office; that right, we hope, will never be taken away; that liberty we hope will never be abridged. Such a power in the hands of some Commissioners of Patents might make the Patent Office a huge political machine, dangerous to the interests and subversive of the privileges now enjoyed by inventors. Such a *one-man* power is greater than that exercised by any court in the United States, and is totally at variance with democratic principles.

But if Senators desire to retain this clause, let it in all honesty be so amended so as to specify the qualifications necessary to practice as a Patent Agent, the mode of examination, &c.; for surely it would be despotism in the extreme, to deprive any man who can prove his competency, from practicing as a patent agent, thereby making such a profession an exclusive order, like that of the Knights of the Garter, or the Round Table.

We hope, however, that the clause will be stricken out entirely, it is enough for the Patent Office if an application for a patent is correctly drawn up and properly presented. No more has hitherto been required, and no more is necessary.

We also object to those parts of sections (12 and 14) which provide for the payment of a fee of $10 on an appeal from a lower to a higher officer of the *same* court—from the Assistant to the Commissioner of Patents. We also consider that the increase of inventors' fees, by the plan proposed in section 14, is a poor method of increasing the revenue of the Patent Office. Thus it is proposed that an applicant for a patent with two claims, shall pay $30 down, and $15 when the patent is issued, making the fee $45. The payment of an additional fee for each claim will create a great deal of trouble to inventors, and can be made a ready method of extracting their hard-won cash. For example, if an application were presented embracing five claims, as is oftentimes done, this would require a fee of $70 down, and then the Patent Office might reject them all but one, and pocket $40, without returning any equivalent; this would be rank injustice. We also object to the paltry sum of twenty-five cents being charged for every hundred words above 1000, in a specification. We also object to the increase of fees for copying from the present rate of 10 cents to 12½ for 100 words. This is a regular grocer's system for catching half cents.

We really do not well know what is best to say of section 15: it is so new and so droll. This new system of "Confirmation," we think, should be left to those religious denominations that maintain such church policy. We are certainly adverse to any usurpation of religious ceremonies by our Patent Office, especially when the object is *filthy lucre*—no less than $100. The *confirming* doctrine means, that after a patent has been in existence five years, and extended (upon paying $100) for fifteen years, then, upon paying another $100, and the very same proceedings gone through with as when the patent was extended, it will be *confirmed*. Well, what does this Confirming doctrine amount to in favor of an inventor? Nothing but a ceremonial palaver, to get an extra $100 out of him. At the same time it would amount to this on the part of the Patent Office, that every patent issued under its seal, subscribed by the Secretary of the Interior and the Commissioner of Patents, would be considered an illegal document until it was Confirmed—that is, until it has grown up to be five years of age, and paid $200, exclusive of first fees, into the Treasury. We hope the Senate will strike out all the Confirming doctrine, or refer it to some Bishop for further amendment, to clear up the smoky doctrines embraced in the 16th and 17th sections, especially the last clause of the 16th, which provides for the *curing of a fraud after it becomes three years old*. We also object to the 2nd clause of section 17: it provides that when a person enters a suit to annul a patent, he must pay $50 into the Patent Office. What business has the Patent Office with any such fee, when it gives no services in return. We also object to that part of the 18th section which makes the owner or defender of a patent liable to costs. This should never be, except in the case of fraud, for if an inventor obtains a patent in all honesty, and another person sues to have it annulled, because, as he believes, he can show that the subject patented is not new, would it be just for the owner of the patent to be compelled to pay the plaintiff's costs?—all costs, as the Bill says? By such a law a wealthy plaintiff might run up a bill of costs high enough to swamp all the property owned by three-fourths of our inventors.

Sections 26 and 27, which provide for property in things (products of a patented machine) not patented, if made abroad, is opposed to all the laws of commerce, and would lead to endless troubles. We could advocate the measure so far as it relates to the British Provinces until they provide laws for Americans taking out patents in those countries; but to carry out the principle so blindly inserted in these sections, if a sewing machine were patented here, and the inventor took it to England, patented it there, and sold his right, he could stop the sale of coats, vests, and pants in this country, if made by the very machine for which he was paid in full. This section certainly requires amendment.

We object to section 28, so far as it confers power on Courts of Equity, to decree and award damages. We have no desire to see our Patent Laws placed above and made more stringent than "Common Law."

The 29th concluding section is excellent; it provides for the settlement of all disputes about musty testimony relating to priority of inventions, and places the question upon a proper basis.

The Bill, as a whole appears to be a powerful instrument for increasing the revenues and powers of the Patent Office; and the means proposed for these purposes are exceedingly complex and anti-republican. Instead of simplifying the Patent Laws, it makes them more obtuse and complicated. If the revenues of the Patent Office are insufficient for conducting its business promptly and properly, let the universal fee be raised to $40 or $45, this, for 2673 applications would increase the revenue to $56,780 or $40,095 more per annum. This would be a more simple and commendable plan than piling on the assessments for claims, and the "*clap-trap*" advances for *Confirmations*.

Objections to the parts specified of this bill, have so crowded upon us in examining them, that we have not been able to find room for presenting one tithe of the arguments that might be advanced. At some other time we may return to the subject; but at present we appeal to Senators to give this matter a calm and unhurried examination, and pass only such a Bill as will be a credit to themselves,—a wise and just measure to benefit inventors and the people at large.

New Use for Buckwheat Straw.

We have seen it stated in some of our foreign scientific exchanges, that the straw of buckwheat has been used in Russia for a number of years, as a substitute for quercitron or yellow oak bark. This will tell against the American importers of this bark, if it be found in Europe that buckwheat straw answers as well in dyeing. We do not know how much quercitron is now exported, but the quantity cannot be small; still we think it is not so large as it was thirty years ago owing to the extended use of the bi-chromate of potash since that time, for dyeing yellows on cotton fabrics. Quercitron, or yellow oak bark, is an American dyewood, discovered by Dr. Bancroft, of London, while in America before the Revolution. It was, and is now employed in dyeing yellow on woolen, silk and cotton goods, also for dyeing green on a blue ground. The latter color is produced on cotton by dyeing the fabric a blue color in an indigo vat, then preparing the cotton for the bark decoction with pyroligneous acid, or a preparation of alum and the acetate of lead. The bark is scalded or boiled and the goods handled carefully in the clear liquor for half an hour. To dye yellow with quercitron bark, it is only necessary to scald some of it in a clean vessel, and use the clear decoction, by placing it in a boiler, bringing it up to the boil, and using a small quantity of the sulpho-muriate of tin in the liquor. The goods receive two or three dips in the liquor—each dip requiring about 15 minutes handling—then an airing. Cotton and woolen goods are boiled in the bark liquor, but silk goods are not boiled, they are merely handled in scalding hot liquor. This bark makes a very beautiful color, but if buckwheat straw will answer as good a purpose, our farmers can use it for dyeing yellows and browns, in the same manner as bark, only it will be more convenient for them to use alum in place of the sulpho-muriate of tin, as the mordant. It is a well known fact, that quercitron bark was exported from Philadelphia for many years to England, and used there for dyeing yellow, before the secret of its use was known at home.

A New Technical Dictionary.

Although there have been quite a number of dictionaries of Science and Art issued by home and foreign presses, there is not one that we can think of as satisfactory in all respects. They are either too cumbrous in their materials, because devoting too large a space to some particular department of art or science, with whose details the author happened to be familiar, while deficient in other departments, perhaps omitting some words altogether; or, what is worse, they present the mere rehash of the crude, unassimilated, contents of previous works of the same class, without a single studious effort to add anything which the rapidly accumulating wants of the present era may have called forth—for, with the rapid improvements which inventive talent and industrious art are making at the present day, there must necessarily be many additions to the very terms of science and art, in order that the ideas of the inventors shall have fitting forms of expression.

It is in view of this state of things that we have always extended a friendly recognition to the various attempts to meet the wants of science and art in this respect. And it now gives us special pleasure to announce that M. Gardissal, our agent in Paris, has in hand a work to whose appearance we look forward with hope. It is to be a TECHNICAL DICTIONARY, in three volumes, the first of which has, as we learn, already been put to press. The first volume will range French, English, German, the second English, French, German, and so on. In getting it up M. Gardissal has the valuable co-operation of the brothers F. and A. Tolhausen, practical engineers, which fact is a guarantee of the accuracy of the more practical features of the work.

We think we can promise that the American price of M. Gardissal's work will not present any barrier to its general accessibility, as has been the case with most similar publications. The agency for this country will probably be in our hands, and in a great measure under our own control.

Life Preserver Seat.

We learn by our Washington cotemporaries, that some very successful experiments have been made at the Navy-yard in that city, in the presence of a number of naval officers, with the life-preserving seat of N. Thompson, of this city. This seat forms a ship stool of the usual size, convenient, neat, and substantial, and can be converted into a life-preserver in a moment, by moving two brass slides, which allow it to divide and open, and then by moving the slide a few inches more, they hold it firmly in that position. It then forms a strong frame, with a capacious air chamber at each end, and the person is supported in the water without effort, the sides coming up under the arm-pits, and leaving the arms and legs free. An experimenter, who had never before seen the apparatus, threw himself with it into eighteen feet water, and managed it in many ways with perfect ease.

Deaths.

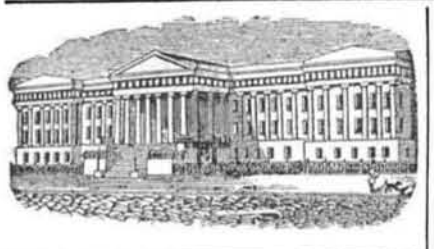
Madame Sontag, the famous vocalist, died of cholera on the 16th ult, while in the city of Mexico.

Josiah Holbrook, who was for a long period a resident in this city, and was engaged in professional pursuits to simplify science—especially geology—to the capacity of youthful minds, was drowned a few weeks since in Virginia. his body having been found in Black Water Creek, as we learn from the Lynchburg "Virginian." It is supposed that he met his death by falling down a cliff while searching for geological specimens.

Massachusetts Boots and Shoes.

The Boston Atlas, in an article upon the vast extent of leather manufacturers of Massachusetts, says: "To give an idea of the magnitude of this branch of trade, it will be sufficient to state that Massachusetts makes every year, very nearly two pairs of shoes for every man, woman, and child in the United States."

That is 48,000,000 of pairs.



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING JUNE 27, 1854.

FURNACE OF STEAM BOILERS—Jonathan Amory and W. P. Parrott, of Boston, Mass.: We claim conducting off the carbonic acid gas, or other heavy and incombustible gases, which check combustion, by means of a pipe which communicates with the bottom of the furnace at or near one end of the same, and with the smoke pipe or flue, as described.

CIDER MILLS—Jesse Bauman, of Shepherdstown, Pa.: I claim the use of the wheel provided with offsets or planes, and teeth or spikes, in combination with the springs for grinding the fruit.

Secondly, I claim the arrangement of the grinding wheel and springs, with the cam, pressing box, and pomace drawer, and spring, O, for the purpose of pressing the pulp and delivering the pomace, as set forth.

Lastly, I claim in the secondary mill the arrangement of the spring, concave, and cam shaped rasping wheel, or grinder, for the purpose of reducing the fruit to a pulp.

COFFEE MILLS—Chas. H. Beatty, of Wheeling, Va.: I claim adjusting the movable grinder of coffee or spice mills by a handle or lever composed of two parallel pieces and a tempering screw, as set forth.

GRAPE FRAME—J. O. Cross, of Kingsbury, N. Y.: I claim an adjustable elevating and depressing grape frame, with or without supporters attached, for the better cultivation of the grape, which is believed will secure all the advantages specified.

GAS AND LIQUID REGULATORS—T. H. Dodge, of Nashua, N. H.: I claim the employment for regulating the flow of gases and fluids of two chambers having communications at top and bottom, and being partly filled with water or other liquid, and furnished with a valve and float, arranged and operating as described.

GRASS HARVESTERS—George Esterly, of Heart Prairie, Wis.: I claim, first, the construction of the sickle in such manner as to have projections on alternate sections of the sickle sliding upon a bar, operating for the purposes set forth.

Second, I claim grinding off the raised or feather edge made by the chisel in cutting the sickle, as set forth

Third, I claim the attachment of a plow to the sickle beam, by a screw pivot to fit said plow to the surface of the soil, as set forth.

REVERSIBLE CAPSTANS—J. A. H. Ellis and Alex. Gordon, of Rochester, N. Y.: We claim the shifting spur wheel connected to the shaft of the capstan by feathers, and operated by a lever or its equivalent, for the purpose of reversing the direction of the barrel of the capstan, without reversing the direction of the sweeps, and giving said capstan an increased backward motion.

BREECH-LOADING FIRE-ARMS—J. Durell Green, of Cambridge, Mass. Patented in England, May 12th, 1854: I claim the self-adjusting thimble, constructed and operating as described.

I also claim the peculiar manner of locking the barrel to the breech by means of the wedge-formed ears and the hooks, in combination with the method described of controlling the forward and revolving motion of the barrel by means of the cylinder, the sleeve, and the spindle, the whole being connected together by the key, as set forth.

BANK LOCKS—Wm. Hall, of Boston, Mass.: I claim the slotted slides, which are allowed to arrange themselves upon the stepe of the former, to form the bits of the key in combination with the pin, or its equivalent, when the tumblers are operated by turning the key, whereby the tumblers are rendered inaccessible to any instrument that may be inserted at the open key hole, and the latter is closed whenever the key is turned so as to bring the slides to bear upon the tumblers.

SEED PLANTER—Daniel Hill, of Bartonia, Ind.: I claim the reversible directing board plane on one side, and furnished with converging slats or ridges on the reverse side, for the purposes of either drill or broad-cast sowing.

SUSPENDER ENDS—Julius Hotchkiss, of Waterbury, Ct.: I claim the double attachment or connection of the straps with the buckle, as set forth.

SEWING MACHINES—Walter Hunt, of New York City: I claim, first, sustaining both ends of the needle whilst moving the cloth to effect the feed by means of an inclined guide made adjustable and placed under or upon the shuttle side of the cloth, as described.

Second, I claim the rotary table top, in combination with the guides and ways underneath the same, all arranged and operating as set forth.

ROTARY CULTIVATOR—H. M. Johnson, of Carlisle, Pa.: I claim a system of sharpened disks or rotary colters, a part of which are armed upon their periphery with knives projecting laterally—said knives being set obliquely to the radius of the disk as described; the whole being combined and arranged in three several sets, so that the two sets armed with knives shall cut alternate sections of the soil as set forth.

DRYING CLOTH—D. W. Kennedy, of Staunton, Va.: I claim the reel constructed as described in combination with the hot air or steam drum arranged upon its shaft, whereby the cloth near the shaft may be dried equally with that upon the outer diameter of the reel, and thus equalize the shrinking of the cloth throughout its whole length.

MITER MACHINE.—George W. La Bau, of Jersey City, N. J.: I claim the combination and arrangement in the manner described, of the several specific parts or their equivalents, of the miter machine, without limiting myself to any particular arrangement of parts.

HYDRO-PNEUMATIC FORCE PUMP—Alexander B. Latta, of Cincinnati, Ohio: I claim, first, discharging the air from the cylinder before the end of the stroke of the piston to move beyond the end of the cylinder, and into the enlarged chamber, as described.

Second—Inclosing the top of the water chambers upward from the end of the cylinder to the discharge valve, in the manner set forth.

Third—I claim the protrusion of the piston from the end of the cylinder at the end of each stroke in combination with the upward inclination of the top of the chamber leading to the discharge valve, as set forth.

COFFINS—John McF. Lyeth, of Baltimore, Md.: I claim the method described of constructing marble slab coffins so that the joints shall be tight, and strongly secured to each other and to the bottom, and when raised by the handles, the weight shall come upon the bottom slab, as described, the whole forming a new article of commerce not hitherto known, or used.

REGULATOR OF GAS BURNERS—Wm. Mallerd, of Brooklyn, N. Y.: I claim, first, the perforated cups or partitions, with their edged rings encircling the perforation in combination with the perforated disk valve and the pin points to support it.

Second, the series of two or more valve chambers, as described, with their thin valves, each succeeding valve having a smaller perforation than the preceding one, and a slight increase of weight, the whole arranged and operating as set forth.

Third, making the holes in the jet so as to burn at low pressure, in combination with a regulator.

GAS BURNERS—Wm. Mallerd, of Brooklyn, N. Y.: I claim, first, making the tip where the jet or jets of gas are burned of pure tin or other metals of which tin forms a large proportion, thickly coated with tin, for the purpose set forth.

Second, making the tube and inner portion of burners of tin or any metal thickly coated with tin, to prevent corrosion, and to avoid the use of solder.

Third. punching the holes through the tips or jets of the gas burners, instead of drilling or sawing, which can be done by a hand punch, but with more accuracy and despatch by a small machine.

DOUBLE-ACTING FORCE PUMP—J. H. McGowan, Jr., of Cincinnati, O.: I claim the combination of an air chamber communicating with the pump above all the valves, with a vacuum chamber communicating with the pump below all the valves, whereby the elevation of water is rendered more equable, and effected with a saving of power.

FRUIT PICKER—John Mellendy of Southbridge, Mass.: —I am aware that a fruit picker has been made of a common fork with two bent tines arranged on top of a pole, and a basket suspended underneath the tines, I am also aware that a fruit picker has been made of a cylindrical vessel placed on the top of a pole, and having its upper edge armed with angular teeth raised on it: I therefore do not claim any such contrivances: nor the combination of a bifurcated pole and a basket hung to it, as they do not offer the facilities for gathering fruit that are found in my apparatus, as the movement of the basket of it, up to the star-shaped separator, enables a person to seize the fruit, and remove it without bruising it against limbs or by its dropping too far or upon other fruit. Besides this, the instrument when among the branches of trees may be moved from one fruit to another, without the necessity of turning around, the fruit being gathered by it with less labor and care than by the other instruments to which allusion has been made.

But I claim the application of the star or serrated cover or separator, and the sliding basket on the pole, so as to extend entirely around it on the pole, and so that the serrated cover shall be stationary relatively to the pole, and the basket be made to slide or move towards and away from the cover, and be operated as specified. The whole construction and arrangement of the parts rendering the instrument far more convenient and effective, in use, and less liable to bruise or injure the fruit gathered by it, than any of the others to which reference has been made.

INHALING TUBE—Daniel Minthorn, of New York City: I do not claim inhaling tubes as new, I claim the bottle or flask with an air-tight stopper, and a tube with its lower and submerged into said fluid.

And lastly, I claim the inhaling tube in combination with the flask and tube.

CUTTING BRADS—Wm. J. Miller, of Cold Spring, N. Y.: I claim the arrangement of the vibrating shear in relation to the revolving shears or cutters, as connected, so as to change the position of the cutting edge of the vibrating cutter, and cause it always to stand parallel with the edge of each revolving cutter until the nail has been cut off, as set forth.

ROAD SCRAPER AND SPREADER—Thos. Penrose, of Ellington, Ill.: I claim the tail piece with its adjustable brace, when combined with a flat scraper having the points of attachment of its draught chains at its lower edge, as set forth.

CHARGER FOR FIRE ARMS—T. H. Peavey, of South Montville, Me., I claim the charger, consisting of the chambered cylinder confined between two plates, to one of which is attached a muzzle piece, or some suitable means of fitting it to the barrel, and furnished with a spring catch, or its equivalent, by which the chambers may be severally held in communication with the holes in the plates, and the muzzle piece, as set forth.

TRAP FOR ANIMALS—Oliver Pier, of Harmony, N. Y.: I claim the lever treddle, set, or fall, and the elbow catch latch, in combination with the single and double prong grapple, together with the folded spring, as described.

WOODEN BUTTONS—L. L. & A. L. Platt, of Newton, Ct.: We claim manufacturing wooden buttons by cutting the blanks from slabs, which are of a greater thickness than the buttons are intended to be, and reducing said blanks by pressure to the desired thickness for the purpose of forming durable and well proportioned buttons, as set forth.

MORTISING MACHINE—Hiram J. & Simeon, H. Plumb, of Honesdale, Pa.: We claim cutting mortises by having two chisels forced gradually into the wood or stuff, and a reciprocating chisel or plane working between. The chisels cutting the ends of the mortise, and the chisel or planer cutting out the wood between them, the above parts being arranged and operated as shown, or in any equivalent manner.

WINNOWERS OF GRAIN—B. D. Sanders, of Holliday's Cove, Va.: I do not claim the valves or slides for regulating or modifying the blast in the several compartments of the blast spout, for they have been previously used, neither do I claim the spring traps, as they are well known.

I claim the combination of the inclined screen (next adjoining the feeding hopper) with the suction spout, subdivided into two or more compartments, the lower ends of the partitions extending downwards nearly to the screen, as set forth.

CARRIAGE AXLE—Wm. H. Saunders, of Hastings, N. Y.: I do not claim simply enlarging an axle at the root, as this has been done heretofore; but I claim the combination of a taper axle, having an enlargement at the root, with a box having a similar inside enlargement at its rear, and a diminution of size outside, provided with concentric rings or grooves for allowing it to be wedged in the hub, the whole being for the purpose of strengthening the axle without enlarging the box and enabling me to use smaller hubs with a sufficiency of wood therein to preserve the necessary strength, as set forth.

CALIPERS—Perley Seaver, of Oxford, Mass.: I do not claim the precise form nor the operating by a screw or spring, or their combination.

But I claim making the pieces with the projections, when combined with the cam and its nut, and operating substantially as described.

GRINDING MILLS—Isaac Straub, of Cincinnati, Ohio: I claim the combination of the permanently adjusted tram blocks, for supporting the upper stone, and the bridge tree, which is adjustable at both its ends, for supporting and adjusting the spindle and the lower stone or runner upon it, to the upper stone, as described.

STEAM HAMMERS—Thos Sumner, of Paterson, N. J.: Merely varying the direction of the blow, and employing for that purpose a hinged or rocking guide frame for the hammer to descend in, with lever to direct the descent, I do not claim, but I claim the arrangement described of the hinged guide frame, which carries the hammer in relation to the anvil by supporting the said guide frame on a trunnion below situated at the back of or on one side of the anvil and at the same level, or thereabouts, as that occupied by the bar, or works under operation on the anvil; the said hinged guide frame being furnished with a counter-balance weight, to facilitate and steady its swing and relieve the swinging parts from strain when occupying an oblique position as specified, by which arrangement the hammer may be swivelled from the vertical towards the horizontal position, on either side into radial positions with that portion of the bar or work resting on the center of the anvil for the purpose of enabling the hammer to be worked across or round the bar, and to operate alike on its top and corners or sides to give it a round, taper, or polygonal form in its transverse section, or otherwise work and shape it with convenience and dispatch, and whereby the frequent handling or turning of the heavy bar or work is avoided.

HEAD GATE FOR WATER WHEELS.—Hartwell L. Turner, of Strykersville, N. Y.: I claim the manner as described, of constructing, arranging, and operating the head gates of re-action water wheels, for the purpose specified.

VENTILATING SEWER—Enoch Thorn, of Philadelphia, Pa.: I claim the application of a self-acting valve to a common sewer for the purpose of allowing the sewer to relieve itself of the compressed air, which at times accumulates in it, so as to prevent the bursting of the sewer, or of its overflow into the streets, in the manner set forth.

COFFINS—Philo Washburn, Harrison G. O. White, & George A. Copeland, of Taunton, Mass.: We claim, first, a movable and adaptable head frame, round or otherwise, consisting of the following parts, viz.: the head frame, the bar, the uprights, the head cushion, the straps, and the hooks, as represented.

Second, the method by which the cover is secured to the coffin, viz.; the eyes, E E, the hooks, the eyes, D D, and the thumb screws or pins, as represented.

Third, the facings of the edges of the lid and its corresponding aperture with metal, all for the purposes described.

WIRE BONNET FRAMES—Henry Weed, of Philadelphia, Pa.: I claim the method described of forming wire frames for bonnets, viz.: by winding the wire round pins or stays, or their equivalents, arranged as described, on a plate or board, thereby securing uniformity and exactness in every particular, as specified.

WHISTLING TOPS—W. E. Woodbridge (assignor to Chas. Humphrey), of Perth Amboy, N. J.: I claim the attachment, as set forth, of a whistle or other instrument capable of producing a musical sound, without regard to the particular form of the top or the mode in which it is set in motion.

FEEDING PAPER TO PRINTING PRESSES—Wm. F. Collier, (assignor to himself and Joseph Boyden), of Worcester, Mass.: I claim combining with the table (on which the paper is laid) and the sheet lifter, the bar or stand, against which the sheet of paper is driven while being lifted from the pack. The object of such bar being to shake the sheet or produce such a concussion thereon, that should two sheets adhere together and be lifted they may be shaken apart, so that while the upper one is further raised upwards, the lower one may be set free to drop back upon the pack.

I also claim the combining with the lifter the sheet elevator, by which the sheet of paper is elevated or kept elevated and deposited on the top of said lifter, as specified.

I also claim the combining with the rotary lifter, the projecting wing, lip, or plate, by which the sheet of paper is raised and presented to or upon the inclined planes or rests of the transferrers, as specified.

I also claim the transferrer in combination with the exhausting lifter and the inclined rails, the same being employed to receive and transfer a sheet of paper from its place of deposit on the rails to the press rollers, as specified.

I also claim the mode of opening, holding open and closing the jaws of the transferrer, viz., by means of the trigger catch lever, the two stops, and the springs applied to the upper jaw.

I also claim the movable sheet receder in combination with the inclined rests and mechanism, as described, for elevating a sheet from the pack and transferring it to the press rollers, as specified.

I also claim the combining with the sliding or movable table on which the pile or pack of paper is deposited, mechanism for permitting it not only to fall or move towards the sheet lifter, while the upper sheet of the pile is raised above the lifters, but to hold the table firmly in position while the sheet lifter is being moved away from it or the pile of paper on it, as stated.

ENGRAVING OR PRINTING UPON GLASS—M. D. & L. W. Whipple, (assignors to L. W. Whipple & R. B. Fitts), of Somerville, Mass.: We claim the described method of engraving or lettering upon glass, an engraved metallic surface being caused to revolve or vibrate in contact with the surface of the glass, emery, or other suitable cutting material being interposed between the bearing surfaces of the two.

Second, We claim the method described of causing the engraving cylinder to roll in contact with the surface of the article to be engraved the parts which carry and give motion to the cylinder being connected with the vibrating lever operating as set forth.

POWDER CHANNEL TO DOORS OF SAFES AND BANK VAULTS—F. C. Goffin, of New York City (assignor to A. B. Ely, of Boston, Mass.: I claim the construction of channels or hollow chambers, in connection with the doors of safes, vaults, &c., the same being open at top and bottom, and reaching from the lock to the bottom of the door, as set forth.

MOLDINGS FOR METAL CASTINGS—David Brown, of Baltimore, Md. (assignor to J. F. Clark, of Washington, D. C., and David Brown, aforesaid): I claim the arrangement of the pattern and piston plate surrounding the pattern, within a chamber or piston box, in relation to the half flask, operated as described, by which I am enabled to protrude the sand into the half flask from said piston box or chamber ann around the pattern, and thus effect a compression of the sand at the parting instead of at the central portion of the mold, as has heretofore been done, for producing more perfect castings.

PUMP—Ira Carter, of Champlain, N. Y.: I claim, first, the mode of attaching the lug described, made to the cylinder, and the grooves to contain the packing,

Second, the form and operation of the induction valves being housed in by the lug of the cylinder enclosing an air chamber between them, and closing the port holes on a circle section against the water after it passes them thereby obviating lost suction.

Third, the form and principle of the core, which may be made a stationary part in a pump, or an operative part, by changing the locality of the induction valves only.

And fourth, the mode of oscillating by two cranks with friction wheels on their wrists, being brought to act upon one lever between them, vertically attached to that part of the pump to be operated, said cranks being made firm on two parallel horizontal shafts geared to revolve with equal speed, and gathering at the top.

MILK AND OTHER EVAPORATORS—A. F. Dalson, of New York City: I claim the combination of the shallow pan with a rapid current of air underneath the cover, and thence through the central draught pipe, as shown, together with the apparatus for continual stirring, by means of the revolving cover and fixtures, as described.

PREPARATION OF ARCHIL—Jonas Eberhardt, of Philadelphia, Pa.: I claim the production of a bright and clear steam purple, without the use of any acid, after its being printed and steamed, as described.

SMUT MACHINES—H. B. James, of Trenton, N. Y.: I claim the combination of the hopper, trunk, spiral passage, and separator, effected by means of a common air-tight casing, as set forth.

HEEL CUTTERS—A. D. Kelley, of Rochester, N. Y. Ante-dated March 20, 1854: I am aware that spring knives have been used in sole cutters, and that they have had screws adapted to them in such a way as to change their form or forms according to the size of the sole to be cut by them; I therefore do not claim such,

But I claim the combination and arrangement of the flexible yoke and its screws, with the spring blade for the former or pattern, as specified, such flexible yoke and screw enabling a person to change the form of the cutting edge of the knife, or to adapt the knife to any pattern block as set forth.

MAGAZINE REPEATING AND NEEDLE GUN.—Edward Lindner, of the City of New York: First, I do not claim the barrel containing the charges, but claim the application of the rack situated between the gun barrel and the cartridge barrel, and the construction of the piston in connection with the said rack for the purpose of pressing the cartridges into the revolving breech piece as described.

Second I do not claim the needle for the purpose of igniting the priming, but I claim the spiral spring round the needle, together with the toggle joint at the upper end of the hammer constructed as set forth, and acting upon the needle in such a manner that after said toggle joint has pressed the needle sufficiently far into the cartridge to ignite the priming, said toggle joint is forced upwards, allowing thereby the needle to spring suddenly back and pass under the toggle joint by the action of the above-mentioned spring, and by which quick returning motion any heating of the needle is prevented.

Third, I do not claim the revolving breech piece with spiral grooves on the outside circumference: but I claim the arrangement and manner of working the pin, by which the revolving breech piece is made to turn, as described.

Fourth, I claim covering the bottom of the cartridges with a thin skin to facilitate the piercing process of the same.

Fifth, I claim the ramming hammer worked as set forth.

BREECH-LOADING FIRE-ARMS—A. N. Newton, of Richmond, Ind.; I claim, first, the method described of operating the sliding breech-pin by means of the lever the thumb lever, and the spring, all applied or attached to the arbor, which forms the tumbler shaft, operating as set forth.

Second, Locking and unlocking the sliding breech-pin by means of a locking piece which slides in grooves in the stock or shank of the gun and a lever, having a stud working freely in a slot of suitable form, in a plate attached to the same arbor as the levers by which the breech pin is operated, the whole being as set forth.

Third, fitting the cock and tumbler, or other equivalents usually secured to the tumbler shaft, loosely to the said shaft, within the stock or shank of the piece, and causing the cock to be driven back to cock the piece by means of a pin attached to the lever, by which the sliding breech is moved back and forth, whereby the sliding breech is allowed to return after the cartridge is introduced, and leave the piece cocked as described.

COMBING COTTON AND OTHER FIBROUS MATERIALS—Jas. Noble, of Leeds, England: I do not confine myself to the precise details shown and described, so long as the peculiar character of my invention be retained.

I claim for the purpose of operating upon fibrous material, as set forth, and in combination with brushes and draw rollers, or their equivalents, the combining of two rotating rings of teeth, so that not only shall one rotate in and be eccentric to the other, but, so that at or near one point of the revolutions of the two rings, they shall come nearly or quite together or in contact with each other, as specified; such rings, by their co-operation, being made to separate the long from the short fibers of the material when subjected to the action as explained.

VENTILATED FLOUR BARREL—Thos. Pearsall, of Smithboro', N. Y.: I claim the manner described of preventing fermentation of flour, meal, or other vegetable commodity, by dividing the bulk, as specified, that is to say, by means of air pipes or passages, arranged to run through the cask, as set forth, and whereby the flour is prevented from heating and becoming sour at the center of the cask, by the free circulation of the cold atmosphere or air through said tubes.

PLOWS.—Jacob Revercomb, of Botelоust, Va.: What I claim in ploughs with self sharpening points, is the mode of fastening points, the same consisting in the insertion of the keys, through an opening in the land side, as set forth, in combination with a slot so placed in the stem of such points that in the different or reversed position of the points, the slot shall be in place for the reception of the key.

CORDAGE MACHINERY.—Philos B. Tyler, of Springfield, Mass.: I claim in the regulator, as described, wherein the tension of the strand or so acts upon a friction brake as to make a uniform resistance, and consequently a uniform tension of the strand or thread.

KEROSENE BURNING FLUIDS.—Abraham Gesner, of Williamsburgh, N. Y. (Assignor to The Asphalte Mining and Kerosene Gas Company of New York City) I claim as new manufactures or compositions of matter for illuminating and other purposes, the liquid hydrocarbons described, which I denominate "A Kerosene," "B Kerosene," and "C Kerosene" Three Patents.

RE-ISSUES.

DRYING GRAIN.—Henry G. Bulkley, of Kalamazoo, Mich. Patent originally dated, March 2, 1852: I claim the method of seasoning or kiln drying substances by using steam in a vessel which has an opening communicating with the atmosphere to limit the pressure for the purpose of transmitting caloric to the substances to be seasoned, or kiln dried, in the vessel or vessels containing them, as specified.

SEWING MACHINES—I. M. Singer, & Edward Clark, of New York. (Assignees of Chas. Morey & Jas. B. Johnson, of Boston Mass.) Patent originally dated, Feby. 6, 1849: In the above machine, we claim the combination of a needle and a hook, as constructed and made to operate together, for sewing cloth, (or any other material or materials capable of being sewed) as specified.

We are aware that an adjustable bar has been made use of to hold the cloth to the cloth bar, and prevent it from being retracted by the withdrawal of the needle, and we therefore lay claim to no such device, but we do claim the spring or curved arm for the purpose of holding the cloth to the surface of the feeding apparatus by a yielding pressure, in the manner set forth.

NOTE.—Nine of the applications in the above list were prepared at the Scientific American Patent Agency.

Iodide of Potassium.

The following is from the "Archives der Pharm." by Prof. A. Overbeck, on the preparation of the above named useful substance:—

"Iodide of formyle is prepared from 3 equivs. alcohol, 6 equivs. iodine, and 5 equivs. potash. If 4 equivs. of iodine be employed to $C^4 H^6 O^2$, the mass thickens too much by separation of the iodide of formyle produced, so that the greater addition of alcohol is very essential to the facilitation of the operation. This is performed in the following manner:—

The necessary quantity of watery alcohol ($C^4H^5O.,H.O.$) is first gently heated in a beaker or flask; the dry iodine and the potash (the latter dissolved in as little water as possible) are then alternately added, in such a manner that before each addition of iodine the solution is completely decolorized. The iodide of formyle produced separates for the most part during the operation in citron-yellow laminæ; its complete separation is effected by pouring over it 20 times as much water as there was alcohol employed; the whole is then collected on a filter, pressed between blotting-paper, and boiled with solution of potash (1 equiv. of iodide of formyle to 4 equivs. potash) until it is completely decomposed into formiate of potash and iodide of potassium.

This fluid, mixed with that filtered from the iodide of formyle, is now evaporated to dryness, then mixed with some powdered charcoal (for more ready decomposition of any iodate of potash that may have been formed), and heated to redness; the mass, which contains iodide of potassium and carbonate of potash, is then extracted either directly with alcohol, or with water after neutralization by hydriodic acid. Pure iodide of potassium is obtained by crystalization from either of these extracts."

The London Crystal Palace.

The London Crystal Palace, which was removed from Hyde Park to Sydenham, near London, was re-opened on the 10th ult. by the Queen in person.