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LIST OF PATENT CLAIMS

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FOR THE WEEK ENDING MAY 17, 1853

PENDULUM LEVELS—By T. A. Chandler, of Rockford, Ill.: I claim the method of supporting the angular journals of the arch of a pendulum indicator in turning and self-adjusting bearings, of similar form to the angular journals, as set forth.

VIOLINS—By Moses Coburn, of Savannah, Ga.: I claim the apertures in the sides, instead of in the top, and for producing the effect set forth.

VERTICAL PIANOS—By Edwin Fobes, of Boston, Mass.: I claim the arrangement of the straining pins, with their axes, vertical, or nearly so, and parallel, or nearly so, to the general plane of the strings, and to stand above the iron frame, as set forth, the string of each hitch pin having guide rollers applied to it, as set forth, my improvement enabling me to obtain sundry important advantages in the construction and tuning the piccolo pianoforte.

I also claim extending the sounding-board upwards, above the bridge, and in rear of the bridge plate in the treble, and so as to be capable of vibrating, in rear and above said bridge plate, as set forth.

UMBRELLAS AND PARASOLS—By Samuel Fox, of Sheffield, Eng. Patented in England, April 6, 1852: I do not claim the bending or corrugating a metallic plate, or bar, for the purpose of imparting strength thereto. But I claim making umbrellas and parasols with ribs and stretchers of plate steel, bent in the trough-like shape, as specified, in combination with eyes and connections, applied essentially as described, whereby they are rendered comparatively much lighter than, and still posse-s all the requisite strength of those made with solid or round rods of metal, in the ordinary way, and at the same time the formation of the eyes and connections is facilitated.

SOFA BEDSTEADS—By L. L. Gilliland & J. R. Wagoner, of Dayton, Ohio: I claim the hinged front board, so arranged that by the turning over the seat, to convert the apparatus from a sofa into a bed, the front board shall turn down to prevent it fromforming a hard ridge, under the sacking, which would be uncomfortable to lie on, and when the seat is turned back again, to re-convert the bed into a sofa, the front board shall be lifted up again by the act of turning the seat back into the proper position to support the sacking of the seat.

Also, the arrangement of the head and foot boards so that the act of shutting up the bed will depress them, and opening it out will elevate them again, as set forth.

The arrangement of the turning seat of the sofa, and the sackings of the bed and seat, in such a manner that, by the turning of the seat to form the bed, the sacking of the latter shall be stretched, and by the turning up again of the seat, to reform the sofa, the sacking of the latter shall be stretched, as set forth.

CALENDAR CLOCKS—By J. H. H. Hawes, of Ithaca, N. Y.: I claim causing a calendar clock to supply its own changes, for the irregularities in the length of the month, and showing on its dials the exact and no fractional parts of a day, week, or month, by means of the combination of the wheels, having thirty-one divisions, both of which run together, and independently of each other, at intervals, on the same arbor, and the lifting pieces for supplying the necessary changes in the length of the months, the whole being operated by the hook piece, as described.

Also, in combination, the wheel of seven parts, working, spring-tight, with the wheel and the catch piece, so that the two wheels may move together and independently of each other, for the purpose of allowing the day of the month indicator to run, during the time that the change is taking place from the end of a short month, to the beginning of the next month, while the day of the week indicator passes from one day to another, in regular succession, as described.

COOKING STOVES—By Matthaus Helm, of Cincinnati, Ohio: I claim the open bottomed space or chamber, behind the fire encircled at the sides and top, by flue, and closed at the ends, by shifting or movable doors, as described, constituting an accessible and well ventilated arrangement for roasting purposes.

CUTTING WOODEN SCREWS—By A. H. Longley, of Lebanon, Ind.: I claim giving an equal progressive to the cutting tools, in combination with a differential rotary motion, for the purpose of cutting the screws at the same time the hole is bored or the tenon is made as set forth.

UPHOLSTERING FURNITURE—By Frederick Mathesius, of New York City: I claim covering the seats or other parts of upholstered furniture, or other articles and things, by means and with the aid of elastic ligaments or springs attached to the edges of the covering, and to the framework of the article covered, in such manner that the outer or fancy covering, however much used or pressed down, upon being relieved from such pressure, will resume and retain an even and smooth surface, using for that purpose india rubber, springs, or any other elastic material, which will produce the desired or intended effect.

SEEDING HOES—By J. A. Pease, of New York City: I claim the combination and arrangement of a double bladed hoe, with seed box and drop, as described, for the purpose of planting separate kernels of corn at equal distances apart.

POCKET COMBS—By Wm. J. Thorn, of Westbrook, Me.: I claim the manufacture of pocket combs, with semicircular joints in combination with strips overlapping them, as set forth.

CASTORS FOR FURNITURE—By Wm. W. Wade, of Springfield, Mass.: I claim the arrangement of the right-hand screw on the spindle, in combination with or respect to the arrangement of the left-hand screw, into the socket of the socket piece, and to the bearing surfaces of the said parts, whereby the spindle is not only preserved in the socket piece, by the two screws, but allowed freely to rotate, when its bearing surface is in contact with the bearing surface of the socket, as described.

GRADUATED CUTTERS FOR CLOTH AND OTHER SUBSTANCES—By H. D. Walcott, of Boston, Mass.: I claim, in its connection with the cutting knife, the improvement of making the bed to move or rotate transversely, in combination with the surface of it, which acts in conjunction with the knife, of variable length or lengths, in order, by moving or turning the bed around under the knife, different lengths of cut may be produced, as set forth.

Also, the improvement of combining with the knife and tubular cutter, and a rotary shaft or cylinder, placed under them, the two triangular or trapezoidal beds or surfaces, arranged on the shaft or cylinder, as described, whereby a cut or button may be made of any desirable length either with or without a hole at one end, as stated.

CLEANSING AND COOLING BLOCK DIES IN RIVET MACHINES—By D. L. Weatherhead, of Philadelphia, Pa.: I claim is clearing cinders, scales and other obstructions, from a socket die, made in a solid block, for the purpose of heading rivets, by forcing in at the closed end of the die, a stream of water, that washes out the cinders, &c., every time a rivet is discharged; the inner end of the socket of the die being closed so that the pressure of the head of water, is rendered available, for forcing obstructions out of the die, as set forth.

LIME KILNS—By S. J. Seely, of New York City: I claim the process described of calcining limestone in a kiln, by the aid of furnaces and an artificial draught of air, through the furnaces and the kiln, maintained by a mechanical blower.

I also claim the combination of a suction blower at the top of the kiln, and a forcing blower at the bottom thereof, as set forth.

Also, the method of regulating the production of steam, to generate the power for the engine, in proportion to the duty required of it, by setting the steam blower in the same furnace that supplies the heat, for calcining the limestone, as described.

TRACK CLEARERS TO HARVESTERS—By Wm. F. Ketchum (assignor to R. L. Howard), of Buffalo, N. Y.: I claim the scraper or raking board, constructed as described, and combined with the rake piece at an angle less than a right a rigle, as set forth.

CORRUGATED PLATES FOR STEAM BOILERS, &c By Richard Montgomery (assignor to Elizabeth Montgomery), of New York City: I claim the corrugated metal plate, as described, with flat margins of greater thickness than its middle.

AIR ENGINES—By J. A. Woodbury, of Winchester, Mass, Joshua Merrill, of Boston, Mass., & Geo. Patten, of Charlestown, Mass.: We claim the mode specified of using air as a motive power, said mode consisting in the employment of a receiver, in which is to be highly compressed, heated, and maintained at or about a uniform pressure, a suitable working cylinder and piston with the ordinary appendages, an air pump, or pumps, worked by the ordinary appendages, an air pump, or pumps, worked by the engine for supplying the receiver, when the same are connected or combined with suitable devices, as set forth, for cutting off and working the air expansively, and according to the degree of compression of the air, as set forth.

We also claim, in combination with such an engine, the device for regulating the pressure of the air in the receiver, and economizing the power of the engine, said device consisting of the weighted bar, entering the receiver through a stuffing box, and connected, at its opposite end, with the stop cocks attached to the chambers of the air pumps, as described, intending to use any known means for accomplishing the two-fold purpose of regulating the pressure of air in the receiver, and opening the pump chambers ta the atmosphere so that the pump shall be relieved from unnecessary labor.

SEED PLANTERS—By Wm. Cressler, of Shippensburg, Pa.: I claim, in combination with the adjustable tubes, the seeding wheel, with its flange and partition, for adjusting, receiving, and carrying the grain and other material to be sown with it, around the opening, whence it is conveyed to the ground.

Events of the Week.

"WHAT IS DOING TO THE ERICSSON.—This fine ship lays at her dock foot of North Eighth st., Williamsburgh, preparing to undergo extensive alterations and improvements in her machinery. A temporary shed has been constructed near her dock, wherein to stow her machinery, most of which is to be taken out, in order to facilitate the improvements. In removing the machinery it will be necessary to displace a portion of her deck.—Workmen were yesterday engaged in taking out the ashes and brick from her furnaces, &c. To-day it is expected this job will be completed, when the work of removing the machinery will be prosecuted with earnestness. Several months yet must necessarily elapse before she will be ready for her destined voyage to Europe."

This extract is taken from the New York Daily Times of the 18th inst. When we have presented any information respecting new repairs or alterations making in the hot air ship, we have quoted the same from some paper (like the above) which had previously proclaimed *the complete* success of the Ericsson. It is not that we are not as well, or even better informed about what is going on in the Ericsson, than any paper in our city, that we make extracts like the above from our daily papers, but because we wish to corroborate all we have said about the failure of this ship, by giving the testimony of such journals as most lauded the new power at first, and who made bold to assert that "the days of steam were ended."

We cannot tell what may be affected by alterations of which we know nothing; we have spoken about what we know has taken place. Nothing would have given us greater pleasure than to have been able to say, "hot air is superior to steam power," as we welcome every *improvement*. We have received a number of letters from various places, in which Prof. Rainy has lectured on the Ericsson, informing us that on every occasion he took the liberty to misrepresent us. We keep a record of his sayings and bide the proper time to use them. We cannot believe that the gentlemen connected with the Ericsson have anything to do with his *itinerancy*, and they are therefore not responsible for his statements.

TO PREVENT INCRUSTATIONS IN BOILERS.—To persons having the care of steam engines the following from the "Lawrenceburg Register," may be valuable:—"Mr. Ira Hill has informed us that he has accidentally made a valuable discovery, by which the deposition of lime upon steam boilers may be obviated. Two or three shovels of saw-dust are thrown into the boiler; after which process he states he never had any difficulty from lime, although using water strongly impregnated with it. He has always found the inside of his boiler as smooth as if just oiled. Whether the lime attaches itself to the floating particles of saw-dust, instead of the boiler, or whether the tanic acid in the oak saw-dust forms a salt with the lime, which will not attach itself to iron, remains to be explained. The saw-dust was placed in the boiler for the purpose of stopping a leak. The experiment is cheap and easily tried.

[Saw-dust is not a new discovery for the prevention of incrustations in steam boilers.—In 1846 a patent was obtained for the use of mahogany saw dust to prevent incrustations in boilers; exhausted tan bark and dye woods have also been used for the same purpose.—Blocks and chips of oak wood have also been used, and our constant readers are perfectly familiar with these facts, as *saw-dust* is described on page 397, Vol. 3, Scientific American, as being applied for this purpose. If Mr. Hill will refer to said page he will find this mentioned, but the discovery may be new to him.

A NEW PROPELLER.—A beautiful propeller named the Vequero, has been built in this city for the coast trade of Cuba. The hull was built and modelled by George Steers, the designer of the yacht America. It is of unsurpassed symmetry and beauty. Her total length is 151 feet; depth of hold 10 feet; breadth of beam, 24 feet 4 inches; and is driven by a pair of oscillating engines; cylinders, 26 inches diameter; length of stroke, 28 inches; diameter of propeller, 8 feet; pitch, 10 and 11 feet; geared, 2½ to 1; draft, 9 feet consumption of fuel, 5 tons per twenty-four hours; burthen, 340 tons, carpenter's measurement. The engines, by S. H. and E. Farron are of great efficiency and perfection.

This vessel on her trial trip last week, made 16 miles per hour with her sails set.

Cincinnati Steam Fire Engine.

The annexed letter is from the inventor of the Cincinnati Steam Fire Engine, to Charles Cist, Esq., of "Cist's Advertiser," who has kindly furnished us with the original copy, which will interest our readers, as all rejoice in the progress of invention, and welcome every one that is new and useful:

"About twelve years ago I commenced making improvements in steam generators, and in the experiments have made various advancements towards a safe and speedy, as well as an economical mode of generating steam. These efforts have at last been embodied, with most of the improvements made in the time above stated, in the construction of a steam generator which was tried and crowned with entire success. I made the first one practically tested, with my own hands, in the establishment of Miles Greenwood, Esq., having obtained from him the use of a smith's forge and materials; I proceeded to work, and in a short time finished the generator; it was then put in connection with a six inch diameter steam cylinder, two feet stroke, and an old pump of a condemned fire engine belonging to the city; the whole thus thrown together, and by the assistance of Mr. Bray, the City Fire Engineer, and A. B. Lattu, was mounted on a wooden frame on wheels. A day was set for the trial, which was made in presence of many members of the City Council and citizens, numbering probably three thousand.

It was universally agreed, that from the time the fire was lighted until the steam was made from cold water, and the engine and pump at work lifting water from the cistern and pushing it through three hundred and fifty feet of hose, projecting over one hundred feet, from an inch nozzle, to where it struck the ground, occupied just five minutes. This trial was made on the 2nd of March, 1852.

On the first day of January, 1853, the firm of Lattu, Shawk & Co. had completed the steam fire engine now in the use of the city; and on the same day the trial was made, and was reported by the committee that 'in five minutes after the application of the match, there was steam sufficient to work the "doctor," which supplies the boilers with water; in ten, the engines were working finely, and in fifteen minutes the apparatus was at the cistern, by the intersection of Broadway an Second street. In four minutes more, making in all nineteen minutes, from firing and starting the, attachments were all made, and the apparatus lifting through two suctions, and throwing two handsome streams through inch nozzles. It variously threw from one to four streams; by concentrating six streams through a 1½ inch nozzle, it threw water to the distance of 224 feet. From one to three streams were thrown in various directions from the centre of Broadway over the Broadway Hotel and other four story buildings.'

After the engine was put into the hands of the city, an opportunity offered to test its full power, and show the amount of water it could lift from a cistern and discharge from the engine in a given time.

The cellar of an engine house was by an overflow of the street filled with water, the side were twenty-two feet apart in the clear, and the rear and front walls were seventy-two feet in the clear. The water line was marked when the engine was set to work and the time taken; in the space of one hour and ten minutes the water was lowered five feet, showing that twenty-six barrels were discharged per minute during the time of working.

At a recent fire on sycamore street the engine went eight squares, dropped the suctions, into the cistern, attached, and laid out six lines of hose six hundred feet each supplying at that distance, four hand engines, and throwing two streams on the fire, the time consumed from the time the engine started, until the water was thrown upon the fire, was twelve and a half minutes.

At a trial on Ninth street the engine lifted the water from the cistern and projected it, through an inch and three quarters nozzle, to the distance of two hundred and thirty-eight feet from the nozzle, to where it fell upon the ground, not measuring the spray.

The engine has been to all the fires since it has been in the hands of the city, and at all of them, has elected the universal approbation of the citizens.

There is now no more doubt of its usefulness and practicability, for putting out fires than there is doubt about the navigation of the Mississippi river against the current, or of the Atlantic Ocean by steam vessels.

There has been much effort necessary in the introduction of this machine, it required an acquaintance by experience, in its use, which alone could be obtained by time and a number of trials at fires; difficulty of training hands to manage it well, was a great tax on the patience of the City Fire Engineer, R. G. Bray, who also had the prejudices and much of the opposition of the fire department, to overcome which could only be done by gentle means, as violent opposition or arbitrary dictation would only have created more violence on the part of those opposed; the course pursued was the right one, as the result has shown.

The whole fire department has been re-organized and put in successful operation without any serious consequences, and brings with it order and unanimity of action.

ABEL SHAWK.

Cincinnati, Ohio, May 1st, 1853."

The "Charleston Standard" thinks that Mrs. Singleton, now living in the Williamsburgh District, in that State, is the oldest woman in the world; she is now in the 131st year of her age. Her mental faculties are still unimpaired.