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LIST OF PATENT CLAIMS

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ROCK DRILLS—By Wm. F. Ash, of Springfield, O.: I claim in combination with the cam wheel and guide, the hanging of the lever, by which the drill is raised on a jointed arm, so as to give it two sets of motions, viz., up and down, to lower and raise the drill, and a backward and forward motion from and towards the cam wheel, to operate the machine, without noise or jar, the whole being arranged substantially as described.

LEATHER GAUGES—By L. W. Beecher, of Avon, N. Y.—I claim the wheel with its inclined planes or wedges, arranged so as to act upon the roller frame, substantially as set forth.

POTATO WASHERS—By Alonzo Bentley, of Honesdale, Pa.: I claim the screen and cylinder combined, the screen working within the cylinder, and its axis or shaft working within or through the tubular projections or bearings of the same, substantially as set forth.

LEVER JACKS—By L. H. Davis (assignor to J. A. Duggale), of Kennett's Square, Pa.: I claim the combination of the lever, the lip, and the cleat, constructed as set forth, with the dog and the spring, so as to act together as stated.

ELECTRO-MAGNETIC ALARM BELLS—By M. G. Farmer, of Salem, Mass.: I claim the combination, substantially as set forth, of the electro-magnet and armature (or its electro-magnetic equivalent), with the falling ball or spring, and the detents and the lifting cam, or its equivalents, so arranged that when the ball is supported by the armature, a slight force, only, of the electro-magnet, is required to trip the ball, which ball, in falling, requires sufficient momentum to produce much greater mechanical effects than the magnet alone—the velocity of the ball, in falling, being still further accelerated by the force of a spring, if desired. The power thus obtained I use in the manner described.

WASHING MACHINES—By Christ. Hollingsworth, of Liberty, Ind.: I claim the application, substantially as described, to the process of washing of balls of wood or other buoyant material, in connection with a reciprocating frame, or equivalent device, by means of which a rolling, yielding, or evenly pressing surface is presented to the clothes or other articles to be washed.

ADJUSTABLE WRENCH—Andrew Hotchkiss, of Sharon, Conn.: I claim constructing the collar or eye of the inner jaw with an aperture therein of greater section than the bar on which it slides, in combination with the spring therein and the screw thereto attached—the whole constructed and operating substantially in the manner and for the purpose described.

DIFFERENTIAL SAFETY VALVES—By John McClintic, of Philadelphia, Pa.: I do not claim constructing a valve that shall act upon the differential principle, or one which will not admit of the application of external weight or pressure.

But I claim the peculiar arrangement and combination of the hollow cylinder box, sliding in a case, with the conical valve and the tubular valve rod and escape pipe, constructed and operating substantially as set forth.

RAILROAD CAR BRAKES—By Thos. G. McLaughlin, of Kensington, Pa.: I claim the employment of the radial bar turning loosely on the brake lever shaft of the tender or forward car and spring for enabling the brakeman to operate the brake of the tender or forward car on which he is stationed, without altering the position of the radial bar after being set, as described.

ANVIL—By Chas. Peters, of Trenton, N. J., and Wm. Fetter, of Bucks county, Pa.: We claim a cavity in the body of anvils, for the purpose of cooling the same by the introduction of water or other fluid into the said cavity, while the faces of the said anvils are undergoing the process of tempering.

MACHINERY FOR GRINDING CONICAL EDGED KNIVES—By J. L. Plimpton, of Westfield, Mass.: I claim, first, the combination of the curved way and table thereon, provided with appropriate automatic contrivances for traversing the latter along the former, with the carriage on which they are both supported, and which is provided with axis and screws, or their equivalents, to adjust said carriage to any required angle with the horizon, for the purpose described.

Second, I claim operating the feed motion, or the motion for carrying the edge of the knife across the periphery of the stone, by means of a roller bearing on the periphery of the stone, in the manner and for the purpose set forth.

Third, I claim connecting the carriage and the table which carry the knife, with the roller receiving motion from the stone, by means of the combination of mechanism substantially as described, by which the motion of the roller towards the axis of the stone consequent upon the wear of the stone, will cause the knife or knives being ground, to follow the periphery of the stone, and thereby compensate for its wear, and preserve the required form of the edge or edges of the knives, viz., that of an arc of a circle, as set forth.

CHURNING MACHINES—By Gelston Sanford, of Ellenville, N. Y., (assignor to G. A. Meacham, of Enfield, Ct.): I claim the arrangement of dogs or pawls, and pin, with wedges, for the purpose of tripping each other.

FUNNELS—By Christen Schneider, of Washington, D. C.: I claim the measuring funnel, constructed substantially as set forth, with an interior ventilating tube to admit air beneath the valve.

MACHINERY FOR GRINDING OR POLISHING SAW BLADES—By Wm. Southwell, of Kensington, Pa.: I claim, first, the combination of two grindstones, or their equivalents, revolving in the direction made known, for the purpose of grinding or polishing two sides of a saw, or other article, simultaneously, with a reciprocating frame, or its equivalent, for the purpose of holding the article being ground or polished, whereby the tendency of either stone to move the article is counteracted by the action of the other stone, and the same force is thereby required to reciprocate the article in either direction, as described.

Second, the combination of the right and left hand screws, carriers, and nuts for said screws, movable pedestals, or boxes, together with the cross shaft, worms, worm wheels, and handles, substantially as set forth, for the purpose of moving two grindstones, or their equivalents, simultaneously against opposite sides of an article being ground or polished, as described.

Third, I do not claim giving an automatic traverse motion to grindstones; but I claim the arrangement of screws, mitre wheels, handles, eccentrics, eccentric boxes, and movable frame, substantially as described, whereby I am enabled, at any time, to move the grindstones, or their equivalents, entirely across the machine, for the purposes set forth, without interfering with the automatic traversing motion which is given to the said stones, irrespective of their precise position with reference to either saw frame or either saw, or other articles fixed in said frame.

Fourth, the arrangement in the same machine of two sets of reciprocating frames, either of which can be stopped without affecting the other, and a carriage, whereby the grindstones can be caused to move from one frame to the other, by which arrangement one saw can be ground or polished while another is being adjusted into place.

LIGHTNING RODS—By James Spratt, of Cincinnati, Ohio: I claim the formation of the point of a lightning rod of three or more metals, encased one within another, the most fusible to the outside, in order to prevent the destruction of the entire point by melting from an overcharge of the electric fluid.

WINDOW-BLIND MACHINERY—By D. H. Thompson, of Springfield, Mass.: I claim, first, hanging the auger shaft in swinging arms or gates of different lengths, hung on centres, said centres being in line, so that by moving the said swinging arms or gates nearer to or further from a position at right angles to the line in which the centres are placed, the distance between the said auger shafts, taken in lines parallel to the line of centres, will be increased or decreased, and thereby be adjusted to different widths of slats lying upon each other, as set forth.

Second, I claim the combination of the sliding bar or carriage carrying the stiles and rods, with the reciprocating carriage carrying the mortising augers and wire hole prickers, in the manner substantially as described, for the purpose of boring the mortises in the slats, and pricking the wire holes in the rods, and ensuring the distances between the mortises and points of attachment of the slats being precisely the same throughout.

Third, I claim the reciprocating slat table, or bed, made in three parts, the two end parts of which are adjustable to the middle part, in combination, substantially in the manner described, with the adjustable cutter heads, to wit, the end parts of the table or bed, and the cutter head being adjustable, relatively to each other, for the purpose of tenoning or turning down the pivots on both ends of slats of various lengths.

Fourth, I claim pricking the wire holes in the slats and feeding them at proper intervals from the box in which they are contained, to the bed or table upon which they are tenoned, by means of a vibrating feeder, deriving its motion from the bed or table carrying the slats, the said feeder being provided with suitable horns or their equivalents, and prickers, for the purpose of entering the box, and pricking and pushing out the slats one after the other in succession.

SPEAKING TUBES—By T. J. Woolcocks & Wm. Ostrander, of New York City: We claim the combination of an alarm valve with a speaking tube or pipe in the manner and for the purpose set forth.

Ventilation Lights.

The free circulation of the air is only second in importance to that of the blood, and our apartments of all kinds must first be well ventilated, to well ventilate our lungs. In the open air, our respiration is free, and ventilation is only the same freedom extended to our apartments. To effect a free and full ventilation on a simple plan, at a small expense, and universally applicable, I have invented the "Ventilation Lights." Where light, also, is wanted, they may be made of transparent glass, and where air only, they may be made of colored glass, earthen, china ware or metal. They can be made plain like common panes of glass, or more or less hemispherical and ornamental. In both forms they are to be uniformly or partially perforated with minute air-holes or pores, of a size sufficient for the free passage of the air, and yet to exclude dust and rain. These air-holes may be distributed uniformly or in artistic groups, and bevelled on one or both sides, or they may be left unbevelled. If the lights be plain, they may be fastened in the sash, like common glass; while, if they be hemispherical, they must terminate in a plane base or circular rim, so as to fasten like plain ones. These lights, of either form, can be made of different sizes and patterns, and when broken can be replaced by new ones. The minute air-holes act the same part to our apartments as our pores do to our own system, and are quite as necessary for the free and healthy circulation of the air in our lungs and the blood in our arteries and veins. Like our pores, they must also be kept open and clean. The greater the sphericity of the lights, the more holes there may be, and a greater column of air in capillary currents can pass and repass. In the plain form, this column can not overgo half the area of the light, while in the spherical form it can equal it, owing to the enlarged surface. The greater the sphericity and thickness of the lights, and the uniform size of the air-holes, the better they will ward out dust and rain. In order to stop the ventilation at pleasure, perforated and fixed lights may be permanently attached to the outside of the sash, and un-

perforated and opening and closing ones on the inside. The outsiders will act as ventilators, and the insiders as anti-ventilators. These lights may be cast with their air-holes, or they may be first made and then have the holes etched in by fluorine. My plan of universal ventilation in short, is the substitution in part or entirely of plain or hemispherical panes of glass, minutely perforated with capillary air-holes, in place of unperforated ones, which entirely forbid it. Another plan for free ventilation, and universally applicable, by a little alteration in common sash, and the fixed position of the lights without their being perforated, is this,—let the tops of the lights in a sash be all inclined inward, more or less according to the depth of the sash-frame, while their bottoms remain, as usually fastened, near the outside; or whatever may be the depth of the sash frame, let the tops of the inclined lights extend as far to the inside as their bottoms do to the outside. When the lights are thus arranged, a window will appear like a surface formed of glass-wedges. Thus the sash where the lights are attached, and between them, let small air-holes be made or air-tubes inserted for the air to pass and re-pass freely. For lights which are stationary, as in buildings, &c., the inclination is inward at their tops; and for those which are in motion, as in cars, steamboats, &c., the sides which are next to the moving power, are inclined inward towards the inside of the sash. These inclined lights act as shields to ward off dust, &c., while the off-sets they form at their junction in the sash, serve for ventilation when properly perforated. By thus inclining the lights and perforating the sash where they off-set from a common plane, the air can pass and re-pass freely either way, and thus subserve the interests of health and the prospects of long life.

H. STRAIT.

Cincinnati, Ohio.

[We are glad to direct attention at all times to the importance of ventilation, and the plan suggested by Mr. Strait, we hope, will meet with public favor. In 1847, Dr. Robert Bowie, of London, registered what was termed "The Glass Ventilating Pane;" it consisted in drilling a number of holes in a pane of glass in an oblique direction, the perforations being inclined upwards towards the ceiling inside.—[Ed.]

Resemblance of Lords and Savages.

There is often, in fact, no material difference between the enjoyments of the highest ranks and those of the rudest stages of society. If the life of many young English noblemen and an Iroquois in the forest; or an Arab in the desert, are compared, it will be found that their real sources of happiness are nearly the same. The treasures of science, the refinements of taste, the luxuries of wealth, are in many cases disregarded or forgotten, and the excitation of life depends on the destruction of wild animals, or the management of impetuous steeds. This is a fact which is a matter of daily observation; and it furnishes a most instructive lesson as to the proportion established by nature between the active and speculative part of mankind. The great majority in every class of society are incapable of receiving happiness from any source but from physical excitation; and every other plan for human improvement which is founded on any other supposition, will necessarily fail. Nor is it without good reason that nature has established this disproportion between the studious and active parts of the species. The great mass of undertakings essential to the existence and the welfare of mankind, depend on physical exertion; and unless the greater part of our fellow-creatures were disposed to that species of labor, and gratified with the enjoyments that attend it, the race would speedily perish, and the speculations of science disappear with the individuals who formed them.—[Allison.]

Grave of an Ancient Sea King.

A remarkable discovery has lately been made in the parish of Borre, near Horten, in Norway. In a shippon (barrow in the shape of a ship) has been discovered the unconsumed part of a vessel, together with the skeletons of three horses, two dogs, a sword-dagger, battle-axe, the foot of a glass goblet, a bell with curious ornaments of bronze, stir-

rups, the bit of a bridle with silver mountings, the remains of a saddle (a saddle-bow of bronze), and other objects. This cairn has probably held the corpse of King Eystein, or his son, King Halfdan, who, according to Snorro, lie buried here.

For the Scientific American.

Compensation Pendulums.

A great deal has been written on the subject of compensation pendulums by men of acknowledged scientific attainments. Much expense has been incurred in constructing them, with a view to obviate the difficulties arising from the expansion and contraction of the material used, occasioned by the variations of temperature. It is unnecessary to say anything in reference to the merits of the different kinds that have been used, as all who feel any interest in the subject have an opportunity to become familiar with the various plans in use. It is strange, however, that the simplest, the cheapest, and unquestionably the best construction for a compensation pendulum, should remain almost entirely unused. The following is a description of one that a clock-maker in Cadiz, Ohio, made for me, and I will thank any person who will show its imperfection.

Let a wooden support be erected immediately behind and at the same height of the pendulum's ball. Into this support place a rod of the same size, material, and length of the pendulum rod; extend it upwards, say three-quarters of an inch behind the pendulum rod, through a hole in the piece of metal on which the pendulum is usually suspended; bend three-quarters of an inch of the top of the rod at right angles outward, suspend the pendulum in the end of this rod, and let it pass through the usual slit also. Now it is quite obvious that if the wire on which the pendulum is suspended, expands an eighth of an inch, it will raise the upper end of the pendulum rod an eighth of an inch, as it is only permanently fastened at the lower end, and moves easily through the whole above. But the pendulum rod being composed of the same material, expands an eighth of an inch at the same time, and thus keeps the ball at the same distance from the centre of motion. It is probable that this suggestion may be of use.

Wm. E. LUKENS.

Putnam, Ohio.

Petition for Extension of a Patent.

On the petition of Abram Van Orde, of Ithaca, N. Y., praying for the extension of a patent granted to him, on the 17th of July, 1838, for an improvement in boilers for steam engines, &c., for seven years from the expiration of said patent, which takes place on the seventeenth day of July, eighteen hundred and fifty-two.

It is ordered that the said petition be heard at the Patent Office on Monday the 12th of July, 1852 at 12 o'clock M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing, must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

THOS. EW BANK, Com. of Patents.

Washington, 1852.

Cochineal Raised in Europe.

At a meeting of the British Entomological Society, held at London on the 5th ult., we notice that the President, J. O. Westwood, Esq., presented specimens of the so-called "new cochineal insect, Coccus Fabæ," which, it appears, feeds on the common bean and yields a most brilliant color, in all respects resembling the cochineal of Central America. Mr. W. stated that the cultivation of the insect had been commenced on a large scale in the south of France, where it would supply a new and profitable opening to the labor of the peasantry.

To make grass grow under trees, it is only necessary to water it frequently with a weak solution of the nitrate of soda. This is a most excellent substance to make grass grow in fields. Care must be taken to sow it in small quantities in wet weather.