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### LIST OF PATENT CLAIMS

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**PARCEL FOR YARDS OF VESSELS**—By D. S. Bayles, of Brooklyn, N. Y.: I do not claim the rocker, simply by itself, a saddle or slide having been heretofore used, and fastened into the swallow-tail of the gaff and boom of sailing vessels, applicable to fore-and-aft sails only.

But I claim the combination of the rocker in front of the mast, and capable of a motion in two planes, with the rockers at the side of the same, said rockers being arranged, with respect to each other and the yoke, as described.

**EXTRACTING GOLD, &c., BY AMALGAMATION**—By M. A. Bertolet, L. Kirk & A. M. De Hart, of Reading, Pa.: We claim bringing the ore, in a heated state, into contact with mercury, during the process, as set forth.

Also the method of heating pulverized ore, by causing it to pass in a shower through a current of some heated fluid, preparatory to bringing it into contact with the mercury, as set forth.

Also, the method of heating the apparatus, the mercury, and the ore, by means of a current of heated fluid, circulated through chambers and pipes, substantially as described, whereby a single current of a suitably heated fluid, and a single system of circulating pipes of simple construction and compact arrangement, are made to heat the whole of the apparatus that requires to be heated, and to heat the ore in the process of feeding, and the mercury, in the process of amalgamating, as specified.

**WINNOWING MACHINES**—By Samuel Canby, of Ellicott's Mills, Md.: I claim the combination of the piston, rack rod, pinion, valves, and eccentric pulley, in connection with a conducting chest, and blower, for the automatic graduation or government of the blast through the spouts, of a winnowing machine, arranged and operating in the manner and for the purpose set forth.

**ILLUMINATING GAS**—By Geo. Danre, Pascal Nicolas, and Felix Lopez, of Marseilles, France. Patented in France, Sept. 27, 1851: We claim the combination of woody and fatty substances in gas generators, as described, so that the excess of hydrogen in the former may combine with the excess of carbon in the latter, and produce a rich carburetted gas of any required density, and free from sulphurous fumes.

**TEMPLES FOR LOOMS**—By Elisha and Warren W. Dutcher, of North Bennington, Vt.: We claim the arrangement of parts, so that the temples have a reciprocating action, corresponding with the motion given to the cloth, by the beat of the lay, substantially as set forth.

**CUTTING PAPER**—By J. P. Farnum, (assignor to himself, J. Jenkins & C. B. Clark), of Andover, Mass.: I do not confine my invention to the precise form or arrangement of its parts, as represented, but intend, to vary the same to any extent, while I do not change the character of the machine.

What I claim is the combination of a press, or its equivalent, for holding the book or paper to be cut, with one or more cutters or knives for trimming the front or one edge, and one or more cutters for trimming one or both of the other edges of the book, the different sets of cutters being simultaneously operated, while the paper or press is moved towards them all, substantially as specified.

And in combination with such cutters or knives for trimming one or the front, and other edges or edges of a book, at one operation or time, I claim the improvement of combining with them, or either of them, one or more polishing surfaces, or their equivalents, whereby the edges of the sheets of paper are cut and polished, or smoothed, ready for gilding, as specified.

**CUTTERS OF PLANING MACHINES**—By Pierce Saulnier (assignor to J. T. Bruen), of New York City: I do not limit myself to the special mode of construction specified, as this may be changed at pleasure, so long as the principle or character of my invention is retained.

What I claim is hanging the cutters to the stock by means of a joint pin, or its equivalent, whose axis is diagonal to the line of cutting motion, and in a plane parallel with the surface being cut, for the purpose of relieving the cutting edge in two directions, when the cutter stock is set perpendicular to the plane of the surface to be produced.

Also combining together in one cutter stock, two cutters, hung substantially as specified, and with the angle of the axis of the two joint pins reversed, as specified for the purpose of relieving both cutters from the two surfaces, when cutting in both directions.

**MAGNETIC PRINTING TELEGRAPH**—By Royal E. House, of New York City: I claim, first, the employment of electro-magnetic force, in combination with the force of a current of air or other fluid, so that the action of the former governs or controls the action of the latter, for the purpose described.

Second, the construction of the electro magnet, as described, that is to say, a series of fixed magnets, in combination with a series of movable magnets, arranged upon a central axis, which axis plays between or through the line of fixed magnets, so as to effect a vibratory movement of said axis by a force multiplied by the number of magnets of both kinds.

Third, the combination of the electro-magnet with the valve, for regulating and directing the force of a current of air or other fluid, acting as a motive power upon the piston, or other analogous device for producing a vibratory motion, as described.

Fourth, the endless band, in combination with the cylinder, as an inking machine for conveying and applying the coloring matter to the paper, at the moment of receiving the impression from the types, as described.

Fifth, the combination of the regulating bar, with the type wheel, for the purpose of regulating the proper position said wheel should have, in connection with a given position of the key shaft, at the moment of printing any letters or characters.

**HEADING BOLTS, &c.**—By Edward Page, of Albany, N. Y.: I claim, first, the combination of the stationary die and die pivot with the sliding ham-

mers, actuated by the rotary grooved cams, or cam collar, as described.

Second, the revolving ring or cam collar, provided with cams or their equivalents, on its inner and outer surfaces, when arranged with radial compressing and sliding upsetting hammers, in the manner described.

**SHUTTERS FOR LOOMS**—By Wm. Tucker, of Blackstone, Mass.: I claim the combination of the elevator, bent spring, platform, and its recess, passage, and slot, as applied to the shuttle and cop spindle, and made to operate together, substantially in manner and for the purpose of causing the filling thread to be broken, so that no filling thread shall be woven into the warps under circumstances, as stated.

**HEADING SCREW BLANKS, RIVETS, &c.**—By Wm. E. Ward, of Rochester, N. Y.: I claim, in combination with the swedge header and die plate, the giving of a back or receding movement at the end of the heading operation to the follower, against which the point of the rod rests during the heading operation, that the rod or wire may be upset, outside of the die, whilst resistance is made by the follower against the end of the rod, and then as the follower retires, cause the part so upset to be gripped between the surface of the die and the swedge to complete the form of the head, the surplus metal being thereby forced into the blank, as set forth.

**STEAM BOILERS**—By Henry Waterman, of Williamsburgh, N. Y.: I claim, first, the safety chamber and safety plate, combined with the boiler in any way substantially as described, whereby the bursting of the plate, by the too high pressure in the boiler, causes the chamber to be filled, and the pressure in the boiler to be reduced by the expansion of the steam.

Second, the plate placed between the boiler and safety plate, having one or more small openings, through which the steam is allowed to pass to act on the safety plate, and fill the safety chamber, whereby the water is prevented from priming or foaming, and being carried up by the steam when the safety plate bursts.

**RAILROAD CHAIRS**—By J. F. Winslow & J. Snyder, of Troy, N. Y.: We claim the movable cutter for making the cuts in the edges of the plate, substantially as described, in combination with the slides, which answer the purpose of stationary cutters and rests, to effect the partial bending of the lips, and which afterwards complete the beading of the lips, as described.

Also, in combination with the cutter, as described, the making of the mould or former, to slide therein, for discharging the chair, after it has been formed, as described.

Also the dies for upsetting and giving additional thickness to the lips, as described, in combination with the bending slides and cutter, substantially as described.

**DAGUERRETYPE**—By Wm. Garnall, of Newark, Ohio: I claim producing ornamental borders and designs of different shades and forms, and singly or in numbers, around any photographic image, by the method of irregular chemicalization combined with the use of pattern slides or chemical cut-offs, all of which is described.

#### DESIGN.

**GIRANDOLE**—By R. E. Dietz, of New York City.

#### Reform of the Patent Laws.

**FEES OF FOREIGNERS.**—All foreigners pay large patent fees to our government in comparison with our own citizens. The citizens of Great Britain pay \$500, and those of all other nations \$300. The reason why such high fees were charged to the citizens of Great Britain was "because that government charged such enormous patent fees to all applicants for patents." A great deal of meanness was displayed by those who made such a distinction in the patent fees charged to foreigners. We have been told by a native of Britain that he had an active share in getting such a clause inserted—not a very democratic work—but one which takes considerable odium off the Americans, who were active in bringing about the reformed patent code of 1836. When we consider that a patent for a machine is more valuable in England, if it is a good improvement, than in any other country, and when we consider that a patent for Belgium and all the foreign countries in Europe, except France, is of little consequence, the fact of high patent fees being charged in England to all applicants, should, if the enactors of our code had discriminated justly, placed all foreigners upon an equal footing. As the patent fees by the late reform in the British Patent Laws, have been greatly reduced in that country, we hope, as we have mentioned before, that the patent fees for natives of Britain will be reduced from \$500 to \$300. England makes no distinction in her patent fees; she charges her own citizens as much as ours—all are placed on an equality in respect to patents for improvements.

There is another reform which we advocate, viz., a reduction of the fees retained by the Patent Office for examining the application of a foreigner when his petition is rejected. For example, if an Englishman, Irishman, or Scot applies for a patent, and after examination at the Patent Office, it is found that something of the kind has been invented before, the petition is rejected, and by law the Patent Office retains one-third of the fees, \$166,66; if he is a native of any other foreign country he is charged \$66,66 less. Now it requires no more time nor talents to examine the applications of foreigners than those of our own citizens, yet only \$10 is retained for

our own inventors, while ten times ten dollars are retained for Frenchmen, &c., and about seventeen times as much for Englishmen. Now, is this just, is it honorable or republican-like? It is not; we confer no favor upon these foreign rejected applicants, we grant them no privileges; ten dollars will pay all the expense of Patent Office trouble, and yet we charge them speckled high fees. It may be said, "these men should ascertain, before they make application, whether such an improvement has been or has not been patented in America. This is an impossibility in many cases, owing to the way business used to be conducted in the Patent Office. And owing to the fire in 1836, it is not possible, without much practice to obtain the desired information. The corps of Examiners in the Patent Office, were appointed for the purpose of giving such information to applicants, and it is unreasonable and wrong to charge immoderate fees when an application is rejected. Experienced patent agents, no doubt, are very competent judges of what has been patented, what is new and what is not, indeed some of them must possess information beyond that of some examiners in the Patent Office, and they can give inventors very sound advice about whether their inventions are new or not, but then this does not mend the matter, while the law is wrong. No unjust statute should exist in our country, and we think this is one which has existed long enough and should be abolished.

The fees for subjects of Great Britain should be reduced to \$300, and the fees for the rejected petitions of all foreigners should be reduced to \$30 or \$50. This reform we advocate, because we believe it is a just and reasonable one.

The Bill for reforming the Patent Laws is now before Congress; we hope these two reforms, and the returning of models to rejected applicants will be added to it. We hope our Senators will not be in too great a hurry to pass the bill, but give it further consideration; there are some clauses in it which should be stricken out, and those we have suggested inserted. Mr. Burke, while Commissioner of Patents, was an advocate for reducing the fees to foreign inventors, and the reasons given by him for suggesting such a reform of our patent laws, were sound and republican.

#### White's Patent Railroad Truck—A Defence.

In the Scientific American of Nov. 27, I find an article by Mr. W. G. Hudson, in which he takes considerable pains to convince the public that the cup eccentric, used on my truck, is anything but a scientific remedy to make a locomotive engine track square, and says that "if required to move much, to make the driving wheels track, it would cause the truck to run to one side and mount the rail, thereby causing the result it is meant to avoid," &c. I am, perhaps, as well aware as Mr. H. of the difficulty that would arise if the forward end of the locomotive should be moved very much to one side. I am also aware that it would not be prudent to carry a pressure of five hundred pounds to the square inch in a locomotive boiler; but it does not follow that because five hundred pounds pressure would tend to burst the boiler, that ninety or one hundred pounds pressure to the square inch may not be used with safety. I never intended to move the forward end of the locomotive much to one side, and would prefer to have the locomotive built so that it would track perfectly square, but I know that locomotives frequently run to one side in consequence of their being out of line, and it is frequently the case that they have wedges only on one side of the driving or pedestal boxes, and often have no wedges in the pedestals whatever. In cases like the above, a contrivance by which the head of the locomotive can be slightly moved without moving the stationary centre of the truck, must appear to every practical man to be of value, inasmuch that when the flanges of the driving wheels are found to be wearing to one side more than to the other, the moving over of perhaps one-fourth of an inch to one side, which may be effected by the cup eccentric in a few minutes, would save the necessity of taking the locomotive into the shop to make an alteration, and thereby miss one or more trips, causing a

loss of from one to perhaps five hundred dollars. The arrangement of my truck is such, that the centre plate or axis on which the forward end of the locomotive rests, is not movable, and is never out of the centre of the truck frame, the distance always being the same, from the sides of the frame to the centre of said plate, whether the eccentric be turned to one side or not. The lower wearing surface or part of the centre-joint that comes in immediate contact with the truck frame is bolted firmly to the centre of said frame, and cannot move, consequently the truck would not run to one side, as predicted by Mr. Hudson. When used for eight-wheeled cars, or tenders, the eccentric would be useless, and in such cases I do not use it. It adds nothing to the self-adjusting or flexible qualities of the truck, and is only, as before said, a convenience for locomotives when the driving wheels do not track square. Mr. Hudson, no doubt, built a locomotive for the Buffalo and Attica Railroad; I have understood that he did, and it may have had a centre-bearing truck; but since reading his article on my truck, I have talked with a gentleman who is well acquainted with both Mr. H. and his truck alluded to, and he says that it differs very much from mine.

JOHN L. WHITE.

Corning, N. Y., Dec. 15, 1852.

[We have also received a letter under the signature of Hiram W. Bostwick, Esq., President of the Corning and Blossburg, and of the Buffalo, Corning, and New York Railroad companies, who says he "has used White's Equalizing and Self-adjusting Truck for about three years, under the engines of the Corning and Blossburg Railroad, and the Buffalo, Corning, and New York Railroad, and he is well satisfied that they are the best trucks in use." Before he used them the engines were frequently getting off the track, but during three years using they have not run off the track once, while the cars have done so a number of times—the locomotive still keeping the track. They carry, he says, "the forward end of the locomotive finely, and turn curves in a beautiful and easy manner. He is going to put them under every engine on the railroads of which he is President."

We have also received a letter from W. M. Mallory, of Corning, N. Y., who meets the objection of Mr. Hudson about the "eccentric," and says it is only there of a necessity, to be used when builders of locomotives neglect to make them as perfect as they should be—when they do not centre in the proper place, which any one, engaged on railroads, knows to be a not uncommon occurrence. "In such cases," he says, "the engine man, by a slight movement, can do in a few minutes what it would take some hours to do with the men in the shop." We present the rest of his letter entire:—

"But the eccentric cup part is by no means the most important part of Mr. White's valuable improvement, it is so arranged as to give an equal bearing upon each journal, under all circumstances, and it adapts itself to any unevenness of the road, and I have known this truck used for nearly three years upon the Corning and Blossburg Railroad, which, at the time, was very uneven, and it was never thrown from the track, while locomotives, with trucks like those in common use, were often thrown off. I have been engaged in the practical part of the railroad business for the past twelve years, and consider this one of the most important improvements in railway carriages that has ever come to my knowledge."

#### Large Printing Presses.

The Philadelphia "Ledger" is getting in a large eight-cylinder Hoe Press. The Ledger has a large circulation, and deserves it, and the public, we are glad to see, know and appreciate its ability and spirit, hence the happy necessity of printing more copies, and doing so faster and better.

#### Climate of Minnesota.

Although the cold in Minnesota is so severe in winter, those who have lived a length of time assert that it is far from being unfavorable to health, there being no wind stirring, even when the thermometer has fallen 35° below zero before breakfast, as it does sometimes, or when even the mercury congeals.