



Reported Officially for the Scientific American
LIST OF PATENT CLAIMS
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 FOR THE WEEK ENDING MARCH 16, 1852

DOUBLE PLANE IRONS—By Fordyce Beals, of Pittsfield, Mass.: I disclaim all contrivances, arrangements, or forms of cap, or iron, which together compose a double iron, now in general use.

I claim the new and improved mode of fastening and adjusting the cap to the arm, by means of a projection and slot, forming a dovetail slide, giving new facilities for the operation, and also a level surface to the back of the iron. Also the elongation of part of the width of the cap, and its occupying the place of a removed part of iron, giving the operator new facilities in nicely adjusting cap to edge of iron, without removing it from the stock, the same as described, using for the purpose the aforesaid arrangements of parts, or any other substantially the same, and which will produce the same effect in like manner.

CARPETS—By Thos. Crossley, of Roxbury, Mass.: I lay no claim to the invention of making a carpet by the process of plying and engraving, in connecting together the plys, or different layers of cloth, whether woven, either with plain (uncolored) or colored yarns. Nor do I claim the process of producing figures by printing them in colors. Nor do I claim to weave a carpet with an uncolored pile or warp, in the Brussels process of weaving, and afterwards printing the figures thereon in colors.

But I claim an ingrained, plied, printed carpet, made by a combination of the process of weaving in two or more plys, and engraving the same, and subsequently printing the figure or figures on both sides of the same, as described—the discovery having been made by me, that the plying process prevents the colors printed on one ply from penetrating the other ply, so as practically to injure its other surface, to an extent which renders it unfit for the reception of colors, and use as a carpet, as stated, a great improvement in trade being the result of such.

[This patent takes us all aback.—Ed.]

GRATE BARS—By F. P. Dimpfel, of Philadelphia, Pa.: I am aware that grate bars have been heretofore so constructed, of metal, that the loose ashes of the furnace might accumulate in cavities therein and protect the bar; but these have been found inefficient in practice, as any loose substance, merely accumulating in the cavity of a metallic grate bar, will shake off even with the edges thereof, and thus expose the bar to the action of the fire.

I claim the construction of grate bars for furnaces of clay, soapstone, or other refractory substance, for the purpose and in the manner specified.

SOFA BEDSTEADS—By J. T. Hammitt, of Philadelphia, Pa.: I claim, first, the combining the back of the sofa with the seat, by means of sliding pivots, in the manner set forth.

I also claim the sliding table and washstand, in combination with the sofa, substantially in the manner set forth.

JOINTS AROUND GLASS TUBES FOR PHILOSOPHICAL APPARATUS—By A. B. Latta, of Cincinnati, O.: I claim the method used for promoting the drying or evaporating of the liquid matter from the packing, by drilling holes in the barrel, the said holes being afterwards filled with solder.

I claim the method of making the joint at the end of the tube, which is effected by the friction of the packing around the tube, which forces the end of the tube against the bottom of the bore, and produces a joint, when the stuffing box is forced to its place, as set forth.

SHOVEL PLOWS—By James Lattimore, of Chattahoochee, Ga.: I claim the combination of the wing, or half shovel plow and the adjustable scraper, arranged on different stocks in the said beam when the said scraper is arranged on the land side and rearward of the plow, and so that the grass, weeds, &c., shoved off by the scraper, will be thrown into the furrow made by the plow, the whole being arranged in the manner and for the purpose set forth.

COTTON GINS—By T. J. Laws, of Washington, Ark.: I do not claim the use of a mote brush, in combination with gin saws and the ordinary stripping brush, as I am aware that a cylindrical mote brush, revolving in the same direction with mine, has been used before.

But I claim making the mote brush (revolving in the direction described), with wings, so as to act by a current of air, as well as by contact with the cotton on the teeth of the saws, substantially as set forth, in combination with the saw and grate.

TREATMENT OF HYDRO-SULPHURETS, AND IN MANUFACTURING CARBONATES AND SULPHUR COMPOUNDS—By Chas. Lennig, of Philadelphia, Pa.: I claim the manufacture of carbonate of barytes and strontia, by processes as described, and in combination therewith, employing the sulphuretted hydrogen gas, evolved in the aforesaid process, for the producing of sulphur or sulphuric acid.

BURNERS FOR ARGAND LAMPS—By Austin Olcott, of Rochester, N. Y.: I claim arranging the grooved tube for adjusting the wick inside of the wick—and outside of the screw, that is, between the wick and the screw, and extending the pin from the wick holder, through the groove in the tube, into the score between threads of the screw, thereby dispensing with the perforated tube heretofore used upon the outside of the wick, and leaving the wick open on the outside, so that the material to be burned may have free and unobstructed access around the wick.

CUTTING SCREWS ON RAILS AND POSTS OF BEDSTEADS—By J. Parsons Owen, of Norwalk, O.: I do not claim, of themselves only, reversible cutter heads. But I claim constructing the reversible cutter-heads of arms, placed at right angles to one another, and carrying reverse right and left hand cutters (four) in combination with the eccentric snug and flanch of the screw spindle, for the purposes and advantages specified.

CONNECTING WASHERS WITH SPINDLES IN SPINNING MACHINERY—By Horace T. Robbins, of Lowell, Mass.—I do not intend to confine my invention to the application of the spring clasp, or holder, to the countersunk button, as the same holder may be used with a flat button, by having the bobbin countersunk, so as to let the bobbin down over the spring clasp, or holder, such, in fact, constituting the peculiar essence of my invention.

I therefore claim the spring clasp, or holder, or its equivalent, either with or without teeth, in combination with the spindle, or as applied and used therewith, substantially in the manner and for the purpose of holding the washer.

PLANING MACHINES—By Dan. Stearns, of Rome, N. Y.: I claim constructing, arranging, and operating a reciprocating plane, which cuts off the shaving by its forward stroke, and feeds the board by its backward stroke, and the clamps and gripes, or stops, with which such a plane is connected, as described, so that the board is fed at the back stroke of the plane, and planed at its forward stroke, a distance equal, or thereabouts, to the throw or stroke of the plane, whereby a greater length is planed by a given number of strokes of the plane, than in reciprocating planes that feed themselves by their own motion, as heretofore constructed; and also, the injurious shocks and strains are avoided, which, in those planes, are caused by the necessity of making the cut considerably shorter than the stroke.

CUPPING AND BREAST GLASSES—By Wm. S. Thomas, of Norwich, N. Y.: I claim the improved exhausting apparatus described, for surgical and other purposes, said apparatus consisting of a combination of a tubular spring piston with a barrel, substantially as set forth.

PATTERN CARDS FOR JACQUARD LOOMS—By Samuel T. Thomas, of Lowell, Mass., and Edward Everett, of Lawrence, Mass.: We claim the combination of the buttons with the metallic card, as described—the buttons being so rivetted or attached to the card, as to allow of their being turned, for the purpose of closing or opening the holes to which they are respectively attached.

HOT-AIR REGISTERS—By Wm. Turton, of Bushwick, N. Y.: I claim the crown wheel, or section of a crown wheel, in combination with the pinion wheel, or section of a wheel, attached to the fans as set forth.

RAILROAD CAR BRAKES—By Thomas Walber, of New York City: I claim the arrangement of the followers (four) with their brake blocks (three), and two links, whereby the power, operating to separate the followers, throws the brake blocks on to each side of each wheel, for the purposes described.

Second, I claim the steam piston and rod, wedge, nut, and screw, in combination with the brakes, arranged and acting as described, whereby the said brakes can be actuated by steam from the locomotive, or by hand, as described.

INSTRUMENTS FOR INHALING POWDERS—By Ira Warren, of Boston, Mass.: I claim the instrument described, for inhaling powder, &c., into the throat and lungs, the said instrument consisting of a receiver with holes in its bulb, or end, covered by and working loosely in an exterior tube, which prevents any of the medicine from lodging in the mouth, substantially as described.

HINGES FOR STOVE DOORS, &c.—By C. J. Woolson, of Cleveland, O.: I claim the connecting and hanging of the door or doors, upon the fronts of stoves or grates, so that they may be opened or closed without marring the beauty or affecting the convenience of the same, in either case, or exposing to view the hinges, or inside of the door, as described.

JACK CHAIN MACHINERY—By H. Marshall & S. S. Cook, of Stamford, Ct. (assignors to John Bostwick, Jr., & Elbert White): We claim the arrangement of the bed plate of the nipping jaw, the mandrel, and pin, with the turning lever (furnished with a pin) moving under the table in the manner, substantially as set forth.

[For the Scientific American.]
Extinguishing Fires in Ships.

On reading the account of the burning of the steamer Amazon, with the sad loss of life attending that heart-rending catastrophe, a train of reflection was re-kindled in my mind, such as has been presented to it on every recurrence of the kind, since the burning of the Lexington; and the question "cannot some means more effectual be devised to save our fellow men from such dire calamities?" has been brought home with force to my consideration. I would simply remark that the following is a general description of a fire engine, for which I made application for a patent during the past year, but which the Commissioner decided did not possess sufficient novelty to secure a patent:—

Construct in the lower part of the vessel a water-box of suitable size and strength, let it communicate freely and at all times with the water by a pipe, through the side or bottom, yet in such a manner that it may be closed if necessary, place it so low down in the hold that it may have two or two and a half feet water in it; in this box firmly secure four working cylinders, similar to those in ordinary fire engines, with the necessary valves attached to them, let the rods attached to the plungers or pistons of these cylinders connect with a crank, on the shaft of which, secure a bevel pinion; let the pinion connect with a driving wheel, so calculated that it will give to the pinions four revolutions to one of its own, let the shaft to which this driving-wheel is attached, extend upwards through the deck, about three feet, and terminate with a cap with chambers in it, to receive bars, or hand-spikes, similar to a ship's capstan; use 8 bars, 10 feet long, made of tough unyielding timber, and so attached to the cap that when not in use they may be turned upwards and secured in that position. When wanted for use, let 40 or 48 men take the bars and press them around, and every revolution will discharge 16 cylinders; let the cylinders be 14 inches diameter, with 12 inch stroke, and each one will contain 1764 cubic inches, the whole 16 containing 28,224 cubic inches, equal 130½

gallons; let the men make two revolutions per minute and they will discharge 261 gallons, equal to 4½ hds. of 60 gallons each, during that minute. There is little doubt, that under such trying circumstances, they could make double that number, but I will take that as the average of speed. Place one of these engines in the bow, and another in the stern of the vessel, as far from the region exposed to the fire as they can be; man them and set them at work, and in ten minutes they would discharge 5,220 gals., or 87 hds. of water, on the burning mass; and could not any of the ill-fated vessels whose destruction has been recorded, have been saved from their fiery doom by such a flood? From each of these engines, let two discharge pipes, 1½ inches in diameter, terminate in the most exposed part of the vessel, with a hollow globe of about 10 or 12 inches in diameter perforated with numerous holes of a proper size, always open, so that the moment the engines start, the water will be sent to the spot where it is needed, without any exposure of men to direct it there. When these pipes are not needed, they may be closed, and ordinary hose attached to other discharge pipes, or all may work together. I have said nothing about power, for in such a crisis despair itself would nerve every man and woman on board, to exert twice or thrice their usual force, and the great danger would be, that the machinery would give way under their frantic exertions, unless securely guarded against.

I have noticed, in all records of burnt vessels, when allusion has been made to their fire engines, that in a few minutes they were rendered entirely useless, on account of the intense heat, being directed, as they must be, from a position near the fire; and in most cases the engineer is the first officer driven from his post; but in this case the last who would be driven from their posts would be the men working the engines.

The readiness with which such an engine could be put in operation would be greatly in its favor, for, in ordinary cases, the first 8 or 10 minutes after the first alarm decides the fate of the vessel; and in this case, as the engine is always in readiness, not one minute would elapse before the streams would be pouring upon the fire, and that could be done, too, by the passengers themselves, without the direction of the officers, whose presence might be needed elsewhere; for, doubtless, the passengers, to relieve the tedium and monotony of the passage, would occasionally operate the engine for amusement and recreation, and thus become acquainted with its mode of operation.

But suppose, as is sometimes the case, fire should originate low down in the hold, so that it would be necessary to flood the vessel; to meet that case, let a four-inch pipe, prepared for the purpose, with a stop-cock or valve, communicate with the hold from the water box; open these valves, and the vessel would soon be flooded. While, at the same time, the engines might be pouring the water down the hatches.

Again, suppose that instead of fire, the vessel has sprung a leak; let there be prepared for this event a suction pipe, connecting the engine with the well; stop the pipe that supplies the box with water, and use the engine for a force pump. With two engines, or even one of this kind, could not the Helena Sloman have been saved? JOSHUA CLEWES, Elmira, N. Y.

The Yacht America.

Some time since, an English paper, envious of the fame of the yacht America, started a report that the purchaser of that beautiful craft was disappointed in her, and was anxious to sell her at a reduced price. This report, which was eagerly seized upon by the English papers, was, without doubt, unfounded. It will be seen, by the following extract of a letter, dated Malta, Feb. 6, that the performance of the yacht, on her Mediterranean voyage has been highly satisfactory:—

"The America, the wonder of the day among yachts, arrived here on the 2nd inst. She came in in beautiful style, after laying-to for four hours in a heavy gale from the N. N. E. Her noble owner, Lord de Blaquiere, is loud in her praises as a vessel of remarkable speed and buoyancy. She will be within four

points of the wind and do her fifteen knots an hour with ease. Since leaving England she has had a fair share of heavy weather, and had there been any truth in the prognostics of her detractors, that her masts would be carried away in bad weather, and other similar follies, there was every possible opportunity of their being realized. But the pretty craft nobly did her duty, doing her 14 knots for a whole night, when running with but her jib set, and setting all bad weather at defiance. During her stay she has been visited by numbers of persons. The America will proceed to-morrow to Alexandria."

Liquors Made in the United States.

The Census Report gives the amount of whisky made in the dominions of our Republic at 42,133,955 gals.; rum, 6,500,500 gals.; beer, 1,177,924 gals.—total, 49,812,379 gallons of whisky, rum, and beer. The amount is more than two gallons for every man, woman, and child in the country, per annum. A great deal of this is exported, but perhaps we import more brandy and wine to make up for it. New York and Pennsylvania are the great distilling and beer making States in the Union. Some consider beer to be a healthy beverage, others do not.

Gum Elemi.

This is a concrete resinous exudation, of which there are several varieties. The gum elemi of commerce is said to be furnished by Amyris hexandra of the West Indies. It is also said to be furnished by the Canarium of balsamiferum of Ceylon, and by the Icica icariba of the Brazils. It is imported in cylindrical cakes covered with palm leaves; but, as it is scarce and costly, it is sometimes adulterated with common fir-tree resin. Its chief use is to form pastilles, or to burn as incense: it has been recommended as an ingredient in ointments, and also in some kinds of varnish. Fresh elemi is soft and viscid, but becomes hard and brittle by cold and by age; it is yellow, translucent, and of a peculiar odor, somewhat resembling fennel: it yields a volatile oil when distilled with water. It contains about 60 parts of an acid resin, soluble in cold alcohol, and 20 parts per cent of an indifferent crystallizable resin soluble in hot alcohol.

Maryland Institute—Chemistry.

We learn by the Baltimore Sun, that Mr. Campbell Morfit, author of "Applied Chemistry," is now inducted regular Professor of Chemistry in the Maryland Institute. His opening lecture before the institute is said to have been a brilliant one. In speaking of chemistry he said:—

Chemistry is a material relative of all—a great storehouse, filled with knowledge suited to the wants of all. Chemistry is the only true socialist; for while it furnishes benefit to every community, it is upon fixed rules, which neither policy, persuasion nor legislation can change. She is immutable in her ways, acting as naturally as astronomy; with greater precision than mathematics; greater certainty than human jurisprudence; more universal than justice; with greater industry than art or handicraft, because her operations never cease; and with as much benefit to mankind as all the theories of faith, because in her works she manifests by unvarying attributes, and by her faithfulness of universal good, the unmistakable existence of a first great cause—a Providence.

Chemistry brings its aid to medicine—points out the evil and recommends the remedy; teaches how to fix dyes and colors; how to temper iron and steel; to mix and perfect the different preparations of the Chandler, the glass maker, the refiner of metals, of sugar, and of all other substances; enters into every ramification of the labors of the living, and is sometimes called to lift its torch of light over the grave, to see if the stealthy hand of crime had added no drug to hasten the departing hour of the dead.

It is, therefore, not a confined art, but a universal agent. It has not a limited field for its operations, but an unbounded plain. In short, its usefulness extends to all the wants of man and its boundaries are co-extensive with nature itself.

[How true this is! We have heard novices in science—enthusiasts in mathematics assert that mathematics alone was a true science. This is a great error.