



Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.
FOR THE WEEK ENDING NOVEMBER 23, 1852

SWINGING CHURNS—By Wm. F. & Nathan Davis, of Castleton, Vt.: We claim the combination of the swing slotted board wheel, rock shaft, and lever, for the purpose of producing two complete motions of the dash, from one full oscillation of the pendulum bars, substantially as described, to be denominated the "Oscillating Double-Acting Dash Churn."

PINCERS FOR OPERATING PILE WIRES—By Augustus Faulkner, of Walpole, N. H.: I claim the manner described of constructing and operating the claw, for withdrawing, carrying, replacing, and releasing the figuring wires, viz., by making one of the jaws fixed, and providing it with a pin or projection extending into a suitable slot in the sliding part of the claw, so that as said part moves back and forth, in contact with the fixed part of the jaw, the pin or projection therein will, when the figuring wire is to be seized, keep it in position for being properly caught in the claw, and when it is to be released, will prevent it from moving with the sliding jaw, as set forth.

SPACES FOR SETTING TYPE—E. C. Harmon, of Troy, Ohio: I claim the cyma recta, or other more suitable shaped elastic space, for facilitating the art of setting type, or for saving the time and labor usually expended in "spacing out," "thin spacing," "regulating the distance of words in the same line from one another, and "correcting proof," in the manner set forth.

FASTENING PALINGS TO RAILS IN IRON FENCES—By Geo. Hess, of Easton, Pa.: I claim the circular projection, or its equivalent, on the rail and lower part of the paling, in combination with a corresponding cavity on the lower rail, so arranged that by giving a partial rotation to said rail the palings will be clamped to the rails, in the manner described.

DRYING PAINTS—By Heman S. Lucas, of Chester, Mass.: I claim the process of treating magnesian mineral, such as serpentine silicates of magnesia and iron, and similar rocks, by mineral acids, to prepare from the sedimentary or insoluble, or undecomposed portions of such rocks or mineral product, which I call a basis, to be used in the preparation of pigments, as set forth.

HARVESTERS—By John H. Manny, of Wadsworth's Grove, Ill.: I claim, first, the arrangement of the track scraper and driving wheel, in such a manner that the latter, while the machine is cutting one swath, will run in the track cleared by the former, when the machine was cutting the previous swath, as set forth.

Second, the projections on the under side of the upper bars of the finger, in combination with the chamfer or recess on the lower inside corners of said bars, to counteract the tendency of wire grass and other fibrous obstructions to pass in between the cutter bar, and the sides of the recess in the upper part of the finger in which it is guided.

Third, forming the guard fingers of two parts, interlocked at the point, substantially as set forth, so that the grass cannot lodge in the joint and form an impediment to their entering between the stalks of the standing grain.

Fourth, in combination with a rocker stand or seat, a removable platform, constructed with a wing that extends from the outer end of the cutter, over the frame, and holds up the butts of the straws above the stubble, which otherwise would obstruct the discharge of the grain from the platform, substantially as set forth.

PRINTING PRESSES—By Chas. Montague, of Pittsfield, Mass.: I claim placing the bed-plate in a vertical position, when a reciprocating motion is imparted to it, by which the impressions can be made at each forward movement of the said bed-plate, as set forth.

I also claim the combination of the vertically-acting bed, with a cylinder or cylinders, arranged in such a manner that the forward movement of the bed will impart motion to the cylinder or cylinders, to give or take an impression and allow said cylinder or cylinders, to remain stationary during the return movement of the bed, substantially as set forth.

BOOT TREES—By David Sadleir, of McWilliamstown, Pa.: I claim, first, the arrangement and combination of the levers, friction rollers, screw, and slide, or their equivalents, with the back part of the tree, which, when constructed, all bed closely therein, for the purpose described.

PRINTING PRESSES—By A. H. Cragin, M. Buck, J. H. Buck and F. A. Tenney (assignors to A. H. Cragin), of Lebanon, N. H.: We claim, first, the arrangement and combination of the movements, in connection with the bed, by which an extent of motion is imparted to the said bed, much larger than that of the sweep of the operating crank, whilst the whole of the said movements only occupy the space within the frame work of the press below the bed, the pinion shaft having pinions upon it, which gear into stationary racks, B B, made fast to the sides of the frame, and into racks, C C, secured to the underside of the bed, the forked lever, or its equivalent, having its forked extremities connected to the said pinion shaft, and its opposite end jointed to the lever that rises from the oscillating shaft, and the pitman connecting the said lever with the crank on the driving shaft, or the equivalents of the said movements, when combined and operating as set forth; disclaiming, however, the principle of imparting motion to a printing press, by direct application of power to the bed.

Second, the combination and arrangement of the pressure cylinder and the bed with the conveying bands, nippers, and cams for operating the said nippers, as set forth.

Third, the arrangement of the upper and lower tables with the pressure cylinder, bed, conveying bands, nippers, and cams for operating the nippers in such a manner that an impression can be made at each right and each left movement of the form under the cylinder, and the sheets be deposited after receiving their impressions upon the said lower tables, substantially as set forth.

WHIFFLESTICKS—By D. C. Williams, of Madison, Ohio: I claim a shaft with the ends bent at right angles, and the lever making part of the same, arranged and operating as set forth.

MACHINE FOR DRILLING STONE—By J. J. Couch, of Philadelphia, Pa.: I claim making the drill rod to slide through the piston rod, as set forth.

I also claim the combination of the rocker lever, the wedge, the bolt within the lever, the two cam plates, the spring catch, the spring, and a projection, as applied to the drill shaft, the carriage or block, and the sideways thereof, and made to operate together, and to actuate the drill, substantially as set forth.

RE-ISSUE.

STEAM BOILERS—Cadwalader Evans, of Pittsburgh, Pa. Originally patented April 15, 1839: I claim the combination of a fusible alloy confined in a cup tube, or case, with a metallic stem, rod, or other fixture, not fusible at the melting temperature of the alloy, which stem, rod, or other fixture, is held or kept in position whilst the alloy remains hard; but when said alloy is fused, said stem, or its equivalent, can move or have motion, by which liberty to move any valve may be liberated, or caused to open and let steam escape, or any alarm may be let off, or any index moved, so that this combination may act as an alarm indicator, or safety apparatus. Also, in combination with said alloy and plug, the heavy slotted weight, lever, or its equivalent, and safety or escape valve and its ordinary weight, acting in the manner and for the purpose described.

Recent Foreign Inventions.

NEW COMPOSITION FOR RAILWAYS AND OTHER CONSTRUCTIVE PURPOSES—Mr. Owen Williams, of Stratford, has patented a composition to be used in railways and other structures, in lieu of iron, wood, or stone, and for building purposes generally. One of these compositions consists of 180 lbs. pitch, 4½ gallons creosote, 18 lbs. resin, 15 lbs. sulphur, 45 lbs. finely powdered lime, 150 lbs. gypsum, and 27 cubic feet sand, breeze, scoria, bricks, stone or other hard materials, broken up and passed through a sieve with half-inch meshes. The sulphur is first melted with 30 lbs. of the pitch, after which the resin, and then the remainder of the pitch is added with the lime and gypsum, by degrees, and well stirred till the mixture boils. The earthy and stony materials are then added, and the creosote mixed in, when the composition is ready for moulding into blocks, to which pressure is applied. The claim is the mode of preparing such composition, particularly the use of sulphur therein.

PREPARING MADDER—C. A. Kurtz, chemist, of Manchester, Eng., patentee. The improvement is for treating madder roots and ground madder, or munjeet, for calico color-makers. The patentee takes 20 lbs., of crushed malt and boils it in 100 gallons of water for half an hour; he then stops the boiling and adds 45 lbs. of wheat bran, stirring the whole together, and then allows the liquor to settle. When settled the clear is run off, and to every 65 gallons of it 100 gallons of water are added, which is placed in a copper vessel and heated to 112° Fah., and to this is added 3 cwt., of madder or of munjeet ("Rubia Munjista"), which is stirred at intervals of 15 minutes, until a homogenous mass is produced. In this state the mass is allowed to stand until it exhibits symptoms of fermentation, when they are checked by successive stirrings for 18 hours. This prepared madder is then filtered, pressed, dried, and ground, and packed away for use like garancine.

TO PREVENT INCRUSTATIONS IN BOILERS—M. Libbald, patentee.—To prepare the compound, take one pound melted tallow, one pound of black lead, two ounces of powdered charcoal, and one gill of gas tar; these are well mixed together, and present the proportions of the scale preventative. This composition is applied while hot, with a brush, to the inside of the boiler. It also makes a good black paint for fences, outhouses, &c.

EXPLOSIVE COMPOUNDS—S. Davey, of Rouen, and A. L. Cance, of Paris, France, patentees.—The explosive compound is formed of 6 parts, by weight, of the chlorate of potash; 5 parts of nitrate of potash; 5 parts sulphuret of antimony; 2 parts yellow prussiate of potash, and 2 parts bichromate of potash. A second explosive compound or powder is formed of 6 parts chlorate of potash; 3 parts nitrate of potash; 3 parts sulphuret of antimony, and 4 parts of the prussiate of potash. Each of these ingredients is separately ground to a fine powder, and the whole of them, when so ground, are thoroughly mixed together, when the said two compounds are fit for use.

MACHINE FOR RESTORING HUMAN HAIR—R. Griffiths, England, patentee.—This is a new touch in the hair restorative art, and does not consist in any of your lotions, &c., but a real true-blue mechanical operation. It consists of a machine containing combs and brushes, so arranged and constructed as to produce a gal-

vanic current when used. The teeth of the combs are made of copper and zinc, alternately, and continued back to a chamber in the hind part of the comb, in which is placed a flannel saturated with salt water as an excitant. The object of the invention is to excite an electric current when the combs or brushes are used. The brushes are made of fine copper and zinc in place of bristles.

Vinegar—Its Adulteration.

It is our opinion that adulterated liquors of every description are manufactured and sold in great quantities in our city. Out of a hog-head of whiskey, nine or ten different liquors are made and palmed off for the real Simon Pure. We believe it is the same with other liquids besides those containing alcohol. Vinegar, for example. Are we sure that all the vinegar sold in our city is genuine? No, we are not. The majority of people do not know how to judge of good acetic acid, they are perfectly satisfied if what they get for it is perfectly sour in taste and has the yellow color of the excellent old cider vinegar, that is made by our farmers. It is easy to make a cheap spurious article, and no doubt hundreds of people daily use a mixture of vitriol, water, &c., in the firm belief that it is real vinegar, because they have purchased a liquid of that name. The manufacture of spurious vinegar is an old story, we have heard an old soldier who fought on the frontiers during the last war, state, that the troops were often served with vitriol and water for vinegar while at Oswego, and their health was affected by it, until he discovered the imposition, and where it was manufactured—a few miles distant in the woods.

Where there is no censorship exercised over the manufacture of such liquors or liquids, there is great room for evil doers to do acts of the greatest enormity—we consider that the adulteration of any article of food or drink is almost venial crime. In London there is an analytical sanitary commission of eminent chemists and doctors, appointed to analyze the articles which are daily used by the people and sold wholesale and retail. They report the names of those whose articles are adulterated, who are amenable to law, and those whose articles are pure. The late report of the committee states, with regard to vinegar and its adulterations, that out of 28 samples purchased at the houses of various retailers in different parts of the city, and the productions of almost every maker of any note by whom the entire metropolis and its suburbs are supplied, only four out of the above number were free from sulphuric acid or oil of vitriol; that twenty-four were adulterated with that powerful and corrosive mineral acid; that two contained it in a small quantity only; that in three it was present in considerable amount; that 12 contained it in very considerable amount; and that in seven it was present in immense quantity. The report then publishes, as usual, the names of the parties selling and the makers of the adulterated articles, together with the names of the makers (unfortunately only four) and vendors of the pure article. The fact of the vinegars of these four makers being found to be entirely free from sulphuric acid or oil of vitriol is regarded as most important, inasmuch as it proves most convincingly that the use of that highly objectionable acid, even in small quantities, is not necessary to insure the preservation of vinegar, and shows that its addition is made rather for the purpose of increasing its apparent strength. The report concludes by publishing a letter from Mr. Fletcher, surgeon, of Bromsgrove, showing how families might manufacture for themselves, by a very simple process, sufficient vinegar for the table, or for the purpose of pickling, by using sugar, treacle, and water, and a fungus known as the vinegar plant, and thus make themselves independent of dishonest manufacturers.

Every American family knows how to make vinegar; it is therefore needless for us to tell how this can be done; but at the same time, we must say, that there are so many families in cities like New York, who have not the conveniences to make it, and it is so much easier to buy than to make it, that there should not be the least necessity for doing so, and there need not, if things were well man-

aged. We should have an analytical sanitary commission in this city, to examine both solids and liquids, so as to have only pure articles sold, and those punished who sell adulterated articles. Now what would our Common Council say to the appointment of such a commission? We believe if such a commission was appointed, a great amount of good would be accomplished by it. Let our Aldermen think of it; the subject is a very important one.

A New Propeller for Steamers.

Professor A. Crestadoro has just secured under the new patent law, an interesting scheme for propelling vessels.

He considers the use of paddles or blades to be a mistake similar to that which so long prevailed in the application of locomotives on railroads, and which materially retarded the progress of that invention, when, taking for granted the inability of the plain circumference of the wheels to propel the carriage, much labor and skill had been wasted in the contrivance of levers, which acted on the road in a manner somewhat resembling the feet of the horses. Now, as the apprehended insufficiency of the adhesion of the plain circumference of the wheels with the road to propel the carriage has been proved a fallacy, so he considers the necessity of paddles or blades, of whatever description they may be, as altogether fallacious and that the best and cheapest method of improving the propeller is to use simply the plain circumference of cylindrical drums. It is a natural supposition that a plain round surface should have no tractive adhesion with the water; but on close examination it will be found that not only such is not the case, but what is even more surprising, the tractive adhesion of a plain cylindrical drum is far greater than that of a paddle-wheel of equal size.

Taking, for instance, the steam vessel Atlantic, whose paddle wheels are of 35 feet diameter, and length of paddles 12 feet 6 inches, supposing a moderate immersion of five feet paddles—one pair of drums of equal size at equal immersion would displace a pair of cubic segments of about 135,631 lbs. of water, or, what amounts to the same thing, a pressure of not less than sixty tons would act upon the drums as a tractive adhesion which is by far superior to that afforded by the best method of paddle wheels in the most favorable circumstances. Now, the cylindrical propeller has the substantial advantage that it can be, when reduced to a moderate diameter, applied as well as totally immersed, if it be, (as proposed by the patentee,) fitted into a semi-cylindrical case, with only such a clearance as is just sufficient to let the drum have a proper action, the other half drum or semi-cylindrical projection being out of the case for the propelling action.—[English paper.]

[There is a decided mistake in the conclusions of Prof. Crestadoro. No mortal man but himself, we believe, ever would suppose that paddle wheels were invented because it was believed that broad sheathed wheels would slide on the surface; such an idea never was entertained, consequently no such mistake as that referred to was ever made in the case of steamboats. The two modes of propulsion are entirely different, the one is by traction, the other by the displacement of an incompressible fluid. Now, the action of a rigid body passing over another rigid body, is altogether different from what it would be if propelled through a fluid. We have also to state that drums have been tried as substitutes for paddles, but as might be expected, proved utterly incompetent. We cannot see how a man of science permitted himself to be led away by such an idea as that set forth in the above extract.]

Telegraph between Quebec and Detroit.

The process of laying down the submarine wire across the Bay of Quinte, for the trunk line of telegraph now in course of construction between Quebec and Detroit, was gone through last week. The submarine wire, which works admirably across the bay, was manufactured in London.

All plants have a season of rest; discover what season is peculiar to each, and choose that season for transplanting.