*Reported Officially for the Scientific American*

## LIST OF PATENT CLAIMS

**Issued from the United States Patent Office.**

FOR THE WEEK ENDING OCTOBER 19, 1852.

SEWING MACHINES- By Otis Avery, of Honesdale, Pa.: I claim, in combination with the needle bars, the spring holders, and adjustable guides, through which said bars pass, for the purpose of regulating the length of the stitch, substantially as described.

I also claim, in combination with the apparatus for regulating the length of the stitch, the weight or its equivalent, for drawing the cloth forward, as it is alternately released from the needles, by which means the feed motion is regulated, and made dependent on the length of the stitch, substantially as described.

SPREADING LIME AND MANURE—By Lewis Cooper, of Coopersville, Pa.—I claim, so constructing the pulverizing and fertilizing apparatus, as to effect the several functions of pulverizing and distributing manures of various kinds, at will, by so arranging the roller, that it can be raised or depressed in the discharging opening of the bottom of the hopper to any required level, so as to discharge a larger or smaller quantity of material previously brought to the desired degree of fineness in the hopper, and at the same time, to act as a valve to close, more or less tightly, the bottom of the hopper—the same roller also serving as a distributor of seed, in sowing broad-cast without any alteration of the machine, as set forth.

TOOLS FOR CUTTING PEGS OUT OF BOOT SOLES.—By D. D. Allen, of Adams, Mass.: I claim the adjustable float or cutter, connected to a shank by means of the pin or pivot, which turns loosely in the bearing or standard, so as to permit the float to adjust itself to the proper positions to cut the pegs from the heel to the toe of the boot, in the manner set forth.

GRAIN SEPARATORS—By Peter Geiser, of Smithsburgh, Md.: I claim the method of regulating the blast of winnowing machines by means of a flap on the fan case, arranged and adjusted, substantially as set forth.

I also claim the reciprocating toothed bars, with the trough, whose bottom is divided into three portions, the lowermost being tight, and acting merely as a conveyor—the middle one acting both as a conveyor and screen, to separate the wheat from the straw, and allow it to pass into the winnower, and the upper or third portion acting as a conveyor for the straw, and a coarse screen to separate therefrom the heads of unthreshed grain, that would not pass through the lower screen, the teeth of the reciprocating bars, moving the straw regularly along the trough, and working or shaking the grain and heads so effectually through the screens, that none is left to pass off with the straw, when it is discharged from the upper end of the trough.

PRINTING PRESSES—By L. T. Guernsey, of Montpelier, Vt.: I claim the combination of a reciprocating type bed, with an impression cylinder, which has the half rotary (or reciprocating rotary) movement, and also a movement to and from the type-bed, as set forth.

SEED PLANTERS—By Edson Hart, of New Albany, Ind.: I claim the rail with the rod or rods connecting it with the hopper, the said rods occupying traversing collars, with tightening screws, by means of which the relative distance of the axle and the feed shaft are adjusted to suit different arrangements of gearing according to the rate of feed desired.

APPARATUS FOR ELEVATING AND DISCHARGING BILGE WATER, ETC.—By Nehemiah Hodge, of North Adams, Mass.: I am aware that rocker pumps have been constructed to be operated by hand-power, but in these no adequate provision has been made for receiving and retaining the water as it is raised up; besides, their action is limited to a continuous rapid propelling power, whilst, by my arrangement, any varying inclination of the vessel, from a horizontal line however slow, puts the apparatus in operation, and, as heretofore constructed, could not, without encumbering the hold of the vessel, be placed therein; I do not, therefore, lay claim to any such pumps.

But I claim, in combination with a series or system of tanks and tubes, or their equivalents, the ventilating tubes, substantially as described, for the purpose of elevating and discharging water from the holds of the vessels, the whole being operated or worked by the motion of the vessel, as set forth.

WATER WHEELS—By Ira Jagger, of Albany, N. Y.: I claim the applicationof an adjustable lip, sliding on the inner surface of the buckets, of a turbine wheel to regulate the openings between the outer edges of the buckets, and thereby the flow of water from the wheel, substantially as set forth, and thus adapting the lines of the turbine to the head of water, and amount of work to be done however varying.

MAKING SODA ASH AND CARBONATES OF SODA—By Henry Pemberton, of Philadelphia, Pa.: I claim, first, the process of making soda ash, by heating the mixture of sulphate of soda and carbonaceous matters, without the use of lime or any other foreign matters, as preparatory to converting the same into other products, substantially as described.

Second, the process of treating the aqueous solution of the above heated products, by carbonic acid, then boiling to degrees, to form a mono-hydrated carbonate of soda, to be treated again in the dry state, by carbonic acid, to form bi-carbonate of soda, as set forth.

BEDSTEADS—By D. W. Smead, of Peru, Ill.: I claim the swinging foot board, to serve the purpose of a clasp for securing the bed clothes, it being held down by a ratchet and pawl, or otherwise.

SASH STOPPER AND FASTENER—By J. D. Smith, of New Britain, Conn.: I claim the construction of a window or sash stopper, operated by a winding spiralspring, the whole arranged and combined as described.

LIFE-PRESERVING SEAT—By G. P. Tewkesbury, of Boston, Mass.: I claim the life preserving seat, as made of a combination of the seat, the head or block, the air-tight vessel, and the connecting rods or grasping bars applied together and used, substantially as specified.

BURGLAR PROOF PLATES FOR DOORS, SAFE WALLS, VAULTS, &C—By Linus Yale, of Newport, N. Y.: I claim a method of making burglar-proof plates, doors, and chests, of iron, which, in the process of being cast into the form required for such plates, doors, and chests, surrounds or imbeds malleable iron rods or bars, or their equivalents, arranged substantially as described

I do not claim, in said plates, doors, and chests, the casting in of straight rods, or bars of malleable iron, or their equivalents, imbedded parallel with each other, in only one general direction.

DESIGNS.

COOKING STOVE—By Elihu Smith, of Albany, N.Y.

FORKS, SPOONS, &c.—By Robt. Taylor & Robt. O. Laurie, of Philadelphia, Pa.

COOKING RANGE—By Benj. Wardwell, of Fall River, Mass., & E. R. Barstow, of Providence, R. I.

### Proceedings of the French Academy of Sciences.

DISEASE OF THE VINE—Much apprehension has been excited in Italy and the North of France, from the appearance of a peculiar disease among the vineyards of those countries—singularly enough it is the choice trellised vines that are first attacked before the common sorts growing in the country. It is attributed, by Dr. Robouam, a land owner in the environs of Paris, to the attacks of a small insect, called by him the *coccus radicum*, which likewise, according to him, is the cause of the disease of the potato.

GASTRIC JUICE—The food, and particularly certain descriptions of food, undergo, in the stomach, a necessary process of digestion, which is performed by the gastric juice, the process being the same whether the gastric juice acts in the abdominal cavity or in an open vessel. The permanent opening made in the stomach of a soldier in Canada, by a musket ball, and described by Mr. Beaumont, as well as the experiments performed with animals, prove irrefragably that the process of digestion, in animals which resemble man in their organization, is the same whether the action goes on in the stomach or in a vessel. It follows from this that it is very easy to obtain any quantity of the gastric juice, either from animals that have been killed at the slaughter-house, or preferably from living animals furnished with a permanent aperture in the stomach, so that the gastric juice may be taken out when required; the species of animal may, moreover, be changed at pleasure. By this means invalids and others, troubled with dyspepsia, may be supplied with the means of digestion, either by taking the natural gastric juice in a liquid state or by having it dried and reduced to powder; in this latter state it becomes active on being again dissolved. In either case the gastric juice may be given directly or in some other substance with scent and taste, or not, as may seen best. In extreme cases, an artificial digestion of the food may be first operated in vessels, and then allow it to be administered already digested. The patient will then have only to absorb and assimilate the food, the act of digestion having been already accomplished. The gastric juice has nothing disagreeable in its transparency, color, scent, or taste; when in a powder it has no sensible effect on the palate, and the food already digested may receive, like cooked viands, every sort of taste by culinary processes.

RELATION BETWEEN THE SPOTS IN THE SUN AND THE MAGNETIC NEEDLE.—According to observations made by M. Rodolphe Wolf, Director of the Observatory at Berne, it appears that the number of spots on the sun have their maximum and minimum at the same time as the variations of the needle. It follows, from this, that the cause of these two changes on the sun and on the earth must be the same, and, consequently, from this discovery, it will be possible to solve several important problems, whose solution has hitherto never been attempted.

HYDROPHOBIA.—It is pretended by a French physician, Dr. Bellanger, that there is, in reality, no such disease as hydrophobia, the whole calamity consisting in the imagination of the patient. He offers to restore to health, gratuitously, anyone affected with this, according to him, imaginary malady.

PRESERVING PROPERTIES OF COFFEE.—M. E. Robin speaks highly of the preserving properties of coffee. For example, meat dipped in coffee, rather strong, which had been allowed to cool, and then left in the air for three days, has been preserved without any change worth mentioning. Since last November, 1851, it has assumed the appearance of cooked meat, and has never had any bad odor; the liquor is discolored, but preserves its aroma, which is very agreeable. Another piece of the same meat placed in a similar quantity of coffee, in the same manner, had a bad odor at the end of ten days, and putrified at the end of three weeks. The question of its certainty for preserving is one of interest to domestic economy.

### Bell's Reaping Machine in America.

MESSRS. EDITORS.—In reply to an article in your paper of the 2nd inst., calling for information in relation to the importation of the "Scotch Reaping Machine," permit me to state, that in the year, 1834, the late John B. Yates, of this place (not P. B. Yates) imported one of the Rev. P. Bell's horse-power reaping machines, and in the following year it was put in successful operation here.

The machine was sent by Mr. Peter Gibson, of Dundee, via Liverpool, per ship Sheffield, Hackstaff, master, to the care of Messrs. Boarman, Johnston & Co., of New York, who received payment for the same at the office of Yates & McIntyre, in New York on the 9th day of April, 1835. Its whole cost on delivery at New York, including duties, charges, &c., was $345,40. The first trial of its working powers was made in the presence of several residents of this village, as well as Mr. Yates, the Rev. Mr. Bell, the inventor, and myself, and resulted in the reaping of a level field of wheat of from two to three acres in about as many hours. I will only add, that I then acted as the general agent of Mr. Yates's affairs here, and since his decease, which occurred in July, 1836, have performed the duties of an Executor of his will. Among the farming effects left by him was this very machine, and although now in a ruinous condition, it may still be seen at this place. Your's, &c.

GEORGE K. FULLER.

Chittenango, Madison Co., N. Y., Oct. 18.

[We are much obliged to Mr. Fuller for the prompt and complete manner in which he has replied to our request. We would state here to those who assert that Mr. Bell's machine was imported into this country before McCormick or Hussey's were invented, that O. Hussey's reaper was patented in 1833, and McCormick's in 1834.

### Scrofula and Pork.

The Editor of the Journal of Organic and Medical chemistry, an able new periodical comes out savage on pork. He "defies all hog-eaters, chemists, and physiologists to prove that hogs' flesh is a healthy article of diet." He asserts that the name *scrofula* "had its origin in a disease peculiar to swine." This is true, the Greeks gave it this name—"swine disease." It may, however, be as wrongfully applied as many other terms. A man is called a *dunce* as an epithet of stupidity, derived from the term applied to the followers of the metaphysician, *Duns Scotus*, by their less able, but more bitter opponents.—Nevertheless, there appears to be something between scrofula and pork, if the testimony of many able physicians is to be believed.—There are some, however, who ride upon different hobbies; one upon one kind of food, and another upon a different kind. One will advocate bran-bread and vegetables, another beef, pork, wine, and beer. There should be a moderation in all things, for bad beef is just as full of scrofula as bad pork. The great object in selecting food is to have it good—in proper condition—and when hogs are fed upon good provender, and killed in good health, their flesh, if eaten in moderation, we presume will not cause disease. People of fair complexions, who live in cold changeable climates, are subject to scrofula. We believe, however, that too much pork is eaten in our country, and the strictures of the Journal of Organic Chemistry, are required to arrest attention and direct it to the evils arising from the unbounded use of pork for food among our people.

### Gold in New Zealand.

The San Francisco Whig of September 1st, announces that gold has been discovered in New Zealand. The extent of richness of the gold mines is not stated. The group of islands are 1,200 miles from Australia, and of volcanic origin, several active volcanoes being found in the Northern Island. The schooner Creeper, which brought the news to San Francisco, had laid on for Port Philip, and had already obtained a full complement of passengers, when the discovery of gold at Manukau, induced them to leave for the new placers. The troops which had been sent for by the Governor General of Australia were also withheld, as their presence was likely to be wanted.

### The Ship Challenge.

The challenge of the "American Navigation Club," offering a bet of £10,000 as a prize to the winning vessel, a Yankee ship against a British one, of 1,200 tons burden, to run from London to China and back, has not yet been accepted. It was to stand open for 30 days. The club, unwilling that England should so far forget her old chivalry, has extended the period for accepting the challenge, and will augment the stakes to £20,000, and give the British ship 14 days of a start. Is there not public spirit in all old England to accept this challenge? As this race does not involve high pressure steam, we hope to see the challenge taken up, or an offer made to race for love to test the relative speed of American and English built ships. A correspondent of the London Mechanics' Magazine criticised Mr. Griffith's work on ship-building, and insinuated that the English shipwrights were better acquainted with the science than the American ones. Here is an opportunity for him to prove it. He should exert himself to find some one te accept the challenge, when he does so he will find the stakes by calling on Mr. Peabody, in London.

### Bomerang Propeller.

The last files of the Sydney Morning Herald contain accounts of a new propeller invented by Sir Thomas Mitchell, the Surveyor General of New South Wales, a trial of which in a small steamer at that port had just excited great interest. It is called the Bomerang Propeller, and is constructed on the principle of the weapon of that name used by the natives to kill game. Although the experiment was only on a small and imperfect scale, a speed of 12 knots an hour against a head wind is stated to have been obtained. The instrument is described to combine great strength and simplicity, while it has also the advantage that its motion in the water causes but a comparatively slight agitation, so that it is capable of being adapted to canal boats as well as to other vessels. At the conclusion of the trial Sir Thomas Mitchell expressed his conviction "that the weapon of the earliest inhabitants of Australia has now led to the determination mathematically of the true form by which alone, on the screw principle, high speed on water can be obtained."

### What is to be Done with all the Gold.

By the arrivals from California gold keeps flowing in, like a steady stream, to the Atlantic States. We have the same accounts from Australia. Some of the ships which arrived in London recently brought from a million to two million of dollars worth of the precious metal. Allowing this great yield of gold to pour into the markets of America and Europe for some years to come, it must affect the currency in a most sensible manner. As yet things seem to flow on in the usual course, so far as the old standard value of the gold is concerned, and it is to be hoped that whatever change takes place, it will not be sudden, but gradual and temperate, in order that no revulsion in any branch of business may be caused thereby. It is the duty of bankers and national financiers to look this matter firmly in the face, and devise measures, if they can for the steady and regular procession of all kinds of business dependant upon the financial operations of banking firms.

### Bellville and Illinoistown Railroad.

The grading, masonry, piling, &c., of the Railroad from Illinoistown to Bellville is advertised to be let, either as a whole or by sections of one mile each.

The distance is sixteen miles, and the payments cash. The road is to be finished by the 1st of May, 1853.

### Panama Railroad.

The stock of this railroad is up to 129. W. C. Young, formerly president of the Hudson River Railroad, is to take charge of it, in place of Mr. Stephens, the deceased traveller.