

Scientific American

NEW-YORK, OCTOBER 30, 1852.

Iron Lighthouses.

So long as wood is cheaper than iron in our country, it will be used in preference to it for the sake of economy in the first cost. Every year, however, tends to increase the scarcity and price of timber, and iron is every day extending in use, and it will yet be as common to see iron houses of all kinds as it now is to see those of wood. We shall not live to see this result, but we can see it *afar off*. In our city, iron pillars are universally taking the place of those made of wood and stone, and in Britain, five iron ships are now built for one of wood. The employment of iron in marine structures forms an important era in respect to its use for lighthouses. The great expense and difficulty heretofore experienced in forming foundations of stone for lighthouses in sand banks, and in yielding soft places, have been overcome by Mitchell's iron screw piles, and Potts' iron cylinders, and then raising the superstructure on these. We have a letter before us from Mr. C. Pontez, stating that he is progressing with his foundations of iron cylinders for a lighthouse in the course of erection fifteen miles below Baltimore. A number of these cylinders are now sunk, and when all completed, they will form two concentric circles, the outer one twenty-three feet in diameter, composed of cylinders 26 inches in diameter each, and one inch thick; the inner circle will be seventeen feet in diameter with cylinders of 17 inch diameter. These cylinders will be filled with concrete, capped with iron plates, and all the caps connected together by wrought-iron ties, thus forming a continuous circuit. Around and within, the circles will be filled with large masses of granite to the level of low water, and on the top of the iron circuits the regular courses of masonry will be laid. The site is two miles from the shore, in water 10 feet deep, and thus a strong and permanent lighthouse will be built by the employment of iron foundations at an expense of less than one-half of what a stone foundation could be laid; indeed, the employment of iron, enables our marine engineers to build lighthouses in situations where it would be utterly impossible to build stone towers.

At the exhibition of the Franklin Institute now open in Philadelphia, there is the model of an iron lighthouse by Merrick & Son, to be built on screw auger piles bored 12 feet into the coral reef, at Sand Key, Florida, it has a base of 50 square feet will be 132 feet high, and weigh four hundred and fifty tons.—The lighthouse on Carysfort Reef, Florida, completed by the Topographical Bureau this year, is a wonderful iron structure, and was made by Merrick & Towne, of Philadelphia. It is built on piles arranged upon the angles and centre of an octagon; the heads of these piles are united by iron ties, and on this arise courses of iron pillars and a strong central column from the centre foundation to a level with the top of the upper series of pillars—from this central column, there radiate, at proper levels, iron girders of great strength, which, added to the horizontal ties extending from one pillar to another, form a combination so compact and stiff that no force of the wind, it is supposed, will ever disturb it. For the residence of the keepers of the light, a cast-iron dwelling of a circular and conical form is fitted to the above described frame-work of pillars, ties, &c., at a point 35 feet above the level of the reef, and 20 feet above the highest tides.

This dwelling consists of two stories. The lower one being about 8 feet in height, and 40 feet in diameter, is designed for the deposit of stores, the kitchen, etc. It is fitted with 8 windows and 16 bull's eyes—the former for air, the latter for light. It contains six iron tanks for water and oil. The upper story is divided into six rooms, with a hall in the centre to allow a free ventilation in all the apartments. There is a door at each end of the hall, and a large window in each room. Surrounding this story is a gallery, exterior to the house, 5 feet in width, where the keepers may exercise.

From the centre of the hall rises a spiral

staircase to the top of the structure. This staircase is enclosed by an iron cylinder, the whole weight of which rests upon the roof of the dwelling house. On the top of the structure is placed the watch room, and lantern, or light room, fitted to contain a Fresnel apparatus of the largest size, that will produce a light of the highest power. The diameter of the structure at the base is 50 feet, and 20 feet at the level of the watch-room floor. The height of the entire work above the surface of the reef is 127 feet, and the height of the centre of the light 115 feet.

It was for this lighthouse that the Fresnel Light was intended, which was sold in the New York Custom House for old iron and glass, when in charge of the Topographical Engineers, and not under that of the Light-house Board, as we have since been informed. The benefit of iron in marine structures, such as lighthouses, was first displayed by A. Gordon, C. E., of London, who, in 1841, erected one on Morant point, in the Island of Jamaica, on a position difficult of access, and where, from the frequency of earthquakes, no stone lighthouses above two stories high could stand. This lighthouse is made of cast-iron, and has stood several severe shocks of earthquake. A cast-iron lighthouse was erected by the same engineer on the Island of Bermuda, in 1845; it is 105 feet high, and is provided with a Fresnel light, which can be seen at 30 miles distance. Owing to the great expense, or total inability of erecting stone structures in many exposed situations, we cannot but feel grateful that iron meets and surmounts all such difficulties. The iron lighthouse in Bermuda has been the means of greatly reforming the habits of a large number of the inhabitants who formerly gained their livelihood as wreckers, an occupation not very favorable to the development of the best qualities of humanity. The iron lighthouses on the dangerous Florida Reefs will also be the means of doing a vast amount of good in this respect. Within view of a first-class light on Carysfort Reef, there was wrecked in three years and four months, property to the amount of \$1,147,500. The wrecking fleet on the Florida Reefs amounts to 47 vessels with a tonnage of 1,200 tons, and crews amounting to 350 men. At Key West, Florida, the amount of salvage decreed to the wreckers, in 1848, amounted to \$199,140, and the wrecked vessels and cargoes amounted to \$1,282,000. The iron lighthouses on the coast of Florida, if they do not prevent all this great amount of wreckage, will no doubt prevent nearly the whole of it; success then, we say, to our Iron Lighthouses.

Firemen on Steamships.

A very important case has recently been tried before the U. S. Courts in this city, which we cannot pass over in silence. On the late voyage of the steamship Franklin, one of the firemen, when he left New York, was intoxicated, and when heated at his labor became stupid, disobeyed the command of the assistant engineer, fell off the stairs, became insensible, and in that state the said engineer poured some pails of cold water over him, after which, in a very short time, he was a corpse. The engineer was brought before the court on a charge of manslaughter, but the evidence, to our view, did not exhibit any intention to injure the deceased man. The evidence, however, developed a most heartless system, and brought to light the life of a steamship fireman, in comparison with which that of the meanest serf is blessedness itself. It was stated that the firemen were generally intemperate, that they drank a great deal of spirits, and no wonder. The fire-room is below the water line of the ship, and is often at 80°, 90°, and 100° of temperature. The men have to work in this atmosphere, and sometimes they can scarcely breathe. Frequently they sink down exhausted, and by pouring water upon them, revive; this was applied to the deceased fireman, but he will wake no more till the last trump shall sound. The temperature of the human body is 99° 5', and although it has been proven by many experiments, that the body maintains the same heat in the man who lives in the cold regions of 30° below zero, and him who lives in the tropical regions of 90° above it, yet reason, common sense, and experience tell us that there must be a certain temperature of the atmosphere most in

harmony with the temperature of the body.

Men have stood and may stand to live in an atmosphere of 100°, (and we have entered into an atmosphere above 200°) yet they can only do this for a short period. The difficulty of breathing (the fiery choking sensation) tells us that such an atmosphere cannot be breathed with impunity. For example, an atmosphere of 99° 5'—the same temperature as that of the human body—must be in equilibrium with it; now, as the action of the lungs is to promote slow combustion in the body, the atmosphere, to be perfectly healthy for a man, should always be colder than the carbonic acid gas and moisture from the lungs. Unless this is the case, the atmosphere, as it should, cannot act as a good condenser to the heat of the lungs, therefore, a highly heated atmosphere must be injurious to health; it cannot be otherwise. We have observed that those men and women whose lot was that of working in warm rooms for dressing fine muslins, in factories, in printworks, firemen of steamships, &c., presented a bleached and consumptive appearance, and it we had statistics of their health and longevity, we have no doubt but the bill of mortality and sickness would be appalling. The evidence presented by the engineers and firemen of the Franklin conclusively proves this, and something more is demanded in the inspection of steamships than an examination of the hull and boilers for the safety of crew and passengers. The safety of the lives of firemen working away down in their minor pandemonium, demands the attention of all philanthropic men, and we hope that this case may lead to a better ventilation of boiler rooms on board steamships.

The best temperature of atmosphere conducive to health ranges from 42° to 75°; we have no statistics to prove this assertion, we only conclude that these atmospheric temperatures are the best, from a knowledge of their influence upon fermentation, and the robust forms and general health of the natives of those countries, the temperature of which averages about 50° throughout the year, and never rises 30° above nor 30° below that standard, excepting upon rare occasions. The natives of very cold climates are stunted specimens of the human family, and if some of the natives of Africa are tall and muscular, it is owing to a physical constitution of an entirely different character from that of the Caucasian race.—They would no doubt make excellent firemen in our present steamships, (only they would have to be more strictly watched than men of our own race,) but we believe that the temperature of the boiler room can be maintained at 65° or 70° without any loss of heat to the boilers, and the firemen thereby be enabled to work with safety and comfort.

Artificial Hydraulic or Portland Cement.

"The London Journal of Arts and Sciences" contains an article on testing the brick-beam erected at the Great Exhibition last year with Portland cement. In England no artificial hydraulic cement was discovered until the experiments of Mr. Frost, who was the real discoverer of the Portland cement. This hydraulic cement has superior qualities to any other; it is capable of setting very fast in water, and it can also be used as a mortar. The Portland cement is made of clay mixed in certain proportions with chalk, then ground in water and afterwards burned. It is submitted to a high heat, and has been called over-burned lime. It is now used extensively in England for docks in harbors, for stucco work, the construction of cisterns, &c. The discoverer of this cement conferred a great boon upon England; he came to this country a number of years ago, and resided for a long time in the city of Brooklyn, in which place he breathed his last at a good old age, the early part of this summer. His experiments with steam, and his pamphlet on *stame* (steam heated apart from water) which he termed "a substance with new qualities," are well known to the public. He was a man of a very gentlemanly appearance, he possessed great ingenuity and engineering skill, was an excellent practical electrotypist as mentioned by Dr. Lardner in his lectures in 1841, and had a very extensive knowledge of chemistry. There were few, if any, men in our country possessed of more general information connect-

ed with engineering than Mr. Frost. At one time he was possessed of considerable wealth, but his latter days were spent, though not in want, in comparative poverty. He was an inventor, and the last days of his life were like those of too many of that benefit-conferring class; he benefited others to the injury of himself.

The Fair of the American Institute.

It was decided by our State Courts that "The Art Union" of New York was a lottery. The American Institute at its present Fair, has flung the gauntlet of contempt at such a legal imputation upon such an Institution as an "Art Union." At the East end of the machine room there is suspended a picture resembling the scene of "The Money Changers" in the Temple at Jerusalem. Connected with it is the flaming sign, "Art Union," for the relief of Broadway, by steam carriages. At the desk beneath, a subscription list has been opened, and subscribers solicited. The object of this Art Union is the formation of a company for the relief of Broadway, by the substitution of steam carriages in place of horse omnibuses. We shall say nothing about the impracticability of such notions being carried out; but we do say, that no company has received, nor can receive, the privilege of running steam carriages in Broadway, and to form a joint-stock company for this purpose is a most extraordinary proceeding. And how does the conduct of the American Institute comport with true ideas of right and honor? It certainly appeared as an abettor of this scheme, or why did the managers allow part of the Fair to be turned into a subscription box? The Fair, in this respect, is an infliction upon visitors and a disgrace to our city: it has become a vender of spurious titles; for it is not an exhibition of American Industry only, but a dealer in baseless projects. Any person or persons have a perfect right to form all kinds of legal joint-stock companies for testing any scheme, practicable or impracticable, but the Fair of the Institute is not the place for selling stocks for such projects.

Hydraulic Rams.

We have received a communication from J. D. Rice, No. 397 Market street, Phila., which states that the information which we received about the hydraulic ram from the "Report of the Committee of Science and Art" of the Franklin Institute, Philadelphia, is full of error. The communication states that the ram said to have been put up in the town of Naples, N. Y., (as mentioned on page 13, this Vol., Scientific American) to supply it with water, has never distributed a single drop.—The Town Clerk of that village furnishes this information. The hydraulic ram of Birkensbine, which was put in to supply the Girard College, it is also stated, has been taken up, and that institution is now supplied with water from a pump operated by a steam engine. This is a question of facts in respect to certain statements; who has done wrong in propagating errors? This is to be answered by our Pennsylvania friends.

Portrait of Washington.

Sold by Williams, Stevens & Williams, Broadway; Wm. Terry, 113 Nassau street, sole agent.—An engraving from Stuart's superb picture of the Father of his country has been handed over to us for inspection, with which we are highly delighted. It is engraved upon steel by T. B. Welch, of Philadelphia, from the original painting in the Athenæum at Boston, and reflects the highest credit upon the artist. As a specimen of American skill, it is one that does infinite credit to our country, and we sincerely hope that the spirited publisher will receive all the patronage that he so justly deserves. It would be useless to enter into any critique upon the painting, which is too well known to require description, and it will be found that the engraving is a true copy of the original. Every feature is as accurately represented by the lines of the engraver as by the pencil of the artist. It is a national work and therefore deserves national patronage. We doubt not that the sale will be immense.

DANIEL WEBSTER, Secretary of State, died at his residence in Marshfield, Mass., at 3 A. M., on the 24th inst.: thus have recently passed away our three greatest statesmen—Calhoun, Clay, Webster.



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 LIMB 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 Smithsburg, 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 winnowing, 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 application of 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.

BEDSTEDS—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 spiral spring, 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 seem 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. Boardman, 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. Yours, &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 in thereof *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 beet, 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 Creep, 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 to 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.