



Reported Officially for the Scientific American

### LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING APRIL 12, 1853.

**HARROWS**—By Wm. Berlin, of Berryville, Va.: I claim constructing a double frame work of iron bars or straps of metal, and arranging and combining the two together by graduating bolts or adjustable screws and taps, by which means or contrivance, the lower frame can be elevated or depressed, and the teeth or tines, lengthened or shortened in their drag or dip.

**SPRING MATTRESSES**—By Edwin L. Bushnell, of Poughkeepsie, N. Y.: I claim the mode or principle of securing the springs, by attaching the free extremity of each spring, to the terminal coil of the adjacent spring, so that they mutually support each other without the use of any inflexible frame of wood or other material, at the same time that in rolling or folding up the mattress, the outside ends of the springs are exposed or open, while the inside ends contract or close, and by which means any article, so constructed, will admit of being rolled or folded upon its self or compressed, substantially as described.

**SMUT MACHINES**—By H. L. Fulton, of Chicago, Ill.: I am aware that a flat plate on the side of the concave has been used; this, therefore, I do not claim; but I claim the circular prismatic shaped brace and concentrator, arranged between each pair of revolving scouring plates, and secured fast to the inner periphery of the case for the purpose of concentrating the grain, and throwing it upon the second scouring plate, and thereby preventing its escape, before it is effectually cleaned from the first scouring plate, directly to the discharge passage, as described.

Also, in combination with the revolving dish shaped plates, or beaters, substantially as described, the prismatic ring, for the purpose of concentrating and directing the grain from one beater to the other as described.

[See engraving page 369, Vol 7 Sci. Am.]

**MATCH SPLINT MACHINES**—By Reuben F. Gustine, of Chicago, Ill.: I claim the combination of the reciprocating knife with a convex or protuberant rest, and feeding and holding mechanism, and the pressure roller, or any equivalent thereof, for the purpose described.

**COIN SAFE AND DETECTOR**—By J. J. Hatcher, of the District of Spring Garden, Pa.: I claim a coin safe, or receptacle for coin, consisting of the arrangement of the outer case, spring, with a pad, for holding the coin up against the top of the case and slide with its projection, or their equivalents, for forcing the coin through the slot provided for the purpose, as described.

**ROBIN OIL**—By S. W. Hawes, of Boston, Mass.: I do not claim the form or kind of apparatus set forth, irrespective of its use or particular application; my claims being founded upon the invention or discovery, of improvements in the process of making rosin oil by means of said apparatus, or any other equivalent in principle.

Therefore I claim, first, in the process of making rosin oil, charging and discharging the still, by means substantially the same in principle or mode of operation, as these set forth, whereby I save the necessity of unluting, and prevent the incrustation of the still.

Second, I claim in the process of making rosin oil the separation of the oil from the more volatile products, at different and distinct points remote from the still, instead of discharging them all together, as heretofore done, as set forth, by means of the series of recurved pipes, in combination with the series of condensers attached thereto, as set forth.

**SHINGLE MACHINES**—By Simon Ingersoll, of New York City: I claim the spring clipper, operated as described, in combination with the riving knife, for the purpose of insuring the complete separation of the shingle from the block, and, at the same time, throwing it on the lower bed, in position to be carried to the dressing knives, by the next advance of the driver, as set forth.

**HOT AIR REGISTERS**—By E. A. Tuttle, of Williamsburgh, N. Y.: I claim constructing the leaves, of a register or ventilator, with projections on their surfaces, to form an ornamental open or fret work, between the leaves, when they are turned with their edges uppermost or partially so, for the purpose of dispensing with the separate front or top plate of ornamental open work now employed on registers and ventilators.

**SEWING MACHINES**—By Wm. H. Johnson, of Granville, Mass.: I claim the use of a hollow rotary clamp, as described, for holding and feeding cloth or other materials to be sewed, substantially as specified.

**MERCURY BATHS FOR DAGUERREOTYPING**—By B. F. Upton, of Bath, Me.: I claim combining with the mercury bath and the lamp for heating it, the sliding tube and lever, or their mechanical equivalents, as described, so that by the expansion of the bath the lever may be moved so as to elevate the slide tube on the wick, and thereby decrease the flame of the lamp and the heat thereof, or caused so to act as to maintain, or nearly so, equality of evaporation, as specified.

**WASHING MACHINES**—By C. F. Wilgus, of West Troy, N. Y.: I claim the employment of the revolving feeding net cylinder, in combination with the two sets or circles of rollers, one set of said rollers being allowed to yield when the sack of clothes or other articles, is drawn round the net cylinder and between the said sets of rollers and made to spring back by means of the springs, which are connected to the rollers, the whole being constructed, arranged, and operated as described, and for the purpose of washing clothes and fulling and flocking cloths, as set forth.

**MANUFACTURING INDIA RUBBER AND GUTTA PERCHA**—By Chas. Goodyear & Robt. Haering, of New Haven, Ct. (assignors to Chas. Goodyear). Patented in England, March 4, 1851: We claim the art or method of manufacturing articles composed in part of caoutchouc, or other gums, susceptible of vulcanization, by heating or vulcanizing the same, when surrounded with and pressed upon, externally or internally by or moulded in pulverized soapstone, sand, plaster, or other similar granular, pulverized,

or porous matter, or in moulds of plaster or other porous substance, as described.

**SCREW BLANKS**—By Cullen Whipple (assignor to the New England Screw Company), of Providence, R. I. Patented in England Nov. 30, 1852: I am aware that in machines for shaving the heads of screw blanks, the shaving cutter, whether moving on a slide or a rocker, has been moved towards and from the blank, obliquely to the axis of the blank, and therefore I do not claim, broadly, the moving of such cutter obliquely; but I claim the method of shaving the heads of screw blanks, by causing the cutter to approach the blank obliquely, and in line or nearly so, with the under side of the head, whereby the use of a rest to support the blank against the pressure of the cutter is dispensed with, as set forth.

#### The London Exhibition.

It appears that much discontent exists with respect to the enormous demands that are made upon the parties who sent articles, for exhibition to the World's Fair in London from this country in 1851 for the expenses incurred in forwarding them, &c. A meeting of those interested in the subject was held on the 11th instant, in this city to express their sentiments respecting the conduct of Mr. Riddle the U. S. Commissioner on that occasion.

Mr. Bell, of West Farms, said that he was an exhibitor, and instead of sending by the national vessel, sent by a private vessel. He paid all the expenses himself, and saw his goods placed in the Exhibition. He received a medal for agricultural products, which was refused to be delivered by Mr. Dodge, till £2 2s. were paid.

Mr. William Wisdom, of the firm of Wisdom, Russell & Co., of Cleveland, stated that he sent a case to his private agents, and had paid all duties, bills, &c. After the Exhibition he was told by Mr. Dodge that there was a charge for custom in and out, &c., and he experienced great difficulty in getting back his goods.

Mr. M. M. Lawrence had paid \$40 before he could obtain his goods.

A. B. Allen & Co. had paid \$400 on \$1000 worth of goods.

Messrs. Roy & Co., of West Troy, stated that they had sent four plaid long shawls, worth in London five guineas each. They thought that they had paid all expenses, but after the exhibition Mr. Riddle advised them that he sold two of them to George Peabody for £1 2s. each: one he said, was stolen, and the other to be delivered on their order to a lady of their acquaintance, but who wrote that she was refused the shawl on presentation of said order. That a balance of £1 7 shillings was standing to the credit of the firm subject to their order.

Messrs. Mawson & Brothers had lost a fur victorine, boa, and gauntlets, &c.

It was stated that several gentlemen had to pay ten dollars to get their medals.

The Chairman stated that Mr. Riddle was notified of the meeting, and he thought he would be present.

The Secretary, Mr. Edward G. Tuckerman, presented a list in the hand writing of Mr. N. L. Dodge, of expenses actually paid on goods in London; and bills for the same expenses as demanded of the exhibitors here by Mr. Dodge, in each of which cases, over-charges to the amount of one or two dollars, had been made and generally collected (amounting in the aggregate to several thousand dollars). He further said that Mr. Dodge was an applicant for an important office where he would meet many Americans, and he pitied them if Mr. D. treated them as he did the 700 American Exhibitors in the Industrial Exhibition.

All the satisfaction, said he, that American Exhibitors could get, was that there was so much charged against their goods, and that they could pay it or let it alone.

The following preamble and resolution was offered and passed unanimously:

Whereas, There is reason to believe that wrong has been committed in the management of the affairs of the American Exhibitors at the Industrial Exhibition in London.

Resolved, That a committee be appointed to examine all vouchers for money demanded by Mr. Riddle, or Mr. N. S. Dodge, his secretary, and paid to them, and the justice of such charge, with instructions to report the same to the exhibitors.

In accordance with the above resolution, Messrs. Tuckerman, Thomas Bell, and M. M. Lawrence, were appointed said committee.

The following resolution was passed unanimously:

"Resolved, That the Secretary of this meeting be authorized to address a letter to the President of the United States, in relation to the supposed application of Nathaniel E. Dodge, of Massachusetts, for a foreign appointment. The American Exhibitors to the World's Industrial Exhibition have represented, believing that necessary proof will be furnished, that said Dodge, whilst Secretary and acting commissioner of the American Department, unworthily transacted the business for his countrymen, so far as the financial affairs were entrusted to him."

After other remarks by the gentlemen present, the meeting adjourned, subject to the call of the committee.

#### Colliery Explosions.

An awful catastrophe of the above-mentioned description occurred on the 23rd of last month, near Wigan, in England, by which forty or more individuals lost their lives. The spot where this dreadful accident took place is called the Arley Mine, and forms one of a cluster of eight coal pits, belonging to the Ince Hall Coal Company, extending over an area of about two miles. The explosion was fortunately confined to the Arley Mine, which is 414 yards deep, and ventilated, it is said, with every suitable regard to safety. At the time of the accident the hands employed had left off work, as it was their fortnightly pay day, and were congregated about the pit mouth waiting their turn to go up. From 140 to 150 men and boys are generally employed, and about 64 of the number had already gone up leaving a group of about 20 others at the bottom of the shaft, near the furnace by which it is ventilated, the remainder being distributed in various parts of the mine. At this time, a few minutes after 1 o'clock in the afternoon, the explosion took place, close to the furnace, and roused vent up the shaft, doing considerable damage to the masonry and brick work in its progress, and shaking even the furniture of two inns that were 300 yard distant from the scene of the accident. The force of the explosion was such that a quantity of material were carried up the whole altitude of the shaft and hurled into the Leeds and Liverpool canal, which passes close to the spot. By the next morning after, the last of the living, as it was supposed, was brought out, a workman who, at the time of the explosion, was in a distant part of the workings, about three-quarters of a mile from the pit mouth, and from this lucky circumstance he escaped the more severe effects of the explosion. The accident is attributed to gross negligence on the part of the workmen, as the Company allow only Davy's Safety Lamps to be used below, and these are always kept locked. How the accident took place will probably remain unknown, but the cause of these explosions is so well understood that the reckless indifference of some of the men engaged in coal pits is almost beyond comprehension. Notwithstanding the awful warnings that are continually given, this class of men are unceasingly exposing themselves and their fellow workmen to inevitable destruction, and the colliery explosions in England are only rivalled by the steamboat explosions in the United States. When will either of these dreadful contingencies of modern civilization be one of the matters of history, which we may read as having formerly occurred, instead of having our feelings continually harrowed by accounts of such destructive calamities, that can be obviated by proper attention, and are generally attributable to neglect and mismanagement?

#### A Moving Bog.

A curious instance of this natural phenomenon, took place on the 3d of March, on the lands of Enagh Monmore, in the west of the County Clare. A tract of bog, about a mile in circumference, was perceived to be deeply fissured, and shortly afterwards the whole mass commenced to move in an easterly direction, and continued in motion for twenty-four hours. In that period it accomplished a movement of about 80 perches to the east of its former position, and the result has been the exposure of a quantity of bog timber, which was previously covered with peat to the depth of fifteen feet. The cause of the land slip is supposed to have been an accumulation of water in a slough which occupied

the centre of the bog. It now covers a piece of ground from which the turf had been cut away.

#### Recent Foreign Inventions.

**WOOL AND SILK FROM OLD FABRICS**—L. F. Vandelin, of London, patentee. The object of this invention is to obtain wool, silk, and cotton from old fabrics, in such a condition as to admit of the same being again spun and used in the manufacture of other fabrics. This is done by passing old fabrics, while immersed in water, between a rotating cylinder, and a flat plate armed with teeth which tear the fabric to pieces and bring the fibres into a suitable state to be manufactured again into fabrics. It has hitherto been the custom to tear old fabrics to pieces for the same purpose, but only while in a dry state, it is stated that the fibres are more easily separated while in a wet state, and being constantly immersed in water, they are thoroughly cleaned at the same time.

**COMPOSITION FOR STRUCTURES AS A SUBSTITUTE FOR IRON**—Owen Williams of Stratford, England, patentee. This invention consists in the preparation of compositions to be used in the construction of railways, drains, sewers, cisterns, pavements, buildings, and other structures. Take 180 lbs. pitch, 4½ gallons of coal oil, 15 lbs., of brimstone, 18 lbs. of rosin, 45 lbs. of finely powdered lime, 108 lbs. of finely powdered gypsum, and 27 cubic feet of sand, or pieces of stone passed through a half inch sieve. The sulphur first melted in a boiler with about 30 lbs. of pitch; the rosin is next introduced and the mixture caused to boil; the remainder of the pitch is then added, and the mixture boiled up, after which the lime and gypsum are gradually introduced and the mixture made to boil. The operator then puts in the sand, gravel, &c., which must be perfectly dry and previously heated, and then the coal oil is added. The whole is constantly stirred and worked together till sufficiently heated, when it is placed in moulds and pressed into shape; when cold it is ready for use. A composition for floors is made as follows; 10 lbs., of pitch, 1 quart of coal oil, 2 oz., of rosin, 5 lbs., of gypsum, 5 lbs. of lime, 4 lbs., of sulphur, one-half cubic foot of sand, one-half cubic foot of gravel about the size of peas; these ingredients are treated in the same manner as those which form the preceding mixture. A composition used for joining pieces together, or for cementing blocks in a building, is composed of 40 lbs of tar, 4 quarts of coal oil, 4 lbs. of sulphur, 2 lbs. of rosin, 6 lbs. of tallow, and 10 lbs. of lime, boiled and treated in the manner previously described.

**IMPROVEMENTS IN WAX-CANDLE WICKS**—Thomas Mosdell Smith, of Hammersmith, England, patentee. This inventor states that the best material for manufacturing wicks is bleached coarse cotton yarn, slightly platted. It is found desirable to dip the wicks in a solution composed of 2 oz. of borax, 1 oz. of chlorate of potash, 1 oz. nitrate of potash, 1 oz. sal ammoniac, and 3 quarts of water. After the wicks are saturated in this for some time, they are dried and ready to be used for candles.

**CANDLE WICKS**—W. E. Cooper, of Mottram, Eng., patentee. This improvement consists in passing a portion of the strands of which the wick is intended to be composed through a solution made of bismuth and oil, or such other suitable solution as will have the effect of rendering the strand or strands so saturated more susceptible of combustion than the other remaining strands. The whole of the strands for a wick are then twisted together in the usual manner of twisting a cord. About one-third only of the strands used for a wick should be treated with the bismuth and oil. When the candle is lighted the prepared strand or strands will be presently exhausted, and so cause the wick to lean over on one side; the carbonized portion of the wick is thus given off imperceptibly, and the wick requires no snuffing.—[Condensed from Newton's London Journal, &c.]

A clipper built at St. Johns, New Foundland, named the "Star of the East," was recently sold in London for \$80,000. The colonial built ships seem to excel those built in England in point of speed.