



[Reported Officially for the Scientific American.]

### LIST OF PATENT CLAIMS Issued from the United States Patent Office. FOR THE WEEK ENDING MARCH 7, 1855.

**CLEANING SEAL HEMP AND STRIPPING SEED FROM BROOM CORN**—G. D. Allen, of Key West, Fla.: I claim the combination of the prongs, C, arranged substantially as described, with the spring levers, G, G, or their equivalents, constructed and operated substantially in the manner and for the purpose set forth.

**LIFE BOATS**—John Allen, of New York City: I claim, first, a life boat composed substantially as described, of a frame and a flexible covering, and provided with inlet and outlet pipes and valves, so that when the flexible covering is closed up perfectly watertight, the action of the waves on the said flexible covering and the tossing about of the boat on the water will keep up a constant pumping action, and thereby supply fresh air to and discharge vitiated air from the interior.

Second, I claim the construction of the frame, substantially as set forth, of the two tubes, A, A, and right and left handed screws, B, and the longitudinal ribs, b, b, all combined and operating as described.

[A description of this invention may be found on another page.]

**COOK STOVES**—J. J. Anderson, of Beaver, Penn.: I claim the construction of the ellipsoidal oven in stoves, as set forth, arranged in contact at the front with the horizontally corrugated fire back and detachable ash box.

**ARRANGEMENT OF THE SPRINGS ON WAGONS**—Harmon W. Ballard, of Burlington, Vt.: I do not claim a spring wagon having solid bearings, to take the weight of the load when it becomes too heavy for the springs to bear, as this has been accomplished before in other ways.

But I claim the arrangement of the springs, as described, on either or both sides of the rocker, bolster or axle-tree of a wagon, cart, or other vehicle, as and for the purposes specified.

**GUARDS FOR DOOR LOCKS**—William Ballauf & Frederick Wirth, of Cincinnati, Ohio: We claim, first, the bit or case, c, and the bracket, k, adapted to the slot of an ordinary key hole, in combination with the cylindrical socket, b, and tapering screw threaded spindle, a, substantially as set forth, adapted to the key hole, and which spindle, by means of a suitable key, l, as described, can be screwed within or unscrewed from the key hole, the rotation of the screw, by any other than the proper key, being prevented by the described tumblers, d, or their equivalents.

Second, the sliding and vibrating tumbler or tumblers, d, provided with a locking dent or lug, 5, catching within a notch, 4, in the spindle shank, and disengaged therefrom by the combined agencies of the chamfeled and sliding key, l, elevating pin or piston, i, longitudinal and T-slots, 6, 7, and stationary pins, g, h, substantially as described, the tumbler on the withdrawal of the key re-locking by means of suitable spring.

Third, in combination with tumblers, substantially as represented, the longitudinal notches, 4, extending on both sides of a transverse or eccentric channel, 10, around the spindle shank.

Fourth, the eccentric and parallel channels, 9, 10, around the spindle shank and key stem; acting simultaneously upon both dent and spur of each tumbler, after the manner and for the purposes set forth.

Fifth, the tapering screw threaded and spirally scored spindle in this connection.

**SAFE CATCH FOR BREAST PINS, &c.**—E. C. Benyard, of Philadelphia, Pa.: I do not claim the application of a safe catch generally, for the purpose of holding the point end of the pin of a piece of jewelry.

But I claim the application and use of a safe catch constructed substantially as described, for the purpose of holding safely and securely the point end of the pin of breast-pins, cuff pins, chateleines, or any other piece of jewelry requiring a catch and pin.

**HAND CULTIVATORS**—Nehemiah B. Chase & C. W. Saunders, of Wilkesonville, Mass.: We are aware that a hand cultivator carried on wheels has been constructed with shafts not guarded at the points, and having both a rotary and a lateral adjustability, therefore we do not claim these features.

But we claim the arrangement of the knives, A, A, upon the frame, so as to be adjustable in an oblique direction, and also reversible, as set forth.

**PROCESSES FOR MAKING BREAD**—Charles Crum, of Hudson, N. Y.: I claim the suffering the dough to pass into the acetous state, then reviving it, by the working and breaking into it fresh dry unfermented flour and the subsequent process of cutting, piercing, raising in the open air, and baking in an open oven or an oven freely ventilated, and I claim this invention in its application to wheat flour or any other flour of which bread is made.

**TREATING FISH FOR MANURE AND OIL**—Rene C. Demoleon and G. A. C. Thunroeyssen, of Paris, France. Patented in France, Jan. 13, 1851. We claim the reduction of fish or the remains of fish to a dry powder for manure and other purposes, substantially as specified.

**HARNES SADDLE TREES**—Julius C. Dickey, of Saratoga Springs, N. C.: I do not claim the prolongation of the nut, c, for the purpose of enabling me to place the turrets higher upon the yoke where they properly belong, and to prevent the reins passing through them, from being too much spread at that point, as they would be if the turrets were placed at the joint which is limited in its position, substantially as set forth.

**MACHINE FOR CUTTING MITER AND OTHER JOINTS**—F. A. Gleason, of Rome, N. Y.: I claim, first, the rotary dovetail groove, as described, or its equivalent.

Second, I claim the miter saw, F, with the clearing knife, b, fixed upon the same chuck and concentric with the groove; also the manner of fastening the saws, as described.

Third, I claim the tongue stock with its saw and bevel cutter or their equivalents: also the manner of attaching it to the head stock.

Fourth, I claim the carriage with its movable bed, which may be adjusted to any angle required.

**DOUBLE ACTING HYDRAULIC STEAM PUMP**—R. B. Gorsuch, of New York City: I claim effecting a water pressure upon the suction end of the pump plunger, M, in direct acting steam pumps, at or near the completion of the stroke, without diminishing the resistance against the forcing end of the plunger, in the manner, as shown, or an equivalent way, for the purpose of closing the suction valve, a, filling the vacuum space in the pump chamber preparing the force valves for opening and acting conjointly with the steam pressure upon the piston, B, whereby the steam valve, D, is operated with precision whatever may be its velocity.

[A description of this pump may be found in No. 13, present Vol. Sci. Am.]

**AUGER HANDLE FASTENING**—G. H. Hubbard, of Shelburne Falls, Mass.: I do not claim the ferrule, B, which has been previously employed.

But I claim the ring, C, constructed, arranged and operating in the manner and for the purpose set forth, or other manner substantially the same.

**SODA WATER APPARATUS**—M. F. Hyde, of Burlington, N. J.: I claim the porous distributor or its equivalent, arranged and operating as described.

**COAL SCREEN**—George Martz, of Pottsville, Pa.: I claim the improvement in coal screens, by which the coarsest coal is separated from the finer sorts and discharged at the mouth of the screen, whilst the finer sorts of coal are carried forward and separated the one from the other in the usual manner.

**MILL FOR GRINDING AND BOLTING SUMAC**—S. W. Powell, of Tuscarora Valley, Pa.: I claim the slotted hollow cylinder having a shaft armed with spirally arranged teeth revolving within it, constructed and arranged in the manner and for the purpose set forth, and disclaiming all other parts not claimed.

**STEERING APPARATUS**—Jesse Reed, of Marshfield, Mass.: I claim combining with the divided end the adjustable guide and guard rails, substantially in the manner and for the purpose set forth.

I also claim the supporting of the pedestals upon the stanchions by means of long pins or studs passing through oblong slots in the pedestals, and into said stanchions, for the purpose of allowing the pedestals and several parts connected therewith to move fore or aft, up or down to accommodate themselves to any rising or falling, or springing, or bending of the rudder post, substantially as described.

**COMBINATION OF AN AIR CHAMBER, WATER COOLER, AND FORCE PUMP IN SODA FOUNTAINS**—N. D. Robins, of Edinburgh, Ind.: I do not claim the water cooler, the air chamber, the force pump, the connecting pipes, nor the making of soda water with chemicals under atmospheric pressure.

But I claim the apparatus, as constructed, of a combination of a water cooler, A, an air chamber, C, C, placed within A', A', and force pump, B, B, and made to operate substantially as specified.

**RAILROAD CAR COUPLING**—Edward Rice, of Canandaigua, N. Y.: I claim the arrangement of the movable guiding mouth, D, the catches, G, G, the inclined planes, F, F, the embracing band, H, and the lever, E, with each other and with the draught bar, A, in such a manner that the coupling bar, B, will be self-caught and retained when brought in contact with said parts, and by which it can also be readily liberated when the cars are in motion, substantially as set forth.

In combination with the spring catches, G, G, and the movable mouth, D, of the coupling apparatus, I also claim the movable heads, C, C, of the coupling bar arranged substantially in the manner and for the purpose set forth.

**FIRE PLACE**—John W. Smith & John S. Gallaher, Jr., of Washington, D. C.: Having described the construction, nature, and principles of our improved economical fire place, we claim the adjustable perforated blower pipe with perforated collar, as described, arranged with the detachable fire place; the latter having perforated throat and double funnel ventilator; together with the valves, diaphragms, partitions, smoke conduit pipes, as constructed and arranged with the recess casings, fuming, air chambers and gas receiving apartments, substantially as described, and for the purpose set forth.

**MACHINES FOR MAKING CANDLES**—John Stainthorp, of Buffalo, N. Y.: I claim, first, the employment of the piston, D, D, formed at their upper ends into molds for the tips of candles, in combination with stationary candle molds, to throw out the candles in a vertical direction, substantially as set forth.

I do not claim these of clasps, separately considered; but I claim, secondly, the combination of the rack, tip bar, and clasps, constructed and arranged substantially as described and for the purposes specified.

**CONSTRUCTING SAW PLATES, AND SETTING TEETH THEREIN**—Linus Stewart, of Washington, D. C.: I claim the improved mode of constructing saw plate, and fastening of the bits therein, as described, that is, the bits shall be so made and arranged with projections on each side equal to the set of the saw and fastening them with a key or other known modes of securing the same.

**MACHINES FOR STUFFING HORSE COLLARS**—W. L. Whitaker, of Cumberland, Md.: I am aware that a hinged rack inside of a hopper has been used, which the inventor states can be moved up or down to change the quantity which the stuffing rods are to carry into the collar. It is not clear how it was done, but it differs from my plan, which keeps a regular and unvarying quantity at the spot which the rods pass through. It is deemed new, therefore, in its special application.

I am also aware that a collar has been stretched while it was being filled from one end only. This is not any part of my invention, because the same difficulty arises as to its susceptibility of having the straw lapped.

I claim, in combination with the hoppers, the weighted racks for bringing down a regulated quantity of straw to take the place of that carried into the collar by the stuffing rods, as set forth.

I also claim stuffing the collar simultaneously from both ends by means of stuffing rods, which travel past each other at the center of the collar, by which means the straw is evenly lapped at the center as at the ends, substantially as described.

**ARRANGEMENT OF EXHAUST PIPES IN LOCOMOTIVE ENGINES**—John Williams, of Dunkirk, N. Y.: I claim surrounding the exhaust pipes, e, e, with cylinders, a and d, the outer one connected by wings, b, b, with the sides of the smoke arch, for the purpose of economizing fuel and power of the engine, as well as equalizing the draft through the lower flues of the boiler, substantially as set forth.

**EXTRACTING STUMPS**—W. W. Willis, of Orange, Mass.: I do not propose to utilize the power of the engine, or any two of them perform the functions for which, after much thought and many experiments, I discovered that all three acting in connection, were indispensable.

I claim the combination of the draft hook, R, shears, H, and pulley, N, substantially in the manner and for the purpose set forth.

**ARRANGEMENT OF DESKS IN SCHOOL ROOMS**—Virgil Woodcock, of Swaney, N. H.: I claim the diagonal arrangement of the seats and desks, as described.

[An engraving of this invention will embellish our columns next week.]

**APPARATUS FOR PURIFYING ILLUMINATING GAS**—D. H. Chamberlain, of West Roxbury, Mass. (assignor to Henry Woodward, of Boston, Mass.): I do not claim a gas purifying apparatus composed of a closed cistern, provided with ingress and egress pipes, and an annular float having an inverted concentric groove or chamber and numerous passages leading therefrom, whereby the gas suffered to flow into said chamber, while the float is resting on a purifying liquid, is caused to raise the float so as to escape from its chamber, and pass over the surface of the liquid in numerous streams, the float having no rotary movement, whereby it is caused to stir and agitate the cleansing liquid.

But I claim an improved gas purifying apparatus arranged within the closed cistern, and made to distribute gas in contact with the liquid therein, and to be put in rotation by the gas, so as to stir up and agitate the said liquid, as specified, the said apparatus consisting of a wooden or other proper float, E, and a separate gas receiving and discharging apparatus, composed of the disk, F, the tube, L, and its receiving and discharging scroll or the equivalent thereof, such a mode of constructing the agitator having important advantages over a simple float having an annular chamber formed within it, and made while resting on a purifying liquid to receive gas, and to be raised by it, and so as to permit it to escape in numerous thin streams and over in contact with the liquid.

**GRAIN AND GRASS HARVESTERS**—John H. Manny, of Rockford, Ill., and Henry Marcellus, of Amsterdam, N. Y.: We claim supporting the stalks of grass or grain to be cut by means of rods or wires on one side of the sickle, while they are supported on the opposite side by means of the edges of the fingers in the usual way, substantially as set forth.

We also claim the construction of the shanks or rear part of the fingers, in such form that the shanks will pass or overlap each other and mutually support each other and stiffen the finger bar, substantially as set forth.

We also claim the manner described of connecting the rods to the fingers and to the outer bar, and of adjusting them so as to support and brace the point of the finger with such degree of force as may be required, substantially as set forth.

RE-ISSUE.

**GRAIN AND GRASS HARVESTERS**—John H. Manny, of Rockford, Ill. Patented Oct. 17, 1854; ante-dated June 15, 1851: I claim making the outside or dividing finger hollow, so that while it affords sufficient room for the play of the end of the sickle, the bearing of the latter therein will not be so long as to afford a lodgment of grain and grass, &c., in sufficient quantity to clog it.

**GRAIN AND GRASS HARVESTERS**—John H. Manny, of Rockford, Ill. Patented Oct. 17, 1854; ante-dated June 15, 1851: I claim the combination of the reel for gathering the grain to the cutting apparatus, and depositing it on the platform, with the stand or position for the forker, arranged and located as described, or the equivalent thereof, to enable the forker to fork the grain from the platform and deliver and lay it on the ground at the rear of the machine, as described.

**GRAIN AND GRASS HARVESTERS**—John H. Manny, of Rockford, Ill. Patented Oct. 17, 1854; ante-dated June 15, 1851: I claim the combination of the fence to compress the grain against, at the outer end of the machine, and guide it while sliding off the platform, and the position, stand, or seat for the forker at the inner end of the platform with the platform, substantially as set forth.

129 iron steamships were launched in the Clyde in 1854.

### The Age of the World.

MESSRS. EDITORS—Judging from remarks of your own appended to articles upon the "Age of the World," which have appeared in late numbers of your paper, you favor the *biblio-geological* view as to that age, namely, the view that the six days of creation spoken of in the first chapter of Genesis, may mean the six million ages (or the six indefinite periods, however long) indicated by geology as the time taken to complete that creation. Let us look into rather than merely glance at the account of those six days.—

"In the beginning God created the heavens and the earth. And darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.— And God said, Let there be light; and there was light. And God divided the light from the darkness. And God called the light Day [then, as now, the time during which the light of the sun was upon one hemisphere of the earth,] and the darkness he called Night [then, as now, the time of the absence of the sun's light from the same hemisphere]. And the evening and the morning was the first day"—that is, from the commencement of the first "Night," which commencement was "in the beginning," to the expiration of the first "Day," which was the close of the first period of sunlight upon the earth, was one day—one revolution of the earth upon her axis. You say: "no, such is not a proper rendering of the passages. The 'Day' spoken of could not have meant one period of sunlight upon one half of the earth; because the sun was not created until after the close of the third "evening and morning." Well, supposing it admitted that your objection is valid, then it devolves upon you to explain in what, exactly, the process of dividing the light from the darkness before the sun was formed, differed from the same process after the sun's formation; also to give the precise meaning of the *evenings and mornings* before and after such formation. Will you do your readers the favor of answering the requirement.

G. M. EVERETT.

Phillips, Me., Feb. 26th, 1855.

"It does not devolve upon us to explain [the process of dividing the light from the darkness," but upon those who assert that the first day named in Genesis was one of our ordinary solar days, and yet assert that the sun was not created for some days afterwards. Our correspondent mistakes our views if he supposes that we have imbibed positive opinions respecting the geological dispute relating to the great age of the world, as being in harmony with or opposed to the common belief respecting the Genesis account of the six days of creation. We have signed the *statu quo* for the present, waiting for more scientific light; and it does not devolve upon us at any time to prove a negative. We said, that Mr. Mean's argument against the solar day theory, for the first two days of creation, was incontrovertible. We speak for ourselves, because we cannot gainsay it. We all know so little about the ways of the Infinite Creator in making our world, that it becomes us to be very modest.

Hugh Miller, who is an advocate of the interpretation of the days mentioned in Genesis being great periods of time, advances scientific facts, as proof of this, against which we have nothing to set up, nor have we seen anything to meet them. Thus, the present coast line in Scotland has not changed since A. D. 140 (this is positive,) and that, since this is so, the "old coast line" must have existed about four thousand years, thus exhausting the common Hebrew chronology. "And yet," he says, "what a mere beginning of geologic history does the epoch of the old coast line form. Not a single shell seems to have become extinct during the last six thousand five hundred years. The shells which lie embedded in the subsoils beneath the old coast line, are exactly those which live in our seas."

He tells us that he has found shells above this old coast line on heights varying from two to nearly fourteen hundred feet, and these not shells like those of Britain, but the

same as those found now on the shores of Iceland. Some of these he found six miles from the sea, on the tops of dizzy crags. He thinks that owing to some change in the Gulf Stream, nearly all Britain was once submerged in a sub-arctic ocean, and that it existed as a scattered archipelago of wintry islands. And yet there are evidences that, at a remoter period still, Britain was above the water, existing as a larger country, and enjoying a tropical climate. Then the elephant, the rhinoceros, the hippopotamus, the hyena, and the tiger infested the British jungles. In the course of thirteen years, two thousand elephants' grinders and tusks have been gathered from the sea bottom of the Norfolk coast. These elephants must have belonged to a number of generations, and roamed over a vast area. Those great changes which have taken place at various periods in the history of our globe, have left behind them such testimony of its great age (reasoning from a certain unit of history, the present coast line,) that we cannot find a single argument nor fact to combat them with.

### Ether and Steam.

*La France*, a large French steamship, has been fitted up with M. de Trembley's combined ether and steam engines. In a voyage from Marseilles to the Black Sea, it made nine knots per hour, but with what economy of fuel we have not been able to learn. As described on page 405, Vol. 8 SCIENTIFIC AMERICAN, the exhaust steam is employed to heat ether in a separate vessel into vapor, which is admitted to work a piston in a duplicate cylinder, [like a Wolfe engine,] where it is afterwards condensed by surface contact, and the same ether used over and over again. It is expected, and has been asserted, that such a combination must effect a great saving in fuel. We cannot see how this can be, and we believe it will so turn out. The boiling point of ether is no doubt very low—96°—but its vapor is dense in proportion to the difference of its latent heat to that of water, hence we cannot see how it can be more economical than steam alone. With all the care exercised, it has been found impossible to prevent the escape of the ether vapor, which makes its use both dangerous and disagreeable.

### Obituary.

Robert Mills, Civil Engineer, died at his residence, Capitol Hill, Washington City, on the 5th inst. He was a native of Charleston, S. C., but had resided for a number of years in Washington, and was the planner and superintendent of a number of the public works of that city. He possessed many sterling qualities, and was beloved by a large circle of acquaintances. He possessed a very original mind, and was distinguished for his practical abilities and mechanical genius. He was a frequent correspondent to the SCIENTIFIC AMERICAN, and on page 369 is an illustrated view of a very original plan proposed by him for the Pacific railroad. He was architect of the National Monument, and the designer of other public edifices. It is reported that he was ill treated by the "Red-tapists" at Washington, with respect to some of his designs, and this so affected his mind, as to have been the cause of his death. *Memento Mori.*

### Railways in Virginia.

The yearly railway list of the *American Railway Times* gives 21,310 miles completed in the United States, and 16,975 in course of construction. Of this sum, 837 miles of finished road are assigned to Virginia. Our usually correct cotemporary is here mistaken. It could hardly be expected indeed to bring up the figures of so many lines, in constant course of extension, to a fixed day with absolute precision. According to our reckoning, Virginia had in operation, on the 1st of January, 1855, one thousand and thirteen miles of railway, not including the Baltimore and Ohio road in this State; besides some eight hundred under contract. [Winchester Virginian.]