



Reported Officially for the Scientific American

### LIST OF PATENT CLAIMS

Issued from the United States Patent Office  
FOR THE WEEK ENDING JANUARY 11, 1853.

**RAKES TO HARVESTERS**—By T. Baylis & Daniel Williams, of Tecumseh, Mich.: We claim the construction and method of operating the rake, together with the use of the jointed brake, in facilitating the discharge of the sheaf at the rear of the machine, as set forth.

**LATHES FOR INTERIOR AND EXTERIOR SURFACES**—By Nathan Chapin, of New York City: I claim constructing the clampingheads with a V projection on the interior face, in combination with the orifices to act through said clamps and V projection, for the purpose of introducing key slats, in order to retain the piece firmly in position, during the operation of turning the interior and exterior surfaces.

Second, I claim giving to the sliding and vibrating interior cutter, suspended on the stationary mandrel motion, corresponding to the pattern to be turned, by a rod passing through the stationary mandrel, as described.

**GALVANIC BATTERIES**—By Moses G. Farmer, of Salem, Mass.: I claim the improved cell, made as described, viz.: with a part only of it porous, or so as to permit the electricity to pass from the nitric acid or liquid within it through such part, and into the liquid surrounding the cell, the remainder of the cell being made by glazing or other means, impervious to the passage of electricity, and acid or liquid through it, as specified.

**SOYTHE FASTENINGS**—By P. Frost, of Springfield, Vt.: I claim the peculiar construction of the loop and the set ring, with the grooves, in the manner set forth.

**CIRCULAR SAWS**—By Ammi M. George, of Nishua, N. H.: I claim in combination with a circular saw, driven by friction, near its periphery, the guard plate with its arbor, around which the saw runs, and by which it is held into the wood, and on which the board or veneer, being sawed, may rest and relieve the saw from all friction therefrom, and by which means I am enabled to cut boards or veneers, of nearly equal width with the diameter of the saw, as described.

**FIRE POLISHING GLASS**—By J. L. Gilliland, of Brooklyn, N. Y.: I claim the method substantially as described, of fire-polishing glass by means of a rotating table, provided with a hollow handle, or its equivalent and gear, by which said table can be rotated as described.

**BUCKLES**—By Peter P. R. Hayden, of New York City: I claim constructing the buckle in the manner described, viz.: by uniting or connecting the two ends of the body of the buckle, by means of a boss formed at each of the two ends of the body, said bosses being in contact with each other, and forming a bulb, around which one end of the tongue is clasped, the end of the tongue, which surrounds the bulb, having a recess or groove in its inner surface, which conforms to the convexity of the bulb, and keeps or binds the bosses firmly together, and also keeps the tongue in its proper place.

**MANURE SPREADERS**—By Silas A. Hedges, of Lancaster, Ohio: I claim constructing a manure cart with two bodies, the front one of which is raised or tilted, for the discharge of manure into the rear one, by the action of the hind axle, by means of another axle and tackle, when thrown into gear by the hand lever, arranged as set forth.

I also particularly claim the combination of the endless apron, the tilting body, and raising the tail-board simultaneously with throwing in gear the endless slotted apron, as set forth.

**COPYING PAPER**—By Wm. Mann, of Philadelphia, Pa. Ante-dated July 11, 1852: I claim the copying paper described, composed of Manila fibre, or the equivalent thereof, tempered with cotton or its equivalent, as set forth.

**SREW CUTTING DIES**—By Andrew Mayer, of Philadelphia, Pa.: I claim arranging solid dies between the side plates, or their equivalents of a stock, in such manner that they are free to play, to a limited distance, in a plane perpendicular to the axis of the bolt or pipe, to be screwed, while they are, at the same time, incapable of revolution in the same plane, as described.

**STEAM BOILERS**—By Rich'd Montgomery, of New York City: I claim rivetting together the overlapping flanges of the opposite sides of the sheet flues in steam boilers in the manner described, whereby the flues are firmly attached each to each, and the usual flue sheet is dispensed with; and also certain advantages in construction attained in other parts of the boiler, as described.

Also the method of connecting a series of flues and water spaces with the roof or arch of the fire box, by means of tongues which project from the latter, and are secured, alternately, to the faces of the water spaces and to the tops of the flues.

**SMUT MACHINES**—By Dan Pease, Jr., of Floyd, N. Y.: I claim the employment of the adjustable deflector set at an angle to throw the grain in different directions, in combination with the receiver, the top of the said receiver being adjustable to any height desired, and the front piece of the same being set in such a position, in relation to the deflector that it will, when the grain strikes the deflector, be thrown against the said plane surface, which, from its peculiar position, will throw the grain in a partially spread state, up against the adjustable top, which causes it to spread still more, and then to fall down on the ribbed bottom, and pass off through the wind pipe.

Also, causing the grain to spread to a greater or less degree, by making the top of the receiver adjustable to different heights, as described.

#### Improved Mode of Making Brick.

A new machine for the manufacture of bricks by the application of Dick's powerful press, is being constructed under the direction of J. E. Holmes, at Hadley Fall, for a gentleman of Taunton, Mass. By this machine above 50,000 bricks can be made per day,

with a pressure of 1,400 tons, exerted on every six bricks. A full description of this new building material, as it may be properly designated, and of the apparatus by which it is made, will be given by us in the course of a few months.

#### Patent Office Report.

As noticed by us last week, we will quote some of the remarks of Ex-Commissioner Etwbank, in a letter to the Secretary of the Interior. He says, "If systematic endeavors to overawe and overrule the Commissioner be not frowned down, they will, in time, effect the integrity of the Patent Office, and will make it a source of injustice to the public, and of grievous wrong to real inventors. Its judicial character requires that it be cordially sustained, and zealously protected from improper influences."

"If the Commissioner and chief officers are not competent to perform, or are not faithful to discharge their duties, they should be removed; but if they are able and honest, they ought not to be harrassed with calls to answer complaints preferred to the Department of the Interior, and often to the President, by disappointed applicants and their friends, nor is there the slightest grounds for coercion, since, if the Office improperly refuse a patent, the law has provided a Court of Appeal, in which its decisions can be revised and reversed."

We say that the system of appealing is unjust, inasmuch as all the expense comes upon the appellant, or inventor, and none upon the Patent Office; yea, and even when successful, the appellant has to pay the appeal fee to the Patent Office—to the parties for making a wrong decision, that is beautiful justice. We don't like the wheel-within-wheel system of coercion as spoken of here. This government frowning, and lick-spittle interference with the Patent Office is anti-republican in essence and spirit.

**ADDITIONAL ROOM REQUIRED**—It will be recollected by our readers that the present Secretary of the Interior, attempted to get a Bill passed through Congress granting him, for his Department, the use of the new wing of the Patent Office. It was said by him that there was plenty of room both for the Patent Office and his also. We took strong grounds against his Bill, and pointed out the incorrectness of its general statements. The "National Intelligencer" (not the "Republic," as mentioned by us last week), came out in defence of the application of the Secretary of the Interior, and tried to defend it as being in accordance with law. We exposed the fallacy of such reasoning; but the principle—that which we now wish to make plain—was the request of the Secretary of the Interior for the wing of the Patent Office, coupled with the assertion that there was plenty of room for his department and the Patent Office business also. This Report of the Commissioner says,—"they are so embarrassed for want of room that, for twelve months, the mails have been made up in an open passage,—where the correspondence and daily cash remittances are unavoidably exposed—if more room is not soon provided, it will prove a positive interruption to the business of the Office; such an exhibition of the models as was contemplated by the law of 1836, is not only impossible, but it is scarcely practicable to protect the delicate models from destruction. The condition of these models is a great injustice to their authors, and to inventors and patentees generally, since the rooms and cases prepared expressly for them at the expense of the Patent Fund, have now been withheld from the Office for a period of ten years."

The whole force of the Patent Office also united—and their letter is published in this Report—in urging the providing of more room for their business. Their report states—"the patented models now in the Office are so crowded that the provision of the law with respect to the exhibition of them, cannot be complied with, and the rejected models are in a worse condition. Three times the present space is wanted for the Library, and double for the Draughtsmen's Room. The copying clerks are now crowded into the rooms of other officers. Rooms are required for workshops, caveats, models, and pending models." How does this accord with the demand for

the new wing of the Patent Office for the offices of the Department of the Interior? Our inventors and patentees have been deeply wronged, already, in appropriating for other uses the Exhibition Room for Models,—it is now the National Museum, which should have a building exclusively for itself. There are now 20,000 models in the Patent Office, and in ten years it is supposed their number will be 40,000,—as they are increasing at the rate of 2,000 per annum. The value of the 20,000 models, we presume, cannot be less than \$1,000,000; but what of that? They only relate to the progress of invention (that which has made our country great), and as they do not relate to party politics, why, let 6,000 rot in the cellars. It is a great mistake to suppose that the treatment of inventors does not influence politics; we know to the contrary, but some leading politicians have not the gumption to perceive this.

In 1851, 2258 applications were made for patents; out of this number 760 were granted, thus making the rejections to be 1491, nearly two to one. The hasty rejection of some applications causes more trouble to the Office than it otherwise would; and many applications for patents have been rejected which should not have been. The surplus of the Office Fund for the year amounted to \$8,881 68, over all expenditures; our inventors pay all their own taxes in connection with patents, yet they have been often treated as if they were paupers. We hope that better days are in store for them; we feel amply repaid for what we said about appropriating the Patent Office to the service of the Department of the Interior, by the prevention of such an outrage upon inventors' rights.

#### Effect of the Earth's Rotation on Locomotion.

Until this week we did not see a short article published in a monthly magazine in this city a month ago, by one signing himself W. B. S., of Boston, wherein he states "the Editor of the Scientific American misunderstood Mr. Clark's meaning about the effects of the earth's rotation on locomotion." He, it seems, understands Mr. Clark's meaning to a diamond shaving, and here it is. He says, "If the engine is running north from one place to another at which the rotative velocity is less, the engine will have a greater rotative velocity than the portions of the track with which it comes in contact, and will therefore exert a slight but imperceptible force against the easterly or right hand rail. On the return of the engine the rotative velocity of the track will be greater than that of the engine, hence the engine will now press the westerly or right hand rail, with a force equal to the difference between the rotative velocity of the track and that of the engine." This explanation is certainly made in accordance with that rule, which works both ways, an exceedingly convenient one for superficial reasoners. By this logic, when the locomotive is running to the north and parting at every point of its journey with increments of rotative force, the said engine climbs the right hand rail in the direction of the earth's rotation, but when the locomotive is coming back on the same road, and is receiving increments of rotative force at every advancing point (in the same direction as before,) it climbs the opposite rail. That is, the effect of the earth's rotation on a locomotive causes it to climb the rail to one side while travelling in one direction, and the opposite rail when travelling in the contrary direction. We confess that this is not an exhibition of the effect of the earth's rotation on locomotion, but the effect of locomotion on the earth's rotation.—The earth keeps rotating in the same direction, but this critic, who understands Mr. Clark's meaning so well, makes his locomotive act with and against the earth's rotation, just by moving backwards and forwards.

#### New Locomotive.

A locomotive of a new description has been lately patented by Messrs. Remsen & Hutton of Troy, N. Y., a working model of which is now on exhibition at No. 6 Wall street. An account of this invention was given some time back, in the Scientific American, as will be seen by referring to page 260, Vol. 7, under the head of New Inventions. The theory propounded by the patentees is, that

the steam is more effectually employed in moving the crank during what is often termed the upper part of its revolution, than when it assumes the position below the horizontal. Or, in other words, they employ the power transmitted from the piston to pull the crank, but not to push it, so that the movement of each piston is effectual only when travelling in the same direction as the train. To attain this end, the patentees employ the single action principle, admitting the steam to only one end of the piston. Of course either can be used, as it is necessary at times to reverse the engine, but, as a rule, the steam is admitted only above the piston, which they consider to realize a greater percentage of the power. Three cylinders are employed, one for each driving-wheel, and a third, which is situated between the other two acts on the axle, an arrangement that is, in reality, equivalent to a three-throw crank, the nature of which is well understood by all locomotive engineers.

#### The Scientific American—Prizes to Apprentices.

**Messrs. Munn & Co.**—It has often made me sad to see so many of our apprentice boys idle away their useful moments while out of shop. If a young man wishes to be master of his business, he must be attentive to store his mind with useful information, derived from reading, good conversation, and experiment. But our young men from eighteen to twenty one years (I admit there are some noble exceptions—I speak of the mass,) spend their spare moments in enjoying themselves—as it is called, among silly people—or in reading trifling books, or nonsensical love stories.—This age in a man's life has a potent influence according to the way it is improved or mis-improved, on his future welfare, his value to himself, his relatives, and country. A young man who completes his apprenticeship carrying with him a character of excellence for industry, honesty, and skill, is worth his weight in gold to himself, friends, and country.

With the favor of the Scientific American, I say unto you—young men of our glorious land, make up your minds, take your stand with a firm determination to spend your spare moments in useful reading, reflection, good conversation, writing, draughting, &c., and to work faithfully and honestly during working hours, so as to become competent, skilful, and intelligent workmen. Our manufacturers are calling loud for master mechanics, but qualified men are not easily found. Young mechanics think of this; the innocent amusements are yours, they do good; but do not neglect to improve the moments by wasting them in trifling pleasures.

E. H., of Pa.

N. B. I hereby send for five copies of the Scientific American, which I will present to apprentices in our coach factory, believing they will be to them of great benefit.

#### Foreign Patent Laws.

The recent change in the English Cabinet will undoubtedly effect a complete change in the officers having charge of the patent department, and the public may expect a more liberal and enlightened construction of the Patent Law Amendment Act, and that odious feature which excludes inventors from the colonies recinded—which it will undoubtedly be. Inventors and manufacturers having patent business to transact in any foreign country, are invited to counsel with the proprietors of this paper, as they possess superior facilities for securing patents. All communications confidentially treated.

#### The New Steamboat Law.

This law, passed by last Congress, and which was to go into effect on the 1st inst., has been taken up in Congress again, and by a joint resolution of the Senate and the House of Representatives, the inspectors are allowed, in certain cases, to excuse steamboat owners or non-compliance with the law, for ninety days after the date (1st Jan., 1853) when the law should have gone into effect. Some of its provisions require altering as well as delay.

#### New Railroad.

Measures are being instituted for the immediate construction of a railroad between Portsmouth and Dover, N. H.