



Reported expressly for the Scientific American, from the Patent Office Records.

LIST OF PATENT CLAIMS
Issued from the United States Patent Office.

FOR THE WEEK ENDING NOVEMBER 13, 1850.

To Thos. Antisell, of New York, N. Y., for improved Filter for Oils.

I claim the use of a filter, formed as described, carried downwards by pressure, under the force of which the oleic acid is filtered upwards, and which applied in connection with the arrangement described for applying cold, allows oils and fats to be purified in warm weather.

To Charles Atwood & George Kellogg, of Birmingham, Conn., machine for making Jack Chains.

We claim the combination of the parts, movements and operations of one machine, which are required to make jack chains by one process, from the straight wire, after it is cut off in suitable lengths to finished chain, substantially as described.

We also claim, particularly, the stud-pin, with a recess in it, substantially as herein described; that is, the use of it as a mandrel around which the bow of a link is bent, while the bow of another link is held in the recess, thereby forming a continuous chain, and irrespective of the mechanical devices by which it is moved or used.

We also claim the partly revolving mandrel with its stud and nipper and other appendages for binding the last bow of each link, substantially as combined and used in our machine, and constituting part of it.

To C. S. Bulkley, of Macon, Ga. for improvement in Repeaters for Electro Magnetic Telegraphs.

I claim the manner of connecting two galvanic circuits with the two electro-magnets in the said repeater, substantially as herein represented and described: to wit, each of the said galvanic circuits, as it passes through my telegraphic repeater, embracing in its course the armature of the opposite electro magnet in the said instrument previous to its passing through the helices in the electro magnet, embraced in its own respective circuit.

In combination with the above, I also claim the connecting the points with the galvanic battery or batteries, when the said points are placed in such positions in relation to the armatures of the electro-magnets in my said telegraphic reporter, and that when either one of the said electro-magnets is charged it will, by attaching its armature against one of the points, close the poles of the galvanic circuit, in which the opposite electro-magnet (in the instrument) is in connection, and thereby throw the battery into the said circuit, substantially as herein set forth.

To Samuel Cannon, of New Richmond, Pa., for improvement in Seed Planters.

I claim the attachment of my vertical cylinders to the rear of my plow or cultivator, (without regard to any particular plow) in combination with its machinery, arranged substantially in the manner and for the purposes herein set forth.

To S. S. Green, of Lowell, Mass., for improvement in Horse-shoe machinery.

I claim the combination of the two flanges rotating, disarranged with respect to each other, and operating substantially as herein described, said dies being so shaped as to give the requisite form to the metallic shoes of animals.

To Aquilla Jones, of New York, N. Y., for improvement in Drying Paints.

What I claim is the method of giving a drying quality to oils by the use of a mineral commonly known as the "red oxide of zinc," in a partially de-oxydised state, and either in combination with those substances naturally associated with it, or by the use of any of its component parts, separated by mechanical means.

To John Krauser, Sommers Crowell & Cyrus Krau-

ser, of Reading, Pa., for improvement in Iron Railings.

We claim the combination of the rods, tubes and palings, with the manner of operating the same, as herein described.

To Samuel Pierce, of Troy, N. Y., for improvement in Cooking Stoves.

I claim the method of heating the front end of the extended part of the oven in combination with and receiving the heated air in from the hot air chamber, behind the fire back, and causing it to pass through the oven and out into the fire flues, in the manner substantially as described, and for the double purpose of heating the front end of the oven and passing a current of heated air through the oven, substantially as specified.

To Allen B. Wilson, of Pittsfield, Mass., for improvements in Sewing Machines.

I claim forming the stitch by each throw of the shuttle, and corresponding motion of the needle; that is to say, making one stitch at each forward and another at each backward motion of the shuttle, this being effected by the needle, in combination with the shuttle, both constructed, arranged and operating as herein described, or in any other mode substantially the same.

Second, I claim the combination of the sliding bar, the plate, the feeding plate, the spring, the screw, the lever and the clamping, for holding and feeding the cloth to the needle and regulating the length of the stitch, in the manner herein described, or in any other way substantially the same.

[See page 73, Vol. 5, Sci. Am., for an engraving of this good and cheap machine.]

RE-ISSUES.

To Timothy Clark, of New Haven, Conn., for improvements in machinery for turning irregular forms—previously patented Jan. 19th, 1847.

I claim the arrangement of the cutter wheel or saws, so as to cut in the direction of the grain of the wood or other substance to be formed, when this is combined with the rotation of the pattern and substance to be formed, during the operation of the cutters, substantially as described.

I also claim the rotating cutter wheel, constructed substantially as herein described, of a series of circular saws secured in an inclined position to an arbor, which carries them as herein set forth.

DESIGNS.

To C. Y. Haynes, of Philadelphia, Pa., for design for bas-relief of Henry Clay.

To D. Root, of Cincinnati, Ohio, for design for Stoves.

To R. J. Blanchard, of Albany, N. Y., (assignor to Billings P. Learned & G. H. Thatcher,) for design for Stoves.

To Apollon Richmond, of Providence, R. I., (assignor to A. C. Barstow & Co.,) for design for stoves.

Patent Cases. Important Decision.

Battin's Coal Breaker.—U. S. Circuit Court, Philadelphia, Nov. 15th. Before Judges Grier and Kane.—This very important case or rather cases, after a very long trial, was decided in equity as follows:

Battin vs. James Taggart.—Verdict for plaintiff, \$800.

Same vs. Ratcliff Johnson.—Verdict for plaintiff, \$800.

Same vs. Jno. G. Hewes.—Verdict for plaintiff, \$800.

Same vs. Thos. S. Darling.—The plaintiff suffered a non suit in this case, after the charge of the Court, which was against him. The above verdicts are against the defendants for a violation of the patent for Battin's coal breaker. They are heavy, but the judgments will be heavier. The law authorizes the Court to treble the damages in patent right cases, which will put on each of defendants the amount of \$2400.

By reference to number 3, this volume, Sci. Am., an engraving of this machine, and an opinion about the validity of the patent, will be found.

Complimentary about Patents.

Messrs. MUNN & Co.—Gentlemen—I received my letters patent on the 9th ult. I feel under many obligations to you for the valuable service rendered to me in procuring the said instrument. I will always solicit your advice and employ you as agents to transact my business, from the fact that every thing intrusted

to your care, seems to be safe, meets with attention, promptness, and is executed in good order. I would advise all, as a friend to their best interests, to apply to you for advice in making applications for patents, for I believe that your agency is the surest, safest and much the cheapest of any other known to me. This is the second patent secured through you to me, and I rejoice to know, and I am grateful for it, that those inventors who are not able to make out their own specifications, can have them done honestly, well and cheaply through you. Your obliged friend, with many thanks,

A. L. MACOMBER.

Bennington, Vt. Nov. 11, 1850.

[The patent was for the spiral double cut and feed Straw Cutter, on page 396 of our last volume.]

For the Scientific American.
Geology.

Near sixty years have elapsed since systematic and effective efforts were made in this science, by men of energetic minds and persevering research. Prior to that time, indeed, facts had accumulated and praiseworthy efforts had been made. Several Arabian writers upon mineralogy, as early as the tenth century; some Italians in the sixteenth, upon fossil shells, Boccacio especially; Lehman, the German; Palissey, Rouelle, and Guettard, in France; and Owen, Woodward, Llywyd, Lister, Mithell, Holloway, Packe, Strachey, and others, in England—will always find a place in the history of this science. Still, however, until the time of Hutton and Werner, Geology consisted of little else than mere *membra disjecta*; their theories form an important epoch. Soon after, William Smith commenced his extensive researches in England; while at the same time the pupils of Werner, on the Continent, were imbibing the zeal of their master, Saussure was examining the Alps, and Pallas the Russian Empire. Not long after arose the geological constellation,—in Great Britain, Jameson, Playfair, McCulloch, Greenough, Webster, Canybeare, Buckland, Phillips, Aikin, Weaver, Seymour, Griffith, Farey, Bakewell, Parkinson, Sowerby and Miller; on the Continent of Europe, Cuvier, Brongniart, Daubuisson, Humbolt, Von Buch, Brocci, De Luc, Brochant, and Delametherie; and in our own country, Maclure, Mitchell, Gibbs, Bruce, Cleaveland, Silliman, Waterhouse and Seybert, who led the van in the effort to conquer the rocks, and, what was worse, the indifference and prejudices of their countrymen. In the hands of such men, geology outstripped even chemistry in its progress. And ere two decades of years are gone by, we believe this science will deservedly rank first in point of dignity and the extensive range of its subjects.

Physical Aspect of Geological Systems.

Granite Districts—Where the rock is soft, the hills have a heavy rounded appearance, and are only peaked and irregular in outline where it is hard and flanked by stratified rocks. The landscape is black and barren; e. g., the Andes in South America.

Primitive Districts—Are bold, rugged, and unfertile; e. g., the Highlands of Scotland and Brazils of South America.

Transition Districts—Are bold and mountainous, and well illustrated by the characteristic scenery of Wales.

Old Red Sandstone Districts—Are varied and irregular; the hills being less bold and precipitous than those of any subsequent period; e. g., the Ochils and Sidlaws in Scotland.

Carboniferous Districts—Are tame and unattractive, relieved by few elevations or depressions of picturesque beauty, and in general bleak and unfertile; e. g., Nova Scotia and Pennsylvania.

New Red Sandstone Districts—Are rather flat and gentle, consisting of rounded terraces and level expanses here and there dotted with a gentle eminence; e. g., the basin of the Solway, Scotland.

Oolitic Districts—Though pleasing, are less bold than the preceding: longitudinal hollows and dry and fertile ridges undulate the country, the latter not exceeding 600 feet in height; e. g., the southern slope of the Himnlehs.

Cretaceous Districts—Are distinguished by the smooth flowing outline of the hills and valleys, possessing great amenity and rural beauty; e. g., the western river-plains of South America.

Tertiary Districts—Present a level and somewhat unvaried scenery; the soil is light, dry, and unfertile; e. g., the Isle of Wight, vicinity of Paris, and valleys of the Swiss lakes.

The Foot Prints of the Creator.

Messrs. Gould, Kendall & Lincoln, of Boston, have re-published this splendid work; it should be read by every man in our land. As an evidence of what a working man can do, besides following his daily toil, no work ever published presents a stronger proof of the truthfulness of that old adage, "where there's a will there's a way." The author of this work, Hugh Miller, commenced life in the north of Scotland as a country quarryman—an occupation of severe toil. In digging up rocks from the bosom of mother earth, his mind was led to inquire "how rocks were made, how disposed, and to examine into their history." For many years he groped on in darkness, without one to assist him, but at length he ascended, step by step, to the front rank among geologists, and in this book he stands forth in the front rank among authors, both in style and originality of thought. The book is, as a whole, an argument against that work called the "Vestiges of Creation." That work took the position that animated nature was not a creative work, so far as it related to distinct species: the author holding that organization is created microscopic, and that man is not a created but a developed being. It was supposed for a long time that the earliest developments were small, for by digging down among the rocks beneath us, the earliest formations disclosed very imperfect and minute organisms. Mr. Miller, by his explorations, discovered that the earliest organisms were not small, and that there was no ground for the development theory—that instead of one class being developed from another, there is a harmonious whole, but distinctive creation of species.

This book is a valuable acquisition to the literature and science of geology in our country. We recommend the study of this science to our young men; let them approach it with open and not unfaithful breasts, for amid our mountains, grand and tall, our boundless plains and flowing rivers, vast and virgin fields for exploration yet present themselves.

Barley.

The value of Barley for human food could be shown by various facts in the history and experience of the past, as well as by the science and practice of the present. Speaking of Count Rumford's experiments in providing food for the poor, the London Encyclopædia (article "Food") says:—"After an experience of more than five years in feeding the poor at Munich, during which time every experiment was made that could be devised, it was found that the cheapest, most savoury, and most nourishing food that could be provided was a soup composed of pearl barley, peas, potatoes, cuttings of fine wheaten bread, vinegar, salt, and water, in certain proportions.

This plant, although it does not possess the beauty of the wheat, nor the elegance of the oat, is nevertheless beautiful in its form and appearance, whilst it possesses the valuable quality of being more hardy than either of these, and can be grown in climates where these cannot. According to Einhof, the ripe grain contains in 100 parts:—Farina, 70.05; Bran, 18.75; Water, 11.20; and according to Playfair, it contains in 100 parts:—solid substance, 84.5; Water, 15.5; Flesh principle, 14; Heat principle, 68.5; Bone principle, 2.

The form in which this grain can be best used in America, is that known as Pearl Barley, which is made from the "two rowed barley." The grain is first dried in a kiln, then deprived of its bran by a mill, and finally made nearly round by trituration. Einhof states that the farina, of which the pearl barley is chiefly composed contains, in 100 parts:—Starch, 67.18; Gluten, 3.52; Sugar, 5.21; Gum, 4.62; Water, 9.37.