

the sulphur from them, for the purpose of making sulphuric acid.

DESIGNS.

**CLOCK CASES**—Pietro Cincinni, (assignor to Bradley, Hubbard & Bradley,) of West Meriden, Conn.

[This is a pretty and easy design, consisting of a man laden with toys, the clock case being the body of the figure, and the face in the center. It is termed the "Santa Claus."]

**COAL SCUFFLES**—Gootfried Thurlmeyer, of New York City.

[This design is elegant and chaste, and consists of shells and curves, which harmonize well together.]

ADDITIONAL IMPROVEMENTS.

**LOCOMOTIVE BOILERS**—James E. McConnell, of Wollerton, Eng. Patented June 2, 1857. Ante-dated Dec. 2, 1856: I claim the fire-box extended into the barrel of the boiler, in combination with the transverse fire brick bridges, and with water bridges or chambers fitted with tubular stays, through which a fresh supply of air is admitted to the combustion chamber, or extended portion of the fire-box, for the purpose of assisting the combustion, and of preventing the formation of smoke, substantially as set forth.

**LOOMS**—Daniel W. Snell & Stephen S. Bartlett, of Woonsocket, R. I. Patented January 13, 1857. Ante-dated September 1, 1856: We claim as additional to our re-issued patent dated September 1, 1856, first, The application of the worm gear, F, in combination with the pinion shaft, E, and pinion, C, as and for the purpose represented.

Second, The spring, H, acting as shown, for the purpose of giving a yielding motion to the beam at the change of harnesses and beating up of the reed.

NOTE.—In the above list of patents issued last week, we notice the names of no less than NINETEEN inventors whose cases were prepared at this office.

Descriptive Index to Chemical Patents.

An index to the chemical patents issued by the United States Patent Office during the year 1854. Prepared for the SCIENTIFIC AMERICAN by Dr. D. Breed, solicitor of patents, Washington, D. C. Continued from index to 1855, 1856, and 1857, published in SCIENTIFIC AMERICAN.

**Archil**—Extract of; mixed with calcined magnesia, (instead of ammonia,) and gum water, for dyeing: Jonas Eberhardt, June 27.

**Cement**—Ashes of cotton seed, or of other oleaginous vegetable substance, as ingredient, mixed with rosin, or oil, and earthy matters: W. H. Poindexter, administrator of J. R. Remington, July 4.

**Dyeing**—Exhaustion and pressure of vat, in connection with moving the fabric: Charles T. Appleton, May 30.

**Fat**—Purified by water at high temperatures and pressure: R. A. Tilghman, October 3. England, January 9, 1854.

**Fire**—Extinguishing of, by mixture of sulphur nitre, sawdust, and tow, set on fire to absorb oxygen: Ralph Bulkley, March 21.

**Flax**—Boiled in alkali, washed, then steeped in bleaching solution, to which is added borax, sea salt, saltpeter, glauher salts, epsom salts, sal ammoniac, or other salt to separate the fibers: Jonathan Knowles, February 14.

**Flax**—Bleaching of, facilitated by agitation and squeezing between rollers when immersed in bleaching solution: J. Augustus Roth, April 18.

**Gas**—From wood; heating gas after it leaves retort to convert tar into gas: William P. McConnell, September 26.

**Gutta Percha**—Treatment with a small amount of sulphur, (1 oz. sulphur to 1 lb. of gutta percha,) and heating to 285° Fah. to expel volatile ingredients before vulcanizing: John Murphy, May 30.

**Hemp**—Use of salt or other saline in steeping hemp to remove the gum. 2, Immersion of hemp in boiling tar before making into twine: Lewis C. Sugett, May 22.

**Hemp, Straw, etc.**—Treated with steam or hot water, to remove extractive and coloring matters: William Watt, November 21.

**India Rubber**—Hollow articles of; fitted to mold by use of water, which, during vulcanization, is converted in part into steam: E. D. S. Goodyear, March 28.

**India Rubber**—Curing of vulcanized by heating in water to 300° Fah.: L. Otto P. Meyer, February 28.

**India Rubber**—Treated with hydrogen gas during the heating process of vulcanization, in order to remove excess of sulphur: Rider & Murphy, November 7.

**India Rubber**—Vulcanized with selenium: E. E. Marcy, November 7.

**India Rubber**—Molded and then covered with tin-foil, to preserve form during curing process: L. Otto P. Meyer, April 4.

**India Rubber**—Sheets of covered with paper, and confined between plates of metal during vulcanization: Charles Goodyear, April 4.

**India Rubber**—Use of steam jacket both for the mold and for the die, for re-molding worn out rubber: Daniel Hayward, August 29.

**Iron**—Making direct from ore; Use of blasts forced on the deoxygenizing ore on the hearth, to aid in decarbonizing: James Ren-ton, October 24.

**Iron**—Enameling of; treating surface with mucilage, and dusting over with frit: Thom-in & Stumer, October 17.

**Lime**—Neutral sulphite, for neutralizing chlorine in bleaching: Professor E. N. Hors-ford, October 30.

**Marble**—Fusible artificial; mixture of as-phalium, clay, calcareous loam, and silex: Henry P. Gengembre, July 11.

**Marbling Stone**—Use of gum kauri with drying oil in bath to prevent colors from com-mingling: Hiram Tucker, February 21. Eng-land, September 23, 1853.

**Marbleizing**—Use of a syringe to lay down veins or designs of marble, either on cement or on the mold: William Bonney, August 8.

**Oil**—From rosin; mixed with clay (instead of alkaline earths,) and then distilled, to avoid obtaining pitch with oil: Halvor Hal-vorson, May 2.

**Oil**—Purified by agitation with alcohol: Thomas Drayton, July 4.

**Oil**—Kerocene; distilled from petroleum at 800° Fah., then redistilled at a low tempera-ture, and treated with sulphuric acid, peroxyd of manganese, and lime, etc., three products obtained: Abraham Gesner, June 27.

**Paint**—Use of dried albumen to harden and fix paints by coagulation. Two patents: Ga-briel Blondon, June 20.

**Paint**—Steaming iron ores in manufacture of pigments: Joseph H. Davis, August 8.

**Paper**—Pulp from wood; use of alkali and chlorine, or its compound, to disintegrate wood: Watt & Burgess, July 18. England, August 10, 1853.

**Telegraph**—Insulation by composition of gum shellac, rosin, tar, oils, bitumen, (asphal-tum, or mineral pitch,) and india rubber: Thomas, Earl of Dundonald, June 13. Eng-land, October 6, 1852.

**Tallow**—Hardening by nitrate of ammonia, or niter and sulphate of ammonia, for making candles: Charles Schinz, June 13.

**Varnish**—Crude turpentine, spirits turpen-tine, and sulphate of zinc: Jonathan Burrage, March 14.

**Zinc White**—Jet of air for cooling, convey-ing and oxydizing vapors. Two apparatuses: Richard Jones, March 28.

**Salt Works**—Mother liquor of; treatment of to obtain epsom salts, iodine, bromine, and common salt: Edward Stieren, December 12.

**Soap**—Mixture of spirits turpentine, spirits camphor, alcohol, nitric ether, aqua ammo-nia, to be used with soap suds: C. W. Crozier, July 11.

**Soap**—Use of bran dissolved in caustic al-kali, as ingredient of: T. Chalkley Taylor, June 13. England, September 17, 1853.

**Soap**—Potatoes with skins treated with al-kali as ingredient of: T. Chalkley Taylor, June 13.

**Stereotype**—Composition of gutta percha and either pulverized graphite, soapstone, plaster, chloride of lime, or peroxyd of man-ganese: Julius Herriet, October 24.

**Sulphuric Acid**—Gaseous: purified from hypo-nitrous acid by sulphurous acid in the leaden chambers. Two apparatuses: D. E. Contaret, June 13. England, December 16, 1853.

The Compressed Air Bath.

We have received a long letter from Dr. Taylor in answer to the one from Dr. Gleiwitz which appeared in our columns of Sept 19th; and were we to publish it, a long discussion would be originated quite foreign to the object of our paper. We have neither space nor inclination to open our columns to a medical argument on a subject which is of little interest to our readers. But as the letter contains answers to certain objections advanced by Dr. Gleiwitz, we feel in justice bound to publish them: "First, this bath is not intended to

force air into the lungs, for the cure of con-sumption, but simply to supply the requisite amount that the system requires, and gives the blood a better chance of aeration. 2d, It is not easy to breath at great altitudes, as any one who has ascended a mountain or been up in a balloon knows very well; testimony enough to fill a volume might be adduced on this subject. 3d, Carbon is not an essential component of the air, it is purely accidental, and only one part of it occurs in ten thousand of air. 4th, There is no doubt that the la-borers about salt works are remarkably ex-empt from pulmonic diseases, so are all per-sons who live an entirely out-door life, if in a good climate; and lastly the compressed air bath does not claim to be a specific for any-thing, it is no Holloway or Morrison, but only a valuable aid in medical hygiene." This is the essence of Dr. Taylor's reply, with all personalities and unmeaning explanations sup-pressed; and we hope that this will be satisfac-ory to both parties.

Chinaware.

This elegant, useful and important kind of pottery was, as its name implies, first manu-factured in China, where it attained the high-est perfection. Travelers often took specimens to Europe, which excited the ambition of the potters, and for a long time they tried in vain to imitate it, for not having the exact kind of clay, their experiments were fruitless. In the commencement of the last century, however, a clay was discovered in Germany by a gen-tleman who proposed to use it for hair pow-der, but a druggist's apprentice by the name of Bottcher seeing it, concluded he could put it to a better use, and from it he made first porcelain, or Dresden china, which has since become so celebrated. A clay was again ac-cidentally discovered in France, and the manu-factory of Sevres was the result; and lastly, a far superior variety of china clay, or, as it is called from the Chinese word, kaolin, was dis-covered in Cornwall, and the English china began to far surpass all the others in richness of tints and clearness of structure until very recently. With clay in abundance, and all the requisites at command, we were content to import all our chinaware from England, and this to the value of about two million dollars a year. Several potteries for making china had been established in this country, and for some unaccountable reason, failed. But now there are many successful works in operation, and one of them at Gloucester, N. J., is on an extensive scale. They obtain their clay from Delaware, and it answers the purpose well.

It is, perhaps, unfashionable to drink tea or coffee out of American china cups; neither might we think as much of a porcelain figure, however artistic, made at home, as we should of one which had crossed the Atlantic. One thing is certain, and that is, if we only make the progress in this department of manufacture which we have in others, we shall not import chinaware from Europe, but export it there, to adorn the tables or drawing-rooms of the great and rich. American china will then become as celebrated as that of Dresden, Sevres, or Worcester.

A Machine for Forming and Hardening Hat Bodies.

This improvement consists in a new ar-rangement of the parts of the ordinary hat cone, and adding to the picking machine and exhaust box in common use, a revolving adjustable heart-shaped cam and sundry inci-dental parts, by means of which the cone receives a graduated vertical alternating motion during the formation of the hat, for the hat, accelerated or retarded by the shape of the cam, or the application of a hand lever, so as to increase or diminish the quantity of fur deposited upon particular portions of the surface of the cone. By means of another cone, centrifugal motion, and steam, the whole is hardened to the proper degree. It is the invention of A. C. Arnold, of Norwalk, Conn.

The claims of the various improvements

noticed below may be found by reference to the List of Claims on another page.

Caps or Covers for Nails.

T. Walsh, of Newark, N. J., has recently invented a device whereby he saves a great quantity of metal in the cutting by dies of nail covers. In the ordinary method a num-ber are cut out of a strip of metal, and the metal is thrown away. He, however, employs strips nearly twice the usual width, and cuts out two rows, each alternating with the other, so that comparatively little metal is wasted. The invention consists in the feeding arrange-ment, which is very ingenious.

Gang Plow.

This improvement professes to surmount the difficulties that usually attend the use of gang plows, by allowing them a vertical and lateral adjustment, and also that they will ride over any obstruction independent of each other. They are also provided with rotating coulters and a swivel wheel, by which they may be guided. It is the invention of S. L. Kingston and Daniel Gore, of Plain View, Ill.

Saw Mill.

The object of an invention or improve-ment in saw mills, invented by Jesse Gilman, of Nashua, N. H., is to make suitable provision to prevent the stuff, when it is sawed from the bolt, from binding or wedging against the saw. This is attained by having the guide attached to a movable arm so arranged as to keep the stuff from the saw after being cut.

Fountain Pen.

The great objection of fountain pens gene-rally, is that they do not deliver the ink regu-larly, and that they are very difficult to clean. This pen, the invention of A. F. Warren, of Brooklyn, N. Y., by having its valves so con-nected that they work simultaneously, pre-vents the former evil, and the general ar-rangement of its parts renders it easy of being cleansed.

Seeding Machine.

This improvement, the invention of Wm. C. Squier, renders the seeding machine capable of being expanded when required for use, and folded and contracted when not required, or while being transported from the field to the house, or vice versa. Thus all inconvenience in passing through narrow gates or passages, and economizing room in the farm yard or implement house after the planting season is over.

Field Bronze.

The ordinary bronzes are of some trouble to apply, but the inventor (H. Hoffman) has succeeded, by a combination of gilding pow-der, any of the common bronze powders, and collodion, in making an article which can be applied to wood, stone, or metal with ease and certainty. It may be had of H. Bridgeman & Co., publishers of the *Druggists' Circular*, 36 Beekman street, New York.

Novel Plow.

This plow first cuts the sod clear away from the subsoil, and then cuts it up into strips, thus presenting a rich and mellow subsoil to the seed. This is done by means of vertical and horizontal cutters and cutting wheels all arranged to work conjointly. It is the inven-tion of N. Newman, of Springfield, Ill.

Corn Husking Machine.

A new device for this purpose has been patented by W. H. Smith, of Newport, R. I., whereby the corn may be husked direct from the stalk. Endless bands take the stalk up to saws which cut off the stalk, the corn is then stripped by brushes, and other bands take it away.

Polishing Bricks.

Where a neat facing another lings or ware-houses is required, this invention will be use-ful. The bricks are polished by being allowed to become partially dry and then subjected to further pressure. It is the invention of E. H. Bellows, of Worcester, Mass.