HEATING APPARATUS—Rensselaer D. Granger, of Philadelphia, Pa. Ante-dated Nov. 24, 1858: I do not claim, broadly, an air chamber situated in a casing and exposed to the action of the fire within the same, as such a device has been heretofore used.

But I claim combining the air chamber, C, with the separate perforated chamber, H, having an independent communication with the air, substantially as set forth, so that the said perforated chamber may serve the double purposes of consuming the gases arising from the ignited fuel, and of preventing the rapid destruction of the bottom of the chamber G, by the action of the fire.

COAL STOVES—R. D. Granger, of Philadelphia, Pa. Ante-dated November 24, 1858: I claim hanging within the stove, and immediately above the fire, a perforated chamber H, when so constructed and arranged, that the air shall have free access to the interior of said chamber, and when the latter shall admit of being readily raised and lowered, or its position in regard to the fire, otherwise altered, for the purpose specified.

FISH TRAP—Robt. Gray, of Anson, Me: I claim the strainer, the vibrating slats, T T', and the V-shaped chambers V V', all in the manner and for the purposes specified.

FASTENING FOR BREASTPINS, &c—Benj. F. Grinnell, of New York, N. Y.: I claim the permanent hook, D, and spring, E, in combination with the hinged pin, C, of a breast-pin, or other article of jewelry, when the spring is so bent as to direct the pin, when the latter is depressed into the hollow of the hook; and when the spring and hook are otherwise arranged in respect to each other, substantially, as set forth.

HOUSE VENTILATION—John H. Griscom, of New York, N. Y.: I claim the employment of an auxiliary flue or tube, connecting the hot-air flue with the ventilating-flue, in the manner and for the purpose proposed.

COTTON CULTIVATORS—John M. Hall, of Warrentown, Ga.: I claim, in combination with the series of adjustible, revolving hoes, the scrapers, K, K, in advance of them, substantially in the manner and for the purpose described.

APPARATUS FOR EVAPORATING SACCHARINE JUICES—Lyman P. Harris, of Mansfield, Ohio: I claim, First, The stationary, yet portable fire-place, B, with the stops, C, C, and the springs, H.

Second, I claim the portable, movable, and inclined furnace, A, and its combination with the stationary fire-place.

Third, I claim the handles, M, and their springs, L, and their combination with the springs, H, also, the rod, F, or its equivalent.

Fourth, I claim the racks, O, and their combination, also the movable flue or plate, P, and its rod, R, and their combination with the movable furnace, A, and stationary fire-place, B.

Fifth, I do not claim the heater, 8, nor evaporator, 10, as my invention, but I claim, as an improvement, the application of one or more strainers, 2, and valves, 1, to the heater and evaporator.

COFFEE ROASTERS—Theodore Heerman, of Mitchelsville, Tenn.: I claim, First, The specified arrangement of the plates or shelves D, D, for the purposes set forth.

Second. The combination of a window or windows in one or both ends of a coffee-roaster, with the inclined, elevating plates or shelves, substantially as, and for the purposes set forth.

CORN PLANTERS—John L. Hoag, of Geneva, Ill.: I claim the arrangement and combination of the arm (g,) lever, K, and bar, H, said lever serving as an oblique brace to hold the bar H, (as is shown in Fig. 2,) as and for the purposes set forth.

I also claim the arrangement and combination of the lever, (h) slide (i,) lever (j,) upright, Q, bar, P, and swinging-frames, O, M, as and for the purposes shown and described.

[The nature of this invention consists in the peculiar manner of operating a distributing slide, and also, in a peculiar manner of arranging the furrow, and covering shares, whereby they may be raised and lowered as desired.]

REVOLVING HARROWS—Mark W. House, of Cleveland, Ohio: I claim the combination, with the spindle, of a revolving harrow, of the cap, e, and box, d, for the purpose, and substantially in the manner described,

CATTLE PUMPS—John H. Irwin, of Carlenville, Ill.: I do not claim the use of rising and falling platforms separately considered, but claims the platforms B, B', weight, F, drum, C, and pulley, D', placed loosely on drum, C, and connecting with it by the pull, e, and ratchet, D, the whole being combined and arranged to operate as and for the purpose set forth.

The cattle walk upon a platform that is capable of rising and falling, and which is connected by means of ropes or chains, to a drum that has a pulley of comparatively large diameter placed loosely upon it. The weight of the cattle depresses the platform, rotates the drum and pulley, which can only move in one direction, and so elevates the water.]

COMPOSITION FOR LINING METAL PIPES—Wm. Johnston and Hugh Forbes, of Brooklyn, N. Y.: We do not claim inserting an india rubber, gutta percha, or equivalent pipe previously made into a metallic pipe; nor do we claim the apparatus by which it is applied. But we claim the composition of matter, substantially as set forth, for lining metallic or other pipes, or surfaces of a similar kind, substantially as set forth.

HARVESTERS—Wm. F. Ketchum, of Buffalo, N. Y.: I do not claim the use of a cap, or an opening in the guard-tooth, generally to prevent clogging; but I claim the combination of the openings in the guard-tooth below the cutters, with the caps above the cutters, substantially as described.

ROLLING AND PRESSING WOOL—Wm. W. Purdy, of Liverpool, Ohio: I claim the combination of the sectional rollers. I and I', with the strap, F, and breast-piece, E, for the purpose of rolling and pressing fleeces of wool, as describe

TRUSS SPRINGS—J. W. Riggs, of New York City: I claim constructing springs for trusses in the manner and for the purposes substantially as set forth.

METHOD OF PACKING CARTRIDGES—E. K. Root, of Hartford, Conn.: Not wishing to confine myself to any exact shape of package, peculiar mechanical construction of box, or arrangement of the cartridges and caps, what I claim is putting up cartridges between two blocks, or their equivalents, substantially as described.

I also claim forming in the package, or holder, as described, a receptacle or receptacles for containing caps or other primings, substantially as described.

SEEDING MACHINES—John F. Seaman, of Clyde, N. Y.: I do not claim the distributing device formed of seed cells, f, made in a cylindrical head, e, in connection with cut-off brushes, h, for this is an old and well-known device.

Neither do I claim, broadly, rotating covering shares, irrespective of the construction and arrangement shown.

What I claim is, operating the seed-distributing device by means of the part, b, of the handle, C', attached by a pivot, d, to the other part, c, of said handle, and connected at its lower end to the shaft, E, by a cord, or chain, i, the above parts being used in connection with the spring, F, attached directly to the other handle, C, of the implement, and to the shaft, E, by a cord or chain, k, the whole being arranged substantially as and for the purpose set forth.

This is a good seed-planting device, designed for planting seed, chiefly corn, in check-rows. It is not liable to become choked, and is perfectly under the control of the operator.]

HORSE-SHOE MACHINE—Solomon Shetter, of Allegheny, Pa.: I claim, first, The curved arms, w l, of clamps, s, moved and operated by the friction rollers, 2, and the backward and forward movements of table, c, when the clamps, s, are used in connection with the dies, t and w, as described and for the purpose set forth.

Second, The use of the flexible strip, n, for the purpose of operating the clearer, u, as described and for the purposes set forth.

Third, The arrangement on the upper surface of table, c, of dies, t and w, springs, x, the under jaw, v, of the shears and the clearer, u, when used and operated in connection with the clamps, s, friction rollers, 2, roll, t l, shear, d, and swage, f, as described and for the purposes set forth.

SWEEPING MACHINE—Stephen Wm. Smith, of Brooklyn, N. Y.: I claim, first, The combination of the gears, F and G, with the driving wheel, constructed and operating substantially as described and for the purposes specified.

Second, The method of adjusting the brush by the plate, K, which admits of both vertical and lateral adjustment, as described and specified.

Third, I also claim preventing the escape and rising of the dust, by means of the flexible curtain, L, arranged and operating substantially as described and specified.

MANUFACTURE OF WHITE LEAD—Benj. F. Smith, of New York City: I claim the manner of filling the chamber with metallic lead by means of the open work tables or racks in which the lead in detached pieces rests, arranged one above the other in successive and close series substantially as described, and whereby a more thorough and equal circulation of the fumes or gases amongst the lead is produced.

I also claim constructing the converting chamber with an inclined bottom, substantially as and for the purposes set forth.

I also claim the method described of extracting from the converting chamber the carbonate of lead, and other incidental products, by means of a current or currents of water passing through said chamber from top and bottom, substantially in the manner and for the objects set forth.

I also claim subjecting the carbonate of lead and other incidental products, previous to their extraction from the converting chamber, to the action of steam, substantially in the manner and for the purpose specified.

INSTRUMENT FOR TURNING THE LEAVES OF MUSIC BOOKS, &c.—C. B. Thayer, of Boston, Mass., assignor to himself and Chas. Robinson, of Cambridgeport, Mass.: I claim the double holding cords, E E E, elastic springing cords, G G G, or their equivalents, back, or catch band B, provided with clamps, C D, and notch, and the curved concentric rod or way, F, arranged and operating in connection with, and in relation to each other, substantially in the manuer and for the purpose specified.

I also claim the escapement catch, H, constructed, arranged and operating in connection with the curved rod, F, and thimbles of the holding cords, E E E, substantially as described.

HORSE-POWER—Ferdinand M. Sofge, of Columbus, Ga.: I claim the combination of the cogged wheel, A, having the supporting flange, No. 1, and the wheel, B, with corresponding cogs and bearing, revolving upon the supporting ring, I; the whole constructed and operating substantially, as and for the purpose set forth.

COOKING STOVES—P. P. Stewart, of Troy, N. Y.: I claim, in combination with a stove, such as described, making the front plate of the oven open with doors, and an apron to receive and hold a tin kitchen or roaster substantially as specified, that the heat radiated by the front plate of the fire-chamber may be aided by the heat radiated by all the oven plates, as specified when combined with an end door, whereby the draught may be controlled without the aid and independent of the front doors. And I also claim the boiler having a removable cover and two inclined flues, which are separate at the lower end, united into one at top to connect with the chimney substantially as described, in arrangement with the exit flue space, to which the boiler is fitted, and into which the gaseous products of combustion are discharged from the series of direct and return-flues, substantially as and for the purpose specified.

DEVICES FOR GATHERING GRAIN INTO GAVELS—W. M. Waggoner, of Middletown, Ind.: I claim the stationary fingers, E, E, G, G, and the fly or gathering fingers, H, H, attached to a suitable framing or stanchions, mounted on wheels, and arranged to operate substantially, as and for the purposes set forth.

[This device can be used by an operator, and shoved along the ground underneath a windrow of grain which it will gather into gavels, and bind each gavel into a sheaf, the work being performed with great facility and very expeditiously.]

DEVICES FOR REEFING SAILS—Louis B. Wakeman, of Baltimore, Md.: I claim the employment of the smooth-surfaced clamp E, E, as described, when in combination with the forked screw-bolt, 5, or its equivalent, carrying the blocks through which the rolling halyards, d', d', pass for the purposes set forth.

I also claim giving direction to windlass ropes, d, d, by the bent arm, b, when in combination with the clamp, E, E, and forked screw-bolt, 5, when fitted with an ordinary block, operating in the manner and for the purposes set forth.

HARVESTERS—Wm. M. Whitely and Andrew Whitely, of Springfield, Ohio: We claim a finger so constructed, that the slot or opening above the cutters shall increase in capacity from front to rear, in combination with the clearing projection described, passing directly into the rear corner of said opening in the manner described for the purpose specified.

We also claim forming the clearing projections of a bent extension of the cutter, substantially, as described.

RAILROAD CHAIRS—John Young, of West Galway, N. Y.: There may be modifications of my construction, therefore, I do not design to confine myself to the precise devices shown.

I claim the combination of bearing surfaces, a, capable of forming any desired angle with each other, and the securing portion, a', of the chair, substantially as and for the purpose set forth.

GRAIN-FAN AND CORN-SHELLER—Hamilton E. Smith, of Philadelphia, Pa., assignor to himself, D. B. Nelson, of Cortland Co., N. Y., and John L. Myers, of Chemung Co., N. Y: I do not claim broadly combining a grain-fan and a corn-sheller in one instrument; I claim arranging the spiked roller, C, and slotted shield, D, of a corn-sheller on the frame of a grain-fan in respect to, and in combination with the seive frame, E, blower, G, and inclined plane, J, of the said grain-fan, in the manner herein described, so that the said blower, seive-frame, and inclined plane may serve the purpose of separating the cobs from the shelled kernels of corn, and the latter from the chaff and other refu

THE MANUFACTURE OF STEEL—Frantz Anton Lohage, of Unna, Prussia, assignor to Edmund Leopold Bewzon, of Boston, Mass. Patented in England, Jan. 29, 1850: I would observe that the commencement of the process, that is, the fusing and boiling the pig iron is similar to the operation usually carried on in the pudding furnace in the manufacture of wrought iron, I do not, therefore, intend to claim such part of the process.

But I claim regulating the heat and stopping the decarbonization of the fused mass of metal in the finishing process in the puddling or reverberatory furnace, as set forth, before it becomes converted into malleable or wrought iron, and whereby I obtain steel in the manner specified.

PADDLE WHEEL—Nelson Orcutt (assignor to himself and G. W. Gregory), of Binghampton, N. Y.: I claim the centrally suspended paddle or bucket, without any stop, means, difference of area or of weight for holding it in a working position, but left entirely to the action of the forces exerted upon it during the revolution of the wheel, as set forth.

[An engraving of this will shortly appear in our columns.]

UMBRELLA FRAMES—Joseph Bloom, (assignor to R. E. Rogers), of Philadelphia, Pa.: I claim, first, The bow or rib, constructed substantially as described. I am aware that the bow or rib, and the brace or sustaining rod have been attached to collars upon the standard by a piece of metal having an enlarged end affixed to the end of the bow or rib, and a like piece of metal affixed to the end of the brace, the enlarged end fitting into a slit of a sheet metal collar, the flange of which must be swaged down upon the enlarged end, in order to hold it in place, and I therefore do not claim this method; but I claim connecting the bow or rib and the brace, or sustaining rod to the collars upon the stem or standard, by the means set forth. I am also aware that the end of the brace or sustaining rod has been connected to the bow or rib by the end of the brace being riveted to a band, which may be sprung into a groove in the inner surface of the bow or rib, and I therefore do not claim this method of connecting the two parts here named; but I claim connecting the brace or sustaining rod to the bow or rib by the spring-board embracing the bow, as set forth.

RE-ISSUE.

VENTILATING WINDOW FOR RAILROAD CARS—George Neilson, of Boston, Mass. Patented May 30, 1854: I claim the convergent ventilating window as made with defiecting and light penetrating sides or surfaces, and an air opening, and a closing window or cover, essentially as explained and to be applied to the opening of a side of a railway car, substantially as specified,

And I claim the arrangement of a defiector guard entirely around the window opening, and in respect to the deflecting sides, as specified, not intending to claim a defiector or guard as applied to a car-window opening, but to claim its arrangements on four defiecting sides or planes, and entirely around the opening between them, as set forth.

ADDITIONAL IMPROVEMENT.

HOMINY MORTARS—John Reezer, of Chillicothe, O. Patented March 2, 1858: I claim the application and combination of the slide with its spring, and roughening of the lower end of the pestle, for the uses and purposes specified and substautially set forth.

DESIGN.

COOKING STOVE—J. K. Hyde, of Troy, N. Y.

Minerals of California.

The Santa Cruz (Cal.) *Sentinel* contains a brief account of the great mineral wealth and the variety of minerals found in the California coast range of mountains. It states that these elevations, extending through the counties of Santa Clara and Monterey, and bounding the western line of the Tulare Valley, is little known to the geologist, mineralogist and paleontologist. They contain the quicksilver mines of New Almaden and New Idra; gold is known to exist in Santa Cruz and Monterey; a vein of silver ore has for many years been opened at Alisal; and silver, almost pure, has been found near Pacheco's Pass. Other minerals also abound, among which we may enumerate copper, lead, cobalt, chrome, antimony, copperas, alum, saltpeter, gypsum, alabaster, lime rock, asphaltum, and coal veins of great value. Fossils of fish, crustacea, mollusca, infusoria, mammalia, polypi, and of vegetation are so extraordinarily abundant throughout this region that it is more curious to see the geological formations without fossils than with them. The range offers to the mineralogist and paleontologist one of the richest fields of observation on the face of the earth, if not the richest—exceeding the *mauvaise terre* of Nebraska. Humboldt and other travelers in the Peruvian Andes, mention the existence of fossil mollusca in the immediate proximity to the richest mines. It seems that our Pacific coast range shows similar indications for the future.

Camphor Ice.

This substance, which is a very delightful thing to rub on the exposed parts of the person, to prevent chapping and sores from cold, is made as follows:—Take one pound of almond oil, one pound of rose water, one ounce each of wax and spermaceti, two ounces of camphor, and one ounce of rosemary. Melt the camphor, wax, and spermaceti in the oil by a gentle heat, then add the rose water, stirring briskly or rubbing in a large mortar, and lastly, the perfume. The consistence may be varied by increasing or diminishing the proportion of wax and spermaceti.

Photographic Agents.

Under the recent discoveries in photography by M. Niepce de St. Victor, of Paris, it is found that almost all soluble chemical substances are rendered available in the practice of the art. Take a sheet of paper and impregnate it with any soluble substance, let it dry in a darkened room, and then isolate it under a negative, take it back to the dark room, and treat it with any of the re-agents capable of combining with the substance operated upon, and you will have a picture of almost any color you desire; for example, if the paper be impregnated with nitrate of uranium, then exposed in the camera, and treated with a solution of red prussiate of potash, a beautiful red picture will be obtained; and if this be afterwards treated with sulphate of iron, a fine blue picture will be produced.

The Great Chess Contest.

The match between Morphy and Anderssen, the celebrated German player, has terminated in favor of Morphy, who won seven games to Anderssen's two, and two drawn. Herr Anderssen is a professor of mathematics in one of the gymnasiums of Breslau, and ranks among the very foremost of European chess-players. He carried off the first prize in the London Chess Tournament held in 1851, against Szen, Mayet, Horwitz, Staunton and others.

Mr. Morphy, says the *Illustrated News of the World*, may now fairly take rank as the champion of the Old World as well as the New. No Englishman is found to do him battle, and every foreigner of note has now, with the exception of Der Luja, fallen an easy prey to the youthful conqueror. It is a question whether he be not the finest player to whom the world has yet given birth.

To Destroy the Turnip Fly.

Mr. Wimball, of Adermaston, England, has taken out a patent for destroying the turnip fly and other insects injurious to crops, and it may be useful in the same manner for destroying the cotton fly, and the wheat midge in our country. The apparatus consists of a small furnace placed on a small wheel-barrow, the fire being operated by a revolving fan blast, through a strap from a pulley on the wheel shaft. On the top of the furnace is a tube chimney bent downwards and capable of being turned in any direction. Sulphur is thrown in small pieces, from time to time, on the fire, and the blast directs the gases thus generated through the bent smoke tube among the plants on which the insects are operating. This appears to be a useful invention, and one not expensive or difficult for any farmer to carry out into practice.

Ornamenting Glass.

J. J. H. Brianchon, of Paris, and the chief of the Sevres porcelain manufactery, has invented a series of compositions for enameling porcelain, glass and similar materials, to imitate gold, white and colored mother-of-pearl, the various and changing reflections of shells, of all kinds of minerals, and of the optical prism. The substances used are metallic salts, with carbonets of hydrogen, which are laid on a glazing or varnish, and then subjected to the proper heat, in a furnace. The patent was granted this week, and although the processes are too long to describe here, we can say that the products are beautiful, not only from the extreme delicacy of the tints, but from their durability and perfection.

Trees for Telegraph Posts.

A correspondent proposes that poplar trees be planted along all our railroads and used as telegraph posts. The under branches can be cut down, so as to leave the trunks as clear as the posts now employed. It will take some years for such trees to grow, but if they then make permanent posts, not subject to be blown down during gales of wind, they will be superior to bare poles and should be planted.