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New Agricultural Products.

Our Patent Office has accomplished an incalculable amount of good in the agricultural as well as the mechanical department, especially in the introduction of new and useful seeds of foreign origin, capable of profitable cultivation in our country. The Chinese sugar-cane has now become one of our most valuable crops; sugar-cane cuttings imported from the West Indies have resuscitated the decayed sugar plantations of Louisiana; barley from Tuscany and wheat from Turkey have been cultivated with success, and have taken the place of inferior varieties. A great number of other grains and seeds have also been successfully introduced through the Patent Office, and distributed over every section of the country. The person who makes two blades of grass grow where only one flourished before, is held to be a benefactor; and when this is taken as a standard, our Patent Office should be considered one of the most beneficent institutions in our country.

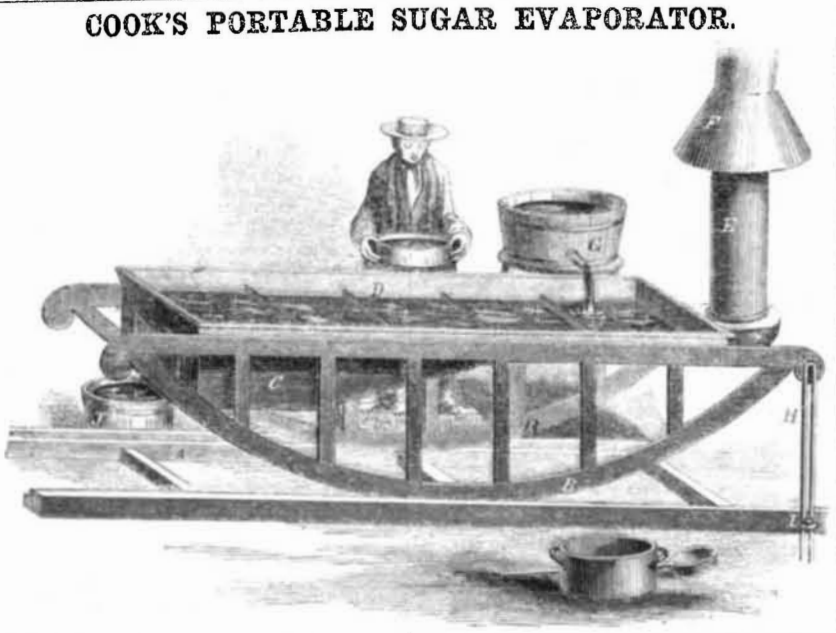
We conceive it to be a positive benefit to cultivate a very great variety of useful crops. In countries which are devoted to the raising of a very limited number, there is great danger of famines, such as in Ireland, where the potato was the chief food of the people, which esculent was blighted in 1846, and was followed by a great famine. Although many new seeds have been introduced from other countries, there are still several others equally deserving the attention of those in authority.

In the East Indies there is a number of cereals and pulses which are exceedingly nutritious, and deserving of introduction; one of these, called Boot (the *soja hispada*), contains 46 pounds of nitrogenous matter in every hundred cwt.; 12½ pounds of oil, 13 ounces of phosphorus, and 1¼ ounces of sulphur. To the vegetable-eating Brahmins, some pulses are what beef and other flesh meats are to us. They mix about one fifth of some liguminous seed—such as *Cajanus Indicus*, their favorite—with rice, and grow as fat and oily on the regimen as beef-eating Caffres. We have introduced the Chinese sugar-cane, and the yam from the East; but in Hindostan there are a vast number of peculiar, useful vegetable productions, which no doubt can be cultivated in some sections of our country.

Consumption.

A physician of the homeopathic school has furnished us with the following recipe for the weakening night sweats that are so common in consumptive cases. It is to rub the patient, every three or four days, all over with olive oil. By this means the perspiration will be reduced, and the strength of the sufferer be kept up.

COOK'S PORTABLE SUGAR EVAPORATOR.



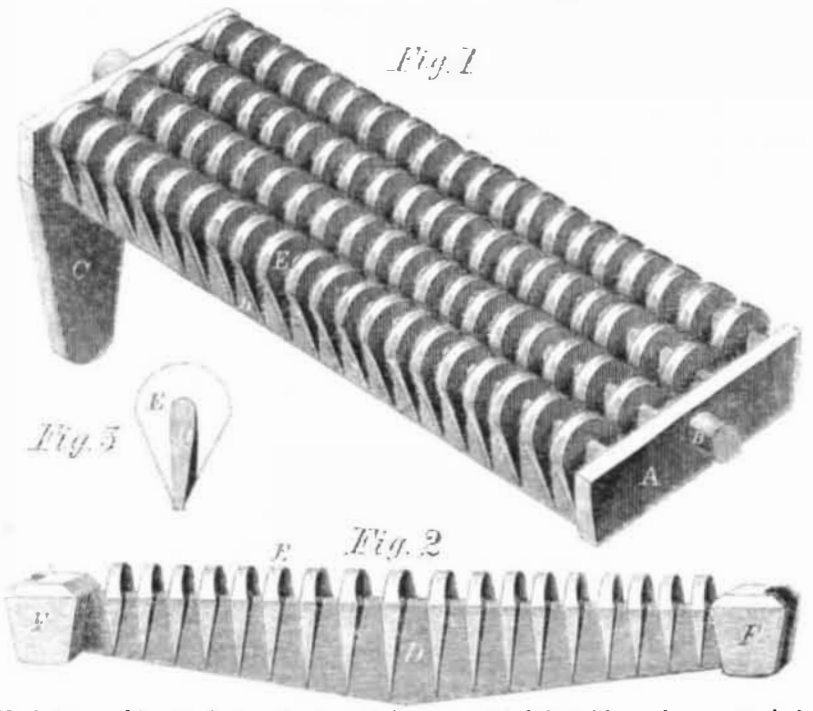
The principal purpose or which this invention is designed is to make refined sugar direct from ripe China cane, and be so portable, cheap, and convenient, that every farmer can possess one if he wishes, and refine his own sugar from cane of his own growth. Our illustration is a perspective view of the arrangement, showing the evaporator in operation.

Guides, A, are laid on the floor; these are made like grooved rails, and are intended to preserve the position of the evaporator while it is being rocked or inclined. Two rockers, B, formed of malleable or cast iron riveted together when cold (hoop iron being strong enough), supports the fire chamber, C, and evaporator, D. The door of the fire chamber, C′, is seen in the front. The evaporator or pan is made of light protected copper or other metal sheathing crimped into flanges or spaces, so as to form a continuous transverse channel one inch and a-half deep and five inches wide. The chimney, E, carries off the smoke, and draws the fire under the evaporator, and the steam is carried away by a hood, F, communicating with the roof of the building.

The sirup from the mill is poured into the tub or reservoir, G, from which it runs into the top end of the evaporator, and the frame and rocker being secured at the desired angle to ensure the best evaporation by a rubber, H, and set screw, I, the juice runs down the grooves; and as it is running, it must be skimmed by a skimmer that fits between the sides of the evaporator, D, and the pure sirup runs off into a receptacle, J, at the lower end. The firing, skimming, and grinding must go on steadily together, and a constant stream of pure sirup will be the result.

The inventor is D. M. Cook, of Mansfield, Ohio, and he obtained a patent June 22, 1858. Any further information concerning details of construction, price, sizes, and their capacity for work, can be obtained by addressing the inventor as above.

SAVAGE'S SELF-CLEANING GRATE BAR.



Much time and heat is lost while the ordinary furnace bars are being cleaned and the clinkers removed by the common fire-rake or poker; and the grate bars themselves are so constructed that either only comparatively large coal can be employed, or the atmospheric surface is so small that it is impossible to attain anything like perfect combustion.

To provide a grate bar that is self-cleaning, a larger coal surface and greater air surface, S. T. Savage, of Albany, N. Y., has invented the subject of our engravings. Fig. 1 shows a segment of a grate for a locomotive, consisting of four bars; as many of these may be put together as the width of the fire-box permits. The bars, D, are cast with end pieces, A, which are provided with bearings, B, on which they can turn, and these bearings fit into corresponding recesses in the fire-box, so that the grate segments can be entirely upset by moving the projection, C, by a lever; all the projections, C, being connected by links. The grate bar, D, is cast thin, with a series of arched projections, E, upon it; these spring from the bottom of the bar at an angle to nearly a level with the top of the grate bar, this point being also the widest part of E, and from this the arch is formed that gives a curved surface to the coal, and keeps the coal up from the main bar, doing away with the flat surface on which the coal lies dead on an ordinary bar, so that a free circulation of oxygen is secured through the fuel. It cleanses itself of ashes as fast as they accumulate, having no surface for them to collect upon, while the clinkers (should there be any) can be removed by capsizing.

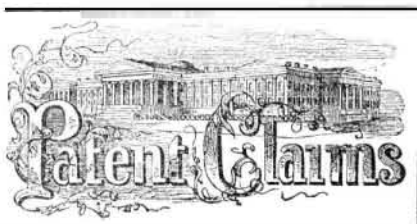
Fig. 2 shows a bar suitable for any kind of grate, constructed on the same principle, only cast singly, with boxes, F, at the end, to rest in the fire box. The boxes are cast hollow, and air can find its way in them, to keep the ends cool, and also feed the extreme back and front of the furnace. Fig. 3 is a vertical cross section of this bar, illustrating the relation between the arch, E, and the main bar, D.

A great saving of metal, in comparison with the strength and durability, is effected, and as the draft is sufficient, the heat is continually carried up among the fresh coal, and the distribution of the air passages are so diffuse that the bars are kept comparatively cool. Wherever a furnace or large fire is required, these bars are the very thing; for boilers or melting furnaces they are equally applicable.

They were patented November 23, 1858; and any further particulars can be obtained from the inventor or the manufacturers, Messrs. Treadwell, Perry & Norton, No. 110 Beaver st., Albany, N. Y.

Ventilating Waterproof Cloth.

The Paris *Moniteur Industriel* states that 20,000 tunics, rendered waterproof and yet porous, were served out to the French army during the late war with Russia. They were prepared in the following manner:—Take 2 lbs., 4 oz. of alum and dissolve it in ten gallons of water; in like manner dissolve the same quantity of sugar of lead in a similar quantity of water, and mix the two together. They form a precipitate of the sulphate of lead. The clear liquor is now withdrawn, and the cloth immersed for one hour in the solution, when it is taken out, dried in the shade, washed in clean water and dried again. This preparation enables the cloth to repel moisture like the feathers of a duck's back, and yet allows the perspiration to pass somewhat freely through it, which is not the case with gutta-percha or india-rubber cloth. The method of thus preparing cloth is not altogether new, but such cloth being employed by the French army is some evidence of its utility.



Issued from the United States Patent Office

FOR THE WEEK ENDING DECEMBER 28, 1858.

[*Reported officially for the Scientific American.*]

*** Circulars giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

BOOT JACK—Frederick Ahl, of West Meriden, Conn.: I am aware that boot-jacks have been made where an inflexible portion pressed on the upper surface of the foot of the boot, I therefore do not claim that as such.

But I claim the described arrangement of the platform, A, vibrating arm, F, and cross bar, H, when the whole is constructed, arranged and made to produce the result substantially as described.

LETTER ENVELOPE—James G. Arnold, of Worcester, Mass.: It is evident that some variations from the above will be necessary in making the different sizes and styles of envelopes, but they being governed by the said principles of construction and producing the same results, will suggest themselves in each case; therefore I do not wish to be understood as limiting myself to the precise forms or proportions of parts shown, as I do not claim these.

But I claim, as a new article of manufacture, making letter envelopes by cutting, folding and pasting the paper substantially in the manner and for the purposes set forth and described.

I also claim folding narrow folds at the ends or sides so as to come inside between the face and back in the manner and for the purposes substantially as set forth and described.

MANUFACTURE OF PYROGENIC OILS—Luther Atwood, of Brooklyn, N. Y.: I claim forming oleaginous vapors from substances yielding pyrogenic oils, by the action of the heat of a properly regulated current of products of combustion passing over and above the surface of the mass operated on with or without the aid of external heat, substantially as described and for the purposes set forth.

APPARATUS FOR DESTRUCTIVE DISTILLATION.—Luther Atwood, of Brooklyn, N. Y.: The combination and arrangement of a "distilling tower" and receiving vessel substantially as described, with a steam blast, or its equivalent, in the combination for the purpose of producing an induced current, substantially in the manner and for the purposes described and set forth.

APPARATUS FOR DESTRUCTIVE DISTILLATION OF WOOD, &c.—Luther Atwood, of Brooklyn, N. Y.—I claim, First, The use of the inner case, V, in the manner and for the purposes substantially as set forth.

Second, The described arrangement of the flues, N, leading from the annular passage, E, into the distilling tower, A, substantially as and for the purposes set forth.

Third, The combination with the distilling tower of the combustion chamber or fire place, A', when so arranged as to supply products of combustion by a downward draught through the fire place substantially as described.

LAMPS—William W. Batchelder, of New York City: I claim the small tapers or wick tubes, D, placed on both sides of the flat burner or wick tube, C, in combination with the cap, A, when the said tubes and cap are used without a chimney substantially as set forth for the purposes described.

MANUFACTURE OF ARTIFICIAL FUEL—William A. Bradley and Jacob Bigelow, of Washington, D. C.: We claim the manufacture of artificial fuel made from refuse bituminous coal anthracite or charcoal, as set forth, combined with the substances herein described, the whole made in the manner and for the purposes set forth.

GRAIN MEASURE—Job Brown, of Lawn Ridge, Ill.: I am aware that tallying machines have been previously used and arranged in various ways, and I therefore do not claim broadly such device irrespective of the particular arrangement of parts shown and described.

But I claim, as new, and desire to secure by letters patent, as an improved article of manufacture, a grain tally having a slide, H, operated by a pendent, g, and spring, I, a lever, F, pall, E, ratchet wheel, D, and indicating belt, C, the whole combined and arranged as shown and described.

[By this invention grain taken to the mill can be accurately tallied. It consists in applying to a grain bin, or receptacle of any kind containing grain, an endless graduated belt arranged with certain mechanism, so that the mere placing of the measure beneath the bin will open a slide or door, and allow the grain to pass into the measure and also actuate the belt so as to record or register the measure, the slide or door closing as the filled measure is removed.]

REVOLVING FIRE ARMS—John W. Cochran, of New York City: I claim first, The hinged or jointed thumb-piece of the hammer or cock, constructed and arranged, and having the functions substantially as set forth

2d, I claim the worm-wheels upon the cylinder shaft, and the tumbler shaft or hammer shaft, combined and operated as and for the purposes described.

3d, I claim the means substantially as set forth, for allowing the cylinder to be rotated within its frame independent of the shaft of the hammer or tumbler, and also allowing of the detaching of the cylinder and its shaft from the frame and from the means of rotation.

COMPENSATING PENDULUM FOR CLOCKS—Wright S. Coffinberry, of Grand Rapids, Mich.: I claim the combination of two metals of different expansibility in the manner and for the purpose set forth in the specification.

STUMP EXTRACTORS—Francis M. Eagle, of North Manchester, Ind.: I do not claim any construction in which the movement of the stump is the same as that of the power.

But I do claim overcoming the resistance by the movement of a roller invariably connected with the stump, substantially as described, upon a track either rectilinear or curved, all parts of which, except the starting point of the roller, are exterior to the circle with the invariable connection for a radius and the point of attachment of the hook for a centre, the operation being substantially as described.

STOVES—Nelson Edwards, of Chittenden county, Vt.: I claim the application to a stove of an improved, combined hydro-atmospheric jet and gas chamber.

I also claim the stove-contained coiled smoke-pipe in its combination with the plurality of stove walls substantially as described.

SPRING BOTTOM FOR CHAIRS AND OTHER SEATS—Patrick Gallagher, of Pleasant Unity, Pa.: I claim making the bottoms of chairs, or other seats, of spring plate metal, so that, when laid loosely upon the frame, said plates shall be both a bottom and a spring, substantially as set forth.

PRINTING PRESS—S. R. Cotton, of Green Bay, Wis.: I claim operating the form bed, J, from the pressure cylinder B, by means of the cam or eccentric, M, provided with the pin, O, rack bar, D, provided with the projection, p, and roller, n, the pinions, E G, on the shaft, F, with or without the pinion, H, slide bar, L, and spring, s, and the rack bar, I, the whole being arranged to operate as and for the purpose set forth.

I also claim the toothed sector, x', which gears into the pinion, y, of roller, a', and is connected with the rack bar, D, by means of the slotted arm, t, on the rack bar, and the arm, w, of the sector, provided with the pin, o, the rod, c', attached to the arm, d', the pall, i', attached to the arm, d, and the ratchet, h', attached to the roller, g', the whole being arranged as fully shown and described, so that the inking device will be operated automatically from the pressure roller.

I further claim having the bearings, b b, of the pressure cylinder, attached to rods, d d, which are connected by tension nuts, e e, to straps, f, that encompass the eccentrics, g, of the shaft, h, for the purpose of readily raising, when necessary, the cylinder, B, and regulating its pressure.

[The object of this invention is to obtain a very simple and economical cylinder press, suitable for operation in a small way, as, for instance, job or country newspaper offices, and one that will work rapidly with but a small expenditure of power. The invention consists, 1st, In the peculiar arrangement of parts employed for transmitting motion to the form-bed and inking device from the pressure cylinder; 2d, In an equalizing device connected with the reciprocating form-bed, and so arranged that all "back lash" is prevented at the termination of its vibrations, and an easy, smooth and regular movement obtained; and 3d, In a peculiar means employed for adjusting and regulating the pressure cylinder.]

STEERING PROPELLER—H. E. Tessel, of Chicago, Ill.: I do not claim the invention of applying a screw propeller in such a manner that its position can be changed to make it operate as a rudder.

But I claim the arrangement and combination of the slotted frame, A, propeller, F, driving shaft, C, and chain wheel, i, substantially as and for the purpose shown and described.

[This invention consists in applying the propeller shaft in bearings carried by a horizontal circular frame which is capable of rotating to some extent around a vertical driving shaft, geared with the propeller shaft, and which is so geared with a steering apparatus that the propeller shaft may be set at any required angle to the centre line of the vessel, and the propeller thereby made to perform the duty of a rudder without interfering with its action as a propeller.]

SEEDING MACHINES—Joseph Fowler and F. M. Bacon, of Ripon, Wis.: We do not claim the board, J, nor the roller, G, for they have been previously used, and may be seen in our patented machine previously alluded to.

But we claim the reciprocating perforated slide, E, stationary perforated slide, H, and perforated roller, G, in connection with the inclined board, J, the whole being arranged to operate as and for the purpose set forth.

[This invention relates to an improvement on a seeding machine formerly patented by the same inventors, the letters patent being dated August 24, 1858. The present invention is an improvement in the seed-distributing device, whereby the seed may be more evenly distributed or planted than by the former machine.]

SHUTTLE BOXES FOR LOOMS—A. F. Gibboney, of Union Township, Mifflin county, Pa.: I claim the half swell, D, on the inner end of the fly, A, to be operated on by the picker, F, as set forth.

SASH FASTENER—Porter A. Gladwin, of Pawtucket, Mass.: I claim the employment of the perforated plate, D, with the notch spring, F, for fastening window sash in the manner substantially as described.

PROPELLER FOR BOATS—James Hamilton, of New York City: I do not claim a reciprocating propeller frame between the vessel, neither do I claim buckets hinged at their upper edge, nor movable stops against which the buckets rest while in action.

But I claim the arrangement of two sets of propeller buckets in a reciprocating frame, so set that they act in opposite directions to give head or stern way respectively, when said buckets are, combined with sliding stops, fitted and acting, as specified, to retain one set of buckets in a folded and inoperative position, while the other set is acting to move the vessel as set forth,

TYPOGRAPHER—Henry Harger, of Delhi, Iowa: I claim first, The employment or use of the bedpiece, B, frames, D and C, and type frame formed of the plates, E E, arranged substantially as and for the purpose set forth,

2d, The particular means employed, as herein shown and described, for feeding the frame, C, and paper or wax to the type; to wit, the bent lever, G, connected to the hand lever, F, the ratchet, H, and cords or chains, o, attached to the frame, C.

3d, Regulating the feed movement of the frame, C, by having the types, h, made of varying hights or lengths, so as to give corresponding lengths of vibration to the lever, F, substantially as described.

[By this arrangement of means for actuating type, and feeding the paper thereto, printing directly from the type is much facilitated, or the invention is applicable either for printing on paper or for giving impressions on wax, so as to form molds or matrices for electrotyping and similar purposes.]

FURNACES FOR BURNING LIME—Thomas R. Hartell, of Philadelphia, Pa.: I do not claim, broadly, a reverberatory furnace, arranged to receive a movable platform or truck, containing the articles or material to be acted upon by the heat of the furnace, as such a device has heretofore been used in the manufacture of glass.

But I claim, as an improvement in reverberatory furnaces for burning lime, providing a recess in the side walls in which a corresponding projecting edge of the fire-proof traveling platform fits, in the manner described, for the purpose of cutting off all communication between the heated upper chamber and the cool lower chamber, at the same time presenting no obstruction to the forward movement of the truck and platform.

LOCK—Spencer Hiatt, of Indianapolis, Ind.: I claim first, The combination and arrangement of the tumblers, 1 2 3 4 5 6 7 and 8, and key bits, 9 10 11 12 13 14 15 and 16, with the lever, A, sliding yoke, Q, and lever arms, V and K, when constructed and arranged substantially as set forth.

Second, The combination of the comb spring, M, and slide, R, with the tumblers, 1 2 3 4 5 6 7 and 8, when constructed, arranged, and operated substantially as and for the purposes set forth.

BREECH-LOADING CANNON—John W. Hollensbury, of Alexandria, Va.: I claim a breech-loading cannon formed in two parts, and secured together by means of a frame, substantially as described.

Second, In combination with the two divisions of the cannon, as described, I claim the frame, D E F G, fitting closely up against the breech, A, and capable of being elevated or depressed, the whole constructed and operated substantially as and for the purpose set forth.

Third, In combination with the two divisions of the gun I also claim the band or circular wedge, W, constructed and operated substantially as described.

LADIES' HOOPED SKIRTS—John Holmes, of Boston, Mass.: I claim the net-work fabric described, having the number or size of its meshes reduced toward the top in such a manner as to throw the fullness in one direction or on one side, so that when the hoops are inserted it is self-sustaining, to produce the "bishop" or "bustle" form, and preserve that form to the bottom of the skirt, as set forth, without the use of lacings, springs, extra "bustles," or other contrivances.

[These skirts are formed of a net-work, between the meshes of which the hoops are passed; and in the manufacture, sufficient fullness is left in the back part to form a bustle when the hoops are placed in it. It is a neat and well-shaped skirt.]

METHOD OF ADJUSTING THE TRIPPER TO THE ESCAPEMENT LEVER OF TIME-KEEPERS—Edwid B. Horn, of Boston, Mass.: I do not claim a compensating scroll or coil, D, composed of two metals of variable expansive properties, and applied to a hair-spring balance.

But I claim the movable plate, F, or its equivalent, supported so as to be capable of turning on a pivot, or its equivalent, carried by the stand, the same being for the adjustment of the beat or the pin or tripper of the escapement lever, as specified.

INKSTAND—Thomas S. Hudson, of East Cambridge, Mass.: I do not claim an inkstand composed of a main ink reservoir and a cup or ink receiver, furnished with a tube, and connected with the main reservoir by a flexible or elastic diaphragm, as such is not new.

Nor do I claim in combination with the ink reservoir or cup, B, and its cover, D, mechanism substantially as described, whereby the act of elevating the cover off the cup, the latter shall be depressed so as to cause ink to flow from the reservoir upward into it, and by the act of depressing the cover toward the cup, the ink will be caused to flow back into the reservoir.

But I claim the arrangement of a vent hole, i, within the flexible or elastic diaphragm, C, and with respect to the ink receiver, B, essentially in manner and to operate as described, and for the purpose explained.

TOOL FOR SLOTTING CLOTHES PINS—John Humphrey, of Keene, N. H.: I claim arranging knives or cutters to widen or flare the outer ends of the slots in clothes pins simultaneously with the sawing thereof, by having portions of the plate of the saw removed, and the cutters secured to the disks or flanges on the arbor, and held thereby independent of the saw, as shown and described, by which arrangement a perfect and complete slot may be cut, at a single operation, and the cutters may be quickly and accurately adjusted to any required position, and be securely kept therein or be readily removed, when desired, as set forth.

PROPELLING AND STEERING APPARATUS — Samuel Huse and Samuel Huse, Jr., of Chicago, Ill.: We claim as an improvement in propellers, when hung within the rudder and operated by gears, E F G, as set forth is, receiving the end thrust of the propeller shaft upon the sleeve, I, on the post, B, arranged and operating in the manner substantially as described.

SPRING TACKLE BLOCK—Obed Hussey, of Baltimore, Md.: I am aware that springs have been interposed between blocks and the fixed or movable eye bolt or body to which they were attached; such an arrangement of a spring without the block is, obviously, an essentially different thing from my improved block with a spring within it.

Of course, I do not confine myself to any special form or arrangement of the strap and the block, or of either (as these may be indefinitely varied), so long as the block is constructed with a seat to yield to the force of sudden shocks, and thereby prevent the dangerous jerks which, as described, it is the object of my invention to prevent.

What I claim is, a block having a yielding seat, substantially as set forth.

PRESERVING FRUITS—John R. Jenkins, of Kingston, Pa.: I am aware that the mode of preserving such articles by incrusting them with a composition impervious to the air, and which will prevent their desiccation and decay, is not new; Robert Warington obtained, March 5, 1846, a patent in England for the use, in this manner, of many such compositions. I do not wish, therefore, to claim broadly this mode.

But I claim dusting the articles to be coated with any dry powder, such as plaster of Paris, or its equivalent, to prevent the coating from adhering to the articles coated, and permitting it to come off readily.

GAS RETORTS—William H. Laubach, of Philadelphia, Pa.: I do not desire to confine myself to the particular form of the retort illustrated, or to the exact shape of the plate, D, inasmuch as both may be considerably modified in shape without any deterioration of the result.

But I claim dividing the retort into an upper and a lower chamber by means of a movable plate, D, said plate being so constructed and so arranged in respect to flanches or projections in the retort, and being so weighted that the amount of vapor admitted into the communication between the two chambers shall be proportionate to the rapidity with which it is generated, and that the vapor shall pass from the lower chamber in a stream so attenuated and so exposed to red-hot surfaces as to insure its being converted into permanent gas on entering the upper chamber, as set forth.

CLOTHES' HORSE—Tristram S. Lewis, of Kendalls' Mills, Me.: The arrangement of the four spring catches is such that the spring, k, while operating to press the horse open, and to maintain it in an extended state when unfolded will also operate to maintain all the catches in engagement with their respective slats. Therefore, when the posts, A B, are hinged together, and the four folding sets of slats are applied to them and arranged on them as described—

I claim the arrangement of the spring, k, and the two sets of spring catches, f g h i, in order that the said spring may perform at one and the same time the two functions, as specified.

FRUIT CANS—W. W. Lyman, of West Meriden, Conn.: I claim in combination with the groove for receiving and holding the packing and the flange, m, on the cover, fitting into said groove and against the packing, the sleeve, C, with its cam slots, and the studs on the neck of the can, for drawing the flange of the cover tight down on to the packing without crimping it, substantially in the manner specified.

CULTIVATORS—Howard Mann, of East Attleborough, Mass.: First, I claim the application of each wheel arbor to its wheel, and the frame, A, substantially as described, viz., so that the wheel may turn on the arbor, and the latter extend into slots, and have fastenings as explained, whereby not only the wheel may be adjustable with reference to the cutters, but the arbor and its screws and nuts may be employed to strengthen the frame, in manner as set forth.

Second, I also claim the described arrangement of each of the slots of the wheel arbor with respect to the scraper of the periphery of the wheel, whereby the wheel, at whatever altitude it may be placed, while its arbor is in the slots, will be at one uniform or proper scraping distance from the scraper.

Third, I also claim the application or arrangement of the slide bar of the cutter, G, so as to operate not only as a scraper to the wheel, but as a supporter of the cutter post or rod.

SEED PLANTERS—F. M. Marshall, of Seguin, Texas: I claim the arrangement of perforated plates, A' and B', beam, A, gage wheel, B, bull tongue plow, S, roller, F, crank, H, arm, D, and handles, R R, the whole being constructed for joint operation as set forth and described.

MACHINES FOR PICKING CORN—S. W. May, of Gatesburg, Ill.: I claim the bars, L, the elevators, F, the figer d belt, R, the frame, A, the crank with its pitman, O, or their mechanical equivalents, the whole being combined, arranged and operated, substantially as and for the purpose set forth.

LOCOMOTIVE AXLE BEARINGS—David Matthew, of Philadelphia, Pa.: I am well aware that it is common to use a crease in journal bearings for purposes in connection with lubrication, but they have no such effect nor construction as mine, and I do not wish to be mistaken as using a mere modification of such crease, or as claiming any such arrangement or device.

But I claim the peculiar construction of journal-box or bearing, in one piece, having a longitudinal slot or opening operating as and for the purpose substantially as set forth.

DOOR SPRING—T. J. Mayall, of Roxbury, Mass.; I claim, as a new article of manufacture, the described india-rubber torsion door spring, operating as described.

SHIRT STUD—Charles McIntire, of Newark, N. J.: I claim the latch and catch, constructed substantially in the manner and for the purpose set forth.

CORSETS—Anne S. McLean, of Williamsburg, N. Y.: I disclaim looped fabrics of any kind for the purpose of forming the shield or top of the pad next to the outer dress.

Neither do I claim the manufacture of eyelet hooks, as they are in common use.

But I claim providing the upper sections or pads of the corset, with cone-shaped flat steel, or their equivalent springs and spring supporting plate next the body, for the purpose of giving elasticity to the pads, which pads are held in their places by the weight of the corset.

IRON PAVEMENTS—Richd. Montgomery, of New York City: I claim a metallic pavement, consisting of a series of parallel arched corrugations, reaching or extending from the curbstone on one side of the street to the curbstone on the other side, substantially as shown and described.

I also claim casting or making the upper parts of the corrugations thicker than the lower parts in the manner and for the purpose set forth.

I also claim supporting or anchoring the pavement when it is cast in sections by a grooved central support, as shown and described.

I also claim the dovetailed recesses and projections, k, in combination with the projections, b c, for the purpose of holding the pavement in place.

DEVICE FOR TRANSMITTING ROTARY MOTION—Henry Morris, of West Philadelphia, Pa.: I claim the combination of the convolute gear, A, and convolute groove, b, with a sliding pinion or gear, C, substantially as and for the purposes shown and described.

[This invention consists in the combination of two beveled gears, one of which has its teeth arranged in convolute form, and the other of which, gearing with the first one, has its teeth concentric to its axis; the latter being fitted to slide on its shaft that it may, when geared with and driving or being driven by the first one, approach or recede from the axis of the same under the guidance of a convolute groove, which is formed between the convolute coils of teeth, and be thereby caused to receive from or impart to the first one a gradually increasing or diminishing velocity. The device may be applied to many purposes in machinery, but is more particulary intended to be applied to the spinning mule, the first gear being secured to what is known as the "scroll shaft" of the mule to drive the other one, which is attached to a shaft which drives the rollers, for the purpose of producing a gradual diminution of speed of the rollers before stopping them after the mule carrier has moved out a certain distance from the rollers, and thereby prevent the jerk on the yarn, which is caused by stopping the rollers suddenly.]

BLIND FASTENER—John Murphy, of Boston, Mass.: I do not claim the window blind or shutter fastener shown and described in the United States patent No. 4,633.

But I claim the arrangement of the spring catch on the pintle step shank, and with respect to the notched pintle, as described.

I also claim combining with the catch, and its case, a movable projection, or cover, applied so as to be capable of being moved on and off the pintle head, and to carry the thumb projection or stud of the catch, substantially in manner and for the purpose as specified.

LATHE FOR TURNING MASTS, &c.—P. H. Niles, of Boston, Mass.: What I claim as an improvement in machines for turning masts and spars is the revolving traversing cutters, in combination with the dogs or their equivalents for supporting the stick of timber, operating in the manner described for the purpose set forth.

Second, I claim raising the dogs automatically as the cutters approach them, for the purpose set forth.

Third, I claim the method of controlling the position of the cutters by means of the combination of the slotted wheels, D and L, the gears, P Q and R, and the pattern, W, and their connections, M M', N O T V, operating in the manner substantially as set forth.

CONSTRUCTION OF IRON RAILING—James Nuttall, of New Orleans, La.: I do not claim, broadly, dovetailed connections, as such is not the scope of my invention.

But I claim the combination of bent sheet metal rails, with grooves in the panels receiving the edges of the rail, and giving an internal and external bearing to the rail, substantially as set forth.

LATHE MACHINE—Jacob Pefley, of Bainbridge, Ind.: I claim the combination of the reciprocating knife, K, the bolt supports or bars, k, and the stationary bar or bed, Y, arranged to operate substantially as and for the purpose set forth.

I also claim the shaft, H, provided with the bent rods, h, and connected or arranged with the rock shaft, V, of the bars, k, through the medium of the levers, Q R, bars, S R', and the arm, U, substantially as and for the purpose set forth.

I further claim, in connection with the knife, K, bars k k, and bed, Y, the registering device operated from the rock shaft, V, through the medium of the pawl, i, connected with the lever, C, rod, k', and bent lever, i', so as to be thrown in contact with the ratchet, A', by the bolt, a, as set forth.

[A reciprocating knife or cutter is arranged with a stationary bed and reciprocating supports for sustaining the belt, and there is also a registering device applied to the machine, and used in connection with a bell. These are so placed in conjunction with each other that a perfectly self-feeding or automatic machine is obtained, one that works expeditiously and well.]

CORES FOR MOLDING PLASTIC SUBSTANCES—James Pilgrim, of New Britain, Conn.: It is obvious that my improved core may be made of any desired form and size, and of various materials, without departing from the nature of my invention, though for its formation I have found the india rubber cloth, in practice, most desirable.

It will also be observed that my improvement is particularly applicable and advantageous in the construction of composition cisterns and other formations, where the orifice through which the core has to be extracted is much smaller than the cavity formed, since a core thus constructed may be entirely collapsed and drawn through a very small hole.

I do not, therefore, desire to limit myself to any particular form of core or material of the same, or to any exact arrangement of the inflating and exhaust devices.

But I claim constructing cores for molding in plastic clay, cement, or other like substances, of india rubber, or equivalent material, so that they be inflated and collapsed, substantially as described.

PESTLES FOR CLEANING CLOTHES—Ezra Pollard, of Albany, N. Y., assignor to himself and B W. Seeley of New York City: I do not claim a pestle formed of a series of parallel and solid cylindrical projections fitted in a head or stock, for that, or its equivalent, has been previously used.

But I claim as an improved article of manufacture, a clothes pounder or pestle composed of a stock, A, handle, C, tubes, D, and openings, a, as shown and described.

[The subject of this patent is a clothes pestle or pounder, constructed of a series of parallel tubes fitted in a suitable head or stock, and having apertures made through them at their upper parts, thus rendering it a very effective instrument for washing clothes.]

BURNISHING ATTACHMENT FOR LATHES—James S. Ray, of East Haddam, Conn.: I claim the arrangement and combination of the plate, E, plate, F, spring, K, mandrel, C, and tool, G, as and for the purposes shown and described.

[The object of this invention is to facilitate the manipulation of the burnishing tool to such a degree that apprentices, females, and comparatively inexperienced persons, may perform the desired work equally as well as the experienced workmen now required. The invention is applicable to all burnishing that is performed with the aid of a lathe—such as the burnishing of metal buttons, coffin screw-heads, &c.]

STEERING APPARATUS—Jesse Reed, of Marshfield, Mass.: I claim, first, The duplex screw shaft, E, in combination with the nuts, G, and guide rods, H, the rods being each permanently connected with one of the nuts, and passed through the lug, d2, on the other nut, and operating in the manner substantially as specified.

Second, I claim in combination with the above, connecting the nut, G, to the rudder-head by means of the arm, I, bulb, K, and rod, b, operating substantially as described.

TRACE FASTENINGS—Nil J. Reynolds, of Webster, N. Y.: I do not claim the face plate, A, or bolt and spiral spring, E, as new.

But I claim first, the formation of the eye, d, which receives the tongue, E, for the purpose described and set forth.

Second, I claim the tongue, E, in combination with the tube, c, spiral spring and bolt, E, which fastens tongue, E, in the eye, d, as described.

RAILROAD CAR BRAKES—J. W. Rice, of Springfield, Mass.: I claim, first, The suspension bar, H, crotch bolt, J, and nut, J, when arranged and operating in the manner and for the purposes substantially as described.

Second, I claim the continuous rod, V, and loose pulley, K, in combination with the suspension bar, H, and crotchet bolt, I, and nut, J, when arranged and operating substantially as and for the purposes set forth.

Third, I claim the loose collars, P P, on the standard, q, when applied in the manner and for the purposes substantially as set forth.

BEDSTEAD FASTENING—Oliver Robinson, of Rochester, N. Y.: I claim the combination and arrangement of the hooked locking bolt, A, with the circular wrench and eccentric, B, constructed as described, for holding the bolt by means of the lip, i, in the proper position for entering the post and tightening the connection made with the pin, f, or its equivalent, substantially as and for the purpose set forth.

APPARATUS FOR WALKING ON THE WATER—Henry R. Rowlands, of Boston, Mass.: I claim the construction and use of the apparatus by the arrangement of the metal floats, o o, the metal ballast boards, m m, and the wooden stanchions, H H, in a manner substantially as and for the purpose described.

DREDGING MACHINE—James Stewart, of New London, Ct.: I claim the arrangement of the three series of dredging buckets in the same dredging machine, substantially as described and shown, for the purpose of excavating a channel in the earth throughout the entire width of the boat.

I claim arranging the windlass barrels which raise the dredging apparatus out of the water, on the same shaft that operated the dredging chains, so that they may be locked to the shaft to raise the dredging apparatus without stopping the chains of dredging buckets, substantially as described.

BURRING MACHINE—O. W. Stow, of Southington, Ct.: I do not claim the rollers, G H, nor the manner of adjusting the upper rollers H, nor do I claim the gage I, in itself considered, nor the manner of adjusting the same on the lower roller, G, by the screw rod, J, for these parts are well known and have all been previously used.

But I claim the arrangement and combination of the spring, K, gage, I, and rollers, G H, substantially as and for the purpose shown and described.

[The object of this invention is to prevent the difficulty attending the wear of the journal of the lower roller shaft, and the consequent separation of the lower roller from the gage, whereby the latter is frequently rendered useless, or prevented from performing its proper functions. It consists in a novel manner of applying the gage to the implement, whereby the gage is permitted to adjust itself with the lower roller, and compensate for all wear of the journal of the lower roller shaft.]

MANUFACTURE OF STARCH—S. T. Stratton, of Philadelphia, Pa.: I disclaim the use of cold alkalies or alkaline liquors for steeping the material.

What I claim is, steeping the material from which the starch is extracted, either whole or crushed, in an alkaline or caustic alkaline liquor of a suitable strength and artificially beaten to a temperature of from 70° to 130° Fah., as specified.

WASHING MACHINE—G. W. Swigert, of Monmouth, Ill.: I claim as an improved article of manufacture, a washing machine provided with a cylinder of brushes C, a concave, J, supported on spring, d, guard, k, attached to rod, e, pounders, L, tappet drum, M, and otherwise constructed as shown and described.

[In this invention, a rotating brush, elastic concave and guard are employed placed in a suitable box or case, and so arranged that clothes may be washed in an expeditious and perfect manner without injury or breaking any buttons that may be attached to them.]

CLOSET FOR SEWING MACHINES—William P. Uhlinger, of Philadelphia, Pa.: I am aware that sewing machine stands have already been made with a view to hide the machine from sight, when standing idle, which end is, in those, accomplished by means of a separate covering or cap, the platform of the machine being stationary; but this I do not claim. I think, however, it must be evident from the description that parts of my improved sewing machine closet may be modified, or equivalents substituted, without imparing my invention; as, for instance, an arrangement of levers, or of gearing, may be employed in place of the cords or chains and pulleys described, all of these being well known mechanical devices, and, in this instance, giving the same result; or the platform, G, may, instead of sliding bodily up and down, be made to turn on pivots; I therefore do not desire to confine myself to the described construction or combination of the various parts in every minutia.

But I claim combining the sewing machine platform, G, with the lid, B, of the closet, that the opening and shutting of said lid shall operate the platform, G, substantially in the manner and for the purpose set forth.

RAILROAD CAR SEATS AND COUCHES—Nathan Thompson, Jr., of Brooklyn, N. Y.: I claim, first, The combination of longitudinal seats, with a raised platform and berths, or reclining places beneath the seats and platform, substantially in the manner described.

2d, In combination with berths or reclining places beneath a seat and a raised platform serving as a footstool to such seat, I claim a back to that seat capable of being moved, or of change of place, substantially as specified, so that it may serve, at will, as a back or as a couch above the main seat.

3d, I claim making the top of the platform, or footplace, pertaining to the main tier of seats movable, substantially in the manner and for the purposes specified.

4th, I claim arranging within a railroad car longitudinal couches along or upon the floor, and other couches or seats above these, with backs, which may be converted into couches and passage ways, or a passage way, from which free access may be had to all the seats and couches, the arrangement of the whole being substantially such as set forth.

5th, I claim combining with longitudinal passage ways, or a longitudinal passage way, longitudinal seats when those seats have backs so constructed, substantially as specified, that they may be converted into couches, or when those seats are free to slide transversely substantially in the manner described, the combination, as a whole, being as set forth.

Sixth, I claim adjustable or movable end seats, substantially such as described, and serving, if necessary, as steps, in combination with longitudinal car seats, having backs capable of conversion into couches, substantially in the manner specified.

APPARATUS FOR GENERATING ILLUMINATING GAS—Charles A Tyler, of Washington, D. C.: I claim, first, The peculiar arrangement and combination of the retort for generating the hydrogen gas with the main retort for the generation of the illuminating gas, substantially as set forth.

2d, Elongating and contracting the rear end of the main retort in the manner and for the purposes substantially as set forth.

3d, Connecting the rear end of the hydrogen retort with the contracted end of the main retort in the manner and for the purposes substantially as set forth.

BURNERS FOR VAPOR LAMPS—Sigourney Wales, of Boston, Mass.: I claim, when the wick is supported on and around an inner wick tube and within an outer wick tube, and the jet-cap is made separate from and so as to screw or fit on the outer wick tube as described, the application of a rod, F, to the movable jet-cap, D, and the inner wick tube, E, in such manner as to be fastened to the cap, D, and extend into and fit the bore of the tube, E, so as not only to enable the jet-cap to be raised and supported above the wick in manner to allow such wick to be inflamed and the flame thereof to heat the said jet-cap and rod, but to serve as a means of conducting heat from the jet-cap into the inner tube, by which such heat may be conducted into the wick in order to aid in vaporizing the liquid contents thereof.

MAKING EDGE TOOLS—William White, of Newark, N. J.: I am aware that ingots of steel and iron are now formed by pouring the melted liquid into molds; I do not claim for the purpose of forming the ingot; I do not claim the manufacture of iron or steel, nor the remelting of the same, either new or old.

But I claim the use of wrought iron and steel separately or combined, while in a melted or liquid state, for the purpose of forming into shape axes and other articles, without the process of forging, welding or swaging, by the use of a mold, the cavity of which is the shape or form of the articles desired, as set forth in my specification.

LIFE-PRESERVING TRUNK—Oliver Evans Woods, of Philadelphia, Pa.: I do not confine myself to the precise form of valise represented in my drawings, but the same construction may be applied with equal advantage to all kinds of trunks; the stays may be placed upon the inside or the exterior of the valise or trunk as may be found most desirable.

I claim, as an improved article of manufacture, a valise or trunk, made substantially as shown and described.

[This valise, trunk, hat-box or other similar article used by travellers for carrying clothes, is constructed out of three separate frames, which are connected by a flexible waterproof covering, the middle frame being provided with pivoted stays, so that the valise is expanded when these stays are turned on their pivots into an upright position; but when the stays are turned down, so as to fall in the same plane with the middle frame, to which they are attached, the valise can be compressed like a pair of bellows.]

THE CUTTING APPARATUS OF HARVESTERS—William A. Wood, of Hoosick Falls, N. Y.: I claim the manner described of constructing the guards and uniting them to the finger bar, as set forth.

DOOR FASTENER—Gilbert Yates, of West Dresden, N. Y.: I am aware that there is quite a number of fasteners already patented, all of which I disclaim.

But I claim a door fastener constructed of the pieces, A A' A'', bolt, B, keeper, C, and slot, D, operating as set forth.

TURNBUCKLE FOR WINDOW BLINDS—Joseph L. Chapman, (assignor to himself and George Chapman,) of Philadelphia, Pa.: I claim the turnbuckle, E, and sliding collar, D, provided with the flanch, b, and the spring, E, placed on the spindle or arbor, A, the whole being arranged to operate substantially as and for the purpose set forth.

I also claim, in combination with the above named parts, the washer, C, placed on the arbor, A, for the purpose set forth.

[The object of this invention is to obtain a fastening that will secure window shutters or blinds in an open state, without allowing them to play or rattle, and a the same time accommodate itself to shutters or blinds of different thicknesses, and one also that will not be liable to work loose in a building by the action of the shutter or blind upon it when thrown open.]

RAILROAD CAR SEATS—George L. Dulaney, (assignor to himself and Solomon R. Moore,) of Mount Jackson, Va.: I claim the combination and arrangement of the movable seat bottoms, C, hinged folding cushions, G, sliding slat blind frames, H', and hinged cushioned frames, 1, and cushioned flaps, K L, on the backs, E, of the seats and slides or panels, M.

[The nature of this invention consists in so constructing the seats and securing them to the floor of the car as to enable them to answer all the purposes, and have all the advantages of the ordinary reversible car seat and yet admit of their being turned parallel with sides of the car, and their several parts altered and so adopted to each other as to convert them into comfortable double sleeping couches, one above the other, with suitable partition blinds between the lower ones, and entirely enclosed from outside observation, and thus insure their occupants the privacy, ease and facilities for sleep that are obtainable from the ordinarily arranged berths for steamboats.]

EXPANDING BIT—Harley Stone, (assignor to Paul P. Todd,) of Blackstone, Mass.: I claim the mode and application of the slide cutter, B, the slits, C and D, the bolt, E, and the graduated scale, F f, and constructed and operating as set forth and described.

METHOD OF BLASTING OR REMOVING SUBMARINE BODIES—Samuel Eakins, assignor to himself and U. S. Wickersham, of Philadelphia, Pa.: I claim the combination with a piece of ordnance to be employed under water for the removal of rocks or other bodies, by the operation described of a series of adjustable legs, applied and operating substantially as and for the purpose specified.

[In this method of blasting or removing submarine bodies, a very heavy cannon, loaded with powder and ball, is sunk with its muzzle in contact with, or as close as possible to the face of the rock or other body to be removed, and fired by a galvanic battery, to project the ball against the rock. The weight of the column of water above the cannon, added to the weight of the cannon itself, prevents recoil, and causes the ball to be projected with immense force. The cannon has adjustable legs, which support it or attach it to the body to be removed, and enable it to be set at such angle as might be desirable to split off a ledge of rock. When the cannon has been fired, it is raised by chain tackles attached to it. Experiments show this to be a very effective method of blasting.]

STACKING AGRICULTURAL PRODUCTS—Carlos W. Glover, of Farm Ridge, Ill., assignor to himself, Bronson Murray and J. Van Doren, of La Salle county, Ill.: I claim making a stack out of two or three, four or more lengths of straw or other material, that overlap or break joint with each other, and which are laid with their seed ends pointing to a common center, and commencing at the apex and ending at the base, and drawn together and secured substantially as represented, using, as a foundation to build upon, an apron or the binding cords or chains as set forth.

STACKING AGRICULTURAL PRODUCTS—John Van Doren, of Farm Ridge, Ill., assignor to himself, Bronson Murray and Carlos W. Glover, of La Salle county, Ill.: I claim the so placing of two, three or more layers of straw or straws in a box or former that they shall break joint with each other, beginning at the apex and so continuing until one half of the stack is formed, and then reversing the operation and laying them from the base to the apex for the other half of the stack, so that, when bound up, they shall form a stack shingled on its outside to protect the interior, substantially as described and represented.

CAST IRON MERCURY BOTTLE—Moses Wrangle, assignor to Hunter, Keller & Co., of New York City: I claim molding iron mercury bottles, with concave bottoms, by means of the patterns, substantially as described.

RE-ISSUES.

SHEARS—Joseph A. Braden, of La Grange, Ga. Patented Sept. 21, 1858: I claim the construction of scissors or shears, with their blades in separate pieces from the handles, and fitted to the handles with stems and sockets.

[We noticed this invention on page 26 of the present volume of the SCI. AM., and the same description equally applies to the re-issued patent.]

LOOMS FOR WEAVING FIGURED FABRICS—Geo. Crompton, of Worcester, Mass. Patented Nov. 11, 1854: I claim, combining with hook jacks which are connected with the harness, and with the mechanism for operating them to open the shed, a pattern chain or cylinder constructed with two or more petterns, and operated so that either of the patterns can be made to act on the hook jacks to place them in the required position to be operated upon by the mechanism for operating the shed.

I also claim, in combination with a pattern chain, arranged with two or more patterns in the direction of its length, the mechanism for changing the movements of the chain to effect the changing of the pattern.

I also claim placing two or more patterns upon the rods of a pattern chain side by side, and operating them in succession by vibrating the chain laterally.

I also claim pivoting the lifting and depressing rods at one end, the other being made adjustable.

And I also claim moving the rods or jacks out of contact with the rollers on the pattern chain before the chain, the chain is moved by means of what are termed the vibrating fingers, or the equivalents thereof.

STEAM STOVE—J. L. Sutton, of Norristown, Pa. Patented July 20, 1858: I claim combining two or more concentric chambers, connected together and arranged in respect to each other, with a boiler attached to an ordinary stove, for the purpose specified.

MACHINERY FOR CUTTING SCREWS—H. A. Harvey, assignee (through mesne-assignment) of Thomas W. Harvey, late of New York City. Patented May 30, 1846: I claim the combination and arrangement of two inclined rollers, one or both rotating, and placed at a sufficient distance apart to permit the shanks of the blanks to hang therein freely suspended by their heads, and for the purpose or arranging the blanks (when presented in a promiscuous mass) all in a row, with their heads up, and causing the row to travel to the lower end, and to be delivered one by one.

2d, Combining with the delivery end of the inclined rollers, or equivalent ways, for supplying the blanks in order, a delivery and check slide and a receiving and conducting tube, or equivalent therefore, to receive the blanks from the row, deliver them one by one, and conduct them to the place where they are required for after operations, and at the periods required.

3d, Combining with the receiving and conducting tube, a transferer, or equivalent therefore, to receive the blanks from the conductor and transfer them to the mandrel or place where they are to be subjected to the cutting action.

4th, Combining with the mandrel or spindle, and with suitable means for holding the screw blanks in line, a sliding twin screw and spring, or equivalent therefore.

5th, Governing the motions of the chaser towards and from the axis of the blank, by combining the chaser with a carriage and sway bar moved by a cam, and also connecting one end of the sway bar with an adjusting slide, when this is combined with a chaser, or chaser head, whereby the amount of taper to be given to the screw can be regulated at pleasure.

6th, Changing the directions of the various cam grooves by means of sliding switches, operated by sliding rods within the hollow cam shafts, and shifted by an index cam, by which the various changes of the motions of the machines are effected.

And, finally, Making the cam which operated the sway bar adjustable on its shaft, for the purpose of adjusting the motions of the chaser to the length of the blank, to insure the proper formation of the point of the screw.

GAS BURNERS—J. R. Foster, of Boston, Mass., assignee of A. H. Wood. Patented Sept. 21, 1858: I claim, first, The flame spreaders, consisting of the ring pieces, extending outwardly from the gas orifice.

2d, I claim the heaters, combined with the jet gas burners.

3d, I claim, combining with the jet gas burner, a draft cone, the top of which terminates at or near the level of the gas orifice.

INVENTIONS EXAMINED at the Patent Office, and advice given as to the patentability of inventions, before the expense of an application is incurred. This service is carefully performed by Editors of this Journal, through their Branch Office at Washington, for the small fee of $5. A sketch and description of the invention only are wanted to enable them to make the examination. Address MUNN & COMPANY,

No. 128 Fulton street, New York.

Sergeant's Improved Governor.

This governor is suitable for marine or other engines, and consists of a smaller steam engine which works independently of the engine whose speed is to be governed, and which is so applied as to drive certain mechanism that offers an unvarying resistance to its motion. The small engine is also so combined with mechanism driven by the engine to be governed, and is in combination with the whole of this mechanism, that is so applied to a regulating valve which controls the supply of steam to the large engine, that any variation in the load of that engine, and consequent tendency to an increase or diminution of its velocity, as compared with the velocity of the smaller engine, causes the opening of the regulating valve to be diminished or increased in a proper degree to overcome such tendency, and causes the velocity of the large engine to be always, notwithstanding the greatest variation in the load upon it, in exact proportion to that of the smaller engine, which latter velocity can be controlled without any difficulty. The inventor is Henry C. Sergeant, of Columbus, Ohio, who has procured patents in foreign countries. The patent for the United States was granted last week.

Hugh Miller's Monument.

The foundation stone of the monument to Hugh Miller was laid at Cromarty, the birthplace of the eminent geologist and author, on the 5th ult. The monument will consist of a pillar 50 feet high, surmounted by a statue of Mr. Miller; the base is to be of old red sandstone taken from the quarry which was the first scene of Miller's geological researches. The inscription will be engraved on the base: "In commemoration of the genius and the literary and scientific eminence of Hugh Miller, this monument is erected by his countrymen. He was born at Cromarty, 10th of October, 1802, and died 24th December 1856."

Wooden Water Tubes.

The *Rural New Yorker* states that a piece of wooden tubing laid down in 1816, on the farm of E. Morse, of Eaton, N. Y., was recently lifted, and was nearly as fresh as when it was first taken from the forest. It was placed ten feet deep in the soil at the lowest point, and gradually approached the surface. The wood was pine; the bore two inches, and the whole tube four inches in diameter. This shows that wooden tubes in some situations are more durable than those of iron.

Literary Notices.

ARABIAN DAYS' ENTERTAINMENTS. Translated from the German by Herbert Pelham Curtis. Phillips, Sampson & Co., Boston; Sheldon, Blakeman & Co., New York. This is indeed a pleasant gift book, for this present-making season, and although not equal to the great original, (as, indeed, what could be) it is still the best collection of pleasant stories for children of all ages that we have seen for a long time. Its tone is genial, and the illustrations by Hoppin are lively and graphic.

THE SOCIABLE: OR, ONE THOUSAND AND ONE HOME AMUSEMENTS. Illustrated with engravings and diagrams. Dick & Fitzgerald, Ann street, New York. It is a genial substitute for the theatre, the ball room, and similar places of amusement. Every man who is surrounded by a home circle of some magnitude, or who is accustomed to share in the innocent social enjoyments of others, must have actually felt the want of choice and variety exhibited in the games and other parlor performances usually gotten up to while away, in a pleasant manner, a long winter evening.

THE COSMOPOLITAN ART JOURNAL. December, 1858. 548 Broadway, New York. This splendid quarterly contains much excellent matter from the pens of distinguished *litterateurs*, and the mechanical execution is perfect. For the engravings we cannot say much, and think that fewer and more perfect ones would be an improvement that would be appreciated. The object of the journal—the cultivation of art in America—is noble, and should be encouraged in all quarters.

THE ATLANTIC MONTHLY, for January, contains the following table of rich literary viands:—"Olympus and Osgard," "Juanita," "Left Behind," "Coffee and Tea," "Men of the Sea," "Chicadee," "The Illustrious Obscure," "The New Life of Dante," "At Sea," "Bulls and Bears," "The Professor at the Breakfast Table," "The Minister's Wooing," "White's Shakespeare." Publishers: Phillips, Sampson & Co., Boston

THE BUILDER. Wiley & Halsted, New York. This excellent periodical has some good engravings illustrative of architectural and decorative improvements in Europe, and much information that no person having taste for the progress of art should be without.

GRAHAM'S HANDBOOK OF AMERICAN PHONOGRAPHY. Andrew J. Graham, author and publisher, 348 Broadway, New York. To all who wish to attain a knowledge of the art of phonography, this book will be a valuable companion, and the already proficient will find in it many hints by which they may profit in reporting. It is, we think, a successful attempt to systematize phonography and place it beyond the chance of future change, so that any person acquiring it now will not have to be continually altering, correcting and unlearning what he has already acquired. This book will, we have no doubt, be largely sold to the flying artillery of the press (reporters), who will thank Mr. Graham for its production and the lessons it teaches. The author should, however, have given more credit to Mr. Isaac Pitman, the inventor of the art.