52,639.—Clasp for Skirt Hoops.—George W. Cheesman (assignor to himself and J. W. Osborne), Ansonia, Conn.:

claim in clasps for skirt hoops, notching their ends, substang as and for the purpose above set forth.

52,640.—Rendering Apparatus.—Charles J. Everett (assignor to *Lockwood and Everett), New York City:

City:

Calim consuming the noxious gases, steam or vapors as they issue from the apparatus while in operation, or after the fire has been withdrawn, therefrom by the use of a separate consuming furnace connected to, or in communication therewith.

Second, The use of a superheater in combination with said consuming furnace and in connection with the apparatus for the purpose specified.

Third, Passing the superheated steam, gas or vapor through a coil of pipe placed in the digester for the purpose of raising the temperature in the digester, and to dry or crisp the scrap as set forth.

perature in the digester, and to dry or crisp the scrap as set forth. Fourth, Carrying the heat directly from the furnace through a coil of pipe placed in the digester, and so arranged as to discharge in the chimney, making said coil a fine from the furnace to the chimney, for the purpose of raising the temperature of the digester, and to crisp or dry the scrap as set forth.

Fifth, Avoiding the condensation of the noxious vapors and gases against the uncovered part of the digester, by carrying the steam and water lacket all the way around it so as to entirely envelope the digester as set forth.

Sixth, The use of a decodorizer filled with chloride of time or its chemical equivalent for this purpos', in combination with a digester for reneering and refining lard, tallow and other fatty or oleaginous matter for the purpose of decodorizing and disinfecting the noxious gases as they issue therefrom.

52,641.—Stamping Head.—P. W. Yates (assignor to himself and R. D. Frazer), Chicago, Illinois: I claim the compound hard and soft metal shoe, A B C, constructed and produced sub-stantially in the manner described. Second. Constructing the stem, A, with a flange, B, which has intersecting dove-tail grooves in its lower face, so that the metal which forms the part, C, of the shoe shall be united to it by the acting said part. C, substantially, as described.

Third, The intersecting dove-tail grooves formed in the underside of the soft metal stem, A, of a compound hard and soft metal shoe, substantially as described.

52,642.—Well-boring Apparatus.—S. J. Goncher (assignor to Wm. Foreman), Philadelphia, Pa.: I claim the shart, c. with its permanent pulley, I, and loose pulleys, J, and J. combined with the driving shaft, H, adjustable shart, c, its pulleys, J, the drum, C, and walking beam, F, all substantially as and for the purpose described.

52,643.—Darning Spool.—Joseph H. Greenleaf (assignor to John M. Marlin, and Geo. H. Snow), New Haven, Conn.:

1 claim the darning spool above described as a new article of

(The object of this invention is to produce an article which will serve to hold, as on a spool, several varieties of darning yara and whose ends shall serve to distend the parts of a stocking to be mended or darned

52,614.—Piston Packing.—Thomas J. Jones, Summit, New Jersey, assignor to C. J. Eames, New York

Oldy: claim as an improvement in springs, for piston packing, the ble, M, shaped spring closed in front, and open at the back in manner herein specified and represented.

52,645.—Lacing Device.—E. C. C. Kellogg, Hartford, Conn., assignor to himself S. F. Bennett, and D. H. Burrill, Little Falls, N. Y.:
I claim the punch, k, knife blade, h, needle, m, and awl, n, arranged with reference to each other upon the pivoted levers, A B, substantially as set forth for the purpose specified.

52,646.—Sewing Machine Hemmer.—George C. Overhiser, Ionia, Mich., assignor to himself and Jacob C. Robie, Binghamton, N. Y. Antedated Feb. 5,

I claim the combination of the hemmer, N, sliding gage, K M, amp, L, pressure spring, H, smoothing spring, I, hinge, d, bar, G, diffame, A, arranged and operating in the manner and for the irpose set forth herein.

purpose set forth herein.

52,647.—Method of Treating Sheet Iron Plates.—
Charles H. Perkins (assignor to the Perkins Sheet Iron Co.), Providence, E. I.:
I claim giving to common sheet Iron, the luster finish and color of Russia sheet Iron, by the process, substantially as described.

52,648.—Hot Air Furnace.—Jacob H. Schwein, Cincinnati, Ohio, assignor to himself and Christian

cinnati, (Rummel: Rummel:

I claim the tire pot, A B C, slab, D, smoke passages, E F G, and aliducts or ventilating passages, K L M, the whole being arranged and operating substantially as described.

selden,) Fairview Township, I'a.: claim the movable pintle constructed with the fixed washer ge constructed substantially as described.

or enlarged center, q, in combination with the two leaves of a hinge constructed substantially as described.

52,650.—Preservatory.—Addison Smith, Perrysburg, Ohio, assignor to himself David M. Mifford, and Giles Boalt, Norwalk, Ohio:

I claim, First, A receptacle compartment or box for fruit or other edibles having two orifices or series of orifices communicating respectively with opposite ends of a deoxygenating chamber or circuit outside of said receptacle and provided with a forced circulation, substantially as and for the purpose set forth.

Second, In the described communication with one another, the following elements, to wit, the closed preserving chamber, A, whether subdivided or otherwise, and the closed combustion chamber or circuit, D. and the mechanical circulation, G."

Fourth, In the described communication with one another, the following elements to wit, the closed preserving chamber, A, with the described communication with one another, the following elements to wit, the closed preserving chamber, A, with the described communication with one another, the following elements to wit, the closed preserving chamber, A, with the described communication with one another, the following elements, to wit, the closed preserving chamber, A, and the desiccating chamber, G."

Sixth, The closed preserving chamber, A, communicating with the described deoxygenating sind desiccating circuit, G, provided with a forced circulation, the whole being combined and operating substantially as and for the purpose set forth.

Seventh, A close preserving chamber having the meandering ventilating ducts, L [12, 17], in which a circulation and deoxygenation is described.

Eighth, A closed preserving chamber in which a circulation election of the air is maintained ov the use

set forth and described.

Eighth, A closed preserving chamber in which a circulation, deoxygenation and deslocation of the air is maintained ov the use of a desiccating chamber, G' in combination with a deoxygenation chamber, G or D' and a 'ording apparatus, G'' Ninth, The series of closed preserving chambers, provided with the meandering ducts, [1, 1]', having a forced circulation and communicating with a closed deoxygenating chamber, G', and a closed discoating chamber, G'', substantially as set forth.

52,651.—Gang Plow.—John E. Travis (assignor to himself and Elon Francisco), Grenville, III.:
Iclaim, First, The sliding bar, C, when used in connection with the axle, B, and holster, D, and regulating bolts, a a', as and for the purpose set forth.

Second, I claim the hinged braces, H H, the levers, H' H'', and posts, F' F', for the purpose of attaching the plow frame of gang plows to the bolster thereof, when such parts are constructed and employed as described and set forth.

arranged and combined as herein described and for the purposes set form.

52,639.—Clasp for Skirt Hoops.—George W. Cheesman (assignor to himself and J. W. Osborne),

152,652.—Buckle.—Julius Waterman, New York City, assignor to himself and Joseph Mayer, Brooklyn, N. Y.:

1 claim the buckle for shirt bands, etc., formed of two rectangular loops, one over the other, as specified.

loops, one over the other, as specified.

52,653.—Machine for 'Determining the Load of Car Axles.—J. H. Ehrhardt, Dresden, Saxony:

I claim, First, The supporter, A. B., with lip, a, and leg, d. in combination with the scale beam, C. and steel yard. D. or its equivatent constructed and operating substantially as and for the purpose described.

The adjustable wedge, i, in combination with the slides, f, beatones, g, scale beam, C, and supporter, A. B., constructed and operating substantially as and for the purpose set forth. Third, The index, m, in combination with the steelyard, D. supporfer, A. B. and scale beam, C, constructed and operating substantially as and for the purpose described.

[This invention relates to an apparatus which is intended to bal-

[This invention relates to an apparatus which is intended to balance the weight of a locomotive, tender or railroad car, so as to bring an equal pressure to bear on each of the wheels.]

bring an equal pressure to bear on each of the wheels.]

52,654.—Breech-loading Fire-arm.—Alexander Henry,
Eddinburgh, Scotland:

I claim, First, The construction of the curved face of the extractor with a dovetail and pin for fixing it to the extractor bar, substantially as hereinbefore described and shown.

Second, The employment of a lever for actuating the movable bolt for locking the barrel in combination with the hammer under the arrangement hereinbefore shown and described, as as to prevent the barrel from being unbolted until the hammer shall have been moved to half-cock and to secure the complete locking of the barrel before the piece can be discharged, substantially, as set forth.

52,655.—Process for Tanning Hides and 'Skins.—Barthelemy Picard, Paris, France:
I claim the process of tanning hides and skins by the employment of essence of turpentine with sumac, catechu, or other vegetable or mineral coloring essence, in combination with the movement of the hides or skins in a fulling tun or under a fulling hammer, substantially as and for the purposes herein set forth.

52,656.—Manufacture of Iron.—Anton K. Kerpely, Orayitza, Hungary, assignor to A. L. Fleury, New

52,656.—Manufacture, assignor to a. ...
York City:
I claim freeding pig iron from surbaur, phosphorus, arsenic, copper address, by blowing colorine salts with a blast of air into the melting chamber of a blast turnace, into a cupola furnace or into a Bessemer smelting pot, substantially as herein specified.

Steam Engine.—

52,451.—(Heretofore Suspended.)—Steam Engine.—
Edvart Lavoradl, New York City:
First, I claim the frame, A, constructed with a hollow column, f, for supporting the cylinder and attached to the boiler and the hull of the vessel, substantially as herein specified.
Second, I claim the combination and arrangement of the supporting column, the single cylinder trunnion, the valve disks, g and p, spring, r, and nut, s, substantially as and for the purpose herein set forth.

REISSUES.

REISSUES.

2,168.—Machine for Cutting Splints.—Jonathan C.
Brown, Brooklyn, N. Y. Patented June 21, 1864.
Reissued Sept. 12, 1864:
I claim cutting forms from wood in the manner described, when the knives on the revolving cylinder are set at different angles as and for the nurses set forth. I see that the same set of the continuous set for the set of the continuous set for the set of the continuous set of the continuous set for the set of the continuous set for the set of the continuous set of the set

moved, an as above specified.

2,169, — Making Hollow Articles of India-rubber—
Charles Godyear, Jr., New York City, executor of estate of Charles Goodyear, deceased. Patented April 25, 1848. Extended 7 years:
What is claimed as a new article of manufacture and trade are hollow, vulcanized india-rubber articles, the external shape of which is produced by internal pressure derived from an elastic fluid.

auid.

2,170.—Making Hollow Articles of India-rubber.—
Charles Goodyear, Jr., New York City, executor of
estate of Charles Goodyear, deceased. Patented
April 25, 1848. Extended 7 years:
I claim the above-described process of making hollow apheres, various hollow toys or other hollow articles of caoutchouc, the same
consisting in the employment of a mold, and heat and air or its
equivalent, substantially in the manner and under the circumstances above set forth.

stances above set forth.

2,171.—Machine for Making Kettles.—Hiram W. Hayden, Waterbury. Conn. Patented Dec. 16, 1851.
Extended 7 years:
First, I claim the combination of mechanism constructed and arranged substantially as specified, for making kettles and similar articles, in substantially the manner set forth.
Second, The construction of the mandrel, 73, part of which is cylindrical and part fitted with a short screw, 13, to take the screw of the hand wheel, 72, so that great pressure may be made at the point desired, while at the same time the mandrel can be easily and quickly moved through a long distance for the purposes and as described and shown.

escribed and shown.

72.—Horse Shoe.—J. Wilson Hodges and P. De
Murquionds, Baltimore, Md., assignees of J. Wilson
Hodges. Patented July 4, 1865:
tlaim the attachable and removable roughing bar, C, provided
tealks and countersunk or let into the face of the shoe, sub-

stantially as described. It claim the blank bar, E', adapted to occupy the groove, B, in the absence of the roughing bar, and secured in a similar manner within the groove.

within the groove.

2,173.—Wood-bending Machine.—John Philip Lelzelter,
Lancaster, Pa. Patented Feb. 21, 1865:
First, I claim the winged or framed side levers, E, held by a pivot or hinge affixed by a bolt or plate on each side of the drum, substantially in the manner show and specified.
Second, I also claim the binding straps, M, when they are firmly united to a slotted hook, affixed to each end of the same, in the manner and for the purpose specified.

2,174.—Roller for Wringers.—Joseph F. Pond, Cleveland, Ohio. Patented April 5, 1864:
Ictaim the application of canvas, cloth, or other similar material, for the purpose of covering, repairing, and protecting elastic indiar ubber or compound rollers and to prevent the shart getting loose or turning in the roll, as and for the purpose specified.

2,175.—Lantern.—Wm. Westlake, Chicago, Ill. Patented Sept. 26, 1865:

First, I claim the band, d, in combination with the band, b, for the purpose set forth.

Second. The band, l, in combination with the band or upright portion of the bottom, e, for keeping the bottom of the globe in place, as herein described.

Third, The means described, or its equivalent, for securing the ends of the upright bars to the horizontal bars of the guard.

DESIGNS.

2,263.—Door Lock.—John H. Barnes, Brooklyn, N. Y. 2,264.—Piano Stool.—Charles Zeuner (assignor to M. Greenwood & Co.), Cincinnati, Ohio.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when su remit their money by mall, they may consider the arrival of the first paper a bona-file acknowledgment of our reception of their



S. D. R., of Tenn.-Sugar is obtained from sorghum rating the juice. Full accounts of the process, with illustrations of the apparatus, have appeared in our back volumes. Sirup is obtained without difficulty, but most farmers, working on a small scale, fail to obtain granulated sugar A. F. C., of Ill.—In this country breast wheels have

long since superseded overshots, and now turbines are generally taking the place of breast wheels. The highest power has been obtaine) from Stevenson's, but others much cheaper are said to

W. M., of Conn.—In civil life the day begins at midnight, and is divided into two periods of 12 hours each. The first hour of the day is from midnight to I o'clock in the morning. In astronomy the day begins at noon, and the hours are numbered

C. W.—Several patents have been taken out for making fuel of coal dust. The general plan is to mix with it an ad hesive substance and then submit to pressure. Some of these compounds have been advertised or described in the SCIENTIFIC AMERICAN.

C. O. G.—We have already stated that the Cutting patent covered the use of bromide of potassium in collodion, a that the use of all other forms of bromine is freeto the public.

O. S.—Wind mills are extensively and profitably used on shops, for various purposes.

PATENT OFFICE.

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and devoted to the interests of your clients, as well as eminently qual-ified to perform the duties of Patent Attorneys."

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PRELIMINARY EXAMINATION AT THE PATENT OFFICE

is desired, we charge the small fee of \$5. This examination involves a personal search at the Patent Office of all models belonging to the class, and will generally determine the question of novelty in advance of an application for a patent. Up to this time we have conducted over ELEVEN THOUSAND Preliminary Examinations, thus showing a more intimate knowledge of inventions at the Patent Office than can be possessed by any other person or firm

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On application for Retsue.

On application for Retsue.

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