47,479.— Train Way for Ferry Boats.— Norman Wheeler, Brooklyn. N. Y.: w.

Wheeler, Brooklyn. N. Y.: First, I claim in connection with the deck, A, and coaming, D, the deflector or switch bar G, so arranged and operated as to slide the rear wheels outward, and cause them to describe the larger curve, substantially in the manner and for the purpose herein set

forth. Second, I claim in connection with the above the employment of the perforated or roughcned plates. F F, of hard material, combined and arranged to operate in connection with the deflector, G, so as to afford a hold for the animals, and provide for the lateral move-ment or sliding of the wheels, substantially as and for the purposes bersin described.

to anord a noid for the animals, and provide for the lateral move-ment or sliding of the whieles, substantially as and for the purposes berein described 47,480.—Tubullar Condenser.—Norman W. Wheeler, Brooklyn, N. Y. I claim the improvement in condensers and analagous tubular constructions herein described-to wit, the employment of the soft packing, G, and driven annulus, E, the latter holding itself in place and supporting and guiding the tube, D, and compressing the pack-ing, G, substantially in the manner and with the effect herein set forth.

481.-Movable Berth.-Norman W. Wheeler, Brook

17,401.—MOVABLE BEFLE.—INFORMATION WITH A VESSEL LIE ENTRY AND A VIENT AND A V

together substantially in the manner and forthe purposes described. 47,482.—Landing Platform for Steamboats and other Vessels.—Norman W. Wheeler, Brooklyn, N. Y.: First, I claim the construction and use of an adjustable bridge, B, permanently attached to a vessel, A, and arranged to allow of its being turned in board, and operated by the boisting means in both positions, substantially in the manner as herem set forth. Second, I claim in combination with an adjustable bridge the man-per and rolling binges, G. P. B, arranged to operate in the man-ner and for the purposes substantially as herein set forth. Third, I claim the within descibed arrangement of the jib stay, H, continuations, h h, and rigid post, I, for the purpose herein set forth

forth 47,483.-3.—Bottle Stopper.—E. R. Wilbur, New York City: sim the bottle stopper above shown, constructed and applied initially as described.

47,484.—Railway Chairs.—J. E. Williams, Xenia, Ohio : First, I claim supporting the joints of rails by means of a two part chair resting upon and bridging the space between two separate ties, with lips, b, extending the entire tength, and fanges, c, ex-tending below and falling between the ties, the parts being clamped and held by the bolts, e e, or their equivalents, substantially in the manner herein described. In combination with the foregoing, I claim the block of wood, for the purpose specified.

for the parts 47,485.—Shield for Breaststraps.— Elyria, Ohio: I claim the reversed hooks having their upper ends covered so as to correspond to the inner circle of the ring for the purpose of giving the greatest possible length to the hooks, and at the same time admit the rang freely, the whole being constructed and operating in the manner and for the purpose described. The Winslow, Cleveland, Ohio:

47,486.—Plow.—T. Winslow, Cleveland, Ohio: Iciaim the herein described constructor of plows, the distin-guisiing feature being the relative position of the lower edge of the mold board to the land side substantially as herein set forth, thus forming in one implement a common and subsoil plow. guisi

forming in one implement a common and sussoil plow.
47,487.—Biraiding Machine for covering Skirt and other Wires.—Oliver R. Burnham, (assignor to J. I. and J. O. West) New York City: First, I claim the uniting by a braided covering of the wires, held separately and apart until U:e point of braiding, and the bringing them together at the point, so as to braid them just before, or as they are brought together side by side or parallel, and then the twin-ing them edge to edge, during the continuous movement of the wires, so as to strain and tighten the braid upon the wires as de-scribed.

ing them edge to euge, turning the braid upon the wires as de-scribed. Second, I claim the construction and use of the guide and sup-porting pieces, b b, with the apertares in the same. for the passage of the wires by which the wires are supported and directed to the point of braiding, without interfering with the motion of the bob-bins or threads, in the manner and for the purposes described. Third. I claim the guide piece, e, constructed and operating in the manner and for the purposes described, by which the wires are brought and kept together, as they ascend, at the required point for braiding, and at the same time the continuous and unobstructed passage of the wires and their joint is provided for, as the braid-ing proceeds and is completed. Tourth, I claim the application and use of the pressure and deliv-ery rollers whether without the guide piece, f, combined with the apparatus above described underneath, by the combined they are conducted away as completed.

47,488.—Knitting Machine Needles.—Augustus C. Carey. Lynn, Mass., assignor to himself and Geo. S. Sulli-van, Boston, Mass.: Leukin the combination in a machine knitting needle of a latch

val, DOSION, MASS.: I ciaim the combination in a machine knitting needle of a latch with an elongated flexible hook that extends upwards nearly paral-lel with the shank of the needle, and to such a distance or length as to reduce the angle that the latch makes with the shank, thus form-ing a narrow of silm needle that can be used for fine work, substan-tially as herein described.

(iai) y as herein described.
47,489.—Heating and Fuel Device.—Daniel C. Colby (assignor to himself, D. W. Rawson, J. Reddington and Thomas I. Harris), Claremont, N. H.: I claim the arrangment of the damper, H, the pipe, G, and the oriface, j on the upper end of the funnel, B, the led amper, I, the pipe, F, and the oriface, k, on the other end substantially as described, and the combination of the funnel, B, thus provided, with the outer funnel, A, and the stove, C, one or both, as and ior the purposes set forth.

Junice, A, and the stove, C, one of obtin, as and for the purposes set forth. 47,490.—Cotton Press.—Geo. C. Davies, (assignor to Ohio Erolin Company.) Dayton, Ohio: I claim, First, The provision in a baling press of the screw, B, winged nut. C, vertical guides, D and a, toggles, G G', rods, F, platform, E, and baling trunk, H, in the described combination with the swinging platten, I, the whole being arranged and operat-ing substantially as setforth. Second, I claim the suspended platten or abutment, I, articulated to the frame, by means of the links, K K', and pintles, L L', so as to be capable of being swung to one side for filling or charging the bal-ing trunk in the manner described.

47,491.—Game Boards.—James T. Edson, Stowe, Mass. assignor to bimself and Geo. L. Crosby, Berlin,

Mass.: claim the combination of the groove, B, and the passage, b, lead therefrom, with the game board, A, and the receiver, c.

.--Valve Gear for Steam Engines.--Chapman E. age, (assignor to Columbia Drew,) Winona.

Minn.: I claim the sliding valve rods, 14 14, constituting supports and ruldes for the bar, r, which imparts movement to the valve rods by coming in contact with the shoulders, 5 13, and thus effect the alter-nate opening and closing of the proper induction and exhaust parts. 47,493.—Lamp.—Alonzo Hicks, Factoryville, N. Y., assignor to himself and Leoniel Jacobs, New York City: I claim the combination of the diaphragm. d. deflectors, 14.

City: claim the combination of the dlaphragm, d, deflectors, i P, rds, f, and wick tube, c, in the manner an. for the purposes clied.

specified. 47,494.—Composition for Preparing Ribbons for Hand Stamps.—Horace Holt, (assignor to W. W. Se-combe,) New York City: I claim the within described composition applied to a ribbon, snb-stantially as and for the purpose set forth.

47,495.—Horse-shoes and Calks.—Charles H. Johnson (assignor to himself and Charles E. Woodman), Boston, Mass.: I claim as my invention the combination of the fastening flange,

a, and the nortise, b, with the corresponding socket, c, and tenon, d, of the calk. and with one or morebolts, a', or equivalents, extend-lug through the flange and the calk, substantially as specified.

47,496.—Composition for Lining Oil Barrels.—Henry Loewenberg, New York City, assignor to himself and Emile Granier, Paris, France:
 I claim the use of a compound of the ingredients herein described, viz., of glue, acid and sirup, and mixed together substantially in the manner and about in the proportion set forth.

 manner and about in the proportion set forth.
 47,497.—Process for Treating Auriferous Ores.—W. Adolf Ott (assignor to himself and Henry Jackson), Brooklyn, N. Y.:
 I claim the use, in treating auriferous ores, and particularly pyrites containing gold, of hypothlorous acid, substantially in the manner herein set forth. [This invention consists in the employment or use of a mixture of

(runs invention consists in the conjugate of use of a mixture of sypochlorous acid in extracting gold from auriferous ores, and par-icularly from pyrites containing gold.]

ticularly from pyrites containing gold.] 47,498.—Feed Bag.—Henry Pennie and Chnnock (as-signors to themselves and Levi Bissell), New York City, and reassigned by L. Bissell to said Pennie and Chinnock: We claim a feed bag, or portable crib, for a horse or other animal, so constructed that it may be at the same time suspended from the bead and attached to or near the ureast of the animal, and when so suspended and attached may have its bottom inclined downward toward or from the animal's mouth, by the downward and upward movements of his head, substantially as and for the purpose hercin lescribed.

described. 47,499.—Feed Water Heater.—Robert Poole (assignor to himself and German H. Hunt), Baltimore, Md.: I claim the manner in which I have arranged and combined the tank. A. with regard to the inlet and cutter water pipes connected with it, the scatterer, and the branch pipe leading 'rom the ordinary exhaust or waste pipe to its int.rotor for the purpose of heating the water passing through said tank without interfering with the free escape of the steam through said exhaust or waste pipe, substan-tially as herein described.

Guily as nerein described.
47,500.—Fastening for Harness.—Josiah Shepard, New Britain, Conn., assignor to himself and Richard Butler, New York City:
I claim a strap fastening for harnesses and for similar purposes, composed of two carved side pieces, a sconnected at their ends by cross pieces, b b", placed relatively with each other as shown, and the center cross piece, b', provided with a central piece, c, substantially as described.

47,501.—Floating Dock.—Edward Turner (assignor to Simon R. Golibart), Baltimore, Md.: I claim, First, So constructing a floating dock that a vessel may be raised bodily out of water and suspended between floats or pon-toons upon vertically adjustable frames or elevators substantially as

cribed. econd, The use of vertically adjustable frames, D D, in combina-to with pontoons, A A, and mechanism applied to these latter ch is adapted for adjusting the frames independently of each irid, The employment of guides, D'D, in conjunction with the rating frames, D D, and floats, A A, substantially as described.

17. Janues, D. D., and notes, A. A. substantially as described. 47.502.—Horse-shoe.—Alexander Tyrrell (assignor to himself and Kimball Ferrin), Batavia, N. Y.: I claim a Lorse-shoe, constructed as described, with the recesses, i.a, made at any point between the heel and toe, for the purposes predited. 47.502

47,503.—Capsules for Preventing the Solling of Fire-arms.—F. L. M. Dorvault, Paris, France: I claim the employment or use of s.if.discharging capsules, sub-stantially as herein described, in combination with fire-arms, to pre-vent them from solling, as set forth.

vent them from soling, as set forth. 47,504.—Medicated Candy.—Lazarus Morgenthau, Mann-hlem, Baden: First, I claim the combination of sugar with an extract from the young shoots of the pine tree, substantially in the manner and for the purpose herein set torth. Second, I claim the compound formed of the s. veral specific in-gredients in the proportions herein set forth. 47,505. Mode of Disintegrating. Vacatable Substances

and

47,505.— Node of Disintegrating Vegetable Substances for Paper Pulp.—Zephirin Gaspard, Alozandre Na-than Petrone Orioli, Amable Alfred Fredet and Pierre Amable Henri Matussievare, Paris, France e We claim the within described process for disintegrating vegetable materials by the application of aqua regia, substantially in the man-ner herein set forth.

47,506.—Manufacture of Iron and Steel.—Geo. Parry, Ebro Vale Iron Works, Eng. Patented in England Nov. 18, 1861 :

sim the process above described, whereby I am enabled to pro-purified wrought iron and hard or soft cast-steel in large masses, economical manner.

# REISSUES.

1.940.

1,940.—Enema Syringe—Hamilton D. Lockwood, Charlestown, Mass., assignee of C. H. & H. E. Da-vidson. Patented March 31, 1857 : What is claimed as the invention of Charles H. and Herman E. Davidson, is a syringe, having an elastic buib or chamber, fixible tubes, and a suitable valvular or arrangement, when organized so as to operate substantially as described.

basis of the sense of the sense of the characteristic of the sense of the

pump, G, substantially in the manner and for the purpose herein set forth. Sixth, Placing a pieceof fire brick, L, or equivalent substance, in close projuinty to the burner, k, for the purpose above specified. Seventh, In an engine operated with the direct pressure of the products of combustion and having the working cylinder and the combustion chamber arranged upon a single portable base, x, I claim the arrangement of the furnace casing and the working cylinder der in the additional casing, S, common to both, with air or other non conducting substance illing the intervening space, substantially as and for the purpose herein set forth. Bighth, I claim is such engines in combination with provisions for reducing the temperature of the products of combustion before their aumission to the cylinder as shown, the employment of the parts of the apparatus, all arranged substantially as and for the purpose herein set forth.



the SCIENTIFIC AMERICAN, have act d as Solicitors and Attorneys for procuring "Letters Patent" for me incentions in the United States and in all foreign countries during the past sconteen years. Statistics show that nearly ONE-THIRD of a the applications made for patents in the United States are solicited through this office ; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source. It is almost needless to add that, after scontess years' experience in pro paring specifications and drawings for the United States Patent Office the proprietors of the SCIENTIFIC AMERICAN are perfectly con

versant with the preparation of applications in the best manner, and the transction of all business before the Patent Office ; but they take pleasure in presenting the annexed testimonials from the three last ex-Commissioners of Patents.

MESSES. MUNN & (5) :- I take pleasure in stating that, while I held the office of Commissioner of Latents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with

he office, a marked degree of promptness, skill, and fidelity to the mptness, same Yours very truly, CHAS. MASON. interests of your employers.

# Judge Mason was succeeded by that eminent patriot and stateman, Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Goy, Brown, he was appointed to the office of Postmaster-General of the United States. S after to the once of rostnaster-teneral of the United States. Soon entering upon his new duties, in March, 1859, he addressed to un following very gratifying letter.

Mysus, Mound yery granting letter. Mysus, Mound Co.: -It affords me much pleasure to bear testi mony to the able and efficient manner in which you discharged your crates as solicitors of Patents, while I had the honor of holding the side of Commissioner. Your business was very large, and you sus tanded and I doubt not justly deserved) the reputation of energy marked ability, and uncompromising fidelity in performing your pro fessional engagements. Vory respectfully your phodient correct

# ments. Very respectfully, your obedient servant, J. HOLT,

J. Horr, Hon. Wm. D. Bishop, late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows: MESSRS. MUNN & Co. --It gives me much pleasure to say that, dur-ing the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency: and that I have ever found you faithful and devoted to the increase of Patent Attorneys with skill and accuracy. Very respectfully, your obelient servant, WM. D. BisHoP. dient servant, Wm. D Bissor.

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Persons having conceived an idea which they think may be patent able, are advised to make a sketch or model of their invention, a submit it to us, with a full description, for advice. The points novelty are carefully examined, and a written reply, correspond

with the facts, is promptly sent, free of charge. Address MUNN & Oo, No. 37 Park Row, New York. As an evidence of the confidence reposed in their Agency by in rentors throughout the country, Messrs. MUNN & CO. would state hat they have acted as agents for more than TWENTY THOUSAND inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of inventors and patentees, at home and abroad. Thousands o inventors for whom they have taken out patents have addressed to them most flattering testimonials for the services rendered them; and the wealth which has inured to the individ-uals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many nillions of dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive that they are prepared to attend to patent business of all kinds in the uickest time and on the most "iberal terms

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The Patent Laws, enacted byCongress on the 2d of Merch, 1861 are now in full to ce, and prove to be of great benefit to all parties who are concerned in new inventions.

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Russian, Spanish and all other foreigners, except the Canadians, to unsian, spanish and all other foreigners, except the canadian nioy all the privileges of our patent system (except in cases of igns) on the above terms. Foreigners cannot secure their inventi sign ot secure their inventions by filing a caveat ; to citizens only is this privilege accorded.

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shortest time by sanding a sketch and description of the invention nentfeefor a caveat 18 \$10. A pamphlet of advice re gardingapplications for patents and caveats is furnish ed gratis, ou application by mail. Address MUNN & CO., No. 37 Park Row New York.

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of their charge is generally left dependent upon the final result. All persons having rejected cases which they desire to have prose-cuted, areinvited to correspond with MUNN & CO., on the subject giving a brief history of the case, inclosing the official letters, &c.

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On aline each application for a Patent, except tor a design the	•
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On application for Reissue	J
On application for Extension of Patent	J
On granting the Extension	,
On aling a Disclaimer	
On aling application for Design (three and a half years)	J
On filing application for Design (seven years)	2
On filing application for Design (fourteen Se rs)	)

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entthere.

entthere. Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through MUNN & CON Agency, the requirements of different Government Patent Offices, &c., may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, orany of the branch offices. INVITATION TO INVENTORS.

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(t would require many columns to detail all the ways in which the inventor or l'atentee may be served at our offices. We cordially in-vite all who have anything to do with patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the rights of Patentees, will be cheerfully wercd.

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F. S. C., of Mass.-Simple as the rule for nominal

- horse-power of an engine is, it seems ithat many persons get very much befogged on it. The number of inches of area in the piston is to be multiplied by the steam pressure on each inch of said area, which will give the total pressure on the piston. The sum thus ob-tained is multiplied by the feet per minute which the piston travels; divide the sum by 33.000, the mechanical expression of one horse power, and we have what purports to be the force of the engine. We can't make the matter any simpler, and we have an ewered this question about once a week for the last five years.
- H. H., of Wis .- We cannot tell you the exact quantity of glycerine to put in plaster to keep it soft, but it would be a very le matter to try a little, and thus accertain by experiment.
- J. G. P., of Pa.-Yonr cast-iron pulley can be turned

with a chilled iron tool. Make an iron mold of a tool, in shape like a fence picket-flat on top, a little round on the end, and with but little rake; cast a tool of white iron, face down, in this mold, and you will succeed without taking off the scale. Run the pulley very slow, and take light cuts. Do not grind the tool but very little.

F. A. Y., of Ohio.- If you examine the SCIENTIFIC AMERICAN you will find many boilers illustrated thereis; perhaps will suit your purpo

E. P. A., of Conn.-India-rubber is insoluble in alcohol. One part of rubber dissolved in sixty-four of chloroform will make a transparent coment, and reest alcohol and linseed oll.

J. K. L., of Kansas.-You say you sent us a year ago a query and a drawing, with a request to work out an elaboratecalcu-lation of the power of a certain windmill, and what weight it would require to run a set of mill-stones by a tram of gears, and you complain that you have never seen any answerthereto. We answered you at that time that we cannot engage to make calculations of the power of windmills or other mschinery for individuals; all that we do in that line is furnished forgeneral reading.

W. D., of Ill.-We can recommend the *Tinman's Man-*and and *Mechanic's Handbook* for your purpose. J. K. Butts & Co., publishers, Washington street, Boston, Mass.

C. T. G., of Ill.-You will find it cheaper to buy malle able iron castings from those who have works erected to make them than to erect works for a small quantity. We cannot give a description of the process in a few lines, but maileable iron is simply annealed cast iron. It requires time-nearly three weeks-and experience to conduct the operation.

G. B. D., of Md.—There is no ground to write an article upon the manufacture of seamless biass tubes. They are cast in ort, thick ingot or cylinder, and drawn through dies, and an-ed after every drawing.

F. S. C., of Mass.—According to the laws regulating the velocities of failing bodies, all substances fail through an equal space in the same time

C. D. W., of Mass.-To charge a bar of steel with mag i etism, place the end of a magnet upon the side of the bar at one end and draw it to the other end, then return the magnet through the air and repcat the stroke, making the passes always in the Soft iron loses its magnetism instantly. e direction.

J. L. G., of N. Y.-If one pound of sulphur be thor oughly mixed with six or eight pounds of india-rubber and pressed in a mold, at a temperature of 300°, it will be vulcanized by the op eration, and will afterward retain its form

D. H. W., of N. Y.-The easiest way for you to divide a circle into any given number of equal parts, we presume, would be by simply trying it with your dividers. In plane geometry, rever, you will find the relations of the diameter of a circle to sides of inscribed polygons. You will probably find the mean ing of all those words in any large dictionary.

R. D. R., of Tenn.-The gnomon of a sun-dial must point to the pole of the heavens, and to do this it must be inclined t an angle from the horizon corresponding to the latitude of the lace where tho dial is located, and set due north. Perhaps the needle in your locality devlates from the north.

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