45,880.—Harness Saddle Trees.—Samuel E. Tompkins

of Newark, N. J.:

Iclaim the two bearings, A A, connected together by a thm strip or late, B, made of convex form at their under sides, to correspond to the shape of the back of the animal, and having a corresponding concave surface at their upper sides, when said bearings thus formed and connected together are provided with nuts. a, at their upper surfaces, to receive the turret screws, b, and all used in connection with the metal jockeys, E E, flaps, C, and back board, F, substantially as herein set forth.

45,881.—Stove Grate.—George Vander Heyden, of Troy. N. Y.:

N. Y.:

First, I claim the bed plate, B, when constructed respectively at each end of said plate, with the direct bearings, a a, and reverse bearings, b b, in the manner substantially as herein shown, for the Purpose of supporting and operating stove grates, in the manner herein set forth.

Second, In combination with the bed plate, B, I claim the fire grate, C, when constructed substantially in the manner as herein described and shown, so that the said grate can be operated in combination with said bed plate, fully in the manner and for the purposes as herein specified.

poses as herein specified.

45,882.—Side-hill Plows.—Nathan Vars, of Newmarket, N. J.:

I claim the employment or use in a side-hill plow, of a subsoil share. G, having its standard, F, attached to an adjustable or swing arm, G\*\*, arranged substantially as shown, to admit of the subsoil share being adjusted to either side of the plow beam, to suit the position of the mold board. G, and share, D, as set forth. (This invention relates to a combination of a subsoil and a side-hill plow, and it consists in having the subsoil attached to an adjustable standard at the rear ofthe plow beam, and arranged in such

justable standard at the rear of the plow beam, and arranged in such a manner that the subsoil share may be adjusted either to the right or left side of the plow beam, according to which side the mold board and share of the sod plow is adjusted, thereby admitting of a combi nation of the two plows, and in such a manner as to insure a perfecworking of both.]

Geo. W. Walker, Boston, Mass ng capabilities both of horizontal reci -Stove Grate. I claim a stove grate having capabilities both of horizontal recreation, and of vertical swinging movement, when the grathung at its rear side to allow these movements, substantially as forth.

forth.

And in a grate so constructed, I claim giving to each end bar of the grate such width and disposition that in its sliding movement under the stove lining, the capability of free movement of the grate is maintained, substantially as described.

45,881.—Pen-holder.—Sylvenus Walker, Boston, Mass Ante-dated Sept. 11, 1863:

Ante-united Sept. 11, 1000:

I claim the follow silvered glass pen-holder, sealed up and prolected as and for the purposes set forth, as a new and highly ornamental manufacture.

45,885.—Grain Binder.—Saml. Jacob Wallace, Carthage

Ill.:
I claim, first, The arm, Z, of wheel, O, sliding over slot of wire holder, Y, sub tantially as and for the purPose specified.
Second, The binder, G, in combination with a movable arm, F, or other equivalent movable part, so that the binder may be madetraveling in relation to platform, A, substantially as and for the purpose specified.

eling in relation to platform, A, substantially as and for the purpose specified.

Third, The combination of the rack, K, and twister, I, substantially as and for the purpose specified.

Fourth, The rack, K, arranged on frame, Q, substantially as and for the purpose set forth.

Fifth, The compresser shoe, V, arranged on frame Q, substantially as and for the purpose specified.

Sixth, The slotted wire holder, Y, bent or recurved, substantially as and for the purpose specified.

45,886.—Machine for Rolling Metals.—Hervey Waters, Northbridge, Mass.: I claim the arrangement of a single yoke with its appurtenances and connections, subwantially as and for the purposes specified.

-Adjustable Chair.-Theos. Weaver, Harrisburg.

45,887.—Adjustable Chair.—Theos. Weaver, Harrisburg, Pa.: I claim, first, The construction of the arm frame, CC F F', and its combination with the haunch, V, or with the haunch, X, and its collar, K, and pin, when so constructed as to inclose the back, A, and seat, B, substantially as and for the purposes herein describe. Second, The combination and arrangement of the back: A, which is provided with the arm rests, D D, the tenons, SS, the ratchets, H, hooks and staples, O O', with the seat, B, which is provided with the arm rests, E E the tenons bearing on R, the ratchets, J, when operated by the haunch, U or X, substantially in the manner as and for the purposes herein shown and described.

45,888.—Thill Attachment.—R. B. Willis, of Rochester, N, Y.:
I claim the combination and relative arrangement of the set screw, sfrictional plate, a, and the thill iron, B, with the bolt, b, and jaws, D, of the clip, the pa ts being constructed as and for the purposes shown and described.

45,889.—Mode of Operating Switches.—J. F. Wilson,

45,889.—Mode of Operating Switches.—J. F. Wilson, Boston, Mass., and James C. Bartlett, Charlestown,

Mass.:

We claim the employment of a shipping wedge connected with and operated at will from the car, and so as to enter between the switch and main rails of atrack, substantially as set forth.

We also claim the arrangement of the shipping wedges for moving the rail in opposite directions, as shown and described.

the rail in opposite directions, as shown and described.

45,890.—Derrick and Horse Power.—Dan. Woodbury, Rochester. N. Y.:

I claim, first, The employment of side braces, J, they being constructed, arranged and applied to mounted powers, substantially in the manner shown and described and for the purpose set forth. Second, The peculiarly constructed stake from, P, in combination with the double brace bars. J, for the purpose of holding the stake when driven more securely in position.

Third, Attachingthe inner end of the sweep brace, I, to the bracket, R, or to the rim of the wheel, W, as and for the purpose shown and described.

ct, R. or to the rim of the wheel, W, as and for the purpose shown and described.

Fourth, The combination and arrangement of the angle iron, D, with the joint plate, E, and the frame, A, of this class of horse-powers, as si own and described and for the purpose specified.

Fifth, Fitting the box, v, between the jaws or wings, n, of the joint plate, E, so as to have but a line of bearing vertically between the parts, as and for the purpose specified.

Sixth, The combination and arrangement of the rope spool or windlass, and the lack, G, constructed as shown and described, with the mounted powers, as and for the purposes herein set forth.

(assignor to himself and J. D. Foster), Racine, Wis.:

I claim the box, A, provided with the lange, d, having a notch or recess, e, and two projections, f, one or both in combination with the cellar, C, provided with the flange, g, internal elliptical opening and the projection, h, all arranged substantially as and for the pur pose herein set forth.

pose herein set forth.

45,892.—Cultivating Land by Steam.—John Fowler,
Jr.. Cornhill, England, assignor to W. P. Tatham,
Philadelphia, Pa.:
I claim the combination herein described, whereby the power of
two engines, situated on distant headlands, is simultaneously employed in giving motion to an agricultural implement by an endless
rope, in manner substantially as described, to haul the agricultural
implement, alternately to and from each head land, as herein explained.

45,893.—Hand Stamp.—George J. Hill, Buffalo, N. Y., assignor to H. G. Leisenring, Philadelphia, Pa.: I claim, first, The yoke, F, constructed and arranged in respect to the plates, E and G, substantially as specified. Second, The bed, composed of the soft rubber ring, I, metal plate, J, and plate L, of harder rubber, leather or other equivalent material, the whole being confined in a recess in a base plate, B, and arranged beneath the stamp, as described, for the purpose specified

45,894.—Calipers.—F. O. Washburn (assignor to himself and John C. Scott), Millville, Mass.:

I claim the index, C, and graduated plate, D, when arranged and applied to the calipers, substantially as and for the purpose speci

[This invention consists in constructing the calipers in double orm, or so as to have both ends capable of being used to gage or measure with, the prongs at one end being curved to measure the exterior of shafting, and the prongs at the opposite end being straight to measure the diameter of a hole or bearing to receive the shafting, both measurements being obtained at once or at the same

Revolving Grate.-P. J. Boris, Halifax, Nova

45,895.—Revolving Grate.—P. J. Boris, Halifax, Nova Scotia:
I claim the revolving grate, D. arranged in the lower part of the function of thinney, A, in combination with the eccentric, F, placed on the axis or shait, C, of the plate, B, and arranged relatively with the dampers, E E, to operate automatically by the turning of the plate, B, and grate, D, substantially as described and represented.

45,896.—Automatic Hammer.—Wm. D. Grimshaw, Birmingham, England:

I claim, first, The system of employing a reservoir between the pump or pumps and the hammer cylin der for holding the compressed air, the reservoir to be formed in the framework of the machine.

Second, The combination of the adjustable but otherwise stationary valve, dt dt. the silde valve, the cylinder, f. the piston gt. the piston rod, h, and the hammer, i, substantially as set forth.

Third, The combination of the valve rod, w. the friction wheel, y, the silding frictionwheel, b), and the shaft, d, substantially as and to the effect hereinab ve set forth.

Fourth, The combination of the reservoir, b, the pump, o, and the stock-cock, t, as described.

Fifth, The arrangement described, of the pump, o, reservoir, b, friction wheels, b' and y, valve rod, w, valve, k, cylinder, f, and piston, g, by which they are made to operate in relation to each other, substantially as set forth.

I claim the arrangement of the double crank-shaned connecting rod. G. devices, e.e., links, a' a', beam, E, lever, H, and post, I, the whole being employed for joint operation, in the manner and for the purpose specified.

purpose specined.

45,898.—Rifling Breech-loading Fire-arms.—Hiram Berdan (assignor to Levi P. Morton, Trustee of Hiram Berdan, Abia A. Selover and Wm. B. Benson), New York City:

I claim the rifling or grooving of the counter bore of breech-loading fire-arms; substantially as and for the purposes herein shown and described.

45,899.—Breech-loading Fire-arm.—Hiram Berdan (assignor to Levi P. Morton, Trustee of Hiram Berdan, Abia A. Selover and Wm. B. Benson), New York

ADIA A. Selover and while D. Delison, New York City; claim, first, The protecting plate, E, swinging in a plane transse to the barrel in combination with the ring, G, substantially as d for the purposes set forth. Second, The protecting cover, I, and protecting plate, E, in combition with the latch, D, as herein specified.

45.900.—Suspended.

45, 900.—Suspended.
45, 901.—Attaching Bayonets to Fire-arms.—Hiram Berdan (assignor to Levi P. Morton, Trustee of Hiram Berdan, Abia A. Selover and Wm. B. Benson), New York City:
I claim placing the bayonet blade and shank upon the underside of the barrel, in combination with the ramrod, substantially as and for the purpose herein shown and described.

RE-ISSUES

RE-ISSUES.

1,848.—Artificial Gums and Palate.—John A.

mings, Boston, Mass. Patented June 7, 1864

I claim the plate of hard ruber or vulcanite or its equival holding artificial teeth or teeth and gums, substantially scribed. -John A. Cum-ane 7, 1864:

1,849.—Tanning Hides and Skins.—Simon H. Kennedy and Henry L. Elder, Philadeiphia, Pa., assignees of Wm. Fields and Israel Townsend, Wilmington, Del. Patented June 7, 1864:

We claim, first, The employment or use in tanning hides or skins, of a current of compressed air applied to the hides or skins in combination with the ordinary or other tanning liquors, in the manner and for the purpose substantially as specified.

Second, The perrorated pipe, E, extending through the air-tight vat, A near its bottom, in combination with an air pump and loaded valve, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

1,850.—Lantern.—John H. Irwin and James F. Griffin.

pose substantially as herein shown and described.

1,850.—Lantern.—John H. Irwin and James F. Griffin, Chicago, Ill., assignees of John H. Irwin, aforesaid. Patented Nov. 4, 1862:

First, I claim the cap or deflector, H, arranged below the top of the wick tube and operating substantially in the manner and for the purposes herein specified and set forth.

Second, I claim the combination of the jacket, G, and deflector, H, and forming the deflected air passage with the holes, e, all arranged and operating substantially as and for the purposes herein shown and described.

Third, I claim, in combination with the jacket, G, deflector, H, and holes e, the prolonged oil cup, E, and vertical plates, d, arranged and operating substantially as and for the purposes described.

-Car Wheel.-Thomas Sharp, Chicago, Iil. Pat-

1,851.—Car wheel.—Thomas Sharp, Chicago, Ill. Patented Sept. 29, 1863:

First, I claim the construction of a car wheel, the combination of the two flanges, a d, with the broad tread described, when arranged and operating with respect to the different gages herein specified, substantially as delineated and set forth.

Second, I claim constructing said car wheel of a single casting, in the manner and for the purposes herein set forth and described.

# EXTENSIONS.

Two and Three-ply Carpets.—Alexander Smith, West Farms, N. Y. Patented Dec. 10, 1850. Extended Farms, N. Y. Dec. 10, 1864:

Dec. 10, 1864:

claim the weaving of two or three-ply ingrain carpets, the
lyment of partl-colored warp and welt, operated by the lacque
other mechanical means to form the figure, when the same
is in the warp and in the west are caused to combine together
in the same colored figure in the fabric, substantially as described.

Vat for Tanning Hides.—Lewis C. England, Williamsburgh, N. Y. Patented Dec. 24, 1850. Extended Dec. 17, 1864:

I claim the slats, as described, in combination with the vat and the handler, substantially in the manner and for the purposes herein

set forth.

Trigger-operating Revolving Fire-arm.—Stanhope W.
Marston, New York City. Patented Jan. 7, 1851.

Re issued July 26, 1859. Again Re-issued Aug. 21, 1860. Extended Jan. 7, 1865:

I claim, first, So constructing the lock of revolving breech fire-arms which may be operated by trigger, as that the hammer, when raised to full cock, preparatory to firing, may be retained in that rosition of unstable equilibrium until the place is fixed on a further pressure of the trigger, by means of a vibrating tooth or fly tumbler, independently of any dog, pawl, catch, or other mechanical device for that purpose.

of the rigger, to have pendently of any dog, pawl, catch, or other mechanical device for that purpose. Second, So constructing and arranging the lock of revolving breech fire-arms susceptible of operation by trigger, as that when the hammer is raised to cock, preparatory to firing, the trigger shall be held back or retained in a drawn position, by means of a vibrating tooth or fly tumbler.

Third, The use, in revolving breech fire-arms of a vibrating tooth or fly tumbler interposed between the hammer and trigger, and operating substantially as breinbefore described, by an upward pressure on the hammer, so as gradually to increase the leverage and consequently the power applied to raise the hammer, and thereby reduce the effective resistance of the mainspring, for the purpose of securing steadiness of alm and greater ease in firing, and also allow the recovery of the trigger after firing, for repeated action.



MUNN & COMPANY.

In connection with the publication of the SCIENTIFIC AMERICAN, have act

ed as Solicitors and Attorneys for procuring "Letters Patent" for en inventions in the United States and in all foreign countries during the past secenteen years. Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office: while nearl THREE-FOURTHS of all the patents taken in fereign countries are procured through the same source. It is almost needless to add that, after seventeen years' experience in pre paring specifications and crawings for the United States Patent Office, the proprietors of the SCIENTIFIC AMERICAN are perfectly conversant with the preparation of applications in the best manner the transction of all business before the Patent Office; but take pleasure in presenting the annexed testimonials from the three ast ex-Commissioners of Patents.

as ex-Commissioners of Patents.

Messrs. Munn & Co.:—Itake pleasure in stating that, while I held the office of Commissioner of Patents, more than one-pourth of all the office of Commissioner of Patents, more than one-pourth 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 the office, a marked degree of promptness, skill, and fidelity to the interests of your employers.

Yours very truly,
Chas. Mason.

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

Messes. Munn & Co.:—It afferds me much pleasure to bear test mony to the able and efficient manner in which you discharged you duties as Solicitors of Patents, while I had the honor of holding the office of Commissioner. Your business was very large, and you su tained (and I doubt not justly deserved) the reputation of energy marked ability, and uncompromising fidelity in performing your professional engagements.

Very respectfully, your obedient servant,

J. Holt.

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:

MESSER, MUNN & Co. —It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business or inventors before the Patent Office was transacted through your agency; and that I have ever found you faithful and devoted to the interests of your chents, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy.

We Will D Bishop.

## THE EXAMINATION OF INVENTIONS

Persons having conceived an idea which they think maybe patent able, are advised to make a sketch or model of their invention, and under the control and a saccetant model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a written reply, corresponding with the facts, is promptly sent, free of charge. Address MUNN & CO., No. 37 Park Row, New York.

As an evidence of the confidence reposed in their Agency by inventors throughout the country, Messrs. MUNN & CO. would state

that they have acted as agents for more than TWENTY THOUSAND inventors! Infact, the publishers of this paper have become identified with the whole brotherhood of inventors and patentees, at home and abroad. Thousands of 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 millions of dollars! Messrs. MUNN & CO. would state that they wever had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the wickest time and on the most liberal terms

# PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The service which Messrs. MUNN & CO. render gratuitously upon xamining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there; but is an opinion based upon what knowledge they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5. accompanied with a model, or drawing and description, they have a special search made at the United States Patent Office, and a report settingforth the prospects of obtaining a patent, &c., made up an mailed to the inventor, with a pamphlet, giving instructionsfor further proceedings. These preliminary examinations are m de through the Branch Office of Messrs. MUNN & CO., corner of F and Seventh streets, Washington, by experienced and competent per sons. Many thousands of such examinations have been made through sons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue. Address MUNN & CO., No 37 Park Row, New York.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention if susceptible of one; or, if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the Government fees, by express. The express charge should be pre-raid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. MUNN & CO. Persons who live in remoteparts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter regis-tered by the postmaster. Address MUNN & CO, No. 37 Park Row New York.

Patents are now granted for SEVENTEEN years, and the Government required on filing an application for a patent is \$15. Other changes n the fees are also made as tollows :-

On thing each Caveat	ÐΝ
On filing each application for a Patent, except for a design.	\$1.
On issuing each original Patent	521
On appeal to Commissioner of Patents	62
On application for Re-issue	830
On application for Extension of Patent	350
On granting the Extension	
On filing a Disclaimer	316
On filing application for Design (three and a halfyears)\$	
On filing application for Design (seven years)	§15
On fling application for Design (fourteen years)	53C

The Patent Laws, enacted by Congress on the 2d of March, 1861 are now in full force, and prove to be of great benefit to all parties are concerned in new inventions

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners, except the Canadians, it enjoy all the privileges of our patent system (except in cases of disigns) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

## CAVEATS.

Persons desiring to file a caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention.

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## REJECTED APPLICATIONS

Messrs, MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The closs proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of ref reneroes, models, drawings, documents, &c. Their success in the prosecution of rejected cases has seen very great. The principal portion of their charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted, are invited to correspond with MUNN & CO., on the subject giving a brief history of the case, inclosing the official letters, &c. FOREIGN PATTENS.

Messrs. MUNN & CO., are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery nane. London; 29 Boulevard St. Martin, Paris; and 26 Rue des Epe enniers, Brussels. They thing they can safelysay that THREE-FOURTH of all the European Patents secured to American citizensare pro

cured through their agency.

Inventors will do well to bear in mind that the English law doe limit the issue of patents to inventors. Any one can take out a pat

Circulars of information concerning the proper course to be pursue: in obtaming patents in foreign countries through MUNN & CO's Agency, the requirements of different Government Patent Offices, &c. may be had, gratts, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

### SEARCHES OF THE RECORDS.

Having access to all the official records at Washington, pertaining the sale and transfer of patents, MESSRS. MUNN& CO., are at all time ready to make examinations as to titles, ownership, or assign of patents. Fees moderate,
INVITATION TO INVENTORS.

Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interes to inventors, and is undoubtedly the most spacious and best arrange

MUNN & CO. wish it to be distinctly understood that the they devote their whole time and energies to the interests of their

# COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents grantes since the rebuilding of the Patent Office, after the fire of 1836, can fur nish the claims of any patentgranted since that date, for \$1.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentee who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by con oetent attorneys, to see if they are not likely to infringe some exis ng patent, before making large investments. Written opinions or the validity of patents, after careful examination into the facts, can asonable remuneration. The price for such servialways settled upon in advance, after knowing the nature of the invention and being informed of the points on which an opin icited. For further particulars address MUNN & CO., No. 37 Park

# EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might readily extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are sufered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of proce ure in order to obtain a renewed grant. Some of the most valuable grants now existing are extended patents. Patentees, or, if deceased their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention.

Patents may be extended and preliminary advice obtained, by con sulting, or writing to, MUNN & CO., No. 37 Park Row, New York.

# ASSIGNMENTS OF PATENTS.

The assignment of patents, and agreements between patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Addre ss MUNN & CO., at the Scientific America Patent Agency, No. 37 Park Row, New York

# UNCLAIMED MODELS

Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the mode is in deposit at the Patent office, and cannot be withdrawn,

it would require many columns to detail all the ways in which the Inventor or Patentee 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

Communications and remittances by mail, and models by express (prepaid) should be acdressed to MUNN & CO. No. 37 Park Row, New



Horse-power.—It is a fixed rule of this, and all other well-regulated newspaper establishments, to disregard all a mous letters

- J. W., of Conn.-You can sell an article before applying for Letters Patent without afterward invalidating your clair do not think it a safe practice to adopt
- G. W. G., of Me .- On page 287 of our last volume you will find a description of an ice-making machine in practical use in England. The cooling is effected by the expansion of air pre viously compressed by a steam engine. It was considered a triccess to make one tun of ice by the expenditure of one tun of coal. The first stroke of an air pump, in exhausting a receiver, covers the interior surface of the receiver with a film of We do not find the data for filling
- R. H., of N. Y.—Baryto-celestine, a mineral which contains 35 per cent of sulphate of baryta, is found on Drummond Island, Lake Erie, and at Kingston, U. C. We are not aware that it is worked in this country. At Pittsburgh, Pa., large quantitie justic soda are prepared, and sold under the name of concen
- D. T., of Mass.—You can not drill holes in glass with a common drill. They are usually made by a steel tool, like a punch in form, or flat on the end. The cutting is done by fine sa eeler & Wilson drill the glass in their cloth-pre with a tool like the one mentioned above, in connection with dia mond dust. If you have many holes to drill it would pay to buy some diamond dust. Large holes in glass can be made by a copper tube and fine sand or ground glass. The ground glass can be procured at druggists.
- T. G. R., of N. Y.—The best book for your purpose is the "Practical Draughtsman." Address H. C. Baird, No. 406 Walnut street, Philadelphia, and he will send it by return mail.
- D. C. D., of U. S. N.—Stubbs's tools can be procured of any first-class hardware store in this city. We are not engaged in the commission business. You had better write to some friend in s city to procure what you desire. Subscriptio
- A.W. S., of Mass.—The harmlessness of pure nitrous oxide has been prettyfully discussed in our columns
- of N. J .- Plaster casts are taken from the faces of living persons in the manner you suppose. Tubes to breathe through are inserted into the nostrils, and the moistened plaster is toys is prepared by cutting waste velvet into dust; it is velvet
- A. S. R., of N. H.—The best way to stop the leak in your boiler is to put a plate over the crack. All other expedients are shiftless and only temporary.
- J. R. M., of Tenn.—There is no work on the locomotive link or link motion. Discussions of it can be found in Bourne' Catechism and Camdin's Practical Engineering, Main and Brown's Marine Engine, etc. The link used on Rogers's patent is, we be lieve, one patented by Uhry and Lutgens, and if the radius is struck from three different points, as you say, it is for some reason best known to the patentees. We see no object in it.
- Gas Blow-pipe, Buffalo, N. Y.—Your letter contained no signature, and we cannot, therefore, reply to your inquiryby mail. The invention seems to embrace novelty, and we think a patent
- D. H. S., of N. Y.-If you are distilling pine wood to obtain turpentine the acid which troubles you is doubtless acetic acid. Your proper remedy is to make your retort or still of castiron instead of wrought-iron
- M. V. B. P., of Canada East .- You ean procure plumbago suitable for electroplating of Smith & Butler, No. 448 Broom street, New York. A good work on electro-metallurgy is Smee's published by John Wiley, No. 535 Broadway, New York. The press ure of water at a great depth may force a cork into a bottle, and yet the water may not be sensibly compressed by the pressure.
- T. E. F., of N. H.—The pressure at the bottom of a
- boiler is the same as at the top.

  A Constant Reader, of N. Y.—It is a common practice with good cooks to bake the undercrust of mince, as well as of other pies, before the pie is filled.
- J. A., of N. J.—The ports for your 6-inchcylindershould be four inches long by one-half inch wide.
- C. E. of Pa.—When a horse is employed in moving a achine in a circular path the diameter of this path should no se than thirty feet, but forty feet would be better.
- O. B. M., of Mass.—The comparative economy of tur-bines and breast-wheels as been aready fully discussed in our col umns, but we should still welcome any new facts or ideas bearing upon the subject. There are some of the turbines you speak of at Woonsocket directly under Mr. Harris's eye, and he has doubtless considered their advantages. We would be pleased to illustrate
- Y. N., of N. Y.—The effects of adding large amounts to our specie circulation has been plainly shown since the disco of the California mines. All except our share of the increased currency of the world goes abroad and is distributed among all nations. Our paper circulation does not go abroad, because foreigners will not take it. Some values adjust themselves more slowly to inflations of currency than others; among the slowest are wages, farms and Government bonds. It is the opinion of this writer that Government could have obtained the means to carry on the war with far greater ease if specie payments had been
- J. H. M., of N. Y .- The preparation of India-rubber for vulcanizing is a complicated process of cutting, washing, grinding and kneading. It was fully described and illustrated in the first volume (New Series) of the SCIENTIFIC AMERICAN, pages 169 to 176. | supplied,

- H. S., of S. C.-You had better advertise your invention for removing scale from boiler tubes through our colu We do not undertake to negotiate the sale of inventions
- S. L. B., of Geo .- You can obtain drawing instruments at Messrs, B. Pike & Sons', No. 518 Broadway, New York,
- -.- India-rubber can be dissolved in spirits R. E., of of turpentine or naphtha, and it can be hardened to variou grees by sulphur and heat, with the addition of lime and other
- L. M. M., of Mass.-The action of drying substances on paint is mysterious. We cannot tell you how to prepare oil with black oxide of manganese in such way as not to have it become
- H. B., of Wis .- We do not think the artificial ears to which you refer amount to mach

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