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 safest way to remit money is by a draft on New York, payable to the
order of Messrs. MUNN \& CO. Persons who live n remote parts of the order of Messrs. MUNN \& CO. Persons who live n remote parts of the
country can usually purchase drafts from their merchants on their country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is
but litte risk in sending bank bills by mail, having the letter registered by the postmaster. Address MONN \& CO., No. 37 Park Row, New York.
Patents are now granted for SEventeen years, and the Government fee required on filing an application for a patent is $\$ 15$. Other changes in the fees are also made as follows :-

##  <br> On issulng each original Patent. ......... On appeal to Commissioner of Patents. On application for Re-issue <br>  <br>  <br> On filing application for Design (fourteen yeirs)............... $\$ 30$

The Patent Laws, enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be
are concer neu in new inventions.
The law abolishes discrimination in fees required of toregners, ox cepting natives of such countries as discrimninate against citizens o the United States-thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners, except the Canadians, io enfoy all the privileges of our patent system (except in cases of de signs on the above terms. Foreigners cannot secure their invent
by fliling a caveat; to citizens only is this privilege accorded. AVEATS.
Persons desiring to file a caveat can have the papers prepared in the
shortest tirne by sending a sketch and description of the invention shortest tirne by sending a sketch and description of the invention che Government fee for a caveat is $\$ 10$. A pamphlet of advice re application by mall. Address MUNN \& CO, No. 37 Park Row, Ne" York.

## REJECTED APPLICATIONS.

Messrs. MUNN \& CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of ref rences, models, drawings, documents, \&c. Their success is the prose of their charge is generally left dependent upon the final result
their charge is generally lert dependent upon the inal result.
Alled, are invited to correspond with MUNN CO on the subpect giving a brief history of the case, inclosing the official letters, \&c.

## FOREIGN PATENTS.

Messrs. MUNN \& ©O., are very extensively engaged in the preparation and securing of patents in the various European countries. For he transaction 29 Boulevard St. Martin Paris; at Nos. 66 Chancer enniers, Brussels. They thind they can safely say that three-fourtne of all the European Patents secured to American citizers are pro cured through therr agency.
Inventors will do well to bear in mind that the English law does no imit the issue ot patents to inventors. Any one can take out a pat ontthere.
Circulars of information concerning the proper course to be pursued n obtaining patents in foretgn countries through MUNN \& CO'S Agency, the requirements of different Government Patent Offices, $\mathbf{\text { cc., }}$,
may be had, gratis, upon application at the principal office, No. 37 may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch oflices. SEARCHES OF THE RECORDS
Having access to all theoficial records at Washington, pertaining to the sale and transfer of patents, MESSRS. MLT $\mathrm{v} \&$ CO., are at all times ready to make examinations as to titles, ownership, or assignment 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 hem much interest. The whole establishment is one of great interest n the world.
MUNN \& CO. wish it to be distinctly understood that they do not peculate or traticic in patents, under any circumstances; but that they devote their whole time and energles to the interests of their clients.
copies of patent claims.
MESSRS. MUNN \& CO., having access to all the patents granted ince the rebuilding of the Patent Office, after the fire of 1836, can tur ish the claims of any patent granted since that date, for \$1.
the validity of patents.
Persons who are about purchasing patent property, or patentees Who are about erecting extensive works for manufacturing under petent attorneys, to see if they are not likely to infringe some exist ing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuncration. The price for such services is alwasssettled upon in advance after knowing the nature of the inention and being informed of the ooints on which an opini $n$ is so cited. For further particulars address MUNN \& CO., No. 37 Park Row New York.

## EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might realily be extended, and if extended, might prove the source of wealth to very many patents ar suftered to expire without any effort at exten sion, owing to want of proper information on the part of the patent tees, their relatives or assigns, as to the law and the mode of proce dare in order to obtain a renewed grant. Some of the most valuable grants now existing are extended patents. Patentees, or, if deceased heir 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 consulting or writing to MUNN \& CO., No. 37 Park Row, New York. assignments of patents.
The assignment ot patents, and agreements between patentees and the Patent Office. Address MUNN \& CO., at the Scientifiç American 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 o order them returned as early as possible. We cannot engage to rast accumulation, and our lack of storage receipt, owing to their ore. who wish to preserve their models should order them returne within one year after send!ng them to us, to insure their obtaining them. In case an application has been made for a patent the mode s in deposit at the Patent office, and cannot be withdrawn.

It would require many columns to detall all the ways in which the nventor or Patentee may be served at our offlces. We cordially in朝e all who have anything to do with patent prow, New York, wher any questions regarding the rights of Patentees, will be cheerfully answered.
Communications and remittances by mail, and models by express Vork

## $1{ }^{4}+4$

W. V. H., of N. Y.-A fly-wheel does not create power -the idea is absurd. It is employed for two distinct offices. First, to give uniformity to the motion of machinery in cases wher either the force or the resistance is variable. Second, to accumu late the power where a resistance greater than that of the force is cation is seen in the steam punch, where the resistance in some cation is som in cases would stop the ghe in which the $p$
lated. T. S
T. S., of N. Y.-High piston speed is a desirable ele ment in an engine, but we c nnot see how a much higher velocity can be got with a pair of double engines than with one engine of the pair. Some advantage may be derived from one helping the other ofs centers, but if one engine runs a high for by an mis A high piston speed is economical, other things being equal. Any it is suficilo New York, will furnish you with a book on ship-building.
P. S. S., of Pa.-We have no doubt that Mr. Hogg wa in error in supposing thatcanned fruit will keep better without the adiition of sugar. It is true that a small quantity of sugar in when tion of sugar will ferment more readily than a concentrated one indeed if it is sufticiently concentrated no fermentation will take
place. All fruit contains sugar or starch enough to induce fermer place. Alt the addition of more sugar will doubtless tend to pre vent fermentation.
F. E. W., of Mass.-You are mistaken in regard to the law. Unless you made a definite agreement with your workman to get up the improvement for you, you could lay no claim to it He is employed by you to do a certain amount of work for certa wages, but has not pledged to you the result of his ingenuity in de
W. T. C., of Mass.-The mistake you made was in delay ing your application for a patent, until some one has got a paten for the same thing. In order now to vindicate your rights, you ence with those allowed to the your claims put into interfer ence with those allowed to the other party. Many inventors b \& D of N Steam cause the whistle to vibrate . \& D., of N. H.-Steam causes the whistle to vibrate rapidly, that is what gives the sound. The steam strikes the thin edge percussively, or like a hammer, and that is what makes the by the number of vibrationsoccurring in a given time.
J. H. C., of N. H.-If the watch falls with the same velocity of course the shockl on the pivots of the balance whee will be the same; but with a thicker case it would fall thruugh the air with slightly greater velocity
J. F., of N. Y.-Messrs. Balliere \& Brothers, No. 440 Broadway, New York, have published a tre
troleum by Abraham Gesner, M.D., F. G. S.
H. H., of Ohio.-Your improvement in sawing machines seems to be new, but before applying for a patent we advise you to have us make a preliminary examination into its novelty at the Patent Office.
R. B. W., of Ohio.-Mr. Riehard Dudgeon, machinist, of Columbia street, this city, will furnish you with a punch that will cut an inch hole by hand in a bar one inch thick
W. C., of Pa.-Your quadrant would measure the alti thde of a star, but we should
. R. S., of Md.-The metal you send us is known as Chinese white copper. It
E. A. K., of N. Y.-The mechanical powers are the lever, the puley the wedge, the inclined plane, and the screw. N. W. F., of N. Y.-There is no better electrical ma chine for medical purposes than Dr. Smith's, the kind you now have.
R. B., of Canada.-We know of no prize offered for a demonstration of the problem to bisect an angle

## Money Received

At the Scientific American Office, on account of Patent Ofice busivess, from Wednesday, Oct. 5, 186-1, to Wednesday Oct 12, 1864 -
L. E., of N. Y., s25; R.C. \& M., of N. Y., \$35; B. \& G., of II 320 F. H. P., of Conn., $\$ 15$; E. T. M., of N. Y., $\$ 40$; J. B., of N Y . $\$ 20$
I. F. B., of Conn., $\$ 81$; L. W. T., of N. Y., $\$ 22$; H. S., of Tenn., $\$ 20$
I. B., of N. Y., $\$ 20$ J. B., of N. Y., $\$ 40$; C. T. W , of ra., $\$ 22$; S., of Mas., $\$ 15 ; \mathrm{W}$. Y., of N. Y., $\$ 25 ;$ G. G. P , of ra., $\$ 22$; S. S., of Mass., $\$ 15$; W. Y., of N. Y., $\$ 25$; G. G. P., of Pa., $\$ 40$; A. M.
of N. J., $\$ 15 ;$ A. J. N., of R. I., $\$ 25$; J. S.. of Conn., $\$ 25$; W. N., o N. Y., \$25; D. H. I.. of Ill., $\$ 30$; R. P. F., of Maine, $\$ 15$; C. L., of N . Y. Y., $\$ 25$; D. H. I.. of
Y., $\$ 40$ J. S., of N. Y., $\$ 25$; D. F. W., of Mass., $\$ 15 ;$ L. D. ©., of Mich., $\$ 40$; C.S., of N. Y., $\$ 12 ;$ H. B., of N. Y., $\$ 30$; E. S., of N. Y Mich., $\$ 40$; C.S., of N. Y., $\$ 12$; H. B., of N. Y., $\$ 30$; E. S., of N. Y.,
$\$ 20 ;$ J. S., of N. Y., $\$ 45 ;$. C. C., of N. Y., $\$ 40$; O. G. B., of N. Y.,
 S. P., of N. J., $\$ 30$; S. P. O., of Ill., $\$ 12$; A. S. M., of Ill., $\$ 30$; S. T of Ill., \$42; F. L., of Ohio, \$15; D.I. S., of N. Y., \$25; D.F. H., of Mass., \$100; E. J. K., of N. Y., \$10; L. G. K., of Mass., $\$ 20$; V. W. B of N. Y, $\$ 40$; M. J.D., of N. Y., $\$ 40$; J. L. T., of La., $\$ 15$; H. N., of R. .., $\$ 20$; H. N., of Pa., $\$ 20 ;$ P. \&S., of Conn., $\$ 20$; R. P. B., of
Mich., $\$ 20$; P. S. F., of N. Mich., $\$ 20$; P. S. F., of N. Y., $\$ 20$; R. \& S., of III., \$25; C. B., or Cal., \$60; C. F., of N. Y., $\$ 30$; J. S., of N. Y., $\$ 25 ;$ B. $\&$ L., of Cul., $\$ 15 ;$ J
 K., ot Ohio, $\$ 25$; A. J. S., of Cal., $\$ 19$; T. M., of N. Y., $\$ 15$; W. H. C of Ind., \$25; J. II. C., of Mass., \$16; G. F., of III., \$25; A. R. D., of N. H., \$15; S. W. K., of Mass., \$15; W. C. McB., of N. J., $\$ 35$; S. R. of Pa., $\$ 30$; G. S., of Mass., $\$ 15$.

Persons having remitted money to this office will please to examin he abovelist to sce that their initials appear in it and if they hav not received an acknowledgment by mail, and their initials are not th
be found in this list, they will please notify us immediately, stating be found in this list, they will please notify us immediately, statin the amount and how $t$ was sent, whether by mail or express.
Specifications and drawings and models belonging to parties with the following initials have beenforwarded to the Patent Office, from Wednesday, Oct. 5, 1864, to Weunesday, Oct. 12, 1864 :C. L., of N. Y.; D. I. S., of N. Y.; D. S., of Cal. (t case:: ; V. W. B of N. Y.; L. W., T., of N. Y.; A. C. C., of N. Y.; R. \& S., of Ill.; A J. N., of R. I.; N. B. B., of N. Y. S. P., of N. J.; W. H. C., ot Ind
G. K., of Vt.; H. L., of Iowa; G. F., of III.; G. N. N., of Pa.; L. E G. K., of Vt.; H. L., of Iowa; G. F., of III.; G. M. M., of Pa.; L. E,
of N. Y.; H. B., of N. Y.; J. S., of N. Y.; W. C. McB., of N.J. W. of N. Y.; H. B., of N. Y.; J.S., of N. Y.; W. C. McB., of N. J.; W
Y., of N. Y.; J. H. M., of Ohio; W. N., of N. Y.; J. F. S., of N. Y.; Y., of N. Y.; J.H. M., of Ohio; W. N., of N. Y.; J. F. S., of N. Y.; J.
L., of N. Y.; C. F., of N. Y.; S. R., of Pa.; A. J. S., of Cal.; R.C. M., of N. Y.; J. S., of N. Y.; E. T. M., of N. Y.; C. S., of N. Y.; M. J. M., of N. Y.; J. S., of N. Y.; E. T. M., of N. Y.; C. S., of N. Y.; M. J. f., of Conn.; C. A. B., of Cal. ; D. II. I., of III.; S. P. O., ,. III.; N T., of Ind.; A. S. M., of III.; G. (4. P., of Pa.; M. K., of Othe.

## TO OUR IREADERS.

Modelsare required to accompany applications for Pat ( nts under the new law, the same as formerly, except on design pat ents, when two good dra wingsare all that are required to accompan Receipts.-When money is paid at the office for sub scriptions, a receipt for it will alwass be given; but when subscriber remit their money by mail, they may consider the arrival of the frst paper a boma-fide acknowledgement of our reception of the funds.
Patent Claims.-Persons desiring the claim of any in vention which has been patented within thirty sears, can obtain a copy by addressing a note to this owice, staling he na en the pate copying. We can also furnish a sketch of any pid issued since 1853 to accompany the clam on receipt of 2 Addre MUNN \& CO. Patent Solicitors, No 37 Park Row, New York. Addre invariable Rule.-It is an established rule of this office to stop sending the paper when the time for which it was pre-pal has expired.

## RATES OF ADVEIE'TISING

TWENTY-FIVE CENTS per line for each and every insertion, pay able in advance. To enable all to understand how to calculate th mount tbev must send when they wish advertisements published we will exp! inn that ten words average one line. Engravings will not publishers reserve to themselves the right to roject any adrertisement they mav deem objectionable

## V aluable real estate

large machine silop,
With all the Machinery and Tools, FOR SALE.
On the 10th day of November next, will be sold at auction, on the
premises known as O T. Burt's Armorv, at Windsor Locks, C onn.


TNCRUSTATIONS REMOVED AND PREVENTED.

H. N. WINANS, New York-" Your Powder is invaluable. One an H. N. WiNANS, New york- Your biler pertictly clean.,'
half pounds weekly has kept M. TVNER \& Bro., Franklin, Ohio.
.

A IKENS' AND OTHER KNITTING MACHINES RE A quire a stop motion, which stops before the stitches drop.
Those using said machines can purchase this attachment at the IN.
VENTOR'S AGENCY, 119 Nassau street, New York.
MANUFACTURFRS OF CONL OIL BURNERS Man secure the Right to use a new and mmpoved chimney
Fastening, cheap, simple, and ,eficient. by addressing WILLIAM
PA INTER, Fallston, Md.

## THE CHEAPEST MODE OF INTRODUCING

 INVENTIONS.INVENTORS AND CONSTRIJCTORS OF NEW AND useful Contrivances or Machines, of whatever kind, can have theiv TIFIC AMERICAN on payment of a reasonable charge for the engraving.
No charge is made for the publication, and the cuts are furnshed ore party for whom they are executed as soon as they have放 or poor engravings, such as patentees often get executed by inex dmitted into these pages. We also reserve the right to accept or reject such subjects as are presented for publication. And it is no our desire to receive orders for engraving and publishing any bu ion in this respect, we slall acline to publ meet our approbaon in this respect, we slall decline to publish.
For forther particulars al lresis-
MUNN \& CO.,
Publish $f$ f of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York City.
PATENTS ! ! - VALUABLE ENGLISH $A N D$ American Patents introduced, mannfactired, or sold for cersh
on commission. Consignments resectrily solicited. Address SNY-

DECHANICAI, DRAWINGS NEATLY EXECUTED TIN SHEET IRON, AND COPPER PLATE WORK-
 STAMMERING.-FOR A PHYSIOLOGICAL TREA-
TISE, on its, "Gause and Cure," by return post, send 20 cents HORSE SHOE AND HORSE NAIL MACHINES


TO ALLL MANUFACTURERS WHO WISH TO MAKE

TIIE CONTEABANF GYMNAST OR COMICAL DAR KEY. The most amusing tov ever invented. Mailed, postpaid,
or 25 cents, by MILTON BRADLEY \& CO., Publishers, springfield
I*
Hass.
G AMES FOR THE $\underset{\text { Boys in Camp and Hospital. Nine Standard Home Games }}{ }$
 mail, postpaid, for 81 , by MILTON BRADLEY \& CO., Publishers
Springfield, Mass.
$\mathbf{*}^{*}$ ${ }^{66}$ S OMETHING NEW ${ }_{\text {Steamboat Managere }}^{\text {FOR }}$ FObscriber has discovered and
 cating and burning purposes, giving said oils or fats a metallic base
of zinc, thereby producing the best and cheapest Lubricant known
ror further information. or rights to manufacture and use, address For further inf ormation or rights to manufacture and use, addres
C. OSULLIVAN, Esq., 137 Broadway, New York, where samples may
be seen or the Patentee.
Paine's improved surveyor's measure.
This measure is made of a narrow steel tape, of various length
 rawn out straight with little force, and does not stretch as does a li, and pins, is remarkably compact, and can be carried slung over
he shoulder without anv inconvenience to the bearer. Circulars
 description and prices may be had gratis of:
E. G. W. BLUNT, 17J Water street, New York.
J. R. ELVNS.
T. LAWRENCE, Shebonnsylvania avenue, Washington. Wis.
I.
FOR SALE.-ONE DOUBLE SURFACING 24-INCH
 WASON'S PATENT FRICTION CLUTCHES PFOR and stopping heavy mach hinery of every description, Altho for starting shock
or itar, are manufactured by WILLIAM MASON, Providence, R. I.
i6 5* $G_{\&}^{U N}$ AND PISTOL Manufacturers (Office. 74 Beekman street, New York), are alwars prepared to furnish Gun and Pistol Screws tow sample
Screws to tht the U. Sumsen . Muset, Sewing Machine Screws, and Meta
Screws generally, of the best quality, at short notice.
PECK'S PATENT DROP PRESS MANUFACTURED
$\mathbf{W}_{\text {Flues Brass Cocks, Stop Valves, Water Gages, Steam Whis- }}^{\text {ROU }}$ Flues, Brass Cocks, Stop Valves, Water Gages, Steam Whis
 66 NDEPENDENT JAW CHUCKS, MANUFACTURED Dy L. D. FAY, Worcester, Mass. Cash prices, 12 inches di-
ameter, $\$ 30$; 15 inches, $\$ 36 ; 20$ inches, $\$ 00$. (The Jaws are wrought
i6 $3^{*}$ Norice Steels or Irons for all kinds. Farming Machines forged or All communications, promptly answered. Address D. B. ROGERS \&
SONS, Pitsburgh, Pa.
$160^{*}$
G REAT SANITARY PAINT, FOR WHICH THE IN ventor intends to take out Letters Patent. Health, economy

HUNT'S PATENT FOOT-WARMER. - WORKS efficient wherever artiticial heat is desired tor the the fet-in carriage, sleivh, parlor, or sic s-bed. State rights for sale
Adress solo
$\mathbf{1 0}^{16} \mathbf{4}^{*}$

TMPORTANT TO MOULDING-MILL PROPRIETORS, In Carpenters and Buideres, Cabinet carr, and roy Manuraterers


 Serpentine Molding and Planing Machine, the only machine in ex will be sent on application. Agents solicited. All orders should be
addressed the the Combination Molding and Planing Machine Com
pany, COTCH GLASS TUBES, ! FTEAM AND WATER $162^{*}{ }^{*}$ Gates for sale. E. BROWN, 311 Walnut street, Philadelphia.
$T O$ INVENTORS OF ANY IMPLEMENTS FOR FAR MER'S use, requiring the use of iron or steel, an opportunit
May he found to dispose of or dovelope the same, by addressing, with
description, Box 532 , Yittsburgh, Pa.

TALUABLE COOKING UTENSIL.-ONE-HALF TH invention will be assirned to any reliableperson paying the coss
a patent. Adddress WM. SALISBURY, Wheeling, W. Va. 16 3*

M ACHINISTS. - WANTED A FEW GOOD MACHIN liberal workes, and steady emplov given. None but exper wil

B AIRD'S PATENT INCRUSTATION PREVENTER Water. No invention connected with steam Power combines so
many advantages as this. The economy in fuel alone, from its use enars the cost of the preventive.
Certificates from Engineers and owners of Steam Boilers, at se tames $\mathfrak{F}$ l levin. $23 \stackrel{\text { Contral }}{\text { Cam }}$ Wharf, Boston.
$\left.\begin{array}{l}\text { MERRITT } \\ \text { WALCOTT. }\end{array}\right\} \begin{aligned} & 69 \begin{array}{l}\text { Courtlandt street, New York } \\ \text { 29 Front Levee, New Orleans. }\end{array} .\end{aligned}$
16 4*
METAL_L1G Machinists.-Metalic Letters and Figures to put on Patterns, plied with figures to number houses, stores, shons, etc. Send for
circular and price list. H. W. KNIGHT \& BRO., Seneca Falls, N. Y.
$164^{*}$

G ROVER \& BAKER'S HJGHEST PREMIUM ELAS $1_{\mathrm{t}} \mathrm{t}$,

PORTABLE ENGINES, WITH LOCOMOTIVE PATnyines with uipright, ofoilers, neve, nend second-hand Enginee of evisting lescription, Lathes, Planors, Drills, Boiler Sho Tools, Shafting, Pu
eys, and Machinist Supplies, for sale by C. GAY, 29 Doane sitreet,
Boston.
J. FAY \& CO., CINCINNATI, OHIO,

$$
\begin{aligned}
& \text { MANUGACTURERS OF } \\
& \text { IATENT WOOODWORKING MACHINERY } \\
& \text { PARTIICLARLY DESIINED FOR } \\
& \text { RAILROAD AND. CAR }
\end{aligned}
$$


CNGINEERS AND MACHINISTS ARE SURE OF Getting into the United States Navy as Engineers hy applying
ar addrexsing, with two stamps, J. HARRIS, 355 North 10 th
Philiadeet
13
$5^{*}$

N ERVOUS DISEASES AND PHYSICAL DEBILITY, arising from Specific causes in both sexes-new and reliable
treatment, in Reprtsor the Howard Absociation-sent in sealed letter
nvelopes, free of charge. Address Dr. J. SKILLIN HOUGHTON envelopes, free of charge. Address Dr. J. SKILLI HOUGHTON
HowardAssociation, No. 2 South Ninth street, Philadelphia, Pa.
$1412{ }^{*}$

## Best quality of

Furnished to order and at short notice by addressing "
Furnished to order and at short notice by addressing "Malleable
ron Works," New Britain, Conn.
SAVING OF FUEL TO PARTIES USING STEAM Guaranteed to effect a great saving $n$ fuel and give the mos
perteet reaularity of power. For sale by the subscribers, who have
established their


TRON PLANERS, ENGINE LATHES, DRILLS AN AND 1 other machinists' tools, of superior quality, on hand and finish
ng, or sale low. For deseription and price adress NEW HAVEN
MANUFACTCRING COMPANY, New Hayen, Conn.
H OLSKE \& KNEELAND, MODEL MAKERS. PAT П ENT Office Models, Working Models, and Experimental Ma
hinery, made to order at 258 Water street, betweenc Center and Elm.
New York. Refer to Munn \& Co., SCIENTIFIC AMERICAN Ottice. lif

M ANUFACTURERS OF the link motion, variable cut oft of the most apr, WITH the link motion, variable cut off of the most approved con
struction; also Lathes, Nill-gearing, Shating, Hangers and Machine
ry in general. Address $21 . \&$ T. SAULT, New Haven, Coan. $1925^{*}$

PATENTED WOOD BENDERS. - THOROUGHLY

R EYNOLDS' TURBINE WATER WHEELS.-COM R PETENT men are employed to measure streams, make plans
and put in fumes whleels, and gearing. TALLCOT \& UNDERHLLL
No. 170 Brf
Broadway, New York.
VACHINERY.-S. C. HILLS, No. 12 PLATT STREET hucks, Drills, Pumps ; MIortising, Tenoning and Sash Machines Woodworth's and Daniels's Planers, Dick's Punches, Presses and
Shears; Cob and Corn Mills ; Harrison's Grist Mills ; Johnson's
Shingle vills ; Belting Oul, \&c.
FOR BEDSTEAD AND WHEEL MACHINERY, AD

A MESSIEURS LES INYENTEURS.-AVIS JMPORT A ANT Les inventeurs non fanailers avec la langue Anglaise, ei equent nous addresser dans leur langue natale. Enveyez nous un
d exiln et une description concise nour notre examen. Tout ranicutions seront resues en conflence.

## A VALUABLE WORK FOR INVENTORS

 PATEN'PEES AND NIANUFACTURERSThe publishers of the SCIENTYFIC AMERICAN have just prepared
With much care, a pamphlet of information aonot Patents and the Patent Laws, which ought to of e inf the hands of everviniventor the
atentee, and also of manufacturers who use patented invention The character of this useful work will be better understood after read The complete Patent Law Amendment Act of 1861 -Practical In
sructions to Inventors, how to obtain Letters Patent, also about
Models-Designs-Caveats-Trade-marks-Assignments-Revenue Ta Models-Designs-Careats-Trade-marks-Assignments-Revenue Ta - Extensions-Interferences-Infringements-Appeals--Re-issues or
Defective Patents-Validity of Patents-Abandonment of Invention

- Best Mode of Introducing them-Importance of the Secification - Best Mode of ntroducing them-Importance of the Spectication
Who are entitled to Patents-What mpil prevent the pranting ot
Patent-Patents in Canada and European Patents-Schedule of Pat Patent-Panents in Canada and European Patent the granting of at
ent Fees; also a variety ot miscellaneous items on patent law ques It has been the design of the publishers to not only furnish, in con
Ienient form for preservation, a synopsis of he PATENT LAW and PRACTICR, but to answer a great variett of questions which have
been put to them from time to time during their practice of upward f eeventeon yeary, which replies are not accessible in any ot ther form


CNGINEERING. - $A$ YOUNG MAN, RECENTLY D graduated from the Engineering Department of Yale College,
having the best of testimonials from his Professors and others, is
now desirous to enter an en now deairous to enter an engineering establishment where he can
apply himelf to his profession. Addr ess S. H. WALES, SCIENTIFIC
AMERICAN office

PLATINA.- WHOLESALE AND RETAIL. FOR ALL
$T O$ IRON MEN
A young man, with some experience in the business, desires a
situation as Rolling Mill Superintendent. For further naticular
ddress S. E. N., care of Thomas Bland, care of Thomas Bland, 42 Pine street, N. Y. $154^{*}$

THE IMPROVED PHRENOLOGJCAL BUST-SHOWNithe exact location for all the Organs of the Brain ; de
signed for Learners. In this Head alt the newly discovered Ocgan
the Brain are given. It show sachindividna Orman of the Brain are given. It shows each individua, Dorgan on one side,
and all the groups-Social, Executive Intellectual, and Moral-on the
ather. Price, for the largest size, $\$ 1$ si 50 ; and smaller, 75 cents. If

A SAFE STEAM BOILER.
The subscriber is prepared to receive orders for the "Harrison
Steam Boile," in sizes to suit purchasers. The attention of manuacturersandial advantages in absolute safety from destructive ex plosion, first cost and durability, economy or ruen, acity of clean
ing and transportation, etc., etc., not possessed by any boiler now in


TRIP HAMMERS (HOTCHKISS'S PATENT) FOR


OIL! OIL! OIL
For Railrouds, Steamers, and for machinery and Burning,
 machinists pronounce it superior to and cheet serthan any other, and
the only oil that is in all cases reliable and will not gum. The
"Scientific American " after sevel test to any other they have ve used for machinerv., pronounces it superior sale only by the
Inventor and Manufacturer, F. S. PEXSE, No. 61 Main street
Buffalo Buffalo, N. Y.
N. B.-Reliable orders filled for any part of the United States and
Canada.

PORTABLE STEAM ENGINES-COMBINING THE more than 300 being in price. use. Ally are widely and favorably known
Descriptive circulars sent on application. Address actory or no sale
. C. HOADLE CO Lawrence, Mas

CAVALRY HORSES WANTED.
Cavalry bureav, Office of Assist. Quartermaster,
No. 18 State street, New York, June lo, 1864.
T WIIL PURCHASE IN OPEN' MARKET ALL THE Calvary Horses that may be presented and pass inspection atth
Government Stables, corner of 10th avenue and $25 t h$ street, in thi city, until further notice.
Payment will be made in checks payable in certificates of indebted
ness, when seven (7) or more horses are received. Price, one hun ness, when seven (7) or more horses are received. Price, one hun
dred and sixty dollars each.
6 tf
GEO. A. BROWNING, Capt. and Assist. Qr. Mr

THEYSON \& OGG, 39 GREENE STREET, NEAR Grand street, Machinists, Brass, Finishers, and Model Makers
Experimental Machinerry, Indicators, Registers. and Steam Gageer*
anv kind accurately and promptly made.
I1 $11 *$
M ILL STONE DRESSING DIAMONDS SET IN Patent Protector and Guid e. For sale by JOHN DICKINSON,
Patentee and Sole Manufact urer a nd Import er of Diamonds ior all No. 64 Nassaustret, New York Cuty. Old Diamonds reset.
Nresser. Send Postage stamp for Descriptive írcular of the Diamond
$110^{*}$ Dresser.

3ur Beadjtung für Deutid)e (Frmmer.
 berabfelgen peda) grats an tormen ibre plittheilungen in ber reutiden ©prade madien. Etiza von Erfintungen mit tirrgen, Dcullid) geidricbenen © © fid)reibungern beliebe man zu aborifiren an

2uf ber Effice wirb beutidi) gefprodect 37 .
Bir Patent-befege Ier Hercinigten Staaten, nelit ben Regeln unb ber (3rid; aftsorbnung ber Fatent-Ofice uns
 Gefacen frember lanber und darauf bejinglide Mathidlage; ebenfall


Improved " Rorqual Fold ${ }^{\text {s }}$ for Ships.
Many narrow-beam ships are much benefitted by attaching long " shelves," running fore and aft, projecting downward, at an angle from the sides, a foot or more. These " shelves" take hold of the water confine it, and thus prevent the heavy roll and lurch that crank ships are liable to. This invention is designed to effect the same object, and it is called by the inventor the "rorqual fold," from the whale of that species, which is the largest known to naturalits, and for the peculiar faculty of creating similar folds in its skin.
Regaruing the uses to which it may be applied, and the advantages resulting from it, the inventor says:-
"Our vessels, as now constructed, sit on the water

## HOWARD'S COIN SAFE

By transporting specie to a distance in the ordinary canvass bags, boxes, or other packages, where the coins have a chance to rub against each other, very perceptible loss occurs from abrasion or friction. The rough milled edges scraping against each other, and on the smooth parts, is the cause of this loss; the amount of wear on large lots of gold is really very serious, as our large importers know to their sorrow. This has been provided against, as will be seen by inspecting the accompanying engraving. The case, A, is made of cast-iron, and is japanned handsomely outside and in. The case separates in the middle like a portmanteau, and at the junction


BOWDLEAR'S " RORQUAL FOLD" FOR SHIPS.
regardless of the laws of hydraulics, and entirely at of the handle with the body has two small turn the mercy of the waves. There is no affinity between the vessel and its element. It rises and falls, rolls and pitches, without the least control over the waters around. My theory is, when iny attachment is placed on a vessel's bottom that the tendency to roll is counteracted by the resistance these folds offer. They clench the water like so many fingers, and keep the vessel trom rising above its true center of gravity, as the water and vessel-retain their mutual holl of each other. Thus when a vessel is lifted by the powerful action of the sea, the momentum given exceeds that of the wave itself, and consequently she plunges at random, or rolls by her momentum beyond the requirement of the element by which she is surrounded; in fact she does not roll on a safe center of gravity.
"Practical men who have examined it, among them Admiral Stringham, are desirous to see it at once applied."

This invention was patented Oct. 14th, 1863, by John Bowdlear, of Roxbury, Mass. For further information address him at that place, Box No. 410.

## Butter at Sixteen Cents.

Canada must be a very desirable place to live in at the present time. The prices of provisions in the London (C. W.) markets make us long for a corresponding reduction in the enormous prices for food which are obtained here. We quote from the Canada Farmer:-
" Meat, from farmers' wagons, in large supply, and by the quarter very cheap. Beef $\$ 2$ to $\$ 350$ per 100 lbs. Mutton and lamb, 2c. to 4c. per lb. Poultrydressed turkeys, 50 c . to 75 c .; geese, 25 c . to $37 \frac{1}{2} \mathrm{c}$. each; fowls, $37 \frac{1}{2}$ c. to 50 c. ; ducks, 32 c . to 40 c . per pair. Butter, fresh in rolls, 16 c . to 18c. Eggs, 10c. to $12 \frac{1}{2} c$. per dozen. Fruit-apples plentiful, at 25 c . to $62 \frac{1}{2} \mathrm{c}$. per bushel. Vegetables abundant; potatoes, 40 c . to 50 c . per bushel; turnips, $37 \frac{1}{2} \mathrm{c}$. ; onions, $\$ 1$ to $\$ 125 .{ }^{\circ}$

Beef here costs ten times as much. Butter three times and poultry six times as much. Potatoes nine times as much.

An English photographer has lately introduced a novelty in the mode of taking carte-de-visite photographs with the signatures of the sitters appended. This gives but little extra trouble. The sitter simply signs his name on a slip of paper, and finds its tac. simile, diminished in size, transferred to the portraits when they come home.
screws, B, which keep the case together when set as shown, but there are two slots in the handle which allow the case to be opened when the screws are turned horizontally. In the upper side of the case there are circular depressions, $C$, which receive the wax on which the seal of the owner or express company is placed: The gold sets in a series of racks inside, and each rack is proportioned to suit a certain denomination; or they may lue made all of one

size as desired. The gold packed is shown at $D$ and in this condition is wholly protected from loss by the causes mentioned previously. Money cannot be lost out of this safe as it is from bags, which are often cut or ripped, and it need not be counted, as the contents are known, when the racks are full, by a glance. It is more durable than a bag, for it will last for years, whereas luags are costly and soon wear out. The inventor cites one instance where this sate would have been useful; there are, doubt;
less, many similar ones:-"Last winter when there was about six inches of snow on the ground and it was fast increasing, a gentleman was carrying a bag of gold through Wall street; the bag ripped and a number of pieces fell in the snow, his predicament was peculiar; he could not leave what he had dropped for obvious reasons, he could not count what he had left so as to ascertain how much he had lost, he could not tell how many pieces there were under the snow. So all he could do was to rummage with benumbed fingers in all the snow on that part of the sidewalk, and with an amused audience to witness the performance." This coin safe can be conveniently carried in the hand like a carpet bag, and will, no doubt, become popular with our business firms.
A patent is now pending through the Scientific American Patent Agency by Joseph P. Howard, of Brooklyn, N. Y. For further particulars addreas Andrews \& Co., 29 Cliff street, New York City

Soft soap mixed with a solution of potash or caustic soda, or pearlash and slaked lime, mixed with sufficient water to form a paste, is an excellent solvent for old putty and paint. Either of these laid on with an old brush or rag, and left for some hours, will render the putty or paint easily removable.

## §rientific ${ }^{\text {glmexican, }}$

## FOR 1864!

V OLUME ELEVEN

NEW SERIES.

The publishers of the SCIENTIFIC AMERICAN respectfully give notice that the Eleventh Volume (New Series) commenced on July 2d, 18c4. This journal was established in 1845, and is un doubtedly the most widely circulated and influential publication of the kind in the world. In commencing the new volume the publish ers desire to call special attention to its claims as

A JOURNAL OF POPULAR SCIE'NCE.
In this respect it stands unrivaled. It not on!y finds its way to all most every workshop in the coanary, as tha earnest friend of the mechanic and artisan, but it is found in the counting-room of the manufacturer and the merchant ; also in the library and the house hold. The publishers feel warranted in saying that no other ournal now published contains an equal amount of useful information; while it is their aim to present all subiects in the most popular and attract tive manner The SCIENTIFIC AMERICAN is published once a week, in conve nient form for binding, and each number contains sixteen pages of useful reading matter, illustrated with

## NUMEROUS SPLENDID ENGRA VINGS

of all the latest and best inventions of the day. This feature of the iourna' is worthy of special note. Every number contains from five iourna is worthy of special note. Every number contains from five
to ten original engravings of mechanical inventions relating to every department of the arts. These engravings are executed by artists specially employed on the paper, and are universally acknowledged to specially employed on the paper, and arouniversally acknowle
be superior to anything of the kind produced in this country.
The publishers of the SCIENTIFIC AMERICAN promise to present as during preceding years, all the latest improvements in Steam En. gineering, War Vessels, Ordnance-military and naval-Fire-arms, Mechanics' Tools, Manufacturing Machinery, Farm Implements, Wood-working Machinery, Water-wheels, Pumps and other Hydraulic A ${ }^{\prime}$ paratus, Household Utensils, Electric, Chemical and Mathematica Instruments, Flying Machines and other Curious Inventions-beside all the varied articles designed to lighten the labor of mankind, not only in the shop and warehouse, but in every place where the industries of lifeare pursued.
From its commencement the SCIENTIFIC AMERICAN has been the earnest advocate of the rights of American Inventors and the

REPERTORY OF AMERICAN PATENTS. In this important department, so vitally connected with all the great interests of the country, no other journal can lay any claim whatever, as in its columns there is published a weekly official ist of the "Claims" ot all patents granted at the U. S. Patent Oflice.

THE PRACTICAL RECIPES
alone are oft-times worth more to the subscriber than the amount of a whole year's subscription.

TERMS OF SUBSCRIPTION.
Two volumes of the SCIENTIFIC AMERICAN are published each year, at $\$ 150$ eaah, or $\$ 3$ per annum, with correspondingly low terms to Clubs; $\$ 1$ will pay for four months' subscription. The numbers for one year, when bound in a volume, constitute a work of 832 pages of useful information, which every one ought to possess. A new volume commenced on the second day of July, 1864.
Specimen copies will be sent gratis to any part of the country Canadıan subscribers will please to remit 25 vents extra on eac year's subscription to pre-pay postage.

Munn \& Co., Publishers,
37 Park Row, New York.
from fee steak presg of join ac gray \& grem.

