

## Examples for the Ladies.

Mrs. E. J. Stout, Elkader, Iowa, besides doing all the housework for a family of four persons, made last year, with a Wheeler & Wilson Machine, one hundred and fifty fashionable dresses, hemmed over 2000 yards of biased ruffling, and made quite a number of under-garments. This is about her average work a year in all kinds of general sewing for seven years, with no repairs to her machine.

**Burnett's Cocaine** is not greasy or sticky. As a hair dressing, it stands peerless and alone.

## NEW BOOKS AND PUBLICATIONS.

**A COMPENDIOUS GRAMMAR OF THE GREEK LANGUAGE.** By Alpheus Crosby, Professor Emeritus of the Greek Language and Literature in Dartmouth College. Woolworth & Co., 51, 53, and 55 John Street, New York; 111 State Street, Chicago.

This is an abridgement of the well known and long highly appreciated Greek Grammar by the same author, which has now reached its forty-fourth edition. The abridgement is, however, a sufficient *causé mecum* for the student in his progress through school and college. The intention has been to compress, as much as possible, the larger work, to form a portable simple grammar for the beginner, yet sufficiently comprehensive to accompany him throughout a whole course of Greek study as ordinarily pursued.

**MAGNETISM AND ELECTRICITY.** By William Allen Miller, M.D., LL.D., Professor of Chemistry in King's College, London, etc. Corrected from the Fourth London Edition. New York: John Wiley & Son, 15 Astor Place.

This work is identical with the portion of Miller's excellent work on Chemical Physics, from page 313 onward to the end of the book. Some tables, scarcely germane to the subject matter of the reprint, are added. The book forms a good manual of magnetism and electricity up to the date (1864) of the third edition of "Miller's Chemical Physics."

**ÆSTHETICS, OR THE SCIENCE OF BEAUTY.** By John Bascom, Professor in Williams College. New York and Chicago: Woolworth, Ainsworth & Co.

The pressure, upon our time, of other duties has precluded such a perusal of this work as a fair criticism demands. A cursory examination, however, leads us to pronounce it a very useful and entertaining volume. We discern, however, that the author does not abstract the conception of beauty from the conventionalities, religious belief, and even superstitions of mankind, since, in establishing his standards of beauty in literature and art, he defers to all these, deprecating that which violates the "proprieties" of society as below the true standard. Now, we respectfully suggest this is not a "science of beauty," as the author styles it in his preface, but a dissertation thereon, having reference, at least in part, to the moral and religious effect of certain things which, scientifically judged, are beautiful in the extreme, but which our author denounces as inconsistent with a taste for the beautiful, because, to the prurient mind, they suggest immoral ideas. To such an argument as this, the most fitting reply is that art "labors not for prurient minds."

**SPEECHES, ADDRESSES, AND LETTERS ON Industrial and Financial Questions,** to which is added an Introduction, together with Copious Notes and an Index. By William D. Kelley, M. C. Philadelphia: Henry Carey Baird, Industrial Publisher, 406 Walnut Street. Price, \$3.00.

To review this book adequately would require a column of our paper. It is a large octavo, filled with the views of a strong protective tariff advocate on questions, as its title indicates, intimately connected with production and labor. Such a book cannot fail to be interesting and profitable reading, when it is, as in the present case, the work of a strong mind devoted to the consideration of such topics through a life of public service. The social questions hinging upon the solution of the labor question are various and important. The book deserves, and will secure, a large sale, though many will doubtless take issue with the author in some of his views. But such a book, whether it agrees or disagrees with opinions already formed, arouses public attention to vitally important questions, the discussion and settlement of which cannot be delayed without danger. In this way the work before us will do good, and we cordially commend it to our readers.

**FIRST HELP IN ACCIDENTS AND SICKNESS.** A Guide in the Absence, or Before the Arrival of Medical Assistance. Published with the Recommendation of the Highest Medical Authority. Boston: Alexander Moore.

This appears to be a safe and comprehensive manual for the purpose set forth in its title.

**THE AMERICAN JOURNAL OF MICROSCOPY,** which was among the journals burned out in the recent Chicago fire, will hereafter be published at Racine, Wisconsin. By those interested in microscopic science, this publication will be cordially welcomed on its reappearance. Mr. George Mead is the editor and publisher. An advertisement appears on another page.

## APPLICATIONS FOR EXTENSION OF PATENTS.

**MACHINE FOR FORMING SHEET METAL PANS.**—E. A. Smead, Corning, N. Y., has petitioned for an extension of the above patent. Day of hearing, February 14, 1872.

**HARVESTER.**—Joseph B. Butterfield, Philadelphia, Pa., administrator of Jesse S. Butterfield, deceased, has petitioned for an extension of the above patent. Day of hearing, February 14, 1872.

**MACHINE FOR PACKING FLOUR.**—J. Mattison, Oswego, N. Y., has petitioned for an extension of the above patent. Day of hearing, Feb. 21, 1872.

## Value of Extended Patents.

Did patentees realize the fact that their inventions are likely to be more productive of profit during the seven years of extension than the first full term for which their patents were granted, we think more would avail themselves of the extension privilege. Patents granted prior to 1861 may be extended for seven years, for the benefit of the inventor, or of his heirs in case of the decease of the former, by due application to the Patent Office, ninety days before the termination of the patent. The extended time inures to the benefit of the inventor, the assignees under the first term having no rights under the extension, except by special agreement. The Government fee for an extension is \$100, and it is necessary that good professional service be obtained to conduct the business before the Patent Office. Full information as to extensions may be had by addressing

MUNN & CO., 37 Park Row,

## Inventions Patented in England by Americans.

From November 9 to November 11, 1871, inclusive.

[Compiled from the Commissioners of Patents' Journal.]

**CANAL BOAT.**—W. F. Goodwin, Metuchen, N. J.

**HEATING BOLT RODS.**—G. C. Bell, Buffalo, N. Y.

**UTILIZATION OF TIN PICKLE.**—G. Lander, New York city.

**WATER METER.**—G. W. Copeland, Malden, Mass.

## Foreign Patents.

The population of Great Britain is 31,000,000; of France, 37,000,000; Belgium, 5,000,000; Austria, 36,000,000; Prussia, 40,000,000; and Russia, 70,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. A large share of all the patents secured in foreign countries by Americans are obtained through our Agency. Address MUNN & CO., 37 Park Row, New York. Circulars with full information on foreign patents, furnished free.

## Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per Line will be charged.

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4 00 a year. Advertisements 17c. a line. Francis Schleicher, Consulting, Analytical and Man'g Chemist, Laboratory, Newark St., bet. Jackson and Harrison St., Box 172, Hoboken.

Information wanted of where could be purchased, by the quantity, L. A. M. Pascol's patent Burglar Alarm—patentee, George W. Biglow, New Haven, Conn. Please address M. K., Box 313, Shreveport.

I will send, to any address, a plan and specification of my improvements in setting Steam Boilers, together with a shop license, for \$25. Address, for particulars O. Ranney, Corry, Pa., Box 264.

Basket Splint Machine Makers, address B. B. Eastman, Huntington, Mass.

Wanted, a Second Hand Boring Mill—6 ft. to 7 ft. Table—Bement or Sellers make preferred. Address P. O. Box 2459, Phila., Pa.

For Hydraulic Jacks and Presses, New or Second Hand, send for circular to E. Lyon, 470 Grand Street, New York.

The Valley of the Upper Missouri wants 1000 Traction Engines for agricultural purposes, for which it is peculiarly adapted, in surface and in soil. Send descriptive circulars and price list, J. Armstrong, Onawa City, Iowa.

Wanted, a Machinist thoroughly experienced in Milling up Gun Work, making Holders, Jigs, Gauges, and other Gun Tools. A. S. Babbit & Co., Plattsburgh, N. Y.

Williamson's Road Steamer and Steam Plow, with Thomson's Tires. Address D. D. Williamson, 32 Broadway, N. Y., or Box 1809.

Boynton's Lightning Saws. The genuine \$500 challenge. Will cut five times as fast as an ax. A 6 foot cross cut and buck saw, \$6. E. M. Boynton, 80 Beekman Street, New York, Sole Proprietor.

For Hand Fire Engines, address Rumsey & Co., Seneca Falls, N. Y.

Over 800 different style Pumps for Tanners, Paper Makers, Fire Purposes, etc. Send for Catalogue, Rumsey & Co., Seneca Falls, N. Y.

Scale in Steam Boilers—To remove or prevent scale, use Allen's Patent Anti-Lamina. In use over Five Years. J. J. Allen, 4 South Delaware Avenue, Philadelphia, Pa.

Photographs.—Rockwood, 845 Broadway, will make 8x10 negative and six photographs of machinery, in any part of the city, for \$10.

For Sale cheap, a Gear Cutter, nearly new—cuts 46 in. dia.—and a Drill Press. L. Duvenage, 208 Center Street, N. Y.

Presents—A Doty Washing Machine and Universal Clothes Wringer—warranted satisfactory. R. C. Browning, 32 Cortlandt St., N. Y.

Wanted, by an experienced Machinist, a situation to superintend, construct, or Book-keeping. Commands the best references as to ability. D. L. W., Station A., New York.

Improved Mode of Graining Wood, pat. July 5, '70, by J. J. Callow, of Cleveland, O., enabling inexperienced grainers ("without the long required study and practice of heretofore") to produce the most beautiful and Natural Graining with speed and facility. Send stamp for circular.

3 Hydraulic Presses for sale on reasonable terms. Apply to Whitneyville Armory, Conn.

Metallic Molding Letters, for Pattern Makers to put on patterns of Castings, all sizes, etc. H. W. Knight, Seneca Falls, N. Y.

Use Soluble Glass for fireproofing Wooden Pavements, Shanties, R. R. Bridges—also as common hardening Mortar and Cements, makes most durable Stove and Foundry Putty, Iron Cement. Apply to L. & J. W. Feuchtwanger, Chemists, 55 Cedar street, New York.

Portable Farm Engines, new and beautiful design, mounted on Springs. Compact, light, and efficient. Send for descriptive circular, Mansfield Machine Works, Mansfield, Ohio.

Stencil Tools & Steel Letters. J. C. Hilton, 66 W. Lake st. Chicago.

Taft's Portable Hot Air Vapor and Shower Bathing Apparatus Address Portable Bath Co., Sag Harbor, N. Y. Send for Circular.

Shoe Peg Machinery. Address A. Gauntt, Chagrin Fall, Ohio

Builder's Scaffold—Patent for Sale—For further particulars, address Redick & Kunkle, Butler, O.

For Steam Fire Engines, address R. J. Gould, Newark, N. J.

Turkey Boxwood pieces for Sale, suitable for engravers and fancy turners' use. Address Stephens & Co., Riverton, Conn.

All kinds of Presses and Dies. Bliss & Williams, successors to Mays & Bliss, 118 to 122 Plymouth St., Brooklyn. Send for Catalogue.

The best lubricating oil in the world is Winter pressed Sperm. Sold in bottles, cans, and barrels, by Wm. F. Nye, New Bedford, Mass.

Brown's Coalyard Quarry & Contractors' Apparatus for hoisting and conveying material by iron cable. W. D. Andrews & Bro., 414 Water st., N. Y.

Presses, Dies, and Tanners' Tools. Conor & Mays, late Mays & Bliss, 4 to 8 Water st., opposite Fulton Ferry, Brooklyn, N. Y.

Over 1,000 Tanners, Paper-makers, Contractors, &c., use the Pumps of Heald, Sisco & Co. See advertisement.

For Solid Wrought-iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Mining, Wrecking, Pumping, Drainage, or Irrigating Machinery, for sale or rent. See advertisement, Andrew's Patent, inside page.

Improved Foot Lathes, Hand Planers, etc. Many a reader of this paper has one of them. Selling in all parts of the country, Canada, Europe, etc. Catalogue free. N. H. Baldwin, Laconia, N. H.

Chard & Howe's oils, of 134 Md'n Lane, neither gum nor chill.

Safety Store Elevators. Provision against Rope, Bolt, and Engine breaking. One third the cost of others claiming to be safe. Andrews Bro., 414 Water Street, New York.

For Best Galvanized Iron Cornice Machines in the United States, for both straight and circular work, address Calvin Carr & Co., 26 Merwin St., Cleveland, Ohio.

Boiler and Pipe Covering manufactured by the Chalmers Spence Non-Conductor Co. In use in the principal mills and factories Claims—Economy, Safety, and Durability. Offices and Manufactories, 100 E. 9th street, New York, and 1202 N. 2d street, St. Louis, Mo.

Dickinson's Patent Shaped Diamond Carbon Points and Adjustable Holder for dressing emery wheels, grindstones, etc. See Scientific American, July 24 and Nov. 20, 1869. 64 Nassau st., New York.

Railway Turn Tables—Greenleaf's Patent. Drawings sent on application. Greenleaf Machine Works, Indianapolis, Ind.

Peck's Patent Drop Press. For circulars address the sole manufacturers, Milo, Peck & Co., New Haven, Ct.

To Ascertain where there will be a demand for new Machinery, mechanics, or manufacturers' supplies, see Manufacturing News of United States in Boston Commercial Bulletin. Terms \$4.00 a year

## Answers to Correspondents.

**SPECIAL NOTE.**—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however when paid for as advertisements at 100 a line, under the head of "Business and Personal."

ALL reference to back numbers must be by volume and page.

C. L., of Pa.—We cannot detect any silver in the mineral you send.

**PREVENTION OF FERMENTATION.**—Cider can be prevented from becoming fermented by passing ozone through it.—C. F. D.

**INCRUSTATION IN BOILERS.**—E. S. F. should put clean oyster shells in his boiler. These will keep it clean by attracting all the particles of carbonate of lime.—F. W. A. S., of Cal.

**CANKER IN THE MOUTH.**—In answer to F. S. C., November 18th, I will say: Take a piece of common blue vitriol, and either make a wash by diluting in water, or simply rub the vitriol over the affected part, taking care not to swallow any of the vitriol. I have used it a great many many times, and never knew it to fail.—J. C. C., of N. J.

S. H., of ——A perpetual motion, in the sense in which the term is used in mechanics, must supply its own power.

H. A. S., of N. Y.—A siphon cannot conduct water over a height greater than that to which water can be raised by the pressure of the air at the point where the siphon is placed, less the height of a column whose pressure would overcome the friction of the water in the short leg of the tube. It is atmospheric pressure alone that causes the water to rise in the short leg of the siphon. Your query relative to the motion of a rolling wheel has been repeatedly answered in this column.

W. M., of Pa.—The pressure of the atmosphere is all that raises water in an atmospheric pump. Such pumps are called suction pumps only by those unfamiliar with hydraulics.

**WORMS IN HICKORY.**—Cut the hickory at a time when the bark will peel off. That is generally from June to September. We, in the West, find this to be the right time.—G., of O.

**SQUEAKING BOOTS.**—In your issue of November 25, I noticed a remedy for squeaking boots, namely, to saturate the soles with kerosene oil. A much pleasanter way is to have your boots made to order, and, between each layer of leather in the sole, have a piece of oiled silk inserted. This is a sure preventive. Let Jones try it.—G. L. F., of N. Y.

**CUTTING BEVELS.**—In reply to C. H. S.: The surest, quickest, and best way to cut a bevel is to cut it in a box. To cut a miter on beveled work, place it in a miter box, giving it the same bevel in the box that it is to have in the work, and cut it with a saw, in the manner of cutting any other miter.—C. T., of Vt.

**INCREASING POWER.**—In answer to E. K., Nov. 4, I would like to say, it will be a disadvantage to put a fly wheel on his saw arbor. If his saw runs at a high speed, as it ought to, it will take a certain amount of power to run the fly wheel; this is always a dead loss. In sawing short work, it might serve to equalize the speed, but no one can gain power by its use.—F. C. S., of Conn.

**BLAST FOR WASTE SHAFT.**—J. H. B., of Ohio, writes: "I am producing an exhaust or suction in pipes with a blast from a fan, which draws up and discharges, with great force, dust, shavings, sticks, blocks, shelled corn, and all kinds of grain. This I do without anything going through the fan or blower. But, sir, do you know of anything in use that does this?" Answer—Machines for removing sawdust and small rubbish from shops have been constructed on this principle.

**LAYING OUT HOPPERS, ETC.**—C. H. S. asks for a rule for laying out the miter of hoppers, wagon seats, etc. I give the following simple and accurate rule: Bevel the top or bottom edge of the sides of the hopper to the same angle that the sides stand at; then lay a bevel set at a true miter on the beveled edge, and that will lay off the joint. When the sides stand at different angles, bevel the edge of each side to correspond with the angle of that side. If the corners are to be a square joint, lay a T square on the beveled edge instead of a true miter.—G. S. N.

**SETTING SAW.**—A circular saw that is filed and set right for splitting is not right for cross cutting, and *vice versa*. If J. H. M. wants a saw for doing both kinds of work, let him file the front edge of the teeth in a line with the center of the saw, giving the teeth a slight bevel top and front. In setting the saw, use a hammer, holding a piece of iron against the saw on the opposite side. Do not set the teeth at the points, but as near the base as possible. I think this will give him a saw that will cut smoothly, and as near right for both kinds of work as he can get.—F. C. S., of Conn.

**SPRING IN SHAFTING.**—Answer to query 5, No. 22, current volume. Ten years since, our factory, in the basement of which was shafting of cast iron, from three to four inches diameter, in sections about ten feet long, was burned down. These were entire, but crooked as snakes, six to ten inches out of line. When we rebuilt, they were utilized, by being heated (by wood fires, made on the ground) to a red heat at the point to be straightened. At those points a steady pressure was applied; the shafts were forced into line, fitted, and are now in use, "as good as new."—R. L. B.

**EXTERMINATING RATS.**—In your paper No. 14, Sept. 30, 1871, query 21, T. C. H. wishes to know some means of expelling rats from a building. Let him catch, by any ordinary trap, three rats, put them in a cage constructed of wire, in any place which is plagued by this animal, and give them no food whatever. On the third day he will find only two rats, one being eaten up by the two others, and on the sixth day, only a single rat in the cage. Let him give the survivor his liberty on the seventh day, and he will be, in the course of one week, rid of all the rats, except the one monster which ate up his two brothers, and which he may feed for sympathy's sake. This mode was adopted with great success in a building in the former Thiergarten, at Vienna, where all other means to expel these animals were useless.—L. S., of Vienna, Austria.

L. B. S., of Mass.—The compound engine is an engine having two cylinders, one a high pressure and the other a low pressure. In the high pressure cylinder the steam is used non-expansively, and it exhausts from this cylinder into the low pressure cylinder, where it is expanded as much as practicable, and then exhausted into a condenser. The method admits of more convenient application in marine engines, where, to obtain the same amount of expansion, a long cylinder would be needed. With the general adoption of surface condensers, marine boilers are not now liable to scale, and they carry a much higher pressure of steam than formerly, rendering the expansion of steam much more important than was the case when low pressures were the rule. For details of construction of various engines, made on the compound principle, you will find it necessary to read such works and publications as make marine engineering a specialty.

**CURIOUS FREAK OF TWIN STEAM BOILERS.**—Will you allow me to say, for the benefit of H. P. S., of Kansas City, Mo., that the difficulty lies only in his not having steam pipes large enough to allow the steam to pass freely from one boiler to the other, so as to equalize the pressure, attendant upon a larger amount of steam being generated in one boiler than the other and *vice versa*? No one can keep a fire perfectly regular, and therefore boilers set in the manner he states should be connected by a pipe of ample size to allow the pressure to equalize itself; when that is done there will be no trouble. The only curious freak about the boilers lies in the use of so small a pipe to connect them at the top. A six inch pipe would answer the purpose very well; then, if he chooses to use a two inch one to lead from that to the engine, good; but a four inch

one would be better, as the friction of the steam in the pipe would be sufficiently less to compensate for the loss of heat by radiation, etc., by the saving in fuel, if it costs as much as it does generally.

CUTTING BEVELS.—C. H. S. asks for a rule for mitering bevels or "flaring boxes." I submit two methods, original as far as I know.

CASE HARDENING.—If E. N. G. will make a paste of prussiate of potash, and cover his screws and nuts with it, and then heat until red hot, he will have them case hardened.

Queries.

[We present herewith a series of inquiries embracing a variety of topics of greater or less general interest. The questions are simple, it is true, but we prefer to elicit practical answers from our readers.]

1.—LIQUID GLUE.—M. M., Havana, Cuba, asks:—Can any of your correspondents inform me through your scientific paper, how to prepare a good liquid glue for banks, commercial offices, and general use?

2.—MARKING FLUID.—Will some of your many readers inform me how to make a good marking fluid, for marking boxes, barrels, etc?—R. W. R.

3.—VENTILATING ICE HOUSES.—Can any of your correspondents tell me the best way to ventilate ice houses?—J. M. D.

4.—BINIODE OF MERCURY IN SOLUTION.—I often have prescriptions calling for bichloride of mercury with potash iodide, combining which I have the biniodide of mercury (Hg I2) as a precipitate. I wish to inquire through your columns how to retain the salts in solution.—H. G. I.

5.—SOLDERING CAST IRON.—Will you inform us what preparation has been most successfully used for putting solder on to cast iron?—G. D. & S.

6.—DECAY OF INDIA RUBBER BANDS.—Is there any manner of rendering elastic rubber bands proof against decay? Those now in use in business houses are useless after a year or two.—W. H. S.

7.—DEOXIDISING ZINC.—Can any one inform me of any method by which I can restore oxidized zinc or spelter? I use it in a liquid state, but have a great deal of waste by over heating.—G. A.

8.—FIREPROOFING TIMBER.—Can any one inform us of any wash that can be applied to wood to make it fireproof? We have a building of easily fired timber, and would like to avert the danger.—K. K. & W.

9.—COMPOUND GEARING ON SCREW CUTTING LATHE.—I wish a simple and reliable rule for compounding gearing on screw cutting lathes, the traverse screw having four threads to the inch.—R. F. S.

10.—BATTERY POWER.—How many cups of Daniell's battery would be required to work a telegraph line 650 feet long with common sounders at each end? The wire is copper, No. 16.—E. M. D.

11.—SALT AND ICE.—Why is salt mixed with ice to freeze ice cream, while, in winter, we put salt in our pumps to keep them from freezing?—M. A.

12.—CARBON BATTERY PLATES.—I wish to know how to make carbon battery plates for voltaic batteries.—A. N.

13.—DRESSING FOR SHOES.—Can any one give me a receipt for making the best dressing for ladies' and children's shoes, waterproof, and that will not injure the leather?—M. L. K.

14.—FREEZING OF MORTAR.—Does lime mortar undergo any chemical change by freezing when in a soft state? I am informed that it is customary, upon the continent of Europe and in England, for all lime mortar which is to be used in the masonry of buildings of importance to be made up months, or perhaps longer, before it is used.

15.—RESULTANT POWER.—Does the resultant equal the power applied, in that class of machinery where the power is applied at the axle (as in reapers), no account being taken of friction or the power required to draw the weight of the machine? If any power is lost, how can it be accounted for, or, in other words, what becomes of it?—C. A. B. of Ill.

16.—LAND AND SEA BREEZES.—I would like to inquire what causes the wind to moderate at sun setting, and then a breeze to get up after dark? I have often noticed the same at sea, and on land in heavy gales.—B. R., Jr.

17.—JEWELLER'S LAP.—Can any one give me directions for making a lap, such as is used generally by jewellers in polishing? I want to know what the different kinds of metals are, and their proportions, so that I may cast one.—O. B. F.

18.—REVOLUTION OF BODIES.—The following question has given rise to a good deal of discussion in this place, and both parties have agreed to leave the matter for your readers to decide: A man starts to go around a squirrel that is on the trunk of a tree, and as the man goes round, the squirrel travels around the tree, and remains in the same position to the man until both arrive at the point whence they started. Does the man go round the squirrel?—R. O. H.

19.—HYGROMETER.—I wish to know what to do with my hygrometer, that is, the wet bulb thermometer, when it is so cold that water freezes, so that I can find the relative humidity of the air? Is there an instrument made called a hygrodeik?—T. M., Jr.

20.—ANNEALING LAMP CHIMNEY.—Every person who has used a "German Study Lamp" one season, knows that the glass chimneys of the kerosene lamps in common use are an imposition on the public. Can any of your readers give a simple process to anneal or temper them, so that they, with judicious care and careful usage, will not be broken by the heat of its burning wick?—R. L. B.

21.—MARKING INK.—How can I make a good marking ink, suitable for marking boxes and barrels, etc?—T. L. S.

22.—RESTORING BUFFALO ROBES.—What can be applied to buffalo robes to make them soft and pliable after having been wet?—T. L. S.

23.—SOFTENING LEAD.—Will some one please give me, through your paper, a receipt for softening lead, that has become hard by repeated melting and using?—C. W. L.

24.—BRONZING.—Can any one give me some information about bronzing? And where can I obtain a work on bronzing, and which is the best work to get?—C. R.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

CUTTING AND ASSORTING PLAYING CARDS AND STRIPS.—Victor E. Mauger of New York city.—This invention has for its object to produce simple and effective means for assorting—that is to say, putting upon one another in regular order—the several strips or pieces cut from strips.

WATCH ESCAPEMENT.—Don J. Mozart, of New York city.—The ordinary escapement has a projecting pin or ruby on the staff, which receives an impulse from the double pronged anchor alternately in opposite directions.

BORING MACHINE.—Frank S. Allen and Charles F. Ritchel, of New York city.—This improved boring machine is designed more especially for use in boring holes upon a flare and at different inclinations, and is so constructed and arranged that all the holes, whatever or however different their inclination, may be bored at the same time and at one operation; and it consists in the construction and combination of various parts, which can not well be described in such a notice as the present, but which constitute a very ingenious invention.

KEY FOR SEWING MACHINE LOCK.—Edward L. Gaylord, of Bridgeport, Conn.—This invention has for its object to furnish an improved key for locks to be attached to sewing machine covers and other articles that are turned up or over so that the key is liable to fall out and be lost, and which shall be so constructed as to retain its place in the key hole however much the article to which the lock is attached may be turned up.

ASH PANS FOR STEAM BOILERS.—John Gates, of Portland, Oregon.—This invention consists in certain improvements in connection with the ash pans of steam boilers. A surrounding pan, within which the ash pan is placed, is so adjusted that a water space will be formed between the two.

ROCK DRILLING APPARATUS.—Lycurgus Nelson, of Smyrna, Tenn.—This invention has for its object to so combine the necessary shafts and devices of a power drill that either of the processes of drilling, extracting tools, and sand pumping may be carried on without much preparation or difficult change or gearing.

COMBINED WASHER AND BOILER.—George C. Taylor and John B. Christian, Port Jervis, N. Y.—This invention furnishes an improved washing machine, claimed to be very effective in operation, washing the clothes quickly, thoroughly, and without injuring them, and, at the same time, so constructed that the water may be heated and the clothes boiled in the machine.

SKATE FASTENINGS.—Edward Lawson Fenerty, Halifax, Canada.—This invention has for its object to furnish an improved skate fastening which shall be light, strong, simple, and inexpensive, and so constructed that it may be firmly secured to the boot by a single motion.

APPARATUS FOR TESTING CANS, BARRELS, ETC.—William D. Brooks, Baltimore, Md.—In this case, an apparatus is constructed for testing cans, barrels, and other vessels, by forcing air into the same, so that, if the vessel is not perfectly tight, the condensed air therein will leak out and indicate the spot where the hole is, the fact of leakage being revealed by the backward rotation of the index of a pressure gage that is connected with the force pump.

FIRE PLACE FENDERS.—Charles C. Algeo, Pittsburgh, Pa.—This invention consists in having an inwardly projecting flange at the base of the fender with the spindle or pivot of the caster passing through said flange up to the under side of the top of the fender, where a cavity is made for the reception of the top of the spindle, and the latter is confined against falling out by a pin passing through it above the aforesaid flange.

FLUTING SAD IRONS.—Edward A. Franklin, of Brenham, Texas.—This invention relates to a new combination of fluting and sad iron, of such kind that the upper fluting roller will serve as handle for the sad iron, there being thus no loose or separate parts required for the two functions.

LIFTING JACKS.—Walter S. Burgin, of Washington, Vt.—This invention relates to a new arrangement of parts constituting a lifting mechanism for a wagon jack. The case or main frame of the jack is made in form of a rectangular narrow box, standing on a stout base or board, and open on top for the reception of a lifting slide.

SASH HOLDERS.—Charles T. Tessler, of New York city.—This invention consists of a T headed lever, a sliding locking bolt with a retracting spring, a flexible locking roller, and a shifting inclined plate in connection with said roller, all arranged in a case adapted to be applied to the stile of the sash, and to lock the sashy the bolt, and free it from the flexible roller by a down movement of the lever, the bolt being employed for locking the sash when down.

STONE CRUSHER.—Peter Wood, Jersey City, N. J.—This is a powerful machine, the principle of which may be briefly described as follows: A fly wheel shaft receives power from a belt, and through a crank of short radius and a stout pitman, actuates a powerful lever, which, through a bar, applies the force thus multiplied to toggle levers which actuate a pivoted jaw which, moving to and from a fixed jaw, crushes the stones as they are fed in between the jaws.

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