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APPLICATIONS FOR EXTENSION OF PATENTS.

CASE FOR SEWING MACHINES.—William O. Grover, of Boston, Mass., has applied for an extension of the above patent. Day of hearing May 11, 1870.
 MAKING MOLDS FOR CASTINGS.—Robert Jobson, of Worsley, England, has applied for an extension of the above patent. Day of hearing May 11, 1870.
 OPERATING STEAM STAMPS.—Adelia E. Ball and Edwin P. Ball, of Chicopee, Mass., administrators of William Ball, deceased, have petitioned for an extension of the above patent. Day of hearing May 11, 1870.
 REAPING MACHINE.—William C. Martin, administrator of Jacob J. Mann, deceased, and Henry F. Mann, of Pittsburgh, Pa., have petitioned for the extension of the above patent. Day of hearing May 18, 1870.
 NAIL MACHINE.—Daniel Dodge, Keeseville, N. Y., has applied for an extension of the above patent. Day of hearing May 18, 1870.
 REGISTERS AND VENTILATORS.—Edward A. Tuttle, of Brooklyn, N. Y., has petitioned for an extension of the above patent. Day of hearing May 25, 1870.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; besides, as sometimes happens, we may prefer to address correspondents by mail.
 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 \$1.00 a line, under the head of "Business and Personal."
 All references to back numbers should be by volume and page.

H. B., of Ky.—You are right in attributing the cracks in your boiler to unequal expansion, and also in the opinion that the boiler is unsafe. You do not say where the feed-water is admitted, but judging from your description we infer that it is at the bottom. If so, it is wrong. It ought to be carried in at a point opposite the middle of the upright flues. The water space between the inside and outside shells of the fire-box is too contracted. Instead of five eighths of an inch space between these shells there should be three inches. You can alter the boiler to correct this error by taking out some of the flues, but of course you will thereby reduce your heating surface.
 F. W. of N. Y.—There would have been no danger of explosion in the boiler of your steam heater if the water had gradually blown out of it under a pressure of 6 lbs. to the square inch; but it would under such circumstances be liable to injury from overheating, and so become weakened, and incapable of withstanding even that low pressure. You should be careful to regulate the draft so as not to get up more pressure than that of the head which supplies the feed water.
 C. B., of Ky.—To find the area of induction pipe to steam engine cylinders, multiply the speed of piston in feet per minute by the square of the diameter of the cylinder in inches. Two one-hundredths of this product multiplied by 170, gives the area of cross section of the induction pipe in square inches. To find the inside diameter, divide the area of cross section by the decimal 0.7854, and extract the square root of the quotient.
 J. G. B., of Miss.—Variations in the temperature of the human body are strong indications of disease, either local or general. In a state of health the human body keeps about the same temperature under all circumstances. Even when a person feels very warm from violent exercise, the thermometer shows little change in the temperature of the blood, unless the functions of the body are disturbed.
 S. C., of N. H.—We have investigated the matter of engines made with cylinders curved in the line of the bore, and find that to properly elucidate the subject it would be necessary to make engravings. The subject is not of sufficient importance to justify this. We understand the cylinders are bored by a tool sliding on curved ways, and driven by means of shafts with universal joints.
 R. S., of Conn.—You will have no difficulty in keeping swans, if you have a small piece of water for them to swim in. Their food is the same as that of geese. They prefer to build their nests on a small secluded island, and such an island if it does not exist naturally is generally provided, and a small house for the young erected thereon.
 W. R. B., of Ind.—There is no gas with which you could safely mingle a mixture of air and the vapor of gasoline to increase the light, unless, perhaps, it might be hydrogen. It has been claimed that hydrogen with gasoline vapor is better than air, but we have some doubts about it.
 R. S., of Tenn.—Gallic acid and tannic acid are extracted from nut galls, barks, etc. They are very nearly alike in composition. Tannic acid is the principle contained in barks which acts upon the gelatin of raw hides to convert them into leather.
 H. & G., of Pa.—We have already expressed our doubts of the safety of high pressure steam heating pipes, in contact with wood, and our belief in the safety of low steam pipes. We refer you to discussions on this subject in our last volume.
 C. Q. E., of Wis.—You are right. There is nearly always a difference in the price of gold and silver coin in favor of the gold. That is, a ten-dollar greenback will buy more nearly ten silver dollars than ten dollars in gold.
 W. J. Lobach, of Ky., and others.—We republished the recipe for recutting files by acids just as we found it recorded. We know nothing about it that we have not already given, and we do not believe in its efficacy.
 T. D., of N. Y.—The drawing of the steam hammer you send us is not clear, and as we are unacquainted with the device, we cannot explain it.
 H. G., of Minn.—The blistering of the silver coating in the process of electro-plating, probably results from too great power of battery.
 D. J. W., Jr., of S. C.—The best thing to prevent guns from rusting is olive oil. It is well to stop the muzzle with a cork, or wooden plug.
 J. G. W., of Ind.—The discovery you have made is not new. We are unable to say who made the same observation first.
 R. T., of Texas.—There are probably twenty processes for preserving meat in use; to which do you refer?
 C. G. F., of Texas.—We shall be glad to hear from you on the subject of "Wooden Railroads."
 W. H. G., of N. J.—The crystals you send are garnets of an inferior kind, and of no value.
 T. F. M., of Pa.—You will find an answer to your query in another column.
 J. K. S., of W. Va.—The subject of small cotton presses has been sufficiently discussed for the present. Your communication contains nothing additional to what we have published.

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.

To ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's manufacturing news of the United States. Terms \$4.00 a year.
 1250 lbs. portable platform scales, \$25; hay scales, 4-ton, \$75. Send for free price list, No. 378. Edward F. Jones, Binghamton, N. Y.
 American Boiler Powder.—A safe, sure, and cheap remedy for scale. Send for circular to Am. B. P. Co., P. O. Box 315, Pittsburgh, Pa.
 Physicians of every school wanted to engage in an easy and lucrative office practice. For particulars, address W. C. Coburn, M.D., 568 Main st., Buffalo, N. Y.
 Those desiring excellent copies of old daguerreotypes, tintypes, or card pictures, can have them made to their satisfaction by sending to John A. Whipple, 297 Washington st., cor. Temple Place, Boston, Mass.
 Automatic 10-spindle drill, 5,000 to 20,000 holes a day in castors, etc. Tin Presses & Dies for cans. Ferracute Machine Works, Bridgeton, N. J.
 A No. 2 Smith's molding machine for sale—new and in good order. S. Hartshorn, 82 center st., New York.
 Unparalleled opportunity for agents, canvassers, and all others desiring lucrative employment. For circular, address Chas. H. Nye & Co., Postoffice Box No. 441, Stamford, Conn.
 Wanted—Machinery for a wagon and furniture factory. Address E. D. Jones, Jefferson, Texas.
 A new kind of Waltham Watch, for railroad men, has just been introduced. It is described in Howard & Co.'s Price List. See advertisement on last page.
 A Dickinson Engine Lathe for sale cheap—good as new. Address W. H. C. Dodd, 807 Broad st., Newark, N. J.
 A Master Machinist of thorough and successful experience in designing and constructing work of the best class, will be ready to enter upon an engagement in May or June. Address, till April 1st, Box 298 Worcester, Mass.
 Inventors of non-wasting hydrants send description and terms to John Gibson & Co., Plumbers, 7th and Main sts., Cincinnati, Ohio.
 Wanted.—Brass Spinners address C. Ahrens & Co., 24 and 26 Webster st., Cincinnati, Ohio.
 Pat. watch opener and key, 15c., 2 for 25c. E. M. Kimball, Toledo, Ohio.
 Steam Engine and Boiler for sale cheap, 6-H. P. horizontal, nearly new. Address J. H. Cory, Elizabeth, N. J.
 Second-hand lathes, planers, drills, and all kinds of tools for sale by Charles Place & Co., 60 Vesey st., New York.
 Wanted—Second-hand Engine and Boiler, about 40-H. P. Address Otis W. Booth & Co., 111 Water st., New York.
 Right For Sale.—Action and Reversion Water Wheel (self-governing). Will vent large or small volumes of water. Will retain its power under back water. Address William E. Hill, Erie, Pa.
 Partner or Foreman Wanted.—In a well-established steam wagon factory, at Kansas City, Mo. Address, with references, Oliver Case & Co.
 Spools of all kinds, and spiral shade tassel molds made by H. H. Frary, Jonesville, Vt.
 Millstone Dressing Diamond Machine—Simple, effective, durable. For description of the above see Scientific American, Nov. 27th, 1869. Also, Glazier's Diamonds. John Dickinson, 64 Nassau st., N. Y.
 Peck's patent drop press. For circulars, address the sole manufacturers, Milo Peck & Co., New Haven, Ct.
 The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4.00 a year. Advertisements 17c. a line.
 Kidder's Pastilles.—A sure relief for Asthma. Price 40 cents by mail. Stowell & Co., Charlestown, Mass.
 Needles for all sewing machines at Bartlett's, 569 Broadway, N. Y.
 For tool making, buy 15-in. engine lathes with taper attachment, made by the Pratt & Whitney Company, Hartford, Conn.
 Pat. paper for buildings, inside & out, C. J. Fay, Camden, N. J.
 For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.
 For first-quality new 14, 17, and 20-in. screw lathes, milling machines, and one-spindle drills, at small advance from cost, apply to Geo. S. Lincoln & Co., Hartford, Conn.
 Hackle, Gill Pins, etc., at Bartlett's, 569 Broadway, New York.
 "Winn's Portable Steam Brick Machine," makes more and better brick than any other machine in the world. Address Wright & Winn, Lock Haven, Pa.
 Perforated Zinc and Sheet Iron for separators, smut machines grain dryers, tubular wells, malt kilns, etc. R. Aitchison & Co., Chicago
 T. F. Randolph, Steam Model Works, Cincinnati, Ohio.
 For the Best Upright Drill in the World, address Wm. M. Hawes & Co., Fall River, Mass.
 For mining, wrecking, pumping, drainage, and irrigating machinery, see advertisement of Andrews' Patents in another column.
 To Rent—East River water front, stores and vacant lots suitable for manufacturing or mercantile purposes, together or separate. Daniel W. Richards & Co., 92 Mangin st.
 Portable Pumping or Hoisting Machinery to Hire for Coffers Dams, Wells, Sewers, etc. Wm. D. Andrews & Bro., 414 Water st., N. Y.
 Two 60-Horse Locomotive Boilers, used 5 mos., \$1,300 each. The machinery of two 500-ton iron propellers, in good order, for sale by Wm. D. Andrews & Bro., 414 Water st., New York.
 Cold Rolled—Shafting, piston rods, pump rods, Collins pat. double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa.
 Keuffel & Esser, 71 Nassau st., N. Y., the best place to get 1st-class Drawing Materials, Swiss Instruments, and Rubber Triangles and Curves
 For tinman's tools, presses, etc., apply to Mays & Bliss, Brooklyn, N. Y.
 Glynn's Anti-Incrustator for Steam Boiler—The only reliable preventative. No foaming, and does not attack metals of boiler. Liberal terms to Agents. C. D. Fredricks, 587 Broadway, New York.

Recent American and Foreign Patents.

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

WATER WHEEL.—Samuel Martin, York, Pa.—This invention consists of certain improvements in turbine water wheels, tending to increase their efficiency.
 EXPANSIBLE CORE FOR CASTING IRON, GLASS, ETC.—Anson Baldwin, Wheeling, W. Va.—This invention has for its object to enable the cores around which hollow articles are cast, to be contracted, after filling the mold, so as to facilitate the removal of the cores from within the casting.
 DITCHER.—James Callihan, Baton Rouge, La.—This invention consists of an apparatus for digging a ditch and throwing up a levee at one and the same time; said apparatus being operated by steam engines, which it carries, and is drawn forward by a steam engine placed upon a separate truck, which carries a steam boiler for supplying all the engines with steam.
 GLAZIER'S POINT DRIVER.—M. D. Converse, London, Ohio.—This invention relates to a semi-annular V-shaped chamber, in which the triangular points, used for setting glass, are placed, said chamber being shaped in conformity with the brass or points, and being combined with a feed spring that keeps the points at the spot where they are required for use, and with a slide and guide by and through which the points are driven, one by one, into the sash.
 STUMP MACHINE.—J. Higgins, Friendship, N. Y.—This invention has for its object to furnish a simple and convenient machine for drawing stumps, and other purposes, where great weight is to be raised short distances.
 COTTON-SEED PLANTER AND FERTILIZER DISTRIBUTOR.—Henry C. Harris, Fort Valley, Ga.—This invention has for its object to furnish a simple, convenient, reliable, and effective machine for planting cotton and other seed and for distributing guano and other fine fertilizers.
 HAND CLOTHES WASHER.—Peter Falará, Newark, N. J., and George H. Snow, New Haven, Conn.—This invention has for its object to furnish a simple, convenient, and effective hand washing machine, with which the clothes will be washed by squeezing out the water from the clothes, which clothes are at once again wet by water from the machine.
 WINDOW-SHADE HOLDER.—Edward J. Robinson, Syracuse, N. Y.—This invention has for its object to furnish an improved holder for that class of window shades that roll up from the bottom, which shall be simple in construction and convenient and effective in use, holding the shade securely in any position into which it may be adjusted.
 CLOTHES WASHER.—Rev. F. M. English, Evansville, Ind.—This invention has for its object to furnish an improved machine, which shall be so constructed as to wash the clothes and heat the water in which they are washed, which will do its work thoroughly and well, and without injury to even the most delicate fabrics, and which may be used with equal facility for various other purposes.
 SADDLE-GIRTHING ATTACHMENT.—Eugene Speiden, Astoria, Oregon.—This invention relates to improvements in appliances for girthing saddles to horses and other animals. It consists of the combination with the saddle and the girth, of a set of pulley blocks, cord, and cord-holding clamp, under such arrangements that the rider may increase or diminish the tension of the girth, while in the saddle, and accomplish the same more easily than in the common way, by reason of the advantage due to the use of the pulley blocks and cord. The adjustment may also be made while on the ground equally as well.
 FERTILIZER SOWER.—T. J. West, Alfred Center, N. Y.—This invention relates to improvements in machines for sowing plaster, lime, ashes, manure, and all other fertilizing substances, and consists in an arrangement, on an axle, mounted on wheels, and provided with a tongue or other means for hitching horses, of a long V-shaped trough, with a longitudinal opening at the bottom, and having one side arranged on pivots to be oscillated for widening or narrowing the opening, in which trough is placed a retrocurving rod, actuated by cams on one of the wheels, and provided with pointed or saw-tooth-shaped agitators, propelling downward through the discharge opening, and provided with flanges, projecting from the sides, by which the lumps and clods of the fertilizing substance will be pulverized and caused to feed uniformly through the discharge opening.
 BLANK BOOK.—George H. Reynolds, New York city.—This invention relates to a new method of binding blank books, and all other books which are to be used for a considerable length of time, and in which great strength and durability are the chief objects. The invention consists more particularly in a novel system of arranging an endless upright string for holding the strapping to the back of the book, and in the manner of disposing such string. The invention also consists in the use of transverse strings, which are applied to the outside of the strapping and interwoven with the afore-mentioned upright strings.
 RATCHET AND PAWL.—John H. Durran, Aurora, Ill.—The object of this invention is to prevent the end of a pawl from working on the edge of a ratchet wheel, and from thereby wearing off the contiguous surfaces, while the pawl slips or works loose on the ratchet. The invention consists in providing the pawl with spring clamps by which it is held away from the edge of the ratchet wheel, so as not to wear the same.
 STOVES AND GRATES.—E. C. Loud, Springfield, Mass.—This invention has for its object to so construct those stoves which have pivoted grates, that the swinging sides of the grates will be opposite to concave surfaces, so that the grate can be considerably agitated to disturb the fuel, without danger of dropping any coal into the ash box, and without danger of wedging coals or cinders between the edge of the grate and the stove frame.
 SCROLL SAWING MACHINE.—G. M. Nickason, Ellenville, N. Y.—This invention relates to a new arrangement of a sliding frame for all kinds of reciprocating saws, so that the stroke allowed to the saw will be regulated by the thickness of the stuff to be sawed, to prevent useless waste of power. The invention also relates to a new application of adjustable spring power, for drawing the saw up, after each stroke.
 COMBINATION TEAKETTLE.—G. Lanáre, Jersey City, N. J.—This invention relates to a new and useful improvement in culinary utensils, and consists in combining with an ordinary teakettle a boiler and a steamer.
 VEGETABLE CUTTER AND PEELER.—George Lutz, John Schultheis, and Michael Florentin, Newark, N. J.—This invention relates to a new vegetable cutter of that kind on which the articles are cut into long, narrow strips, and has for its object to provide an automatic peeling attachment and devices for adjusting the width and thickness of the strips cut.
 HALTER.—Wm. M. Harris, Dixon, Ill.—This invention relates to improvements in halters for horses and other animals, and consists in connecting the tie strap to a ring suspended in a bight of the throat strap, and passing it through another ring in the bight of the lower nose strap, to slide freely in the latter ring, and in passing the bights or loops of both these straps through other rings before attaching the tie strap ring to them, the said rings being connected by a strap extending from the nose strap to the throat strap, under the center of the lower jaw; the said arrangement is designed to apply the restraining force of the tie strap on the nose, the throat, and top of the head, in a way to confine the head in a cramped position, calculated to temporarily disabuse the animal, when making efforts to escape.
 PRESS FOR HAY, COTTON, AND OTHER SUBSTANCES.—Samuel Miller Mount Union, Pa.—This invention consists in double ratchet vertical hoisting bar applied to a press, which is operated by means of a lever and pawls, upon a rocking block.
 FELTS.—Simon P. Siver, Danbury Ct.—This invention relates to improvements in felts for the manufacture of hats and other articles, and consists of an improved mode of producing felts with plain grounds, spotted with pieces of felt worked into the ground and differing from the same in color, to impart ornamental surfaces of variegated colors, of more permanence than when stamped on.