

Business Men Find It

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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 reference to back numbers should be by volume and page.

A. S. W., of Ca.—Evidently your chimney is not of sufficient capacity for your boiler furnace. Undoubtedly the cheapest way in the long run will be to increase the height of the chimney by masonry, not by a 11-inch pipe, as proposed, in one corner of the chimney. Such a pipe would reduce the sectional area of the chimney flue, now 400 square inches, to 95 square inches. We consider the area of 400 square inches small enough for your boiler. The best thing for you to do is to get a competent engineer to calculate for you the proper dimensions of the chimney, and correct its deficiencies under his direction.

A. G. G., of N. Y., wishes to know the correct spelling of the name of the frame which supports the step and spindle of a flouring-mill stone. He says it is spelled by different people. "Hearsh," "Hurst," and "Husk." We answer that the latter spelling is correct, and that the word is pronounced as spelled, "Husk."

B. B. D., of N. Y., wants to know if imperfectly glazed earthenware bottles may be rendered so tight by the use of water glass that they will not leak under the pressure of fermentation when holding root beer? The beer is put into the bottles while hot. As water glass is dissolved in hot water, this substance will not answer the purpose. Perhaps some of our correspondents may have met with a similar difficulty, and found a good way to remedy it.

H. L., of Wis.—The scale which adheres to the inside of tea-kettles is difficult to remove without injury to the kettle. There are no acids we can recommend for the purpose. It may often be mechanically removed by tapping the outside of the kettle with a hammer. Sometimes boiling oak bark, or slippery elm bark in the kettle will start the scale. More often, however, it resists removal, except by chipping with a pointed steel instrument—a tedious operation.

F. E. M., of Pa.—The explanations you seek comprise a somewhat extensive course of reading. They cannot be made in our columns. They cover nearly the whole fundamental basis of mechanics and physics. For enlightenment you should peruse some able treatises on celestial and terrestrial physics and mechanics.

D. P. R., of Mo.—Colza oil is a general commercial name employed in France, Belgium, etc., for the oil manufactured by expression from the seeds of different species of Brassica, and has there the same significance as "rape oil" in England. "Colza" koolzaad, means cole or cabbage seed. "Colza" is the French name for "rape seed."

L. V. R., of N. Y.—A "noggin" is a wooden cup or mug of no definite capacity. We do not recollect ever seeing it used in any work as a definite measure, though it would seem that it has been, since the treatise on dyeing, of which you speak, so uses it. We are informed that in Ireland it is a measure of one gill.

R. S., of Pa.—The gas issuing from the spring you describe is undoubtedly sulphureted hydrogen. You can test it by holding over the spring a piece of paper wet with solution of acetate of lead. If sulphureted hydrogen be present it will turn the paper black.

W. J. H., of Ind.—Directions for softening water for manufacturing purposes, may be found on page 217, Vol. XXI., of the SCIENTIFIC AMERICAN, and in any good and complete treatise on dyeing.

N. A. H., of Ca., has tried several recipes for covering the soles of boots with rubber without success. He now appeals to our correspondents for information. If any have been successful we shall be happy to publish their method.

S. R. V., of Tenn.—A preparation for marking the glossy black letters used on show cards, and highly recommended, is lamp black, from which the oil has been removed by roasting, mixed with whites of eggs.

L. M., of N. Y.—The words upward and downward, when applied to direction, mean away from or toward the earth's center, in radial lines. It is obvious, therefore, that up or down, is not precisely the same direction for any two persons on the earth's surface.

W. P. D., of Vt.—The smell of petroleum is very difficult to remove from barrels which have contained it. We know of no method whereby you can accomplish it.

D. L. M. of Va.—The pressure of a vertical shaft and its appurtenances upon the step, is just the same while revolving, as when at rest.

C. L. P., of Minn.—Temper your brass plates for springs by hammering them cold. You can give elasticity to the softest brass in this way.

D. T. D., of R. I.—The notion that a given head of water will drive a wheel faster in the night than in the daytime, is a mistaken one.

L. P. W., of La.—The plates upon which music is engraved are made of 90 parts block tin, and 10 parts antimony.

Recent American and Foreign Patents.

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

WASHER CUTTER.—Patrick McCormick, Newark, N. J.—This invention has for its object to provide an instrument by means of which two or more concentric washers can be cut from one piece, and their size regulated at will.

CURTAIN FIXTURE.—W. P. Yates, Elmira, N. Y.—This invention relates to a new and useful improvement in curtain fixtures, having particular reference to the mode of revolving the cutter roller, and consists in so applying the power to the roller that a variable purchase is obtained, and so that at one point in each revolution the curtain will balance the spring.

LOCK NUT.—James Moorcroft, Newport, R. I.—This invention relates to a new manner of locking a nut by applying it to the split end of a bolt, together with a conical screw for expanding said bolt within the nut, whereby the nut will be securely fastened.

METALLIC ROOF.—W. M. Barry, Nashville, Tenn.—This invention relates to a new and useful improvement in the construction of roofs for railroad and other purposes, whereby many of the objections which have hitherto been met with in the construction of roofs are obviated.

JOINTED OAR.—C. Dann, La Crosse, Wis.—The object of this invention is to provide an oar which can be operated by a person facing the bow of a boat.

PEPPER SAUCE.—E. McIlhenny, New Iberia, La.—This invention relates to a new process of preparing an aromatic and strong sauce from the pepper known in the market as Tobacco pepper.

SHUTTER BAR.—Julius Berbecker, New York city.—This invention relates to a new construction of the shutter bars or fastenings used on inside shutters.

WASHING MACHINE.—E. S. Harper, Sutherland Springs, Texas.—This invention has for its object to furnish an improved washing machine, which shall be simple in construction, effective in operation, and easily operated, and which will not injure the clothes.

MOUSE TRAP.—W. K. Bachman, Columbia, S. C.—This invention has for its object to furnish an improved mouse trap, which shall be simple in construction, not liable to get out of order, easily set and reliable in operation.

OYSTER TONGS.—Edward Ward, Smyrna, Del.—This invention relates to a new and useful improvement in tongs for taking oysters from the water, and consists in such a construction and arrangement of parts that the tongs are opened and closed by means of cords.

MELODEANS.—J. C. Briggs, Ansonia, Conn.—The object of the present invention is to provide for a more even motion of the valve in an expression chamber, and not to allow the sudden violent movements of the same which are produced if the air only acts on one side of the pivot.

HORSE HAY RAKE.—G. E. Carleton, Oldtown, Me.—This invention has for its object to improve the construction of horse hay rakes, so that the rake may be raised to discharge the collected hay by the advance of the machine.

WHEAT STEAMER AND DRYER.—C. T. Hanna, Keokuk, Iowa.—This invention has for its object to furnish an improved apparatus for steaming and drying wheat to soften it preparatory to girdling, which apparatus shall be simple in construction, effective in operation, and easily applied.

HEMMEK.—Abel H. Bartlett, Spuyten Duyvil, N. Y.—This invention relates to improvements in that class of hemmers for sewing machines which are designed for making hems of different widths, and which are attached to the presser foot.

STEM-WINDING ATTACHMENT FOR WATCHES.—Fritz Robert Theurer, Chaux de Fonds, Switzerland.—This invention relates to improvements in attachments to watches for winding and setting them by turning the stem, and consists in an improved arrangement of means having for its object, mainly, to provide an apparatus which may be applied to watches already made, as well as to those being made.

ELEVATORS.—Theo. H. Rudiger, Lawrence, Kansas.—This invention relates to improvements in elevators, and consists in arranging the spout on to which the articles elevated by the buckets are dumped, so that previous to the dumping the upper end will swing back under the bucket, so as to ensure the receiving of all the contents of the bucket, and then swing out of the way of the downward movement of the bucket in time to let it pass without obstruction.

WAGON SEATS.—C. E. Hollenbeck, Kirksville, Mo.—This invention relates to improvements in the detachable spring wagon seats, used by placing them on the tops of the sideboards of the wagon boxes, or on cleats or ribs attached to the sides. The invention consists in an improved construction and arrangement of the springs.

WIPING ATTACHMENT FOR FEED ROLLERS.—Lyman Crawford, Holyoke, Mass.—This invention relates to improvements in wiping apparatus for the feed rollers of carding machinery, and consists in a combination with the rollers of wiping plates, one placed above the upper rollers, and another below the lower ones, each plate, having a concave face, to be provided with a wiping cloth, acting on the surface of the roller; also, a slot behind the wiper, through which the substance wiped from the said rollers, and collecting in masses, may escape or be removed, and the lower wiping plate is provided with a guard or scraper plate, arranged in conjunction with the lower roller to prevent any large collections of waste from being carried up by the said roller to the sliver.

DUMPING CAR.—Ed. C. Hegeler, La Salle, Ill.—This invention relates to improvements in dumping cars, and consists in arranging the boxes with one side, or end, as the case may be sloping from about the center of the bottom upward, and providing the sloping side with rockers, on which the box, in tilting, will roll toward the edge for dumping, instead of tilting on hinges, as heretofore. The said rockers are provided with flanges, to keep them on the rails whereon they roll, and they have chains attached to their ends, and to the truck frame, in a way to prevent them from sliding on the rails they roll upon.

FURNACE GRATE.—Abraham L. Pennock, Upper Darby, Pa.—This invention relates to a new and useful improvement in grate bars for furnaces, whereby they are made cheaper, more useful, and more durable than they have heretofore been, and it consists in locking the bars together by means of locking pins running through, and at right angles with the bars, the said locking pins having notches for holding the bars, by means of which the distance of the bars apart may be varied so as to adapt the grate to either coarse or fine coal.

COTTON-SEED PLANTER.—Fletcher Sloan, Bolivar, Tenn.—This invention has for its object to furnish an improved cotton-seed planter, simple in construction, and effective in operation, and which shall be so constructed that it may be readily adjusted for planting corn, peas, and other seeds, and for distributing guano and other fine fertilizers.

PLOW.—David Morris, Bunker Hill, Ill.—This invention has for its object to improve the construction of plows in such a way as to enable the beam to be adjusted laterally to adapt the plows for use as a two or three-horse plow, as may be required, and which shall, at the same time, be simple in construction and effective in operation, holding the beam securely however adjusted.

ATTACHING DRAFT TO PLOWS, ETC.—George W. Kidwell, Elwood, Ind.—This invention has for its object to furnish an improvement in attaching draft to plows, harrows, reapers, mowers, and other machinery where the draft is attached by means of a clevis, which shall be so constructed that should the plow or other machine strike a stone or other obstruction, the horses will be kept from being injured and the machine from being broken by the sudden shock, and which will enable the line of draft to be adjusted to cause the plow to cut a wider or narrower furrow, as may be desired.

EARRINGS, DROPS, ETC.—Gottfried Haberland, Bloomington, Ill.—The object of this invention is to so construct earrings and drops that the same may be applied without requiring the perforation of the lobes. The invention consists in constructing the earring in form of a spring which will retain itself on the ear by spring pressure; the application and removal of earrings and drops is thereby considerably facilitated.

MANUFACTURE OF HYDROCARBON OILS.—William Spears, Jamestown, N. Y.—The object of this invention is to produce a highly valuable hydrocarbon oil or liquid for illuminating or other purposes, from the products of distillation in the process of manufacturing oils from crude petroleum, and consists in uniting (by the application of heat) the first and most volatile product of distillation (benzine) with the refuse tar, thereby forming a compound from which a highly valuable oil is distilled.

VALVE COCK.—John C. Macdonald, St. Louis, Mo.—This invention has for its object to improve the construction of valve cocks so as to enable them to be ground to their seat at any time when necessary without removing them from their fittings, and, at the same time, to have a true working guide while being re-ground.

Caveats are desirable if an inventor is not fully prepared to apply for a Patent. A caveat affords protection for one year against the issue of a patent to another for the same invention. Patent Office fee on filing a caveat, \$10. Agency charge for preparing and filing the documents from \$10 to \$12. Address MUNN & CO., 37 Park Row, New York.

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Official List of Patents.

Issued by the United States Patent Office

FOR THE WEEK ENDING Sept. 27, 1870.

Reported Officially for the Scientific American

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Full information as to price of Drawings, in each case, may be had by addressing MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

- 107,646.—PULLEY FOR GATES.—Ephraim S. Axtell, Macomb Mich.
107,647.—MOUSE TRAP.—William K. Bachman, Columbia, S. C.
107,648.—TRUSS.—Sir William Baker, Austin, Texas.
107,649.—METALLIC ROOF.—William M. Barry, Nashville, Tenn.
107,650.—HEMMEK FOR SEWING MACHINES.—A. H. Bartlett, Spuyten Duyvil, N. Y.
107,651.—SHUTTLE FASTENING.—Julius Berbecker, New York city.
107,652.—WASHING MACHINE.—John T. Bever, Lathrop, Mo.
107,653.—TOOL FOR CUTTING WOOD MOLDINGS.—Charles E. Boynton (assignor to himself and Isaac N. Vosburg), San Francisco, Cal.
107,654.—MACHINE FOR CUTTING MATERIAL FOR BASKETS.—L. H. Bridgeman, Rock Stream, New York.
107,655.—MELODEON.—J. C. Briggs, Ansonia, Conn.
107,656.—COUPLING JACK.—H. A. Brown and E. B. Keith, Galesburg, Mich.
107,657.—FLUTING MACHINE.—Samuel G. Cabell, Washington, D. C.
107,658.—AGEING SPIRITS.—Andrew Caldwell, Lexington, Ky.
107,659.—FLOOD GATE.—John Campbell and Addison Watson, London, Ohio.
107,660.—HORSE HAY RAKE.—Guy E. Carleton, Old Town, Me.
107,661.—WASH STAND AND TANK.—H. W. Catlin, Burlington, Vt.
107,662.—STALK CUTTER.—Martin Caywood, Peoria, Ill.
107,663.—MODE OF INSERTING GLASS IN VAULT LIGHTS.—Zenas Cobb, Chicago, Ill.
107,664.—TIN ROOFING.—Benjamin Coddington, La Fayette, Ind.
107,665.—BLOWER.—W. S. Colwell, Pittsburg, Pa.
107,666.—ROLLER FOR SEWING MACHINES.—R. W. Courts, Russellville, Ky.
107,667.—WIPING APPARATUS FOR FEED AND OTHER ROLLERS.—Lyman Crawford, Holyoke, Mass.
107,668.—CARRIAGE GEARING.—Cornelius Custer, Norristown, Pa. Antedated Sept. 17, 1870.
107,669.—JOINTED OAR.—Christian Dann, La Crosse, Wis.
107,670.—MACHINE FOR SHAPING THE HEADS OF HORSESHOE NAILS.—Norman Dexter, Bower Hill, Pa.
107,671.—BLIND-SLAT TENONING MACHINE.—Frank Douglas, Norwich, Conn.
107,672.—PENCIL CASE.—Charles H. Downes, Hudson City, N. J.
107,673.—EGG BEATER.—Timothy Earle, Valley Falls, Smithfield, and Gilbert K. Dearborn, Pawtucket, R. I., assignors, by mesne assignments, to Timothy Earle and E. D. Goodrich, Boston, Mass.
107,674.—KNIFE SCOURER.—H. E. French, Unity, N. H.
107,675.—MACHINE FOR SAWING MARBLE.—J. E. French and J. M. Stephenson, Pendleton, Ind.
107,676.—PLOW.—David Fulton, St. Helena, Cal.
107,677.—SEWING MACHINE.—Charles W. Godown, Lambertville, N. J.
107,678.—MACHINE FOR JOINTING STAVES.—S. S. Gray, Boston, Mass.
107,679.—EAR RING.—Gottfried Haberland, Bloomington, Ill.
107,680.—WHEAT STEAMER AND DRYER.—Cyrus T. Hanna, Keokuk, Iowa.
107,681.—WASHING MACHINE.—Elijah S. Harper, Sutherland Springs, Texas.
107,682.—CARPET LINING.—J. R. Harrington (assignor to G. Harrington), Brooklyn, N. Y.
107,683.—DUMPING CAR.—Ed. C. Hegeler (assignor to F. W. Matthieson & Hegeler), La Salle, Ill.
107,684.—WAGON SEAT.—Charles F. Hollenbeck, Kirksville, Mo.
107,685.—CHAIR AND FURNITURE TIPS.—Francis H. Holton, Brooklyn, N. Y.
107,686.—APPARATUS FOR PREPARING PARCHMENT OR WATER-PROOF PAPER.—E. P. Hudson, New York city, assignor to New York Water-proof Paper Co., New York city.
107,687.—MANUFACTURE OF RUBBER-COATED PARCHMENT PAPER.—E. P. Hudson, New York city, assignor to New York Water-proof Paper Co., New York city.
107,688.—BALING PRESS.—Wm. Iler, Shreveport, La.
107,689.—METHOD OF PRESERVING FRUIT.—Geo. Jaques, Boston, Mass.
107,690.—COMPOSITION OF MATTER FOR PRESERVING FRUITS FROM DECAY.—Geo. Jaques, Boston, Mass.
107,691.—SASH HOLDER.—William F. Kells, San Francisco, Cal.
107,692.—ATTACHING DRAFT TO PLOWS.—G. W. Kidwell, Elwood, Ind.
107,693.—CHEWING GUM.—Weston W. Kilbourn, Sanford, N. Y.
107,694.—CHIMNEY ATTACHMENT.—A. H. Lanphear, Atchison, Kansas.
107,695.—HAY ELEVATOR.—James Linderman, Bullville, N. Y.
107,696.—HEATING STOVE.—Adolphus Lotze, Cincinnati, Ohio.
107,697.—VALVE COCK.—John C. Macdonald, St. Louis, Mo.
107,698.—POTATO DIGGER.—George M. Marks, Half Moon, Pa.
107,699.—LAMP BRACKET.—Riverius Marsh, New York city.
107,700.—WASHER CUTTER.—Patrick McCormick, Newark, N. J.
107,701.—PEPPER SAUCE.—Edmund McIlhenny, New Iberia, La.
107,702.—FRICTION LOCOMOTIVE.—T. S. Minniss, Meadville, Pa. Antedated Sept. 17, 1870.
107,703.—GRAIN-BINDING ATTACHMENT FOR HARVESTERS.—T. S. Minniss, Meadville, Pa. Antedated Sept. 17, 1870.
107,704.—NUT LOCK.—James Moorcroft, Newport, R. I.
107,705.—PLOW.—David Morris, Bunker Hill, Ill.
107,706.—SCAFFOLD BRACKET.—Charles Mudge, Ovid, Mich. Antedated Sept. 17, 1870.
107,707.—WASHING MACHINE.—Abraham Mutersbaugh, Lewinsville, Va.
107,708.—FOLDING CHAIR.—Julius Nicoli, Boston, Mass.
107,709.—CORN PLOW AND PLANTER.—H. C. Osborn, Clark-county, Ohio.
107,710.—DITCHING MACHINE.—Jason C. Osgood, Troy, N. Y.