Scientific American.

Beccent American and foreign Latents.

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

WASHING MACHINE — William H. Derasear, Primrose, Iowa.—The invention consists, first, in reciprocating the two rubbers of a washing machine simulraneously with a pressure toward one another, and in reverse directions over the clothes placed between them; also, in a stationary spring presser, applied to produce a continuous but yielding pressure upon the rubbers and clothes; also in the mode of arranging the springs and adjusting them to different tensions.

SOLDERING FURNACE.—Samuel A. Ewalt and John A. Tillery, Baltimore city, Md.—The invention consists in constructing a soldering furnace with a nonconducting chamber under the top plate and heating spaces under a side plate or plates, so that the can may be soldered by simply turning it in suitably shaped recesses on the outer surface of said side plates and then sliding it on top, where it remains until cooled. Thus the side plates become the soldering tool, while the top plate is a cooler in juxtaposition thereto.

LONG SPAN PARABOLIO BRIDGE TRUSS.—George E. Harding, New York city.—The invention consists in a stiff upperchord of metal orwood, arranged in the form of a double rubber arch, braced and counterbraced so as to equalize the strain upon upper and lower chords, and rigidly connected at each end with a double lower catenary cord, braced and counterbalanced by vertical tension rods.

RoLLS.—William D. Hillis, Elgin, Ill.—The invention relates to rolls for the manufacture of metallic fonce rais from round rods, and consists in combining one smooth roll with another that has been longitudinally grooved and the grooves placed at intervals about its periphery. The rail is thus made flat between the posts and with a shoulder on each side thereof.

PRESS FOR EXTRACTING LIQUIDS FROM SOLIDS.—Washington F. Pagett and Christian F. Rohrer, Fremont, Ohio.—This invention relates to that class of presses which are provided with foraminous press boxes and followers for extracting liquids from various solid substances, such as lard, fruits, cheese, etc. The invention consists principally in the provision of a vibrating or movable post or block which is applied to the follower of the press for transmitting to the same the pressure exerted by a lever which has its fulcrum point in a stationary ratchet plate.

GRINDING APPARATUS.—Albert Assman, Linden, N. J.—This invention relates to a new apparatus which is to be used for grinding or smoothing the Surfaces of metallic springs or other flat metallic surfaces, and in whicha feed roller is employed above a grindstone, and geared together therewith in such manner that, as the grindstone wears smaller, the feed roller will follow down and still remain in gear.

KEY SEAT CUTTING MACHINE.—Thomas R. Bailey, Lockport, N. Y., assignor to himself and L. W. Vail, of same place.—This invention relates to improvements in that class of machines for cutting key seats in the center holes of pulleys and gear wheels, in which a vertical saw is used for working through the eye of the wheel while lying on the table; and the first part consists in connecting the saw to cross head by an oscillating block journaled thereto. Second, it consists, also, in attaching saw to block by screws passing through trunnions of block into sockets of straw.

CAGE FOR GLOBE VALVES.—John Wood, Franklin, Pa.—This invention relates to an improved construction of cage for globular pump valves with the object of preventing the clogging of the valve by means of sand, gravel, or other impurities entering along the bars of the cage. The invention consists in making the bars of the cage convex or with a sharp edge in cross section on the inner side, so that the ball will be in contact with the least possible extent of surface within the cage. The invention is applicable to steam engines, cold or hot water pumps, and other devices.

APPARATUS FOR CLEANING GRAIN.-Peter Provost, Rochester, Minn perforated cylinder or screen is inclosed by a sheet metal jacket, into which said jacket steam is admitted through a pipe for enveloping the wheat which passes through the screen in an atmosphere of steam, for softening the matters adherent to the wheat; also the hull, to facilitate the removal of all extraneous matters, and as much of the hull as possible in the smutting or scouring machine, to which the wheat is conducted unmediately after being so steamed. The wheat is admitted to the screen from the happerthrough a pipe, and is discharged at the lower end above the spout, for conducting it away above a perforated partition, which prevents it from going down to the escape pipe for the steam and water of condensation. The matters separated from the wheat by the screen fall upon a slide and are discharged into the spout which conducts them to the proper receptacle. The spout conducts the wheat into a hollow sheet metal cylinder, inclosed by a jacket, in such manner that steam may be used in the said jacket for drying off the moisture on the surface of the wheat in cold weather, which is sometimes necessary. The cylinder projects at both ends through the heads of the jacket, which are fitted as closely to it as to prevent the escape of steam at the joints, and the wheat enters said cylinder at one end outside of the jacket and discharges from the projecting end at the other, through the spout which is to condact it to the smut machine.

PLOW.—Sewall J. Leach, Tuscaloosa, Ala.—This invention has for its object to furnish an improved plow, which shall be so constructed that its parts may be conveniently put together, and, when put together, will be securely held. Upon the inner side of the middle part of the land side is cast an upwardly projectinghook, which hooks over a brace, which crosses the angle between the mold board and standard, and is cast solid with said mold board and standard. A simple, convenient, effective, and reliable lock is formed for securing the land side to its place. Upon the inner side of the rear part of the land side is cast a seat for the lower end of the handle which is secured in place by a bolt, as indicated by the bolt hole in said land side. A plow point fits upon and is secured to the forward edge of the mold board. The entire plow is thus cast in three places, which may be quickly put together and secured to each other.

HORSE FOWER.—Lemuel B. Morris, Hopefield, Ark.—The object of this invention is to furnish a horse power for driving cotton gins and other machines, and it consists in the arrangement of studs and braces with the driving wheel and draft levers. The levers are placed at a properhight from the ground for the application of the power, and necessarilysome feet below the driving wheel. The stability of the driving wheel, therefore, depends upon the manner in which it is fastened, to the driving lever, and braced. By this system of bracing, this connection is made very permanent and durable and the objections to this description of horse power are obviated.

STEAM PUMP.—John North, New York city.—This invention relates to the combination of two inventions—one an improvement in steam valves, and the other an improved pump—with each other, with the object of utilizing their advantages jointly, and thereby increasing their effectiveness and utility. The present invention consists in extending the stem of the rocking steam valve toward the pump, and in so connecting it with the stem projecting from the oscillating cylinder that is fitted into the pump cylinder, as to impart the eccessary vibrating motion thereto. The action of the steam on the inlet valve will thus also be brought to bear on the rocking pump cylinder, thereby economizing complex link mechanism, and taking none of the power imparted to the piston from it for valve-setting purposes of any kind.

BRIDGE.—Samuel P. Hastings, Tonawanda, N. Y.—This invention relates to improvements in the construction of bridge arches, beams, connecting links, and splices, with the object of increasing the strength and durability of parts and simplifying their connection. The invention consists in the arrangement of a counter arch and inwardly projecting stays over the main arch; in the construction of simple links, which connect the arch braces, to allow their playing one upon another; in the use of arched sleepers, which do not touch the cross beams except under great weight; and in the introduction of a novel simple splice for any of the parts to be connected.

TOOL HOLDER.—Alfred Belchamber, Ripley, Ohio.—This invention relates to a device for facilitating the grinding of plane bits and chisels on grindstones, and consists in a holder and fulcrum stand arranged in combination with the grindstone. With this holder, the plane bit or chisel can be ground with a true bevel, and much more accurately thanit can in the ordinary way, and the bevel may be varied and made long or short by varying the position of the tool back or forward in the holder or fulcrum stand, either vertically or laterally. The holder is readily removed from the stone, and the tool is released from the holder by simply turning the thumb screw.

PORTABLE STREET CAR HOSE JUMPER.—James S.'Hagerty, Baltimore, Md. —This invention relates to jumpers which allow the cars to pass over hose, lyingacross the track, without injury thereto. The two improvements in this special class of invention consist, ist, in combining with angular faces an opening for hose of a horizontalbottom-face on each side of jumper, provided with a groove that receives the splkeheads and enables the jumper to sit firmly in its place on the rail; and in combining side and end braces so as to prevent any lateral or longitudinal movement of the jumper.

DREDGE.-Isaac A. Ketcham, Breslau, N. Y.-The invention relates to dredges or machinery for taking oysters, coal, or other objects that lie upon the bottom of a stream, bay, or other body of water, and it consists in a lever regulator by which the teeth of the dredge are set at different lengths, according to the softness or hardness of the bottom, while, at the same time, said lever serves as the ordinary fender, to clear the roller or sides of ship when being taken on board.

MILK COOLER.—Bruce C. Bort and Timothy Bryant, Chateaugay, N. Y.— This invention is an improvement upon the cooler patented June 18, 1872, and consists in dispensing with the bottom of said cooler, by which a large percentage of metal is saved, the milk brought more directly into contact with the cooling surfaces, and the cooler brought within the milk pan.

CONTINUOUS RAILROAD RAIL.—John Downey, Johnstown, Pa.—The invention relates to an improvement in the class of railroad rails formed of three parts, namely, a central piece whose head forms the tread and is provided with a lengthwise tongue; and two bars adapted to fit against the respective sides of the tongue. The invention consists in the mode of setting the railint ransverse slots in the sleepers, and in the use of a clamp bar for securing the three sections of the same together. The sections are arranged to "break joints," and thus form continuous rails.

TOOTH BRUSH TRIMMER.—Jabez Stone, Waterford, assignor to Julius Kayser, New York City.—This invention relates to a new machine for trimming the ends of the bristles in tooth brushes, making the rubbing edges of the brushes either quite flat or convex laterally. The invention consists principally in the arrangement of a rotary cutter in connection with longitudinal guides, on which the brush is moved toward the cutter, and with a slotted fork for holding the brush. The latter is moved at right angles to the axis of the cutter, the edges of the knives being either straight or concave, according to the shape to be imparted to the brush. The invention also consists in the arrangement on the machine having the straight cutters of a transverse rocker, in which the brush can be held and vibrated whenever it is desired to cut it convex by means of straight knives.

HAME FOR HARNESS.—Mason Ellis Abbey, Sardis, Miss.—The trace is looped around the hame and protected by a shield. The hame is made wholly of iron and bent outward to provide room between it and the collar for the trace straps; a friction sleeve is put on it, inside of the loop, to take the wear.

HARNESS SADDLE.-Mason Ellis Abbey, Sardis, Miss.-This invention relates to improvements in the class of harness pads made of wood or other hard substance; and consists in forming pads of wooden or other hard biomics and sheet or the lots including of covering the same on the under side, and in the manner of connecting these parts with each other and the top plates of the pad.

GRAIN BINDER.—Hugh S. L. Bryan, Kearney, Mo.—The invention consists in combining a fork and sliding rake to compress and hold the bundle, and in springs to expelit; in a twine carrying and wrapping mechanism; in the operation of a needle in connection with the twine; in peculiar mechanism for operating rake and twine carrier; and in the general combination of the essential parts to form a grain binder.

SWINGING CHAIR.—Mark H. Prescott, Jr., La Crosse, Wis.—This invention has for its object to furnish a swingingchair. To the back are attached two open steel spring bands, to pass around the body of the child to secure it in place upon the seat. The chair is suspended by cords fitted with hooks and eyes.

HORSE POWER.—William S. Stone, Pitt's Point, Ky.—This invention has for its object to furnish an improved horse power which shall not be liable to get out of order, and will require a comparatively small amount of power torunit; and it consists in the combination, with a sweep crown wheel revolving on a vertical shaft and wheels that communicate motion to the machine drives haft, of a drive pinion, arranged on a spindle resting upon a collar beam suspended from the girders of the frame.

INKING APPARATUS FOR PRINTING PRESSES.—George K. Farrington and Bradford S. Potter, Bloomington, III.—This invention consists of an ink fountain and feed roller, combined with a distributing disk having a beveled margin of the upper surface, on which disk the said feed roller works in a manner calculated to effect a more equal distribution of the ink than can be had with the ordinary fountains. The fountain proper is fixed in connection with the feed wheel detachably, so that interchangeable fountains, containing different colored inks, may be used.

HARNESS.—Mason Ellis Abbey, Sardis, Miss.—This consists of an arrangement of the side and back straps of the breeching for lengthening and shortening, to adjust the breeching for large or small horses. It is a wide strap for traces, breeching, and analogous uses, made with margins lapped and secured with rivets and washers.

TOOTH BRUSH TRIMMER.—Jabez Stone, Waterford, assignor to Julius Kay-ser, New York city.—This invention relates to a new machine for trimming the bristles of tooth and other brushes of such kind, where the rubbing edges are concave lengthwise, and straight or convex laterally. The invention consists in the use of convex cutters on a rotary shaft, in connection with a transversely slotted longitudinally movable brush carrier. The inats in the c hinstion the brush radle descril other application, with the convex cutters, for trimming a brush concavlengthwise, but convex laterally. SAWING MACHINE.-Michael McCool, Moundsville, West Va.-This inven tion relates to a new sawing machine for cross cutting, ripping, and other purposes; and consists in a new manner of fastening the saws in the car riage. The saws, of which a suitable number can be used, are fastened to the end of the carriage by a transverse pin and screw clamp. The pin is fitand the clampe of a values and rested on a projecting rib of the carriage and then clamped tight by means of screws. Grooves are cut into the ril and clamp to receive the saw blades and hold them steady transversely The outer ends of the saw are connected with each other by a cross piece and thereby held from swaying and kept the same distance apart.

FAUGET.—William A. Traver, of Rhinebeck, N. Y.—The object of this invention is to provide ready and convenient means for inserting faucets into barrels containing beer or other liquid or fluid under pressure without wasting the contents and so constructing it that it willfit tap holes of different sizes, the faucet having threaded stem, packing, and tapering sleeve, threaded on the inside and outside.

METHOD OF BLASTING ROCK.—James Brodie and Samuel H. Wheeler, of San Francisco, Cal.—The invention consists in the method of blasting rock by means of sand as a filling material for the drill hole, said hole being first bored to a depth requisite for insertion and explosion of several charges, and the sand, or other equivalent material, being removed therefrom subsequent to each explosion to enable the succeeding charge to be placed in the hole to the depth required for the next explosion, the sand in every instance forming a bed for the charge.

COTTON CHOPPER.-Ebenezer T. Mathews, of Galveston, Texas.-By suitable mechanism, when the driving wheels revolve forward they carry the axle with them, but may revolve back without turning the saidaxle. At gear wheel is placed upon the axle and is attached to the forward end of the shaft that revolves in bearings attached to the front and rear cross bars of the frame. To the rearwardly projecting end of the shaft is attached a wheel or disk. In the wheel are formed seven, more or less, sets of slots, which are made upon the arcs of circles having their centers at the axis of said wheel, to receive the bolts by which the arms are adjustably secured to said wheel. To the forward side of the outer ends of the arms are bolted the shanks of the bars or cutters, so that the hoes may be conveniently adjusted, according to the position in which the frame is supported. The barring-off plows may be adjusted wider apart or closer together, as may be desired. By means of a chain extending to the driver's seat, the choppers and the rear part of the rear frame will be raised from the ground for convenience in turning around or passing from place to place.

[OFFICIAL.]

Index of Inventions

For which Letters Patent of the United States were granted.

For the week ending October 22, 1872, and each

BEARING THAT DATE.

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| | SCHEDULE OF PATENT FEES: | |
| | On each Caveat | \$10 |
| · | On each Trade-Mark | |
| | On filing each application for a Patent (seventeen years) | |
| | On issuing each original Patent. | |
| | On appeal to Examiners-in-Chief. | |
| | On appeal to Commissioner of Patents | |
| | On application for Reissue On application for Extension of Patent | |
| | On granting the Extension | \$50 |
| | On filing a Disclaimer | |
| . | On an application for Design (three and a half years) | |
| | Onan application for Design (seven years) | \$15 |
| | On an application for Design (fourteen years) | \$30 |
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RECIPROCATING STEAM ENGINE.—Johann Rudolf Eichenberger, Baughman, Ohio.—The object of this invention is to increase the power and efficiency of the steam engine, and it consists in increasing the steam surface or area of the piston by making it either convex or concave instead of flat, one third more or less, as may be desired, thus being added.

WINDMILL.—Isaac Lehmer, Lima, Ind.—This invention has for its object to furnish an improved windmill, which shall be more readily controlled than windmills constructed in the ordinary manner. It is so constructed that, as the wind increases in power, the form of the wings and the centrifugal force engendered by the revolution of the fans tend to turn the wings into a horizontal position or from the wind, carrying the spiders in the opposite direction from that in which the central spider is moving. As the motion decreases, the spiders are drawn back, turning the wings to the wind by means of a suitably arranged colled spring. The motion of the spiders is retarded to allow the inner spider to advance relatively, and thus throw the wings from the wind and stop the wheel by means of the brake, which should be so formed as to bear first and with greater force upon the inner spider.

WAGONJACK.—Jehue M. Harlan, of Owensville, Ind.—This invention re lates to a new adjustable wagon jack, which can be extended at will, for use on all sizes of vehicles. The invention consists in making the stem or standard of the jack extensible, and in combining the vertically adjustable upper part with a pivot lever and pendulum "foot."

TOOLFOR PARING HORSES' HOOFS.—John C. Johnson, of Sulphur Springs, Ind.—This invention relates to a new and improved instrument for trimming the hoofs of horses preparatory to shoeing; and consists in a combined knife and clamp, constructed and arranged as a single edged hoof parer, provided with the T handle, whereby a right or left cut may be easily and conveniently made with the single edged cutter.

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