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## Gusimess amd eepsomat.

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foot East 9 th Street, New York-1202 N. 2d Street, St. Louis.
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Brick and Mortar Elevator and Distributor-Patent for Sale See description in Sor. Amerid
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Diamonds and Carbon turned and shaped for Philosophical and Mechanical purposes, also Glazier's Diamonds, manufactured and reBrown's Coalyard Quarry \& Contractors' Apparatus for hoisting andconve日ingmaterialby iron cable. W.D.Andrews \& Bro, 114 W ater st,.N.Y Ashcroft's Self-Testing Steam Gauge can be tested without
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I, Lockport, N. Y., Manf. Gauge Lathes, Walrus Leather for Polishing Steel, Brass, and Plated Ware. Greene, Tweed \& Co., 18 Park Place, New York.
Brown's Pipe Tongs-Manufactured exclusively by Ash croft, Sudbury St., Boston, Mass.
American Boiler Powder Co , Box 797, Pittsburgh, Pa., make the only safe,sure,and cheap remedy for 'Scaly Boilers.' Orders solicited.
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E. M. Boynton, 80 Beekman Street, New York, Sole Proprietor. Betterthan the Best-Davis' Patent Recording Steam Gauge. The Berryman Manf. Co. make a specialty of the economy and safety in working Steam Boilers. I. B. Davis \& Co., Hartford, Conn For Solid Wrought-iron Beams, etc, see advertisement. AC dress Onion Iron Mills, Pittsbargh, Pa., for lithograph, etc. For hand fire engines,address Rumsey \& Co.,Seneca Falls,N.Y. All kinds of Presses and Dies. Bliss \& Williams, successors Mining, Wrecking, Pumping, Drainage, or Irrigating Machir ery, for sale or rent. See advertisement, Andrew's Patent. inside page.
Portable Baths. Address Portable Bath Co , Sag Harbor, N.Y Presses, Dies \& all can tools. Ferracute MchWks,Bridgeton, N. J
To Ascertain where there will be a demand for new Machin-


New Pat. Perforated Metallic Graining Tools, do first class work, in less than half the usual time and make
Grainer. Address J. J. Callow, Cleveland, Ohio.
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For Steam Fire Engines, address R. J. Gould, Newark, N. J Old Furniture Factory for Sale. A. B., care Jones Scal orks, Binghamton, N. $\mathbf{Y}$

## Hodargequygries.

[ Wepresentherevit ha series of inquiries embracing a variety of topus of oreater or less general interest. The questions are
prefer to elicitpractical answoers trom our readers.
1.-Pitch of a Propeller.- Will you please explain th meaning of the term "pitch" used in describing a screw propeller?-J.D.E.
2.-Saponification of Linseed Oil.-What will caus aseed oil to turn to soap after absorption by a piece of woolen goods? D. E.
3.-Reducing Valve.-If I wish to drive my engine with a pressure of 501 lbs . on the square inch, the gage on my boiler showing 100
bs. onthe inch, can I do so by using an intermedi ate boiler and a reducing valve? What 18 a reducing valve?-A. H.
4.-Brick Burning Queries.-How shall I remedy a kiln of brick in which the fires have been allowed to go out during the burning,
leaving the bricks too soft? If I take down, soak in water, reset and bur leaving the bricks too soft? If I take down, soak in water, reset and buri
over, can anything be put in the water toimprove the quality of the brick
5.-Saw Mill Hands.-Please tell me why it is next to mpossible to find a man who thoroughly understands the management o a circular saw mill? Such is the case in this State (Tenn.) Is it because a
6.-Mechantcal Drawing.-What is required of a young man in addition to a thorough knowledge of mechanical drawing, to ft him or a position as draftsman in a first class machine shop? Is a practical
ducation in the principles and construction of machinery, or a course chanical engineering, essential?-s.J.
7.-Attraction.-Two leaden spheres, each one foot in wameter, are placed with their centers four feet apart. What is the forc with which they attract each other? What is the force that unites two plth
8.-Revolution of the Earth.-Would the earth's ve ocity upon its as
poles?-A. F. M.
9.-Radiation of Heat.-Does the radiation of heat de pend upon arr, and would heat radiate in a room or vessel from which the air was exhausted? If air be essential in the case of heating a house, would not the register supply sufficient air to the air chamber and so dis pense with a dratt through the chamber? The particular I
I heat a house by a furnace with the air draft closed ? P . P

## dusurets to Correspomileuts.

SPECIAL NOTE.-This column is designed for the general interest and in 8truction of our readers, not for gratuitous replies to questions of
incely business or personal nature. We woill publish
such inquiries however, when paidfor as advertisementsat $81 \cdot 00$ a line, under the hea at "Business and Personal."
LL reference to back numbers

Tarnish on Brass.-To A. P.-We have given many direc tions for cleaning polished brass. See
ume XXV. of the Sorentipio Amerion.
Cementing Rubber to Sheet Iron.-D. P. W. should try either or both of the methods described on page 42 of volume XXV . an sheetiron with a thick metallic paint, he can fasten his rubber on with

Power of Engine.-By a slip of the pen, there is an erro in my answer, on page 170, to this query. The horse power, theoretically
is $1 \cdot 856$, which is subject to variation as I mentioned.-D. B., of N. Y. Elimination of Mercury.-To I. H. M., query 9, page 138.- Place the tin amalgam in a retort, and distil at a low red heat, con 138.- Place the tin amalgam in a retort, and
ducting the mercury into a rcceiver of water. If the quantity to be oper
ated upon is small, you may use a hard glass retort.-E. H. H., of Mass. ement for Meerschaum.-To E. S. T., query 10, pag 138.-Dissolve carbonate of magnesia in strong hydrochloric acid till
saturated. With this solution, make a paste by adding fresh calcine magnesia, and rapidly use the cement so formed for building up the frac tured pipe. If a piece is to be cemented in, moisten each edge with the so apposition. In an hour or less it will have hardened sufficiently to clea off, and the pipe will be quite serviceable.-E. H. H., of Mass.
Drilling Holes in Glass.-To W. V. B., query 11, page 138.- Use chrome steelfor drills, and make the points very obtuse angled
Use a slow motion, with firm and moderate pressure. Moisten continu ally with a saturated solution of camphor in turpentine.-E. H. H., o
Mass. Mass.
Boiling Oil.-To V. L., query 12, page 138.-Steam can be used for the purpose, but to obtain the necessary heat, a very high pres-
sure would be required, and would be attended with no advantage over coal where ordmary care is observed.-E. H. H., of Mass.
india Rubber for Steam Joints.-To N. L., query 13 page 138.-India rubber washers exposed to the heat of steam pressure at
four pounds and upwards will soon become hard and brittle, but if the four pounds and upwards will soon become hard and brittle, but if th
joint has peen carefully made at first, this will not affect its integrity.E. H. H., of Mass.

Nitro-Glycerin.-To P. G. S., query 20, page 138.-Take nitrate of potash in powder 1 part, sulphuric acid 33/3 parts. Mix thorough
ly, and cool to zero, then pour off the strong fuming nitric acid, draining thoroughly the mass of sulphate of potash left behind. To this acid and four fifths of a part of glycerin very gracually, taking care to maintain the whole at as near zero as possible. In an hour's time add a considerable
quantity of water ; the nitro-glscerin will separate and fall to the botblom quantity of water; the nitro-glycerin will separate and fall to the bottom
Wash it thoroughly with fresh water, and whatever else you do, be care Wash it thoroughly with fresh water, and whatever else you do, be care
ful in all your manipulations with this powerful agent.--E. H. H., o ful in all
Mass.
Cement to resist Water and Alcohol.-To F. S , query 24, page 31.-You do not say what material is to be cemented. The peel
ing off depends on an afflity between the cementand the object it placed on, and what will answer in some cases will not in others.-E. H
H., of Mass. Holes in Glass.-To W. V. B., query 11, page 138.-Holes can be drilled in glass
plied to the drim,-C. O. I., of Pa .
grecemt Anteritan and forkign eatents.

## Under this heading we shall publis. nent home and foreign patents.

 of
end of the standard is attached to the middle part of the plow beam, and the orward branch of the former supports the plow share. The land side i ttached by its forward end to the share, to the outer part of which is fas ened a brace, which, passing through the lower end of the standard, is
ecured to the land side. The space at the land side of the plow is closed ecured to the land side. The space at the land side of the plow is closed
by a metallic plate. The foot of a solld wooden mold board is fitted and y a metalinc plate. The foot of a solid wooden mold board is fitted an
ecured in the cavitv of the share, by which it is claimed the device is re ered light, cheap, and sultable for furrowing or for use in light soil.
Grain Ceiling for Vessels.-Constantin Lazarevitch, New York city.-
When grain is shipped in bulk from one port to another, and especially to When grain is shipped in bulk from one port to another, and especially to
European ports, it is necessary to cell the part of the vessel which contains European ports, it is neceessary to cell the part of the vessel which contains
such cargo to protect it from dampness. Such celling is required by the insurance companies. Boards are therefore placed between the bottom of the vessel and the grain, thus mak'ng a second bottom with boards, which
overlap each other in that part of the hold. These boards are firmly nailed own to the bottom of the vessel, which renders it impossible to remov them without splitting, breaking, and effectually destroying them. This
umber, consisting of many thousand feet, is consequently sold for fire woo umber, consisting of many thousand feet, is consequently sold for fire woo
fter the grain has been discharged. The object in this invention is to so ut in andsecurethis celling that the lumber or boards of which it is com posed shall not be injured, but may be removed intact and sold as perfec meher, thus effecting a very material saving to ship owners, while reducing he cost of freght. The invention therefore consists in securing the cellin Wridya - Melacto Brant Nothport N .
WindLAss. - Melancton Bryant, Northport,N. Y.-This invention consists
of the attachment of the pawl lever for turning the drum of a inch to the ratchet wheel or disk by a kind of yoke or frame, embracing both sides of the wheel, and conflned upon it by sectional annular flanges atting in annular grooves in the disk, and sliding around the disks in said rooves, for raising the pawl, but binding therein when the pawl is force
gainst the teeth, and moving with the disk when the latter is turn When the pawl lever has the end of its short arm pivoted at the axis of the rum, it is capable of being worked much taster than the detachable bar rrangement, wherein two or more hand bars are placed in radial mortise rranged at intervals around the drum.
Musio Stand.-Le wis V. Brown, Salisbury, N. C.-This invention relate o an improvedmusic stand whose rack can be extended for large or con racted for smaller sheets of music. The invention consists in making th
rack pruper on the principle of lazy tongs, of jointed rods, and in combin ing it with a bar or plate at the back, whereby it is locked in its expanded
position. When the estand is not in use it is folded together and can be position. When the stand is not in use it is folded together and can be packed into a narrow space.
Fanning Mill.-James M. Kendall and James Peel, Madelia, Minn.his invention consists of a simple and efficient arrangement of the shak ng shoe and a revolving screen, whereby the grain is first subjected to the
last in the shoe, and then passed through the screen, which is revolved by earing connected with the fan driving shaft, the said screen being protec d from the blast of the fan by a hood. It also comprises a novel arrange ment for shakitg the shoe, whereby a horizontal and a vertical mo-
tion are fimparted to the shoe. The shoe is constructed with perforated tion ar
sides.
Sand-papering Maciine.-Orra I. Foster, Salem, N. H.-This inventio n blade an arrangement of the fan blower for carrying the dust a way,the haft tustead of to the hood of the machine, as heretof cre.
Coutrvator.-Totten Poling, Guthrie, Iowa.-This invention relates to
n improved iron cultivator, which shall be so constructed that it may con in improved iron cultivator, which shall be so constructed that it may con orm to irregularities in the surface of the ground, and may be readird.
djusted to run deeper or shallower in the ground, as may be desired. vel of tppliances ena ble one of the plows to rise-above or urface, and enabling one of the plows to be raised to pass an obstructio ithout disturbing the other. This construction also forms an arch or rise in the connecting bar so that the cultivator may cultivate both sides of a
row of plants at the same time without injuring or breakine the plants. The plow beams may be moved farther apart or closer together, as may be desired, their rear ends having a free lateral but no vertical movement.
The plowman, while guiding the plows, walss at the side of the row o The plowman, while guiding the plows, walks at the side of the row of plants being cultivated. Bars bent downward and curved rearward to rest
upon the ground serve as drag bars to support the plows a way from the round when passing from place to place.
Carriage Wheel Hub.-Jesse B. Bauman, Shepherdstown, Pa.-This
vention relates to an improvement io carriage wheel hubs, the construc on of which is such that the spokes, tire and felloe can be readily and easily ightened by means of movable collars, when it is necessary to take the disi out of the wheel.
Carriage Werel.-Samuel R. Bryant, Waterford, Pa.-This invention nd the mode of fiting the sposes and pipe box together. To lock togethe the spoke tenons so that lateral movement of one upon the other shall be revented, longitudinal grooves in their contiguous surfaces are formed and to prevent longitudinal movement of the spokes one upon another.
transverse perforations may be formed to receive locking pins of any suittransverse per
able material.
Wagon Brakr. -Joseph Pavey and Marshall Martin, Walla Walla, Wain ington Territory.-This invention relates to improvement in a class of Wagon brabes, wherein the brake bar is suspended below the reach of the
wagon. This brake can be used with or without the wagon box, by reason agon. This brake can be used with or without the wagon box, by reaso
of the employment of the bar for suspending the brake bar when the box is the employment of the bar for suspending the brake bar when the box 18 remov.
axle.
apparatus for Drying Flook or Velfet Paper.-Theodore A. Blanchard, New York ci y.--Flock paper atter betng flocked has heretofore been
dried by looping or festooning the paper over poles, which were usually ried by looping or festooning the paper over poles, which were usuall rranged so that they could be moved closer together or further apart, a circumstances required. This mode of drying the paper, though allowing
the air to crculate freely about the paper, always permanently creased o marked it where it passed over the poles. This invention consists in sup.
porting the paper in a hovizontal or nearly horizontal position during the porting the paper in a horizontal or nearly horizontal position during the IMProvind MANUF operation upon drying frames prepared for the purpose
Improvid Manvfaoturi of bitartrate of Potassa.-Gustave Bour
gade, Jersey City, N. J.-The object of this invention is to simplify the ade, Jersey City, N. J.-The object of this invention is to simplify the
means of producing cream of tartar or bitartrate of potash, so that the sam may be economically manufactured in large quantities. The apparatus con ists of a double jacket steam kettle, made of copper or equivalent material with its lower part hollow, for the admission of steam. In the bottom of the kettle is a discharge pipe, having a valve and covered with a filter. The in-
ventor flls the kettle with water, and, when it is boiling by the heat of steam dmitted into the jacket, adds a quantity of crude argols, well ground, hich are left to holl untll pertectly dissolved. In order to prevent the ormation of tartrate oflime, he adds a quantity of diluted sulphuric or mu liatic acid. Bone black is then poured in and the mixture left to boil. Afte dissolution, a quantity of prime American clay well dissolved in water is
added; after which the preparation is allowed to flow into crystallizing added;
tanks.
METE
Method of Making blanig for Plow atraohments.-Orren A. An hony, Maytield, N. Y.-This, invention consists in a method of making blank for an attachment for plows of a single plate of stee,, which is ftte on to the worn oute
he share and colte
Rallroad Tane Valfe.-Charles w. Chappell, Watertown, Wis.-This vention has for its object to furnish an improved device for operating railroad water tank valve, enabling the valve to be conveniently opened,
whatever may be the weight of the water pressing upon the valve. This is effected by means of a lever attached to the valve stem being raised by the tank. This shaft 18 rotated from the outside by means of a hand wheel.

SoroLi Sawing Maching.-David R. Williams, Sr., Paris, Ky.-This in-
vention relates to an improved mode of combining guide rode and a bearing vention relates to an improved mode of combining guide rods and a bearing
plate with a saw cross head, so that the cross head will not have the friction of the bearing plate, except when pressed against it by the work: and it also consists in providing a clamp, which holds the saw, with an adjustable pin
that will afford a rest thereto when the width is lessened by wear or sharpthat wi
ening.
Corn Planter.-George G. J. Millar, Lockbourne, Ohio.-This invention has for its object to furnish an improved corn planter which maybe adjusted so plant the rows of hills at any desired distance apart, and to drop any deto receive the seed from the hoppers and discharge it upon the ground, and are attached to the outer ends of a rod or shaft which is -made in parts,
slid'ng upon each other, so that its length may be extended or contracted as the machine is adjusted to plant the rows of hills wider apart or closer together. By means of suitable appliances the driver can operate the dropping clinders and drop the saed with his foot or by hand. The driver's sea is adjustably supported from the platform, so that it may be moved back or relieving the horses' necks. Other mechanism allows the planter to be raised from the ground for convenience in turning or passing from place to
place. The machine may be adjusted to plant the seeds at any desired depth in the groand. The covering plates are secured by a single belt, so that they may be set back or forward, according to the am unt of soil de
sired to be drawnover the seed. Cutters are provided, designed to cut of sired to be dra noverthe Cutters are proviea, de go whichto anystalks or other rubbish that may be
Fencte-William T. Willie, Independence, Texas.-It is economicalls for which he substitutes another, should be fully utilized on the spot for which he substitutes another, should be fully utilized on the spot.
Hence the inventor purposes setting the posts diagonally across the fence alternately, in opposite directions, which brings the lower or base portion of every successive pair of posts much nearer each other than they would bottom and longer rails forthe top portion of the panel.
Wash Boileri.-Wilson C. Berger, Bethel, Pa.-This invention consists o a secondary or false bottom, adapted to fit inside that of the sheet metal boilersnugly, with the legs to hold it about three inches above the perma nent bottom, which said false bottom has three parallel rows of hole through it vertically, said rows being in the direction of its long axis; arsi plates, rising as high as the top of the boiler, and joined together at the to and ends, so that water heated in the space below the fatse bottom will be torced up in the said inclosed space, and out through the perforated sides among the clothes, and down to the heating space again, through the out side row of holes in the false bottom, so as to act upon the clothes very effl clently
Knife Sharpener.-Jonathan Quipp, Buffalo, N. Y.-This invention fur emery roller, supported on a suitable frame, with a journal or pivot at eaci end. Stands or ears are attached to the bed plate, through which the jour nals of the roller pass. The roller is made of wood or of any suitable mate rial, and is covered with emery or equivalent material, the same as emery wheels; or thay be mater material. The sharpener may be placed upon the dining table, and is
intended to take the place of the ordinary steel sharpener. BEX Hive.-AmosR. Moulton, Fall Branch, Tenn.-This invention relate enable every portion of the same to be opened or unfolded with the greates faclity for the purpose of inspection, removal of honey and refuse mat
ter, etc.
Car Coupling.-James Broadley, of Bradford, Eng.-The mechanical arrangements comprising this invention consist of a sliding shaft or bar,
working in suitable bearings secured to the ends of the carriage or vehicle at a position somewhat above the usual coupling chain arrangement, whic can be left attached to the carriage or vehicle, and can be made use o When two carriages are to be coupled, one of which is not provided with the coupling arrangement. This sliding shaft or bar has a bolt connected thereto, which bolt is made to work in an orifice provided for , itin the sides
of a socket or guides secured to the carriage or vehicle." $A$ slotted link is also secured to the carriage of vehicle, to which it is attached by a joint, so that it may be lifted up out of the way and secured by a catch on the slidina shaft when a carriage or vehicle undrovided with these arrangements is to coupled in the ordinary way. The coupling slotted link is, when two car riages or vehicles are tr in the sockets or guides above mentioned by sim-
position, and is inserted ply bringing the two carriages or vehicles together, and then the sliding shaft can be actuated so as to couple the carriages by handiling its end from the side of the carriage without going between the carriages, and the un coupling can be effected by asimhlarthoughreverse action. Ifthought de sirable, lever arrangementsmight, it is obvious, be adopted, to enable th
guard or attendant to work these arrangements without getting down from his place.
Safrty Switoh Fastrening. - William B. Sloan and Ldward H. Sweetse Hamburg, Iowa.-The invention consists in a railroad switch fastening, con
structed with springjaws which clamp the annular recess ofa bolt passed therethrough and require to be separated by a key before the bolt can b removed.
Folding Paif.-Ransom Sabin, Benona, Mich.-This invention consist in a combined water pail or bucket and teed bag, tormed of a waterproo
flexible cloth or rubber cylindrical body, and a sheet metal bottom. It is capable of use in drawing water from a well, may be set over a flame, ca be folded flat so as to be placed under carriage cushions or otherwise conve niently packed away, and is withal very light as well as strong, durable and cheap
Lathes for Turning Bent Stioks.-Thomas Ott, of South Green Town ship, Pa., assignor to himself and Nathan Houck, of same place.-This in
vention has for its object to produce a simple apparatus for turning the hooks at the ends of umbrella aticks andother bentsticks; and consists in a annular chuck carrying a cutter at its narrow inner edge, and hollowed a the faces to be asthin as possible along the inner edge. An annular chuck or block made of wood or metal is slotted out to receive a knife whose cut ting edge projects beyond the inner periphery of the chuck. The knife in
preferably slotted, to be adjustable as its edge wears. The faces of the an nular chuck are hollowed to make it as thin as possible in the middle. Beingthin in the middle, the chuck permits the stick to be held at such vary ing angles as to allow its entire bent portion to be turned to unitorm thick Lamp Heater for Nursfry Flabi.-Seymour Hughes, of Jefsey city N. J.-This invention relates to a rew apparatus for hearing the contents of
nursery flasks and similar vessels; and eonsists in the use of a portable water heater containing a lamp, flues, and a platform for the support of the flask. The latter can be placed wituin the heated water to have its contents gradually and gently warmed without exposing the flask to injury or Wasting heat. The invention also consists in providing the flue of th
water heater with a transparent section so that it may also serve This is a very neat apd useful invention, one of the small kind adapted fo genera
Harrow.-Horatio N. Swift, Matteawan, N. Y,-Heretofore the connec tion between the sections of the well known flexible harrow has been made by means of round rines through the three eyes, which approach each other butit has been found that the sections, when connected by a ring in this manner, were liable to catch and cramp in turning the harrow, and cause
much trouble in releasing and straightening out the same. To remedy this difllculty, instead of the round ring, a triansular connecting dink is employed composed of a single piece of metal, but with a separate ring for each eye By this means the eyes of the sections are separated, so that in turning or twisting the harrow will not cramp, but assume its natural position without connections, the outer angles of the sections being connected by commo links and chains.

Land Roller.-Halloway w. Mathews, Frenchtown. N. J.-Thei:ven tion consists in providing a roller frame with four pendent bearinge, each
vertically slotted, and all the corresponding parts of said slots being in the same horizontal plane, so that the journals of each end of a roll can ireely play up and down, and so that the weight of frame and driver will
when on a level, be equally distributed over the several journals, but wil be concentrated upon any clod over which either end of either roll may
pass.
[OFFICIAL.]

## Index of Inventions

Por which Letters Patent of the United States were granted
for the week miding august 27 , 1872, and fact bearing that date.

## Actd for hardening stone, treating Alloy or bell metal, H. L. Macker

Alloy or bell metal, H. L. Macker..
Anthracene, manufacture of, Fenne
Auger, hollow. G. N. Stearns...........
Barrels, levice for handind,
Basket, fruit, O. A. North.
Bed bottom, $\mathbf{A}$. W. Obermann.
Bed bottom, spring, S. M. Brooks
Bedstead, bureau, W. F. Brown
Bedstead, bureau, W. F. B
Beehive, Mulkey and Case

## Beehive, W. T. Mosher.

Bell call, w. H. Nichols.
Belt shifter, T. P. Rodgers.
Betts, fastening for, J. C.
Berth, ship's,I. A. Chomel.
Billiard cue cutter, F. R. Gardner
Blacking, packing shoe, C. Herold
Boiler, cullhary, I. Kinney.
Boiler, wash, L. H. Suits.
Boiler, wash, J. C. Tilton

Boltfor sashes, etc., U. Crame
Boot and shoe heel, J. M. Hunter
Boot and shoe sole, S. J. Shaw
Boot and shoe cleaning machine, Terheun and Ackerman
Bridge, C. W. Warer
Bridle, safety, B. R. Du Val
Brush and mop holder, $0^{\prime}$ Brian and Baker
Camera, photographic, M. Flammang
Car coupling, Musgrove and Sharp...
Carriage seat fastener, L. D. Belnap
Chair, J. Defoe.
Chill plate and flask, Long and Miller
Churn, w. E. Barr.........................
Cloth cutting machine, Fenno and How
Collar, hor se, P. B. Horton
Collar, horse, J. B. Hor
Compass, $\mathbf{O}$. Stoddard
Compound for polishing and cleaning metals, etc., J. B. Emerbon..
ream strainer, J, Preventirg, T. Pyle
Cuff, L. H. Foy.
Dental plugeer, w. D. Stillma
Dryer, frugk, Paige and Wilkinson.
Electro-magnet,
Electro-magnet, T. A. Edison.
Electrotype plate, S. P. Kight...............
Elevator, G. Scott...............
eva
Engine, locomotive, s. Skillman
Excavator for railways,
Fence, T. D. Roberts.
Fince, T. D. Roberts..........
Fiuting machine, w. Weitling
Fork, pickle, H. Laurenc
Fountain, G. Finley
Fruit box, C. W. We
Furnace, hot air, J. R. Gaston
Furnace, hot aif. W. W. Dodge......................
Furnaces, teeding the charge to metallurgic, G. Edward
Gas retort, J. Butler.....................................
Gas extinguisher and cut off, automatic, G. R. Pierce.
Gate, A. H. Phillip
Gilding and ornamenting leather tor suspenders, etc
Grain scourer, smutter, etc., Hunt and Ingraham
Hammer, drop, N. C. stiles
Harness clamp, Po
Harrow, wheel, T1. M. Brintnal
Harvesterers, binder attac
Heater for curling tongs, J. Fletcher
Hogs, ringing, H. W. Hill.
Horses, forming the curve in tailis of, I. B. Phillips.
Knitting machine, w. H. Ramsdell
Ladder, folding step, M. Mattern
Lamp, I. Lindsley.....
Lamp shade, A. Combs
Lock, combination, J. B. White......
Locomotive balloon, P. Haenlein
Logs, machine for turning, E. C. Dicey........................................... 130,960
Loom for weaving pule fabrics, w. Webster.......
Masts, ball for, E. C. Seely..
Masticator, steak, R. F. Coo
Masticator, steak, R. F. Cook.
Mat, metallic, F. G. Johnson
Mat, metallic, F. G. Johnson.:
Matches, drying, McC. Young.
Metal, machine for punching, N. c. Stll
Molding, P. Conver.........................
Mortising chisel, Shuler and ©arpenter.
Mortising chisel, Shuler and Carpenter.
Movement, mechanical, W. B. Bartram
Muzzle, dog, C. De Quillfel
ng and measuring, E. F. Wilder
rgan action, W. N. Manning.
rgan, reed, D. Tripp..
ven, hot blast, T. Wh
Pan, cake, W. C. Butler
aper pulp from wood, apparatus for making.................................
Pavements, composition block, for, C. W. M. Smith
Pavements, composition block for, J. C. Tucker (reissue).
ipe and nozzle, discharge, A. Lovie.
Plower, s. R. Fenner.
Plow, A. H. Swe etland

Printing, inking apparat
Pump, steam, w. Arthur
Pump, glass cylinder of, J. Bryan...........................................................130,89 130,89
Prrometer, E. Brown.......................................................................................... 130
(Zack, feed, J. L. Rhodeback ............
Saddle, harness, G. W. Dutton
Sap bucket bracket, J. J. Pellett.
Sash holder, A. Perron..
Sasb bolder, G. W.
Saw set, W. Nash.
Sater
Saw mill edger, G. Willett.
Saw mills, head block for, G. W
Sawing machine, E. G. Budd..
Sawing maehine, stave, Gerlach and Knippe
Sa wing machine, stone, G. A.
Scraper, earth, A. B. Smith
Scrubber and scraper, J. A. Little
Seat, gepring, Lathrop and Fowles
Sewing machine, Q. Rice (refssue)
Sewing machines, treadle for. I. P. Fishburn..
Sewing machines, attachment for, P. Grosfeld.
,

Signaling apparatus for railroads, electric, e. L. Pope...........................................90,94
Sign winding machine, J. W. Cox ............................................... 110,90
silk
Sod
Soda fountain, E. B. Chamness
Spark arrester, C. B. Street.................................
Spark arrester and consumer for locomotives, C. F. Pike.
Spinning and twisting, spindle for, E. Osgood.
Spinning machines, bobbin holder for, w. L.
Staples, process of making bind, J. Keith................................. 130,9 130,8
Staves, machine for jointing. W. C. Perkins.
Stone, manufacture of artiffcial, D. M. Sprogle.
Stone, manufacture of artificial, Sprogle and Pie
Straw cutter, J. E. Tyler....
Straw cutter, F. L. Maynard
Stump extractor, Miller and Bow
Telegraph apparatus, G. Little...............
Telegraph circuits, ndicator for, G. Little.
Telegraph key, A. G. Davis.
Telegraph printing, H. Van Hoevenberg
Telegraph pole, iron, J. Weis...............
Telegraph paper, composition
Telegraph relay and sounder combined, G. Little
Telegraph, magneto electric dial, Johnson and Whittemore Thill coupling, J. G. Schiller.
Thill coupling. J. O. MaClasky......................
Tlles, machine for pressing rooing, C. J. Merril
Thes, machine for pressing
Transplanter, C. E. Brown.
Truss, C. H. Carr
Valve and cut off, steam, R. T. P. Allen
Valve indicator, check, J. G. Blackbur
Valve, steam governor, C. H. Burton....
Valve, water pressure check, T. Bailey
Valve, water pressure check, T
Vehicles, wheelfor, H . H. Fetter.
Ventiler,
Ventilator, car, Williamson and
Wagon, dumping, D. D. Smith.
Wagon standard, P. Sweeney ............
Wardrobe and bookcase, F. F. Voight
Wasbing machine, A. Doney...
Washing machine, B. Edgar...
Washing machine, B. Edgar...
Washing machine, J. W. Pratt
Water wheel gates, op erating, J. W. Hill.
Water pipes, apparatus for venting and draining, $\mathbf{H}$. English
Well point, tube, S. L. Bignall
Wheel traction, C. E. Brown.
Whiffetree, J. M. Isenberg.
Whifletree, J. M. Isenberg..............................
Whifletrees, trace
Whip, A. Scharff.
Whip, A. Scharff......................

## DESIGNS PATENTED

6,009.-Campaign Shirt.-A. Blumann, New York city
6,090.-Otroman.-C. J. Conradt, Baltimore, Md.
,091 and 6,092.-CArpets.-A. M. King, Kidderminster, England
6,093. - SHAwL.-M. Landen berger, Philadelphia, Pa.
6,094.-CARPET.-J. Powell, Kidderminster, England.
6,095.-MTFF Coverina, etc.-R. M. Seldis, New York city.
TRADE MARKS REGISTERED.
69.-Spool Thread.-Clark Thread Company, Newark, n.

972.-MOLAssss.-A. Thomson \& Company, New Orleans, La
973.-SIRUP.-A. Thamson \& Company, New Orleans, La.
974.-MoLAsszs. -A. Thomson \& Company, New Orleans, La.
55.-Fanoy Goods.-Weil \& Woodleaf, San Francisco, Cal.

SCHEDULE OF PATENT FEES:


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APPLICATIONS FOR EXTENSIONS
Applications have been duly fled, and are now pending, forthe extensio
of the following Letters Patent. Hearings uponed respect a
are appointed for the days hereinaster mentioned:
22,185.-Preservation of Flish for Food.-N.B.Marsh . Nov. 13, 1872.
22,197.-Hoop Skirt.-S. Peaberdy. Nov. 13, 1872.
22,674.-Truss Spring.-J. W. Riggs. Jan. 2, 1873.
EXTENSIONS GRANTED.
11,233.-Carpet Sweeper.-H. H. Herrick.
21,311 .-Sefuring Plane Irons to Stocks.-L. Bailey
21,324 - - SUN SHADE.-A. G. Davis.
1,329.-SEnding and Reoriving Trlegraph Missagis.-M. G. Harmer.
21,352.-RatlroadCar Seat.-C. M. Mann.
21,367 .-Straw Carrier.-F. W. Robinson.
21,372.-Fari Box.-J. B. Slawson.
$21,381 .-$ Bracriet.-F. M. Sweet.

