The Pittsburgh *Evening Chronicle* says that nearly all the coal shipped to New York and New England, amounting to 9,000,000 tuns per annum, is obtained from Pennsylvania. Of this quantity, 3,500,000 tuns are shipped to New York, and the balance, 5,500,000 tuns, is conveyed in sailing vessels to various ports on Long Island Sound, and ports beyond. The production of coal in Penn-ylvania and Maryland in 1867 was over 16,000,000 tuns, and is increasing at the rate of 2,500,000 tuns, or fifteen per cent per annum

Francis Joseph, Emperor of Austria, is quite a mechanical genius. He has recently found time to construct a clock, a very ingenious piece of workmanship, which he has presented to his mother, the Archduchess Sophia. There is attached to this clock a gaudily-plumed cock, which crows every day at sunrise.

The Maine lumbermen complain that the water was so high early in the season that the mills could not be run, and that now the water has fallen so rapidly that a large amount of logs on the way to market must lie over till another season.

Arinkcompany has been organized at Hartford, Connecticut, and the rink is to be built at once. It will be 200 feet by 80, will cover 16,000 square feet of ground, hold6,000 people in a public meeting, and, as a rink, is to accommodate 800 skaters and 3,000 spectators. It will cost \$20,000.

Commissioner Wilson, of the Land Office, has received intelligence setting forth the discovery of a valuable mine of cinnabar, about twenty-five miles northeast of the city of San Francisco, in township north of range ${\tt No.}$ 1, east of Mount Diablo meridian.

The observatory of the Colby University, at Waterville, is to be erected the coming season. It will probably be built on the hill in the rear of the Maine Central buildings, as the college grounds are subject to much jarring from the passing of trains.

The returns of the several railroad corporations in the State of Massa chusetts, show that 24,916,021 passengers were transported by them for greater or less distances during the year ending November 30, 1868, and out of this vast number not one was killed or injured while occupying his seat, although several were fatally hurt while attempting to get on or off the trains while in motion.

WOODENRAILS .- A company has been organized, so we are informed, at Stevens Point, Wisconsin, to construct several miles of wooden track railway. It is proposed to use hard maple, and to treat it with some prepara tion to harden the wood and to preserve it from rotting.

The new railroad line is now open via the Harlem Railroad to Lebanon Springs and Manchester, Vt., and Montreal. The trainsleave Twenty-sixth street at 7 o'clock A. M., arriving at Lebanon, at 3:16 P. M., connecting at Rutland with the Montreal train,

"Geissler's tubes" are now no longer provided with wires at both ends for the electrical discharge, friction alone having been found sufficient to render the gas contained in the tubes luminous.

The Commandant of the United States Armory, at Springfield, Mass., is sending away 100,000 muskets Which our Government has sold to the Turkish Government,

Dispatches irom Ottawa, Ontario, state that the evidence given before the Committee on the Huron and Ontario Ship Canal, establishes the fact of the importance and practicability of that great work.

A Commission has been appointed by the Secretary of War to consider the proposed location of the Hudson River West Shore Railway upon the publiclands at West Point.

The President of the Des Moines Valley Railroad reports that over \$100, 000 will be collected in duties on railroad iron at Keokuk during the present season.

The British Postoffice Department has completed its arrangements for purchasing all telegraph lines in the kingdom.

Anew tin mine has been opened in San Bernando county, California.

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 in-formation from us; beside, as sometimes happens, we may prefer to ad-dress correspondents by mail.

SPECIAL NOTE-This column is designed for the general interest and in-struction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however-when puid for as advertisemets at \$2.00 a line, under the head of "Busi-ness and Personal."

All reference to back numbersshould be by volume and page.

- C. T. L., of Ind.-Expert operators are able to transmit from 15 to 20 words per minute through the Atlantic Cable. The velocity with which a current or impulse will pass through the cable has been ascertained to be between 7,000 and 8,000 miles per second; the former being the velocity when the earth forms a part of the circuit and the latter when the earth formed no part of the circuit.
- R. and B., of Pa.-We know of no substance which can be used to coat an iron tank for water, that can also be applied with a brush. and not affect the taste of the water at first, unless it be soluble glass. Good white lead paint will do very well indeed, after the taste has disappeared, but it takes some time before all taste will disappear. We have not seen soluble glass applied to iron and cannot tell whether it will adhcrestrongly or be liable to scale off. If good we think it will work well and be durable.
- J. T., of Mich., asks the proper speed for a circular saw of 50 [Scientific American-Old and scarce volumes, numbers, and inches in diameter to run and do a good business, and if a saw of that kind requires more motion in feeding fast than it does in slow feed? An swer. A 50-inch diameter saw should make 750 revolutions per minute and do a good business. Fast feed requires more motion than that of slow.
- EEP

During August and September an international exhibition is to be held J. A. S., of Pa.-We do not wish to re-open the discussion on the theory of the tides. Your communication although ingenious and plausible is therefore respectfully declined.

W. H. W., of Ohio, asks, "if wheels of different sizes fixed to an axle will run on straight parallel rails without one of them slipping." They will not.

C. A. W., of Me.-The greatest strain on the gears of an engine lathe, is on the gear that runs the slowest.

G. D. M., of Del.-The construction of envelopes with a thread inserted in one end on the bottom, to facilitate in opening, is not new. It was patented in 1858. We returned your remittance by mail.



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.

Scientific Books to order. Macdonald & Co.37 Park Row.N.Y.

Send to L E. Sharp, Evening Shade, Ark., for particulars of best water-powers in the West.

Sheffield Scientific School, of Yale College.-Copies of the Fourth Annual Report for 1868-9 will be sent on application to Prof D. C. Gilman, Sec.

Who makes the best Rotary Pumps? Address Box 389, Pittsburgh, Pa.

Manufacturers of wire-drawing, and also of horseshoe-nail machines, address, without delay, Box 587, Baltimore Postoffice.

\$2000.—Patent right, for the United States, for sale very low, of S. S. Hamilton's Weighing Scale, Patented Jan. 12, 1869, No. 85,816. Address, care Hemlandet, Chicago, Ill. S. S. Hamilton.

Mechanical Draftsman wanted. Address T. R. Sharp, New Castle, Del.

Mechanical Patent Reports, from 1790 to 1860, for sale. Address G. W. Tolhurst, Liverpool, Medina county, Ohio.

Boiler Wanted-About 50-H. P. Payment in Machinists or Boilermakers' tools. Address U. Eberhardt, Newark, N. J.

Bartlett's Instantaneous "Gas Lighter," for lighting and ex- Under this heading we shall publish weekly notes of some of the more prom. tinguishing street and elevated gas lamps. Witness its operation by the Manhattan Gas Co., now lighting 7,000 lamps of New York city. J. W. Bartlett, 569 Broadway, New York.

Eggs kept fresh for a year. Rancid Butter rendered sweet. White and streaked butter made yellow. Milk and butter kept sweet, by , and other vegetables and cereals. new methods. Circulars sent free. Agents wanted. Address Practical Chemistry Co., No. 4 Arcade Court, Chicago, Ill.

Right of New England States, for sale cheap, for the best and cheapest improvement in Brick burning. Patented March 30, 1869. Send for a circular. J. M. McCarthy, Canal Dover, Ohio.

Wanted—A first-class molder in Loom, Dry, and Green Sand. Address Box 137. Rome, Ga.

Quimby & Co., Manufacturers and Inventors' Agents, Free Exposition Rooms (to Exhibitors and Visitors), 185 Chambers st., N. Y., have room for more new and useful light machinery, and other articles. On Exhibition and Sale, Models of Rare Inventions, and Novelties. Call

J. T., Boston.-L. L. Davis' Spirit Level and Plumb is fully described in our last number. Address J. W. Storrs & Co., 252 Broadway, New York.

Mill-stone dressing diamond machine, simple, effective, durable. Also, Glazier's diamonds. John Dickinson, 64 Nassau st., New York.

Peck's patent drop press. Milo Peck & Co., New Haven, Ct.

The Best and Cheapest Boiler-flue Cleaner is Morse's. Send to A. H. & M. Morse, Franklin, Mass., for circular. Agents wanted.

Builders of bridges, railway cars, and other woodworkers will notice Steptoe, McFarlan & Co.'s advertisement, inside.

An engineer, about leaving for Europe (where he has first-class business friends), to negotiate a very valuable patent, is desirous of receiving one or two similar commissions. 1st-class firms only treated with References A 1. For particulars address H. M., Postoffice Box 6, New York.

Leschot's Patent Diamond-pointed Steam Drills save, on the average, fifty per cent of the cost of rock drilling. Manufactured only by Severance & Holt, 16 Wall st., New York.

For Sale—A Patent valuable to manufacturers of farm machinery. Will sell low, or trade for lands. Send address to H. S., Box 651, Cincinnati Postoffice, Ohio.

Gear-cutting engines-new patterns-cut every number up to 127, and 26 in. diam., made by A. H. Saunders, Nashua, N. H.

Cider Mills for sale, and rights to manufacture. Address H. Sells, Vienna, Ont., or Shaw & Wells, Buffalo, N. Y.

entire sets of the Scientific American for sale. Address Theo. Tusch, Box 448. or Room 29. No. 37. Park Row, New York city.

For the best hammer and sledge handles, made of carefullyselected, well-seasoned, second-growth hickory, address Hoopes, Bro. & Darlington, West Chester Spoke Works, West Chester, Pa,

NEW PUBLICATIONS.

THE PAINTER, GILDER, AND VARNISHERS' COMPANION. Containing Rules and Regulations in everything relating to the Arts of Painting, Gilding, Varnishing, Glass Stain-ing, Graining, Marbling, Sign Writing, Guilding on Glass, Coach Painting, and Varnishing, Tests for the Detection of Adulterations in Oil Colors, etc., and a Statement of the Director which Paintore are popularly lightly with the Diseases to which Painters are peculiarly liable, with the Simplest and Best Remedies. Thirteenth Edition, Revised. With an Appendix, comprising Descriptions of a great variety of Additional Pigments, their Qualities and Uses, to which are added Dryers, and Modes and Operations of Painting, etc., together with Chevreul's Principles of Harmony and Contrast of Colors. Philadel phia: Henry Carey Bard, 406 Walnut street. Price, by mail, free of postage, \$1.50.

The number of editions which this work has reached is a sufficient guarantee of its excellence without our saying a word in its praise. Had we room we could, however, point out perhaps as many praiseworthy fea-in it as could be culled from any other work of its size ever published. The appendix contains much new and valuable matter, and it, as well as the body of the work, is copiously indexed.

THE CENTENARY.

Such is the title given to a new monthly just commenced at Charleston S. C. The first number contains eighty-four pages, and gives abundant promise of success, so far as literary merit is concerned, the articles gen erally very readable. It remains to be seen how far the Southern people will sustain a first-class magazine. We wish it success,

SPRINGDALE ABBEY is the title of a new book from the press of Claxton. Remsen & Haffelfinger, of Philadelphia. It consists of extracts from the diaries and letters of an English preacher. Edited by Joseph Parker, D. D. We have found the book very pleasant and very interesting reading, in which is also combined useful hints and instruction presented in a taking style.

THE ECLECTIC, for July, contains two fine pictures-Landseer and his Connoisseurs, and Gutenberg 1400-1468; also a very choice contents of articles selected from the leading European magazines. We regard "The Eclectic" as one of the best serials extant. Terms of "The Eclectic"-One copy, one year, \$500. Address E. R. Pelton, publisher, 108 Fulton street, New York city,

Recent American and Loreian Batents.

inent home and foreign patents.

 ${\tt FERTILIZER.-F. C. Renner, Ladiesburg, Md.-The object of this invention}$ is to provide for public use a cheap and easily-manufactured composition, which shall possess superior qualities as a fertilizer for corn, garden truck,

ELLIPSOGRAPH.-Andrew Smith, Dayton, Oregon.-The object of this invention is to provide for public use a simple, cheap, and effective instrument for drawing ellipses, and so constructed that it can be easily adjusted to produce figures of any practicable size and shape.

MANUFACTURE OF ILLUMINATING GAS .- Robert Alsop, Philadelphia, Pa.-The object of this invention is to produce an illuminating gas, by impregnating common atmospheric air with the vapor of suitable hydro-carbon fluids, and is carried into effect by the employment of suitable apparatus.

TEA AND COFFEEPOT .- Nathan Lawrence, Taunton, Mass .- This invention relates to metallic tea and coffeepots, and consists in an improved handle, which will not become so quickly heated as the handles heretofore made for such articles, together with an improved construction of the bottom, to prevent it from melting, and an improvement in the method of forming the body of the pot.

GATE.-Jeremiah Snell, Evans' Mills, N.Y.-The object of this invention is to construct a simple and cheap farm gate, which can be conveniently attached and operated, and which, when thrown open, will be entirely outside of the gate posts, no part of it projecting into the roadway, so that, by no possibility, can a passing carriage come in contact with it.

SLEEP PRESERVER AND MUSQUITO GUARD .-- Robert Themar, Sheboygan, Wis.-This invention relates to that class of devices adapted to protect the face, hands, etc., from the attacks of musquitos and other insects, and has for its object to provide the public with a simple, cheap, and light guard, which can be carried in a valise or hat box, and which can be placed over the head and arms during sleep, or at any other time, for the purpose indicated.

MACHINE FOR MAKING TWINE, CORD, ETC .- James McIntire, Hopewell Cotton Works, Pa.-The object of this invention is, so to improve the construction of machines for making twine, cord, etc., that the spool shafts can always be kept in gear, so as to run evenlyand continuously, while the threads shall be twisted harder, and shall be guided properly and kept at the right tension in passing from the spools to the reel, whereby a better article of twine, etc., can be produced than hereetofore.

STOVE PIPE .- Abel D. Cook, New Madrid, Mo .- This invention has for its object to furnish an improved means by which the horizontal part of a stove pipe may be cleaned out without taking down the pipe, and without the chance of soiling or dirtying the carpet or room.

CHANDELIERREFLECTOR.-Charles F. Jacobsen, New York city.-This in vention has for its object to furnish an improved double cone reflecting chandelier, for use in churches, theaters, parlors, and other public and private buildings, which shall be so constructed and arranged as to light the ceilings and walls, as well as the floor and body of the room, and which shall be so constructed as to soften the light, destroying the glare and dif-fusing it agreeably through the room, and at the same time be highly ornamental.

RANGE BOILER. Andrew Bennett, Brooklyn, N. Y.-This invention has for its object to furnish an improved range boiler, the dome top of which shall be securely and strongly connected to the body of said boiler.

FIRE GRATE.-Leopold Bertsche, Jr., Allegheny City, Pa.-This invention improved fire gra structed and arranged that the bars, when burst out, can be conveniently taken out singly and replaced with new ones.

econa p ify, but the larger the pipes the greater the friction. In order that the two pumps shall work equally well, the main pipe from which the second branches out, should be one and a half inches in diameter, and the connection should not be right-angled but curved.

J. V. S., of Ohio.-It is not generally the pressure that breaks the glass tubes of water gages. It is their inability to withstand changes of temperature. They should be made of the best annealed Bohemian glass tubing. A common fault is to make them of too thick glass, which is much more likely to break than thinner glass.

T. C. P., of Ohio.-If we understand your communication, you are cutting off steam at half stroke, with a single eccentric, and get, as might be supposed, too much compression. A single eccentric cannot be used advantageously to cut off steam so early in the stroke. You should set your eccentric back and not cut off at less than two-thirds stroke. With the compression you will then have, you will not need to use lead.

C. M. R., of N. Y.-Your suggestions are mainly not new, but that steam might be advantageously adopted for towing boats in canals, properly constructed for that purpose, is beyond a doubt.

M. W., of N. Y.-You are right; a mechanic ought to read and study, as well as practice. You will find the best works on steam and engineering noticed in our new publication column as they appear. B. M. R., of Pa.-The conducting power of a metallic rod is injured by partially burning it.

Tempered steel spiral springs made to order. John Chatillon, 91 and 93 Cliff st., New York.

The Tanite Emery Wheel-see advertisement on inside page.

For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Machinists, boiler makers, tinners, and workers of sheet metals read advertisement of Parker's Power Presses.

Diamond carbon, formed into wedge or other shapes for pointing and edging tools or cutters for drilling and working stone, etc. Send stampforcircular. John Dickinson, 64 Nassau st., New York.

Winans' boiler powder, 11 Wall st., N. Y., removes Incrustations without injury or foaming 12 years in use. Beware of imitations.

APPLICATIONS FOR EXTENSION OF PATENTS.

STEAM GAGE Cocks.-Albert Bisbee, Chelsea, Mass., has petitioned for an extension of the above patent. Day of hearing, August 30, 1869.

CORRUGATED BEAM.-Richard Montgomery, of New York city, has applied for an extension of the above patent. Day of hearing Sept. 25, 1869. ROOFING COMPOSITION .- James West, Syracuse, N. Y., has applied for an extension of the above patent. Day of hearing October 11, 1869.

CHEMICAL COMPOUND FOR EXTRACTING PAINTS, OILS, GREASE, AND TAR ком СLOTHS.—C. B. Skiff, Jersey City, N. J.—This invention has for its object to furnish an improved chemical compound, by means of which paint. oil, grease, and tar spots may be quickly and thoroughly removed from clothing, and other cloths, so as to leave no stain or spot upon the cloth.

FARM FENCE.-Cyrus Abbott, Iowa City, Iowa.-This invention has for its object to furnish a simple, strong, and durable fence, so constructed and arranged that the body of the fence may be supported free from the ground, so as not to be liable to decay from contact with the ground.

PICTURE NAIL.-Henry Hickman, Omaha, Neb.-This invention has for its object to furnish an improvement in picture nails, by means of which the cord will be securely held in such a way that the picture cannot be accidentally knocked down, and which shall, at the same time, hold the cord a way from the wall and be in itself ornamental.

CULINARY VESSEL.-Henry Zachgo, Brooklyn, N. Y.-This invention has for its object to improve the construction of boilers, and other culinary vessels, in such a way that the cooking may be done in less, time and with less expenditure of heat than is possible with vessels constructed in the ordin ary manner.

SEED PLANTER.-George Banister, Hartford, Vt.-This invention consists in operating the machine by friction on a roller or wheel, and in the method of operating the slide, for discharging the seed, and in the plow and the method of gauging the same and covering the seed.

PREVENTING THE RADIATION OF HEAT .- James McFarland, Louisville, Ky.—This invention relates to a new and useful device for preventing the condensation of steam in steam pipes, in consequence of the radiation of heat therefrom, and for preventing the radiation of heat from steam pipes under all circumstances

SEED PLANTER .- John B. Miner, Groton, Conn.-This invention relates to new and useful improvements in machines for planting corn and other seeds.

CULTIVATOR.-R. B. Parks and J. R. Parks, Neponset, Ill.-This invention relates to a new and improved cultivator, designed for cultivating crops grown in hills or drills.

BAYONET ATTACHMENT .-- J. S. Alexander, Philadelphia, Pa.-- This invention relates to a new and useful attachment to firearm bayonets, and is intended to facilitate the operation of soldiers in throwing up intrenchments or excavating the earth for other purposes.

GATE.-L. W. Sibley, Ames, Iowa.-This invention has for its object to furnish an improved gate, which shall be so constructed and arranged that it may be opened by the advancing and closed by the dep arting wagon.

PLOW.-Daniel H. Hill, Union Springs, Ala.-This invention has for its object to improve the construction of plow frames, so as to make them stronger and lighter than the frames constructed in the ordinary manner, while at the same time causing the plows to runlighter and steadier.

TRUNK.-Henry Hickman, Omaha, Neb.-This invention has for its object to improve the construction of trunks, so that the size or capacity of the trunk may be adjusted as may be required, according to the amount of clothing or other articles to be put into it.

SCREWDRIVER .- William Hofer, New Haven, Conn.-This invention has for its object to furnish a simple and convenient screw driver, more particularly adapted for driving screws into soft wood; by means of which the screws may be driven quicker, and with less weariness to the hand of the operator than is possible when the screw driver is constructed in the ordinary manner.

MACHINE FOR CLEANING SAUSAGE CASES .- Martin Heusy, Burlington, Ohio .- This invention relates to a new apparatus for cleaning the intestines used for sausage cases, and is to supersede the ordinary scraping knives or sticks heretofore employed.

PAPER BOXES .- James L. Reber, Philadelphia, Pa.- This invention relates to improvements in paper boxes such as are shaped on one piece of paper to be folded and closed to secure the contents, without the use of any fastening material other than the parts of the paper where folded together.

CURD AGITATOR.-DeWitt C.Hall, Barnes' Corners, N. Y.-This invention consists of the arrangement in a vat having a metallic or other screen near the bottom of a sliding and rotating stirring apparatus, whereby the curd is agitated and the whey caused to pass off through the screen.

PEN AND PENCIL CASE.-J. H. Rauch, New York city.-This invention relates to improvements in telescopic pen and pencil cases (such as are made for being materially shortened for convenience in carrying in the pocket), intended to provide an arrangement whereby the extension and contraction of the pencil may be effected with fewer tubes, and less friction, and the finished pencil may be made of small diameter for convenience in carrying in the pocket and handling.

COFFEE Pors.ETC. - Ira Yeamans, Brooklyn, N.Y. - This invention relates to improvements in coffee-pots tea-pots and other similar vessels for table use employed for holding liquids to be poured into drinking cups, and is designed to so arrange them as to avoid the necessity of raising or turning them for pouring, as required in the use of these vessels as now constructed. The invention consists in mounting such vessels in trunnions for turning in a vertical plane, the said trunnion supports being also capable of re volving in a horizontal frame.

GROOVING MACHINE.-Thos. Holt, New York city.-This invention relates to improvements in machinery for grooving stair stringers and other work in joinery and cabinet making. It consists in a rotary tool stock carrying saws and a planing tool for cutting the groove, arranged in a sliding frame to be traversed across the board to be grooved, the sliding frame be ing capable of adjustment to traverse the board at any desired angle. It also consists incertaindevices accessory thereto.

PROJECTILE.-J. W. Hill, Jefferson, Iowa.-This invention relates to an improved construction of projectiles, having for its object to provide projectiles which will, after having traveled through a portion of their flight, discharge from a central bore, smaller projectiles, imparting to them in ad-dition to the speed attained in being discharged from the gun an accelerated spend by a secondary charge within the shell. The part so discharged being also charged with a third part to be similarly discharged, or the same may be repeated a greater number of times, thus obtaining a capacity of shooting a great distance.

MACHINE FOR TURNING BOOT LEGS .- C. Collins, Warren, Ind.-This in vention relates to a new machine for turning boot legs after they are sewed, to prepare them for the last, its object being to facilitate the turn ing process so that it can be rapidly carried on. The invention consists chiefly in an adjustable cylindrical support upon which the boot legis drawn, and in arranging, within said cylinder, straps or rods that are attached to a treadle, so that they will, when fastened to the boot straps and when drawn down by the treadles, turn the boot leg over the upper edge of the cylinder.

PROCESS OF CURING MEAT .- Wm. H. Silberhorn, New York city.- Thi invention consists in the application by any approved means to pieces of meat of pulverized but solid salt, saltpeter, or other preservative sub stance, to be inserted in any way between the flesh and the bones, or into the fiesh near the bones.

SUBSOIL PLOW.-James W. Murfee, Havanna, Ohio.-This invention con sists in an arrangement of a horizontal wedge-shaped coulter for plowing and pulverizing the earth. This wedge is driven horizontally through the ground by being attached to an inclined and wedge-edged cutting coulter, which coulter is attached to the beam of the plow. The coulter is set as acutely with the horizon as practicable, so as to approach the line of the 91,523.—STEAM GENERATOR FLUE BRUSHES.—Pat. H. Coyle, axis of the plow or hoe as near as may be, and the power is applied thereby as nearly in the direction of the axis of the wedge as possible. The standard of the frame is a continuation of the line of the coulter shank, and the angle which the handles make with the horizon or base of the plow point, should be amean of the angles which the top of the point and front edge of the coulter shank make with the horizon, so that any power applied in the direction of the handles by the plowman will have the greatest effect on the

the frame, and in so connecting it by a pivoted arm with the front part of the frame, and by pointed levers with a steering handle, in front, that it can, by turning the said handle, be bodily swung into the slots of the frame. frame.

VELOCIPEDE.-Abner L. Butterfield, Brattleborough, Vt.-This invention relates to a new manner of constructing the wheels of velocipedes for the purpose of making them stronger, and also to a new driving mechanism and brake attachment, all parts being so arranged as to produce a strong and convenient velocipede.

WATER INDICATOR AND SAFETY VALVE ATTACHMENT TO STEAM ENGINES. James Brahn, Jersey City, N. J.-This invention relates to a new device forregulating the hight of water in a steam boiler, and for controlling the pressure of steam in the same, it being so arranged that it can, with a slight modification, be adapted to either service.

CHILDREN'S CARRIAGE.-John A. H. Ellis, Springfield, Vt.-This inventionrelates to a novel manner of arranging the springs on children's carriages for the purpose of making them answer at once as reach and as axle supports, so that the sills or reach heretofore employed can be done away with.

MACHINE FOR FELTING HAT BODIES.-L. Robinson, L. Conine, N.F. Hyatt, and D. W. Hyatt, Matteawan, N. Y.-The invention consists in an arrangement of machinery for felting the tops more evenly than can be done by the machines now in use. Also, for felting the sides on a block, so for med as to be inserted within the crown of the hat, the latter being turned thereon to cause the whole to undergo the felting operation.

HAND SEED PLANTER.-One of the most simple hand seed planters with which we are acquainted, is doubtless the invention of Mr. A. J. Williams, of Barnesville, Ga., who recently obtained a patent forit through this office. Afriend who has tried one thus writes of it: " In operation it is quite as reliable and effective as the most complex machines, and possesses this advantageover them: the laborer is near to his work, and inspects it constantly and without trouble to himself. Every failure or inaccuracy in de-positing seed is seen before the deposit-or want of deposit-is covered, and 91,570.-BOOK-COVER PROTECTOR.-Alfred L. Sewell, Chicago, mistakes are thus seasonably rectified. As compared with the seed planter affixed to the handle of the hoe-an otherwise more complete instrument because of the combination-while this requires two laborers, or a second traversing of the ground by one, the labor is so greatly reduced by the lessened weight of the hoe, that the additional time required is fully compensated for. In fact, under the most favorable circumstances for each method of planting, I would give the preference to the Williams planter, in the belief that with it the greatest amount of work in the shortest time can be ac omplished."

Official List of Latents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING JUNE 22, 1869.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES:	
On each caveat	.\$10
On filing each application for a Patent (seventeen years)	.\$15
On issuing each original Patent	\$20
On appeal to Commissioner of Patents	. \$20
On application for Reissue	\$30
On application for Extension of Patent	.\$50
On granting the Extension.	. \$50
On filing a D'sclaimer	. 310
On an application for Design (three and a half years)	. 8:0
On an application for Design (seven years).	
On an application for Design (fourteen years)	\$30
In addition to which there are some small revenue-stamp tayes. Resid	ente
SCHEDULE OF PATENT OFFICE FEES: On each caveat	01100
or canada and nova scona pay goo on application.	

- 91.506.—STEAM CONDENSER.—B. C. Atkinson, Newburyport,
- 91,500.—STEAR CONDENSER.—D. C. RKINSON, New DIFYPOIT, Mass. Antesated Junes, 1869.
 91,507.—STONE SAWING MACHINE.—L. E. Baldwin, Windham, Conn., assi nor to the Connecticut River Quarry Company.
 91,508.—HEEL CUTTER.—J. H. Bean, Marietta, Ohio., assignor to himself, Abram Pratt, and J. A. Tenney.
 91,509.—COAL STOVE.—C. N. Bennett, Cincinnati, Ohio., assignor to himself, and T. Bannett, Cincinnati, Ohio., assignor to himself, and T. Bannett, Cincinnati, Ohio., assignormal conduction of the provided and the provided of t
- signor to himself, and A. T. Bennett. 91,510.—VELOCIPEDE.—G. Bergner, Washington, Mo. 91,511.—SCREW PRESS.—H. Blundell and Jno. McWilliams,
- Providence, R. I. 91,512.—MACHINE FOR SHEARING METALS.—Robert Briggs,
- S1,312.—INACHINE FOR SHEARING INETALS.—Robert Driggs, Philadelphia, Pa.
 S1,513.—PNRUMATIC TUBE FOR TRANSPORTING GOODS.—A1 bert Brisbane, New York city. Antedated June 11, 1869.
 S1,514.—GRINDSTONE JOURNAL BOX.—T. W. Brown, Reading,
- Pa.
 91,515.—BOILER FEEDER.—Henry İ. Brunner, Nazareth, Pa.
 91,516.—POCKET FOR EGG CARRIERS.—A. H. Bryant, Phila-dephia, Fa. Antedated June 8, 1869.
 91,517.—BASE BURNING STOVE.—W. M. Bush and Thomas B. Richards, Cincinnati, Ohio.
 91,518.—WOODEN WALL FOR BUILDINGS.—Jos. Busser, Troy, Ohio.
- Ohio. 91.519.—STOVEPIPE SHELF AND DRYER.—W. E. Canedy, auconda, Ill
- Warconds, 111. 91,520.—COOKING STOVE.—A. E. Chamberlain, and J. B. Crow-ley, Cincinnati, Ohio., assignors to A. E. Chamberlain, O. N. Bush, and Franklin V. Chamberlain.
- 91,521.—Ash SIFTER.—Jos. Chisholm, Boston, Mass. 91,522.—LIQUOR-THIEF.—John F. Collins, New York city.
- Newark, N. J. 91,524.—STEAM-DEVICE FOR WARMING RAILROAD CARS, AND
- 91,324.—STEAM-DEVICE FOR WARMING RAILROAD CARS, AND FOR OTHER PURPOSES.—A. C. Crary, Utica, N. Y.
 91,525.—HARROW.—Isaac Crum, West Chester, Ohio. Ante-dated June 8, 1869.
 91,526.—MEAT-CUTTING MACHINE.—J. G. Divoll, Sonora, Cal.
 91,527.—PRINTING TELEGRAPH.—T. A. Edison, Boston, assign-or to J. H. Hills and Wm. E. Plummer, Newton, Mass.
 91,590. DOOD FURING Scamper Elliptic Biolemond Ltd.

29

- 91,510.-VELOCIPEDE.-John Lund, Milwaukee, Wis.
- 91,551.—Folding Wagon-Cover FRAME.—Benj. G. Luther,
- 91,551.—FOLDING WAGON-COVER FRAME.—Ben]. G. Luther, Providence, R. I.
 91,552.—CURING AND PRESERVING MEAT, ETC.—A. S. Lyman, New York city, assignor to himself, and David Lyman, Middlefield, Ct
 91,553.—COFFEE ROASTER.—Charles Mackh, Elgin, Ill.
 91,554.—SWEET-POTATO FLOUR.—C. K. Marshall, New Or-leans, La. Antedated June 8, 1869.
 91,555.—DEVICE FOR CONVERTING MOTION.—T. A. Mitchell, Washington, D. C.

- Washington, D. C. 91,556,—BRUSH HEAD.—C. G. Moore and Levi S. Gambold,
- Coatesville, Ind. 91,557.—PROCESS FOR PRESERVING FRUIT.—E. R. Norny, McDonough, Del. Antediated June 10, 1869. 91,558.—STEAM PLOW.—James H. Northcott, Mechanicsburg,
- 91,559.—HAT AND COAT RACK.—J. E. Osborn, Chicago, Ill.

- 91,560.—HOT AIR FURNACE.—John S. Perry, Albany, N. Y.
 91,561.—GRAIN SEPARATOR.—C. T. Phillips, Jordan, N. Y.
 91,562.—CHURN.—A. M. Powell (assignor to himself, Wm. J. Mathews, and H. R. Johnson), Collinsville, Ill.
 91,563.—COOKING STOVE.—S. H. Ransom, Albany, N. Y.
 91,564.—SPADE BAYONET.—Edmund Rice, United States
- Army. 91,565.—UMBRELLA RUNNER.—Horace T. Robbins, Boston,
- Mass. 91,566.—SULKY CULTIVATOR.—John Robinson, Plainfield, as-ignor to Aaron Snell and Arthur T. D. Anstin, Will county, Ill. 91,567.—FOOT COMFORTER.—Geo. W. Rothrock, Mifflin, Pa.
- Antelated May 25, 1869. 91,568.—BAG HOLDER.—Newton N. Rugg, Geneva, Ill. 91,569.—HOT AIR FURNACE.—Watson Sanford, Brooklyn,
- 111. 91,571.—HORSESHOE.—Harrison Smith, Sandyville, and J. H.
- Evans, Bolivar, Ohio. 91,572.—CORN SHELLER.—J. P. Smith, Hummelstown, Pa. 91,573.—CARPET FASTENER.—J. V. C. Smith, New York city. 91,574.—WATER-CLOSET VALVE.—W. Smith, San Francisco,
- 91,575.-ENVELOPE MACHINE.-D. M. Smyth. Orange, N. J., assignor to D. Appleton, & Company, New York city. 91,576.—ROOFING COMPOUND.—Hiram G. Soules, Syracuse,
- <u>N. Ү.</u> 91,577.-
- MACHINE FOR MANUFACTURING ROOFING.-H. G. Soules, Syracuse, N.Y. 91,578.—PAINT-OIL COMPOUND.—Wm. E. Tascott, Cleveland,
- 91,579.-SLIDE FOR EXTENSION TABLES.-J. W. Teft, Buffalo,
- 91,580.—TURBINE WATER WHEEL.—T. R. Timby, Saratoga,
- N.Y. 91,581.—GROUND ROLLER AND STALK CUTTER.—Phineas H.
- Tompkins and Elza Dorgal, Van Buren, Iowa. 91,582.—HARVESTER RAKE.—Wm. H. Ward, Auburn, N. Y. 91,583.—LETTER BOX.—Frederick Wittram, San Francisco,
- Cal. 91.584.—BOAT-DETACHING APPARATUS. — W. M. Wood.
- Oving's Mills, Md. 91,585.—FARM FENCE.—Cyrus Abbott, Iowa City, Iowa. 91,586.—SPADE BAYONET.—John S. Alexander, Philadel=
- 91,586.—SPADE BAYONET.—John S. Alexander, Fillauerphia, Pa.
 91,587.—THRASHING MACHINE.—Joseph Allonas, Mansfield, 0hio, assignor to Cornelius Aultman and Henry H. Taylor.
 81,588.—APPARATUS FOR MANUFACTURING ILLUMINATING GAS.—Robert Alsop, Philadelphia, Pa.
 91,589.—VELOCIPEDE.—Samuel Anderson, New Orleans, La.
 91,590.—LAMP.—Lewis J. Atwood (assignor to himself and Holmes, Booth, and Haydens), Waterbury, Conn.
 91,591.—CURTAIN FIXTURE.—J. D. Ayres, East Greenshorough. Vt.

- borough, vt. 91,592.—MACHINE FOR BENDING WIRE FOR RAKE TEETH.
- 91,592.—MACHINE FOR BENDING WIRE FOR RAKE TEETH.— J. N. Ayres (assignor to the Stillwater Company), Stamford, Conn.
 91,593.—TYING-UP AWL.—Nathan W. Baker, Lynn, Mass.
 91.594.—CLAMPS FOR JOINING CEMENT-LINED WATER PIPES —Phinehas Ball, Worcester, Msss.
 91,595.—SEED PLANTER.—George Bannister, Hartford, Vt.
 91,596.—RANGE BOILER.—Andrew Bennett, Brooklyn, N. Y.
 91,597.—FIRE-PLACE GRATE.—Leopold Bertsche, Jr., Alle-mentor City Pa

- gheny City, Pa. 91,598 STOVE TOP AND COVER.—Elijah W. Bigelow, Wor-
- 91,599.—DOW-TOP AND COVER.—James Brahn, Jersey City, 91,599.—LOW-WATER INDICATOR.—James Brahn, Jersey City, N. J., assignor to himself and G.E. Cutter. 91,600.—FANNING MILL.—Henry Bruggeman, Petersburg,

- Ind.
 91,601.—TOBACCO DRYER.—Leander Burdick, H. J. Chase, F. P. Isherwood, and W. S. Isherwood, Toledo, Ohio.
 91,602.—VELOCIPEDE.—A. L. Butterfield, Brattleborough, Vt. 91,603.—LUBRICATING JOURNAL.—G. E. Clarke and Edwin P. Dickey, Racine, Wis. Dickey, Racine, Wis. 91,604.—MANUFACTURE OF ENAMELED BRACELETS.—Abiel Codding, Jr., North Attleborough, Mass. 91,605.—WRENCH BAR HEADING MACHINE.—Loring Coes,
- Vercester, Mass 91,606.—MACHINE FOR TURNING BOOT LEGS.—Cornelius Col-
- ins, Warren, Ind. 91,607.—FLOOD ROLLER.—W. J. Connell, West Unity, Ohio. 91,607.—FLOOD ROLLER.—W. J. Connell, West Unity, Ohio.
 91,608.—STOVE PIPE.—Abel D. Cook, New Madrid, Mo.
 91,609.—HINGE.— John J. Crooke, Southfield, and Lewis Crooke and Henry 3. Crooke, New York city.
 91,610.—PADLOCK.—Addison Crosby, Westfield, N. Y.
 91,611.—BURIAL CASE.—Addison Crosby, Westfield, N. Y.
 91,612.—FLOUR MILL.—Henry Cutler (assignor to S. N. Cutler and Company), Ashland, Mass.
 91,613.—PITMAN.—Mexworth D. Drake, Scituate, assignor to W. E. Barrett, Providence, R. I.
 91,614.—FABRIC FOR THE MANUFACTURE OF HATS. BONNETS.

ter, which coulter is attached to the beam of the plow. The coulter is set as	91,522.—LIQUOR-THIEF.—John F. Collins, New York city.	W. E. Barrett, Providence, R. I.
acutely with the horizon as practicable, so as to approach the line of the	91,523.—STEAM GENERATOR FLUE BRUSHES.—Pat. H. Coyle,	91 614 — FABRICFOR THE MANUFACTURE OF HATE BONNETS
axis of the plow of noe as hear as may be, and the power is applied thereby	Newark, N.J.	AND VARIOUS ARTICLES FOR USE AND ORNAMENT Prosper Erhand and
as nearly in the direction of the axis of the wedge as possible. The standard	91,524.—Steam-Device for Warming Railroad Cars, and	Amelie Erhard, New York city
of the frame is a continuation of the line of the coulter shank, and the angle	FOR OTHER PURPOSESA. C. Crary, Utica, N. Y.	91,615.—CHILDREN'S CARRIAGE.—Joel A. H. Ellis (assignor
which the handles make with the horizon or base of the plow point, should	91,525.—HARROW.—Isaac Crum, West Chester, Ohio. Ante- dated June 8, 1869.	to Ellis, Britton, and Eaton), Springfield, Vt.
be amean of the angles which the top of the point and front edge of the	91,526.—MEAT-CUTTING MACHINE.—J. G. Divoll, Sonora, Cal.	91,616.—BREECH-LOADING FIREARM.—Lewis T. Fairbanks, Worcester. Mass.
coulter shank make with the horizon, so that any power applied in the di-	91,527.—PRINTING TELEGRAPH.—T. A. Edison, Boston, assign-	91,617.—STUBBLE AND SUBSOIL PLOW.—R. R. Fenner, Ur-
rection of the handles by the plowman will have the greatest effect on the	or to J. H. Hills and Wm. E. Plummer, Newton, Mass.	bana, Ill.
point and shank.	91,528.—DOOR SPRING.—Stephen Elliott, Richmond, Ind.	91,618.—BUSH FOR BARRELS, ETC.—David F. Fetter, New
CURTAIN FIXTURE.—J. D. Ayres, East Greensboro, Vt.—This invention re-	91,529.—DISH WASHER.—Wm. H. Emerson, Dixon, Ill.	York city.
lates to a new and useful improvement in the method of hanging window	91,530LIGHTNING RODHenry W. Farley, Oswego, Ill.	91,619.—PROCESS AND APPARATUS FOR MAKING SHEET IRON.
and other curtains, whereby they are rendered much more useful and much	91,531.—MORTISING CHISEL.—Michael Feigel, New Utrecht,	-George Weeden Francis (assignor to himself, Edwin Garfeld, and Jeremy W. Bliss, assignors to themselves and George W. Williams),
less liable to get out of order than when hung in the ordinary manner.	N.Y.	Haruora, Conn.
	91,532.—COMPOUND RAILROAD RAIL.—Henry J. Ferguson,	91,620.—MACHINE FOR PLASHING HEDGES.—David Gore,
BREECH-LOADING FIREARMS John Adam Heckenbach, Mayville, Wis	Manchester, N. J. Antedated June 7, 1869.	Carlinville, Ill.
This invention relates to certain improvements in breech-loading fire-	91,533.—VAPOR BURNER.—Louis Fischer, Brooklyn, N. Y.	91,621.—BEVERAGE.—Wm. H. Goss, Boston, Mass.
arms, and is more particularly intended for double-barreled guns, and will	91,534.—VELOCIPEDE.—L. B. Flanders, Philadelphia, Pa.	91,622.—CURD AGITATOR.—De Witt C. Hall, Barnes' Cor- ners, N. Y.
shortly be more fully described and illustrated in our columns.	91,535VELOCIPEDEAllen Greene and Elisha Dyer, Prov- idence, R. I.	91,623.—HAY RAKER AND LOADER.—F. W. Harlow, Hanni-
BUSH FOR BUNGSDavid F. Fetter, M. D., New York cityThis inven-	91,536.—BASE-BURNING STOVE.—Joseph C. Henderson, Troy,	hal, Mo. 91,624.—BREECH-LOADING FIREARM.—John Adam Hecken-
tion has for its object to provide a lining or bushing for the bungs of bar-		hach, Mayville, Wis.
rels and other purposes, in such manner that it can be readily applied and	91,537.—CEMENT FOR CALKING SHIPS, AND OTHER PURPOSES. —Edward Heylyn, Rochester, N. Y.	
securely fastened without injuring the wood or other material of which the	91.538.—CARRIAGE SPRING — E. C. Hodge Oneonts and D.	ENT SHAPE.—Robert Henderson, Thomaston, Conn.
barrel or other article is made. The invention consists in forming on the	H. Mann. Delhi, N. Y.	91,626.—FRUIT DRYER.—Henry Henley, Shoals Station, Ind.
lower edge of the bush or lining a series of projecting bars or lugs, which,	91,035.—SKATE.—Alpheus S. Hunter, Newburg, N. Y. Ante-	91,627.—ORE WASHER AND CONCENTRATOR.—Wm. G. Hes-
when the bush is applied, are turned out to fit under the wood.	dated June 19, 1869.	lep and Thomas A. Cochrane, Jamestown, Cal.
WIRE-BENDING MACHINEJ. N. Ayres, Stamford, ConnThis invention	91,540.—RAISED-LETTERED SIGNS, SHOW-CARDS, AND THE LIKE ARTICLES FROM PAPIER MACHE.—T. C. Jenks, Philadelphia, Pa.	91,628.—DEVICE FOR CLEANING SAUSAGE CASES.—Martin
relates to a new apparatus for straightening wire which is to be used for	01 5/1 DAD BOD HODGER HOODS T_{1} T_{1} T_{1}	Heusy, Burlington, Uhio.
the teeth of horse hay rakes, and for other purposes, and has for its object	Maga	91,629.—PICTURE NAIL.—Henry Hickman, Omaha, Neb.
to relieve the wire from the strain to which it is subjected in the machines	91,542.—COOKING STOVE.—D. P. Kayner, Erie, Pa.	91,630.—TRUNK.—Henry Hickman, Omaha, Neb.
now in use.	91,543.—OFFICE INDICATOR AND REGISTER.—Jas. M. Keep,	91,631PLOWDaniel H. Hill, Union Springs, Ala.
The second secon	New York city. Antedated June 8, 1869.	91,632.—CONFECTION.—John Q. Hill, Worcester, Mass.
THREE-WHEELED VELOCIFEDELucas A. Sinclair, Bellevue, OhioThis	101,011. Iteller, handling machine. Isaac heller, handulph.	91,633.—PROJECTILE.—J. W. Hill, Jefferson, Iowa.
invention relates to a new steering device for a three-wheeled velocipede,	Onio.	91,634.—SCREW DRIVER.—Wm, Hofer, New Haven, Conn.
and to a new manner of constructing and arranging the frame of the same. The invention consists in arranging the rear axle in the slotted rear part of	91,545.—ROSETTE HOLDER.—I. C. Kelley, Monticello, Ind.	91,635.—GROOVING MACHINE.—Thomas Holt (assignor to
inclused to consists in arranging the rear axie in the slotten rear part of	91,546.—Horse Power.—Peter Kline, Johnsville, Ohio.	himself and Abram T. Merwin), Brooklyn, N. Y.