# RECENTLY PATENTED INVENTIONS

MECHANISM FOR OPERATING ROLLERS. Jules Richard, Paris, France. According to this invention, there is a loose roller on each of two shafts, a spring movable on each shaft being adapted to be pressed into engagement with the rollers, while a reciprocal cam plate alternately engages and disengages the springs, the mechanism being adapted for operating rolls on which ribbons, aprons, etc., are wound, and rendering it possible to adjust the parts so that when the ribbon or apron is being moved in one direction it will he impossible to accidentally move it in the wrong direction.

COLORING OR COATING PAPER.—Louis Dejonge, Jr., Stapleton, N. Y. This is an improvement on a formerly patented invention of the same inventor. providing a machine for coloring or coating paper and like material, and making provision on the cylinder of the machine for sheets of any size, the adjustment of the bed receiving the sheets being quickly and conveniently made, improved grippers being adapted to hold the paper on the bed. The invention also simplifies the devices for elevating the paper and holding it in position until caught by the clips of the drying machine used in connection with the coloring and coating machine.

Power Sled .- Joseph, William H., and Moses C. Runnoe, Crested Butte, Col. This invention provides a self-propelling sled, carrying a motor, and one which may be driven over snow and ice with sufficient power to haul or carry a load, being provided with easy means of steering. Its driving mechanism is adjustable to suit varying depths and conditions of snow, and it has an improved snow plow adapted to discharge the snow to either or both sides. It is also adjustable vertically to enable it to scoop the snow to any desired depth.

#### Agricultural.

CULTIVATOR AND WEED CUTTER.-Alfred J. Morley, Chula Vista, Cal. This is a machine having readily removable cultivator teeth or shovels, so shaped as not only to cultivate the ground but to throw the earth, assisted by the teeth supports, toward the center of the machine or to the outside. The frame constitutes substantially a continuous plate, directing the loosened soil over to the rear and insuring the breaking of ground not acted on by the teeth or shovels. The machine acts also as a pulverizer and leveler, the frame smoothing over the loosened soil, and a comb finally treating the surface over which the machine is passed.

FERTILIZER DISTRIBUTER. - Monroe Morse, Medway, Mass. This is a machine adapted to distribute fertilizer in drills as readily and as accurately as broadcast, the extent to which the material is scattered being conveniently regulated. It has distributing hoppers adjustable to and from each other, each having a valve-controlled opening and the valves being capable of rotary or vertical movement, and the driving shaft is parties carrying on different kinds of busin made in telescopic sections, to be lengthened or shortened according to the spacing of the hoppers. The machine is inexpensive and durable, and is not liable to

SAUSAGE FILLING MACHINE. - Richard W. Seideman, Marysville, Montana. This is a selffeeding machine, to be operated by hand or power, and when operated by hand one person furnishes the power while the other places the casings in position and removes the filled casings. The casings are placed on tubular supports attached to a wheel, a number of casings being placed in position while one is being filled. The operation is conducted in a continuous manner, and air is not forced in with the meat.

## Miscellaneous.

TOE CLIP FOR VELOCIPEDES.—Samuel L. Ruden, New York City. A superior toe clip for the pedals of these machines is obtained by this inventor by means of a U-shaped plate pivotally mounted and adapted to have one arm engaged by the sole of the rider's foot, the remaining arm being drawn down upon the toe of the

Horse Hitching Device.—Uriah E. Miller and Paul Barringer, Heilig, N. C. This is a simple device adapted as a substitute for the ordinary hitching strap, the wheels of the vehicle being readily locked and the locking mechanism being connected with the driving lines of the harness, the arrangement being such that the animal will be prevented from moving the vehicle forward or backward. The more the animal draws on the hitching straps, the firmer they are locked.

Branding Cigars. -Paul Gebhard, New Haven, Conn. To brand cigars with a name or emblem and at the same time cut the cigar to the desired length, this inventor provides a device comprising two hinged sections with a cigar-receiving groove in one section and a type groove and movable plates in the other ing a set screw for each plate. A gradu ated gage for regulating the length of the cigar is adjusted by a set screw, and a knife in each section cuts the cigar to the proper length at the same time that the type characters make an impression on the wrapper,

PRICE SCALE. - Harry Fisher, Neoga. Ill. This invention consists principally of a movable point of connection between the weighing beam and the weighing frame, thus forming a computing scale to give the value of an article at a given price per pound or other unit, the price being varied by the operator manipulating the scale. A movable weight automatically preserves the balance of the beam through all changes of the connection between the weighing beam and the weighing frame.

CONVERTIBLE TABLE AND KIT CASE. -William E. Baxter, Frankfort, Ky. Two patents have other necessary articles of a well equipped camp kit, and the invention covers a novel construction, combination and arrangement of parte.

FIRE EXTINGUISHING APPARATUS. Elias K. Driver, Lufkin, Texas. This is an apparatus more especially designed for usein gin mills, saw mills, factories, etc., and is arranged to enable an attendant to quickly turn on water or steam to extinguish flames in or outside the building. A valved supply pipe is connected with the steam boiler, and branch pipes extend vertically therefrom within and outside of the building, discharge nozzles being flexibly connected with the branch pipes. and the discharge nozzles being under the control of the operator to direct streams as desired.

FENCE.—Robert S. Sayre, Talladega, Ala. This inventor has devised a portable panel fence of simple and inexpensive construction and which is light, strong and durable. The rail forming the body of the trestle for other parts of the panel is preferably an undressed tree trunk, to which are removably secured diverging legs adapted to slightly enter the ground, while vertical perforationareceive braced standards connected by fence wires or wooden strips. The fence sections may be readily loaded on a wagon to be taken from place to place.

WIRE FENCE.—Ross Phillis, Springfield, Ohio. This invention provides novel braces or stay pieces for the wires comprising the fence, and affords reliable means for securing the fence wires on supporting posts, permitting expansion and contraction of the wires and the taking up of slackness. The fence wires are prevented from being moved up or down or length wise when pressed against by animals, and the stays or rods may be removed at will without injury to the fence

SPORTSMAN'S FLY CASE. — Daniel K. Howe, Portland, Oregon. A case for carrying fly hooks and leaders and also adapted to serve as a pocket flask for liquid refreshment has been devised by this inventor. The casing has at one end a metal cap suitable for use as a drinking cup, and a liquid proof partition divides the casing into a number of chambers adapted to receive flies, sinkers, etc., and hold them without liability to damage, but so as to be readily removable. The lower end of the casing consists of a small reservoir or chamber provided with a screw cap.

COLLAR.-George S. Elliott, Bar Harbor, Me. This is a standing collar made with a necktie retainer, consisting of a tape secured at its ends to the collar to form a loop. The tape is extended longitudinally of the collar underneath one of the end buttonholes and the necktie end is passed vertically through the loop before completing the knot.

BUSINESS DIRECTORY. - John D. Browning, Louisville, Ky. This is a telephone list and business directory combined, comprising a novel arrange ment of sheets or boards with names of subscribers in alphabetical order, with the names of other parties following various occupations, as indicated on the margins, the directory affording a convenient and ready reference to

DESIGN FOR MIRROR FRAME.—Albert Wanner, Jr., Hoboken, N. J. This frame has legs in the form of foliated scrolls, which are continued around the outer border of the frame, and combined in a central line to form lyrelike figures.

NOTE .- Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.



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give me recipe for making a good leather cement, suitable for fastening small leather belts? A. Take of common glue and gelatine, equal parts; place them very much? A. The general principle is, that the more in a boiler and add water sufficient to just cover the hole. Let it soak ten hours, then bring the whole to a boiling heat, and add pure tannin until the whole becomes ropy or appears like the white of eggs. Apply it warm. Buff the grain off the leather where it is to be cemented; rub the joint surfaces solidly together, let it dry a few hours, and it is ready for practical use; and if properly put together, it will not need riveting, as the ce ment is nearly of the same nature as the leather itself.

(6813) W. H. S. says: By accident I tore a good rubber coat. How can I mend same? A. Cement for sticking on patches and for attaching rubber soles to boots and shoes is prepared from virgin or native India rubber, by cutting with a proper solvent. We advise you to use rubber bicycle tire cement. Apply a coating to the outside of the surface on each side of the tear and to one side of the piece of rubber fabric to be used for mending. After an hour's exposure, give a been granted this inventor for a foldable construction to second coating and let them stand over night. Then serve as a box or case for the papers of an army officer or place the edges of the tear accurately together and apply to inclose the utensils of a kit with table legs and braces, the patch, so that the coated surfaces come together or as a flat or grass table or an elevated table. Sufficient Press well together and the repair is made. Rubber cespace is afforded for the storage of coffee pot, bucket and ment depends for its action on the cohesive power of pure rubber surfaces-it operates entirely differently from a true cement. Strictly speaking, it should not be called a cement.

(6814) W. B. B. writes: 1. Please inform me through your paper how the connections are made to get the waste current from an electric railroad track. I saw the account of it in your paper, but have lost the paper. A. Sometimes by connecting one wire to the water pipe and the other to the gas pipe, current may be obtained. There is no fixed method. 2. Could I make a Crookes tube with an incandescent lamp globe? A. The vacuum is insufficient generally for X ray work, which is very exacting. 3. How many dry cells would it take to operate it with an induction coil? A. From twenty upward; the induction coil must be large enough to give at least a 2 inch spark.

(6815) M. W. C. writes: Will you answer the following problem in your columns? Prove that  $x+\frac{1}{2}y=\pi$ , if

$$\frac{\sin y}{1-\cos y} + \frac{\cos x}{\sin x} = 0.$$

A. From circular functions we have

$$\frac{\sin y}{1-\cos y} = \cot \frac{1}{2}y$$

$$\frac{\cos x}{---\cot x} = \cot x$$

and, also,

sin x We also know that the cotangent of the supplement of an

arc = -cotangent of the arc. Therefore, since cot ½y=-cot x  $x+1/2y=180^{\circ}=2\pi$ .

(6816) B. S. B. says: Will you please tell me how to make a waterproof glue for sticking paper, etc.? I would like it to be colorless and mix very thin. A. In order to render glue insoluble in water, even hot water, it is only necessary, when dissolving the glue for use, to add a little potassium bichromate to the water and to expose the glued part to light. The proportion of potassium bichromate will vary with circumstances; but for most purposes about one-fiftieth of the amount of the dry glue used will suffice. In other words, glue containing potassium bichromate, when exposed to the light, becomes insoluble.

(6817) L. A. M. says: Can you tell how o whitewash brick walls so that it will stick well? A. For brickwork, especially where exposed to damp, take half a peck of well burned quicklime, fresh from the kiln, slake with hot water sufficient to reduce it to a paste, and pass it through a fine sieve; add a gallon of clean white salt which has been dissolved in a small quantity of boiling water, and a thin, smooth paste, also hot, made from 1 pound of fine rice flour; also ½ of a pound of the best white glue, made in the water bath. Mix, stir well, add 1/4 of a pound of the best Spanish whiting in 5 quarts of boiling water; stir, cover to retain heat and exclude dust, and let it stand a week. Heat to boiling, stir, and apply hot. The above proportions will cover forty square yards.

(6818) S. A. S., Texas, asks: Would a gasoline engine compressing its volume 15 per cent produce as much power as one compressing it 30 per cent? Why? What is the strongest metal for its weight? A. Compressing the gas and air mixture in a gas engine produces quicker combustion and greater ex plosive pressure. A 30 per cent compression will produce more power than a 15 per cent compression, but there is probably a limit to the economy of compression by its increasing the negative pressure. The relative volumes of gas and air also have a controlling effect in compression gas engines. One part gas to six parts air gives the highest efficiency in the higher compression probably un to three atmospheres. The heat of compression also favors rapid and perfect combustion. Aluminum and steel are of equal strength in ratio of their weight. A small percentage of copper in aluminum increases its tensile strength in proportion to its weight.

(6819) W. R. says: How are the yellow or light spots on the wrapper of a cigar produced? Of course not those that are of natural, but of artificial origin. I have heard it is done by sprinkling the tobacco leaves with a kind of acidous liquid, that will not destroy the texture of the leaf. A. We have not this information at hand. Perhaps some of our readers may be able to inform us

(6820) G. E. M. asks how to arrive at the number of kilowatts in the case of an electric train requiring 200 amperes for 20 hours per day, with voltage at 500. A. 200 amperes × 500 volts gives 100,000 watts, or 100 kilowatts. The hours per day has nothing to do with the problem

(6821) J. D C. asks: What would be the number of turns of No. 18 copper wire to use with 11/2 pounds No. 36 wire, to get the longest spark with a Rhumkorf coil? That is, I want to know the proportion. (6812) D. B. K. says: Will you kindly I already have the 11/2 pounds No. 36 wire, and want to know how much No. 18 to use for the primary. Does the absence of a condenser reduce the length of the spark length of the spark will be greater, as there are more turns in the primary wire. Try one pound of wire for the primary; this will give you about 200 feet, enough for 600 to 1000 turns. The omission of a condenser will seriously impair the operation and will diminish the length of spark. See our SUPPLEMENT, No. 160, for a small induction coil.

(6822) R. W. P. writes: 1. The C. G. S. unit of current strength is defined thus: "A current has unit strength when one centimeter length of its circuit bent into an arc of one centimeter radius (so as to be always one centimeter away from the magnet pole) exerts a force of one dyne on a magnet pole placed at the center." My question is, does it make any difference what the diameter of the magnet pole is? And if it does, what should its diameter be, its thickness I mean? Of course only a geometrical point would be placed at the center. A. The magnet pole is supposed to be a point or equivalent thereto. 2. Unit difference of potential exists between two points when it requires the expenditure of one erg of work to bring a unit of + electricity from one point to the other against the electric force. ference of potential (as just defined) exists or not. In on the ratio between the turns in primary and secondary.

actual practice, such as would be necessary in the deriva tion of the volt, how is the difference of potential determined in these absolute units? A. For absolute measments very sensitive instruments are used. The various types of electrometers give potential determinations with accuracy. You will find the subject well presented in Ayrton's "Practical Electricity," \$2.50 by mail, with numerous examples of apparatus both of electrometer and of galvanometer type. Emptage on "Magnetism," \$2.25 by mail, gives excellent treatment of the subject of your first query. For higher mathematical treatment we refer you to Foster & Atkinson's "Elementary Treatise on Electricity and Magnetism," price \$2.25 by mail.

(6823) R P. B. asks: 1. Is the ordinary calcium carbide dangerous to handle? If so, how can I handle it in safety? A. Carbide of calcium is perfectly safe to handle if no water comes in contact with it. 2. Can it be put into an airtight vessel with small opening in which there is placed an outlet or jet for the consumption of the gas generated therein? A. To preserve it, use an airtight vessel with no outlet. The outlet will simply canse it to decompose. 3. In what issue was the apparatus for generating the gas in, for illuminating purposes? Also numbers describing the properties of the gas and other general information relating thereto. A. For several standard apparatus we refer you to the Scien-TIFIC AMERICAN SUPPLEMENT, No. 1057; other papers are in the Scientific American Supplement, Nos. 998, 1004, 1007, 1012, 1014, 1015, 1016, 1035, and 1038, price

(6824) M. E. S. says: Will you kindly tell me how to mix soap suds for making bubbles? I have been told there are other ingredients necessary besides the soap and water, to bring them to lasting perfection. A. For soap bubble solution the best material is pure cleate of soda. Oleic acid as sold in the shops is from reliable, containing one or more other fatty acids, such as stearic acid. To make the pure acid, 2 ounces of pure soap (almond oil is the best, but Castile will answer) are dissolved in 20 ounces of boiling water. One ounce of sulphuric acid, previously diluted with 2 ounces water and allowed to cool, is added. The fatty acids rise to the surface in an oily layer. The water is siphoned off, and they are washed three times with boiling water. The mass is allowed to cool, and is removed from the surface of the water, where it floats. It is weighed, mixed with 1/4 its weight of litharge, and heated (212° to 225° Fah.) until complete combination is effected. This may be known by the cessation of any evolution of bubbles from the mass. The resulting lead plaster is allowed to stand mixed with 10 to 15 times its weight of ether in a tightly corked bottle, until completely disintegrated. Then it is filtered, and to the filtrate hydrochloric acid is added as long as any lead is precipitated. The ethereal solution is poured off, and the ether recovered by distillation, leaving pure oleic acid. Two fl. drm. of the acid is added to somewhat less than 1 pint of boiling water, and solution of caustic soda very carefully added, drop by drop, until complete solution of the acid is effected, very carefully avoiding an excess of soda, and after cooling, water is added to make it measure 1 pint, A standard soap solution is thus obtained. To this add 16 its bulk of the best glycerine (Scheering & Glatz's, or Price's). Shake long and well, and the mixture is ready for use. For additional bubble mixtures and interesting experiments on soap bubbles, see Scientific American Supplement, Nos. 160, 495, 563, 579, 654.

(6825) W. K. W. writes: 1. The saving of copper is very great in three-wire system of electric lighting, but I notice it is rarely, if ever, used in insulated plants. Can you tell me the reason for this? A. There is no reason why this system should not be used by authorized parties. There is an economy in copper for lamps of specified voltage, but not for a given maximum voltage in the system. 2. Are 220 volt lamps used in this system or 110? A. About 110 volts is the rule in this country. 3. How canarc lamps be run on incandescent circuit? A. By using a resistance coil in circuit with each lamp. See our SUPPLEMENT, No. 955. 4. Do you think that a good knowledge of steam engineering can be got from a school of correspondence? A. A good theoretical knowledge, which would make the practical part very much easier to obtain-for it is necessary to have practical experience.

(6826) J. L. O. writes: 1. I have access to a 10 light dynamo, the current of which can be passed through the body without being felt, unless the machine is out of order. A. The dynamo is so well constructed that it gives but little extra current, owing to the absence of sudden changes in E.M.F. A steady voltage has little effect on the body. 2. Please explain the principles of an alternating current dynamo or motor. Is it stronger than direct, and, if so, why? A. Our SUPPLE-MENT and back numbers of the Scientific American explain alternating current dynamos and motors. They are neither stronger nor weaker than direct current. You will find Leyden jars described in any work on physics.

(6827) G. S. asks: What is the cheapest (and the longest life) battery or batteries for operating motor 641; Can No. 20 on the the fields be used for the same? Can you give me some information regarding electric motors actuated by alternating currents? Can a motor (small one) be driven from the secondary of an induction coil—a very powerful one? If so, how and why? A. The secondary or storage battery is the best for driving motors. A bichromate battery, such as described in our SUPPLEMENT, No. 792, can be used. Many secondary batteries are described in our Sup-PLEMENT, Nos. 641 and 838 and others. For information about alternating current motors we refer you to our SUPPLEMENT, Nos. 601, 653, 692, 717, 763, 822, 944, and 1025. The numbers of wire specified can be used on the motor. The secondary of an induction coil cannot be used, except experimentally, to drive a motor. A special motor should be used, and it would give very slight

(6828) W. C. Van N. asks: 1. What is the law for determining the size of wire to be used in induction coils? A. The primary is made large enough to take the current it is proposed to use. There is no other fixed rule. 2. Is the voltage of a secondary coil in being 10° of these units, it becomes important for me to an induction coil increased by using finer wire, if the know how to tell whether, in any given case, the unit dif- length remains the same? A. No; the voltage depends

3. Please give title of a work, other than Hopkins and Dyer, on construction and law of currents of induction A. We can supply "Induction Coils and Coil Making," by Allsop, price \$1.25, and "Induction Coils, a Manual for Coil Makers," by Bonney, price \$1, mailed.

(6829) M. H. says: I am making an induction coil from Supplement, No. 160. How much more wire would be used if I used No. 26, instead of No. 36, on the secondary coil? A. Use enough to get the same number of turns.

### Business and Personal.

The charge for Insertion under this head is On a Dollar a line for each insertion; about eight words to a line. Advertyements must be received at publication office as early as Thursday morning to appearin the following week's issue.

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March 31, 1896,

#### AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.]

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	Everlasses J. E. Boyle 557.323	: R
•	Faucet for heer or other Casks, Kelley & Sector 557 395	! K:
2	Feed water heater, C.W. Eccleston	R
a	Fence, Moore & Vaniman 557.214 Fence, E. Roth 557.328 Fence post, R. B. Robbins 557.328 Fence post, W. J. Sleep. 557.445	R
3 5 4 8	Fence, B. Roth 557,430 Fence post, R. B. Robbins 557,230 Fence post, W. J. Sleep 557,245 Fence, wire, J. Combs 557,445 Fence, wire, J. Combs 557,445 Fender. See Car fender. Car safety fender. Fender. R. M. Knight 557,305	·R
í	Filter, E. A. Wilder 557,177	R
95	Firearm, magazine, A. Burkess	SE
4	Fire hinter, automatic, D. R. Courvoisier	8
9		
67092	Funeral carriage or car, R. A. McCauley 557,333 Furnace. See Blast furnace. Boiler furnace.	5 : 80 : 80
2370	Furnace, C. E. Wyman 557,463 Furred pelts, macbine for plucking hair from, S.	
881	Fuse for shells, time. H. Tolley	S
77 20	Game apparatus, H. R. Hinckley	S S
7	Gate. Dee Dievatorgate.	- 1
<b>i</b> 4	Gate, Couper & Colver. 557,49 Gate, E. H. R. Evans. 557,30 Gate operating mechamsm, electric. F. J. Dyett. 557,49	1   91 5   91
9 2	Glass blowing apparatus, F. Altenbaugh,	. 9
18 18 51		
5) 11	Grater, nutmeg. C. A. Prest. 557,50 Grinding stone, H. D. Blumenfeld 557,30 Gun carriage 1 R G A Canat 557,48	3 I S
61 50 11	l Hernoes & M Schindol 557.42	
01 16		
2-2	Heating apparatus, bot water, E. E. Clark. 557.18 Heating apparatus, steam, E. A. Field. 557.38 Hinge, R., Black. 557.37	9 8
28 D6	B. Hoof spreader. J. Trenkle	5 8
36 03 04	B Horseshoe, elastic tread, A. Loeffler	3 S 7 S 3 S
53	6 Hydrocarbon burner, R. A. Poitrimol. 557.22 Indicator. See Office indicator. Indicator. Inkstand, J. S. Parmenter. 557,42 Iron. See Sand tron. Irrigation shovel. J. H. Gordon. 557,38 Iron. See Ween under the control of the contro	5   S 5   S 5   S
05	Irrigation shovel, J. H. Gordon	10
58 57 58	W. H. Stewart	31
-vi		- 1 49

<u> </u>		
amp, J. Kirby, Jr	557,397 557,518 557,229	1,58
amp shade, incandescent ele ctrc, S. O. Richard- son, Jramp signal, A. H. Handlanantern, bicycle, W. L. Keene	557.982	T
amp signai, A. H. Handlan antern, bloycle, W. L. Keene akt, H. G. Locke eather folding machine, G. Poliock ifter. See Plate lifter. iquid bolder, W. H. Bender. oock. See Blcycle lock. oocmotive boiler, W. B. Warren oom pattern mechanism, Wicks & Roy. oom shuttle changing mechanism. E. H. Ryon. fail receiver and deliverer for cars, Andriot & McClanahan.	557,394 557,210 557,341 557,352	1
ock. See Bicycle lock. ocomotive boiler, W. B. Warren oom pattern mechanism, Wicks & Roy oom shuttle changing mechanism, E. H. Ryon.	557,459 557,295 557,519	T
and receiver and deliverer for cars, Andriot & McClanahan	557,322 557,293 557,234	T
McClananan. landolin pick holder. F. Wahl lanicure table, A. Rosenberg. latch safe. F. H. Romans et al. latch safe. F. H. Romans et al. latchematical instrument, A. Lietz dechanical movement, G. M. Eckels. letal bracket. C. A. Cotter. letar. See Electric meter. Photographic exposure meter.	557,383 557,116 557,111	T
posure meter.  il crometer gage, F. Spalding	557,445 557,241	T
Aini, see Colordini. Ore crusing mil.  Aining machine, E. S. McKinlay.  Aining machine, C. O. Palmer.	557,481 557,144 557,340	T T
atotal Case Fee motor	557,486	Ť
posure meter.  Incometer gage, F. Spalding.  Illking machine teat cup, A. Shiels.  Illking machine teat cup, A. Shiels.  Illne trap door, J. O. Brien.  Illning machine, B. S. McKinlay.  Illning machine, C. O. Palmer.  Illting machine, C. O. Clapp.  Iditen, driving, D. C. Clapp.	557,317 557,349	,
Moore, ut lock, J. O. Richards. ) r, bow facing and self feathering, S. A. Tenney ffice indicator, J. A. Day, ii and stesm separator, D. Cochrane.     Indicator of and apparatus for oxidizing F.    Ill. process of and apparatus for oxidizing F.	557,277 557,230 557,318 557,194 557,108 557,098	
Oil, refining cotton seed, F. B. Aspinall Oils, process of and apparatus for oxidizing, F. Walton Ore crushing mill, H. P. Holland.	557.098 557.457 557,529	1
Creeparator, magnetic, O. M. Graves	557,121 557,390 557,364 557,365	
Dils. process of and apparatus for oxidizing, F. Walton.  Per crushing mill, H. P. Holland.  Cresparator, nagnetic, O. M. Graves.  Dven, baking, G. Huebner  ackage, sealed, O. S. Fellows.  ackage, device for opening sealed, O. S. Fellows  ackage, and display box, R. D. Severance.  ackage, nistingly box, R. D. Severance.  ackage, believe.  ackage, device for opening sealed, O. S. Fellows  ackage, device for opening sealed, O. S. Fellows  ackage, device for opening sealed, O. S. Fellows  ackage, printiation, T. D. Severance.  andlock, permutation, T. D. Severance.  anno amic display mechanism, A. C. Allyn.	557,240 557,107 557,522 557,155	,
Pan. See Frying pan. Panoramic display mechanism, A. C. Allyn Pants guard, bloycle, A. A. Billingsley Paper cutting machine, M. D. Knowiton	557,179 557,181 557,400	1
Paper folding machine, O. H. Marston. Paper marbling machine. A. H. Schneidawind Peeler, vegetable. G. J. Capewell. Peeler, vegetable, O. C. Merrill.	557,310 557,433 557,188 557,212	
Pelts, machine for refining, P. Jenik	557,129 557,374 557,149 557,402	. ,
an. See Frying pan.  anoramic display mechanism. A. C. Allyn.  anoramic display mechanism. A. C. Allyn.  anoramic display mechanism. A. C. Allyn.  aper anoramic display.  aper folding machine, M. D. Knowiton.  aper marbling machine, O. H. Marston.  aper marbling machine. A. H. Schneldswind.  eeler, vegetable, G. J. Capewell.  eeler, vegetable, O. C. Merrill.  eelts, machine for refining, P. Jenik.  een, fountain, B. Frischknecht.  een, fountain, G. J. Renz.  encil sharpener and point guard, J. Kraker.  "erforating, pinking, and punching machine, W.  H. Keighley.  Photographic child's support, C. La Prease.  Photographic exposure moter, G. F. Wynne.  Photographic pinting appar tags, W. Friese-  Greene.	557,276 557,132 557,246	[
Phong aphic printing appar tas, W. Friese- Greene. Plano act on, u pright J. W. Fischer. Plano attachment, mouse proof, G. P. Bent	557,119 557,261 557,353	I
renow apnic printing appar uss, w. Friese- Greene. lano act on, u right, J. W. Fi sher. lano act on, u right, J. W. Fi sher. lano bammer, H. B. K. Rosenfeld. lano music rack, C. R. Ellas. lanos, construction of, E. N. Ogden. lanos, c	557.429 557.304 557,420	1
Pipe coupling, R. Wigan.  Pipe covering mould G. Armstrong.  Pipe, draw bench for manufacturing, P. Boyd 557,478.	557,296 557,351	' i
Platting machine, C. C. Emmons	557,500 557,327	(
Bryson. Planter, check rowcurn, R. R. Spear. Planter, seed, J. A. Mengel et al Plate lifter, W. J. Cranford Plow barrow attachment, P. B. Hayden	557,483 557,160 557,136 557,256	: ]
gst. See Fence post.		: 1 : 1
Wer transmitting device, E. A. Sperry.  Pess. See Fructing press.  Printing machine, W. Scott.  Printing press. M. L. W. Hallenbeck  Pulp, machine for forming bodies from, Fairbanks.  A. Parker.  Pump, F. Pearn.  Pump, centrifugal, H. A. Barber.  Pump, carry, M. W. Hall.  Punching and recording device, ticket, D. McGill  Punching and sbearing machine, steam. C. A.	557,381 557,197 557,285	1
Pump, centrifugal, H. A. Barber	557,285 557,300 557,123 557,142	1
Punching and shearing machine, steam, C. A. Bertsch. Pupilometer and bridge measure, L. L. Paimer Rack. See Bieycle rack. Piano music rack. Raduator, A. Elebborn.	557,103 557,220 557,499	] ]
Rack. See Bicycle rack. Plano music rack. Raduator, A. Elebhorn. Rail bond and electrical connector, C. E. Moore. Rail bond or connection, E. A. Turner Railway and tramway wheel, flanged, J. Mc- Ilonald.	557,139 557,174 557,217 557,320	1   
Donald Kallway, cable, Wood & Milier Railway, electric, P. B. Delany. Railway metals, device for lifting, A. Von Ole- klevicz	557,758	1
klevicz. Raliway switch, L. A. Osborne. Ralsin seeder, G. A. Alger. ange protecting pocket, S. C. Noble Reaping and binding machine, J. S. Davis Reciprocator, L. B. McDonald Register: See Cash register. Typewriter word	557,338 557,321 557,337 557,193	8
legister.		
negulating treatment or substances chrono- metrically, etc., device for, W. E. Curtis Regulator. See Air current regulator. Ribbon retainer, F. E. Denzel Rotary engine, G. E. Boom. Sad iron, F. J. Pubyl Sad iron and friller, combined, R. A. Boyd Safety pin, W. H. Stimson.	. 557,386 . 557,115	
Sad iron, F. J. Probil Sad iron, F. J. Probil Sad iron and friller, combined, R. A. Boyd Safety pin, W. H. Stimson Seeb cord guide, F. Clerkson	. 557,227 . 557,477 . 557,347 . 557,489	
sad iron and rriler, combined, R. A. Boyd. Safety pin. W. H. Stimson Sash oord gulde, F. S. Clarkson. Sash fastener, storm, A. A. Loetscher. Sash bolding appuratus, window, W. Hall. Sawmill, W. H. Inglish. Sawtootb, R. Motznik. Sawing machine, veneer, J. Antbon.	557,408 . 557,268 . 557,391 . 557,414	
Scaffold, builder's, J. E. Ennis	. 557,180 . 557,501 . 557,330	
Seat. See Spring seat. Separator. See Oil and steam separator. Ore separator. Steam separator. Sewing machine spinning attachment, B. Conne Sewing machine tuck markung attachment, O. B	e r 557,110	: :
Sewing machine tuck markmg attachment, O. B Brush. Sheet separating and feeding machine, pneu- matic, G. F. Leiger Shelf bracket, T. Corscader.	557,357 557,279	1
Shelf, roller book, Jewell & YawmanShelf, roller book, Jewell & YawmanShingle sawing machine, J. B. WalkerShips and for raising sunken vessels, etc., ap.	. 557,492 . 557,392 . 557,458	
Sheif, roller book, Jewell & Yawman. Shungle sawing machine, J. B. Walker. Ships and for raising sunken vessels, etc., apparatus for preventing sinking of, F. Kindt. Shoe clasp locker, W. L. Judson. Shoe fastening, W. L. Judson. Shovel. See Irrigation shovel. Steam shovel. St ter ash S. C. Davis.	. 557,396 . 557,208 . 557,207	i 1
Si ter, ash, S. C. Davis Signal setting device. R. T. Kanski. Signaling apparatus. Oleson & Morrison. Skirt, bicycle, J. H. Deutschman.	. 557,363 . 557,275 . 557,421 . 557,495	
Slever forming machine, T. E. Pbillips.  Snap switch, J. S. Gibbs.  Snow and ice melting apparatus, C. F. Springfel	. 557,346 . 7,427 . 557,198 8 557 163	
Spectacles, S. N. Stone.  Speed measure, L. S. Starrett.  Speed measure, Wright & Terry.  Speed measure, Wright & Terry.	. 557,448 . 557,446 . 557,245	
Si ter, asn, S. C. Davis.  Signal setting device. R. T. Kanski.  Signaling appuratus. Oleson & Morrison.  Skirt, bic7cle, J. H. Deutschman.  Sled, band, F. E. Soutbard.  Sled, band, F. E. Soutbard.  Sled, band, F. E. Soutbard.  Sled, band ice melting apparatus, C. F. Sprinsfel.  Snap switch, J. S. Gibbs.  Snow and ice melting apparatus, C. F. Sprinsfel.  Soda water apparatus, C. F. Kade.  Spectacles. S. V. Stone.  Spectacles. S. V. Stone.  Speed measure, L. S. Starrett.  Speed measure, W. F. Sterrett.  Speed measure, W. F. Sterrett.  Speed measure, W. F. Sterrett.  Speed measure, W. J. Burnham.  Spool bolder, C. W. Leach.  Spring seat, tilting, C. F. Davy.  Square, combination, C. Chretien.  Stalk and weed chopper, J. M. Flower.  Stamp canceler, E. W. Milhado.  Stay, dress fastelning, R. W. Cash.  Steam boller, J. J. Butcher  Steam boller, E. B. Parkburst  Steam engine, compound, C. J. Mellin.	. 557,485 . 557,278 . 557,494	1
Stalk and weed chopper, J. M. Flower, Stamp canceler, E. W. Milhado. Stamp canceler, E. W. Milhado. Steam boller, J. J. Butcher	. 557,372 . 557,413 . 557,252 . 557 594	
Steam boiler, E. B. Parkburst. Steam engine, compound, C. J. Mellin. Steam generator. H. Seiffert Steam separator. E. E. Gold	. 557,424 . 557,135 . 557,156 . 557,264	
Steam separator, J. W. Parker. Steam separator attachment, D. Cochrane. Steam shovel or excavator, J. B. Webber Still, J. O. Bentley.	. 557,221 . 557,109 . 557,350 . 557,102	
Steam boiler, E. B. Parkhurst. Steam engine, compound C. J. Mellin. Steam engine, compound C. J. Mellin. Steam separator, H. Seiffert. Steam separator, J. W. Parker. Steam separator attachment, D. Cochrane. Steam separator attachment, D. Cochrane. Steam separator attachment, D. Cochrane. Steam separator attachment, D. Webber. Stone breaker, R. McCully. Stone breaker, R. McCully. Stone breaker, R. McCully. Stone breaker, R. McCully. Stream steeper, F. C. Williams. Strenging tool, ornamental. F. G. Wise. Surgical knockdown table. A. Hays. Swath turnum machine, G. F. Nelson. Switch. See Automatic switch. Ejectric switch. Railway switch. Snap switch. Telephon	. 557,216 . 557,506 . 557,416 . 557,297	
Striping tool, ornamental, F. G. Wise	. 557,467 . 557,385 . 557,417	
Railway switch. Snap switch. Telephone switch,	e	

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l	Switch, W. G. Lewi. Switchboard signal, I. H. Farnbam. T bar, J. W. Rapp. Bolle, See Manicure table. Surgical knockdown	557,404
١	T bar, J. W. Rapp	557,147
,	able. See Manicure table. Surgical knockdown table.	
ł	Telephone line apparatus, C. E. Scribner557,153, Telephone switch and support. E. C. Paramore	557,154 557,284
:	Thermostat, W. S. Johnson	557,272 557,314
	Thrashing and clover hulling and dressing ma-	501,011
:	Tile, J. J. Merrill.	557,137
i	Tire, bicycle, P. Schau	557,138
:	Tire, pneumatic, C. S. Scott	557,441 557,531
İ	Tires and covers for same, mould for making	557.129
	able. See maintine table. Sulgical shotsational table.  Telephone aline apparatus, C. E. Scribner557,153, Telephone switch and support, E. C. Paramore. Thermostat. W. S. Johnson. Thill coupling, A. J. McArthur.  Thrashing and clover hulling and dressing machine, J. Greenslade.  Tile, J. J. Merrill.  Tire, bicycle, P. Schau.  Tire, clamp, vehicle, F. P. Miller.  Tire, punctureless pneumatic, C. P. Conrad.  Tires, punctureless pneumatic, C. P. Conrad.  Tires, punctureless pneumatic, C. P. Conrad.  Tires, punctureless pneumatic, D. P. Conrad.  Tires, probe for inserting patches in pneumatic, J. W. Mix.  J. W. Mix.  Tongs, skelp, P. Boyd.  Traction engine, H. C. Hicks.  Trap for tee boxes, etc., Stockstrom & Curran.	557 919
١	Tires, woven fabric for wheel, J. Lyall	557,409
1	Traction engine, H. C. Hicks	557,325
ļ	Trap for ice boxes, etc., Stockstrom & Curran Trolley, electric railway, H. A. Seymour	557,449 557,442
-	folley pole support, N. H. Day is	567,114
1	Typewriter word register, C. O. Blandin	557.474
:	Traction engine, H. C. Hiers.  Trap for ice boxes, etc., Stockstrom & Curran.  Trolley, electric rallway, H. A. Seymour.  folley pole support, N. H. Davis.  Trough. See Free trough.  Typew riter word register, C. O. Blandin.  Typew riting macbine, G. B. Selden.  Type writing macbine attachment, N. W. Hartwell	557,000
1	Typograph, F.E. Bright	557,203 557,184
	Typograph, J. R. Rogers. Valve, engineer's brake, G. Westingbouse, Jr	557,232 557,463
ł	Valve gear, oscillating engine, Rarick, Jr., & Walker.	557.228
	Valve, vent, Meyrick & Wilson	557,412
	Type writing machine, G. H. Seiden. Type writing machine attachment, N. W. Hart- Type writing machine attachment, N. W. Hart- Typerraph, F. E. Bright. Typerraph, J. R. Rogers. Valve gear, oscillating engine, Rarick, Jr., & Walker. Valve, vent, Meyrick & Wilson. Valve, water pipe air, A. H. Schierholz. Vaults or safes, removable sill for, K. S. Holmes Vehicle guiding device, J. G. Ale xander. Velocipede, B. C. Hicks. Vending machine, coin controlled, W. A. Ferree. Vending of newspapers, slot machine for auto- matic, J. A. Rule. Vise, W. Thompson. Wise, W. & W. A. Thompson. Wagon bed holst, T. H. Tabor. Wagon bed, B. E. Stevenson. W explaing muchine, A. Woodman. Was thard, D. H. Canny, Washing, scrubbing, and cleaning floors, machine for, J. E. & W. J. Gee.	557.389 567.471
,	Velocipede, B. C. Hicks	557,385
: !	Vending of newspapers, slot machine for auto-	331,300
	Vise, W. Thompson.	557.45
	Vise, W.& W. A. Thompson	557,452 557,450
ij	Wagon jack, B. E. Stevenson	557.167 557.468
	Was haard, D. R. Canny.	557,187
	Washer. See Dish washer.	301,100
	Wasber. See Dish washer.  Washing, scrubbing, and cleaning floors, machine for, J. E. & W. J. Gee.  Watch movement box, C. H. Smith.  Water bandage, W. H. Welch.  Weather Strip, A. Thorn.  Weighing apparatus, proportional, E. A. Munson Weighing machine, M. Schlov et al.  Well augers, boring rod for, H. C. & L. Bruner.  Well cleaner, T. C. Davison.  Wheel. See Bicy cle wheel.  Wheel from manufacture of J. Dring.	557,37
	Water bandage, W. H. Welch	557,24
,	Weather strip, A. Thorn. Weighing apparatus, proportional, E. A. Munson	557.140
i	Weighing machine, M. Schloz et al	557,237 557,487
1	Well cleaner, T. C. Davison	557,113
	Wheel rims, manufacture of, J. Dring	557,19
į	Window fastener, J. Lowe	557,13
,	Howard	557,27
	Wheel ins, manufacture of J. Dring Wheel rims, manufacture of J. Dring Window, E. Gay. Window fastener, J. Lowe Wood, process of and apparatus for saturating, C. Howard Woodwrking machine, combination, L. F. Parks Wrench, H. J. Martin	557,22 557,31
;	TRADE MARKS.	
1	Antiseptic and germicidal preparation, F. W. R	
)	Eachmann. Baking powder, Marsball-Kennedy Milling Com	28,047

	TRADE MARKS.	
1	Antiseptic and germicidal preparation, F. W. R. Eachmann.	28,047
۱	Baking powder, Marshall-Kennedy Milling Com-	28.030
)	Antiseptic and germicidal preparation, F. W. R. Each nam. Baking nowder, Marshall-Kennedy Milling Company. Beer, lager, John F. Wiessner & Son's Brewing Company of Baltimore City. Bicycles, Grand Rapids Cycle Company. Bicycles, Marion Cycle Company. Bootsand shoes, J. Foster & Company. 28,056, Brusbes, tooth, nall, hair, mustache, artists', clothes and bath, R. v. Briesen. Canned pineapple, J. S. Johnson Company. Chemical preparation for removing Scale from boilers and for pentralizing scale producing	28.068
,	Bicycles, Grand Rapids Cycle Company	28,051 28,052
ĺ	Bootsand shoes. J. Foster & Company 28,056,	28.057
	clothes and bath, R. v. Briesen	28.059
1	Canned pineapple, J. S. Johnson Company	28,029
	boilers and for neutralizing scale producing substances in feed water for same, H. Pfabe Cigarettes and smoking tobacco, S. Schinasi	28.045
	Cigarettes and smoking tobacco, S. Schinasi	28,033 28,061
	Cough drops, C. E. Eberbardt	28,031
ĺ	Cough drops, C. E. Sherbardt	28,062
}	Company Leather made from bides or skins, Wilder & Com-	28.026
;	pany	28.028 28.060
l	pany Matches, Delacamp & Company Meats, sugar cured, J. Vogel & Son Medicinal preparation for coughs, colds, and other	28.032
į	W.T. Owbridge  Medicine, extracts and oils, certain named, A. H. Gottschall.	28,046
	Gottschall	28,048 28,044
	Paper, paper boxes, and paper bags, wrapping,	28.027
)	Oil, illuminating, Scoffeld, Shurmer & Teagle.  Paper, paper boxes, and paper bags, wrapping, Miller, Tompkins & Company. Razors, C. F. Butcher. Remedies for headache, catarrh, croup, colds, and similar affections, Coraline Company.	28,050
)	similar affections, Coraline Company	28,066
ί	Remedies for headache, dyspepsia, rheumatism, and di seases of the blood, throat and lungs, J. L. Hoffman.  Remedies for beadache, neuralgia and insomnia, J. A. W. Fernow	
,	L. Hoffman	28,065
3	J. A. W. Fernow	28,064
3	Rods, sheets, wire, plates, ingots and castings made from metallic alloys, Ansonia Brass and Cop-	28,063
3	per Company	28 067
Ì	Soap, balm and toilet, C. Preis	28,642 28,041
5	Der Company. Soab, balm and toilet, C. Preis. Soap, balm and toilet, C. Preis. Soap, toilet and laundry, F. G. Burke	28,013
	Namara Stoves, beating, Gem City Manufacturing Com-	28.049
3	pany	28,054
3	Phillips & Clark Stove Company	28,053 28,058
3	Velveteens and corduroys, A. Openbym Water closets, L. M. Rumsey Manufacturing Com-	
7	Whisky, Freiberg & Workum	28,036
7	Whisky, Mellwood Distillery Company28,037, Whisky, C. P. Moorman & Com any	28,038 28,035
ś	pany, Freiberg & Workum Whisky, Melwood Distillery Company. 28,037, Whisky, C. P. Moorman & Com any. Whisky, T. Train & Company Whe, daret, J. M. Verguole.	28,039 28,034
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### DESIGNS.

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j :		25,30
	Radge J & Williams	25 20
-	Bicycle fork crown, A. Bach	25.33
	Bicycle fork crown, A. Bach. Bicycle saidle, W. A. & M. H. Hulbert,	25.3
	Button, J. M. Ciaybrook	25.30
0	Can oil F. S. Chase	25.3
	Can, Oil, F. S. Chase	25.34
1	Carnet, F. M. Parker	25.34
	Casket handle ear, E. Cleff	25.30
)	Casket handle ear, E. Cleff. Cereal cup, H. D. Perky. Chaplet, F. Hoblreider. Clegar boxes, ornamental print for, N. Witsch. Clock front, W. C. Drew. Counter, display, S. J. Sberer. Curling iron holder, W. A. Dobson.	25.31
2	Chaplet, F. Hoblreider	25.30
3	Cigar boxes, ornamental print for, N. Witsch	25,30
3	Clock front. W. C. Drew	25.31
_	Counter, display, S. J. Sherer	25.32
8	Curling iron holder, W. A. Dobson	25.31
B	Curling iron holder, W. A. Dobson. Curtain, lace H. Horsefield.	25.34
7	Diaper. W. Green	25,34
ď	Dynamo case, C. E. Woods	25,32
3.	Diaper, W. Green Dynamo case, C. E. Woods Fence pattern, wire, A. L. & D. M. Kitselman	•
5		
Ļ,	Game board, I. Schulz	25.31
5	Game board, E. P. Slocomb	25.3
6	Index and card holder. F. A. Alien	25.31
7	Kettle, water, A. R. Pritcbard Key, W. H. Taylor	25,32
3	Key, W. H. Taylor	25,30
3	Kitchen cabinet, C. Hooper	25,3
ŀ	Kitchen cabinet, C. Hooper. Knife, table, C. Snow.	25,32
3	Mantel and hall rack, J. Hampson, Jr Mirror frame, A. Wanner, Jr	25,32
ģ	Mirror frame, A. Wanner, Jr	25,31
5	Nail set, H. Neff	25,30
7	Nail set, H. Neff. Panel, ceiling or wall, F. G. Caldwell	25,33
5	Paving block, J. Schwechler Pedal shaft, C. H. Metz.	25,33
	Pedal shaft, C. H. Metz	25,5
2 2 3	Pencil case hody of back W. A. Mathewa	25.31
Ę	Reflector for annular burners, J. Mitchell Scale frame, E. N. Gilfilian	25,32
ž	Scale frame, E. N. Gilflilan	25.3
2	Spoon holder, J. Young	25,3
2	Stove door or panel, L. Kahn	25,32
	Stove door or panel, L. Kahn Tile, skylight, J. Mark.	25,3
5	Toy, H. S. Kerr Undershirt, J. M. Heyman	25,3
6	Undershirt, J. M. Heyman	25,24
•	Vehicle seat, W. A. Sayers	25,3
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A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 25 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 381 Broadway New York.

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