desired number of plaits in a piece of material; and any kind of ornamental stitching can be placed between the plaits.

HOLDER FOR PICTURES. STATIONERY, OR OTHER ARTICLES. - WILLIAM H. H. DICKINSON, Missoula, Mont. This holder is a combination of clamping-bars, and a screw having an orifice therein through which the clamping-bars are passed. A bodybar holds the screw in place, the screw being moved to engage the clamping-bars and hold them in con-tact with the body-bar. The intention of the device is to hold for use or display, pictures, books, stationery, crockery, and other articles. It is adjustable to objects of various sizes and can be readily handled and adapted to take any needed angle relatively to its support.

The inventor has devised a method for fixing a handle are made entirely of metal, thus obviating the tendency to looseness, a defect which prevails where wedges or | blade is driven into the tip to secure it. other tightenings engage wooden surfaces. The clamping-devices consist of two members, one of which fits over the handle, the other of which receives the pick. Both members are formed with mating-slots through which a pin is passed and held in place by a wedge. The two members, when thus keyed and wedged together, firmly clamp the pick to the handle.

VALVE FOR PNEUMATIC TIRES OF BICYCLES. -FRANZ RICHTER, Cologne, Germany. The construction of the valve is simple. The essential part consists of an elastic flat tube carried in a suitable manner by the valve-box connected with the pneumatic tire. This tube has an elliptically-shaped hole narrower at the bottom than at the top and not lying in the middle of the tube, so that a narrower slit with two adjacent lips of vice versa. The buckles comprise separable body-memdifferent sizes is formed. The lower slit permits the air bers furnished with guides which receive the connectto enter; but when the pump is stopped, back-pressure of the air in the tire presses the smaller lip against the broader, so that no air can escape.

BROOM. - HOMER W. HODGE, Atlanta, Ga. This broom is designed for use in cotton and woolen factories and around machinery. With this end in view, the broom is made with metallic shields arranged in a manner to strengthen the broom and protect it from damaging contact with machine-frames.

FOLDING BED.-LEWIS B. JEFFCOTT, Manhattan, New York city. The bed proper has a section pivoted the casing when the bed is folded. The weight of the bed holds the several sections in an innermost folded position, as the pivot is located at the lower, outermost corner of the bed. Hence no springs, weights, or other devices are necessary to hold the bed in a folded position within the casing.

COCK.-JOHN MORRISON, Dubuque, Iowa. The invention provides a mechanism for permitting the adjustment of the plugs of stop and waste cocks, so that the plug may be rendered right or left handed in operation, according to the desire of the user or to the position of the cock. The essence of the invention is to be found in a novel arrangement of cap and casing, whereby the plug is always prevented from describing an angle greater than ninety degrees.

WIRE-GRIP.-HARRY A. MOSSMAN, Manderson, S. D. The device is to be used for gripping and stretching fence-wires. On opposite edges of the stock convergent cheek-plates are mounted. Against the cheekplates jaws are movable. Guide-plates and a stop-plate are also provided. The jaws are moved forward; and the inclined cheek-plates cause the jaws to be moved toward each other. Then by means of a suitable stretching device drawing longitudinally upon the gripper, the wire may be stretched. The greater the pull on the device, the greater will be the clamping effect of the jaws upon the wire.

ENVELOP.-HENRY TRENCHARD, JR., Manhattan, New York city. In "tension-envelops" of the type in which a cord is secured to the back of the envelop by means of a tubular rivet, dust and dirt sometimes enter and thus soil the contents of the envelop. Moreover the exposed inner end of the rivet is apt to scratch the contents. To obviate these difficulties, the inventor employs a cap-piece in connection with an inner washer to cover the inner end of the rivet.

ORNAMENTAL OBJECT. - EMILE BICK and CHARLES II. HAHN, 1417 State Street, New Haven, Conn. The principal object of the inventiou is to ornament articles in imitation of tree-bark, with knots projecting unduly strained. from the surface. This effect is secured by covering the object with papier-mâché while in a plastic state and embedding in the papier-maché plugs of wood which project and are also covered with papier-maché.

WITH GAS. -- EDWIN C. WORNS, Manhattan, New York city. There are one or more receivers for the water to be impregnated. The gas is taken from one or more "bottles" by pipes to the water-receivers, and the more "bottles" by pipes to the water-receivers, and the water is then charged with the gas. The aerated or impreg-visible and detracts in no way from the appearance of nated waters are to be dispensed from the receivers by pipes. A chamber containing gravel is interposed between the dispensing pipes; and the water is caused to pass through this chamber, the gravel therein serving to break the water into separate globules or drops.

DEVICE FOR MOISTENING AND SEALING EN VELOPS.-CHARLES L. VOSE, Westerly, Rhode Island. The device comprises essentially a combined water-reser voir and handle, the one end being provided with a sponge and the other with a roller. After the gummed surface has been moistened by the sponge, it is evenly and squarely sealed by means of the roller. The entire method is so simple and so cleanly that the device should do away with the old objectionable method of sealing envelops.

BILLIARD-CUE-TIP FASTENER .- WILLIAM HESS, Manhattan, New York city. The invention provides a fastener for the tips of cues, which will be practically indestructible and will permit a new one to be applied whenever the old one becomes unfit for use. The fast-PICK .- WILLIAM PERRY BEVINGTON. Escondido, Cal. ener comprises a plate and a blade fixed rigidly in the center thereof, with its end portions extending respecto a pick so as to keep the pick or point from working tively beyond the faces of the plate. The lower end loose. To help secure this object, the clamping parts part of the blade is adapted to enter the cue-stick to hold the plate in place. The upper end portion of the

> THILL-COUPLING. - RICHARD ECCLBS, Auburn, N.Y. In this invention the shaft-shackle has the eye adjustable to any size of pivot so as to permit quick shifting and prevent the accidental dropping off of the eye from the pivot. The shaft-strap has an eye at one end, which eye has a hinged section. A bolt is hinged to the strap and extends through the hinged section of the eye. A nut on the bolt is an apted to be seated on the hinged eye section. One arm of the nut engages the eye portion of the hinged section, the other, the strap.

> COMBINATION PULLEY AND SASH BUCKLE. -JULIUS BROWER, Manhattan, New York city. The object of this invention is readily to permit the change of the device from a pulley-buckle to a sash-buckle, or ing straps when the buckle is used as a pulley-buckle. Clasp devices unite the body-members when the buckle is used with a sash. The clasp and guide being movable, one can be adjusted out of the way of the other, and vice versa.

APPAREL-DRAWERS. - JOSEPH R. WHITE, St. Josephs, Mo. This garment has a body and a waistband, the latter lying closely around the waist, with its upper portion beneath the corset. The body of the drawers is formed at each side with approximating vertical slits producing a rear flap. The upper edge of this to the bed-casing at one end. To this section an end flap ends at the lower edge of the waist-band, which section is hinged, extending into the casing. The latter leaves the flaps free of the corset. The flap can be resection has cam-faces, which are engaged by rollers in leased without disturbing the waist-band. The waistband of the garment under the corset is thus capable of being worn without interfering with the unrestricted use of the drawers.

> TOY.-THALEON BLAKE. Philadelphia. Penn. The toy comprises a barrel which carries a picture. A wheel mounted therein has a non-continuous web which exposes the picture as the wheel turns. To provide for rapid revolutions, there are means for assisting the application of a blast of air to the wings carried by the wheel. The picture appears when the barrel is turned and is invisible when the barrel is at rest.

PAPER BOX .-- JOSEPH T. CRAW, Jersey City, N. J. This device provides a slide-box for tacks or other small articles. It is constructed from a single piece of material, are in order. 2. How should ventilation be provided if and so folds and connects certain members of the piece that a tube and a sliding-tray are obtained. The tray is main hall on first floor of two-story house, for ventilacapable of entire withdrawal from the tube and then tion, seventy-five square feet of heating surface boxed spreads apart, so that the contents are made accessible to in and connected to fresh-air flue of one-half square foot inspection. When the tray is withdrawn from the tube area? The house contains about 19,000 cubic feet of and spread, it can be quickly restored to its position within the tube.

APPAREL-BELT.-AMAND WIGHARD, Jersey City. N. J. The belt contains two main sections, the rear one having loops at its end through which the sections slide. There are clips on the rear ends of the sections with an elastic attached to the clips and also to the rear section. A ribbon or tape is connected with the clips and to the rear ' air flues, if properly provided above the roof, will seldom section, being between the elastic and this section. It is draw down when the house is heated. Summer drafts adapted mainly to waist-bands for women's wear. It yields lengthwise, thus securing a snug and easy fit.

WINDMILL-WHEEL. - JOHN E. ALBERS, Wisner, Neb. The wings of this apparatus can be readily set at any angle, according to the force of the wind. For a strong wind, a weight is shifted in toward the fulcrum of a lever. For a light one, the operator moves the weight outward on the lever. This insures a uniform running in light or heavy winds, and without requiring the turn. ing of the wheel out of the course in which the wind is blowing. By this arrangement the wind-wheel is never

HORSE-CHECK.-ROBERT T. GEER, 178 West 94th Street, Manhattan, New York city. This simple horse-check comprises practically two parts, a bracketstrap and a check-rein, so arranged that a pull upon the APPARATUS FOR IMPREGNATING WATER check-rein will cause the bracket-strap to bring pressure | upon the glands of the neck which lie just back of the iaw-bones and constitute the most sensitive part of a horse's neck. So efficient is the device that a horse

Business and Personal.

Marine Iron Works. Chicago, Catalogue free. "U. S." Metal Polish. Indianapolis. Samples free. Yankee Notions. Waterbury Button Co., Waterh'y, Ct.

Handle & Spoke Mchy. Oher Mfg. Co., 10 Bell St. Chagrin Falls, ●. Most durable, convenient Metal Workers' Crayon is

made by D. M. Steward Mfg. Co., Chattanooga, Tenn. Gear Cutting of every description accurately done. The Garvin Machine Co., Spring and Varick Sts., N. Y. The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York. The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y. 137 Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.



HINTS TO CORRESPONDENTS.

HINTS TO CORRESPONDENTS.
 Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.
 References to former articles or answers should give date of paper and page or number of question.
 Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.
 Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.
 Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each. to may be had at the office. Price 10 cents eacn. **Books** referred to promptly supplied on receipt of

Minerals sent for examination should be distinctly marked or labeled.

(7958) W. E. S. asks: 1. Which system of dwelling house heating is most desirable, reliable and healthful: steam, hot water or air ? A. Each of the three systems named are desirable, reliable and healthful if properly installed on sanitary lines. All three systems are largely in use and each is selected to meet the tastes of house owners or first economy of erection. The hot water circulating system is probably the highest in first cost, cheap to operate, and a most convenient system to regulate in moderate weather. Steam is best suited to a cold climate where an active element of heat is required. The hot air furnace is so much a universal heating agent that but little can be said against its usefulness and convenience in small and medium-sized houses. With any of these systems used in modern dwellings ample ventilation is had from open fireplaces and windows. Where there are no fireplaces ventilating registers near ceiling and floor with flues to the roof water or steam is used? Would it be sufficient to put m space and is occupied by six persons, use electric light and also a few kerosene lamps, say one for six hours in twenty-four. A. Artificial ventilation by a radiator in a flue closure is not needed, except in buildings of complex structure. 3. Where would be the best place for foul-air flue, and what size ? If at bottom of room, how will current outside be kept from entering ? A. Foul may be occasionally downward for the same cause as with cold chimneys. Heated rooms will always cause an up-draught in a ventilating flue. 4. Can you give rule for finding size of single and double belts for transmitting power and also size of shaft, where speed and power is known ? A. The rules for belting are somewhat complicated by the angle of contact, tension, quality and kind of belting used. The rules for shafts and belts are fully set forth in tabulated form and con-ditions, in Kent's "Mechanical Engineer's Pocket Book," which we can furnish for \$5 by mail. A general rule for single leather belts is to allow 144 square feet of belt passing a given point per minute to equal one horse power. A double belt is about 40 per cent greater in power than a single belt of same width, but must have greater tension. The rules for shafting also vary very much with the kind of metal as iron, cold-rolled iron, steel and the conditions of use; which are fully set forth in formulas and tables in Kent's pocket book.

1	73
Belt tightener, G. E. Travis	657,301
Belt tightener, G. E. Travis Bicycle, G. S. Bartlett. Bicycle parcel carrier, J. E. Rothaermel Blasting, lead wire for, W. H. Williams	657,382 657,135 657,375
Bicycle parcel carrier, J. E. Rothaermel Blasting, lead wire for, W. H. Williams Board. See Shoveling board. Bolling meats, form for, F. A. Lansing Bott. See Coupling bolt. Bottke collar, G. W. Williams Bottle stopper, C. H. Seelig. Box. See Cigar box. Display box. Lunch box. Mail box. Match box. Packing hox. Paper box.	657,427
Bookbinding, C. J. Taylor Bottle collar, G. W. Williams Bottle stopper, C. H. Seelig	657,503 657,327 657,459
Box. See Cigar box. Display box. Lunch box. Mail box. Match box. Packing hox. Paper box.	
box. Box covering machine, H. Inman Bracket. See Lamp bracket. Window hracket. Brake. See Wagon brake. Bridke handling device, W. A. Norcross Bridge, lift, F. La Pointe Broom, antiseptic, Ø. S. Kulman Broom holder, J. T. Mumford. Brush, E. C. Collins. Bubble blowing and propelling pipe, F. L. Hig- gins.	657,417
Brick handling device, W. A. Norcross Bridge, lift, F. La Pointe Broom. antisectic. • S. Kulman	657.294 657.12? 657.426
Broom holder, J. T. Mumford. Brush, E. C. Collins. Bubble blowing and propelling pipe, F. L. Hig-	657.116 657,335
ginsBurner. See Hydrocarbon vaporizing burner. Burner, See Hydrocarbon vaporizing burner.	657,163
fuel and heating, S. M. Trapp Butter cutter, R. F. Stewart Button, R. H. Lewis	657,228 657,227 657,271
Cabinet, W. Homan Cabinet, portable, C. G. Simpson Cable, submarine, T. Guilleaume	657,347 657,463 657,196
gms See Hydrocarbon vaporizing burner. Burner. See Hydrocarbon vaporizing burner. Burner, See Hydrocarbons for fuel and heating. S. M. Trapp. Butter cutter, R. F. Stewart. Button, R. H. Lewis Cabinet, portable, C. G. Simpson Cable, submarine, T. Guilleaume Camera, focusing, J. D. Morley Can. See II can. Can filler, J. E. Aue	657,437 657,152
Can wiping machine, M. J. Hawkins Car, cattle, E. Rykovskoff Car fender, R. F. Preusser	657,216 657,454 657,180
Car seat, D. B. Cann	657,481 657,490 657,501
Car seat striker arm, J. S. Johnston Car underframe sill, W. P. Bettendorf Car wheel, H. W. Libbey	657,198 657,154 657,123
Carpet fastener, stair, J. S. Jardine Carrier and feeder, D. Webre Qask, harrel, or keg, G. H. Ricke	657,270 657,371 657,134
Chair. See Dental chair. Check protector, G. C. Baker Churn, R. P. Tompking	657,475 657,143
Chair. See Dental chair. Check protector, G. C. Baker. Churn, R. P. Tompkins Ggar of cigarette, N. Du Brul. Cleaner. See Grain cleaner. Clipper, hair, D. J. Archer Clock, geographical, Johnson & Jameson Clock, geographical, Johnson & Jameson Clock, geographical, Johnson & Jameson Clock finishing machine, pneumatic, F. Stiner Clutch, W. K. Liggett Cutch, W. K. Liggett Collar, horse, C. A. French. Collar seam dampening machine, G. Binder Collar seam dampening machine, G. Binder Collar seam dampening machine, G. Binder Collar seam dampening machine, Stumpe Cother, rolling, C. H. Melvin. Commode attachment, J. A. Hackenberg Composition of matter, J. K. P. Shelton Composition of matter, J. K. P. Shelton Combine attachment, J. K. P. Shelton Combine heating etc. anneratus for. E. W.	657,385 657,403
Clipper, hair, D. J. Archer	657,074 657,117 657,333
Cloth finishing machine, pneumatic, F. Stiner Clutch, W. K. Liggett Clutch, friction, J. L. Taylor	657,300 657,244 657,185
Coal washer, E. A. Stewart Cock, stop and waste, W. H. Rawe. Collar, horse, C. A. French	657.184 657,319 657,236
Collar seam dampening machine, G. Binder Collar stiffener fabric, Mann & Stumpe Colter, rolling, C. H. Melvin	657,388 657,171 657,200
Composition of matter, J. K. Hackenberg Composition of matter, J. K. P. Shelton Condenser and feed water heater, steam, R. H.	657,103 657,461
Cooking, heating, etc., apparatus for, E W. Parish.	657,497
an impurity, refining, Klepetkö & Morrow Corkscrew, R. W. Jorres	657.119 657.421
Corset, apparel, J. A. Redick. Cot or couch, gimbaled, Hitchens & Mayhew Cotton compress C. E. Mallett	657.133 657.286 657.225
Condenser and feed water heater, steam, R. H. Smith Cooking, heating, etc., apparatus for, E. W. Parish. Copper from solutions containing antimony as an impurity, refining, Klepetkö & Morrow Corkscrew, R. W. Jorres Corset, apparel, C. Guillot. Corset, apparel, J. A. Redick. Cot or couch, gimbaled, Hitchens & Mayhew Cotton compress, C. E. Mallett. Cotton compress, C. E. Mallett. Cotton gin feed, J. E. Cheesman Coupling. See Fender coupling. Thill or pole coupling.	657.084
Couping doit, threaded, G. P. Shemeid Crate, bottle, T. Booker Cutivator, G. E. Evans Cushion. See Car seat cushion. Cut off, tripping, Bradbury & Washington Cut off, tripping, Bradbury & Washington Cutter. See Butter cutter. Stalk cutter. Deborning, stock for holding cattle while. E. C.	657,269 657,210
Cutter. See Butter cutter. Stalk cutter. Dehorning, stock for holding cattle while, E. C. Bakken	657,379
Bakken. Dental chair, F. Ritter. Dental purposes, electric amp for, B. E. Law- Diatondas, etc., in metal holders, setting, G.	657,360 657,1 9 9
Dish washing machine, E. Sandstrom	657,251
Distributing machine, F. B. Converse, Jr. Doffer blade, A. Conkling. Drawer for card indexe, D. E. Hunter. Drewer for card indexe, D. E. Hunter. Dredging apparatus, A. McDougall Dreis protector, Mann & Stumpe. Dust jar and coupling, T. Seevers. Dust pan, A. Leib. Dreing apparatus, J. C. Thickins. Dyeing machine, Morgan & Menzies. Ear mut, W. H. Hartmann Egg separator, A. Lindsay. Electric furnace, H. C. McBrair. Electric lock, H. G. Carleton. Electric lock, H. G. Carleton. Electricia conductors, stringing or supporting, L. Hackethal	657,309 657,212 657,126
Drawer for card indexes, D. E. Hunter Dredging apparatus, A. McDougall	657,415 657,247 657 172
Dreis protector, Mann & Stumpe Drill jar and coupling, T. Seevers. Dust pan, A. R. Leib.	657,205 657.243 657 393
Dyeing machine, Morgan & Menzies Ear muff, W. H. Hartmann Evg case filler. W. H. Hansell.	657,293 657,109 657,285
Egg separator, A. Lindsay Electric furnace, H. C. McBrair Electric lock, H. G. Carleton	657,125 657,202 657,211
Electrical conductors, stringing or supporting, L. Hackethal Elevator. See Water elevator.	657,104
Elevator, C. W. & W. D. Baldwin Elevator controller, L. W. Southgate Elevator speed controller, electric, J. D. Ihlder	657.380 657,465 657, 4 16
Electrical conductors, stringing or supporting, L. Hackethal	657195 657,093
tary engine. Steam engine. Engine. L. Schulz.	657,458
Envelop, D. M. Emory Envelop fastener, office, J. •. Muenich	657,214 657,439 657,384
Explosive motor, multiple piston, M. F. Mar- monier. Eve protector E G. Stevens	657,226 657 183
tary engine. Steam engine. Engine, L. Schulz Engine tooling means, explosive, S. W. Rea Envelop, D. M. Emory. Explosive engine, S. F. Beetz Explosive engine, S. F. Beetz Explosive motor, multiple piston, M. F. Mar- monier Eye protector, E. G. Stevens Fabric, See Collar stiffener fahric. Faucet, Flannifin & Huck	657,322 657,107
Feed water heater and purifier, T. Gunning Felly plate, C. Minshall Fence post, J. I. Wiggins	657,238 657,435 657,145
Fat skinning machine, T. W. Taliaferro. Faucet, Mannifin & Huck Feed water heater and purifier, T. Gunning Feine post, J. L. Wiggins Fence spacer bar, wire, W. McCloskey Fiber forming machine, C. M. & ●. C. Terrell Fitht wheel, H. C. Fouts Fith wheel, H. C. Wilcox File, bill, J. S. Sammons File for proof, copy, etc C. E. N. Lancaster Filter, J. Davis Filter, J. Davis Filter, J. Davis Filter, J. Davis Filter, J. Bayis	657,128 657,206 657,406
Fifth wheel, F. E. Wilcox File, bill, J. S. Sammons File for proof, copy, etc., C. E. N. Lancaster	657,231 657,455 657,317
Filter, J. Davis Filtration apparatus, J. E. Williamson Fish hook, C. Bew	$657.158 \\ 657,146 \\ 657.387$
Fish hook, C. Bew. Fish trap. J. • Sharpless. Fishing float, L. P. Gibson. Flushing apparatus, automatic, A. W. Barton. Fruit gatherer, Keefer & Karr. Fuel, machine for making straw or peat, Bunker & Horn. Fuel machine and feeding annaratus A. A Dav	657.460 657.407 657,278
Full gatherer, Accler & Aarr. Fuel, machine for making straw or peat, Bunker & Horn.	657,118
& Horn. Fuel preparing and feeding apparatus, A. A. Day, Funnel, telltale, W. C. Belden. Furnace, W. Smethurst. Fuse, R. Mundhausen. Gage illuminator, N. A. Christensen. Game apparatus, G. E. Allen	657,399 657,09 657,138
Fuse, R. Hundhausen Gage illuminator, N. A. Christensen Game apparatus, G. E. Allen	657,414 657,331 657,233

PIPE-COUPLING. - CARL EIBEE, Brooklyn, New York city. The mating sections in this apparatus can be quickly locked together and made water or fluid proof. They can be readily separated under all weather conditions. These sections have a transverse tongue-and- PICTURE-FRAME.-WILLIAM H. HOLTZ, Brooklyn, grooved connection. The part provided with a tongue New York city. The design consists of a Viking ship, has an offset bottom surface adapted for use when the seated in the stern of which is a cupid holding a torch. sections are to be uncoupled, the other has offset faces | In the sail is an opening to receive the picture. Ornaadapted to be engaged by a clamping device and a latch between the two sections.

BADGE.-BENJAMIN HARRIS, Manhattan, New York city. This article has the ribbon-supporting rod pivoted . The body of the burner is annular and is provided with at one end of the badge. A fastening-pin is parallel with a removable flanged centerpiece. The construction is the rod and pivoted to the badge between the pivot of such that the interior of the burner can be readily the rod and the opposite end of the badge. There is a connection between the rod and the pin. The end portions of a front plate are turned back behind the back hold them together.

cleaned.

Note.-Copies of any of these patents can be furnished by Munn & Co. for ten cents each. Please state plate and engaged with the ends of the front one, to the name of the patentee, title of the invention, and date of this paper.

	Gear. rev
Adding machine, typographical, A. S. Dennis 657.266	
Adjustable roller, E. J. Gulick	Generato
Alumina, obtaining, M. E. Rothberg	Generato
Arumina, obtaining, M. E. Rothberg	Glass blo
Anchor, mooring, E. T. Bunje 657.263	Governo
Animal trap, W. H. Larimer 657,291	Grain cle
Aspirator. W. J. McCaw	Grainsa
Automobile, W. O. Barnes	Gratefra
Automobile vehicle, H. W. Libbey 657.124	Grater
Axle lubricator. vehicle, W. A. Olmsted	I Grater, E
A le fublication vellere, al	Gun, pne
bag machine, M. vierenkei	Hammer.
Bag machine, M. Vierengel	Handle b
Baling press, C. J. Johnson	Harveste
Baling press, H. C. Moshier	Harveste
Barrel washing machine, J. Muller 657,354	Ward
Battery element hanger, J. L. Hayes 657,413	Walu Manu
Description diale of the Martin of the Hayes	Hasp fas
Bearing, disk, C. H. Melvin 657.201	Hat faste
Bearing, disk, S. D. Poole	Heat int
Bed couch. J. Thompson 657.469	' Burge
Bed pan, R. Blank 657,279	Hoist flu
Beer drawing device, lager, L. H. Handy 657,106	Horsoshe
Beer pressure apparatus, hygienic, C. Peters 657.498	Horacaho
Doll Dowin & Annold 657 200	norsesu
Bell, Bevin & Arnold	
Bell, hicycle, N. N. Hill657,346	

can be checked almost instandy. The check is in visible and detracts in no way from the appearance of the animal or harness. The device is now being mannfactured. **Designs.**SHOE. -JAMES H. SPARKS, Chicago, III. The fastening in is extended in a compound curve across the instended in a compound curve across the instender of the shoe.
PICTURE-FRAME. -WILLIAM H. Hotzz, Brooklyn, New York city. The design consists of a Viking ship seated in the stern of which is a cupid holding a torch in the safe used to heighten the artistic effect of the whole.
GAB BURNER. -LEWIS S. BROWN, Columbus, Ohio. The body of the burner is annular and is provided with a removable flanged centerpiece. The construction is such that the interior of the burner can be readily a removable flanged centerpiece. The construction is such that the interior of the burner can be readily.
FOR Which Letters Patent of the Week Ending SEPTE/IBER 4, 1900,
FOR Which Letters Patent of the Week Ending SEPTE/IBER 4, 1900,
FOR Which Letters Patent of the Shoe.
PICTURE-FRAME. -WILLIAM H. Hotzz, Brooklyn, Intervent of the shoe.
In the sail is an opening to receive the picture. Ormanic and is provided with a removable flanged centerpiece. The construction is such that the interior of the burner can be readily.
GAS BURNER. -LEWIS S. BROWN, Columbus, Ohio. The body of the burner is annular and is provided with a removable flanged centerpiece. The construction is such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the interior of the burner can be readily.
Such that the inte 657,229 657,434 657,337 657,392 657,332 657,405 rer. uid pressure, N. A. Christensen. noe, adjustable nailless, H. R. Fenley.... noe, spring tread, ●. W. Siebenhaar..... 657,405 657,298 (Continued on page 174)