

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

FOLDING PLATFORM FOR GRAIN-BINDERS.—JOHN J. SCHAILL and ALEXANDER G. LEVALLEE, Tusler, Mon. The platform can be conveniently folded up to occupy a small amount of room so that the binder can pass through a space as small as that required for the passage of the wagon. This result is attained without adding materially to the weight of the wagon. The binder-platform can be folded or unfolded on the field by a boy capable of driving a team.

HARROW.—THOMAS L. FLYNN, Bronx, New York city. This implement will harrow and roll the ground at one operation. The construction includes a rapidly-moving harrow-frame driven from the axle of the machine, effecting a quick and thorough pulverization of the ground. The inventor has provided a simple steering-gear under the complete control of the driver, and means whereby the harrow-drum and roller can be simultaneously raised and lowered, the harrow-drum, when elevated, being simultaneously thrown out of gear with the driving mechanism.

Engineering Improvements.

BOILER.—JAMES H. ARRASMITH, Colfax, Wash. This invention relates to a direct-fue steam-boiler, designed principally for use with straw fuel. Such boilers are usually employed for agricultural purposes, as for supplying the engines which drive threshing-machines, straw being employed for fuel by reason of its cheapness. The construction of the present boiler permits it to hold more water than others of the same exterior dimensions.

STEAM-BOILER.—EDWARD VAN KEUREN, Poughkeepsie, N. Y. The boiler is a locomotive-boiler having a greater water-heating space than is provided in the usual form of boilers. A water-jacket is attached to the flue-sheet and surrounds the flues, the water-jacket being extended forward into the heating-chamber. The water will pass from the boiler into the jacket, so that it is completely surrounded by heat. The inventor has provided not only a larger water space than usual, but also a larger heating surface.

Electrical Apparatus.

TELEPHONE ATTACHMENT.—JOHN A. RICE, Bland, New Mexico. It has been Mr. Rice's purpose to provide an automatic relay for the operation of vibrating electric bells remote from the telephone, such as in different parts of a machine-shop, where a loud or distinct alarm is necessary to call attention to the telephone.

ELECTRIC MOTOR.—JOSEPH DABLING, Clifton, Pa. The present invention is a simplified construction of a motor which Mr. Darling patented in 1900, the purpose being to facilitate the assembly of the parts and to cheapen the construction so that the motor can be sold as a toy. The novel features of the present invention are to be found in a peculiar, simple method of casting the framework and in a novel arrangement of operating parts.

CONTROLLER FOR ELECTRIC CARS.—BARTON W. SCOTT, San José, Cal.—The invention is an improvement in devices for controlling the brake mechanism of an electric car and for regulating the electric current. Both the brake and current are quickly controlled by the operation of a single lever instead of the operation of two levers, as in the usual way. Thus the time required to stop a car is shortened in case of danger and the possibility of confusion on the part of the motorman avoided.

INTERRUPTER.—DR. R. H. CUNNINGHAM, 200 West 56th Street, Manhattan, New York city. This invention is a mercury-jet interrupter for use with induction-coils in actuating Roentgen-ray tubes. Unlike the well-known turbine, mercury-jet interrupter and that of Boas, Dr. Cunningham's apparatus contains no fluid non-conductor, such as alcohol or oil, both of which prolong the arc at the break, rapidly carbonize and contaminate the mercury, and are in great danger of catching fire, if heavy currents be employed. No fixed brushes convey the current to the moving parts. When it is desired to vary the duration of the make without altering the period, thus varying the intensity of the primary current employed, the necessary adjustment can readily be performed from the exterior. Thus the frequent opening of the apparatus and the constant risk of inhaling at such times noxious mercury vapor is avoided. As in other mercury-jet interrupters, the mercury in time becomes contaminated by a certain amount of oxid and metallic mercury in the form of very fine dust, which may be readily removed and distilled to yield the original liquid mercury.

Printers' Supplies.

METAL-POT FOR CASTING PRINTING-PLATES.—LEO GROSSMAN, Brooklyn, New York city. The invention provides a new and improved metal-pot arranged automatically to supply molten metal to one or a number of casting-boxes in a perfectly pure condition and in a very simple manner without the aid of a skilled hand. From the pot an outlet spout leads to form a gravity discharge for the metal. The discharge mouth on the spout is

slidable thereon to connect with or disconnect from the casting-box or mold.

PERFORATOR FOR PRINTING PRESSES.—GEORGE and ROBERT KENNEDY, New Westminster, B. C., Canada. The perforator includes a bar arranged to be locked up in the form of chase. A shaft is mounted to turn on the bar and has perforating devices. On one end of the shaft a crank-pin is attached to the journal. A driver is mounted to slide in a casing at one end of the bar and is provided with a cam-groove having a partly-straight and a partly-curved course, and engaged by the crank-pin, so as to bring the perforating device into active position in advance of the impression. A spring presses the driver. And a spring device is carried by the platen to press the driver against the tension of its spring.

Mechanical Devices.

DEVICE FOR REGULATING SPEED.—CHARLES O'CONNOR, Greenpoint, Brooklyn, and GEORGE C. AHRENS, Blissville, Queens, New York city. The speed-regulating device is especially adapted to power-pump machinery. The purpose of the invention is to provide a simple mechanism for changing the speed of power machinery without changing the diameter of the driving-pulley or interfering with the pulley or the driving-belt in any manner. On the drive-shaft a cone of gears is mounted to slide and turn with the drive-shaft. A worm-gear is provided to adjust the drive-shaft and the driven shaft to and from each other. A gear carried by the driven shaft is adapted to mesh with any gear in the cone of gears.

SPOKE-TENONING MACHINE.—DEFIANCE MACHINE WORKS, Defiance, Ohio. Mr. Charles Seymour has invented for the Defiance Machine Works a novel machine designed for the use of spoke, wheel, and wagon manufacturers to dress the ends of the spokes so as to fit the mortise in the wheel-hub. The machine is comparatively simple and durable in its construction; very accurate in operation to insure uniform work; and arranged to handle large and small spokes, and to cut either a plain tenon or completely to tenon, miter and point a Sarven spoke during the passage of the spoke through the machine. The machine can be readily adjusted to dress spokes of different sizes, shapes and lengths, and to form tenons of the desired thickness and length.

CLUTCH.—THOMAS J. O'BRIEN and HOMER L. ALLEN, Cairo, Ill. The invention is a clutch-pulley that can be rendered fast or loose on the shaft. The construction comprises two clutch members which, in addition to engaging the pulley to hold it fast on the shaft, serve further as a bearing for the pulley on which the pulley is carried to turn when the clutch is thrown out of gear.

EARTH-SCOOP.—WILLIAM MATTHEWS, Peak Hill, New South Wales. The earth-scoop is claimed to be stronger, more efficient and simpler in construction than any now in use. The adjustments are completely under the control of the driver. Any danger of tipping during the operation of filling is avoided. During transit the load is simply and effectively retained. One of the novel features of the invention consists in mounting the earth-scoop so that it may be rotated in the frame. The distance between the axis of the scoop and its front edge is greater than the height of the axis of the wheels from the ground, so that the front edge is caused to enter the ground in such a manner as to overturn the scoop.

CUTTING APPARATUS.—EDWARD A. MAINGUET, Evangeline, La. This cutting apparatus is designed especially for use on reaping-machines. Engaged with the cutter-bar is a lever having an operating-arm. An endless chain has on its outer side a pair of projecting rollers between which the operating-arm of the lever extends. The shafts have sprocket-wheels for supporting and driving the chain. On the shafts are pulleys connected by a drive-belt with a drive-pulley. A tightener is provided for the belt. As the chain moves around, the lever travels with it. The belt is employed for driving the sprockets of the chain evenly and smoothly. The belt may slip in case of unusual stress to prevent breakage of the parts in case the cutter-bar should meet an unyielding obstruction.

STRETCHER.—ADOLFO LURIA, Atwood Building, Chicago, Ill. This improved stretcher, designed for use not only in the field but also in private houses, is essentially characterized by a telescopic frame and hinged handles, which are adapted to fold and to be supported in extended or folded position. By means of the telescopic-frame the width of the stretcher can be adjusted to suit varying conditions.

ADJUSTABLE SCHOOL DESK AND SEAT.—JOHN M. SAUDER, deceased; Experience L. Sauder, administratrix, Philadelphia, Pa. The desk is an improvement of that class which are provided with longitudinally-slotted standards made in one continuous piece, and with pinions, racks, and nuts for adjusting the desks and seats vertically and for locking them in any adjustment from either side. Mr. Sauder simplified and reduced the number of parts heretofore required to effect such adjustment, and invented a mechanism capable of a more easy and speedy adjustment.

JOURNAL AND BEARING THEREFOR.—HERMAN THEMEL, Escanaba, Mich. The journal consists of a shaft, a ball mutilated for the purpose of admitting the shaft, and a member

fitting into the mutilation for the purpose of restoring the rotundity of the ball. By reason of this construction comparatively little lubrication is required.

VEGETABLE CUTTER OR GRATE.—FREDERICK SUELLENTROP, Lynn, Mo. A tray is carried on the upper end of a standard and has an inwardly-turned lip at one edge. In an arm carried on the upright a spindle has a bearing, which spindle is provided with a crank and with a cutter. The vegetables are held by one hand in the tray and against the cutter, which is to be rotated by means of the crank. The lip prevents the upward movement of the material in the tray.

REVERSING MECHANISM.—FRANK C. RICE, Jamestown, N. Y. The reversing mechanism is to be used on washing machines, churns, and other machines and devices to rotate the dasher or other part alternately in opposite directions. The construction is such that friction is reduced to a minimum, and the machine can be run with very little power.

VOTING MACHINE.—GUSTAF JOHNSON, Pigeon Cove, and JOHN E. HALDIN, South Boston, Mass. By means of this machine each voter is enabled properly to cast his vote, and registration of the total votes cast for each candidate, amendment, or the like is effected, all in such a manner as to prevent fraud. Broadly speaking, the invention consists of a number of manually-controlled key-spindles located one above the other; a registering device for each key-spindle, operated thereby; a vertical shaft; means for operating the vertical shaft from the key-spindles; a setting device; and mechanism for operating the setting device from the vertical shaft.

COMBINED PUNCH, GRIP, AND WRIST MACHINE.—JOHN HEISSENBERGER, Bronx, N. Y. The inventor has provided a coin-operated machine in which a punching device, a grip-testing device, and a wrist-testing device are combined. All three devices register on one dial. No two of the devices can be operated together, or any other devices alone until a coin of proper denomination has been placed in the machine. When the pointer on the dial is carried to or beyond a certain figure, the coin deposited will be returned to the depositor.

CAN-SOLDERING MACHINE.—JOHN W. GREEN, Astoria, Ore. The invention relates particularly to improvements in the solder or guide bars of can-soldering machines. The object is to provide a bar so constructed and arranged that it will not be perceptibly distorted by expansion, thus maintaining its parallelism with relation to the upper guides and causing an equal immersion of the can-heads throughout their circumference. The chain-holding weights are adjustable.

FELLY-PLANING MACHINE.—DEFIANCE MACHINE WORKS, Defiance, Ohio. This machine is the invention of Mr. George A. Ensign, well known for his many inventions in wood-working machinery. The machine is an improved planer especially designed for simultaneously dressing both sides of fellyes for vehicle-wheels to reduce the fellyes to the desired width, without the aid of skilled labor. The machine is arranged automatically to feed the felly to and between two adjustable cutter-heads to insure true and uniform planing of both sides either parallel or on a bevel. The cutter-heads can be conveniently reached whenever necessary.

AIRSHIP.—JOHN SPIES, Philadelphia, Pa. In this airship Mr. Spies has endeavored mechanically to reproduce the flight of a bird. To attain this end, his airship is both light and strong. Its wings or propelling devices are located at the most desirable point to effect the movement of the machine. A simple means is provided, under the direct control of an operator for shifting the gravity point, directing motion up or down.

CLOSET ATTACHMENT.—THOMAS A. CAMERON and PAUL T. BEYGRAU, Roseland, B. C., Canada. A water-closet attachment is provided consisting of a long strip or roll of paper, provided at intervals with openings and arranged to be fed over the seat whenever desired.

PULP-GRADING MACHINE.—LEOPOLD ZEYEN, Raguhn, Anhalt, and RUDOLF HAAS, Jr., Mauel (near Gemünd), Germany. The machine sorts paper pulp while it is suspended in water. A series of sieves having different mesh or fineness are arranged in compartments and adapted each to have a limited movement. By this arrangement only pulp of a predetermined grade is collected in each of the compartments; and the separation of the finest grade of pulp is gradual. It is possible to take from each compartment pulp of a proper grade for each particular purpose; and the work to be performed by the finest sieves is reduced, thus minimizing the danger of clogging.

COMBINED CONCENTRATOR, AMALGAMATOR, AND SEPARATOR.—WILLIAM O. JOURNEAY, Austin, Tex. To provide a simple, economical and efficient machine suitable for treating ore or gravel, dry or with water or mercury, is the purpose of the present invention. The ore is received in a chamber at the top, and discharged at the bottom. The chamber is provided with a vertical rotary shaft with stirrer. The operation of the device is very efficient, and the construction is exceedingly simple.

Tools and Implements.

PARALLEL RULER.—ANDRÉ BUSTANOVY, Manhattan, New York city. A construction

has been devised for conveniently indicating the distance separating the rulers for permitting either of the rulers to be shifted lengthwise in any of its positions, and for effectively bracing the rulers so as to hold them against bending.

WORM-WHEEL CUTTING TOOL.—KARL KNAPPE, Reinickendorf, near Berlin, Germany. A common worm-wheel cutter in the shape of a worm, the winding turns of which are formed by a series of cutting teeth having sides receding behind the cutting edges, is very suitable for cutting worm-wheels. But this tool, being very expensive, has not been widely used. In the present invention the cutting edges of the tool are arranged on a single or several pieces of flat steel secured in the milling-shaft of a machine-tool, whereby the advantage is obtained that the flat steel tube with the cutting edges can be produced in a simpler manner than the worm-wheel cutter. It is easy so to form the teeth of the flat steel tool as to cause their sides to recede behind the cutting edges.

DRILL-HOLDER.—EDWARD P. JONES, Breckenridge, Colo. Mr. Jones has devised means for adjustably holding a rock drill so that it can be placed in any position that may be desired with respect to the column. The holder is enabled thus to be placed in any position by reason of a ball and socket connection.

Railway Appliances.

CAR-SEAL.—GEORGE L. WILCOX and COURTLANDT H. VAN RENSSELAER, Manhattan, New York city. The seal consists of a body portion of box-like construction open at one end, the top of the body portion having an inwardly-turned end forming a hook at the inlet end of the body. A reduced projection or lug on the end of the hook is designed to pass into a slot formed in the hook portion of a shackle having one end secured within the body portion. It would be impossible to release the hook end of the shackle from the hook, because it will be prevented from so doing by the projection.

Miscellaneous Inventions.

GARMENT-HANGER.—PATRICK F. DENNING, Haverstraw, N. Y. The invention is an improvement in devices for supporting or holding garments and is especially adapted for use in theaters, halls and churches. The device can be attached to a suitable support—such as the back of a theater chair or pew—and adapted to hold hats, overcoats and the like. Upon being relieved of the weight of the garments, the hanger is automatically folded against its support.

BRACKET.—JAMES E. CHAPMAN, San José, Cal. The bracket consists of a platform. Extended around and secured to the under side of a rim is a supporting wire terminating in fastening points. The connected ends of the wire extend upwardly at right angles to the platform and the points are to be driven into a support. The bracket will be found useful in many places for supporting matches, lamps, soap, and the like.

METHOD OF PRODUCING PLASTIC ARTICLES BY THE AID OF PHOTOGRAPHY.—MARIO RUSSO D'ASAR, Genoa, Italy. Briefly described, the method consists first in making a photographic negative and a transparent positive of the picture to be produced plastically; then placing this positive and negative with their details in registry and with the sensitized surfaces at a slight distance from each other; exposing a light-sensitive plate or medium to light passed through the combined positive and negative; and developing and fixing the plate and using it for the exposure of a plate sensitized with bichromated gelatin. This plate upon development in water yields an uneven surface from which a plaster cast can be made, which cast then serves for the reproduction of the relief intaglio.

GUITAR.—THEODORE WOLFRAM, Columbus, O. The object of the invention is to provide an improvement in guitars, mandolins and similar instruments whereby the instrument is rendered very sensitive to the touch of the player and the tone is improved both in quality and volume. Mr. Wolfram has made two guitars in accordance with his invention and finds that the lightest touch causes a strong vibration. The tone comes stronger and more easily, and holds out much longer than with the old instrument. Mr. Wolfram, who has been a manufacturer of guitars for ten years, claims that the old instruments were weak when the size of the sounding board was considered. The system of bracing necessary to secure durability killed the tone. Mr. Wolfram extends a lining from the sides of the body adjacent to the top, and places on the under side of the top of the body a vibratory rim spaced from the lining.

BUST FORM.—EMILY H. WRIGHT, Manhattan, New York city. The device is an improvement on a bust form for which the inventor received a patent in April last. The object of the present invention is to improve the former construction so that the bust form will retain its shape for a longer time. To this end the previously patented bust form is provided with an inner portion or filling which conforms to it in shape.

DIVING-DRESS.—FREDERICK H. SPRANG, 86 Grange Road, Bermondsey, London, England. The invention has primarily for its object to enable rubber-coated fabric vulcanized in the

piece to be used, which has not heretofore been possible in consequence of the difficulty of making the seams by which the parts whereof the dress is made up are united.

MULTI-COLORED RUBBER MAT.—FREDERIC N. UPHAM, Brooklyn, New York city. The mat presents at all times a very smooth walking-surface, is subjected to even wear, and is arranged to hold the inlaid rubber tiles securely in place in the rubber sheet or plate. When the rubber mat is in use the inlaid pieces cannot work up in the sheet and be broken and forced out.

CLOTHES-LINE ATTACHMENT.—WILLIAM W. PUMYEA, Jersey City, N. J. The purpose of the invention is to provide a means for conveniently holding the ends of the pulley-lines which are commonly used in large cities. Combined with a clothes-line is a body portion with which one end of the line is engaged to form a bight received in an eye in the other end of the line. A dog in a body engages the line adjustably to hold it.

BUTTON-FASTENER.—HERMANN G. C. HÖRNING, Astoria, New York city. The button-fastener is readily applied to fasten a button in place on a garment without danger of tearing the cloth under an ordinary strain and is arranged to permit the use of the fastener on cloth or apertured buttons. The device is very simple in construction, can be cheaply manufactured, and readily applied without, as before said, tearing or injuring the garment.

HEATING AND VENTILATING APPARATUS.—JOHN F. SIMS, Illiopolis, Ill. The invention is in the nature of a novel construction and arrangement of heating and ventilating register, operating upon the principle of a closed circulation of air currents from a furnace in the cellar up to and through the several rooms of a building and thence back again to the furnace in an endless cycle.

MOUTH-ILLUMINATOR.—EDWARD EBI, Cedar Rapids, Iowa. The device is particularly adapted to the use of dentists and physicians to locate any diseased part. The illuminator consists of a casing arranged to inclose an incandescent lamp. A tube is extended from the casing; and forward of the tube two mirrors are arranged. The mirror nearest the end of the tube is smaller than the other mirror. Arms are extended from the tube; and between the arms and the mirrors are universal joint connections. A device embodying the invention can be quickly applied to an incandescent lamp; and when the lamp is suspended by such flexible connection as wires, the device can be readily moved from place to place.

DENTAL FORCEPS.—JOSEPH B. DAVIS, 727 Julia Street, New Orleans, La. In movable beak forceps heretofore devised the pressure from within outwardly on the end of the beak would tilt it in its socket, and thus have a tendency to loosen the beak in the socket. This invention provides such peculiar construction of joint between the movable beak and the jaw of the handle as will make a firm and secure connection which will resist this tendency and which in use will have a tendency to tighten instead of loosen at the joint.

FIREPLACE.—LOGAN B. ARNOLD, Hanly, Ky. Perhaps the feature of most interest in this invention is a back-plate provided on its front face with upright ribs and on its rear face with upright tubes staggered with respect to the front ribs. The tubes are open at their upper and lower ends. By reason of this construction the back-plate is prevented from warping; and the intensity of the fire can be increased so that the heating of the room is improved.

BILLIARD-CUSHION.—SAMUEL MAY, Toronto, Ontario, Canada. This improved billiard-cushion is intended to insure the proper repelling of the balls by the use of two or more graduated springs, so that the force of the ball will cause the steel springs to exert a repelling effort to prevent loss of speed in the ball and to prevent the hopping or jumping of the ball from the table. The use of this cushion moreover insures deflection of the ball at an angle equal to the angle of incidence.

SPRING-HEEL HORSESHOE.—THOMAS CUSDIN, Orrong Road, Armadale, Melbourne, Victoria. The inventor's peculiar construction of horseshoe has been devised with the intention of diminishing concussion. The shoe consists of upper and lower members welded or riveted together at the toe portion, or formed in one piece and divided toward the heel, in order to receive interposed elastic cushions. By this construction the rubber is protected from wear and all the merits of an elastic tread and the consequent avoidance of concussion are obtained without the disadvantage ordinarily resulting from the wearing of the rubber and the loosening of the nails by which the shoe is fastened to the hoof.

INDICATOR FOR SHIPS.—SAMUEL BENNISON, Galveston, Tex. The indicator is designed to show accurately and readily the draft of a vessel as well as any list and pitch. The essential features of the invention are a vertically extending support on which a swing is hung, having a straight lower portion, normally lying horizontal. A level bar is rigidly attached to the support at right angles thereto. On the swing and level bars, spirit-levels are carried. By means of these levels the pitch of the vessel is accurately indicated, as well as the list.

STEEPLECHASE OR HURDLE FENCE.—ANTONIO PASCOBELLO, 174 Grand Street, Man-

hattan, New York city. The upper portion of the hurdle is composed of a piece of rubber which preferably extends from post to post and is provided on its upper edge with a series of vertical fingers whereby a horse that falls to clear the fence will strike one or more of the yielding fingers and thereby be saved from falling or stumbling in passing over the hurdle. The rubber fingers or pieces return to place after being struck and bent over.

PHOTOGRAPHIC VIGNETTE.—WILLIAM D. CORNELIUS and FRANK L. TODD, Enid, Oklahoma Territory. The inventors have devised a vignette attachment to a camera, which is of novel simple construction, is adjustable relatively to the position of the film or plate held in the camera, so as to terminate the image of a vignette photograph at any desired point.

JOINING METAL RODS AND BARS.—OTTO SCHULTZ, Berlin, Germany. This improved method of joining metal bars will be found of particular service in forming grates. Heretofore such bars have been joined either by welding or by means of rings, rivets, or screws. The present invention consists in forming an opening in one bar, inserting the other bar in the opening, bending the bar on opposite sides of the opening, and then subjecting the bar with the opening to pressure.

BELT.—CHARLES M. BUTLER, Woneoc, Wis. The belt is to be used by men and is adapted to be worn upon the trousers to receive the waistband. Cut-out portions fit over the hip and can be adjusted properly to different positions by means of an adjustable fastening at the back of the belt in connection with adjustable fastenings on the front, these cooperating in securing a proper fit of the belt.

LOAD-BINDER.—JOHN MORTENSON, Nehart, Mont. The improved binding apparatus comprises a forked lever to which the binding-chain is attached. The chain has a swivel and terminal hook whose slot is elongated and parallel sided. The lever can be secured in the locking position by means of a rope.

LAMP-HANGER.—HERBERT L. WHITE, Bonham, Texas. This electric-light hanger comprises a casing in which a lamp-supporting tube is arranged to slide. Electric conductors extend into the tube, and pass over a pulley in the upper portion of the casing. Means are provided in connection with the conductors whereby a pull can be exerted on the conductor to move the tube upward.

PROCESS OF OBTAINING IANTHONE AND IONONE.—FERDINAND SEMBRITZKI, Holzminden, Brunswick, Germany. The process is based upon the action of phenyl-hydrazin and similar substitution products of ammonia upon ionone and lanthone, the former of which readily forms condensation products with such substitution products of ammonia, while the lanthone is not attacked at all or combines with difficulty with the hydrazins. Thus it is possible to effect the separation of lanthone from the simultaneously formed ionone obtained upon the condensation of citral and mesityl oxid and by the subsequent inversion of the resulting intermediate product.

MATCH-SAFE.—FREDERICK SCHNECKENBURGER, Wilkesbarre, Pa. The match-safe is of such construction that but a single match can be removed at a time and that an alarm is sounded when the match is removed. A sliding device is provided whereby one match at each operation of the slide will be carried from a receptacle through which the slide works, and automatically delivered at the exterior of the safe in such position that it can be quickly and conveniently removed.

CRATE.—JAMES W. SAYRE, Seneca, Mo. This berry, fruit, butter, or egg crate is arranged to hold ice in order to keep the contents cool for a long time during transportation. By allowing air to circulate the contents are kept in a perfect state of preservation for a considerable length of time.

CURTAIN POLE RING.—FRANK PERRY, Brooklyn, N. Y. Mr. Perry has invented for the John Kroder and Henry Reubel Co. a pole ring formed of tubular split rings having the ends fastened together and carrying a depending eye for engagement by a curtain hook. Mr. Perry's object is to provide a pole ring arranged securely to hold the ends of a tubular split ring in position and prevent accidental opening of the ring, and firmly to support the eye. The several parts are fastened together without the use of solder or like fastening devices.

CANDELABRUM.—HENRY F. NEHR, Brooklyn, N. Y. The candelabrum is of such construction that the arms can be quickly and conveniently adjusted to different positions relatively to the standard by which they are carried. Auxiliary standards can be attached to a support from the main standard, and are provided with adjustable candlestick supports. The entire device can be easily set up and as easily dismembered, so that each part can be separately packed in a suitable case.

SHIPPING AND FILING DESK.—CHARLES LOHRMAN, Brooklyn, N. Y. The purpose of the invention is to locate within compartments which may be termed "filing compartments," pliable partitions, so placed that a series of pockets are formed. The pockets are classified alphabetically and numerically, preferably in sections corresponding to those of the cover. To each pliable partition a spring member is applied, which will permit the partitions to be

forced to one side when a letter or memorandum is to be placed in a pocket, and which serves to restore the partitions to their normal positions when the hand is removed from the pocket.

TOBACCO PIPE.—EARL D. BUSSERT, Lima, Ohio. The pipe can be very conveniently cleaned. Passage of nicotine from the bowl along the stem to the mouth of the smoker is prevented. Liquid accumulation is arrested and prevented from escaping at the tip end of the pipe stem into the mouth while the pipe is in service. The number of parts of the pipe has been reduced to a minimum to adapt them for quick separation.

WAISTBAND.—MOSES W. WINSTON, Manhattan, N. Y. The invention relates particularly to improvements in attachments to waistbands for boys' trousers; and the object is to provide suspending attachments adapted to be engaged with buttons or with the buttonholes of suspenders, these attachments consisting of metal and being, therefore, not apt to break, as is the case with the suspending devices made of tape or elastic.

STOVE-PANEL.—NIELS N. PETERSON, Milwaukee, Wis. When a panel is made in a single section or in sections joined together, it soon becomes warped by the heat and practically useless because vessels cannot sit level thereon. To obviate this warping, the stove panel is made of inner and outer sections, each consisting of two unconnected members, the joint or conjunction of two members of one section being at right angles to the joint or conjunction of the two members of the other section.

SPINNING-TOP.—RICHARD A. LANGERMAN, Louisville, Ky. The invention is an improvement in conical wooden tops spun by the unwinding of a cord or string. The wooden body of the top is provided with a metal cap or cover secured by a spike passing axially through the body, and constructed with a large conical head having a flat portion abutting the truncated head of the top body. The weight of the head of the spike places the center of gravity of the top comparatively low and serves to prevent the cracking or splitting of the body.

Designs.

STOVE BOARD.—EDWARD M. KEMP, Rhineland, Wis. The distinguishing features of this design are a centerpiece, a border, and a background of peculiar form or ornamentation. The background is mosaic; the centerpiece is essentially a circular figure inclosing a smaller one formed of a series of overlapping rings. The border is double-lined and tessellated.

BLANK FOR SHOE UPPERS.—JOSEPH BRUNO, Haverhill, Mass. The leading feature of the design comprises a body having side flaps, tongues, and angular arms, all so arranged that they can be bent and sewn into proper position in the completed shoe.

GARMENT SUPPORTER JAW.—THOMAS F. MCCULLOUGH, Memphis, Tenn. The jaw has a concave serrated edge which runs into the serrated edge of an extension. The serrated edges serve the purpose of holding the garments securely.

EXHIBITING TRAY.—WALTER T. HATHAWAY, Brooklyn, N. Y. This tray has been especially designed for the purpose of exhibiting Colgate's soaps, and consists of a rectangular box in which is arranged a partition transversely inclined and provided with openings for the soap cakes.

MEMORIAL TABLET.—MYRON S. TELLEB, Kingston, N. Y. The design represents a memorial tablet which is to be used as a commemorative monument to soldiers. The features of the design are, therefore, appropriate to the particular purpose for which the tablet is to be used.

WALL PAPER.—PERRY WEARNE, Rixheim, Alsace, Germany. The novel feature of this design consists of a medallion, a suspended wreath around the medallion, and a pendant carried by the wreath, all appearing between parallel stripes.

WALL PAPER.—PERRY WEARNE, Rixheim, Alsace, Germany. The design in its entirety consists in the representation of panels of fancy woodwork arranged parallel and intertwined by ivy.

WALL PAPER.—PERRY WEARNE, Rixheim, Alsace, Germany. The essential feature of this design is to be found in a garland of flowers in a panel surrounded by a border ornamented with scroll work.

WALL PAPER.—PERRY WEARNE, Rixheim, Alsace, Germany. A bamboo trellis and leaves intertwined therewith form the subject of the present design for wall paper.

WALL PAPER BORDER.—PERRY WEARNE, Rixheim, Alsace, Germany. In this border roses are interlaced with ribbons crossing each other.

LAMP-SHADE.—HARRISON D. MCFADDEN, East Orange, N. J. The lamp-shade has a flaring body with bands at the top and bottom, between which the body is plaited. The top and bottom bands are connected at intervals by straps giving the complete shade a paneled effect.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.

MUNN & CO.

- Marine Iron Works. Chicago. Catalogue free.
- Inquiry No. 1783.**—For parties to make porcelain sparking plugs for gas engine ignition.
- For mining engines. J. S. Mundy, Newark, N. J.
- Inquiry No. 1784.**—For a spring power for running peanut roaster; motor to be about $\frac{1}{2}$ to $\frac{3}{4}$ horse power.
- "C. S." Metal Polish. Indianapolis. Samples free.
- Inquiry No. 1785.**—Wanted, to purchase patents on articles suitable for general consumption, such as novelties, etc.
- WATER WHEELS.** Alcott & Co., Mt. Holly, N. J.
- Inquiry No. 1786.**—For a cardboard match scratcher with space for advertising thereon.
- Stencil Machines.—A. J. Bradley, 101 Beekman St. N. Y.
- Inquiry No. 1787.**—For manufacturers of canning machinery.
- Gasoline Lamps and Systems. Turner Brass Works, Chicago.
- Inquiry No. 1788.**—For machines for printing names on aluminum tags.
- Machine chain of all kinds. A. H. Bliss & Co. North Attleboro, Mass.
- Inquiry No. 1789.**—For a double crank forging. cranks to be 180 degrees apart and 4 inches stroke, for a double cylinder gas engine.
- Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.
- Inquiry No. 1790.**—For manufacturers of water fountains, etc., for lawns.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 1791.**—For parties dealing in small armature punchings in large or small quantities.
- Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.
- Inquiry No. 1792.**—For castings for small gasoline engines.
- Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.
- Inquiry No. 1793.**—For the necessary apparatus for establishing a "Shoot the Chutes" resort.
- CANS.— $\frac{1}{2}$ pint and $\frac{1}{4}$ pint tin cans are manufactured by National Cement Co., Toledo, O. Write for prices.
- Inquiry No. 1794.**—For a machine for painting board fence signs.
- Machinery designed and constructed. Gear cutting. The Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.
- Inquiry No. 1795.**—For dealers in carbonized papers.
- Manufacturers of patent articles, dies, stamping, tools, light machinery. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.
- Inquiry No. 1796.**—For manufacturers of brass and aluminum castings for small model engines.
- Constructor and operator of wood chemical plants, including refineries and by-product apparatus. O. A. Myers, 626 West Fourth Street, Cincinnati, Ohio.
- Inquiry No. 1797.**—For manufacturers of boxes and crates.
- Designers and builders of automatic and special machines of all kinds. Inventions perfected. The W. A. Wilson Machine Company, Rochester, N. Y.
- Inquiry No. 1798.**—For dealers in magnetized steel.
- The celebrated "Hornby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.
- Inquiry No. 1799.**—For manufacturers of rubber figures, such as men, boys, etc.
- 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.
- Inquiry No. 1800.**—For manufacturers of hard rubber goods.
- WANTED—Patent articles of merit to manufacture and place on the market. Will buy or pay royalty. Give full particulars. Address Sidney Folder Co., Sidney, Ohio.
- Inquiry No. 1801.**—For a machine for sandblasting buttons.
- WANTED.—A practical mechanical engineer of good executive ability in a large textile manufacturing company. State age, experience and references. Engineer, Box 773, New York.
- Inquiry No. 1802.**—For manufacturers of locked-rubber floor covering and machinery for making the same.
- FOR SALE AT A BARGAIN.—100 tons 66 lb. steel girder relaying rails, 30 feet lengths. Wheelock twin high-pressure engines, 24 x 48 cylinders, A1 condition. M. Braudy & Sons, Grand Rapids, Mich.
- Inquiry No. 1803.**—For a patented article for general use that can be manufactured in the South.
- WANTED.—Experienced draughtsman on mill machinery and machine tools. Permanent employment assured to rapid and accurate draughtsman. Bethlehem Steel Company, South Bethlehem, Pa.
- Inquiry No. 1804.**—For manufacturers of centrifugal pumps for raising water for irrigating purposes.
- WANTED.—First-class mechanic, thoroughly familiar with, and capable of keeping in repair, engines, boilers, pumps and all labor-saving devices in use by general contractors. Apply with references to Mechanic, P. O. Box 773, New York.
- Inquiry No. 1805.**—For manufacturers of water wheels.
- The Excelsior Machinery Co., of 25 Whitecross Street, London, England, proprietors of inventions in special machinery, are prepared to develop, exploit and negotiate the sale of patented inventions, protected in Great Britain and Europe, also open to undertake the exhibit and sale of any class of machinery; having spacious warehouse and showroom accommodation with power, etc.
- Inquiry No. 1806.**—For manufacturers of hard or spring aluminum.
- EXPERIMENTAL MACHINE SHOP.—We are not using our shop at present. Well equipped with lathe, shaper, woodworking machinery, etc. Will rent use and power very low. Fine place for automobile work. Billings Clapp Co., Boston, Mass.
- Inquiry No. 1807.**—For manufacturers or dealers in spring or clock motors.
- Inquiry No. 1808.**—For manufacturers of hot water heaters for boilers.
- Inquiry No. 1809.**—For materials used in boat building.