

### RECENTLY PATENTED INVENTIONS. Apparatus for Special Purposes.

**GOLD-SEPARATOR.**—M. C. WRIGHT, Sultan, Wash. The object in this case is to provide a separator which is simple and durable in construction, very effective when in use, and more especially designed for collecting the fine gold contained in the pulp of stamp-mills or in the material of placer-mining and for providing a ready discharge of the tailings in case they cannot be dumped into a running stream for carrying them off.

**ORE-CONCENTRATOR.**—E. W. KEELER, New York, N. Y. Among the advantages of this machine are, that a given quantity of ore is operated upon in different ways and thoroughly worked before final release; also, that the resulting products—waste sand, concentrated ore, amalgamated mercury, etc.—are arranged to be accessible and subsequently operated upon independently of each other. All parts being submerged in a tank of water, permits gold-carrying sands to be so treated that gold particles may fall on a silvered surface and avoiding friction and water on plates while forcibly pushed. Free mercury cannot become floured in its path, and every particle is preserved.

**SEWAGE-EJECTOR.**—J. W. COONEY, New York, N. Y. Mr. Cooney's invention has reference to improvements in devices for raising sewage or the like from a low level, such as the basement of a building, to a sewer-main on a higher level, an object being the provision of a device of this character that will be practically automatic in its operation.

**DRYING-KILN.**—LA F. C. VAN DUZER, Biloxi, Miss. Mr. Van Duzer's invention relates to drying-kilns adapted for use in drying different substances—such as lumber, bricks, and grain—although it is more especially adapted to the treatment of lumber, for the reason that this material can be economically and thoroughly seasoned in a comparatively short space of time. It is an improvement in that class of driers disclosed by a former letters patent issued to this inventor.

**CALCINING APPARATUS.**—A. LAWRENCE, Acme, Texas. In this instance the invention refers to improvements in apparatus for calcining lime or similar material, the object being to provide an apparatus for this purpose that shall be simple in construction and having a means for keeping the material in constant agitation when being operated upon.

**AMALGAMATOR.**—G. FLETCHER, C. E. DAVIS, and B. T. DOUGLASS, St. Clair, Nev. The invention relates to improvements in amalgamators; and one object the inventors have in view is the provision of a simple and cheap construction by which they are able to collect and retain the small particles of precious metals of the kind technically known as "flour-gold" and "flour-quicksilver" from the pulp, tailings, sand, or other material.

**PROCESS OF MAKING ALUMINA AND BY-PRODUCTS.**—L. R. KEOGH, Pembroke, Canada. The object of the invention is to provide a process for the manufacture of alumina and by-products, such as hydrochloric acid, sodium sulfate, sodium aluminate, sodium carbonate, and other substances that may be contained in clay, kaolin, bauxite, or other aluminous ores, sulfate of aluminum or other aluminous materials to be treated, and sodium chloride.

### Electrical Devices.

**RHEOSTAT.**—W. A. SHERLOCK, San Francisco, Cal. In the present patent the invention has reference to rheostats, Mr. Sherlock's more particular object being to produce a neat, compact, and efficient form of instrument capable of general use and especially suitable for cutting down the current of ordinary service-wires by merely tapping into the wires.

**RECEIVER FOR WIRELESS TELEGRAPHS OR TELEPHONES.**—A. PLECHER, Bristow, Va. A capillary electrometer in this invention is interposed in the circuit between the air-terminal and the earth connection, and the rise and fall of the electrometer's mercury column from the passage of Hertzian waves there-through is made the means of announcing the call and of interpreting the message. One electrometer receives the call and another the message, a switch being so combined with both as to throw either into circuit between the air-terminal and the earth.

**ELECTRICALLY-HEATED HANDLE.**—R. A. FLESS, East Orange, N. J. In this case the improvement relates to handles that are adapted to be used in the open air in cold weather, and has for its object the provision of a simple and efficient device for heating such handles. The invention is applicable, for instance, to the handles of the steering or speed-controlling levers of horseless carriages.

**ANSWERING AND RECORDING TELEPHONE.**—T. D. FREESE and C. J. FREESE, Elyria, Ohio. In this patent the invention has reference to telephony, and the more particular object of the inventors is the provision of automatic mechanism for answering calls in the absence of the operative in charge of the station and for automatically recording message received from the line.

**ALTERNATING-CURRENT TELEPHONE.**—A. PLECHER, Bristow, Va. The invention comprehends for the transmitter two local batteries, two induction coils, and two double microphones operated by one or more diaphragms, one microphone directing alternately

reversed impulses from the local batteries through the primary wires of the coils, and the other microphone directing the alternately-reversed impulses from the secondary wires of the coils over the line, each microphone being simultaneously operated by a vibrating part common to them both.

**TROLLEY-CONTROLLER.**—W. B. LEECRAFT, Denison, Texas. Broadly stated, the invention consists of peculiar means which operate to instantly pull down the trolley-pole when its trolley jumps the conductor wire. The invention utilizes air, gas, or fluid under pressure in connection with automatic means operating, when the trolley jumps from the wire, to pull down the pole and hold it down. It provides an automatic signal for notifying the motor-man that the trolley is out of contact with the conductor-wire along the track.

### Engineering Improvements.

**WATER-TUBE BOILER.**—J. F. HOTTMAN, JR., Dubuque, Iowa. The primary object in this case is to provide a fire-box in a water-tube boiler for locomotive service, and stationary or marine service, whereby the use of stay-bolts may be dispensed with in any part of the boiler, with great saving in expense which making and placing of bolts involve and avoiding danger to safety of the boiler from breaking of bolts, to which large numbers are subject in a locomotive-boiler in service a short time.

**GOVERNOR.**—R. HARRIS, Kansas City, Mo. The invention refers to governors used for various purposes—for instance, for controlling the amount of gasoline for explosive-engines. The object is to provide a governor composed of but few parts, not liable to get out of order, and arranged to work with the greatest precision and sensitiveness to accurately control the speed of the device on which it is used.

**EXPLOSIVE-ENGINE.**—R. HARRIS, Kansas City, Mo. In this patent the invention relates to multiple-cylinder engines; and its object is to provide an engine which is very effective in operation, avoiding sudden shocks and jars, arranged to utilize the motive agent, such as gasoline and air, to the fullest advantage, and to allow of varying the ignition period and varying the length of the stroke of the piston to obtain a variable compression and explosion period.

**COOLING-JACKET.**—W. R. HAMM, Simsbury, Conn. Briefly stated, the invention comprises a jacket proper combined with a number of radiating tubes, preferably arranged in two groups, one group extending longitudinally of and around the cylinder within the jacket and the other projecting through and outwardly from the jacket. It is especially applicable to automobile-engines, although it may be used in other connections with equally or nearly equally good results.

**STEAM-BOILER.**—W. DOBLER, Sumner, Wash. This invention has particular application to improvements in boilers of marine and stationary engines. The principal object is to provide an ordinary boiler with certain adjunctive features or attachments whereby the steam-generating capacity of the entire boiler apparatus will be greatly increased. The improvement is as applicable to a construction having a plurality of boilers as it is to a single boiler.

### Hardware.

**HINGE.**—T. B. MCCREADY, Butler, Ohio. In this instance the invention refers particularly to spring-hinges for hanging screen-doors or the like, the object being to provide a hinge so constructed that the two leaves may be easily separated to remove the door, leaving one on the door and the other on the casing, which will have a better appearance than a casing when the hinge members are removed from the casing, leaving the screw-holes exposed.

**BEVEL-SIDING HEAD.**—E. C. PRICE, Eureka, Cal. This invention relates to improvements in bevel-siding heads or cutting attachments for machines for forming bevel-siding, beaded ceiling, flooring battens, and certain moldings, an object being to provide a head of novel construction and so arranged as to be readily secured to the side spindle of the machine.

**COMBINED DRILL AND REAMER.**—J. E. FUERER, Pittsburg, Pa. The object of the invention is to provide novel means for adjustably folding a drill and an improved counter-sinking reamer device in one chuck for successive use. The sleeve may be readily removed and convenient access afforded to the reamer-blades for their removal from the chuck-block. The blades may at any time be sharpened and replaced for renewed service.

**LOCK.**—O. KATZENBERGER, San Antonio, Texas. The invention relates to locks of the permutation type, such as covered by two former patents granted to this inventor. The details are such as to render the lock more convenient to operate, more difficult to surreptitiously open, enables the quick arrangement of parts on special combination, so as to change it at will, facilitates the locking of the lock when the details are changed from open adjustment, and enables the working of the lock mechanism to open it either by sense of touch or visual observation or both together.

**BRACE.**—J. HOLLEY, West Palmbeach, Fla. In the present case the invention has reference to a brace provided with a plurality of tools

permanently attached thereto, said tools being mounted in a movable holder, so that any one of the tools may be moved into position for operation the same as a tool or bit applied to an ordinary brace.

**LATCH.**—W. W. DAVES, Cartersville, Ga. The latch is designed as an improvement on that class of devices wherein the bolt is projected by the action of gravity devices. Mr. Daves provides a construction which insures an easy motion to the bolt without the use of springs, allows the bolt to be retracted by turning the knob-spindle in either direction, and allows the use of thumb-plates in connection with a combined lever and weight in lieu of the knob-spindle.

**BENCH-VISE.**—F. J. WERMES, Cincinnati, O. The purpose of this invention is to construct a vise by which a grip more powerful than heretofore may be effected and also in which the jaws will move true against each other. This end is attained by providing two screws arranged in a certain peculiar manner and coating with novel devices for simultaneously driving them, these screws thus drawing equally on the jaws and holding them true, the one with respect to the other.

### Heating and Lighting.

**GAS-RADIATOR.**—T. E. MCNEILL, New York, N. Y. This structure has a large heating and radiating surface and provides for carrying off gaseous products of combustion. Burners are close to the floor to secure circulation of warm air. The radiator induces circulation of cold air from the room, and the air to be warmed is brought into contact with the radiator in a way to prevent overheating thereof. The air supplied to the burners is drawn from the room and discharged to secure ventilation. Hot combustion products go tortuously through the radiator and heat moderately a large area of radiating surface, and they may be throttled that their escape may be retarded and the latent heat be absorbed by the radiating surfaces.

**ACETYLENE-GAS GENERATOR.**—C. A. BUTLER, Port Townsend, Wash. In the present patent the invention has reference particularly to improvements in a carbide-feeding mechanism for acetylene-gas machines, an object of the inventor being the provision of simple means for automatically feeding the carbide in desired quantities, at suitable intervals, and in an efficient manner.

### Household Utilities.

**BED-SPRING.**—J. L. BARNAMIAN, Butte, Mont. This bed-spring improvement is adapted to be used in connection with the frame of a cot or bedstead; and the object is the provision of simple and efficient means for easily taking up any slack which may occur in the article through undue stretching of the bed-spring, thus overcoming sagging of the bed and contributing to the occupant's comfort.

**ROLLING-PIN.**—W. L. STANLEY, Cambridge, Ohio. In its general form the invention comprises a cylindrical body formed of sheet metal, with annular corrugations to strengthen the same. The body is provided with heads or ends, and a central shaft is run through the pin to carry the two handles, while the cylindrical body of the pin is further strengthened by an interiorly-located spiral rod lying against the inner wall of the body and extending throughout the length thereof.

**IRONING-BOARD.**—P. A. RASMUSSEN, Beresford, S. D. This is an ironing-board of that class designed to be removably engaged with a table-top or other suitable support, and the object of the improvement is to provide a board of simple construction that may be quickly attached to a table or other support and as readily detached and that may be adjusted to supports of different heights.

### Machines and Mechanical Devices.

**MACHINE FOR CONVERTING MOTION.**—G. A. WALKER, Harrison, Oklahoma Ter. The invention relates to mechanism for converting rotary motion into reciprocatory motion. Though applicable to different uses in various arts, the improvements refer more especially to devices for imparting reciprocatory motion to the rods or dashes of churns and like structures. The principal object is to provide a mechanism simple in construction and organization of the parts or elements, and thoroughly effective in operation.

**MACHINE FOR TURNING CROSS-HEAD PINS.**—C. A. MATHENY, High Springs, Fla. Mr. Matheny's invention is in the nature of a novel construction of machine for turning the pins of cross-heads for steam and other engines. The cross-head pin which receives the pitman is ordinarily formed integral with the yoke portion of the cross-head and is connected to it between its jaws or branches at both its ends. This makes it difficult and inconvenient to turn the pins to a true cylinder. The invention accomplishes this work in a convenient, accurate, and practical way.

**MACHINE FOR INSERTING DIAGONAL STRANDS IN WOVEN-CANE FABRICS.**—L. JANSON, Brooklyn, N. Y. The purpose in this case is to construct a machine capable of being operated manually or by power, and to provide a machine in which a rotary depressing device is mounted to travel over the cane fabric, depressing the warp-strands at each side of the weft-strands, and to so reciprocate a needle

adapted to carry the diagonal strands that the needle will move concertedly with the depressing device, passing over the warp and under the adjacent weft-strands.

**PASTEURIZER.**—A. JENSEN, Topeka, Kan. This apparatus comprises a cream cylinder, having a cream-drainage connection at the bottom and a cream-overflow at the top and a flanged breast, an outer casing forming a steam-space, and removably connected to the breast, a removable cover for the cylinder having a journal-bearing and a revolving beater and scraper having a hollow axial shaft forming the inlet for the cream.

**GOVERNOR FOR CENTRIFUGAL SEPARATORS.**—H. F. HASSLER, Hecla, S. D. In this patent the invention refers to improvements in attachments for centrifugal cream-separators using the skimmed milk to accomplish the governing, an object being to provide a device by means of which the speed of the separator will be kept uniform, as it is well known that irregularities of speed cause fluctuations in the cream itself.

**FEED-REGULATOR FOR ORE-FEEDERS.**—C. Z. ELLIS, Berkeley, Cal. In the present case the invention has reference to improvements in machines for feeding ore to quartz-crushers or similar devices; and the inventor's object is the provision of an ore-feeder of simple construction and by means of which the ore can be evenly fed to the crusher or the like.

**STEAMING APPARATUS FOR CLOTH.**—F. I. BURGER, Stapleton, N. Y. The object in view in this case is to provide an apparatus for steaming fabric during the shrinking and finishing process, the device being very efficient in operation, and arranged to prevent the formation of creases in the piece and to provide a perfect draining and carrying off of the water of condensation to prevent water from passing to the fabric and to allow only very dry steam to act on the fabric.

**METHOD OF PREPARING FOOD PRODUCTS.**—J. P. ROCHE, Louisville, Ky. Mr. Roche's invention relates to a method of eliminating water from distillery-slop and simultaneously producing a composite feed material which consists of vegetable material enriched by the food constituents of the liquid portion of the slop. The present invention is not restricted to the apparatus, because the process may be carried out by different forms of machine and in other ways than by machinery.

**APPARATUS FOR PUNCHING MUSIC-SHEETS.**—H. MEYER, New York, N. Y. In Mr. Meyer's patent the invention has reference to machines for perforating music-sheets for self-playing musical-instruments; and the object is to provide a new and improved apparatus for punching the sheets in a simple and exceedingly accurate manner according to the perforations in the pattern-sheet.

**PUNCHING AND SHEARING MACHINE.**—A. A. KOCH, Montezuma, Iowa. In this case the invention relates to improvements in punching and shearing machines, and the purpose is to provide a machine designed to be operated manually and in which changes for different-sized holes may be quickly made. Different sets of punch-dies and different sets of punch-carriers may be provided.

**BEATING-ENGINE.**—E. A. JONES, Pittsfield, Mass. The object of the present invention is to provide an engine arranged to insure a proper circulation of the pulp or stock in the vat and to cause the stock to readily flow to the discharge-pipe when emptying the vat without requiring manually-actuated rakes for pushing the stock to the discharge-pipe. The invention relates to beating-engines shown and described in a former patent granted to Mr. Jones.

**PACKAGING APPARATUS.**—A. L. HOLTON, Norfolk, Va. In this instance the invention is an improvement in packaging apparatus, being in the nature of an apparatus designed for use in dividing piles of note-sheets delivered from a rolling-machine into the desired number to form books; and comprises means for delivering sheets or the like in piles of a predetermined number and automatically delivering separate strips to divide the piles.

### Of Interest to Farmers.

**HORSE HAY-RAKE.**—H. LINGELBACH, Merino, Col. The invention is an improvement in the class of so-called "push-rakes" or "sweep-rakes" by which hay is gathered by means of long teeth projecting forwardly from a rake-head, the team being hitched in rear of the latter and suitable means being provided for tilting the rake-head on the running wheels which support it.

**FOLDING CRATE OR BOX.**—W. H. CROSSLLEY, Bloomsburg, Pa. One of the principal objects of the invention is the provision of an article which shall have the side members forming the frame thereof so jointed or connected by clips or hinges that the box may be quickly folded into its knock-down position, whereby boxes may be readily shipped from place to place in bulk with great economy and saving of space and at the same time the sides of the frame will be connected by hinges, so that it will be impossible for the same to become separated.

**PLOW.**—G. S. LATTI, Beria, N. C. The improvement is particularly in weight attachments for plow-beams, whereby weight may be added at the front end of the beam in order to depress such end of the beam. The invention

is applicable to all beam plows and cultivators and can be readily applied and removed and adjusted as may be desired upon either iron or wooden beams.

**CULTIVATOR.**—G. W. HAMILTON, Council Bluffs, Iowa. Mr. Hamilton's invention refers to an improvement especially that kind adapted to simultaneously cultivate two or more rows. The purpose is to provide means under the convenient control of the driver whereby to impart either side or vertical adjustment to the cultivator-beams or both, all of the cultivator-beams being simultaneously moved to adjusted position.

**HORSE-STALL.**—G. B. EPPLEY, Washington, D. C. In this case the invention is an improved knock-down or adjustable and collapsible stall especially adapted for use in railway-cars for shipping stock, more particularly valuable horses, with safety and comfort. The panels allow ventilation without permitting the animals to interfere with one another.

**HARVESTING-MACHINE.**—J. H. BRAMMER, Hunters, Wash. The purpose of the invention is to provide means whereby to connect the cutter-bar, sickle, conveyor, and reel with the side of a vehicle and to employ an elevator in connection with the conveyor. The elevator enters a guarded opening in the vehicle-box at one side of a point centrally between the ends of the vehicle, the upper terminal being below the upper edge of the box, thus preventing loss of material by the wind or irregular driving as the material is delivered into the box.

#### Pertaining to Vehicles.

**PNEUMATIC TIRE.**—T. J. COOPER, Paterson, N. J. The inventor's purpose is to so construct a practically punctureless and non-collapsible tire and a wheel-rim of metal or wood or other material to which the tire can be quickly attached without danger of creeping, and to so construct the tire that it will not only be reliable and economic, but whereby two independent air chambers are provided supplied with air from one inlet-valve, and whereby the inlet-passages of both chambers are automatically sealed against leakage.

**WAGON-TOP.**—J. POHLIG, New Orleans, La. In this patent the invention has reference to improvements in wagon-tops, and particularly to the manner of hanging the side curtains, and the object in view is to provide simple means for guiding the curtains and keeping them straight while rolling up or unrolling.

**WHEELED SCRAPER.**—J. J. GLYDENBORG, Hillhouse, Miss. The inventor's object is to provide a scraper especially designed for use in building levees and other embankments, and in which the scoop will ride high, will be easily dumped, can be lifted out of the ground by the draft of the team, will be simple in construction, strong, durable, and easily repaired. It is an improvement in that class of scrapers represented in a former patent granted to Mr. Glydenborg.

#### Railways and Their Accessories.

**TRACK DEVICE FOR INCLINED WAYS.**—A. H. McCLURE, Majestic, Col. The improvement is adapted for use in connection with inclined ways in mines and similar localities for the rapid transit of one or more loaded cars or vehicles. The object is to provide devices by which cars may be chocked at the upper end of a way and by which also they may be readily released and caused to descend the way with the use of little power on the operator's part.

**LOCKING DEVICE FOR SEAT-GUARDS.**—S. E. JACKMAN, New York, N. Y. The object in this invention is to provide a device for the seat-guard of a car, boat, or like vehicle arranged to securely hold the guard against accidental opening or opening by passengers of the vehicle while the latter is in motion to prevent passengers from leaving the seat during the ride, thereby insuring complete safety of the passengers.

**SAFETY DEVICE FOR INCLINED RAILWAYS.**—S. E. JACKMAN, New York, N. Y. This invention relates to apparatus for use in pleasure-resorts, etc., and is a division of the application for a former patent granted to Mr. Jackman. The object is to provide a device designed to prevent accidental return or downward movement of the car while traveling on the upwardly-inclined track portion of the continuous track in case of accident to the propelling mechanism, so that complete safety of the passengers is insured.

**RAILWAY CAR.**—J. M. HETFIELD, Plainfield, N. J. The object in view in this improvement is the provision of a car of the gondola or coal-carrying type with a cover or covers which will effectually prevent the entrance of snow, sleet, or rain, preventing the danger of freezing, and thus causing a saving of time in the unloading of a car. The car is equally adapted to carry lime, as the roof is absolutely water-tight.

#### Miscellaneous.

**SEPARABLE BUTTON.**—C. YEOMANS, New York, N. Y. In this case the purpose is to furnish a button capable of being firmly and expeditiously applied, and to so construct it that the more one section is forcibly drawn from the other the more firmly will both sections remain in locking engagement, and also to so construct the socket-section that a cap member will have limited play upon the body portion, it being necessary to move this member

upon the body portion before the two button sections can be separated.

**LETTER-OPENER.**—H. C. ZENKE, New York, N. Y. The object of the invention is the provision of a letter-opener which is simple and durable in construction, very effective in operation, and arranged to enable the operator to quickly and accurately open a bunch of letters of various sizes and shapes at one operation without danger of injuring the contents of the envelope.

**GLOVE.**—C. WINKLER, New York, N. Y. In this instance the object is to provide a glove having the reinforcing portions or tips arranged to present a smooth surface to the wearer's fingers, to prevent uncomfortable contact of the wearer's fingers with projecting edges, seams, or doubled-up portions, at the same time avoiding undue thickening of the glove-fingers, but giving strength and a fine appearance.

**ERASER.**—H. B. TOOKER, New York, N. Y. The mechanical eraser in this case is more especially designed for use on type-writing machines and arranged to enable the operator to quickly and accurately erase either a single letter, sign, or the like, or a word or entire line without danger of marring the remaining writing or injuring the paper.

**MEASURING DEVICE.**—F. M. STEADMAN, Puebla, Mexico. The device is very compact, comprising simply a disk on which is mounted a roll of specially graduated tape. The size of an object at a known distance or the distance of an object of known size may be determined by noting on the tape at what distance from the eye the object will be eclipsed by the disk.

**SIGHTING DEVICE FOR CAMERAS.**—F. M. STEADMAN, Puebla, Mexico. In this patent the invention is in the nature of a sighting device for ascertaining exactly what confronting objects strike the image plane or for locating the image properly on the plane without looking on the ground glass to do so. The device is especially adapted to film-cameras with which it is impossible to use the ground glass, but is applicable to all cameras.

**CAMERA ATTACHMENT.**—W. E. MULHOLLAN, Juneau, Alaska Ter. Mr. Mulhollan's purpose is to provide a device which can be removably attached to any camera for the purpose of automatically operating the shutter at a predetermined time, enabling persons to take their own photographs from a point near to or at a distance from the camera.

**INSTRUMENT FOR HOLDING ARTIFICIAL TEETH.**—W. F. MCKIBBEN, Linneus, Mo. The purpose of the invention is to provide an instrument for holding teeth to be mounted, especially plate-teeth, so constructed as to firmly hold either end of a tooth while the other end is being operated upon and to duly accommodate the pins in the teeth whether the pins be arranged transversely or longitudinally of a tooth. Mr. McKibben has also invented another instrument for holding artificial teeth, the purpose of which is to furnish one adapted to hold what is known as "plain vulcanite teeth" for grinding purposes, the instrument so constructed that the position of the tooth may be reversed, enabling either side to be ground to the biting edge or adjacent thereof and wherein the teeth may be turned end for end and firmly held in any position.

**PANORAMIC CAMERA.**—C. MILLS, New York, N. Y. The object of the improvement is to provide a camera arranged to permit convenient adjustment of the film-carrier nearer to or farther from the lens, to allow the use of lenses of different focuses on the same apparatus, and to permit of presenting both concave and convex surfaces of the focusing-screen or film to the lens to distinctly bring out on the finished picture nearer or farther portions of the object to be photographed.

**INSECTICIDE.**—J. H. YELVINGTON and J. E. YELVINGTON, Nocatee, Fla. This solution has been employed with remarkably successful results, especially on orange-trees, pineapples, tomatoes, egg-plants, and other fruit-trees, vegetables, and cultivated plants. It acts not only as a most efficient insecticide and fungicide, but also invigorates and promotes the healthy growth and development of the trees and plants in a high degree.

**HOLDER FOR MARKING OR ERASIVE MATERIAL.**—R. P. HAFNER, Passaic, N. J. The inventor provides a holder in which a receiver is arranged to travel in direction of one or the other of the open ends of a tubular casing, which receiver is adapted to hold a stick of chalk or crayon at each end, or an erasive or marking material at one end and an erasive material at the opposite end, whereby the material attached at either end of the receiver may be exposed for use, or all the material may be concealed within the casing.

**DESIGN FOR AN EASEL.**—SABELLA G. DOHERTY, New York, N. Y. In this case the invention is of a new, original, and ornamental design for an easel. The easel is crowned with a wreath. The uprights of the back have holes for the purpose of adjustment of the picture rest to various heights. The base is highly ornamented and is placed on symmetrically curved feet, the whole effect being very agreeable.

**WAIST-BELT ATTACHMENT.**—A. T. GOLDFELD, New York, N. Y. The main purpose of this invention is to bring the plates in close-hinged connection solely by the lacing of the belt through the plates, the plates hav-

ing no direct hinge connection one to the other, and to so hinge the plates one to the other through the medium of the belt upon which they are supported that the plates will not move from the position in which they were placed.

**STAIR-ROD AND SECURER.**—S. A. BROWN, New York, N. Y. The principal object of the invention is to overcome many disadvantages and objections common to stair-rod and securer devices hitherto devised. Though applicable to wooden stairs, the improvements are especially intended for use in connection with stairs constructed of hard materials—such as marble or iron, for instance—and into which it is impossible to drive or insert tacks or the like for securing the carpet or covering in place upon the stairs.

**FISHING-BEEL.**—O. ALLEN, Lincoln, Ill. What is called "backlashing" in the reel occurs by the overrunning of the spool, and thus the cast or flight of the bait is suddenly arrested, and often, when this occurs, the bait is separated from the hook and is lost. The line must then be drawn off the spool, and is often so tangled as to require considerable time to straighten out. This invention avoids these results and delivers the line from the spool without overrunning or the necessity of applying the brake.

**BUILDING CONSTRUCTION.**—A. MENCZARSKI, New York, N. Y. In this case the invention has reference to a fireproof building construction; and the improvement comprises a peculiarly-constructed span of material laid plastic between the horizontal metal I-beams running side by side and the structure thus constituted being allowed to set and form the floors and ceilings.

**FASTENER.**—E. S. GARDNER, San Angelo, Texas, care of D. T. AVERETTE. This fastener is designed for securing the eyes to traces or tugs or fastening stirrup-leathers together, the fastener being also applicable for various other purposes, the arrangement being such that the fastener securely locks the parts together and can be conveniently opened when desired to lengthen or shorten the traces, stirrup-leathers, or the like.

**CIGAR-PERFORATOR.**—W. K. HOLMES, New York, N. Y. The purpose in this case is to provide a device which may be worn upon a watch-chain, and so constructed that it will perforate a cigar inserted therein simultaneously from opposite sides, effecting clean, clear perforations whether the cigar be green or dry, and which will not crack or break the wrapper if the cigar be dry.

**FLY-CATCHER.**—J. SCHNELL, Macon, Ga. The invention is an improvement in that class of fly-catchers in which a surface of some form is smeared or covered with a sticky substance, which may also be attractive and deadly to flies and other insects. A candle or other light-producer may be adjusted at any required distance to attract insects at night.

**BABY-COMFORTER.**—H. SPENCER, New York, N. Y. In this instance the invention refers to improvements in devices for comforting or quieting young babies, an object being to provide a device for this purpose that shall be simple in construction and that when placed in a child's mouth will not only serve to solace the child, but will afford slight nourishment.

**KNIFE ATTACHMENT.**—G. E. CROSLY, Albion, Wis. The improvement relates to an attachment for pocket-knives or for other devices having blades by which pencils may be conveniently and effectually sharpened. The edge of the knife-blade may be exposed to facilitate the cutting of finger nails, and also a roughened or filing surface is provided adapted to be used for filing and rubbing the finger-nails.

**STARTING-GATE.**—F. A. VIANEST, New York, N. Y. In this contrivance the invention has reference to improvements in starting-gates for use on race-tracks, and the object of the inventor is the provision of a starting-gate arranged at opposite sides of the race-course, of very simple construction and having a direct and quick perpendicular movement.

**VALVE.**—A. C. FAMBROUGH, Sonora, Texas. Mr. Fambrough's invention is an improvement in valves, and especially in valves designed for use in tanks. The construction is simple, easily applied to a tank, and the arrangement of valves such as will work in shallow water and permit a much greater flow, because the valve can be adjusted to a wide open position.

**PLUMB-LEVEL.**—W. B. BRADSHAW, Ennis, Texas. This device consists of a body portion having on its upper side front and rear sights, and also a compass, a depressed open-top casing having an outer arc-shaped graduated flange, a box-shaped member having pivoted support within the casing and a glass front side, a suspended bob and lower fixed point within the box or pivoted member.

**COUPLING DEVICE FOR SCREW-DRILLS.**—C. CHRISTIANSEN, Gelsenkirchen, Germany. The invention provides a coupling device by means of which screw-borers of any desired length may be composed of shorter sections. Borers constructed in this manner allow of drill-holes to be bored of any depth in a narrow shaft and transversely to its longitudinal axis. If a borer of a certain length has been driven in up to its rear end up to the mouth of the drill-

hole, an extension-piece, and so on, is attached to it by means of this device. When it is desired to sharpen the borer bit carry the lower part of the serpentine borer provided with the bit to the shop.

**PLACKET-FASTENER.**—A. D. BELL, New York, N. Y. In carrying out the invention Mr. Bell particularly contemplates the production of a clasp which may be secured to the placket of the skirt in such manner that when the placket is closed the fastener will be invisible, so that the skirt will present a neat and tidy appearance, thereby effecting a departure from the bulky, untidy seam and protruding fasteners ordinarily incident to the clasps commonly in use.

**DESIGN FOR A GLOVE.**—F. SCHMIDT, New York, N. Y. In this ornamental design for a glove, three separated bars or rows of heavy black twisted silk each bordered by a thin edge of white silk stitching extend from the knuckles to a line with the base of the thumb. A neat V shaped formation of the same material and execution as the bars complete the design.

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