RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

MILLINERY DEVICE.—J. POPPER, New York, N. Y. This invention relates to a device by which one may determine the effect of any particular style of hat without having the actual hat at hand. A relatively large card or screen is provided having a display opening for the head, and a pictorial representation of a hat about the opening, a portion of which is adjustable to and from the screen in order that the effect of the hat may be obtained.

SKIRT-LIFTING DEVICE. — M. BECHER, Wilmington, Del. The object here is to provide a device arranged for attachment to the waist of a woman, to allow her to raise the skirt evenly all around and to support it in this position without requiring the use of the hand, and with a view to prevent the skirt from being soiled when walking in rainy weather, and to allow her to use both hands freely for carrying an umbrella or when entering or leaving cars and vehicles.

BOOT AND SHOE HANGER.—C. B. ROBUCK, San Bernardino, Cal. This device is adapted for use in suspending or supporting boots, shoes, and other foot wear having a sole or heel crease, the same being in the nature of a spring clamp adapted to embrace the heel portion of the article and thus hold it by friction in any position in such manner as not to obstruct the view of the same appreciably.

Electrical Devices.

MACHINE-TELEGRAPH. — G. C. READ, Davenport Station, Toronto, Canada. Mr. Read's invention refers to machine telegraphs, his more particular object being to provide a receiver system including mechanism whereby currents sent over an electric line and made up of dots and dashes, are caused to operate the keys and analogous parts of a typewriter, so as to print the letters corresponding to the telegraphic characters.

ELECTRIC GENERATOR.—E. F. WHITE, Spokane, Wash. This invention refers to electric generators of the portable manually-operated type, the more particular purpose being to provide an improved form of such generator especially suitable for blasting and having a high degree of efficiency with great mechanical strength.

ELECTROTYPE.—A. VAN WINKLE, Newark, N. J. The electrotype is for use in galvanizing iron or steel in such a manner that a very heavy and smooth deposit is obtained. For this purpose use is made of a solution containing fluosilicate of zinc, in combination with certain salts, and a small quantity of gelatin or other organic substance that improves the deposit.

Of Interest to Farmers.

CULTIVATOR.—D. J. ELLIS, Parlier, Cal. The invention relates to cultivators, and has for its object to provide a cultivator with teeth which may be adjusted as to depth and which may also be rotated in the teeth bar so that the cutting edge may be turned to any desired angle relatively to the said bar.

PLANTER.—J. H. MCCOY, Aberdeen, S. D. The aim in this improvement is to provide economic check row devices of novel construction and accurate in operation and that will avoid the use of ropes, wires, or equivalent guides, and wherein the working mechanism includes means for effectually laying off or marking the rows to be planted.

PIG-FORCEPS.—W. ROBERTSON, Vail, Iowa. This invention is an improvement in pig forceps. In operation it will be found that the forceps may be easily inserted and engaged with the presenting portion of the pig, and when once engaged will retain a firm grasp thereon. The different sized pairs of blades also provide for the use of the same instrument on large and small animals.

EGG-CARTON.—R. M. ODELL, Hoisington, Kan. One object of the inventor is to provide a device by which eggs may be shipped without danger of breakage, in separate cells which are so joined together as to form a single package designed to be placed in a case, and when so placed to form a rectilinear body which will act as a brace for the case itself.

POTATO-PLANTER.—G. W. NATION, Alliance, Neb. This potato planter attachment is for use in connection with the agricultural implement shown and described in a co-pending application filed by Mr. Nation. In operation a roller engages an arm thus swinging the latter out of a chute and dropping a potato cut into the furrow. As soon as the roller passes the end of the arm a spring immediately returns it into a pocket to engage another cut. The disks are provided with arms, which loosen the ground and cover the potato cuts deposited in the furrow.

STRAW-RACK FOR GRAIN SEPARATORS.—J. P. NESTE, Lake Mills, Iowa. The purpose in this case is to provide details of construction for racks, which are adjuncts of a grain separator, whereby positively continuous and regular speed and reciprocating motion of the racks is assured, and a reliable separation of the grain from the straw is produced while the threshing is being conducted.

PLOW-BLADE.—O. S. JEWETT, Lordsburg, Cal. The object here is to provide a blade, which in suitable number are radially arranged and secured in lapped engagement with each other and with clamping disks, whereby a spading wheel is produced that in series is secured on an axle at suitable intervals, said axle being journaled on a frame that is adapted for progressive movement.

CULTIVATOR.—A. BRIGDEN, Albertville, Ala. The object of the invention is to produce a cultivator of simple construction, the teeth of which may be adjusted so as to change their distance apart as may be desired, and further to provide a construction which will enable the teeth to be adjusted as to their elevation to adapt the implement for use on a hillside or ridge.

PLANTER.—A. BRINKOETER, Floresville, Texas. This planter is without springs inside of the seed box which are apt to be choked or gummed by the seed or dust. The invention provides bottom plates and feed plates of different sizes, which may be used with seeds of different sizes, and also for seed which are to be planted a greater or shorter distance apart.

AGRICULTURAL IMPLEMENT.—A. C. NELSON, Nelson Township, N. D. This invention relates more particularly to such implements as are known as potato forks, and each of which in general consists of a head having a fork integral therewith, the latter being provided with a plurality of tines, a shaft having a handle at its upper end pivotably secured to the head, and means for locking the shaft in a plurality of positions on the head.

Of General Interest.

CURRENT-MOTOR.—C. A. NEYLAND, Spokane, Wash. This invention relates to wave or current motors of a class that utilize the force of a moving body of water, such as a flowing stream or tidal action, for useful effect. The purpose of the invention is to provide novel features more particularly for the current motor formerly patented by Mr. Neyland.

RELEASING DEVICE.—C. HUNT, New York, N. Y. The intention here is to provide a device arranged to permit instant releasing of the boat-lowering means from the boat as soon as the latter reaches the water, thus allowing the crew to quickly pull away from the vessel and thus prevent the boat from injury by bumping against the side of the vessel, especially if a heavy sea should prevail at the time.

APPARATUS FOR CONSTRUCTING CONCRETE PIPES.—F. TEICHMAN, San Francisco, Cal. In this patent the invention relates to concrete pipe constructions, the more particular object being to provide certain general improvements in the molds for cheapening the building of concrete pipes. An advantage lies in the arranging of the plates of the inner mold into a general spiral form to facilitate the removal and replacement of the plates as the work proceeds.

FENCE-CLAMP.—P. GREEN, Wytheville, Va. This invention is an improvement in fence clamps and relates particularly to the means whereby the lines of the wire of wire fences may be held for connection with the stretching device. The construction is simple and by forming the opposing surfaces curved, the wire will be tightly and firmly held, and as the curve prevents slipping the clamp may be operated efficiently with fewer bolts than in ordinary constructions.

FASTENING.—I. COLEMAN, New York, N. Y. The invention refers to eye glasses and spectacles, and the object is to provide a device for securely fastening the frame and lenses together without use of screws, and use is made of a stud held in a post lug and extending through an aperture in the lens, the free end of the stud being engaged by a locking device having connection with the post.

PROCESS OF MANUFACTURING SOLUBLE COMPOUNDS OF MERCURIC SALTS WITH HEXAMETHYLENE-TETRAMIN.—A. BUSCH, Brunswick, Germany. The invention consists in the application of the discovery of a process in which, for instance, dry hexamethylene-tetramin-mercuric chlorid is mixed with an equal weight of an albuminoid, soluble in water, such as albumose, peptone, alkali-albuminate, casein alkali or the like, and the mixture is dissolved in a soap solution, the mercury of the solution is in an organic form and no longer to be precipitated by the usual reagents for precipitation of mercury.

CONCENTRATING-TABLE.—J. W. MEYERS and D. F. PAINE, Ely, Nev. The table is such as used in concentrating the crushed ores of precious metals. Simple means are provided for maintaining a cover such as linoneum, in a taut condition, the general object being to prevent buckling or formation of ridges or unevennesses in the cover, which usually necessitates the removal or replacing of the cover.

Hardware.

ANTISAGGING DEVICE FOR DOORS.—C. LEHMAN, Elgin, Iowa. The purpose in this case is to provide a device which may be manufactured at little expense, and which is adapted to lift the door to a normal position after the wearing of the hinges causes it to drop out of normal position, the support being so constructed that it is certain of operation although the pintles of the hinges are out of alinement.

LOCK. — H. C. WALDECKER, Austin, Minn. This invention pertains to locks such as used on doors. It concerns itself especially with locks which employ a latch bolt for latching the door, and a bolt for locking the door. The latch bolt is withdrawn by turning the knob, while the locking bolt is operated by a key.

SAW-HANDLE.—R. D. BOWER, Oakville, Wash. The invention relates to fastening means employed for securing saw handles to cross-cut saws, and the special object is to so construct the fastening means that the parts cannot become accidentally loosened; which presents no obstructions or sharp points which might injure the hand of the workman; and which can be readily disassembled to permit removal of the handle.

BRUSH.—S. A. VER BRYCK, Belleville, N. J. The purpose here is to provide a paint-brush or the like, in which the bristles are securely attached to the head of the brush, in which the ferrule holding the bristles in position is compressed and partly imbedded in the head to hold it in place, in which a comparatively small head can be employed for holding a large quantity of bristles, and in which the necessity of extensively nailing or otherwise securing the ferrule to the head is obviated.

PROTECTION-NOZZLE FOR FIRE-HOSE.—M. J. SANGER, New York, N. Y. The production is of a nozzle having a construction which will enable a protecting sheet of water to be thrown out from the nozzle and between the firemen and the fire, so that the firemen will be protected from the smoke and gases of combustion; and to arrange the nozzle in a way that the sheet will not have the effect of producing a draft toward the fire.

KEY-RING TAG.—H. E. MILLESON, Shelbyville, Ind. Mr. Milleson's invention consists in the forming of the tag of two separate plates, one constituting an identification plate and the other a stamp-bearing plate, the two plates being so connected together that the stamp is normally protected yet may be readily exposed to view.

BELT-LACING TOOL.—J. W. KANE and W. R. CHRISTIE, New York, N. Y. This tool is adapted to be used in lacing the ends of belts together. The invention consists in a gouge adapted to cut openings in the belt of any size desired, and a slicing knife which is adapted to cut lacings for the belt of a size such that they will fill the openings cut by the gage.

LUBRICATOR FOR SAW-BLADES.—G. E. HANZINGER and S. J. RONAN, Greenville, Miss. The aim in this instance is to provide a lubricating attachment which may be easily operated when required, whereby lubricant may be discharged at will upon the saw blade so that it is enabled to make a narrower and smoother kerf with less friction. Thus lubricated a blade requires less set or spread of teeth, and will do closer, smoother work with less force.

SICKLE-SHARPENER. — O. A. HAUBENREISSER, Little Rock, Ark. The sharpener is for use in connection with a grind stone and to provide means for clamping a sickle bar on a support mounted on the frame of the stone. A universal joint permits movement of the sickle to give it the proper angle to the stone, and a counter balanced sickle carrier is arranged to be raised or lowered and to be moved lengthwise along the stone, so that the sharpening can be performed with quickness and convenience.

STIRRUP.—G. W. HOOKS, Sourlake, Texas. The stirrups are made rights and lefts, the right being the exact opposite of the left, and they will always hang in proper position for the insertion of the foot without twisting the stirrup leather. The inner side will not chafe the body of the horse. It may be made of any suitable material and form of body or foot plate to accord with the saddle.

NUT-LOCK.—W. R. GARNER, Palestine, Texas. This improvement in nut locks is especially in that class of nut locks and plates designed for use on railroad joints, frogs, cars, bridges, and the like, as well as on engines, iron fencing, buggies, wagons, and otherwise where similar locks can be employed.

Heating and Lighting.

PETROLEUM-BURNER FOR INCANDESCENT LIGHTS.—E. HOLY, Berlin, Germany. This invention relates to burners which have a horizontal flange around the top of the outer wick. This flange is usually permanently connected with the outer wick tube, but according to the present invention, it is made independently thereof, and is supported by the burner gallery, for instance, by means of arms or feet which are mounted on a ring fastened to the gallery.

VACUUM-VALVE FOR HEATING SYSTEMS.—F. SHURTLEFF, Moline, Ill. In this patent the invention is an improved valve or combination of valves for maintaining a partial vacuum in a heating system. It is capable of use with any vacuum heating system or other apparatus where it is desired to prevent the return of air after it has been expelled.

Household Utilities.

MATTRESS.—P. KLIMOWICZ and J. S. WORZALLA, Stevens Point, Wis. This mattress is intended to provide a comfortable and healthful position to the person, and to this end is constructed with an approximately transverse groove or depression in which the shoulder is adapted to sink, and a number of substantially longitudinal grooves intersecting the transverse depression to receive the forearm and a loose covering over the depressions.

COFFEE-POT.—T. J. CLEMENT, Atlantic City, N. J. This pot has a percolator which can be readily introduced and removed. The construction of the percolator is such that it holds itself fixed within the coffee pot, the member which operates to hold the percolator within the pot operating also to hold the cover of the percolator in position.

SERVING-CUP FOR BEVERAGES.—T. J. CLEMENT, Atlantic City, N. J. The cup in this instance is for use in serving beverages, and it has improved means for refrigerating the glass containing the beverage, to the end that a beverage can be kept cold even if allowed to stand a considerable time after having been served.

DIPPING DEVICE FOR BOTTLES OR JARS.—B. W. MCGINNIS, Wichita, Kan. The device is for use in holding bottles or milk jars when they are being dipped to sterilize or scald them. It can be operated in a simple manner to hold a number of bottles in a convenient manner to enable them to be dipped in a vessel having a scalding or sterilizing bath.

DINNER-PAIL.—A. M. HUNT, Hampden, Maine. The invention refers more particularly to devices for carrying food and the like which includes a number of traps for liquid and solid contents and which have means for holding heat-supplying substances such as burning coke or charcoal, for maintaining the contents of the receptacle in a heated condition.

BED.—W. H. CLING, Charleston, S. C. This invention shows a form of invalid bed in which the mattress frame can be raised at the head and lowered at the foot to suit the necessities or convenience of the occupant. Efficient means are provided for actuating the parts and for maintaining the intermediate portions of the mattress and the head portions of the mattress under the desired tension regardless of the adjustment of the bed.

COVER FOR TEAPOTS.—T. J. CLEMENT, Atlantic City, N. J. This invention is a division of the invention described in a patent the application of which was formerly filed by Mr. Clement. The improvement is useful in connection with any pot on which a beverage may be brewed from leaves or grindings; or indeed, it may be used in any connection where the contents of a serving vessel should be strained before serving.

ADJUSTABLE SHADE-SUPPORT.—C. P. WESTHAUSER, New York, N. Y. In this patent the invention is an improvement in shade and such like supports, the present embodiment of which belongs to that class of such devices in which the shade-supporting arms are adjustable to and from each other to accommodate shades of different length.

Machines and Mechanical Devices.

STARTING DEVICE FOR THE COMPRESSED-AIR MOTORS OF SELF-PROPELLED TORPEDOES.—A. E. JONES, Fiume, Austria-Hungary. This invention consists in particularly connecting the delay action flap of ordinary construction with the reducing valve of the pressure reducer arranged between the compressed air reservoir and the motor, for dispensing with the moderating part of the air admission valve ordinarily arranged between the reducer and reservoir, and the auxiliary air supply valve for disengaging or operating the gyroscope, thereby simplifying the mechanism of the torpedo while rendering it more certain in its operation.

GRINDING AND PULVERIZING MILL.—J. J. KNIGHT, Alameda, Cal. The invention relates more specifically to a mill in which communicating rollers are arranged in concentric circles upon a supporting member, and have concentric pressure rings arranged upon each circle of rollers and held resiliently and adjustably in position thereupon to force the rollers firmly against the supporting member.

WASHING-MACHINE.—R. TWOHIG, Salina, Kan. The intention is to provide a machine which can be driven by hand or by power, in which clothes, household linen, etc., can be laundried efficiently, in which the cleansing is effected by the pounding action of a beater upon the articles, which are immersed in a washing fluid such as soapy water, and in which the articles are positioned preferably upon a perforated, false bottom.

ROTARY VALVE.—S. YANKAUER, New York, N. Y. An object of this invention is to provide a valve in which the valve plug is resiliently held in place, so that leakage is effectively prevented, and in which the rotation of the valve in opening and closing the same tends to continually grind the valve plug and seat and maintain a perfect fit.

GRADER OR DITCHING-MACHINE.—W. L. DAVIS, Wabbaseka, Ark. The invention comprises a pair of blades or boards which are disposed at an acute angle to each other, the arrangement being such that when the implement is advanced one of these blades or boards presents itself in an inclined position so that its lower edge will operate as a scraper on the surface of the earth.

MOUNTING FOR BOTTLE-WASHING BRUSHES.—A. N. DAVIS, New York, N. Y. In the present patent the invention has reference to mechanism to be used in connection with bottle-washing brushes, the inventor's more particular purpose being to produce a mounting provided with a spring-controlled mechanical movement for holding the brushes in good position for washing the bottle.

WRAPPING, TWISTING, AND POLISHING MACHINE.—W. J. CAREY, Trenton, N. J. The purpose here is to provide a machine, arranged to cover a plurality of wires or cores with paper or like wrapping material, and then polish the covered cores and twist the same into a single strand, in an exceedingly simple manner and in one operation.

PARACHUTE.—T. L. ZOOK, Lima, Ohio. In

this parachute rigid guys or braces operate in conjunction with a sail or kite to extend it; and the inventor's objects are to provide means for effecting the opening of the parachute in descent; to afford facilities for folding and stowing the device, and to provide a durable and simple construction of the several parts of the parachute and its entirety.

CAPPING-MACHINE.—C. A. YOUNGMAN, Louisville, Ky. The intention of the inventor is to provide a machine, arranged to press the cap or capsule snugly onto the head and neck of the receptacle, without danger of marring the cap or capsule, or scratching or removing the paint, wax, or other material with which the cap is decorated.

Railways and Their Accessories.

SWITCH MECHANISM.—F. F. YOUNG, Lowell, Ohio. The invention pertains to railway switches, and particularly to the switches of light railways such as trolley tracks. The inventor's aim is to provide means for operating the switch from the car platform so as to obviate the necessity for operating the switch by hand.

AUTOMATIC SWITCH-STAND. — E. E. STAGGS, Hachita, New Mex. An object here is to provide a switch in which the target will always indicate the true condition of the switch. This obviates a grave danger which arises from the use of switch stands of the ordinary kind since with this invention there must be a positive movement by some one who wishes the switch to be changed before the target will indicate such change. The change made, the target will be shifted to indicate the change and will be positively locked in its shifted position.

LOCOMOTIVE ASH-PAN.—J. S. DOWNING, Atlanta, Ga. The inventor's object is to provide a novel positively operating construction for discharging ashes from the ash pan. This is an automatic self-cleaning ash pan having a system of hoes attached to the piston rod, and a cylinder adapted to receive fluid pressure for reciprocating the hoes in the ash pans for discharging the ashes thereon.

RAIL CHAIR AND BRACE.—E. JANDREAU, Cherry Valley, N. Y. The object of the invention is to provide a chair and brace, by means of which railroad rails can be securely held in place upon the cross ties, and which serve to brace the rails against lateral movement at curves and other points of the track where such bracing is necessary.

METALLIC CROSS-TIE AND RAIL-CLAMP.—H. S. KILBOURNE, Washington, D. C. An object of this invention is to provide a cross-tie of light weight but strong and durable. In carrying this out I-beams of standard sizes and shapes are used, thereby reducing cost of manufacture. The tie requires but few bolts, the main connecting member being a clamp of a peculiar form.

Pertaining to Recreation.

MOVING-PICTURE DEVICE.—W. HENDRICK, New Haven, Conn. The object of the present invention is to provide certain improvements in chaplets and shrines of the holy rosary, whereby actuating mechanism is employed and the endless web containing pictures is properly actuated, to accurately display one of the pictures at a time and to display the several pictures in the proper order according to the intended devotional exercise.

Pertaining to Vehicles.

THILL-COUPLING.—V. B. HENBY and H. FINTEL, JR., Hardy, Neb. The main object in this case is to provide an improved means for enabling the draft eye to be detached or inserted, while at the same time means are provided for holding the draft eye in close contact with the coupling pin to prevent rattling of the various parts.

POLE-TIP.—J. W. DEAM, Geary, Okla. The invention relates to tips for wagon poles and the like, and more particularly such as have resiliently controlled means for securely holding a neck yoke in place on the pole. In operation, the latch cannot drop out through the slot of the casing, as the stop with its shoulders, which are transversely disposed with respect to the slot, is covered by the end of the pole.

PNEUMATIC TIRE.—P. I. VIEL, 37 Rue de Rivoli, Paris, France. This invention relates to a tire characterized by the use of a lining formed of a metal cable of wire. This packing or lining is intended to entirely do away with ruptures resulting from excessive pressure or excessive weight, or overheating and punctures. This lining diminishes in no way the flexibility of the tire.

BOLSTER.—J. HEIMLICHER, Defiance, Ohio. The aim in this instance is to provide a bolster for wagon bodies and the like, which is light in weight and inexpensive to manufacture, and which can be easily fashioned from standard structural iron or other metal pieces, such as I-beams and channels.

Designs.

DESIGN FOR A CUT-GLASS DISH.—T. B. CLARK, Honesdale, Pa. This highly ornamental dish is of a circular form and its height is about one-half the diameter of the top and open part. The pattern cuttings are of great variety and exquisite design.

DESIGN FOR A TOBACCO-PIPE.—J. M. TATUM, Athens, Texas. The bowl in this ornamental design represents the body of a tree with several roots sawed off close at the base. The handle has a symmetrical curve. The words Dum Tacket Clamet are inscribed across the bowl and also large initial letters W. O. W. arranged vertically.

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.

NEW BOOKS, ETC.

THE COMMERCIAL PRODUCTS OF INDIA. By Sir George Watt. New York: E. P. Dutton & Co., 1908. 8vo.; 1,189 pp. Price, $5.

This work is an abridgment of "A Dictionary of the Economic Products of India," which was published in 1893-4, and which has been out of print for some time. The government of India therefore decided that a correct and abridged edition should be brought out. The instructions provided that the work should be limited to a single volume, the arrangement of which should follow that of the dictionary and should be confined to products which are at present of prospective industrial and commercial importance. The book is a monumental work, and represents a vast amount of labor. It will prove valuable to those who are in any way identified with Indian industries.

THE PHOTOGRAPHIC MANUAL. Edited by H. Snowdon Ward. London: Dawbarn & Ward, Ltd. New York: Tennant & Ward. 12mo.; 287 pp. Price, paper, 50 cents; cloth, $1, postage extra.

This is the fifth edition of an excellent English manual which incorporates the figures, facts, and formulæ of photography, and is a guide to their practical use, and is intended for all photographers. This collection of formulæ is one of the best that we have ever seen. It is a book which should be in the hands of every photographer.

THE ANGLER'S GUIDE. A Manual for Campers and Anglers. Edited by Wainwright Randall. New York: The Field and Stream Publishing Company, 1909. 18mo.; 242 pp. Price, 50 cents.

This little volume contains a description of all popular fresh-water and salt-water fish. It describes tackle and bait for the expert angler; it gives complete information on how, when, and where to fish, and a summary of the fishing resorts of the United States and Canada. The book is admirably arranged, and is very well printed. Its form is so convenient that it can be carried in the pocket. Among the features which appeal to us particularly are the views and plans of bungalows, the fishing charts, and the directions for preparing food suitable for a fishing camp. The book should be in the possession of every fisherman.

THE DIRECTORY OF DIRECTORS IN THE CITY OF NEW YORK. New York: The Audit Company, 1909. 12mo.; 860 pp. Price, $5.

The tenth edition of this useful work has just come from the press, and maintains the reputation of its predecessors for completeness and reliability. The Directory this year contains over 32,000 directors, each director's name being followed first by the name of the firm or company with which he is directly associated, and then by all the companies in which he is a director. Select lists of corporations in banking, insurance, transportation, manufacturing, and other lines of business, alphabetically arranged, accompanied in each case by the names of the company's officers and directors, are to be found in the appendix, as well as a list of the principal exchanges in New York, with their officers and managers. This is a book which no business house dealing with a large number of companies or their stocks and desiring to know by whom their clients' interests are controlled, can afford to be without.

THE IMPLEMENT BLUE BOOK. St. Louis: Midland Publishing Company, 1909. 8vo.; 460 pp.

This is a very useful book of reference for all users of or dealers in vehicles of all kinds, agricultural machinery and implements. A remarkable feature is the simplicity with which one can find any name or subject heading one wants, the book being described as "self-indexed, double-indexed, and cross-indexed." It begins with a classification of manufacturers in the alphabetical order of the implements they make, following with vehicles in the same manner. Then comes a list of manufacturers in alphabetical order, with lists of the specialties they make, and then a list of branch jobbing and transfer houses in geographical order, with the names of manufacturers whose lines they handle.

ENGINE LATHE WORK. By Fred H. Colvin. New York: Hill Publishing Company, 1909. 16mo.; pp. 180. Price, $1.

The writer is Assistant Editor of the American Machinist, and is the author of many well-known books on mechanical subjects. The present volume gives practical suggestions which will give the young machinist or apprentice the foundation principles of engine lathe work. The illustrations number 127, and are well executed. The author states that while the suggestions have been written especially for those with a limited experience, it is quite probable that many of the ideas and suggestions may be new to some of the older men who have not had a chance to see what other shops were doing.

RADFORD'S ARTISTIC BUNGALOWS. Unique Collection of 208 Designs. Chicago and New York: The Radford Architectural Company, 1908. 4to.; pp. 221. Price, $1.

In the last three years the number of bungalows which have been built in the United States has increased by leaps and bounds, and whole farms are being split up into lots for the erection of bungalows consisting of from two to five or more rooms. The work before us consists of a collection of wash drawings and floor plans. Plans and specifications for any of them are furnished by the publishers at moderate rates. The illustrations are hardly as attractive as they would be if they were made from photographs of bungalows which have actually been built.

THIRD REPORT OF THE WELLCOME RESEARCH LABORATORIES AT THE GORDON MEMORIAL COLLEGE, KHARTOUM. Andrew Balfour, M.D., B.Sc., F.R.C.P. Edin., D.P.H. Camb., Director. Published for Department of Education, Sudan Government, Khartoum, by Balliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London. Depot for U. S. A.: Toga Publishing Company, 45 Lafayette Street, New York city, 1908. 4to.; pp. 476.

The admirable work conducted in the Wellcome Research Laboratories is undoubtedly familiar to our readers. The laboratories were established to promote technical education in general; to further the study of tropical disorders, especially the infective diseases of both man and beast peculiar to the Sudan; to render assistance to the officers of health and to the clinics of the civil and military hospitals; to aid experimental investigations in poisoning cases by the detection and experimental determination of toxic agents, particularly the obscure potent substances employed by the natives of the Sudan; to carry out such chemical and bacteriological tests in connection with water, food stuffs, and health and sanitary matters as may be found desirable; to promote the study of disorders and pests which attack food and textile produce and other economic plant life in Sudan; and to undertake the testing and assaying of agricultural, mineral, and other substances of practical interest in the industrial development of the Sudan. The two volumes of reports previously issued by the laboratories cover the period from the foundation of these laboratories in 1903 to 1906. The third report completes the record up to 1908. The work of the laboratories has been so far extended that the latest report contains some 480 pages or detailed records of many interesting experiments, and researches principally connected with tropical medicine. The volume is profusely illustrated, and includes many valuable colored plates. Simultaneously with the Third Report, and as a Supplement to it, is published a Review of the Progress made in Tropical Medicine during recent years, compiled by Dr. Balfor and Dr. R. G. Archibald.

DICTIONARY OF CHEMICAL AND METALLURGICAL MACHINERY, APPLIANCES, AND MATERIAL MANUFACTURED OR SOLD BY ADVERTISERS IN ELECTRO-CHEMICAL AND METALLURGICAL INDUSTRY. First Edition. New York: Electro-Chemical and Metallurgical Industry, 1909. 12mo.; pp. 182. Price, 50 cents.

LA MORPHOLOGIE DE L'INSECTE. Par Charles Janet. Limoges, France: Imprimerie-Librairie Ducourtieux et Gout, 1909.

INDEX OF INVENTIONS

For which Letters Patent of the United States were issued for the Week Ending August 17, 1909,

AND EACH BEARING THAT DATE

[See note at end of list about copies of these patents.]

Adding machine, C. W. Gooch 931,410
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Automobile rear axle, F. C. Miller 931,451
Automobile wheel, J. A. Fleming 931,403
Awning, M. L. Bond 931,259
Axle bearing device, car, J. W. Stephenson 931,658
Axle box lubricating device, car, H. C. Gamage 931,053
Bag bundling device, G. J. Nuessen 931,468
Baker's goods, milk, postal packages, newspapers, and the like, arrangement for receiving, W. Eichelkraut 931,285
Baking powder, W. A. Beatty 931,027
Baking utensil, potato, J. F. Fairbanks 931,587
Basin, toilet, W. Rieck 931,489
Batteries, preparing alkaline electrolytes for storage, D. P. Perry 931,082
Battery elements, preparing storage, D. P. Perry 931,081
Bearing for upright shafts, step, W. H. Larrabee 931,069
Beater, M. A. Valy 931,100
Bed bottom, W. Shannon 931,148
Bed or douche pan, Williams & Scott 931,539
Bedstead lock or joint, M. D. L. Martin 931,447
Beer drawing apparatus, Handy & Phillips 931,297
Bell ringer, E. Wilson 931,108
Bell striker, T. L. Wilson 931,172
Bilge drainer, C. W. Moore 931,633
Biscuits, machine for making shredded wheat, W. E. Williams 931,243
Bit. See Boring bit.
Blast and pressure meter, E. H. Schulz 931,348
Blasting device, J. Phillips 931,341
Blowpipe, E. S. Kimball 931,623
Boat, W. N. Bell 931,177
Boat and tent, convertible, J. Vaghi 931,529
Boiler tube cleaner, J. Zilliox 931,245
Boll weevil exterminator, J. W. Evans 931,401
Bolt and nut lock, Egenas & Chapman 931,187
Book holder, E. S. Antisdale 931,111
Book, loose back, C. Chivers 931,679
Boring bit, expansible, L. W. Garner 931,593
Bottle, L. V. Phillips 931,216
Bottle cap, A. M. Miller 931,450
Bottle filling and capping head, G. Kirkegaard 931,624
Bottle filling and capping machine, T. G. Redington 931,649
Bottle filling machine, T. Roberts 931,344
Bottle stopper, G. Kirkegaard 931,625
Box, S. Bachmann 931,373
Box, A. Sabor 631,655
Box strap reel, A. Griesbeck 931,294
Braid, cord making, and similar machines, carrier for, A. Petersen 931,083
Braiding machines, etc., carrier for, A. Petersen 931,084
Brake shoe adjuster, O. S. McCurdy 931,212
Bread raiser, J. M. McIntosh 931,075
Brick molding machine, C. Simpson 931,154
Brine cooling apparatus, G. F. Dickson 931,687
Broom, S. F. Frazier 931,290
Brush, F. M. Hanaway 931,602
Brush, rotary tooth, C. L. Phillips 931,143
Brush stud support, B. A. Behrend 931,376
Building block molding machine, A. L. Post 931,644
Burglar alarm, G. J. Deffner 931,395
Burglar screen, E. A. Wayland 931,360
Cabinet for the sacristy, R. A. McEachen 931,462
Cable hanger clamp, S. B. & G. B. Dusinberre 931,399
Cager and sump guard, G. Holmes 931,203
Calorimeter, C. J. Emerson 931,189
Can capping machine, G. W. E. Brooks 931,262
Can filling machine, C. S. Bucklin 931,581
Cans and their heads, machine for clenching sheet metal, Adriance & Calleson 931,022
Cans to operating mechanisms, device for feeding, Krummel & Taliaferro 931,434
Candy, sugared nut, McDonald & Hopson 931,137
Cap, miner's, I. M. McPherson 931,463
Caps, device for applying protectors to fulminating, W. E. Miller 931,454
Capping machine, C. A. Youngman 931,244
Capping machine head, G. Kirkegaard 931,626
Car coupling, G. E. Tomlinson 931,097
Car coupling, E. F. Pendexter 931,338
Car draw bar and extension shank, M. A. Garrett 931,193
Car fender, G. W. Mahan 931,326
Car framework, E. C. Anderson 931,555
Car side bearing, railway, J. F. Courson 931,681
Carbureter, M. D. Colbath 931,386
Carton, G. Mortson 931,074
Carton, egg, R. M. Odell 931,637
Cash register attachment, O. K. Sletto 931,349
Casket lamp for hearses or funeral cars, adjustable, Roe & Antes 931,490
Celery bleaching sleeve, C. W. Mark 931,628
Cellulose article, colored, O. Muller 931,634
Cement and making same, package of sticky, A. Thoma 931,350
Centrifugal apparatus, H. E. Warren 931,707
Centrifugal screen, W. R. Cunningham 931,280
Characters on sheet material, machine for impressing, C. B. Stilwell 931,158
Chasing mill working in looped paths, G. Eirich 931,585
Check receptacle, C. Boulard 931,260
Chenile strip manufacturing mechanism, W. P. Zimmermann 931,365
Chilian mill, W. B. Easton 931,186
Chuck, drill, C. W. Manzel 931,327
Chuck release, latbe, W. L. White 931,167
Churn, M. V. Dudley 931,583
Cigar, F. Meyer 931,629
Cigar machine, F. E. Kelsey 931,314
Cigarette detachable and collapsible tip, C. A. Drucklieb 931,582
Circle divider, N. Perris 931,080
Circuit breaker, Browne & Howell 931,264
Clasp. See Veil clasp.
Clasp, Albertoni & Tropeano 931,023
Clock, electric self-winding, Steiger & Besancon 931,157
Clock register, nautical, T. Cunningham 931,278
Clutch, J. Schneider 931,500
Clutch, M. H. Fischer, reissue 13,009
Clutch, car cable, H. S. Robinson 931,089
Clutch mechanism for printing, stamping, and die presses and the like, friction, M. Rockstroh 931,651
Coal scuttle, D. O. Hedges 931,300
Coat fastening means, W. S. Barker 931,250
Coating articles, dipping process for, W. G. Scott 931,503
Coating composition, receptacle, W. R. Long 931,324
Cock, safety gas, O. R. Hasty 931,197
Coin controlled mechanism, B. M. Davis 931,574
Coke loader, Wright & Monroe 931,110
Collection box, E. E. Adams 931,549
Colliery and other inclines, safety appliance for, J. Morton 931,078
Combination rack, Haas & Giles 931,059
Commutator, dynamo electric machine, J. E. Webster 931,105
Commutator, dynamo electric machine, B. G. Lamme 931,130
Compasses, attachment for, A. E. Washburn 931,359
Compound, H. M. Sinclair 931,094
Concrete construction, reinforced, Foster & Schulz 931,049
Concrete construction reinforcing bar, P. T. Large 931,320
Concrete mixing machine, Scott & Dilgard 931,637
Concrete mold, D. E. Tingley 931,351