

RECENTLY PATENTED INVENTIONS.

Bicycle-Appliances.

BICYCLE.—JOHN A. KELLY, Brooklyn, New York city. The driving mechanism of this bicycle is so constructed that while the hands are used as drivers they may at the same moment be brought into action separately or together to steer positively. The movement of the hands may be stopped or the driving action resumed at will without at any time losing control of the steering mechanism. In directing the bicycle to the right or to the left, there is no lost motion.

LOCK.—OTTO VON NORDHAUSEN, U. S. S. "Galveston," Galveston, Tex. The purpose of this invention is to provide a device which may be attached to a bicycle and by which the pedal-crank may be locked against rotation, so that the bicycle-wheel can not turn. The lock comprises a case having two pins projecting toward each other from opposite sides and terminating short of the center of the case. Keepers are pivoted on the pins, and a bolt lies between the keepers and the ends of the pins, and is adapted to be engaged by a key to throw it. The bolt has a locking recess. A guide projects from the top of the case between the keepers, upon which the bolt slides. A locking-pin is mounted to slide in the casing, is adapted to enter the recess, is spring-held and extends outside the case, so that it may be hand-operated.

Electrical Apparatus.

STORAGE BATTERY.—CHARLES and HARRY LINDENBERGER, and WILLIAM B. TEAL, 354 Century Building, St. Louis, Mo. The casing of the battery is made of aluminium, and comprises two conducting-sections removable one from the other and insulated one from the other. A lining of insulating material extends around side walls on one of the sections. Asbestos pads placed against the lining serve as reservoirs to hold and distribute the electrolyte. Of the two battery elements employed, one is in electrical connection with one section of the casing and the other in electrical connection with the other section of the casing. An absorbent pad is placed between the two elements. There is no possibility of buckling, change of shape, or dropping out of active material.

Mechanical Devices.

WRENCH.—HARRY W. LIBBY and CHARLES R. SWETT, Canton, Me. The wrench has a shank terminating at one end in a fixed jaw and teeth adjacent to the jaw. A handle is attached to the other end of the shank, and a U-shaped slide is mounted on the shank. The head of a pin is fastened in the front portion of the slide to close and hold it movably on the shank. A tubular casing carried by the handle extends along the shank. A spring is mounted in the casing and bears between the handle and the pin to move the slide toward the fixed jaw. A roller jaw is mounted in the slide and meshes with the teeth of the shank. The roller-jaw acts with the fixed jaw to hold round, jammed, and flattened objects.

WIND-MOTOR.—JUDSON S. LONDON, Schenectady, N. Y. The purpose of this invention is to provide a wind-motor which will be very sensitive to light currents of air and which will uniformly and regularly transmit the power directly to a pump or other apparatus placed at the base of the tower. To this end the invention embodies a pole mounted to move in a number of directions and carrying a blade or object offering resistance to the wind, so that as the pole is swung from point to point with the varying gusts of wind, the movement of the pole may be transmitted through gearing to the apparatus to be driven.

CANNING-MACHINE.—OREN RUBARTS, Newport, Ore. The purpose of the invention is to provide a simple machine by means of which salmon meat can be quickly forced into the cans in an unbroken condition and avoid the handling of the meat by many persons. The canning-machine comprises a trough provided with a forming-tube. A can-clamping device at the outlet of the tube is mounted to swing relatively to a base. A cutting-blade is movable between the clamping device and the outlet end of the tube. A plunger consisting of teeth movable longitudinally of the trough is carried by a sliding cover on the trough, through which cover the teeth are removable vertically.

FIREARM.—JACOB G. AESCHBACHER, Rosario de Santa Fé, Argentina. Attachments have been devised by this inventor which can be quickly applied to any revolver or other firearm, and which will enable a marksman to use a cartridge of small caliber in a revolver or arm constructed to carry a cartridge of larger caliber, thereby not only economizing in ammunition, but also reducing the noise of the explosion and enabling a marksman to become familiar with his weapon. The attachments will not necessitate the alteration of the weapons to which they are applied nor impair the accuracy of fire of a piece.

MACHINE FOR CONSTRUCTING IRRIGATING OR OTHER PIPES.—JOSEPH H. MARTIN and DAVID ORMAND, Riverside, Cal. In this machine a section is arranged to supply material, and within the section a plunger operates. A mold has a sliding movement upon the supply-section and is provided with a revolvably mounted core. The plunger acts at one stroke to move the supply-section and at the next stroke to carry the mold in the same direction as the supply section. By reason of the friction of the mortar against the sides of the mold, the mortar or cement is prevented from being pushed through, thereby breaking the pipe already made. This friction is great enough to force the other supply section ahead.

DUMPING APPARATUS.—BRUCE SIMS, Paris, Ill. This invention is an improvement in apparatus adapted to dump loaded cars or wagons automatically irrespective of the size of their wheels. A slotted platform is provided having wheel stops of rails pivoted in the slots and having lateral projections at the front end. A transverse trip bar, having a vertical lever, is supported in hangers adapted to permit lateral oscillation of the bar. The front axles of cars or wagons having different-sized wheels will be carried down into about the same proximity to the platform, and very nearly the same inclination will be given to the car or wagon bodies in all cases.

BOTTLE-WASHER.—HENRY E. DECKER, Manhattan, New York city. The bottle-washing machine comprises a motor upon which a bracket is supported having a hollow head in which a perforated water-receiver is contained, communicating with the motor-shaft. A valved supply-pipe leads into the hollow head. A tubular shaft has connection with the water-receiver and carries wipers and a longitudinally-movable mouthpiece. A spring is attached to the motor-casing and engages the mouthpiece. The movements of the mouthpiece control the supply of water to the water-receiver. The wipers are spread outward by centrifugal action to engage against and wash the inner surface of the bottle. As the bottle is drawn outwardly the spring will move the mouthpiece with the bottle and close the valved pipe.

Railway-Contrivances.

CAR-BRAKE.—JAMES RITCHIE, Flatbush, Brooklyn, New York city. This invention provides a car-brake so constructed that any wear of the bearing between the brake-shoe and the hanger or between the banger and the hanger-head will be automatically taken up, thus insuring tight or close bearings, so that all noise or rattling incident to the setting of ordinary brakes is done away with.

Miscellaneous Inventions.

CLAMPING DEVICE FOR BROOM-HEADS.—SAMUEL P. HERRON and CHARLES F. GRAY, Bertha, Ky. This device is a simple attachment for securely binding together the straw or other material employed in the construction of the brush-sections of brooms, the device being located at the head of these sections. The clamping device is so constructed that even an unskilled person can group and correctly set up the straw and secure it firmly in the desired position.

VEHICLE.—FREDERICK MENZER, Flint, Mich. This invention provides a vehicle-body of such construction that double and single accessory seats may be located in a back extension of the body and be protected by a boot when not needed. The boot is constructed in sections arranged to lie horizontally, one adjoining the other, or occupy a vertical position and constitute backs for the accessory seats. Drop-doors in the sides of the extension enable access to be conveniently gained to the extension of the body when the accessory seats are in use.

ACETYLENE-GAS MACHINE.—JAY S. SEELY, Syracuse, and EDWIN M. RODENBERGER, Walworth, N. Y. Upon the gasometer-bell a plunger is secured, and upon the gasometer-tank a small water-tank is carried adapted to receive the plunger. As the plunger descends into the small tank, water is forced up into a pipe leading to the carbide. As the gas is generated and passes into the bell, the plunger will be carried up out of the tank, thus causing the water to subside below the level of the pipe and automatically stop the generation of gas.

CALCINING-FURNACE.—ARTHUR H. WETHEY, Butte, Mont. This calcining-furnace is an improvement on a double-hearth furnace devised by the same inventor. In the present invention a series of superposed single hearths are supported by two opposite rows of vertical posts, between which and the longitudinal sides of the hearths are arranged on suitable supports connected with the posts the rails whereupon the rake-wheels travel. The brick-work of the hearths and arches is carried by longitudinal I-beams extending along both sides of each hearth and supported by devices connected with the vertical posts. This construction and arrangement of parts have been found to possess important merits.

ACETYLENE-GAS GENERATOR.—LOREN B. WALTERS, WILL H. DAVIS, and AUGUSTUS L. HAWKINS, Georgetown, Tex. The generator comprises a gasometer within which a generator is located consisting of a water-reservoir having a gas-connection with a gasometer-bell. A water-measure is provided having a valved connection with the water-reservoir, controlled by the bell. A water-receptacle has a siphon connection with the water-measure. A carbide-retort has a gas-connection with the water-reservoir and a water-connection with the water-receptacle. The gas before being burnt is washed, dried, and filtered so as to insure the production of an exceedingly white light.

CURTAIN-PIN.—ST. CLARE F. STENNER, Portland, Ore. The curtain-pin comprises a hook for engagement with a curtain-pole ring, and a safety-pin integral with the hook and having a slidable point-receiver arranged to engage the free end of the hook to close the latter and form a keeper for the point of the safety-pin. The pin cannot be accidentally detached from the curtain and is designed for banging heavy curtains and portières of all kinds.

MEANS FOR IRRIGATION AND DRAINAGE.—EUGENE A. BAGBY, Winchester, Ky. These improved means for irrigation and drainage are readily applied to plants growing in pots on greenhouse-benches or to level or sloping ground and arranged to receive a predetermined quantity of moisture, as needed to facilitate their growth. Water from a heavy rainfall is automatically stored and distributed for use during a subsequent dry season. The invention is based upon the employment of capillary attraction.

GRAIN-DRIER.—HENRY W. CUTLER, Wilbraham, Mass. The grain drier is provided with a stationary steam-pipe comprising two pipes one within the other to form a steam-passage and a water-passage. A bead receives the outer ends of the pipes to form a steam-inlet and a water-discharge, one separate from the other. The inner ends of the passages have connection with the steam-inlet for the drying-cylinder and the discharge of the water of condensation. The steam circulates in every pipe of the drier; and binding of the steam-plug in the journal of the drying-cylinder is prevented.

ORE-CONCENTRATOR.—HENRY EARLE, Canyon, Colo. The chief difficulty encountered in the concentration of finely-divided ores is that the particles of valuable material are so nearly of the same specific gravity as the valueless material that the valuable portions float in the water and are carried away and lost. To prevent this loss, the inventor constructs his concentrator with an inclined air-tight chute, V-shaped in cross-section and divided into compartments having

communication at the bottom. The lighter material is carried off from the top portions of the compartments one independently of the other. Pipes receive the heavier particles or ores at the bottom of the compartments.

SAIL.—JOHN DUTHIE, Portland, Ore. The purpose of this invention is to provide a sail for both square and fore-and-aft rigged vessels, which sail for a given size will provide a greater wind-area and consequently drive a boat faster than the type of sail now in use. This end is attained by forming the sail with a number of concavities or recesses, produced by loose sections of canvas and arranged to reverse as the vessel changes from one tack to the other. These concavities or recesses serve to gather and retain the wind and thus increase the efficiency of the sail.

MANUFACTURE OF SOOT-KILLERS.—OLIVER R. MOFFET, Joplin, Mo. This soot-killer for furnaces and stoves consists of zinc, charcoal, and oil. In burning the composition, carbon dioxide gas is formed, which consumes the soot. The products of combustion pass through the smoke and gases of the furnace out of the chimney in the usual manner.

EGG-CARRIER.—WILLIAM H. H. ROGERS, Brooklyn, New York city. It is the object of the invention to provide a new and improved egg-carrier which is arranged with single compartments for the eggs and which can be folded when not in use. The invention consists principally of a box-body formed with a top having integral flaps cut out of the top and adapted to swing down into the box-body to form compartments with openings in the top for the insertion of the eggs.

LANTERN.—ROYAL JACKMAN, Anthony, New Mexico. The novel feature of this invention is found in a lantern-top so constructed that light-rays may be emitted through them at will, so as to illuminate objects located overhead. To this end the lantern-top is provided with an opening of due size which is normally closed by a rotary slide having a portion impervious to light and on the opposite sides an opening for the passage of light.

GASOLINE-LAMP BURNER.—ALBERT S. NEWBY, Chanute, Kans. The novel features of the invention are found in a valve comprising a body having a passage containing the valve-stem and carrying the gas-supply. The body has a coned seat for the valve-stem inward from its end. A passage extends from the seat to its end; and a thin diaphragm closes its outer end. A valve-stem having a coned shoulder engages the coned seat; and a squared end simultaneously engages the diaphragm about a bore therein; and a point or pin enters the hole so as to clean the aperture of all sediment and leave the latter clear for the escape of the gas when the valve is opened.

INCANDESCENT-MANTLE SUPPORT.—ALBERT S. NEWBY, Chanute, Kans. The main object of this invention is the provision of a mantle which is already hung upon its support so as to avoid the difficulty and the danger to the mantle of endeavoring to hang it to a separate support. The mantle and the support are furnished together, it being necessary only to insert the lower end of the mantle support within a socket to secure it in place upon the burner.

INCANDESCENT GAS-BURNER.—ALBERT S. NEWBY, Chanute, Kans. The inventor has devised a cap which can be applied to ordinary burners so that they may use a larger mantle than that heretofore employed, thus increasing the illuminating power of the lamp. To secure this result, the cap is slipped over the upper end of the tube which supplies the mixture of air and gas, the cap being enlarged at its upper end so as to spread the flame more and accommodate a large-sized mantle.

Designs.

WALL-PAPER.—HARRY WEARNE, Rixheim, Germany. The leading features of the design are a medallion upon which a cupid is pictured, a floral wreath surrounding the medallion, a basket of flowers, and a medallion between the basket and the wreath, the latter medallion being decorated with a quiver, bow, and flambeau.

CHILD'S PLATE.—JAMES H. STRUGNELL, Toronto, Canada. The bottom of the plate has a flange and a downwardly and outwardly curved rim. The plate, by reason of this construction, cannot be overturned.

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 NAVAL WORDBOOK. Ein systematisches Woerterbuch marine-technischer Ausdruecke in englischer und deutscher Sprache. Von N. W. Thomas, M. A. Kiel and Leipsic: Lipsius & Tischer. 1899. 12mo. Pp. 146. Price \$1.

The need of a good dictionary of German-English nautical terms has long been felt; and the little book which Mr. Thomas has compiled is therefore to be regarded with more than usual favor. An alphabetical arrangement of terms is perhaps to be preferred to the classification of parts adopted in the dictionary; but the usefulness of the book is thereby not impaired.

HANDBUCH DER INGENIEURWISSENSCHAFTEN. Zweiter Band: Der Brueckenbau. Herausgegeben von Th. Landsberg. Dritte vermehrte Auflage. Leipsic: Wilhelm Engelmann. 1899. Small quarto. 306 illustrations and 30 plates. Pp. 578. Price, paper \$8.

The admirable first and second editions of the "Handbuch der Ingenieurwissenschaften," so ably supervised by Drs. Schaffer and None, of the Technical High-School of Darmstadt, are so well known to most engineers, that an extensive review of this third edition is perhaps unnecessary. Prof. Landsberg in the new edition has shown himself fully equal to the task of directing a work which in its scope and thoroughness can be truly termed monumental. The third edition, revised and enlarged, will un-

doubtedly take its place among the authoritative books on engineering.

LEXIKON DER METALL-TECHNIK. Redigirt von Dr. Josef Bersch. Parts 11-15. Vienna: A. Hartleben. 1899. Each part 70 cents.

DIE MODERNE CHEMIE. Eine Schilderung der chemischen Grossindustrie. Von Dr. Wilhelm Bersch. Parts 11-15. Vienna: A. Hartleben. 1899. Each part 70 cents.

Both of these works have at various times been noticed in this column. The last installment of each is numbered 15. The "Lexikon der Metall-Technik" is nearing completion; the "Moderne Chemie" has still to run through fifteen additional numbers.

EVOLUTION DU CARBONE ET DE L'AZOTE DANS LE MONDE VIVANT. Par P. Mazé. Paris: Georges Carré et C. Naud. 1899. 12mo. Pp. 110. Cloth \$1.

This little volume on carbon and nitrogen has been written with a care which would do credit to a work more pretentious. The descriptions of chemical reactions, of analyses, and experiments are characterized by a clearness which is indeed refreshing. We have before had occasion to notice the scientific publications of Messrs. Carré et Naud. It must be confessed that the standard of the earlier scientific works has been well maintained.

THE ROYAL NAVY LIST DIARY AND NAVAL HAND BOOK FOR 1900. London: Witherby & Company, 326 High Holborn. Pp. 609. Price \$1.25.

This, the third year's issue of this admirable hand book, is characterized by the general excellence which marked its predecessors. The diary portion is arranged to give a whole page to a day and is furnished with separate index, memoranda, etc., schedules for recording all ports visited, and complete schedules for recording drills, etc., and making up official returns. In the letter-press are a calendar of notable naval events; an obituary for the year and a list of the Benevolent Funds and Institutions of the Royal Navy. Among the original articles is one on the Naval Progress of the year, which is the best of the kind we have read for some time past.

SOCIAL LIFE OF SCOTLAND IN THE EIGHTEENTH CENTURY. By Henry Grey Graham. London: Adam & Charles Black. New York: The Macmillan Company. 1899. 8vo. 2 vols. Pp. 520. Price \$7.50.

The eighteenth century is considered by many to be the most interesting in the Christian era, largely on account of precisely the same social events as are chronicled in these scholarly volumes. Probably no period was so quietly eventful in shaping the fortunes and character of Scotland as this century. The striking incidents of the period and the routine of town and country life all have their place in the readable and handsomely printed pages. Those who are fond of information regarding either men of the period or manners cannot fail to draw valuable knowledge from these admirable volumes, for no phase of the subject seems to have escaped the author.

A BRIEF HISTORY OF THE CITY OF NEW YORK. By Charles B. Todd. New York: American Book Company. 1899. 16mo, cloth. Pp. 299. Price 75 cents.

It is a most admirable idea to inculcate in the young a love for the history of some city. The history of a country is something general, while that of a city is concrete. No cities save perhaps Rome, London, and Paris repay study as well as New York with its quaint memories of Peter Minuit, Wouter Van Twiller, Wilhelm Kieft, Peter Stuyvesant and others. This little book is a most admirable one, and its field of usefulness should not be allowed to become restricted to the schoolroom; it can be read by any one with both pleasure and profit.

BEASTS. THUMB NAIL STUDIES IN PETS. By Wardlaw Kennedy. London and New York: The Macmillan Company. 1899. Square 12mo. Pp. 152. Price \$1.50.

This is one of the most delightful books upon animals that we have seen for a long time. It is a most curious and interesting book, and the illustrations are most desirable. It gives attractive pictures and anecdotes of "Pharaoh," which was brought from the Nile in the egg and hatched over a spirit lamp. The comical antics of this animal are second only in interest to the remarkable antics of the pet armadillo and an Indian mongoose. It is a book which we could recommend for the use and instruction of the young who are interested in natural history.

AN OUTLINE OF VENTILATION AND WARMING. By William J. Baldwin. New York. 1899. 18mo. Pp. 70. Price \$1.

The author is a well known expert on heating, and the information given in the little book is in concise form.

ETUDES SUR LES FOURMIS, LES GUÊPES, ET LES ABEILLES. Note 18. Aiguillon de la Myrmica rubra. Appareil de fermeture de la glande à venin. Par Charles Janet. Paris: Georges Carré et C. Naud. 1899.

EXTRAITS DES MÉMOIRES DE LA SOCIÉTÉ ZOÛLOGIQUE DE FRANCE. Sur les Nerfs céphaliques. les Corpora Allata. et le Tentorium de la Fourmi. Par Charles Janet. Three plates. Paris. 1899.

EXTRAIT DES MÉMOIRES DE LA SOCIÉTÉ ZOÛLOGIQUE DE FRANCE. Etudes sur les Fourmis, les Guêpes, et les Abeilles. Anatomie du Corcelet de la Myrmica Rubra Reine. Note 18. Par Charles Janet. One plate. Paris: Georges Carré et C. Naud. 1899.