RECENTLY PATENTED INVENTIONS.

Hardware.

LOCK.—A. N. WICKHAM, Lincoln, Neb. This lock may be placed in a door with a portion of the casing bearing the latch-bolt arm arranged uppermost. It may be inverted and placed in the door with that portion of the casing bearing latch tumblers and locking tumbler arranged uppermost. So arranged these tumblers drag over the inner casing and fall into locking engagement with the casing of their own weight, and operate even if certain springs become inoperative. Means aid in holding the tumbler edges against the inner casing, as the end of the latch bolt extends through the faceplate of the main casing.

SNAP-HOOK.—F. S. BIEBER, Poughkeepsie, N. Y. This hook may be termed a rein and trace hook, since it is particularly designed for use on the portions of the harness of horses that draw fire engines or fire apparatus or other heavy vehicles. The purpose of the inventor is to provide a snap hook that will quickly receive a ring or link, and from which the ring or link can be quickly and conveniently removed.

Heating and Lighting.

COMBINATION BOILER AND FURNACE.—N. FROST, Bloomington, Ill. This invention relates to heating apparatus having a boiler arranged within a furnace and both located within a warm air chamber, thus utilizing the generated heat for hot air heating and ventilating purposes as well as for direct or indirect steam heating purposes. The object is to utilize the heat generated by the burning fluid to the fullest advantage.

HEATING ATTACHMENT FOR GRATES.—F. A. DELPH, New Orleans, La. This attachment is for use with open grates, and consists of one or more return flues or pipes detachably connected with a front plate adapted to cover the space above the grate basket and projecting therefrom into the room where the grate is located. The plate is hinged to the grate frame so that it may be swung laterally together with the return pipe or flues, when desired to replenish the grate basket.

Household Utilities.

SAD-IRON HEATER.—N. A. WESTERLUND, Superior, Wis. The object of the improvement is to provide an arrangement whereby a number of sad-irons may be heated and moved conveniently from place to place. More specifically, the invention contemplates an arrangement whereby the same handle may be used for moving the heater or for applying the irons to the ironing board.

MOP-HEAD.—ESTHER M. LEFEVRE, New Paltz, N. Y. This mop head provides an effective means for scrubbing floors and cleaning walls, especially cornices, moldings, and ledges of all kinds, where there are numerous crevices and cornices which are difficult to reach by mop heads hitherto devised. It will be found to be of advantage in scrubbing stairways, where it is necessary to mop about railings and in the corners impossible to be reached by the ordinary mop head.

Machines and Mechanical Devices.

KINEMATOGRAPHIC APPARATUS.—R. T. HAINES, Melbourne, Victoria, Australia. The invention relates to mechanism designed to produce a more perfect reproduction of living pictures or animated scenes upon any desired exhibiting surface by obviating the fluctuation of light, flickering and blurring and by minimizing the vibration and unsteadiness, spots and other imperfections or irregularities, which render so unsatisfactory all processes and mechanisms now in use.

NUMBERING APPARATUS.—O. G. BARTUSCH, New York, N. Y. The object here is to provide an apparatus, more especially designed for use in printing presses to consecutively number the printed sheets, and arranged to permit the use of a prefix forming part of the actuating mechanism for the numbering wheels and interchangeable with a non-prefix part automatically covered up during the passage of the inking rollers to prevent inking of the non-prefix part without cutting the rollers or requiring the use of a frisket.

LIFTER ATTACHMENT FOR TYPE-SETTING AND TYPE-CASTING MACHINES.—E. C. LAMPSON, Jefferson, Ohio. It is sought by this invention to enable an operator to raise the assembler at will as many times and as often as he cares to do so, the ascent of the assembler being always made with uniform speed and both the ascent and return of the assembler being positive, yet the movement requiring principally no expenditure of energy, the entire handling of the assembler being effected by the application of power.

LOOSE-LEAF BINDER.—J. F. GLOE, Manning, Iowa. The improvement relates to that form of binder in which two symmetrical halves are made to clamp the edges of the loose leaves and have telescopic anchorage posts which protrude through slots in the leaves and also marginal clamping edges which by suitable mechanism may be adjusted toward or from each other to clamp or release the interposed leaves.

Railways and Their Accessories.

CAR-FENDER AND TRACK-CLEANER.—J. DOBOS, New York, N. Y. The provision made in this invention is for a fender and cleaner for use on street cars, automobiles, and other vehicles, and arranged to allow convenient and quick adjustment of the fender relative to the roadway or track rails, and to permit the person in charge of the vehicle to quickly throw the fender or cleaner into an active position or to move the fender into an inactive position.

LOCOMOTIVE-PILOT.—B. T. HAMILTON, Fort Smith, Ark. Switching engines are provided on their forward ends with a draw beam having a coupling adapted to be connected with a car in front of the engine. Such are generally used without a pilot or with a stub pilot so as not to interfere with coupling the engine to a car on its forward end. No pilot used, the engine is not suited for road service, as live stock when struck by the engine going at high speed are liable to be thrown under the train and cause serious accident. When a stub pilot is used the draw beam projects so far beyond the face of the pilot that the stock when struck often become lodged under the beam and fall off the pilot to the track, frequently derailing the train. This invention provides a pilot for use on an engine designed for switching or road service. Mr. Hamilton has invented another pilot, which is adapted to remove obstacles and live stock from the path of the train when used for road service, and to be adjusted relatively to the draw beam so as not to interfere with coupling of the cars to the forward end of the engine when switching.

Of General Interest.

MUSIC-HOLDER.—J. B. WAY and C. FEZLER, Patchogue, N. Y. One embodiment of this invention consists of an open frame-work having means for holding the back sheets in open position. A number of spring-pressed arms, each having a device for removably attaching it to an intermediate sheet of music, are held against the tension of the springs before the sheets are turned by the stem of the key, the latter being operable to successively release the arms and detached sheets.

LEVELING-ROD.—F. WULFF, Torreon, Coahuila, Mexico. This rod easily takes the reading on a horizontal line, through a level, to the small fractional part of a dimension and accomplishes this directly without referring to the unit marks on the rod below or above the reading and without undue straining of the eyes. The rod is covered with graduations on all sides, which provide sufficient space for marking the figures in large type, the graduations of each succeeding side differing by a fraction of a unit, which gives the graduations a spiral trend thereabout.

CHIMNEY-COWL.—E. A. GERRARD, Monroe, Neb. In this improvement the action of the wind on the uppermost blades operates to draw up smoke and the like from a revolving tube and thus increases or improves the draft and clearance at the top of the chimney as desired. The cover is formed from a flat plate of metal approximately square and bent to bring its diagonally opposite corners downward to form the side wings. The wheel is mounted to turn loosely on its shaft, the latter being bushed to operate without unnecessary noise. The vane is preferably made of sheet metal.

SEPARATING-POT.—G. NEBEL, Monterey, Nuevo Leon, Mexico. This separating pot is for use in smelting, to separate the matte from the slag, as well as from the crust formed by the cooling of the slag. The inventor remedies many defects by providing a pot without holes, and having a special shape by virtue of which the slag and matte as well as the crust are poured or taken out separately, and so rapidly that only a very thin crust is formed on the sides of the pot.

ELLIPSOGRAPH.—J. T. KELLEY, West Rush, N. Y. The invention relates to improvements in ellipsographs and more particularly to means whereby curves other than arcs of circles may be readily drawn. It is particularly designed for drawing ellipses, and the compass may be set to draw an ellipse of any given major or minor axis as readily as an ordinary compass can be set for drawing a circle of a given diameter.

PROSPECTING-TOOL.—T. JOHNSTONE, Muskegon, Mich. The tool is such as used by miners in locating ore deposits. It is especially useful for gold miners in locating gold deposits in ancient river beds or streams. The inventor's object is to produce a tool readily operated to raise a quantity of the deposited earth, and which will afford means for quickly separating the solid portions of the earth from the water which is brought up with the earth.

DENTIMETER.—R. H. MACY, West Palmbeach, Fla. One purpose of the invention is to provide an instrument especially adapted for releasing and holding the ends of a wire when measuring a tooth or a root in crown bridge work. Another is to provide an instrument of but two members, and to so construct and combine said members that the ends of a loop of wire may be quickly and conveniently inserted into the instrument and locked thereto, and as speedily released therefrom.

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.

RUSTIC CARPENTRY. Edited by Paul N. Hasluck. With numerous engravings and diagrams. Philadelphia: David McKay. 16mo.; cloth; 160 pages. Price, 50 cents.

"Rustic Carpentry" is a form of amusement that can readily be indulged in by all, whatever their mechanical skill may be. This little work contains directions for making a number of useful and ornamental objects in rustic style.

ELECTRICAL IGNITION FOR MOTOR VEHICLES. By W. Hibbert. New York: The Macmillan Company. 16mo.; cloth; 128 pages. Price, 50 cents.

The ignition of gasoline engines has become a subject of such general importance that every one connected with their operation must have some knowledge of electricity. This book deals with all phases of the subject, including batteries, both primary and storage, and magnetos. The appendix contains the principles upon which battery action is founded, as well as the fundamental laws of electricity.

MOTOR BICYCLE BUILDING. Edited by Paul N. Hasluck. With numerous engravings and diagrams. Philadelphia: David McKay. 16mo.; cloth; 160 pages. Price, 50 cents.

Although motor cycles may seem at first sight to be very complex pieces of mechanism, yet when resolved into their component parts they are reasonably simple. There is no reason why anyone of ordinary mechanical ability should not build for himself a motor cycle, if he has at his disposal the proper directions and the correct designs. This handbook contains, in comprehensible form, a number of articles contributed by a cycle and motor maker and expert, Mr. W. Travers, to "Work," a weekly journal. It is complete in all its details and contains a chapter on Ignition Coils by Mr. G. E. Bonney, the well-known writer on practical electrical subjects.

A HANDY BOOK FOR BREWERS. Being a Practical Guide to the Art of Brewing and Malting. Embracing the Conclusions of Modern Research Which Bear Upon the Practice of Brewing. By H. E. Wright. Third edition, thoroughly revised and enlarged. London: Crosby Lockwood & Son. New York: D. Van Nostrand Company. 8vo.; cloth; 562 pages. Price, $5.

Brewing is an art in which the final product is affected by a multitude of conditions, many of which have but recently been discovered, while others are so obscure that their very existence can only be guessed at. The truly successful brewer should have combined in himself, besides a knowledge of the raw materials he makes use of, the qualities that go to make up the chemist and the biologist. Naturally, a textbook on such a subject must cover a field so wide that to merely give a hint of its contents would be nearly impossible. One can form a slight idea of its efficiency from the fact that, besides the description of raw materials and their preparation, the headings, "Water for Brewing," "The Laboratory," "Ferments," "Culture from a Single Cell," and "The Brewery and Plant," are included in this excellent work, as well as a number of other chapters of almost equal importance.

THE HUMANIZING OF THE BRUTE. Or the Essential Difference Between the Human and Animal Soul Proved from Their Specific Activities. By H. Muckerman, S.J. St. Louis: B. Herder. 12mo.; cloth; 114 pages, 5 plates. Price, 75 cents.

If the thought-processes of the human mind are difficult to trace, how much harder must it be to follow the impulses that produce the activity of the lower forms of life. The most common method of investigating these impulses is very apt to be untrustworthy; namely, the observation of various actions, and the supplying, from our own experience, of the mental attitude that prompted them; since the observer projects himself into his interpretation. The author has avoided this error in his work, which consists of a collection of observations discussed with a view to proving that man owes his reasoning powers to the possession of a "soul"; a something which he alone has. To us it seems, though, that the treatise proves the lower forms of life to possess brains of correspondingly low development and memories correspondingly short, reducing the results of experience to a negligible quantity, rather than that there is a sharp dividing line between mankind and the rest of the creation.

PROBLEMS OF THE PANAMA CANAL. Including Climatology of the Isthmus, Physics and Hydraulics of the River Chagres, Cut at the Continental Divide, and Discussion of Plans for the Waterway. With History from 1890 to Date. By Brigadier-General Henry L. Abbott, U.S.A. Retired. New York: The Macmillan Company. 8vo.; cloth; 269 pages. Price, $2.

Although our nation is engaged in the completion of one of the greatest engineering projects that has ever been attempted, there is little literature on the subject that tells of the work in a complete and readable manner. "The Panama Canal" is a name that has been frequently dinned in our ears of late, yet few of us know, even in a general way, the enormous difficulties that are there being surmounted. Brigadier-General Henry S. Abbot, who was for seven years connected with the work in question, has written of the problems of the canal in a manner that deserves the highest commendation. His book is a minute and painstaking description of every detail of the great labor, with full tables of statistics in every department of the work, yet so remarkably is the subject matter composed that the interest to the casual reader is not destroyed. The engineer in search of exact information, and the layman wishing for general information will both find it equally interesting.

THE BARTON FIRST AID TEXT BOOK. A Manual for the Student in First Aid. By H. H. Hartung, M.D. Arranged and Illustrated by Roscoe G. Wells. Second edition, revised and enlarged. Boston: The National First Aid Association of America. 12mo.; cloth; 134 pages. Price, $1.

The subject of "First Aid to the Injured" should be placed in such forms as to be readily reached by all. One can never tell when his knowledge of rough-and-ready surgery may save a life. "The Barton First Aid Text Book" begins with a short description of the anatomy of the human body; it then deals with the circulation and respiration. The rest of the book is taken up with valuable information on bandaging, treatment of patients for poisoning, what to do in case of shock, and how to transport the wounded or injured.

ANNALS OF THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE. Vol. LV. Part I. Second Catalogue of Variable Stars. By Annie J. Cannon. Under the direction of Edward C. Pickering. Cambridge, Mass.: Published by the Observatory.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending August 13, 1907,

AND EACH BEARING THAT DATE

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

Adhesive applying mechanism, A. Shedlock. 863,106
Adhesive supplying mechanism, O. Tyberg. 863,119
Adjustable bracket, J. T. & G. W. Huff.. 863,068
Advertising device, W. Hornich, Jr..... 863,278
Advertising vehicle, W. A. Harrison..... 862,904
Air brakes, quick action automatic release mechanism for, L. Krimmelbein, reissue 12,680
Air compressor, motor driven, Priest & Bring 863,556
Air drill, portable, S. P. Johnson..... 863,030
Albuminous substances, treatment of, R. Desgeorge 863,268
Alimentary products, manufacture of, P. Mueller, Jr. 863,081
Aluminium, solder for, C. Ellis..... 863,058
Ammonia, etc., obtaining, H. Koppers..... 862,976
Amusement apparatus, J. W. Armitage.... 863,133
Amusement device, F. V. Croshier..... 863,262
Animals, device for the prevention of the practice of onanism in, W. Leech..... 863,291
Anthraquinone compound and making same, Isler & Kacer..... 863,397
Antiskidding device, E. B. Stimpson..... 863,331
Anvil, clamping, F. W. Covert..... 863,511
Automobile vehicles, construction of, M. Birkigt 863,348
Axle, G. G. Smith..... 863,328
Bag holder, O. P. McGregor..... 863,039
Baling presses, pumping mechanism for, S. C. Beale 863,138
Ball molding apparatus, golf and other playing, P. Dick..... 863,366
Balls, making playing, F. H. Richards.... 863,448
Bark mill, E. F. Smith..... 863,459
Basin, catch, S. G. Howe..... 863,181
Bearing box, C. D. Parker..... 863,087
Bearings, safety brass for motor, C. T. Powell 863,089
Bed, sofa, R. Deimel..... 863,365
Bench and tack receptacle, combined, W. J. Porell 863,219
Beverages, manufacture of, L. Nathan..... 863,085
Bicycle attachment, H. J. Phillips..... 862,936
Bicycle support, G. S. Tiffany..... 862,945
Bin. See Packing bin.
Binder, H. V. Wagoner..... 863,242
Blind, window, J. McCord..... 863,573
Blocking machine, F. L. Atherton..... 863,344
Board dropping device, W. Pines..... 863,439
Bobbin molding apparatus, fiber, W. H. Thompson 863,472
Boiler flue blower, T. E. Hutchins..... 863,538
Boilers, machine for fastening crown stays in, H. E. Lewis..... 863,074
Bolt clipper, H. W. Suchl..... 863,111
Book, pocket memorandum, A. Mieden..... 863,036
Bookcase, sectional, J. L. Kershaw..... 863,286
Boot hook, J. Moore..... 862,986
Bottle, antirefilling, J. B. Vaughn..... 863,476
Bottle filling machine, W. J. Cunningham.. 863,363
Bowling ball, S. G. Wilson..... 863,126
Box closure, J. P. Nikonow..... 863,427
Brake, N. J. Clute..... 863,359
Brake beam, N. H. Davis.....863,157, 863,158
Brake head, adjustable, N. H. Davis..... 863,267
Braking apparatus, W. Lockett..... 863,193
Braking construction, E. B. McKenna..... 863,420
Bread, making, D. Childlow.....862,962, 863,021
Breeching, attachment for hip or Yankee, T. F. Long 863,194
Brick cleaning machine, old, A. Le Blanc.. 863,190
Brush, W. S. Walker..... 863,243
Brush, G. S. Butterfield..... 863,260
Brush holder, W. L. Waters..... 862,951
Buckle, W. J. Fleming..... 862,892
Buckle, A. S. Huntington..... 863,280
Buckle, cross line, J. H. Haughawout..... 862,907
Buckle, cross line, T. Bean..... 862,959
Building block, J. H. Denmead..... 862,887
Building block, H. L. Pegram..... 863,435
Building block, R., G. & A. Arnsen..... 863,493
Building block, tile faced, W. P. Meeker... 863,925
Button, F. P. Pfleghar..... 863,438
Button, separable, J. W. Lomax..... 863,543
Buttons, making pearl, N. Barry, Jr..... 863,498
Calamins, process to utilize the inferior, F. S. Moyano 863,417
Camera lenses, adjustable standard for, F. V. Conley 862,883
Can, E. Norton 863,086
Can closure, E. A. Hawkinson..... 862,908
Can or box opener, R. S. Hiltner..... 863,393
Cane cutter, E. M. Hibbler..... 863,534
Car door, grain, D. S. Bailey..... 863,494
Car fender, L. Ostermeyer..... 863,209