RECENTLY PATENTED INVENTIONS.

Engineering Improvements.

CARBURETER FOR EXPLOSION-ENGINES.—HUBERT C. RAY, Visalia, Cal. The carbureter comprises an exhaust-heated carbureting-tank and engine-heated air-supply discharging beneath the oil in the carbureter. An engine-supply pipe connects the carbureter and engine. A combined oil-supply and surplus-gas condenser is also provided consisting of a tank having a pipe for conveying oil to the carbureter, and a pipe leading from the gas-space of the carbureter to beneath the oil-level in the supply-tank and provided with a safety-valve. With this carbureter crude oils can be used instead of refined petroleum or gasoline.

Mechanical Devices.

AUTOMATIC CAGE-REST.—MARTIN HORST, North Lawrence, Ohio. The object of the invention is to provide a new and improved cage-rest which is simple in construction and automatic in operation, moving instantly into an active position in order safely to support the cage at the top of a shaft or mine. The invention comprises supports for the cage and mechanism controlled by the cage and connected with the supports to hold the latter in open position in its ascent. The supports immediately move into a closed position when the cage has passed above them.

ELEVATOR.—PARLEY D. ROOT, Wakefield, R. I. Safety-doors for shafts have been devised, and a novel car which travels in the shaft. The doors at the floors of the shaft and the door in the elevator are independently mounted and yet so arranged that, while both sets of doors are closed, the car can freely pass up and down the shaft. When, however, the car is stopped at a floor and its door is opened, the door in the shaft at that floor will be simultaneously opened; for the two doors will at that time be brought into interlocking engagement, and one will operate with the other. The car cannot move up or down when a door is open.

CULINARY MASHER AND STRAINER.—RICHARD F. HAYES, Manhattan, New York city. This device can be attached to any suitable support, and by its means food can be quickly mashed and soups clarified. The device is so constructed that the sieves through which the material is to be pressed can be conveniently changed to suit the different conditions of material to be treated and that the device can be operated with the use of but one hand. The parts can be easily disconnected and cleaned.

TYPE-WRITER. — ROBERT J. MINER, Greenwich, Conn., and WILLIS E. MINER, Roselle, N. J. This machine is a typewriter for perforation, so that by the ordinary manipulation of the keys a stencil-sheet can be formed from which any desired number of copies can be taken by means of an inked roller, the ink being forced through the perforations to the paper beneath. The machine is therefore particularly useful in railway offices, where a large number of way-bills or the like are required. Either the stencil-type or the ordinary type for printing can be operated by a single bank of keys.

Miscellaneous Inventions.

GOLD-UNDERGLAZED KERAMIC DECORATION.—GEORGE W. TOOKER, 48 Murray Street, Manhattan, New York city. The purpose of this invention is to apply gold decoration to porcelain and glassware so that it will resist the action of alkaline and abrasive substances and will last as long almost as the article to which it is applied. On the china or glassware precipitate of gold is first applied. The article is then fired and the gold surfaces burnished. A glaze is then applied to the gold surfaces and the article again fired at a temperature lower than that of the previous firing. The glaze is now fused and the gold made a corporate part of the ware. The inventor states that the glaze is impervious to alkaline substances and proof against abrasion. This invention is applicable to the following: Household and fancy china, toilet ware, bath tubs, wash basins, water closets, tiling, false teeth, glass ware, etc.

FOUNTAIN-PEN.—CARL J. RENZ, Manhattan, New York city. The invention is so conceived that the pen can be partially or entirely drawn within or without the nozzle by means of a key at one end of the barrel, to vary or entirely cut off the flow of ink. An independent metal feed is employed as an upper or an under feed. The barrel is provided with a piston and stem, the latter having a screw connection with the barrel. The stem has a pen-carrying head which serves as a valve for the socket or nozzle, whereby when the piston is moved in one direction the ink is drawn by suction into the barrel from the pen, and when moved in another direction the ink is forced from the barrel to the pen.

Designs.

FLASK.—JEREMIAH QUINLAN, Manhattan, New York city. The design consists of a flask which in general contour and appearance resembles a shirt.

MARINE PROPELLER.—CARL RONDELL, Stillwater, Minn. The principal features of this design are, first, the arrangement of the radial propeller-blades in a spiral line around a cylindrical hub, and, secondly, the form of the blades, the same being concavo-convex and straight on their entering or cutting edges and convex on their opposite ones.

TEAPOT. — AUSTIN F. JACKSON, Taunton, Mass. This patent is for an ornamental design for a teapot, involving a scroll-work center piece, and floreated and foliated sprays, including daisies, wild roses, and a conventional rosebud.

SAW-SET AND GAGE.—LEWIS VALENTINE, Claquato, Wash. The device is particularly adapted for setting cross-cut saws. An oval handle is adapted to be held in the hand while supporting the device with three of its face projections against a saw-blade so that the fourth projection may gage the angle or lateral inclination of a saw-tooth, and also while the flat end of the device is held against a saw-tooth when the latter is struck with a hammer, for giving it more or less inclination.

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DIE EISENKONSTRUKTIONEN DER INGENIEUR-HOCHBAUTEN. Ein Lehrbuch zum Gebrauche an Technischen Hochschulen und in der Praxis. Von Max Foerster. Third Part. Post Octavo. Illustrated. Leipsic: Wilhelm Engelmann. New York: Gustav E. Stechert, 9 East Sixteenth Street. 1900.

The third part of Prof. Foerster's admirable text-book is devoted to a very thorough discussion of trussed and arched roofs. The clearness and exhaustiveness which characterize Prof. Foerster's work have been more than once mentioned in our reviews of previous parts. This third part fully attains the high standard set in the beginning.

A COMPLETE METRICAL RECKONER. South Omaha, Neb.: Hermann Brothers. 16mo. Pp. 208.

The book is divided into sections from 1 to 100. Folding manila cards at the front and back are turned into place so that any figure from 1 to 100 appears in an aperture which is cut in the card. It is by this means made easy to read off from the calculated weights and measures the exact weight or quantity. The result is a very handy metrical reckoner. In going from the metrical system to the ordinary the card on the right-hand side of the book is used.

PHOTOMETRICAL MEASUREMENTS AND MANUAL FOR THE GENERAL PRACTICE OF PHOTOMETRY. With Special Reference to the Photometry of Arc and Incandescent Lights. By Wilbur M. Stine, Ph.D. New York: The Macmillan Company. 1900. 16mo. Pp. 270. Price $1.60.

The rapid extension of the practice of photometrical measurements in this country, and the general interest in standards of illuminating power and allied subjects, evidenced by frequent contributions to technical periodicals and by papers read before the various associations, has been the occasion for the preparation of this work. The author has produced a most valuable treatise, which will meet the requirements of a large number of readers. The explanations are lucid, and it is well illustrated by engravings and diagrams.

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