

RECENTLY PATENTED INVENTIONS.
Electrical Devices.

SANITARY ATTACHMENT FOR TELEPHONE-TRANSMITTERS.—J. W. DOLSON, New York, N. Y. This attachment is arranged to enable the user of a telephone to speak against a clean piece of webbing extending across the mouth of the receiver, to insure the proper transmission of the sound to the diaphragm of the transmitter, and at the same time prevent the speaker from inhaling any unhealthy exhalations of a previous user of the telephone.

LOCK FOR ELECTRIC SWITCHES.—F. W. BRANDOW, Pittsfield, Mass. The invention relates to means for locking an automobile or vehicle of similar character in an inoperative condition, so as to prevent the vehicle from being removed or operated by any one not authorized to do so. It remains in such position until the switch is released by one familiar with the combination of the lock.

PARTY-LINE TELEPHONE SYSTEM.—G. E. TERHUNE, W. M. EDSON, and W. B. HUSTON, Willow Hill, Ill. The invention provides an efficient lockout for preventing eavesdropping and interruption in conversation. Conceals the identity of such stations as may be busy, thereby preventing operators at other stations from ascertaining what persons are talking. Brings all business of the line under direct surveillance of operator at central station, thereby facilitating the ascertainment of tolls. Provides a selective call which disturbs no station except those desired; and, provides certain details toward simplicity, positiveness of action, and general efficiency of party line.

Of Interest to Farmers.

MILK-SAMPLER.—W. F. BÜCHER, Washington, D. C. In sampling milk from a can, it is important to secure equal portions throughout the vertical area being sampled, and also important to secure the sample without disturbing the cream or agitating the same so as to secure more than the proper proportion, and in doing this the inventor finds it important to arrange the tube so that it will cut down through the cream and thence down through the milk to the bottom thereof, and leave the lower end of the tube practically unobstructed until the bottom of the can is reached. The invention secures this result.

Of General Interest.

ATTACHMENT FOR SEWING MACHINES.—ANDREW G. ROSENTHAL, 872 Clinton Street, Milwaukee, Wis. The device comprises a pin cushion and thimble holder, formed on a plate which may be attached to a machine, by fitting it over the spool holder. A piece of emery paper on the plate provides means for sharpening the points of needles. In the complete illustrated description of this device, which appeared on page 396 of the SCIENTIFIC AMERICAN, Mr. Rosenthal's initials were incorrectly stated. The correct address is given above.

SUPPORTING STRUCTURE FOR BUILDING CULVERTS AND THE LIKE.—E. F. PARCAUF, Sutherland, Iowa. The object of this improvement is to provide a supporting structure for building culverts and the like of cement, concrete or other material, the structure being arranged to permit of quickly and conveniently building the culvert and to allow ready removal of the structure after the concrete or cement has set and hardened.

TELLURIAN.—C. B. MARTIN, Portland, Ore. The invention relates to educational appliances, and its object is to provide a new and improved tellurian arranged to demonstrate the various relations of the globe relative to the sun and moon, with a view to explain the different times, seasons, moon's phases, tides, etc.

FOREHEAD-BAND.—C. W. MABEY, Indianapolis, Ind. The invention has for its object to provide means adapted to relieve a person of headache and insomnia. The covering material may be saturated with chemicals of a character suitable to relieve headache or insomnia, and such chemicals are by means of such device adapted to be drawn from the covering material by the heat of the forehead of the wearer. It may be worn with a hat.

PENCIL-HOLDER AND POINT-PROTECTOR.—R. KLIPFEL, Larimore, N. D. In this instance the invention refers to certain improvements in devices for holding pencils and protecting the points thereof when not in use, and provided with a fastener by which the same may be instantly secured to the inside or outside of a pocket or to any other portion of the clothing.

MANIFOLDING-PAD.—S. W. GASS, Evart, Mich. This pad is to be used by store clerks in the recording of sales, where it is necessary to make duplicate slips of the name and price of each article sold, or other memoranda. For this purpose the inventor has constructed a book box adapted to contain a ribbon folded in a manner to pass freely from the box as it is withdrawn. The ribbon is made in two or more layers, passes over the top of the box to inclose carbon sheets therebetween in order that when the top layer is written upon, two copies more will result. Means provide for inprinting the succeeding layers.

ORNAMENTAL FENCE.—J. FORSTER, Los

Angeles, Cal. The invention involves the use of a small amount of lumber, therefore making it economical of construction, and the parts may be all cut out by machinery and sold in a detached form to the person desiring to use the same, for the parts may be so easily assembled that a skilled workman is not necessary.

COMPOSITION FOR TREATING PAPER.—J. CERNY, New York, N. Y. The invention is an improved composition for treating paper, especially in the form of card-board, rendering it hard, durable and resistant, particularly desirable in the manufacture of hair bottoms and many other articles. They will withstand wear and rough usage like wood.

MANUFACTURE OF ALLOYS.—G. E. BUTTENSCHAW, Beechwood, Choriton-cum-Hardy, Manchester, England. The object of this invention is to produce articles in an alloy suitable for use in the construction of marine engines, pumps, sea valves, torpedo tubes, and the like, which are brought into contact with salt water and which shall not be liable to oxidize or set up galvanic action in the presence of iron and steel.

Household Utilities.

CLOTHES-LINE HANGER.—F. W. STEUER, Plainfield, N. J. The design in this invention is to provide a hanger to support a clothes line, and so constructed and arranged as to enable clothes to be placed on the line by a person within a room, and thereby avoid the dangers incident to leaning out of a window for that purpose.

COMB.—J. G. HIGGINS, Chattanooga, Tenn. The invention relates to combs, such, for instance, as are used for dressing the hair, the more particular object of the inventor being to provide certain constructional details whereby the comb is rendered composite in character, its several parts being thus rendered interchangeable.

FIRE-KINDLER.—W. H. HAGGERTY and W. J. DARDIS, New York, N. Y. The invention is an improved means for kindling fires, consisting of a suitable gas burner adapted to be suspended from the grate of a stove, open fire-place or the like, and heat the fuel therein in a few minutes to the point of ignition.

Machines and Mechanical Devices.

CASTING AND CONVEYING MACHINE.—W. McVAY, Bellaire, Ohio. This casting and conveying machine is arranged to receive the molten metal from a blast-furnace in the casting-house, cast it into a convenient size and thereafter convey the casted iron or pigs, as they are usually termed, to the required point of discharge.

SAW-HANDLE.—W. B. McCAIN, Clearlake, Wash. In the present patent the improvement has reference to saws manipulated by hand, and its object is the provision of a saw-handle which is simple and durable in construction, easily removed from the saw-blade, and without the aid of a wrench, screw-driver or other tool.

TYPE-WRITER.—C. GIBBS, New York, N. Y. In this case the invention relates to typewriters, and especially to that type of these machines which employs type bars. The object of the invention is the production of an improved arrangement which will facilitate the renewal of the type bars when they become worn.

COPY-HOLDER ATTACHMENT.—T. E. FORD, Philadelphia, Pa. The invention relates to typewriters, and concerns itself especially with a device adapted to hold copy and which is intended to be attached to the frame of typewriters of the form used especially for writing upon open books, or tabulating sheets. These typewriters are known commercially as book typewriters.

WAVE-POWER MOTOR.—T. DANFORD, Granby, Col. Among other objects of this invention is to provide a machine in which suitable provision is made for the unequal levels of the water caused by the rising and falling of the tide, combined with a power transforming mechanism to reduce the quick, impulsive and variable movement of the parts initially driven by the motor, to a constant, rotary motion.

COMBINED MEASURING, WINDING, AND WEIGHING MACHINE.—C. W. COTTELL, Washougal, Wash. In this patent the invention is an improved combined machine for measuring, winding, and weighing rope, wire cable, and like material, to be used by storekeepers in the sale of such goods, thereby lessening the labor entailed when these operations are performed in the usual manner.

Prime Movers and Their Accessories.

ROTARY ENGINE.—T. S. PARWIS, Vancouver, British Columbia, Canada. The object in this invention is to provide for the quick reversal of the engine or turbine when desired. The improvement consists of a cylindrical casing in which is journaled a revoluble drum, carrying blades subject to pressure of the working fluid and having a shiftable member or part, automatically operated to change the direction of rotation.

REVERSING-GEAR FOR GASOLENE-ENGINES.—H. E. ZASTROW and J. H. KÖPP, Portage, Wis. The invention consists in means for reversing without having to gain access to the interior of the engine, and it

comprehends as its most distinctive feature a construction of slip clutch between the timing wheel and its shaft so that the wheel may turn a given distance on the shaft independently of the shaft and then take up against and turn rigidly with it, in connection with an adjustable circuit controller.

CLUTCH.—B. F. REICHENBERGER, Township 4, Brown Co., Kan. In this patent the invention has reference to a clutch for connecting rotary elements. It is useful in connection with various branches of mechanical arts, but is especially intended for application to the crank shaft and fly wheel of traction engines.

APPARATUS FOR GENERATING AND STORING PRODUCTS OF COMBUSTION UNDER PRESSURE.—T. H. COLE, 54 Margate road, Southsea, Hants, England. Mr. Cole's invention relates to the generation of power by the combustion of a gas or vapor within a confined space, and it has for its object to provide means whereby the greatest practicable elasticity, or flexibility may be obtained in the application of the power generated in an internal combustion motor. This primary motor is adapted to work on a four-phase cycle.

STEAM-TURBINE.—E. HARVEY, New York, N. Y. The invention is an improvement in steam turbines especially directed to compound condensing marine engines capable of being reversed. The turbine engine is capable of having a high, an intermediate, and a low pressure chamber, each of which is provided with a novel form of piston.

REVERSING STEAM-TURBINE.—W. C. GARDINER, 17 St. Clement Street, Aberdeen, Scotland. In the present patent the invention has reference to multiple expansion reversible steam turbines wherein the rotary distribution valves are employed for the purpose of varying the expansion of the steam and determining the direction of the revolution of the rotor.

Pertaining to Recreation.

PUZZLE.—W. WERNER, New York, N. Y.—The puzzle is preferably in the form of a deck of playing cards and consists of a number of cards, numbered consecutively and arranged in sets or suits, each set being formed by a number of cards, and each card being provided with a colored design, preferably a geometrical figure, the designs and their colors in a set being different, and the colors of the same designs in the several sets being different.

TOY.—A. UEBERLE, New York, N. Y. This invention has reference to toys designed for children's use, and consists primarily of a doll and means connected therewith adapted to enable the doll to be placed in different positions and made capable of various movements to suit the fancy of the user.

Pertaining to Vehicles.

LOG-CART.—J. A. PERRY, Burgaw, N. C. The invention is an improvement in that class of log carts or carriers in which the log is suspended from an axle by means of chains. The main feature of the improvement is the pivotal connection between the hounds and tongue, or any form of rigid arm suitably connected with the axle so as to serve practically as a rocking lever.

EYE-PROTECTOR.—E. VERBAU, New York, N. Y. The more particular object in this invention is to provide a form of mask suitable for use by chauffeurs and drivers of vehicles, the construction being such as to prevent the collection of snow, sleet, frost, or water from gathering upon certain parts of the mask so as to obstruct the vision.

WHIFFLETREE.—S. A. HAZELTON, Pavilion, N. Y. Among other objects of this invention the inventor provides a whiffletree which can be automatically operated to detach and attach the traces of the harness quickly and with little labor, and to inclose all of the operating parts in order that they may be obscured from view and protected from the weather.

LAMINATED TIRE.—J. W. CARHART, Austin, Texas. The invention relates to tires, such, for instance, as are used upon automobiles and other road vehicles, the more particular object being to produce a tire built up of laminae so as to possess great strength and resiliency, and to be easily constructed of comparatively cheap materials as well as to be easily repaired, or to be replaced either in whole or in part.

JOINTED-SPINDLE AXLE.—M. BIDEAU, 16 Cité d'Antin, Paris, France. The invention relates to axles having jointed spindles, chiefly designed to receive the steering wheels in a motor-car, and the object is to so mount or fit the axle that it will allow of a ball bearing or washer being arranged between the body part of the axle and the spindle around the stud of the vertical joint of these parts to avoid any injurious movement out of the perpendicular with respect to the said stud.

AXLE-NUT.—T. MILLIGAN, Fortuna, Cal. In this instance the improvement pertains to axle nuts, and has for its object the provision of a compensating means adapted to take up the lost motion occasioned by the wearing of the end of an axle box, and thereby holds the box against longitudinal motion on the axle.

WHEEL.—I. W. GILES, New Bedford, and C. W. TOBEY, Fairhaven, Mass. This improve-

ment is in the tire construction of wheels. An elastic tire is employed which may be of solid rubber. The construction of the tire fastening devices with the lugs and links connecting the hooks provide means that co-operate with independent rings of the supporting tire, the flexibility of the stud connection co-operating with the yielding of the rings of such supporting tire in securing flexibility of the wheel. Means operate for extending the supporting plates toward securing the desired flexibility of the wheel.

VEHICLE-TIRE.—G. E. HUGULEY, Atlanta, Ga. One purpose of the present invention is to provide a supplemental tread section for the outer tubes of pneumatic tires, or any rubber tire used upon wheels of automobiles or similar heavy vehicles, which supplemental tread section can be quickly, conveniently, and firmly applied.

Design.

DESIGN FOR RIBBON.—E. M. CORBETT, Paterson, N. J. This ornamental design for a ribbon comprises a band of fabric with vertical double lines and single cross lines which make a pattern of very small squares. Bow knots run in an oblique direction and at regular intervals down the ribbon.

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.



HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(10542) V. B. asks: I would like to obtain some rule for the repulsion of permanent magnets: For example: if two magnets have an attraction of two pounds pull, what would be the repulsion between them if one of the magnets be turned end for end? Also, what repulsion would it be possible to get between two magnets, one of any weight and either electro or permanent, and the other to weigh two ounces and be permanent? A. The repulsion between two similar magnet poles is the same as the attraction between two opposite poles in the same position, whether they be permanent or electro-magnets. The repulsion dies out very rapidly as the poles move away from each other, and the attraction increases very rapidly as the poles approach each other. This is due to the low permeability of the air. The force varies inversely as the square of the distance between the poles. We have never tried the experiment to find the maximum force which could be obtained in any given case, but there is no answer to your indefinite question as to the force between a magnet of any weight and form and a permanent magnet weighing two ounces.

(10543) C. E. R. asks: 1. Will an alternating current meter register if the current is coming in at one of its entrance wires and leaving by one of its exit wires? A. We should not expect a meter to register unless all its binding posts had wires attached to them. You should, however, refer the matter to the company controlling the meter, since there are many kinds of meters of widely different construction. No general answer can be given. 2. What liquid and plates are used in a cell which chokes off one of the alternations of an alternating current, giving an intermittent direct current? A. The plates in an electrolytic rectifier are generally iron and aluminium, the electrolyte some potash salt. 3. On a ground return 1/4 mile telephone line when one end is grounded and a receiver connected at the other, sounds are heard which are separated into dots and dashes, which sound exactly like the sparks of an induction coil. The steady hum of alternating current lighting circuits is also heard, but has a quite different sound. At times there are apparently dots and dashes being sent by several different coils at the same time, as their tones are different, some high, some low, some loud, some weak. There is no coherer or other detector in the circuit. Under these conditions is it possible to hear wireless unattended messages? A. The grounded telephone line upon which you hear sounds is able to take up any sort of sound in the neighborhood. The telegraph signals you hear are probably those of