

RECENTLY PATENTED INVENTIONS.

Electrical Devices.

**ELECTRIC SIGNAL.**—J. E. FELLER, Brooklyn, N. Y. In this case the invention relates to electric signals suitable for general use, and more particularly to a type of instrument in which the person signaled may indicate to the person signaling if the signal is properly received. It may be used in various relations, for instance, to advantage in hotels and in connection with block-signals of railways.

Household Utilities.

**BED OR CUSHION.**—B. T. MILLIKEN, Ep. person, Ky. The invention relates to sectional beds and cushions to be made up by uniting and combining independent sections. One object is to provide an article so constructed as to allow its parts to be readily united or separated, thereby facilitating handling, repairing, and cleaning, as well as providing for extension or contraction in respect to length as different conditions of use may require. Improved ventilation is secured.

**PLATE-LIFTER.**—G. S. SOLOMON, Bisbee, Arizona Ter. In carrying out this invention, Mr. Solomon has in view the provision of a device exceedingly simple and durable in its construction and very positive in its operation, the device being so made that when the pan is grasped by the lifter such pan cannot turn or fall from the gripping-jaws and thereby spill the contents thereof. It may be adjusted to utensils of various dimensions or size.

Machines and Mechanical Devices.

**TYPE-WRITING MACHINE.**—F. S. ROSE, Newark, N. J. In this patent the invention refers to improvements in type-writers, in which is sought the production of a construction of the support or carriage for the type-platen or cylindrical roller which enables the same to be folded into compact relation to the keyboard, thus making provision for ready and convenient transportation of the instrument. Means are provided for shifting the platen relatively to the point of impact of the type-faces on the type-levers.

**WOOL BURREING AND PICKING MACHINE.**—G. PROUVON, Roubaix, Department of Nord, France. This mechanism cleans locks of wool from vegetable burrs, dirt, and other refuse which may be entangled therewith. It combs the locks of wool in order to loosen the fibers or filaments and to bring them into parallel relation, thus opening the locks and spreading out and loosening the fibers, so that they are thoroughly cleaned without unnecessary straining or tearing.

Metallurgical Improvements.

**ROASTING-FURNACE.**—S. D. CRAIG, G. E. KELLY, and W. TURNER, LaHarpe, Kan. In this instance the invention has reference to improvements in ore-roasting furnaces or kilns, and the object of the inventors is to provide a furnace in which ores may be rapidly and thoroughly roasted while being agitated by an automatically controlled device.

Of General Interest.

**COMBINED SWING AND FAN.**—D. W. BASH, Buda, Ill. The invention relates to a class of swings that are adapted to actuate a fan, and has for its object to provide a device of the class mentioned with novel details of construction which adapt the fan-blade to blow directly upon the occupants of the swing while the latter is in motion. It may be placed indoors for winter use, but more generally employed for exercise and amusement during summer on a lawn for adults and children.

**MONKEY-WRENCH.**—E. A. RENOUF, Wells-ville, Ohio. In the present invention the improvement is in monkey-wrenches, and Mr. Renouf has for an object the provision of novel constructions for securing the movable jaw and for use in adjusting or moving the said jaw along the toothed wrench-bar. The device is simple and easily applied to use.

**ENVELOP.**—P. DAVALOS, Havana, Cuba. The purpose of this improvement is to provide means for facilitating opening envelopes, wrappers, etc., particularly those covers which are used on mail matters. This end Mr. Davalos attains by forming a tearing strip of the material of which the envelop itself is formed, thus not only cheapening the production of the self-opening envelop in cost of material, but also in labor necessary in constructing it.

**NECKWEAR.**—C. BABSON, Gloucester, Mass. The object in this instance is to provide a tip for necktie neckbands which will automatically lock itself in adjusted position, dispensing entirely with the ordinary retaining-pin, and to so construct such a tip that it will be not only simple, durable, and economic, but which may be threaded through the tie in the usual manner, expanding to retain its position the moment it is released in adjustment.

**OPTOMETER.**—W. J. LAUGHLIN, Waunakee, Wis. The object of this invention is to provide an improved optometer arranged to enable the optician to readily adjust the lenses to any desired power, for conveniently and quickly determining the visual powers and the pupillary distance of the eyes of the patient, for the

selection of proper eyeglasses, and for obtaining the height and inclination of the bridge.

**MEAT-PRESS.**—G. FREYSLER, San Diego, Cal. In this patent the invention relates to meat-presses; and it consists in providing a press of this character with hinged sides and ends, detachable corners, and compressing means, all of simple and novel construction. It enjoys special advantage in the facility with which means are adapted, affording free access to the compressed meat.

**FASTENING AND SUSPENSION DEVICE.**—E. M. LEWIS, Mountsville, W. Va. Heretofore when a person desiring desired to use letters, figures, emblems, shields, etc., they had to be made for the occasion. This invention obviates such difficulties by providing a device which may be suitably secured to various articles made of paper, cardboard, cloth, metal, wood, china, glass, celluloid, candy, etc., or from a combination of any of these where-by they may be quickly attached to and removed from various objects, principally for decorative purposes.

**CRACKER-CASE.**—W. T. MAGNESS, Spartanburg, S. C. By this improvement the inventor provides in a case a framing provided with guides in which slide the shelves for supporting cracker-boxes, so the shelves can be adjusted out of the frame to permit access to the boxes and can be adjusted back in their guides to carry the cracker-boxes into the frame when storing the same. In connection with the sliding box-supporting shelves, lock devices secure the shelves in position and jointed links connect the outer ends of the sliding shelves with the casing to aid in guiding the movements of the shelves and to support the same when adjusted to their outer positions.

**POWDER-CONTAINER.**—JEANIE MCC. MCINTYRE, Jersey City, N. J. In this device the required quantity of powder is automatically, mechanically, and accurately measured from the container through an orifice in the container into a drawer movable in the container's exterior, in such a manner as to prevent contact of the drawer or any exterior portion of the device with the powder inside of the container. The powder always closes the orifice through which it passes by its own gravity into the exterior movable drawer, thus sealing the interior of the container from all exterior influences and preserving the flavor, fragrance, and freshness of the tooth or similar powder.

**PIPE-COVERING.**—M. SULLIVAN, New York, N. Y. The covering is intended to be applied particularly to joints between pipes which themselves have a non-conducting covering, and comprises a sectional frame arranged to be clamped on the pipe-sections and to inclose the joint or connection, this frame supporting a gauze or ferrominated shield which itself carries the asbestos or other compound forming the non-conducting covering.

**SHIRT-WAIST HOLDER AND SKIRT-SUPPORTER.**—A. WILTSEY, New York, N. Y. The purpose in this case is to provide a device adapted to hold a shirt-waist or a dress-waist down and to simultaneously hold the skirt from sagging at the back portion of the waist-band and to so construct the device that it will be capable of convenient and expeditious application and worn without discomfort. The invention improves upon the construction of a similar device for which application for patent was made in a former serial and allowed to Mr. Wiltsey.

**DOOR-SECURER.**—F. E. WIESNER, Washington, D. C. The invention has for an object the provision of a construction which can be easily applied and readily folded when not in use into compact form for carrying in the pocket. The device consists of a shank, with teeth formed thereon, which when the door is closed are forced into the jamb of the door. A cross bar can be slipped through a slot in this shank against the face of the door, thus locking it.

**PARCEL-ATTACHING DEVICE.**—H. F. ROLL, St. Louis, Mo. One of the principal objects of this invention is to devise a retaining means attachable to the person or some part of the clothing and to which device an article, such as an umbrella, is secured, so that if it should happen that the user of the retainer should attempt to leave a car without picking up the parcel he or she would be reminded by a slight jerk or pull from the retainer. It is useful for old and young for holding napkins, scissors, etc., controlling suspenders, and many other operations, but is especially for use by ladies when they go shopping or when riding in street and other cars.

**CLOTHES-LINE HOLDER.**—G. H. DE VINE and A. BAUMANN, Jersey City, N. J. The purpose of the inventors is the provision of a holder capable of being readily placed in position for use and of being operated from the interior of the room when the clothes are placed on the line or are removed therefrom. After clothes have been placed upon the line the device and that portion of the line supported thereby can be swung out from the room and will be held in outer position by the weight of clothes on the line.

**MINER'S TOOL.**—A. V. DES MOINEAUX, Silverplume, Col. This invention relates to a tool for use by miners in preparing a blasting-fuse for service; and the subject-matter of this application is in part a division of a prior one filed by Mr. Des Moineaux. The object is to provide a tool with means for splitting the end of a fuse and with a guide by which the

fuse may be presented properly to the slitting devices and also held firmly in place during the slitting operation.

**WOVEN PILE FABRIC.**—H. SARAFIAN, Yonkers, N. Y. In this case the purpose is to provide a fabric in which the pile is exceedingly close, to give a fine appearance to the finished product, to produce an exceedingly strong and durable weave in which the piles are not liable to become loose or pull out when using the fabric as a rug, for instance, the fabric practically not showing weft or ground warp on either face, but only the pile on the face and the pile-loops on the back.

**HELMET.**—J. J. CURTIS, Jersey City, N. J. As is well known, the helmets ordinarily worn by policemen, firemen, and similar officials are objectionable, especially in warm weather, on account of the weight, and difficulty in ventilating to attain coolness and comfort. Mr. Curtis overcomes these difficulties. He gains an especial advantage in stiffening the brim with aluminium in that the helmet may be made of straw or any light flimsy material, a thing heretofore impossible, on account of the difficulty of stiffening the brim sufficiently.

**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.

Business and Personal Wants.

**READ THIS COLUMN CAREFULLY.**—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.

MUNN & CO.

- Marine Iron Works, Chicago. Catalogue free.
- Inquiry No. 5285.**—For a machine to pick sponges in small pieces without cutting them.
- AUTOS.**—Duryea Power Co., Reading, Pa.
- Inquiry No. 5286.**—For manufacturers of cheap toys and games.
- "U. S." Metal Polish, Indianapolis. Samples free.
- Inquiry No. 5287.**—For makers of castings for gasoline engines  $\frac{1}{4}$  to 1 h. p., suitable for amateurs' use.
- Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.
- Inquiry No. 5288.**—For a heavy spring motor with governor to run a light machine.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 5289.**—For makers of machinery to make stove pipe.
- Send for new and complete catalogue of Scientific and other books for sale by Munn & Co., 361 Broadway New York. Free on application.
- Inquiry No. 5290.**—For machines for preparing cotton for surgical dressing.
- Fine machine work of all kinds. Electrical instruments a specialty. Models built to order. Page Machine Co., 512 Greenwich Street, New York.
- Inquiry No. 5291.**—For machines for making pens and pen holders.
- We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc., Metal Novelty Works, 43 Canal Street, Chicago.
- Inquiry No. 5292.**—For information regarding cost, etc., of small ice-making machinery, capacity of plant 500 pounds in 5 hours' run.
- The largest manufacturer in the world of merry-go-rounds, shooting galleries and hand organs. For prices and terms write to C. W. Parker, Abilene, Kan.
- Inquiry No. 5293.**—For parties engaged in the manufacture and installation of electric light plants.
- The celebrated "Hornsey-Akroyd" Patent Safety Oil Engines built by the De La Vergne Refrigerating Machine Company, Foot of East 138th Street, New York.
- Inquiry No. 5294.**—For quotations on water motors.
- Holtzapfel, screw cutting lathe, plain and complex turning; unequalled inventory of costly apparatus, chucks and tools. F. N. Massa, 54 Warren St., New York.
- Inquiry No. 5295.**—For makers of steel tanks to hold 25 cubic feet to 500 cubic feet; 400 pounds' test and high pressure pumps to pump 500 pounds.
- Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 15 South Canal Street, Chicago.
- Inquiry No. 5296.**—For manufacturers of elevators.
- Inquiry No. 5297.**—Wanted, smooth, bright tin plate for plating purposes, in lots of one to twenty cases at the time direct from an independent mill.
- Inquiry No. 5298.**—For machinery for separating the outer hulls from the bean of the castor oil plant.
- Inquiry No. 5299.**—For manufacturers of smoke consumers.
- Inquiry No. 5300.**—For manufacturers of buckram wire used in manufacturing hat frames.
- Inquiry No. 5301.**—For makers of gasoline or hot air engines of about  $\frac{1}{2}$  h. p.
- Inquiry No. 5302.**—For makers of small steam engine cylinders of the slide valve type of about 1 $\frac{1}{2}$  inches stroke and  $\frac{1}{4}$ -inch bore, either metal or brass.
- Inquiry No. 5303.**—For a machine for printing on lead pencils.
- Inquiry No. 5304.**—For a Taylor calculating machine.
- Inquiry No. 5305.**—For makers of level glasses.
- Inquiry No. 5306.**—For makers of lathes, planers, drill presses, gasoline engine castings and automobile parts.
- Inquiry No. 5307.**—For a machine for imparting power to churn dashers, washing machines, also makers of corn-busking machines operated by hand.
- Inquiry No. 5308.**—For makers of dish-washing machines.
- Inquiry No. 5309.**—For makers of typewriters ranging in prices from \$35 to \$60.
- Inquiry No. 5310.**—For makers of handles for rakes, forks, etc.
- Inquiry No. 5311.**—For a covered automobile carrying 12 to 14 persons.
- Inquiry No. 5312.**—For broom-making machinery.
- Inquiry No. 5313.**—For a small model  $\frac{1}{4}$  h. p. steam engine boiler for demonstrating purposes.
- Inquiry No. 5314.**—For makers of papier maché toys.



Notes and Queries.

**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.

(9331) F. S. says: Could you give us a remedy for our gas-engine igniter points? Sometimes we try and start our engine as many as ten times before we get an explosion, and all at once it goes off and everything is all right. We blame it on the igniter points; they miss the spark quite often. The make of our engine is a C— gas engine with electric spark. There seems to be a grease form over the points, and they get black, and then they will not spark; they are nothing but brass points. In order to get a spark again we have to take off the igniter plate and file the points. The batteries are all new. We have tried platinum points, but they break off every time. Sometimes during the day the engine stops itself because we do not get a spark. So if there is a remedy that will keep these points clean, we would like to know. We use gasoline to start our engine, which may be what causes the grease to form, but it won't start with gas. We thought that if we would make two points about  $\frac{1}{4}$  inch thick at one end, and about 3-16 inch at the other, they would make a bigger spark. Our points at present are the same thickness, about  $\frac{1}{8}$  inch thick. A gas engine troubles seem to be a frequent cause of complaint of late; principally due to want of knowledge of the true cause of the electric shortcoming by electric short-circuiting, of which absence of cleanliness of insulation and excess of explosive fuel are the main features of the trouble. It is not the cleaning or the filing of the points alone that is the true remedy for these troubles, but rather the thorough cleaning of the insulating surface of the ignition plug, which is the proper place to make the remedy. Grease and carbon from defective combustion deposit on the stationary insulated pole of the plug, and sometimes cause this to become short-circuited. In the event of this happening from the employment of too much lubricating oil or of a bad mixture, the igniter will not work at all until it has been removed and the insulated pole thoroughly cleaned. From your description of the trouble you experience, it would seem, however, as if the trouble were entirely due to the use of improper points. These should be neither of brass nor of platinum, but of the hard platinum-iridium alloy that is specially compounded for the purpose. If the points are properly brazed on, there should be no trouble from their falling off.

(9332) J. G. asks: 1. When applied to a slide valve, what is meant by the term lead, and what is accomplished by same? A. The amount of opening for the admission of steam at the beginning of the stroke is called steam lead, and the opening for release at the end of the stroke is exhaust lead. The amount of the opening at dead crank center varies in ordinary engines from 1-64 to  $\frac{1}{8}$  inch valve lead, and may be as much as  $\frac{1}{4}$  to  $\frac{3}{8}$  inch in special designs of valve movement. The effect is a steam compression equal to the boiler pressure at the moment of change of motion of the piston. It neutralizes the strains and effects a smoother running of the engine. 2. What is meant by the term lap, and what is accomplished by same? A. The outside lap, called the steam lap, is the distance the steam edge of the valve extends beyond the edge of the port when the valve is in its central position. The inside lap, called the exhaust lap, is the distance the valve extends or laps over the exhaust port when the valve is in its central position. The effect of outside lap is a later admission and an earlier cut-off with longer expansion. The effect of inside lap is to make the exhaust occur later and to close earlier with a longer compression. The effect of all the lead and lap combinations is for the smooth running of a steam engine. Its freedom from shock or strain, and for the greatest economy in the use of steam for power. 3. What is meant by cutting off steam before piston has traveled its full stroke, and what is accomplished by same? A. The cut-off in a steam engine is the technical expression as to the point in the stroke at which the steam inlet is closed and expansion commences. By this means the power of a given volume of steam is largely increased by utilizing the decreasing pressure due to its expansion during the remainder of the stroke from the point of cut-