

**RECENTLY PATENTED INVENTIONS.**  
**Pertaining to Apparel.**

**SKIRT STAY AND FASTENER.**—W. H. REGNER, York, Neb. The device will prevent the skirt from sagging down behind or becoming unfastened, and allows of stooping, sitting or other bodily movements without discomfort owing to its flexibility and lightness. It can be used in connection with the lightest fabrics on account of dividing the strain on the goods. The fastener can also be adjusted to suit different sized persons, and taken apart to enable it to be conveniently sewed into the skirt or unhooked in the case of a very large person, thus permitting the skirt to be easily applied.

**TAILOR'S MEASURING APPARATUS.**—J. BARNETT, New York, N. Y. This apparatus is intended to be used especially in taking the measurements at the upper part of the body and particularly at the shoulders. While the invention is intended primarily to provide means for taking accurate measurements at the shoulders, it affords means for taking measurements at other points.

**Electrical Devices.**

**INSULATOR-PIN.**—L. STEINBERGER, New York, N. Y. This invention produces a supporting member of great strength with a minimum of material. Renders the supporting stem as near immune as possible from effects of moisture. Makes the stem in parts one encircling the other and firmly anchored thereto. Covers the thread with electrose or other suitable insulating material in order to increase the insulation, and also to enable the thread to be made more exact as to form. Envelops all metallic parts completely with insulating material.

**SPIRAL-CORE INSULATOR.**—L. STEINBERGER, New York, N. Y. In this patent the invention relates to insulators, Mr. Steinberger's more particular object being to produce a type of insulator suitable for use in various general relations and of peculiar value for leading in cables. Among many other objects one is to provide a type of tubular insulator in which a minimum quantity of material is employed in its construction. This inventor prefers to employ the substance commercially known as "electrose" for the dielectric members.

**HIGH-POTENTIAL INSULATOR.**—L. STEINBERGER, New York, N. Y. This insulator possesses numerous advantages among which is to provide a hood upon its inner face with a surface of such conformity as to facilitate the stripping of moisture therefrom very rapidly, thereby reducing surface leakage to a minimum. To provide an insulator hood on its under surface with numerous drip points, air-spaces and barriers, in order to further prevent surface leakage and danger of arcing and to increase the general dielectric properties of the insulator. The insulating material employed is preferably the kind known in this art as "electrose." The inventor does not limit himself to the use in every instance of a cement for securing the separate hood to its support.

**INSULATOR-PIN.**—W. S. LEE, JR., Charlotte, N. C. The inventor's object is to so construct the pin that it will comprise the minimum number of parts so combined as to secure ample strength and durability, and facilitate and expedite line repairs by the ease with which injured or defective insulators may be replaced, and also to secure an economy of cost of such replacing of insulators by reducing in size or amount the part of the pin which has to be discarded.

**TELEPHONE-SWITCHBOARD.**—J. M. DOSSBAUGH, Cedar Vale, Kan. An operator is apprised of a call by the push rod of the station making the calls, this rod springing outward, and that during the time the connection is made between two stations a busy lamp is burning. When a pawl engages a certain tooth and the magnet is energized, this tooth is released and the rod springs back, the point of the pawl engaging a second tooth. The magnet immediately is deenergized, the pawl springs up so that the point releases the second tooth, but a third is immediately engaged so that it cannot get past the pawl until the magnet is again energized.

**Of Interest to Farmers.**

**FURROW PLOW AND ROLLER.**—C. E. HOLBROOK, Carson City, Nev. This invention relates to improvements in furrowing or ditching plows and rollers, for irrigation, the object being to provide a device of this character, that will be comparatively light to draw over the ground to form the ditches and to smooth the banks, sides and bottom of the ditches.

**Household Utilities.**

**TRANSOM-LIFTER.**—L. C. SMITH, New Orleans, La. The invention pertains to transom lifters such as are used in dwellings and similar places, for controlling the positions of transoms for windows. The object of the invention is to produce a device which can be quickly operated to hold the transom in an open, closed or intermediate position.

**SANITARY CUSPIDOR.**—A. FISHMANN, New York, N. Y. In this case the principal objects are to provide means whereby an anti-septic liquid can be automatically forced into the interior of a cuspidor, after it has been

used, to provide for conveniently cleaning it and to improve it in several other particulars. All parts are easily removable.

**Of General Interest.**

**PAPER-HANGER'S TRIMMER.**—E. E. GOBLE, Brattleboro, Vt. A cutter on a table is adapted to be reciprocated in the trimming operation, said table being inlaid at one edge adjacent to the cutter with strips of wood of different color, and provided with a scale in order that the paper may be readily gaged before it is cut. The cutting means, which is provided with a device for insuring a clean cut of the paper, may be removed from the table top and the table folded up in a small compass, making it convenient to carry about.

**POST-FORMING DEVICE.**—W. E. SNYDER, Lagrange, Ind. Mr. Snyder's invention has reference to improvements in devices for making cementitious fence posts, and has for its object to produce a simple, cheap and efficient device by which cement posts used for fences, mail-boxes, hitching horses, etc., may be quickly and cheaply made.

**PROCESS OF MANUFACTURING YEAST.**—J. BLUMER, Peekskill, N. Y. The invention pertains to methods of manufacturing yeast in general, and the main object is to supply the yeast plant in process of propagation with a cheap nutriment which is exceedingly rich in soluble nitrogenous substances, thereby enabling the manufacture of a yeast of great leavening power, and also producing a larger yield of yeast.

**ATTACHMENT FOR ROLL-PAPER CUTTERS.**—F. H. MAASS, Clinton, Iowa. The invention relates to an attachment for cutters such as used in connection with rolls of wrapping paper for cutting small quantities of sheets therefrom. The object is to produce an attachment which may be readily mounted on a roll paper cutter of common construction, the general purpose being to produce an arrangement which will facilitate the drawing out of the paper when a portion of the same is to be detached. While the attachment is for a knife of common form, it will be possible to construct the complete device as one structure, so that the improved device could be shipped in its finished form from the factory.

**CARPENTER'S SQUARE.**—J. A. McCLOSKEY, Mount Vernon, N. Y. In this patent for an improved carpenter's square, the inventor has for his object the provision of a means adapted to enable a builder to readily determine from a given pitch the length of common and hip rafters, and the cut of the ends of said rafters.

**REINFORCED CONCRETE CONSTRUCTION FOR BUILDINGS AND OTHER STRUCTURES.**—G. GEORGENSON and J. E. HENNEN, Fond Du Lac, Wis. An object of the invention is to produce a structure which will sustain to a high degree all kinds of strains or stresses, particularly those incident to unequal settling or heaving, without cracking or dismemberment. It is believed that a building constructed as specified may be raised at one or both ends or sides without injurious consequences, and will retain its shape in all positions.

**DUMPING-BODY.**—W. R. GORT, Oklahoma, Oklahoma Ter. The invention is an improvement in dumping bodies such as are in use on dumping wagons, dumping cars and bins. In operation the dumping of the body sections may be so regulated as to distribute the load to the center, to the outside or evenly between the two as may be desired. The invention in its broad features need not be limited to specific features for readjusting the sections to position to receive the load or to the particular means for breaking the props when it is desired to dump.

**FURNACE.**—A. DUCCO, 36 Via Pio Quinto, Turin, Italy. According to the invention the rotary furnace is provided with a charging device arranged on the roasting chamber itself, and which, at each revolution of the furnace, raises but just the quantity of ore corresponding to the speed of the combustion. With this charging device, air cannot enter into the furnace while charging, nor can the combustion gases developed in the furnace escape.

**EMBROIDERY IN DIVERS CORDS.**—FRANCIA BAUDENON, Vorey, Haute-Loire, France. This invention relates to a mode of support for the applications of embroideries in divers cords, known in France as "plumetis-express." To carry out the purpose, the application is pasted onto a sheet of paper and the sheet is perforated, or partially, or wholly, cut away on a line along the inner contours of the design. Thus, the application is firmly held in shape, for it is connected by the whole of its outer contour to a sheet of paper to keep its shape; furthermore, difficulty of tearing the paper away along inner contours is done away with. Tearing of the paper away along outer contours may again be facilitated by previous perforations.

**Machines and Mechanical Devices.**

**EARTH-SCRAPING MACHINE.**—W. RANDALL and J. RANDALL, Marysville, Wash. The improvement refers to earth scraping and dredging machines in which the cutting or scraping edge is automatically removed or raised from the ground when the scraper is filled, and in which the material may be automatically ejected from the scraper when it reaches the point at which it is desired to

dump the material. The scraper is provided with novel steering means.

**WAVE-MOTOR.**—J. W. NEAL, Kealia, Ter. of Hawaii. In this case the invention relates to improvements in wave motors, the object being to provide a wave motor of comparatively simple construction, that will respond quickly and with even motion to any degree of wave movement, and providing power for machinery on land.

**MEASURING-PUMP.**—T. HENTGEN, New York, N. Y. The invention relates to soda fountains and particularly to pumps for faucets designed to discharge from a receiver syrups used in soda water, and has for its objects to provide means adapted to enable a reciprocating pump to retain the liquid that has once passed therein, and to measure and discharge a pre-determined quantity of syrup from a receptacle at each stroke of the pump.

**STAMP-MILL.**—G. COON, Mount Vernon, Wash. It is intended that the invention should be used especially in the preparation of concentrates from gold ores, and its use contemplates the employment of the wet process. The object is to produce a mill which will consume little power but which will be efficient in operation. Further to construct parts in section, which may be readily transported through mountainous regions by pack-mules or similar means, and there assembled or erected for operation.

**LOOSE-LEAF BINDER.**—F. H. CRUMP, Los Angeles, Cal. The object of the inventor is to provide means for securing the two backs to be easily and quickly separated for the insertion of new leaves or removal of leaves, while the book remains open on the desk, and without the use of a key.

**SEWING-MACHINE GAGE.**—D. DANTZIG, New York, N. Y., and J. BONOWITZ, Philadelphia, Pa. The invention refers to sewing machine attachments, and one purpose of the invention is to provide a gage particularly adapted for accurately indicating the required space between double rows of stitching on coats, for example, insuring the rows of stitching being the same distance apart on each garment until the gage is otherwise set.

**CAN-SEAMING MACHINE.**—E. P. DATOW, New Orleans, La. The machine is adapted for use in connection with any type of pierced cylindrical tin-ware, as for example it is designed to seam on the ends of coffee, baking-powder, fruit, fish, meat and all other cylindrical cans, dippers, pails, pots and all manner of cylindrical pieced vessels, as well as any cylindrical utensils or package made from one or more than one piece of sheet metal.

**ECCENTRIC.**—R. M. CLARK, Webb City, Mo. The invention pertains to improvements in eccentrics, and more particularly to means whereby the eccentric may be placed from its bearings, or removing any pulley or wheel already secured to the shaft. The object is to provide means whereby the eccentric may be separated into a plurality of parts and these rigidly secured together after having been separately applied to the shaft.

**Prime Movers and Their Accessories.**

**INJECTOR.**—W. H. WINKS, Baltimore, Md. In the operation of supplying water to a boiler by means of an injector and in the "break" in the passage of the water from the tank to the boiler there are disadvantages, which the present inventor obviates by providing a tank connected with an overflow pipe of the injector, the tank being arranged on the foot board of the locomotive, although the tank might be arranged at any other convenient point.

**AUTOMATIC STOP FOR PISTONS.**—E. C. THORSCHMIDT, New York, N. Y. The invention has reference to improvements in automatic stops for pistons actuated by steam or water pressure, the invention being particularly adapted for use in connection with power hammers; the object being to provide a simple means to cushion a piston when near the end of its stroke.

**INTERNAL-COMBUSTION ENGINE.**—F. MOREX, Scrafford, W. Va. This invention is an internal combustion engine of the type in which the reciprocation of a piston or pistons is converted into the rotation of a shaft by means of a drum having a continuous encircling cam groove, and a roller journaled upon a pin attached to the piston and engaging the groove. A pair of co-axial two cycle cylinders act upon a piston or connected piston heads so that two impulses are imparted at each revolution.

**Railways and Their Accessories.**

**RAILROAD-TIE.**—R. L. BOWER, Blandburg, Pa. In this patent the improvement relates to metallic ties, and its object is to provide a new and improved railroad tie which is simple, durable and strong in construction, practically indestructible, and sufficiently elastic to slightly yield according to the load.

**Pertaining to Vehicles.**

**STAND FOR MOTOR-CYCLES, ETC.**—J. J. HANSEL, Muskegon, Mich. The rear axle of the cycle is backed into the opening of a casting and a lever swung rearwardly and downwardly, thereby forcing the upper end of the lifting rod upwardly against the steps of the cycle, thus raising the rear wheel of same off the floor, allowing a pawl to engage the rack.

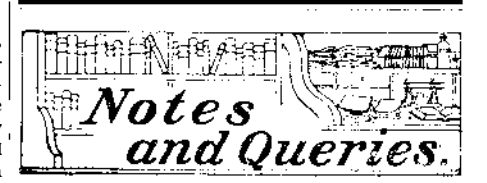
The cycle will be held off the floor, whereupon it may be tested, repaired, etc.

**SLED-PROPELLER.**—J. J. HANSEL, Muskegon, Mich. This invention may be characterized as an attachment to automobiles, employing front and rear sets of sled runners, with a suitable frame connecting the front and rear sled runner, through means of supporting springs, and further, as employing peculiar propeller wheels, adapted to be driven by the automobile or other engine, or by manual means obvious to the skilled in the art.

**DUMPING DEVICE FOR VEHICLES.**—M. I. TUTTLE, Fort Morgan, Col. One object of the invention is to provide a device which is tilted into position to allow the load upon the vehicle to slide from the same, by weight of the loaded vehicle, while the weight of the unloaded returns the tilting platform to its normal position through the change of position of the center of gravity of the vehicle when loaded and unloaded.

**DRAFT ATTACHMENT FOR VEHICLES.**—J. M. SUDOUTH, Manhattan, Kan. The invention pertains to a draft device especially adapted for use where a team of horses is employed, and the purpose is to provide an economic arrangement that will draw equally from each side of the center of the axle, and which will effectually prevent the tongue or pole from having a whipping action, and which will also render the draft exceedingly easy.

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.

(10555) P. E. J. asks: When the elements cesium and rubidium are placed in water they decompose it with the liberation of H, which takes fire, but does Cs give the flame a blue color, or Rb a red? In nearly all books on chemistry I find that the element erbium has never been isolated. On looking through Merck's Index, 1896, a catalogue of nearly every chemical known, I find it thus: "Erbium (E) metal, dark gray powder." Also tell me if this element is not like didymium, which has been split into different elements? A. Cesium was named from the blue lines which its flame gives in the spectrum, of which there are two. The word cesium means skyblue. Rubidium: in a similar way gives two dark red lines. The word rubidium means dark red. Both are from the Latin.—With reference to erbium, Remsen's "College Chemistry" says: "A final statement cannot be made as yet. It is even questionable whether it is an element."

(10556) J. D. asks: Will you kindly tell me how and what preparation is used in sticking pictures on glass so that it will not blister? Most of the art stores have for sale pictures that they call "medallions" which appear to be a piece of glass pasted over the front of a picture. I have endeavored to do this, and have wet my picture and coated the glass with a thin coating of thin white glue and also paste, and also with library paste. It looks very well while it is moist, especially after I have rubbed all the air bubbles out, but after it dries it appears flaky in places, as if the picture did not stick to the glass. I have also tried putting the picture on under water, thinking by this means to keep the air from getting between the picture and the glass. A. According to the Werkstatt, clean the inner hollow side of the glass thoroughly, pour on gelatine dissolved in boiling water, lay the picture on and pour on gelatine again, so that everything swims. Then neatly remove what is superfluous, so that no blisters result, and allow to dry. The following recipe is said to be still better: Gelatine, 16 parts (weight); glycerine, 1 part (weight); water, 32 parts (weight); methyl alcohol, 12 parts (weight). The mixture is prepared by causing the gelatine to swell in water, then dissolving it with the use of moderate heat, adding the glycerine, stirring thoroughly, and pouring the whole in a thin stream into the alcohol.

(10557) The I. L. & S. Co. ask: Can you furnish us the formula for a dry powder chemical fire extinguisher, such as is used to throw on fire to extinguish? A. 1. Alum 24 per cent, ammonium sulphate 52 per cent, fer-