825,697

#### RECENTLY PATENTED INVENTIONS. Pertaining to Apparel.

SKIRT-SUPPORT. - MARGARET A. MCOUAT. New York, N. Y. This support is such as is worn by ladies for supporting the skirt at the waist. The object of the improvement is to provide a support or fastening which will afford means for supporting a skirt from a shirt-waist in a substantial manner, and, further, to provide such an arrangement as will enable the shirt-waist to be laundered with

RUBBER FOOTWEAR. - P. MACA. MAC KASKIE, Tonopah, Nev. One of the purposes of the invention is to provide a rubber boot which will have ventilating openings in the foot-section thereof leading to channels which are conducted to the upper portion of a boot, for example, the knee type, and also to so construct a hip-boot that sundry of the channels will lead to the top of the hip-section and others to the top of the knee-section when the former is folded down on the latter, thus providing for a thorough ventilation, under all conditions of use.

#### Of Interest to Farmers.

DRAFT-EQUALIZER .- F. LINDSTROM, Mar quette, Kan. This equalizer comprises a horizontally-rotatable member mounted upon the tongue or draft-beam of the wheeled structure with which the improvement may be employed. together with special means cooperating with said member for effecting the desired equalization of draft, whether three, four, or five draft-animals be employed abreast of each

#### Of General Interest,

MOORING .- W. H. PEEK, United States Army. Submarine mines are usually anchored to float a fixed distance below the surface, and difficulty has been met in mooring the mines at the desired position. The inventor's object is to overcome this disadvantage, and such end is attained by arranging the anchor to slide on the cable until the anchor reaches a point above the bottom equal to distance below the surface that it is desired to float the mine. This distance is determined by a finder weight and line which automatically throws into action a clutch, causing the anchor to be fixed to the cable, whereupon the anchor in moving into the bottom draws down the mine to desired depth.

SASH-FASTENER.—I. A. SHAW, Leavenworth, Kan. The invention is especially adapted for use in connection with sashes which open by sliding vertically in guide-strips. It will operate to maintain a sash in desired position. Also to maintain a window-sash firmly against its guide-strips. In connection with the fastener means are provided that cooperate with the fastener for locking the sash in a closed position, and so that it may not be opened from the outside.

### Hardware.

PERMUTATION-LOCK. — O. KATZENBERGER, San Antonio, Texas. The object here is to provide details of construction for a lock, and more particularly to improve and simplify construction of the lock formerly patented by this inventor, said improvements being also applicable to various locks of the class indicated, in which the features of novelty may be advantageously embodied, thus providing a lock convenient to operate, may be unlocked in the dark by the sense of touch or by sound of impinging parts, or by both means.

### Heating and Lighting.

GRATE AND FIXTURES THEREFOR .- J. FERRACIOLI, New York, N. Y. The invention relates to improvements in grates intended especially for use in cooking stoves or ranges and to improvements for mounting the grate. The object is to provide a grate which may be heavily constructed, so as to render it as durable as possible, but which may be made in sections, so that one or more of the sections may be removed when injured and replaced by new sections, thus permitting ready repair.

### Pertaining to Vehicles.

MEANS FOR SIGNALING ON AUTOMO-BILES OR THE LIKE VEHICLES .- E. BAR-BAROUX and G. BARBAROUX, Via Ospedale 1, Turin, Italy. In this patent the invention has reference to improved means for giving signals on automobiles or the like vehicles more readily and effectively than hitherto, and has for its principal object the employment of the exhaust-gases from the motor for operating any convenient or known signaling de vice, such as a whistle or a siren or the like.

WHEEL.-I. W. GILES, New Bedford, and C. W. TOBEY, Fairhaven, Mass. This invention is an improvement in wheels, and especially in wheels designed for use on automobiles and the like wherein a cushioning and a strong traction effect is desired. As a whole it may be found in practice to possess all the elasticity of a pneumatic tire without many of the troubles incident to that form of tire, the improved wheel being puncture-proof and so constructed that dirt, grit, and mud cannot enter or obstruct the working devices.

Nore.-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.

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Inquiry No. 8245.-For manufacturers of charcoal machinery.

Inquiry No. 8246.—For manufacturers of sand brick-making machines. inquiry No. 8247.-For manufacturers of public rifle ranges, especially the glass ball and water jet de-

Inquiry No. 8248.-For address of Solar Furnace and Power Co.

Inquiry No. 8249.—For address of manufacturer of Benj. Keyes patent egg box or shipping carton.



HINTS TO CORRESPONDENTS

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Bad at the office. Price 10 cents each. Books referred to promptly supplied on receipt of Minrals sent for examination should be distinctly marked or labeled.

(10081) H. A. says: A cask of water is placed on a pair of scales. It weighs 50 pounds. If a fish weighing 15 pounds (satimon) is placed in the water cutained in the cask, will it raise the weight of the cask or not? It is argued by some apparently smart on them as proof. I contend that the cask them exported distinct of the cask pounds before dinner; does he weigh any more and the absolute of the cask will of the cask will of the cask will of the cask them as proof. I contend that the cask them weighs 65 pounds. A person weighs 140 pounds before dinner; does he weigh any more and the absolute of the cask them weighs 65 pounds. A person weighs 140 pounds before dinner; does he weigh any more and the absolute of the cask will of the cask will of the cask will of the proof. I contend that the cask in the displaces will overflow. As a fish weighs the same as the fish displaces will overflow. As a fish weighs the same after the fish has been put into the water that the cask full of water and fish weigh the same after the fish has been put into the water that the cask and water weighed before the fish was put into it, and if no water when the fish was put into the water, that is, the weight of fish, water, and cask will be 65 pounds in the case you specify. The whole turns upon whether the fish is alive and weigh as much more than he did before the meal as the weight of fish, water, and cask will be 65 pounds in the case you specify. The whole turns upon whether the fish is alive and weigh as much more than he did before the meal as the weight of the food he has eaten. Common sense teaches this. If a person puts 1/4 pounds or food into his pocket and gets upon scales he will weigh 1/4 pounds more than without the food he has eaten. Common sense teaches this. If a person puts 1/4 pounds or food into his pocket. Write stomach in place of pocket, and you will ha

with experience, need not exceed a tenth. Sometimes voltmeters and ammeters are provided with shunts, which change the value of a division of the scale. Thus you can have a shunt made which will make one division have one-tenth of its present value. This will be much better than to estimate by the eye the fractional part of a divsion indicated by the pointer.

(10083) W. D. O. says: I would like to know the composition of the preparation with which the particles of carbon, in the carbon pencils for electric arc lamps, are held together; that is, the cementing substance. A. Arc light carbons, carbon plates for battery cells, and similar articles are made from coke. The higher grades are made from coke derived from the residue of petroleum stills. The crude material is dried, ground fine, and sorted into different sizes. The binding material may be a coal-tar product, or some other substance containing carbon, and which will be reduced to carbon by the heat of the furnace. These are thoroughly mixed, pressed into forms by hydraulic pressure, and afterward baked in a furnace. For a full description see SUPPLE-MENT, No. 1237, price ten cents.

(10084) R. S. C. asks: Why, if known, does the skin of a chameleon change in color, in moving from an object of one color to one of another color; that is, why does its skin always assume the same color as the object it may be resting upon? A. One answer to the question, "Why does the chameleon change the color of its skin?" is that the chameleon has a better chance of life by reason of this protective resemblance to its surroundings. Those chameleons which had the largest range of change of color in the past have survived, and the capacity of change has been evolved in their descendants to a higher degree, so that all chameleons now living readily change the color of their skins to that of the bark of the tree upon which they at the time may be. They are thus protected from their enemies. There are many such adaptations of creatures to their habitat or environment. The polar bear, living among Arctic snows, is white. The tiger in the jungles is striped, as if painted to resemble rushes, reeds, or other stiff and straight plants. Many fish have backs of the hue of the sand or sea bottom upon which they lie. Nature has thus attended to the needs of her weaker children. Another answer might be that the effect of the color of the surroundings is to produce a change in the pigment in the cells of the skin, so that the color becomes like that of the surface upon which the animal is resting. In the chameleon this is comparatively rapid.

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United States were Issued

for the Week Ending

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