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## RECENTLY PATENTED INVENTIONS.

## Engineering.

Rotary Engine.-George E. Boom, Niw York City. This engine is designed to occupy but mall space, and has rotary pistons and all rotary part evenly balanced, reducing the vibratory motion to a min imum, and making it possible to employ a light base and
framework while obtaining a high speed. The pistons are mounted on disks which have bearings in the walle of the cylinders, and on the opposite sides of the disk are segmental counterbalance weights to which are at tached gear wheels, the disks, pistons and parts bein mounted on two shafts parallel with each other. Self iling mechanism is provided for the bearings and the ngine may be readily converted into a water pump or

## Railway Appliances

Car Fender. - John P. Geraghty Jersey City, N. J. Upon a main frame supported from the car, according to this improvement, is a yieldingly
mounted sliding frame on which are pivoted side arms mounted sliding frame on which are pivoted side arms
an apron being attached at its lower end to the arms and tits upper end to a fixed support. The apron is thu ormally held in a stretched position, inclined from the dashboard nearly to the rails, but when a person in the path of the car is struck by the fender and falls upon the apron the arms swing upward and form a scoop of the apron, in which the person will be received and held
without injury.
Speed Indicator.-George S. Wright and Howell P. Terry, Brooklyn, N. Y. A wheel on the axle or other rotary part of the car or vehicle, according
to this invention, is connected by a driving belt with a ant ariving an axle on which is a wheo woving a pointer on a dial. The graduations on the dial indicata wiles and parts of miles, and the position of the point indicates the speed at which the car is traveling.
Switch.-William G. Lewi, Albany, N. Y. This improvement is for a device to be operated
from a moving car to shift switches. It comprises defrom a moving car to shift switches. It comprises de-
pressible platforms in front of a switch, parallel rock shafts, a plunger beneath each platform, while the platorm comprises two drop sections and a sliding section, nection between each plunger and a rock shaft, while a shifting baris connected with the movable section of the witch, and by links and crank arms with the rock shafts. The shifting bar may be automatically operated by pressing downward upon shifting plates at either side of the

Signaling Apparatus.-Charles Oleson and John D. Morrison, Roseburg, Orego . This is u apparatus arranged in connection with air brakes, he closing of an angle cock in the system being marked by an indicator in each car, and causing the locomotive constant pressure below that of the train pipe, and the signal pipe is connected with the angle cock, and when he plug in the latter is closed, connection is made with he signal pipe and a pop valve to sound the whistle in the cab of the locomotive.

## Electrical.

Transmitting Electrical Energi. ore especially designed for use in dental work. rock drilling, ctc, has been devised by this inventor, to facilitate transmitting electrical energy in a simple and effecfive manner. The invention comprises a reciprocating ool and an electro-magnet and armature for causing reciprocations in one direction, a motor in an electric cir-
cuit and on the motor shaft a thimble of alternating me cuit and on the motor shaft a thimble of alternating me.
tallic and insulated strips, while a second electric circuit sonnected with the first circuit and with the magnet of the tool. Contact plates in the second circuit engage with the tbimble to trangmit an intermittent corrent to the
tool magnet, there being a rheostat in the second circn
to regulate the force of the reciprocations of the tool.

## Agricultural.

TUrning Swaths.-George E. Nelson Dillon, Montana. This is a machine adapted to trav behind a mowing machine, and take up and turn ove
waths of cut hay or grase, leaving the swaths in prac swaths of cut hay or grass, leaving the swaths in prac-
tically the same position relative to each other that they were before being lifted and turned. The frame of the machine is readily raised or lowered, according to the character of the hay or grass on the ground, and withi
the frame are two rotating rakes, each adapted to take a swath.

Irrigation Shovel.--John H. Gor Ion, South Bena, W yoming. This isan implement p nliarly adapted to the requirements of irrigation farm ers, making it possible to do a variety of work with on nay serve as a pick or a crowbar in digging a narrow eep trench, and edges of the blade curving from thig ip through strong sod and into any soil, while the scco hape of the blade enables it to remove large quantitie of earth at every stroke.

## Miscellaneous.

Geographical Clock Dial.-David . Thompson, Englewooa, in. This isa clock for the u ion to the local time of the place the time eye, in add in all parts of the world, the portion of the earth's surface here davight prevails and the portion where night preails. It is also capable of adjustment to illustrate this or alls seasons of the year and all latitudes, showing the trrestrial phenomena depend and the seasons, and al fthe earth's axis to the ecliptic and the revolution Builder's Scaffold.-John E. Enni Duluth, Minn. This invention provides scaffold sup porting devics so arranged hat the scaffold may the apparatus being capable of use as an inside or die scaffold, or as a window scaffold where a pround upport cannot be conveniently employed. The appa ratus is also provided with a "runway" or intermediate caffold, for use as a landing or turning station for the

TyPEwRITER W ord Register. Clayton O. Blandin, Hastings, Neb. This improvemén is more especially designed for use in commercial tele.
raphy, registering the number of words written to de trmine the cost of a message, as such messages are usu ally written on a typewriter. It comprises a casing in which is a registering disk operated by connection with applicable to every style of typewriter.
Pyrocatechin Mono-acetic Acid. Wilhelm Majert, Falkenberg, Germany. Pyrocatechin and loss of appetite, stopping night perspiration reducing the evening temperature, and in mild cases destroying ing to this dise disease. The acid is obtained, accord chloracetic acid to the action of one molecule of pyrocatechin in the presence of free carbonate of a free alka cess described in the patent
Steam Radiator. - Augustus Eichorn, Orange, N. J. This inventor has devised a radiaor designed to ready and effectively expel the air from
its interior upon the entry of the steam. In the base is a series of sections communicating with the base at one of their ends, while a diaphragm extends longitudinally and centrally with the base and serves to introduce the steam at the rear of the sections, so that it will be behind the ,
Storm Sash Fastener.- Andrew A.
 dows, screens, or shu tters to a window casing, this in entor has devised a simple and inexpensive fastening comprisiug a flanged block to be pivotally connected t whlle a pln or lug is attachcd to the casing for engage ment with the flange. The device may be easily operated from the inner side of a room, so that a screen may e placed in position or removed with very little trouble. Fence Post. -William J. Sleep, Birmingham, Ala. This is a post especially adapted for carrying the runners of wire fences, and adaptable for the aply of metal, of borlike construction, with longitudial slots or openings and dramage openimgs near the ground line, and hasundercutdownwardly inclined brackets to receive the upper ends of braces, A binding strip
held on one of the faces of the post has transveree the post.
Fence.-Elias Roth, New Oxford. Pa. This invention is for an improvement in fences made integral loops to engage the side of the post and being secured on the posts by staples which embrace adjacent members of each loop, thereby preventing longitudinal movement of the wires. The pickets are of peculiar construction, and are firmly bound by the stretcher wires, the latter yielding upwardly when shortened by low emperatures and sagging proportionately during the hot,
Tilting Spring Seat.-Charles F. Davy, Starkville, N. Y. This is a seat supported on prings from a frame adapted to be botted to the sea extend side springs, so that the seat will be free to move n all directions, but will be held in position by the springs. The seat is well adapted for use on agricnltara machines, locomotives, etc., being readily adjustable to stand at an angle to the surface over which the machine

Corset.-Levi Weingarten, New York
City, and David Grothen, Newark, N. J. Thie corset has
a slitin one edge and a pocket in each edge of the slit, a
shield being permanently secured to the corset adjacent the inner end of the slit, with its corset adjace edges slidin freely in the pockets. The corset may be made to readily adapt itself to the form of the user, the expansible parte being capable of spreading or contracting without osing portions of the garmenta beneath the corsets.

## Designs.

Design for Mirror Frame.-Alber Wanner, Jr., Hoboken, N.J. This design comprises and frame or bonder, atlicework within the fran nd a floriate center within the laticework,
Nots.-Copies of any of the above patents will be arnished by Munn \& Co., for 25 cents each. Please ond name

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(6830) W. W. M. writes: In your answer o my question in a rccent issue, you advised me to use caustic soda in place of caustic potash in the battery under consideration. If such a change were made, 1 what would be the change in potential A. There isno appreciable change in voltage, but you get the advantage if a clean solution and of one cheaply made. 2. Could
ommercial sheet zinc be used for negative plates?
(6831) J. P. H. asks how to make an あotian harp. A. Жolian harpsshouldbe made to At into a breeze across the strings of the instrument. Make the box of thin dry pine, the top piece or sounding board of extra clear stuff about three-sisteenths of an inch thick. Sides and bottom can be one-quarter of an inch, length
two inches shorter than the width of your window, width ten inches, depth two and a half inches. The ends should be of hard wood, and thick enough at one e

uffice in a singleseries for your purposes, giving a total
of eighteen cells. Do not attempt to charge with a primary battery.
(6836) J. W. C. asks: Can you give me a receipt for making a solution for removing the scale
rom drop forgings of iron and soft steel? I understand there are some concerns using a pickle for doing so. What effect would it have on the metal? A. Use, by volume, sulphuric acid, 1 part ; 1 part nitric acid; 2 parte water, applied warm. Either the acid or the iron may be heated. It will not injure the iron, unless used to

## TO INVENTORS

An experience of neariy fify years, and the preparation tencs at home and abroad, enable us to understand the aws and practice on both continents, and to possess unequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all
foreign countries may be bad onapplication, and persons ontemplating the securing of patents, either at bome or abroad. are invited to write to this offce for prices, ensive facilitio accordance with the times and our exMUNN \& CO., o
Tay. New York.

INDEX OF INVENTIONS

## which Letters Patent of th

April 7, 1896,
[See note at end of list about copies of these patent

to hold the eyes or studs for fastening the wires or catgut strings. At the other end the wood should be thick nough to hold a set of violin keys, If you use catgut
or iron piano pins, if you use wire, which should be steel. Two bridges of hard wood glued diagonally across each end, for the strings to rest upon. If steel wire is used, a round wire should be inserted upon each bridge,
so that the soundlng wires will not cut the wood. The est you may gather from the sketch. The tuning should be harmonic, or say thirds, fifths, and octaves. Make about fonr holes
under the strings
(6832) S. L. D. says : I am a subscriber oo your valuable paper, and woald like you to tell me in Notes and Queries how I can restore gilt picture frames
that have become dark and dingy. A. You may improve them by simply washing them with a small sponge moistened with alcohol or of turpentine, the sponge only to be sufficiently wet to take off the dirt and fly dry of themselves.
(6833) W. P. W. asks: What will take electricity out of printing paper? A. Nothing has yet palliates the evil, but will notalways stop it.
(6834) J. S. asks : 1. How is copper oxide easily and cheaply made? I have tried heating copwith ten per cent of potassiumchlorate to make a thin paste, ignite, and wash. By calcining and vigorous shaking you should succeed by simple ignition. 2. How are the copper oxide plates in an Edison. Lalande battery made? A. See Supplement, No. 792 for description of the battery named. 3. I am making a dry battery as follows: I use an amalgamated com-
mercial zinc cup, coated with plaster of Paris and salmercial zinc cup, coated with plaster of Paris and salof gelatine and glycerine. Inside of this is a layer of bl otting paper, and around the carbon a mixture of powdered carbon and manganese dioxide mixed with the same solution as the plaster of Paris. The voltage is all right, but the amperage is low. How can 1 reduce the nternal resistance ? A. The resistance win mevitably be high-you
rolution.
(6835) A. R. B. writes: We should like to be informed, through your valuable paper, how many power, 32 volt lampe for six hours continuously per day What primary battery and how many would you advise us to get, with which to charge the storage batteries ? A teries, as different sizes are made. You will require eigbtect in eeries, and a moderate size of cell would

