RECENT AMERICAN INVENTIONS.

Firearms.-This invention consists in forming upon the muzzle of a musket, rifle or other gun barrel, or providing the same with a cutter or notched, toothed or otherwise roughened edge, for the purpose of cutting or breaking the cartridges, and so obviating the necessity of biting them. Invented by C. H. Bradley, of Westchester, Pa.

Evaporator. - This invention consists in the arrange ment of two pans, one on the top of the other, in combination with a flue running alongside of the bottom of the upper pan, and consequently on the top of the lower pan, in such a manner that the heat passing through said flue serves to heat simultaneously the contents of the upper and those of the lower pan also in the arrangement of two strainers in combina tion with three pans placed at different levels and divided into a number of compartments in such a manner that the juice in passing from one pan to the next succeeding one is strained and freed from curdles, bits of cane and other impurities that may be mixed up with it, while at the same time said juice is gradually boiled down so that the same passes off from the last compartment of the last pan perfectly clear and finished. Patented to O. N. Brainerd, of Marion, Iowa

Let Off for Power Looms. - This invention, by T. H. and H. James, of Stockport, N. Y., consists in a certain novel and very simple mode of combining the whip roll with the weighted levers employed to produce friction upon the yarn beam, whereby the letting off of the yarn is controlled perfectly by the tension of the warp, and the said tension kept uniform, what ever may be the quantity of yarn on the beam.

Slide Valve .- This invention relates to the connection of the slide valve with a piston which is fitted to an open cylinder in the back of the valve chest, and upon which the pressure of the steam acts in opposition to its pressure on the back of the valve ; and it consists in combining the valve with the piston by means of a roller attached to the valve, and a straight bar attached by a yoke to the piston. Invented by Jacob Martin, of Mound City, Ill.

Grading and Excavating Machine.-This invention relates to certain improvements in that class of grading and excavating machines in which a cutter or share is used in combination with an endless conveying apron for conveying the earth to a wagon or cart accompany ing the machine, or for depositing the earth in ridges by the side of the excavation. The object of the invention is to render the cutter or share adjustable in such a manner that it may always be made to work in a perfectlyhorizontal position in a transverse direction, however much inclined the surface of the ground may be over which the machine is passing. The invention has also for its object the constructing of the endless conveying apron in such a manner that the earth will be readily discharged from it, and also so arranging the cutter or share beam that the cutter may be made to penetrate the earth at a greater or less distance, as may be required, and the cutter or share beam rendered capable of being adjusted horizontally in a longitudinal direction. Invented and patented by Albert Keith, of Lisbon, Ill.

Pulverizer and Amalgamator. - The object of this invention is to obtain a machine which will complete the process of pulverizing the ore, as it comes from the stamping mills, and during the process of amalgamating the same, so that a more perfect separation may be obtained of the metal from the ore than by the ordinary amalgamating machines. The invention is chiefly designed for separating gold from quartz, and to receive the pulp as it is discharged from the ordinary stamp batteries or stamping mills. The invention consists in the employment or use of a rotary or reciprocating pulverizer and amalgamator formed of a cylinder or semi-cylinder provided with grooves which contain balls or spherical crushers, and using in connection therewith a rotary hollow cylinder or drum, having an amalgamated innersurface, and so arranged as to receive the contents of the pulverizer and amalgamator and separate any particles of gold that might have escaped in passing through the pulverizer and amalgamator. 'The above invention is by James Burrell, of Central City, Colorado Territory.

Breech-Loading Gun.-This invention consists in the combination of a ring or open cap screwing on to a thread provided for it on the exterior of the rear portion of the body or barrel of gun, and a slide working ter come.

in a mortise provided for it in the said ring or cap. The credit of this invention is due to T. C. Rice, of Cambridgeport, Mass., who may be addressed in care of H. N. Hooper & Co., of Boston, for further information.

Brush.-J. A. Fanshawe and J. A. Jaques, of Tottenham, England, obtained a patent, dated January 7, 1862, for an improved brush, the claim of which appeared in No. 4 of the current volume. This brush is specially adapted for washing the hands, for use in the bath and for other lavatory purposes. Its rubbing surface is made of soft india rubber in the form of a series of concentricannular edges or a continuous convolute edge. The back may be of the same material when flexibility is desired, or of hard india rubber when rigidity is desired.

NOTES ON FOREIGN INVENTIONS AND DIS-COVERIES.

Chain Harrows.-A patent has been taken out by W. Baylise, of Wolverhampton, England, for an improvement in chain harrows, consisting in keeping the links fully extended by suitable strips of thin steel, which form springs like those used for hoop skirts. With the use and combination of such steel springs in a chain harrow it can be drawn obliquely across plowed fields, and it accommodates itself to all unevenness and inequality of the soil's surface.

Bleaching Rags for Paper .- When colored rags are employed for making paper they are washed and reduced to pulp, then bleached with chlorine liquor. T. Gray, of Wandsworth, England, states, in a patent which he has received, that when colored rags are subjected to the action of dilute muriatic acid for several hours in a vat, before being placed in .the bleaching liquor, in the usual way, that a superior bleaching effect will be insured.

Guita-Percha Cements .- D. McKay, of Oxford, England, makes a gutta-percha cement for uniting articles of leather, wood, paper, &c., by dissolving the gutta percha, cut in small pieces, in the bisulphide of carbon, exposed to the atmosphere. It has been customary to dissolve gutta percha and such resin gums in the preparation, kept in a close vessel, but by exposing it to the atmosphere during the period of action it absorbs some oxygen, and becomes more adhesive.

Preserving Railroad Timbers. -J. Cullen, of the North London Railway, has patented a composition for treating railway timber to preserve it. The composition consists of charcoal in fine powder, coal tar and quick lime sifted. The tar is heated in an iron vessel. then the charcoal and lime are added in equal quantities, making about ten per cent of the whole mixture. When it has boiled for one hour the timber may be immersed in it for a few minutes, then taken out and laid aside to cool. This composition may also be applied hot, with a suitable brush, as a paint for coarse boards, and for iron work laid in the ground or otherwise exposed, as it prevents it from rusting.

Improved Electrical Pile .- J. A. Calland, of Nantes. France. has obtained a patent for an electrical pile, in which he dispenses with the porous cell used in the Daniel and other batteries. His battery is thus described :- If a vessel of glass or stoneware be about half filled with a cold saturated solution of sulphate of copper, and pure water or weak salt brine, be then poured cautiously in on the top, the latter will remain separate from the former, and from that moment there will be a disengagement of electricity from the contact of these two liquids. A positive electrode connected with a wire is placed in the liquid at the bottom of the vessel, and a negative electrode in the top solution, and a galvanic pile is thus formed. The wire of the plate which is placed in the lowest solution must be coated with some non-conducting substance

BUTTER IN WINTER .- You cannot get butter out of milk if there is none in it. Feed the cows well and thus secure good milk, and there is not much trouble in churning even in winter. Keep the cream in a warm room till it turns somewhat sour. Let the churn be scalded before pouring in the cream, so that it will be well heated through and not cool the cream. Let the cream be at a temperature of 65° to 76°, and there will not be much difficulty in making the but-



FOR THE WEEK ENDING JANUARY 28, 1862. orted Officially for the Scientific Ameri

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*** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, speci-iying size of model required, and much other information useful to inventors may be had gratis by addressing MUNN & CO., Pub shers of the Scientific American, New York.

233.—T. K. Anderson, of Hornellsville, N. Y., for Im-proved Composition of Fuse or Slow Match for Ignit-ing Powder Under Water : claim a compound consisting of the four-named ingredients, in or it the same proportions specified; prepared and used in the man-as and for the purposes set forth. 34,233.-

34,234.—Frederick Andriessen, of Alleghany City, Pa., for Improved Car Truck Regulator : I claim the application of this self-adjusting regulator with the four leading poles, friction rollers, i.e., (see) effects A, B B, C C C C, D D D D D D and E E E B of the drawings) to R R, locomotives and

34,235.—C. H. Bradley, of Westchester, Pa., for Improve-ment in the Muzzle of Firearms for Cutting off Cart-

ridges : ridges: I claim providing a portion or the whole of the end, or muzzle, of a gun barrel with teeth, or otherwise rendering the same rough, as and for the purpose set forth and described.

34,236.-O. N. Brainerd, of Marion, Iowa, for Improved

Evaporating Plans for Saccharine Liquids: I claim, first. The arrangement of the pans, A and B, in combination with the fue, D, at the bottom of the former and at the top of latter, constructed and operating in the manner and for the purpose shown and described. Second, The arrangement of the strainers, G H, in combination with the pans, A BC, constructed and operating as and for the purpose specified.

34,237.-J. S. Brooks, of Rochester, N. Y., for Improve-

34,237.--J. S. BFOOKS, OI RUCHESLET, R. 1., FOI Improve-ment in Sad-Iron Heaters : I claim an improved sad-iron heater, consisting of the pan, A, divid-ed into separate compar ments for each iron, with hinged failing lids, or covers, e.d. so arranged that the removal of an iron from one chamber, will cause the lid or lids to fail over the adjoining one, sub-stantially in the manner and for the purposes described.

stantially in the manner and for the purpose described.
 34,238.—James Burrell, of Central City, Colorado Territory, for Improved Amalgamator and Ore Crusher:
 1 claim first, A rotating or reciprocating pulverizer and amalgamator, B, when constructed with a series of circumferential grooves, a each of which is a provided with a ball, D, arranged as described.
 Second, In connection with the pulverizer and amalgamator, B, constructed as described, the cylinder, H, provided with an amalgamatelly as and for the purpose set forth.
 34, 230. -1 M Closel, construction of the purpose set forth.

as and for the purpose set forth.
34,239.—J. M. Clark, of Lancaster, Pa., for Improvement in Apparatus for Feeding Mills:
I claim, first, The employment of the revolving cup, F, when adjust-able, substantially as and for the purpose specified.
Second, The arrangement of the cup, F, the strap, a, and rim, F, secured and connected by means of clips, c c, substantially as repreented. Third, The employment of the stationary shield, G, used and for the urpose specified.

purpose specified. 34,240.—J. W. Clark, of Springfield, Mass., for Improve-ment in Tools for Making Screws: I claim the arrangement of the cutters, BCF, opening, o, segmental rim, d, and movable guide plate, G, in combination with the stock, A, as and for the purpose described.

The object of this invention is to construct a simple and effective tool for making screws from iron, brass or any other wire, and the inrention consists in the arrangement of three cutters fitted into a comnon stock, which is provided with two guide openings or rests, one to fit the head and the other the shank of the acrew, in such a manner hat by the action of the first tool the wire is turned down to of the head, by the second to the size of the shank and by the third the oint is rounded and the screw completed to rece ve the thread. 34,241.-C. A. Codding, of Augusta, Mich., for Improve-

ment in Cheese Presses : I claim the employment of the adjustable bottom, C, con et forth, in combination with the hoop or cylinder, A, and lunger, B, arranged and operating as and for the purpose

set forth, in combination with the hoop or cylinder, A, and perforated plunger, B, arranged and operating as and for the purpose specified.
34,242.—J. M. Connel, of Newark, and J. S. Hall, of Columbus, Ohio, for Improvement in Shells for Rifled Ordnance:
We claim, first, The explosive projectile made of two hollow parts, A A' B B', which are stited together so that a space, C, exists between their facing ends, ab, and the part, A A', having circumferentially segmental cavities, D, and the part, B B', having and circumferential edge, G, and the whole being encircled and heid together by a lead packing rug, H, in the manner and for the purpose described.
Becond, Constructing the interior of one portion of the projection states of the amber, J, from the igniting magazine, KI, substantially as and for the purpose described.
Third, In combination with the shoulders, ed, and tube, K, we claim providing a central opening, f, in the end, a, of the part, A A', and a similar hole, g, in the end, b, of rug and arranging and initing magazine, K' & W within the hollow tube, K, and in the openings, f, and a subout the part, A A', and a manging and igniting magazine, K' & W within the hollow tube, K, and in the openings, f, and a subout state and in the opening f, and in the openings and igniting magazine, K' & W within the hollow tube, K, and in the openings, f, and a subding and igniting magazine, K' & W within the hollow sube, K, and in the openings, f, and a subding and igniting magazine with the hollow tube, K, and in the openings, f, and a subding and with the hollow sube, K, and in the openings, f, and the substantially as and for the purpose described.
Yourth, The combination of a sliding, igniting magazine with the hollow subles, K and in the openings, fourther, S, and as and for the purpose described.

34,243 .- Ransom Cook, of Saratoga Springs, N. Y., for

Improved Lunch Box: I claim a lunch case, composed of the dishes, E E E, the vess F F, the driving cups, G G, the inner cover, C, 118 rib, D, with case, A, and the cover, B, the whole constructed and arranged as forth for the purpose specified.

form for the purpose specified.
34,244.—Simeon Coon, of Ithaca, N. Y., for Improvement in Window Sash and Setting Glass therein:
I claim my peculiar construction of window sash with loose mun-nions adjusted as described, and slots cut through the frame, for the purpose of admitting glass; all in combination with the method of se-curing the glass, as set forth in my specification.

curing the glass, as set forth in my specification.
 34,245.—J. H. Duffield, of Glassboro', N. J., for Improvement in Cases for Railroad Tickets:
 i claim the application to a ticket case, constructed and arranged to operate in combination therewith and the tickets contained, in the manner described and set forth, for the purpose specified.

34,246.—O. L. Edwards and Nelson Gabel, of Gratis, Ohio, for Improvement in Fences : We claim, in the construction of portable fences, the combination and arranging of Evys, b' b', d d, post, C and E, and ralls, A, substan-stanulally as set forth