a second, about sixty miles an hour or one mile in a minute. pint of water that has been boiled and allowed to cool. In-When we move from the sounding body with this velocity, the opposite will take place; one twelfth of the vibrations will reach our ear and the tone will appear flattened a semitone. When the sounding body moves and we are at rest the effect will be the same, as is self-evident.

When two railroad trains are passing one another and one locomotive sounds the whistle, the passengers in the other train will hear a higher note, when the trains are approaching, due to the combined effect of the two motions. When each train is moving at a velocity of sixty miles an hour, the rise of pitch will be a whole tone above the real note. When the trains have passed and the distance intervening is increase ing at the same velocity, they will then hear the sound a whole tene below the true one. Hence, at the moment of passing a chapge of pitch will be observed of two whole tones or a major third. Both trains, however, seldom reach this velocity, and the change of pitch usually observed will seldom be more than a minor third, or one tone and a half, which corresponds to a mean velocity of each train of one fifth less than sixty, or forty eight miles an hour. The same fact is observed in the sound of the locomotive bell when it is rung in passing.

When traveling at night I have often amused myself in noticing the correct interval of this change in pitch; deducing from it the sum of the velocities of the two passing trains. Then, by knowing the size of the drive wheels of the loc-motive of my train, and taking into consideration that four puffs of steam correspond always with one revolution, and timing the velocities of these steam puffs, I had the key to the velo city of my train; and subtracting this from the total velocity obtained the velocity of the train which had passed, and of which nothing but the changing pitch of the whistle had been observed. P. H. VANDER WEYDE, M. D.

New York City.

Explosive Gases in Steam-Bollers.

MESSRS. EDITORS :-- The explanation of the bighly interesting case, menti ned by a "Plactical Engineer," page 35, is evident. When the supply proper refused to give water there was, of course, a lack of water in the boiler; and, notwithstanding that the engineer withdrew his fires, some part of the boiler became hot enough to decompose the steam, not into its elements (this is a pure speculation, having no fact to support it), but the iron became oxidized by the oxygen of the water, and the hydrogen was set sree, which is always the case when steam is in contact with red hot iron It is, in fact, one of the ways to manufacture hydrogen. The boiler being closed, and the hydrogen not soluble in water, it remained there; and when, after cooling, the man-hole was opened, air enough entered to form with the hydrogeu an explosive mixture, to which the engineer set fire with his lamp. Any practical chemist, acquainted with the enormous explosive power of oxygen and hydrogen, mechanically mixed in such proportion as they are chemically combined in water, will agree that, if such a mixture had been in the boiler something much worse would have happened to the engi neer and to the boiler also. In this case it was simply hydrogen and common air, which may be considered almost harmless, when compared with the tremendous power of hydrogen P. H. VANDER WEYDE, M. D. and oxygen.

New York city.

The Use of Ozone in Sugar Refining.

MESSRS. EDITORS :- In your journal of June 23d and August 5th. I notice two articles on the use of ozone as a decolorizing agent in a sugar refinery. Having visited that refinery about six weeks since while in London, I thought that the follow ing facts might be of interest to you.

The first experiments in bleaching sugar by ozone were made in the country, about sixty miles from London, and were a perfect success, changing a dark brown solution of sugar to a straw color in a few minutes, and at the same time depositing all the foreign substances. The result of these experiments being so satisfactory, the owner of a sugar refinery in White Chapel was induced to put up a steam engine to drive an electric machine and bleach sugar by these means; but it has proved a total failure on account of his inability to produce ozone in any quantity. The owner of the refinery attributes this to the air of London being, to a great extent, deprived of that gas by its immense population. Be that as it may, until somebody discovers a means of obtaining that gas in large quantities at a moderate price, sugar refining by ozone will remain in its present c ndition. H. W. B. Philadelphia, Pa.

stead of plain water, distilled rose water, elder, or orange flower water is more pleasant. The bites are to be dabbed with the solution so long as there is any irritation. For bees' or wasps' stings the borax solution may be made of twice the above strength.

WATER COOLERS .- We all know that cold water during the summer is one of the greatest luxuries. When it is generally understood that evaporation produces cold, it will be evident that any vessel or material that favors evaporation will induce this result. Now, all porous and absorbent vessels are of this character. Pottery not glazed is porous. A linen clothed dipped into water is porous, absorbs water, and when exposed to the air the water evaporates, producing cold; hence, if any vessel be covered with a damp cloth. the interior will be colder than the exterior. A water cooler is a porous vessel, which allows evaporation to take place on its outer surface, thus cooling the contents. The water coolers, as sent to us from Staffordshire, have, however, one fault they are not sufficiently porous; hence there is only a very slow infiltration from the inner to the outer surface, and any minute organic substance that may be in the water is arrested by the crock. After a time, this organic matter, it is often observed, undergoes decomposition, giving a musty, earthy odor to the water that may be in the vessel. When this is the case, it should be cleaned both inside and out, with an ounce.or two of strong muriatic acid, rubbing the exterior with a flannel wet with the acid, followed with clean hot water. After this treatment the vessel will be, as before, a good water cooler.

LEMON KALI. - A teaspoonful of this compound in a tumblerful of fresh cold water, forms a very agreeable effervescing summer drink. When made, it must be preserved in a dry place, and in well-corked bottles, otherwise it will soon be spoiled. To make it, take one pound of powdered white sugar, half a pound of bicarbonate of soda, halt a pound of citric acid, powdered, and halt a trachm of essence of lemon. Sift the whole well together, then put it into dry, widemouthed bottles. Tartaric acid may be used instead of the citic acid at less expense, but it is not so good for general use. Citric acid is the true acid of the lemon; tartaric acid is derived from grape lees, tamarinds and other fruit. The pleasing flavor of lemon kali depends much upon the quality of the essence of lemon, which rapidly spoils in druggists' shops, and smells like turpentine. See that you have good and fresh essence of lemon.

FLEAS IN DOGS .- Fleas trouble dogs, and one of the best remedies is the following : Rub colza or common olive oil into the coat, saturate the hair with the oil to the surface of the skin, let it remain on for half an hour, then well-wash out the oil with the best yellow soap and lukewarm water. A small portion of any sweet oil brushed into the coat of a woolly dog, will prevent its being infected with vermin. Matrons of large schools may advisedly take this hint. Insects of every kind have a "life and death" dislike to grease in any form.

MANUFACTURING, MINING, AND RAILROAD ITEMS.

An iron steamer, the first ever built there, was launched at Cleveland Ohio, on Saturday, 25 th ult.

It has been suggested in England to unite Scotland and Ireland by a tunnel. The distance of the proposed termini is about four teen and a half miles, and the cost is set oown at £3,150,000 .

Sun-dried oysters, cured lice beef by hanging in the sun, are becoming an importantarticle of trafic in California

Ninety locomotives are now in use on the Union Pacific Railroad, and a hundred and seven others have been ordered.

n imperial French decree suspends the tunnage on vessels entering the

ports of the Empire with breadstuffs for three months from the 1st of October next. This would seem to imply a snort harvest in France.

DISCOVERY OF CHLORIDE OF POTASSICM.-A vast deposit of pure chloride of potassium has been discoverel in a salt mine in Hungary. This must prove of great commercial value to Austria.

APPROPRIATIONS FOR IMPROVEMENTS.-Congress appropriated a million and a balt dollars for river and barbor improvements at the late session. Three hundred and fitty thousand dollars go for the improvement of the Mississippi.

NRW OCEAN STEAM ROUTE .-- A contract was concluded, a short time back, b) the Chilian Government with the Pacific Steam Navigation for direct mail communication with England. The voyage out and back must be completed in forty-two days. The "rst shipsailed on the 13th of July.

SUGARIN BREWING.—The useof sugar in British breweries has largely increased. During the year 1867, 41, 143,000 pounds were consumed. Narcotic adulterations of an exceedingly deleterious nature are often added to the liquor.

A NEW PHASE IN ECONOMY .-- A species of co-operation system has been adopted by the Pennsylvania Railroad Company. It is agreed to divid among the engineers and firemen allthatthey save from lastyear's expende ure offuel, oil, and other articles in running their locomotives

Recent American and Loreign Latents.

der trie reading we entit Dioligh weekly notes of some of the mile s wrows પ્રથમ home and screigh valents.

MILL FOR GRINDING CLAY .-- Levi Moore, Baraboo, Wis .-- The object of this invention is to provide a mill for reducing clay to a pulverulent and plastic state, suitable for building brick or pottery. It consists of the form and arrangement of the grinding devices, the whole being contained within a frame adapted to their operation.

FENCE.-Henry J. Culp, Goshen, Ind.-This invention relates to an improvement in fences, and consists in so constructing the panels of which the fence is composed that they can be readily connected and disconnected.

SICKLE BAR FOR MOWING MACHINES .- G. W. Chapman, Jr., Iowa Falls, Iowa.-This invention relates to an improvement in the construction of sickle bars for mowers and reapers, and consists in forming the bars in two pieces, in such manner as to secure separate cutters or teeth between them, so that the teeth may be easily removed when necessary to sharpen and repair them, or replace any when broken.

LOG SLED.-Chas. W. Mosher, East Leon, N. Y.-The object of this invention is to provide a log sled or boat with means to enable the logs to be taken on to the sled through the draft force exerted by the cattle hitched thereto. It consists of an angular or arched trame vibrating over trunnions, which latter baye bcarings on the sides or runners of the sled, or in suitable pieces of timber affixed thereto, together with a chain and log hooks so arranged that the draft force of the team will act to raise the log and draw it forward upon the sled.

PORTABLE CLOTHES RACK .- Geo. H. Hammond, Davenport, N. Y.- The obect of this invention is to provide a simple, durable, and portable rack for drying clothes. "t consists of a central staff having two hubs affixed thereon, the said hubs being formed with jaws in which are provided folding arms and a jointed brace for holding the arms rigidly extended; the drying ropes arc arranged at proper intervals on the arms, and the whole toset upon a post and revolve freely thereon.

BELT TOOL .- Eben Hester, Suffield, Conn.- The object of this invention is to furnish a convenient tool for fitting belts for machinery. It consists of a quare shank set in a handle and bearing two punches for cutting holes in the belt, and two punches having holow or concave points for heading rivets It is also provided with a flat lacing awl having an eye for carrying the leather lacing strip.

COUPLING FOR SIGKLE PITMANS .- O. P. Drury, Niles, Mich .- The object of this invention is to provise a strong, durable, and easily working counling device for connecting thepitmans of a reaping or mowing machine with the sickleoack of the same.

LAMP.-S. C. Brockington Groton, Conn.-The object of this invention is to construct a lamp for kerose we and other hydrocarbon liquids, in which the wick will always be equally far inserted in the liquid, so that thereby a steady and equal flame will always be obtained. The object of the invention is also to provide an oil reservoir and connections by means of which any number of lamps can be supplied with the necessary fuel.

WRITING AND DRAWING DESK .-- Wm. W. Levering, New York city .-- This invection relates to a new desk, which is provided with states, blackboards. and transparent ground glass plates, in such manner that they will be convenient for teachers, artists, and business men.

FLY FRAME FLYER.-James S. Streeter, Providence, R. I.-This invention relates to a new and improved method of constructing flyers for the twisting of varn, whereby the same are more economically made, and whereby the roving is more effectually prevented from flying out when running.

RICE CULTIVATOR.-Geo. W. Cooper, Ogeechee, Ga.-This invention reates to a new rice cultivator, by which the ground between the drills is broken up, without throwing clods upon the plants, and without forming urrows and hills between the drills.

SASHES AND WINDOW FRAMES .- Johann Schnell, New York city .- This invention relates to a new manner of constructing window frames, with a view of facilitating the cleaning of the glas, panes, the replacing of broken panes, and the repairing of broken sash cords. The invention consists in hanging the frame in which the sashes move np and down to the casing of the windows, so that it can be folded or turned like a folding window, and still be provided with sliding sashes.

EXTENSION WARDROBE FRAME.-Elias Gill, New York city.-The object of this invention is to construct a frame for a portable wardrobe, in such manner that the same may be freely and readily extended and contracted as to length and width, according to the room which it is intended itshould occupy. The investion consists in connecting the four posts of the frame, which fit with meir lower ends mto slotted bars or beds, longitudinally as well as transversely, with toggle levers or slotted extension levers, or both, so that they can, longitudinally as well as transversely, be moved any desired distance apart.

ELASTIC SUPPORTS FOR CAR SEATBACKS .-- Geo. Higginson, Newark, N. J. -This invention relates to a new device for supporting the arms of car seat backs and for receiving the shock when the same are reversed. The invention consists in the use of bolis or blocks which are resting upon spring or other cushions, and which are secured to the sides of the seat, so that the arms, to which the back is secured, may rest upon the upper ends of these elastic supports, and may, if the back, is reversed and suddenly let fall, find yielaing support.

GRATE FOR STOVES AND FURNACES .- A. J. Magoon, Providence, R. I.- This invention relates to a new grate for stoves, ranges, and furnaces, which is so arranged that it can at the same time serve as a grate and ash sifter. The grate is of circular form, and is at its center, by a vertical pin, pivoted in a hor:zontal shaft. On one side the grate is supported by a fixed lug, so that it cannotbe dumped to that side. If by snitable gearing connection the grate is revolved around its vertical axis in one direction. If will simply obtain the said motion and will cause the coal held on it to be thoroughly shoved and sifted, but if revolved in the opposite direction, it will not be held by the lug and will swing around the horizontal axle and be dumped.

ICE PITCHER .-- Thomas Leach, Taunton, Mass.-- In this i syention a detach able and removable lining, of glass, china, or earthen ware, is employed, and in connection with it a combined valve and filter of peculiar construction. together with a novel and convenient device for holding the lining firmly in the pitcher and at thesame time preventing it from fracture by the sliding of the ice.

MACHINE FOR DISINTEGRATING CEMENTED GEAVEL -J.B. Cox, San Francisco, Cal.-This invention relates to an improved machine by means of which the compact gravel that abounds in and about the gold mines of Cali fornla and elsewhere can be readily disintegrated, so that the gold which it contains may be separated from it.

Useful Hints for the Season by Septimus Plesse.

REMEDY FOR INSECT BITES-When a musketo, flea, gnat, or other noxious insect punctures the human skin, it deposite or injects au atom of an acidulous fluid of a p isonous nature. This causes an irritation, a sensation of tickling, itching, or of pain. The tickting of flies we are comparatively indifferent about ; but the itch produced by a flea or gnat, or other nonsome insect, disturbs our sciently, and, like the pain of a wasp or bee sting, excites us to a "remedy." The best remedies for the sting of insects are those which will instantly neutratize this acidulous poison deposited in the skin. These are either ammonia or borax. The atkalin- reactin of borax is scarcely yet sufficiently a preciated. However, a time will come when its good qualities will be known and m re universally valued than ammonia, or as it is commonly termed, "hartshorn." Borax is a salt of that innocent nature that in may be kept in every household; it can be recommended as a domestic and harmless chemical. The solution of borax for insect bites is made thus :- Dissolve one ounce of borax in one and families.

PEAT AS FUEL FOR LOCOMOTIVES .- Mr. F. Trevetbick, has been making experiments in Carlada on the engines of the Grand Trunk Railroad. He seems to have arrived at the conclusion that a tun of peat (2.240 pounds) is equivalent to a tunot the best wood.

LARGE SALT MINE.-Near Burlin, Prussia, an enormous sait mine has been discovered. The thickness of the bed is five hundred feet, and its extent has not yet been determined.

HOW A STRIKE WAS CONGURERD. --- A shoe manufacturer in North Adams Massachusetts has conquered a strike in his factory and is now running it with a full force of workmen. He secured forty-three men in Montreal, and now employs none who belong to a " Union."

NEW PUBLICATIONS.

HAPPY HOURS: A Collection of Songs for Schools, Academies, and the Home Circle By Felward Kingsbury and Alfred A. Graley. New York : Taintor Bros., No 698 Broadway.

A collection of music snitable for children interspersed with pieces re quiring some skill and culture in their execution. The words and the music seen equally chaste and carefully arranged. Both are of a high order. The collection is a good one, and will meet with great favor with teachers, pupils,

POCKET COUNTER -- Jacob S. Detrick, San Francisco, Cal.-The object of this invention is to provide a neat and convenient pocket instrument by which the velocity of shafting, etc., can be accurately determined

MANUFACTURE OF BROOMS .- Robert F. Dobson, Goderich, Canada.- This invention relates to an improvement in the mode of securing the broom proper, or the corn to its handle, and it consists, first, in so fastening the become corn that the free portion shall extend toward the upper end of the handle and then bending or turning the said corn back upon itself and there securing it.

FORTABLE FENCE.-Joseph W. Norman, Eugene, Ind -In this invention the pickets are connected together by links, and each panel is so attac ed to is supporting posts that it can readily be detached and foided or rolled up . rming a compact and easily portable roll. The form of the posts is also new.

SCREWDRIVER .- W. S. Goss, Baltimore, Md .- In this invention the har.dle s made of three pieces connected by clutches and stops in such a manner that its lower part can be turned continuously in either direction without releasing the hand from the npper part. In addition to this improvement, the blade is provided with an anjustable tool holder, which can be employed for holding gimlets, augers, awls, etc., while inserting them into or removing them from the wood

Scientific American.

POLISHING SCHOOL SLATES.—William Kester, Cherryville, Pa.—In this invention the slates are supported upon a car which runs under the grinding stones or wheels, and alternately raises the slates against or depresses them from the stones. The cars are caused to ruse and fall gradually and yet preserve a Derfect level, by means of a series of inclines.

EXOAVATOR.—Chas. F. Woodruff, Newbern, Tenn.—This invention relates to that class of excavators in which a revolving scraper is employed, and consists in so adjusting such scraper, and the means ior operating it, that it can be worked more conveniently than heretofore.

BENCH VISE.—O. H. Gardner, Fulton, N. Y.—This invention has for its object to improve the construction of bench vises so as to enable them to adjust themselves to the form of the object to be held, and to enable them to be adjusted so that the jaws may stand at any desired horizontal angle with the beuch, and which shall at the same time be simple in construction, and easily adjusted.

METHOD OF PRODUCING SILK FROM MULBERRY TREES.—Wilhelm Holdmann, New York city.—This invention relates to a new method of preparing a good quality of silk directly from mulberry trees, without requiring the aid (i the silk-worm. Silk can, by this method, be made as good as from the worm, and at least at half the empense. The preparation can be carried on profitably on a small scale by manufacturers. The production is increased from year to year with the growth of the trees.

MACHINERY FOR MAKING LOOM HARNESS.—Joseph Sladdin, Lawrence, Mass.—This invention relates to certain improvements in machinery for wearing loom harness, whereby, by an automatically operating machine, one is enabled to form the hedule eye, and at the same time secure the yarn to the rig bands in a firm and substantial manner.

MEDICAL COMPOUND.-N. H.Cass, Henryville, Ind.-This invention relate to a remedy for the disease known as "hog cholera"

STEAM EXHAUST DEVICE.---Robert Brown, Norwich, Conn.--The object of this invention is to so construct a steam valve movement for the exhaust of thesteam that it shall b- self-acting and moved exclusively by the pressure of the steam, and it consists in operating two disk valves upon a rod in a partitioned steam chest, connected with the cylinder whereby the engine cylinder is relieved of undue pressure at its exhaust end, and also of the water of condensation.

SCREW DRIVER.—Isaac Allard, Belfast, Me.—This invention consists in making the shaak of the screw-driver in a spiral form by twisting or otherwise, and operating it in a tube by a spiral spring, whereby the screw driver is made self-revolving.

TATTING SHUTTLE.—Ira H. Stockwell, and Lizzie C. Goodwin, Worcester, Mass.—This invention relates to the construction of an artrcle called a shuttle, which is extensively used by females in fabricating what is known as "tatting," a kind of trimming or edging for female under-garments.

DEVICE FOR MARKING BAGGAGE.-G. S. True, Leavenworth, Kansas.-This invention relates to an improvement in the method of marking trunks, chests, boxes, and othersimilar articles use i by travelers for transportation from place to place as baggage, or for other purposes.

FIRE BACK. — D.Hattan, Zanesville, Ohio.—This invention relates to an improvement in the backs of treplaces, and it consists in arranging a horizon-trading plate thereon, and providing for the admission of cold air, whereby a more perfect combustion of the gases which are evoked from the fuel is obtained.

GLASS FURNACES.—Miles Granger, Saratoga, N. Y.—This invention consists in providing a peculiarly constructed melting pot, whereby one is enable: to melt and blow glass without intermission, and by which improved melting pot, pursuea perpetual glass melting and blowing process.

LET OFF MECHANISM FOR LOOMS AND OTHER MACHINES.—William Hall, North Adams, Mass.—This invention relates to a new and improved let off meehanism for looms and other nachines, in which awarp or web is required to be increased or let off irom a shaft, with as uniform a tension as possible. The object of this invention is to obtain a simple means to effect the above result, and one which will keep the warp or web at a uniform tension throughout, or from the commencement of the let off to the end of the same.

FOLDING: HAIR.-J. Nicolai, Boston, Mass.-The present improvement consists in connecting the legs and seat of the chair in such a manner that said parts will move simultaneously in tolding and unfolding the chair, thereby rendering the chair capable of being adjusted (folded and unfolded) with far greater facility than hitherto.

MACHINE FOR CLEANING THE FIBER FROM THE HULL OF COTTON SERDS.— Thos.W. Brown, Cudworth, Barnsley, Yorkshire county, England.—This invention consists essentially in accomplishing the same by the application of heat under such arrangements of apparatus, and by such applications as hall be tound most advantageous for the same.

HOMINY AND PEARLING MILL.—E. A. Duer, Decatur, Ill.—This invention consists of a rotating shaft provided with beaters arranged to rotate in a horizontal cylindrical case, to which the grain is fed by suitable mechanism, and from which it is passed away through a fan and a separating screen.

ELEVATOR BUCKET.--O. W. Clark, Appleton, Wis.--The nature of my invention relates to improvements in elevator buckets, the object of which is to make them more durable, less liable to catch in the cases, and to make them of greater capacity.

ALARM LOCK.—Nush Cheek, Chapel Hill, N. C.—This invention relates to a lock of simple construction, which is designed to be unpickable, and capable of being applied in all cases where an ordinary lock may be used, and in combining with saidlock an alarm.

PRUNING SHEARS.—Daniel Campbell, Elizabeth, N. J.—This invention relates to a new and useful improvement in pruning shears whereby the latter, when required, are rendered available as fruit pickers; the construction of the implement being such that the picking attachment will not interfere in the least with the pruning or cutting mechanism.

SEED PLANTER.—Moses Atwood, New Sharon, Iowa.—This invention relatesto a new and improved machine for: planting corn, and other seed designed to be dropped in check rows, and it consists in a novel construction and arrangement of parts, whereby the seed may be dropped or planted perfectly even or in bills at a uniform distance from each other and the working parts readily operated by the driver.

PATTERNS FOR TRIMMING HAT BRIMS.—C. M. Hawes, New York city. —This invention relates to a new and useful improvement in patterns for trimming hat brims, and it consists in attaching the pattern to a revolving frame constructed and arranged in such a manner as to admit of one pattern being readily detached from the frame, and another of a different size readily applied to it, so that hat primes of different sizes may be trimmed, the revolving frame admitting of the work being done very expeditiously and in a perfect manner. FILE-CUTTING MACHINERY.—Sedgwick A. Sutton, Dixon, Ill.—This invention relates to certain new and useful improvements in file-cutting machinery, and ismore especially designed to be applied to a file-cutting machine, for which Letters Patent were granted to Edward Bucklin, bearing date Feb. 27th, 1865. The present invention relates, first, to an improvement in the hammer shaft, whereby the teeth are cut more perfectly thau https://www.second.com/second

NURSERY CUP.-J. F. Leslie and Edwin A. Tibbets, Woburn Mass.-The object of this invention is to furnish au article or vessel for heating liquids by the use of alcohol (or some equivalent comoustible liquid), which shall be simple, cheap, and convenient, the same being intended more particularly for treating milk for children, water for shaving, as well as for all other pur poses for which it is adapted; and it consists in a funnel-shaped cup with a handle and spout thereto, and combined with a disk-shaped base with a projecting center and a wiresupport for the cup, which base serves as a cover for the cup when the cup is not in use. Patented July 28, 1868.

MACHINERY FOR SEPABATING ORE AND OTHEE GEANULAE SUBSTANCES.— Stephen T. Peurce, New York city.—This invention consists according to one example of my invention in the employment of a vertical hollow rotating cylinder to which the pulverized ore is fed by any suitable means and which is formed with lateral discharging tubes near the bottom through which the ore or other substance is impelled by the centrifugal force due to the rotation of the cylinder in combination with graduated annular receptacles under the said cylinder into which the substance will be discharged according to its specific gravity.

YOKE FOR ANIMALS—F. M. Shields, Macon, Miss.—This invention consists in metablic hooks arranged to be suspended from the heads of the animals in a manner to hook into the fence to prevent jumping or throwing it down.

MACHINE FOR SEPARATING ORES.—S. T. Pearce, New York city.—This invention consists of an arrangement of means whereby the granulated and sized substance to be acted upon, being discharged upon the surface of a cone of polished metal under rotary motion upon its vertical axis, will be set incomotion by the contact of the same with the cone, and discharged therefrom in various lines, governed by the specific gravity of the particles and the frictional quality of the same, in a manner to fall into various receptacles arranged with reference to the various positions in which the particles all fall, to separate them, in the order of their fallurg.

STAND FOR MUSKETO NETS.—A. Strasser, and B. M. Lewy, Montgomery, Ala.—Phis invention consists of a frame in the form of a parachute suspended from the top of an adjustable support rising up from a stand or table, and susceptable of adjustment, either to a verticle or inclined position, on which the musketo net is suspended.

TANNING.-W. Wiudoes, Fond-du-lac, Wis.-This is a new and economical invention by means of which a very soft and beautiful leatner may be expeditiously produced with great success. We have examined some excellent specimens of the leather, in fact we are using gloves made of it which are admirable in quality. We regard the improvement as one of value. The process is quite simple, and reflects credit upon the inventor.

GAGE FOR MEASURING HOLES FOR KEYS.—Benj. F. Merrill, West Lebanon, N. H.—This invention consists in a gage made of two pieces of wood or metal, unite i together by any acjustable connection, the general form of which, when so united, resembles to some extent a key as ordinarily constructed for sccuring a wheel to a shaft or the parts of a connecting rod and cut together; which may be inserted in a key hole a.d adjusted to the proper angle to fit the two inclined sides of the same, when the parts may be secured in that position and removed from the key hole after which the measurement may be readily taken to form the key to fit the said hole.

STEAM VALVES AND VALVE MOTION.--L. H. Allen and John B. Wilford, Tamaqua, Pa.-Thisinvention relates to an improvement in sliding steam valves, and to the method in which they are operated, and it consists in forming the valve with bass for covering the exhaust parts and in moving the valve by steam from the main cylinder operating in an auxilliary cylinder.

DOUBLE ACTING SUCTION PUMP.—Patrick Foley, Nineveh, N. Y.—This invention relates to a new pump, of that class in which two vertical cylinders with reciprocating pistons are used, and which are generally employed for raising water from deep and other wells. It consists chiefly in a novel arrangement of valves, whereby the connections of the eduction and discharge pipes with the cylinders are closed; said valves being so arranged that, when the pump is not to be used, they can be opened to discharge all the water from the cylinders, so that the freezing of the water within the pump or its pipes is completely avoided.

CHURN DASHERS.—T. W. Tyler, Corry, Penn.—This invention has for its object to furnish an improved churn dasher which shall be so constructed as to bring the butter quicker, with less labor, and m larger quantities than the dashers now in use, and which shall, at the same time, be e-ssily washed and cleaned.

DUMPING CARTS AND WAGONS.—William W. Rogers, Hampden Corner, Me.—This invention has for its object to furnish an improved device by means of which the tail boards of dumping cartsand wagons may be made self-operating—that is to say, so that the tail board will be raised automatically, as the cart or wagon body is tipped up to dump the load, and will drop back into place and tasten itselfas the said body is again raised into a horizontal position.

TIRE COOLER.—John Wampach, Sbakopee, Minn.—This invention has for its object to so improve the construction of the frames that the thre when set may be instantly cooled before it can injure the felloes, and without wasting the water, which is an important consideration where water is scarce and has to be brought from a distance.

SHEAR RUDDER BOOM.—Levi W. Pond, Ean Claire, Wis.—This invention has for its object to furnish an improved boom which shall be so constructed and arranged thas it may be held in any place to stop the floating lumber, and opend and closed when required by the action of the current of the stream.

CHURN.-D. A. Fiske, Delayen, Wis.-This invention has for its object to improve the construction of the dasher so as to make it more easily worked and more efficient in bringing the butter; and to improve the construction of the cover so as to prevent the escape of the cream while the churn is being operated.

CAR COUPLING.—Clinton R. Hardy, Lexington. Ind.—This invention has for its object, to furnish a simple convenient strong, safe and raliable car coupling, which shall at the same time be so constructed and arranged as to uncouple itself should one or more cars of the train be overcurned or thrownfrom the track.

COMPOSITION FOR DESTROYING INSECTS UPON HOP VINES AND OTHER PLANTS.-W.A. Phillips, Perry Center, N. Y.-This invention has for its object to furnish an improved composition for destroying lice and other insects upon hop vines and other plants, which shall be composed of ingredients ensily obtained, prepared and applied, and which shall at the same time bc effectual in accomplishing its object, and harmless to the vines or plants.

CHEESE VAT.—PaschalColvin, Peccatonica, Ill.—The object of this invention is to provide an apparatus which will accomplish the formation and manipulation of cheesecurds in an effective and economical manner. Patented July 28, 1868.

FIRE AND WATER-PROOF CEMENT-Snow and Hunkins, Macon, Missouri.lins invention relates to a new and useful cement which is adapted to various uses when the action office or water is to be resisted. Pate ited July 28, 1868.

CEMENT BRANCH PIPE.—Enoch Lockhart and Frank Roberts, Louisville, Ky., and Henry Knight, Brookiyn, N. Y. This invention relates to an improvement in the manufacture of branch pipes for water conductors in drains or sewers, and for other purposes, and it consists in the peculiar formation of the mold and the cores, and the manner in which the cores are united and secured in place, and the method of using the same. Patented July 28, 1868.

SHORES FOR RAISING HOUSE FRAMES.—J. W. Glover, Wm. B. Orner and B. E. Oruer, Martinsville, Ind.—The objectof this invention is to accomplish the raising of house frames with a small number of persons. It cousists of two or more toothed shores in combination with saddles, to be set on to the upper tic-beams of the "bents," so-called, and which accomplish the raising of the bents by the reciprocating action of the shores. Patented July 23, 1868.

GRAIN REGISTERING MACHINE.—Barnett Taylor, Forestville, Minn.—The object of this invention is to accomplish the registering of grain automatically. It consists of a box provided with a yielding top which is actuated downward by the weight of a measure of grain, the top being connected with suit.ble mechanism to register the number of times the top is so depressed. P atented Jnly 28, 1869.

HAT HOLDER.—Z. Waters, Bloomington, Ill.—The object of this invention is to provide a means for holding hats, and locking the same in such a manner that none but the person having the key to the lock, can take it from the rack. It is particularly designed for hotels, steamboats, and public halls, to prevent those mistakes in taking hats from racks, which mistakes are geoerally annoying and disadvantageous to one of the parties concerned, and will save hotel keepers and other persons who are responsible for the loss of hats, a great deal of expense in replacing stolen hats. Fitched July 28, 1863.

VEGETABLE GRATER.-E. A. Goodes, Philadelphia, Pa.-The object of this invention is to provide a macine for grating vegetables in an expeditious andcasymanner. It consists of a case containing a grating cylinder of punchedsbeet metal, or other suitable substitution therefor, and arranged in such a manner that the vegetables will be brought in contact with the grating cylinder, and the grated particles permitted to fall below into an y suitable receptacle. Patented July 28, 1568.

PAPER CAP.--G. Im^hach and J. Weidenman, Hartford Conn.--The object of this invention is to turnish a cap or hat of paper, or other equally light cheap material, having the crown and band in two distinct parts, whereby the former can be removed when solled, and another substituted. Patented July 28, 1868.

SUBSOIL ATTACHMENT FOR PLOW.—J. C. Leona: d, and J. J. Gobar, Clinton, Mo—This invention consists of an auxiliary plow soconstructed as to be attached in rear of a common sod or other plow. Patented July 28, 1868.

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WATER WHEEL.—John Y. Lanfair, Queensbury, N. Y.—This invention relatesto a new aud improved water wheel of the class which are placed on a vertical shaft and work within a scroll or curb. The wheel is designed to be submerged, and is constructed in such a manner that power is obtained from the water both by impact and reaction.

DEVICE FOR FEEDING SAW DUST AND SHAVINGS TO FURNACES.-J. A. McGlelhund, Vernon, Ind.-This invention relates to a new and improved devicefor feeding saw dust, shavings, etc., to furnaces, and is designed more especially to be applied to wood-working machines, such as planers, circular saw inachines.etc., etc., in order to take the shavings and dust from the same and convey or force them direct into the furnace.

CURTAIN FIXTURES.—Davis E. Long, Pawtucket, R. 1.—This invention relatesto a new and useful improvement in curtain fixtures. and consists in a novel means employed for attaching the tassel to the lower end of the curtain. At present the tassel is attached by boring a bole through the stick which is inserted in a bend atthe lower end of the curtain, and passing the tassel cord through the hole in the stick and curtain, and securing the ends on the cord in the beads of the t seel. This plan is objectionable for two reasons : first, the hole in the stick weakens the same, rendering it liable to break; second, the detaching of the tassel to admit of the stick being withdrawn when the curtain requires to be washed, and the attaching of the cord of the tarsel to the curtain are attended with considerable trouble.

being operated,

WEATHER-BOARD GAGE AND MEASURE.—isaac Williams, Westfield, Ind.— This invention has for its object to furnish an improved instrument simple in construction and easily and quickly adjusted, by means of which the exact length of the space between the window frames and other places may be conveniently and quickly measured, in such a way that the board when marked and sawed off may exactly fit into the desired space without its being necessary to use the place upon the ends of said board to make it fit, and which shall be equally applicable for other similar uses.

WEATHER-BOARD, GAGE AND REST.—Isaac Williams, Westfield, Ind.—This invention has for its object to furnish an instrument to gage the distance apartof the energy of the weather boards and at the same time to support the board while being nailed on, so as to avoid the necessity of driving in nailsto support each board, as is now the practice, economizing time and labor.

BUNDLING MACHINE.—Edward J. Reddy. Bayville, N, Y.—This invention has for its object to furnish and improved machine designed expressly for bunching or bundling asparagus and other vegetables, to beput up in bundles or bunches, and which shall at the same time be simple in construction and easily operated.

CABRIAGETOP.-J. F. Sargent, North Tumbridge, Vt.-This invention bas for its object to furnish an improved carriage top, which shall be so arranged that it may easily and quickly attached and to detached from the seat and When detached may be so closed as to occupy a very small space. saws. The manufacture of these saws is now firmly established in the United States, and they are rapidly taking the place of all solid saws. Apply to J. E. Emerson, Trenton, N. J.

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