August 17, 1867.]

Becent American and Foreign Eatents.

Under this heading to shall publish weekly notes of some of the more prome next home and foreign patents.

GRAIN-BINDING DEVICE.—George Warner, West Liberty, Iowa.—This invention relates to a new and improved grain-binding attachment to be applied to harvesters for the pu; pose of binding grain as it is cut.

DRAW HEAD FOR RAILROAD CARS.—Walter A. Shotwell, Paterson, N. J.— This invention relates to a new and improved draw head for railroad cars, and in a novel application of the draw head to the cars whereby the draw heads are rendered self-coupling, capable of being uncoupled or disconnected with facility, and also capable of being used when necessary, with the ordinary link coupling.

COTTON GIN.—Fones McCarthy, Orange Springs, Fla.—This invention relates to a new and improved gin for ginning Sea Island and other long staple cotton and is an improvement on what is known as the "McCarthy Gin,' patented in 1840 and extended in 1854. The defect in this gin is this. The cotton is fed to the drawing cylinder on a plane horizontal grate, and is drawn in and held by the cylinder and breast plate while the stripper, so called, a rapidly-vibrating plate, strikes it (the cotton) and takes out the scods. This stripper, which makes from six to eight hundred strokes per minute, strikes theseeds with such force that a great portion of them are driven above and fall upon the unginned cotton, and mingling with itgreatly retard the ginning operation, making it necessary for the attendant to be constantly shaking and opening the cotton to get the seeds out of the way. By this improvement the cotton is presented to the cylinner vertically or nearly so down through a space between the feed board and a vibrating grate and the drawing cylinder, the seeds being prevented from rising by the cotton above them.

CORE RECEPTACLE FOR BOTTLES, ETC.—Alexander Honrath, New York City.—This invention consists in forming or making bottles, vials, and other small vessels for holding liquids and which are provided with cork stoppers, with a receptacle to hold a spare cork, to be used in the event of the cork in the nozzle or neck of the vessel being broken or injured in drawing it out; the receptacle being also convenient to place the cork in, when the same is drawn from the nezzle of the vessel, in order to fill the latter or pour the contents therefrom.

MACHINE FOR CUTTING FILES.-S. A. Sutton, Pawtucket, R. I.-This invention relates to a new and improved machine for cutting files and it consists in a novel means employed for adjusting the cutter relatively with the file blank, whereby the blank is cut uniformly throughout however round ing its faces or sides may be. The invention also consists in a means for regulating the force of the blow of the hammer so that the blow may be at all times commensurate with the length of the stroke of the hammer. The invention further consists in a novel arrangement of the cutter arm and bed, whereby the cutter is made to operate similar to a drawing cut, and perform its work in a thorough and efficient manner.

FRUIT PICKER.—Edward W. Gurnee, Haverstraw, N. Y.—This invention relates to a new and improved device for picking fruit from trees, and is designed to facilitate the tedious operation of direct picking by hand which involves the necessity of climbing trees and venturing out on small branches. The o.ject of the invention is to obtain a simple, cheap and durable implement for the purpose specified, and one which may be readily kept in repair and proper working order by any person of orchary ability.

GANG PLOW.-D. C. Riggs, St. Joseph, Mo.-This invention relates to a new and improved gang plow and it consists in a novel and improved construction of the same whereby the plows may be readily raised out of the ground when required and the device placed under the complete control of the operator, while the plows arranged in connection with rotary cutters are made to operate with far greater facility than usual, and the draft of the machine thereby greatly reduced.

WINDLASS BEDSTEAD.-Joseph Horner, New Brunswick. N. J.-This invention relates to a new and improved mode of securing the sacking bottom to bedsteads, whereby said bottom may be very readily applied and detached, and, when applied, tightened up with the greatest facility.

SAW.-W. R. Stephenson, Transfer Station, Pa.-This invention relates to a new aud useful improvement in circular and reciprocating saws, and it consists in providing the saws with teeth of peculiar construction and also with clearers, or scrapers, whereby a great saving of power is effected in the running of saws, and more work performed in a given time than can be done with the ordinary saws in use.

INSTRUMENT FOR STRETCHING BOOTS AND SHOES LENGTHWISE .- Wiley Jones, Norfolk, Va .- This invention relates to a new and useful improvement on an instrument for stretching boots and shoes lengthwise, and for which Letters fatent of the United States were granted to this inventor bearing date November 20, 1866. The original invention consists of a screw rod movable brace, and a shell or cap all so arranged that the brace may be adjusted within the boot or shoe against the counter thereof, and the shell or cap fitted in the toe of the boot or shoe and the longitudinal stretching produced by turning the screw rod. This instrument works perfectly in every spect but there is one difficulty attending its use, and that consists in the liability of the shell or cap to slip off from the end of the screw rodin adjusting the former into the boot or shoe, and the liability of the end of the screw rod being drawn out from the shell or cap in removing the instru-ment from the boot or shoe after the stretching of the same. The reason of this is owing to a lack of any attachment of the shell or cap to the screw rod, the latter having simply a tenon turned on its end to enter a hole in the shell or cap, a shoulderformed by the tenon bearing against the latter.

HORSE-POWER.—John C. Cox, Greenville, N. C.—This invention has for its object to furnish an improved horse-power for imparting motion to thrashers and other machines.

SLATE PENCIL SHARPENER AND HOLDER.—W. H. Alcorn, New York City.— This invention relates to a new attachment to school slates, and consists in an arrangement for holding and sharpening slate pencils, which is fixed to the slate frame so as to form part of the same. The holder is so made that it will be adapted to pencils of various diameters, while the sharpening device ismadc substantial and cannot be easily worn out.

APPLICATION OF ROWLOCKS TO BOATS.-Wm.Fuzzard, Chelsea, Mase.-This invention consists in applying rowlocks to boats in such a manner that instead of the rowlocks being fixed or stationary as hitherto, they will be allowed to move, under the action of the oars, in a direction towards and from the operator or oarsman while in the act of rowing, and thereby materially increase the length of the stroke, or sweep of the blade of the oars, and anism intact. Ry this means scales of this class are simplified in construction, rendered lessliable to get out of repair, while all the advantages of the original plan are retained.

CAR COUPLING.-W. R. Jamison, Taylorstown, Pa.-This invention has for its object to furnish an improved car coupling, so constructed and arranged that should one or any number of cars be thrown from the track or fail through a bridge or treatie work, the cars will immediately unrouple themselves, but will be held securely connected in all other circumstances, even when passing around the shortest curves.

ROTARY HARROW.-P. B. B. Stiles, Galesburg, Ill.-This invention has for its object to furnish an improved rotating harrow so constructed and arranged as to be more easily operated, and more effective in operation than the harrows now in use.

FENCE.—F.W.Huxford, Boonesborough, Iowa.—This invention has for its ob ject to furnish an improved fence for keeping the snow from drifting into cuts in railroads, and obstructing the track, and for other similar purposes.

CHURN.-C. J. Chalfant, Unionville, Pa.-This invention has for its object to furnish an improved churn, so constructed and arranged that the air may be carried down beneath the cream, and the cream carried up and thrown through the air, thus throwing the milk into violent agitation in contact with the air bringing the butter in a very short time.

NEW AND IMPROVED MODE OF APPLYING WINDOW SHADES TO WINDOWS. -H. J. COX and Wallace Hill, Long Eddy, N. Y.-This invention relates to a new and improved mode of applying window shades to windows, whereby the former are rendered capable of being rolled up either from the top or bottom as required, and also rendered capable of adjustment laterally, and of being very readily applied to and detached from the window.

ECCENTRIC LATHE.-J. B. Gayle, Portsmouth, Va.-This invention consists in an arrangement which enables me to turn eccentrics for steam engines in a much more complete and perfect manner than it has hitherto been done, and the device is intended especially for that and similar purposes.

WASHING MACHINE.—Wellington Green, Kinzua, Pa.—This invention has for its object to furnish an improved washing machine so constructed and arranged as to do the washing quickly, and thoroughly, and with a small outlay of power.

FLOUR PACKER.-H. A. Barnard, Moline, Ill.-This invention has for its object to furnish an improved apparatus, by the use of which flour may be quickly, conveniently, and evenly packed into barrels.

CORN HUSKER.-H. N. Hill, Pontiac, Michigan.-This invention relates to an arrangement for cutting the ears of corn from the stem, and thereby cleaning the husks from the corn.

HAMES FOR HARNESSES.—S. G. Tufts, Maineville, Ohio.—This invention has for its object to strengthen the hame at its lower end, and to so construct the hame tug hook, that the hame tug may be readily attached and detached when required, and that it will at the same time hold the said hame tug securely in place.

BRUSH RACK.—John Ames, Lansingburgh, N. Y.—This invention relates to a new and improved rack for Folding paint, varnish, and other similar brushes for exhibition in stores where the same are sold. Brushes have hitherto been attached to cards forthis purpose, but they are very liable to become detached therefrom, especially large and heavy brushes, the invention consists in having a shallow box provided with one or more perforsted cleats to receive the handles of the brushes and retain them in proper position within the box.

TUBE CLEANER AND WATER AGITATOR.-W. S. Stensby, Chicago, Ill.--This invention consists in arranging scrapers within the boller and around the tubes which may be drawn back and forth from one end of the boller, so the other whereby the scale deposited on the tubes, and on the interior surface of the boller is so loosened that it may be easily removed from the boller by blowing off.

ANTI-FRICTION PUNCH AND SHEARS.-D. D. Robiuson, Berrien, Mich.-This invention consists in so constructing a combined Punch and Shears that I am enabled to use a variety of punches and dies attached thereto and readyfor use when moved into position, and also in the arrangement of gears for keeping the traversing rollers in position upon the inclined planes.

APPLICATION OF STEAM POWER.—A. J. Fullam, Springfield, Vt.—This invention consists in adapting steam power to operations which have hitherto been performed by hand, such for instance as drilling holes in the sides of ships, or in heavy machinery, of either wood or iron.

DOGS FOR DRAWING SAW LOGS.—Samuel Sykes, ChippewaFalls, Wis.—This improvement relates to the manner in which the "dog," which is driven with a saw log or other logs, for the purpose of a "hold fast," is formed.

MANGE.—Henry Gransden, Dubuque, lowa.—The object of this invention is to furnish a simple, cheap and durable machine, called a mangle, for smoothing linen; and the invention consists in placing in a suitable frame, rollers, between which the linen is made to pass under pressure.

OSCILLATING MARINE PROFELLER.—Charles E. Foley, Brooklyn, E. D. N. Y. —This invention consists in attaching to a shaft which passes through the side of a vessel, propelling wings, which are jointed or hung to a bar or bars which are attached to the shaft, and which stand at right angles therewith, the wings being hinged in pairs and operating against the water alternately

FIRE KINDLER.—Henry Vanausdall, Keokuk, fowa.—This invention consists in constructing an apparatus whereby oil, alcohol, or any of the hydrocarbons may be used for the purpose of igniting coal or wood.

MATCHSAFE.-P. Killin and H. C. Yates, Decatur, Ill.-The nature of this invention consists in forming a safe for holding lucifer matches of ordinary round or square forms, in which is an arrangement for discharging the matches from the bottom, one at a time, and lighting the match as it emerges from the safe or box.

HAY RAKE.—Charles Howard, Bearsville, Ulster County, N.Y.—This in ventionrelates to an improvement in the construction of horse hay rakes, which consists in an arrangement of a lever for keeping the rake in position for raking, and triping it when loaded, so that it shall turn over and deposit its load to be instantly ready for going on with the operation of raking, and also of a lever for raking and lowering the rake head to clear the ground and allow the rake to be moved from place to place without striking the teeth.

SAW MILL.—John C. Delavigne, New Orleans, La.—This invention relates to an improvement in a reciprocating saw mill, and consists in connecting the saw or saws with a walking beam to produce their motion in connection with springs, which are depressed by each end of the walking beam alternately, EVAPORATOR AND DEFLECTOR FOR HOT-AIR REGISTER.-S. Hamilton Caughy, Baltimore, Md.-This device contains water, and is intended to be attached to the grating or rogister opening, so as to deflect the air into the apartment either against and around the tank, so as to evaporate the water freely or more directly into the room carrying less moisture.

WASHING MACHINE.—LeRoy Coville and William Keeler, Oxford, N. Y.— This invention relates to a washing machine in which a perforated board is arranged above the bottom of the suis box, which can be drawn out to allow the articles to be washed to be placed on it. A cor ugated roller, which is secured to a reciprocating frame, that is connected with arock shaft hung in the sides of the suds box, is made to move across the atoresaid perforated board, and is pressed upon the clothes by means of springs, which are secured to the reciprocating frame, their full ends working below a track fixed to the sides of the suds box.

MACHINE FOR MAKING SCHOOL SLATE FRAMES.—William Kester, Cherryville, Pa.—This invention relates to a machine which is used to saw, plane, bore, tongue, and groove, and join the pieces of wood which are used on school-slateframee. The invention consists in such an arrangement of the parts which compose the machine that the said frames can be made thereon from rough and unplaned boards, and be finished so as to be perfect and satisfactory, as regards their appearance, as well as their construction, strength and form.

COTTON PLOW.-C. Billups, Norfolk, Va.-In this invention the landside is provided with a vertical coulter, and is made detachable, and a new device is used for attaching and adjusting the scraper to the standard.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must in all cases, such their names. We have a right to know those who seek in formation from us; besides, as sometimes happens, we may prefer to address the correspondent by mail.

SPECIAL NOTE. This column is designed for the general interest and instruction of our readers, not for graduated replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisemets at 59 cents a line, under the head of "Iusiness and Personal."

IF All reference to back numbers should be by volume and page.

W. H. C., of Mass.—Try paraffin for preserving your copper coins from the action of the air. Immerse them for a moment in melted paraffin and then wipe off the excess of parafilm with a clean, dry cloth.

J. M., of Pa., gives some information to watchmakers which will reply to several inquiries made of this office. He says: If watchmakers wish to experiment with compensation balances, isochronal hair springs, etc., they must not use the marine chronometer, but reduce the scale to that of a watch. The material of which the machine is made is as hard in small as in large scales of construction, while the pressure reduces with the scale, and the rubbing surfaces can be reduced in area proportionally to the pressure.

S. O. P., of N. Y.—The leather washers under the heads of carpet tacks are cut and placed by a simple machine operated by the foot. An upright punch comes down on a die and cuts the leather, while another punch, working inside the first, drives the tack through the leather. The tacks are placed in a hopper from which a tabe, split through its bottom, conducts the tacks to the press the points hanging through the slot, the tacks being suspended by their heads. The best tacks for carpet purposes are those made from tough iron usually labeled "Swedish iron."

J. P., of Mo.-Zinc is not very tenacious. A wire of onetwelfth of an inch diameter will not sustain over 25 pounds.

T. W. H., of Mich., wishes to know how to purify and deodorizegenuinc crude bear's oil. Add to the oil ten per cent of its bulk of a weak solution of sal soda, and blow steam through the mixture for an hour or longer. Septimus Piesse however, says that the most popular and "original" bear's grease is simply hog's lard and almond oil prepared with oil of rose, etc.

H. P. J., of N. H.—" Which produces the most healthful heat for an ordinary room, an air-tight wood stove, an open wood stove, or a coal stove ?" We are not aware that there is any difference in the nature or properties of heat, produced under different circumstances. Heat is always and invariably the same thing from whateversource it comes. There are, however, considerations relating to health for choosing between different methods of warming houses; as for example, ventilation, perfect combustion, and cleanliness.

R. J. H., of Mo.-You can make your flour tiles of any desired color by mixing with theelay the appropriate metallic oxides. Consult any book on coloring pottery or glass, and you will probably get al the information you need.

D. W. H., of Mich.—" How can I deodorize a pine-wood refrigerator or ice box? What solution or preparation applied to its internal surface will prevent it from imparting to articles of food placed in it the odor and flavor of pine?" The most effectual "preparation" and perhaps the best, is a lining of sheet zinc. No varnish would be wholly impervious to the fumes of the pine. If the box were thoroughly seasoned by exposure to the heat of the sun tor a few weeks, probably the greater part of the volatile matter which constitutes the odor, would have been evaporated, E. P. C., of N. Y., desires to know how to conduct the steam from hisboilers, to an engine of 15 or 20 horse power, a distance of 100 feet without wasting his steam too much, and asks whether he should carry the pipe above or below the surface of the ground, how he should protect it etc? First, the pipe should be of generous area, say 3½ inches diameter, and should be covered with hair felting 2 inches thick, carried above ground for the convenience of detecting leaks, and protected from the weather, Properly protected the loss of steam from condensation would be hardly appreciable.

D. A. K., of R. I., asks if there is any troublein burning pine shavings under tubularbollers of ordinary sized tubes; is there much gain of cylinder over tubular bollers; would an 18 or 20 feet boller be more economical than a longer one; in a word, what is the best boller for an establishment requiring 15 or 20 horse power? In reply we would say that, in our opinion, the best boller for your use is the cylindrical tubular boiler, say four feet diameter, 10 feet long, with 50 three-inch tubes, and a grate surface of 18 feet. With a proper arrangement to admit air over the fire, through holes not over 3-16 of an inch diameter, the total area of which to be equal to 24 square inches, there is no reason why the boller should not last as long as any ordinary cylinder boller. The burning of pine shavings is pertectly feasible and is generally practiced in your section of the country.

correspondingly augment the efficiency of the same in their propelling action.

COTTON CULTIVATOR.—Charles Gibbon, Hicksford, Va.—This invention relates to a new and improved machine for cultivating cotton, scraping the earth from the plants, thinning out the same, and throwing up fresh, loose earth thereto.

CLAMP FOR PAINT BRUSHES.—Geo. R. Gardiner, Westerly, R. I.—This invention relates to a new and improved clamp to be applied to paint brushes in order to confine the bristles so as to prevent an undue spreading of the same. The invention is designed as a substitute for, and an improvement upon the plan now adopted by painters to effect the same end, to wit, the wrapping of twine around the bristles, which is attended with considerable trouble, and after a brush has been used and worn down to a certain exten t cannot be readily renewed and adapted to suit the length of the bristles.

PLATFORM SCALE.-Wm. W. Reynolds, Brandon, Vt.-This invention relates to a new and useful improvement in that class of platform scales which are provided with means for releasing the levers or weighing mechanism from the platform, when the articles to be weighed are placed upon, and after being weighed, taken off therefrom. This result is at present effected by having the weighing mechanism arranged in such a mannerthat it may, when it is necessary to detach or disconnect it from the platform, be lowered so that the latter will rest on the frame or bed of the scales, and hence scales of this class are commonly termed "platform drop scales." The invention con sists in accomplishing the object by having supports connected with lever attachments, and arranged in such a manner that the supports, when it is necessary to relieve the weighing mechanism from the platform, may be raised so that the platform will rest upon them, leaving the weighing mech-

and reach to aid in lifting each end alternately.

COMPRESSING RATIAN.-Louis Klein, Dansville, N. Y.-This invention consists in compressing ratian to give it better properties as a substitute for whalebone.

PLANE FOR CUTTING BLIND SLATS.—James L. Bess and Adam Marny, Keokuk, Iowa.—The subject of our invention is a hand plane, adapted to cut two or more thin slats for window shades, blinds, etc., at every stroke or movement, and at the same time dress or prepare the material for the operation.

CAR SEAT AND FOOT REST.—James R. Chiles, Richmond, Va.—The object of this invention is to provide a chair for use in railway passenger ears, which shall serve as a convenient and easy chair for sitting, or at the option of its occupant, be changed easily and quickly to a reclining chair.

METHOD OF PRESERVING WOODEN PILES.-W. Harrold Smith, Memphis, Tenn.-This invention consists in enveloping the pile with a hard earthen case, similar in composition and manufacture to common earthen or stone potter's ware. The earthen envelop may be glazed on its outer surface, and between it and the wooden pile the space is filled in with sand, concrete, lime, eement, coal tar, gravel or common earth. The object of the invention is to preserve piles and timber from decay, and from destruction by worms and insects.

REFEIGERATOR.--William Rosenkranz and Michael Esch, St. Paul. Min.--This invention relates to a new device for cooling liquids in bottles, said device being so constructed that any one bottle can be easily taken out and replaced, and so that a constant stream of cold water is made to circulate in the apparatus.

Business and Personal.

The charge for insertion under this head is 50 cents a line.

For Sale Cheap—Second-hand Barrel Stave Cutter and Jointer, fullset of Shoe Peg Machinery, Portable Grist Mill, and new set of Spool Machinery. H. H. Frary & Co., Jonesville, Vt.
Pattern Letters and Figures to put on patterns for castings, etc., etc., are made by Knight Brothers, Seneca Falls, N. Y.
The owners of the patent step ladder illustrated in No. 5, present volume, offer for sale State and county rights on most favorable terms. Address Smith & Schenk, 183 Fulton street, Brooklyn, N. Y.
F. C. Beach, Stratford, Conn., wishes to communicate with parties who put down "drive wells" in that State.
"J. C. G." of Kansas (in July 27th No.) send address to A. Galpin, Neenah, Wis.

Steam Cooking and Heating Apparatus—Manufacturers of the above please address with descriptive price list, Lewis F. Hake, Salem, Columbiana county, Ohio.

Improvement in Wagon Brakes.

It is a great relief to a team in descending an incline, as a hill, to have some means to release them from the pressure of the descending inertia of a loaded wagon. It is very hard on the horses in such a case to be compelled to secure their footing and at the same time to retain the pressure of the load. Such work is worse for a team than drawing a load up hill; as it is more straining and induces more or less of anxiety very dispiriting to the horses.

The object of the simple arrangement shown in the engraving is to provide an arrangement by which the wagon itself shall afford the power, or, at least, designate the point for applying the brake. In the engraving the wheels, axles,

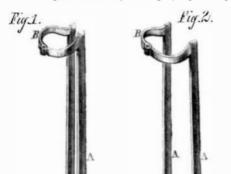
bolsters, and uprights are the same as in any ordinary wagon. The reach, however, has a cross-piece, A, just in front of the hind wheels, which supports a bar formed, at each end into a bell crank, to which are hung the brake-blocks, B. The wrists of the cranks pass through slots in the blocks, in which they are adjusted by setscrews entering the tops of the blocks. The bar is pivoted to the cross-piece so as to turn in its bearings by means of an upright connected to one end of a rod, C, the other end of which is pivoted to the forward bolster on one side of its center. To the other end of the bolster is attached another rod, D, leading back to the hind bolster. This rod in the model merely represents the wagon body and is not necessary to the operation of the brake. The king bolt passes through the forward bolster and through a longitudinal slot in the forward end of the reach.

ward bolster is turned on the king bolt by means of the rod, D, or wagon body which acts as a fulcrum, while the forward axle and wheels are slightly backed, the reach sliding on the forward axle, and thus the rod, C, is made to push backward, and by turning the crank bar on A, forces the brake blocks against the wheels by a powerful leverage. The amount of force thus applied adapts itself exactly to the power exerted in holding back. When the team is pulling on a level the front axle is held forward, by which a reverse motion is effected and the brake blocks, or shoes, are lifted clear of the wheels. A friction roller is fitted into that end of the front bolster which passes under the wagon body steam has been sensibly felt, and many ingenious devices when the team is descending a hill, in order to diminish the have been applied for this purpose, but hitherto the disadvanfriction. The oblong perpendicular slots in the brake-blocks are to allow these blocks or shoes to be lifted by the backward rotation of the hind wheels when the team is backed. Thus it will be seen that under all circumstances the brake is self-operating and adjusting. It appears to be cheap, strong, efficient, and not liable to become deranged.

The contrivance was patented through the Scientific American Patent Agency, November 28, 1865, by C. A. Smyth. Rights for States, counties, or towns are for sale. For terms or other information, applicants should address Smyth & Parker, Independence, Jackson Co., Mo.

VILLARD'S CRUCIBLE TONGS.

The tongs seen in the accompaning illustration are in some measure adjustable, that is they will fit different sizes of crucibles, thus obviating the necessity of employing so large a



2 shows the tongs open, and Fig. 1 embracing a crucible. The elasticity of the bars when compressed by the hand will cramp the segments around a crucible with sufficient force to prevent it slipping in the tongs when canted to pour the metal.

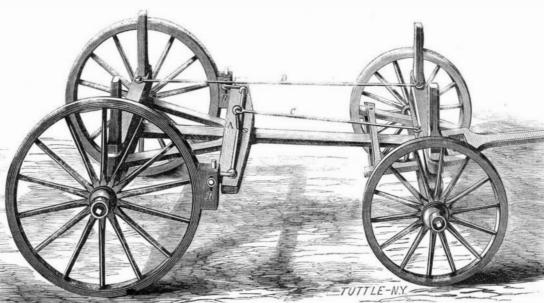
These tongs were patented through the Scientific American Patent Agency, Jan. 29, 1867, and have been sufficiently tested to prove their superiority. They can be made at small expense. For further particulars, address Fred. Villard, Mount Eaton, Wayne Co., Ohio.

Simple Mode of Preserving Eggs.

A correspondent, J. S. G., of Nassau, New Providence, Ba-

which is screwed into the cylinder in the same manner as the ordinary cock, into which is screwed the lower portion of the trap, B, in which is the valve seat, C, of the valve, D, on the lower part and below the wings of which is the short stem which serves as a guide for the spiral spring E. Transversely across the chamber is the cross bar, F, which forms a seat and guide for the adjustable spring seat, G. Below this bar and guide is a faucet barrel into which is fitted a key secured in the usual manner; in the center of this key is cast a recess so as to form a cam or eccentric, H, as will be seen in the engraving. This key does not close the lower part of the trap, which is open at all times.

The operation of this trap will be readily understood; be-

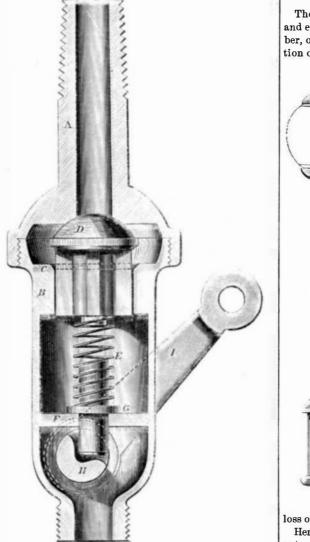


SMYTH'S IMPROVED SELF-ACTING BRAKE.

The operation is very simple. In holding back, the for hama Islands, sends us the following recipe for preserving of a locomotive are far more effective in scaring cattle from the eggs: "Smear with the finger the shell of a newly laid egg, using a slight quantity of butter. This is effectual; I have tried it for years and have, for experiment, kept eggs thus prepared as long as nine months, and that in a tropical climate, and at the end of that period the eggs appeared and tasted as fresh as though not more than a day old. It is a sine qua non that the eggs when buttered be perfectly fresh."

DAVEY'S STEAM TRAP.

Since the first introduction of the steam engine the importance of keeping the cylinders clean and free from condensed



the water to escape, thus leaving a continual opening in the cylinder, but without the escape of any steam; should it become necessary, the valve is raised by moving the handle, I. The advantages of this steam trap consist in instantly relieving the cylinders from water or other matter; allowing it no

ing screwed into the cylinder,

the steam presses down and

closes the valve. D. until the

steam in that end of the cylinder "exhausts," when the valve

immediately opens and allows

time to accumulate, but giving it egress at every stroke of the piston without loss of steam; in enabling the engineer to have full control of the apparatus, thereby permitting the raising of the valve if necessary, as is sometimes the case in the priming of the boilers and consequent flooding of the cylinders; or, as is often the case, when the cylinder cocks

track than the bewildering effects of the whistle : and it can be placed in the same hole as the old cock without any alteration or other expense than the mere cost of the trap.

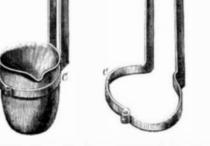
These traps are already adopted on several railroads in Ohio, Indiana, and Kentucky, also or stationary engines, where they are highly commended. The whole, or the right for the Eastern States, for sale. Address, Thos. N. Davey, Jeffersonville, Ind.

This trap can be used in any position, horizontal or vertical, and is not liable to get out of order. At all times the cylinders to which it is applied may be cleared of water or condensed steam. Patented through the Scientific American Patent Agency, Dec, 18, 1866.

KOCHENSPERGER'S BRAKE HOLDER.

The object of this improvement is simply to provide a proper and efficient seating for those wheel brakes where India-rubber, or some similar material is used as a resistant to the action of wheels. The bar, A, is of wrought or cast iron, or of

wood, according to the situation it is to occupy, and the work it is to perform. Secured to its ends are the holders, B, for the resistants, these holders being dovetailed to receive the rubbers, one of which is shown at C. As commonly used, the brakes, or rather, the rubbers on brakes for wagons, cars, and other wheeled vehicles, are held in place by screws or bolts, and when they become worn they must be removed and others put in their places by means of similar bolts. With this, however, the rubber can be removed and replaced by another with very little expenditure of time, As will be seen, the holder is so formed that it slopes outward at the top to adapt the rubbers to the flare of the wheels; consequently, when cast, two patterns should be used, so as to make the holders rights and lefts. There is no necessity, when using this apparatus, to remove bolts. etc., and there can, consequently, be no trouble from

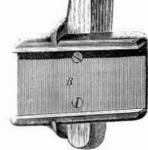


number of different sizes as are generally used in brass founderies, etc.

A, A, in both the figures, are bars of iron or steel, long enough to permit the pourer to use the crucible containing melted metal without discomfort from the heat. These bars are bent at each end into segments of circles, B, and C, nearly approaching semicircles, the length of the bars being perpendicular to the planes of the circles of which the segments are parts. 'I'he segments are hinged together, and those at one end of the tonge differ in diameter from those at the other end. Fig.

tages and objections have always been such as to materially detract from the real practical value of those improvements. In the device herein represented it will be seen that there is little if anything to be desired more than is found in the actual working and capacity of this little trap,

The engraving represents a vertical section. A, is the stem



loss of nuts or bolts.

Henry C. Kochensperger, of Thornville, Ohio, is the patentee, who may be addressed, as above, for additional information. The date of his patent is May 28, 1867. The entire right is for sale.

BENEVOLENCE EXTRAORDINARY .-- A society has been formed in Germany for the collection of cigar ends, and smokers throughout Bavaria are ap-pealed to for contributions of this kind, it heing intended to apply the proceeds arising from their sale to the clothing of poor children. It is calculated that upward of £500,000 a year may be obtained by this means,