

## APPARATUS FOR CUTTING AND ORNAMMENTING SHOE UPPERS.

Edwin B. Stimpson, Brooklyn, N. Y.—This consists essentially of a series of small punches, one or more large punches, a bed die, and a stripper, contrived in the ordinary way of punching machines, for making ornamental figures in the uppers of shoes. The steel die plate is riveted to an iron plate, the object of which is to combine with the die plate a sufficient body of metal, that will not crack in cooling. The stripper is suspended from the head of the press by springs to raise it out of the way of handling the goods after the goods are cut. The marking plate has small points for marking imitation stitches, and there are broad punches for cutting out long strips made concave on the cutting end.

## IMPROVED LUBRICATOR.

Simon Smith and Isaac S. Collins, Mauch Chunk, Pa.—This is a horizontally feeding oil cup for parts of steam engines, which can be regulated to feed a greater or less quantity of oil when the engine is in motion, but which discontinues the oil supply when the engine is stopped. It consists of a horizontal cup of cylindrical shape, with tightly seated glass head. The feeding mechanism consists of a horizontal reciprocating pin, guided in suitable manner, and having recesses that take up the oil from supply perforations and convey it to the feed tube at each oscillation of the part of the engine to which the lubricator is attached.

## IMPROVED GRINDING MILL.

Enoch Moore and David Moore, Mooreville, Iowa.—These inventors propose to provide a supporting plate, with a recess, on which they locate the rocking plate resting on the pivots in the bottom of the recess. The stone on the under side of it rests on other pivots. By this arrangement, sufficient space is secured between the beams without cutting or weakening them.

## IMPROVED COMBINATION LOCK.

Isaac D. Sibley, Huntsville, Ala.—This consists of two systems of bars and springs, arranged one on each side of the guard bolt to slide toward and from it, and so contrived that the bars of one side being adjusted against the block lock it, and in that position are unlocked by sliding up the bars of the other side.

## IMPROVED LARD PRESS.

Pusey Pemberton, Newark, Del.—Devices are provided whereby the follower may be held level, and may thus be kept from binding, even should there be more scrap or cracklings in one side than in the other, and the mechanical construction is new and well calculated to render the machine efficient.

## IMPROVED LEATHER-TAPERING MACHINE.

John Settle, Lebanon, Oregon, and George W. Settle, Oakland, Oregon.—This invention relates to certain improvements upon the patent granted the same inventors, January 19, 1875, for a machine for tapering leather, in which a pivoted frame carrying a knife moves over a hinged adjustable curved block to taper the end of a strap, belt, or other piece of leather, preparatory to attaching the same to another piece, and it consists in the construction and arrangement of a device for clamping and holding the piece of leather in a convenient and effective manner.

## IMPROVED TWEER.

Mark Lester, Bellaire, Ohio.—The object of this invention is to prevent the accumulation of sediment in the annular water space of a tweer for blast furnaces, and to prolong the life and utility of the latter. To this end the invention consists in providing the overflow pipe of the tweer with an outlet cock, located near the bottom of the water space, through which the mud and sediment may be washed out, and extending the supply pipe to the nose or hottest part of the tweer, whereby the cold water is first brought in contact with the part of the tweer which most needs the cooling effect, and whereby also the accumulated mud and sediment may be readily washed out by the natural passage of the water.

## NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.

## IMPROVEMENT IN ORNAMMENTING BUTTONS.

Samuel S. Moyer, Berlin, Ontario, Canada.—This process consists, first, in printing the figures upon the face surface of the button by means of type coated with an impermeable composition, then applying the coloring matter, after which the composition is removed by polishing or otherwise.

## IMPROVED DIFFUSION APPARATUS.

Charles Neames, New Orleans, La.—The object of this invention is to improve the Julius Roberts diffusion apparatus, in such a way as to secure a more perfect extraction of the saccharine matter from the material used, and at the same time simplify the apparatus. It consists in a diffusion vessel of a diffusion apparatus, gradually increasing in size from its top or inlet, opening to its bottom or outlet opening; in the wood packing interposed between the rim of the doors and the door frames of a diffusion vessel; in a division plate extending from the top to the bottom of the vessel to form the heating chamber, and having its lower part perforated with numerous small holes to serve as a strainer. Finally, heating pipes are placed within the diffusion vessels of the apparatus; and there is likewise a combination of the circulating wheel and its pipe with the diffusion vessel.

## IMPROVED CUFF AND COLLAR BOX.

Ernest Scheel, New York city.—This consists of a box divided by a lateral partition into two sections or compartments, of which one is intended for the cuff, and provided with a central tubular post with sliding top. The other is divided by horizontal supports into two parts for inserting a receptacle and storing the collars, neckties, and other articles.

## IMPROVED HOMINY KNIFE.

John Outcalt, Spotswood, N. J.—This consists in improved knives of hullers for hominy mills, made with their blades curved with a constantly increasing curvature from their forward to their rear ends. They are also made wider toward their rear ends, inclined upon their upper sides, flat or inclined upon their lower sides, and provided with rasp teeth above, and file or rasp teeth below.

## IMPROVED HARNESS SADDLE.

Robert Spencer, Brooklyn, N. Y.—The object here is to afford a broader bearing for tree plates of a given size. The under bearing of wood is made broader than the tree plate, and the flap and jockey are attached to the margins of the face or outer side of the pads. The tree plate is made of sheet metal, with a transverse ridge and corresponding groove or depression.

## IMPROVED PACKAGE FOR PAINTS, ETC.

George Sidey, Brooklyn, N. Y.—This invention consists in causing the upper edge of the can body to bear in a groove and against the center of a strip, and providing a flat headed screw working in a nut on the bottom of the can, in order to form a close joint. The article placed in the can is thus hermetically sealed.

## IMPROVED PAPER BAG FASTENINGS.

Henry S. Gillette, New Preston, Conn.—A string of suitable length and strength is attached to the bag by means of a piece of paper which is pasted to the bag over the string. This little clip of paper secures the string permanently, so that the clerk need waste no time in seeking for a string to tie the bag.

## IMPROVED TOY MARBLE RAKE.

Alfred Gurny, Robert H. Piper, and Henry E. Waite, Bridgeport, Conn.—This is a rake or notched bar employed in marble playing for determining the gains by the numbered notches through which the marbles pass. There is a spring tablet to each notch, with the number of the notch upon it, and contrived to be set in the way of the marble passing through the notch, so as to be tripped by the striking of the marble against it. On being raised, it exposes the number of the notch to view, thus showing the count toward game, the number being concealed while the tablet is set.

## IMPROVED AWNING.

Anthony Hessells, New York city.—This consists of a swinging stretching frame and outer curtain, that is wound up by a roller and cord. The roller is supported on a second swinging frame, to be lowered and adjusted to any position for regulating the height. When the awning is lowered entirely, it serves to close the window like a curtain, forming a protection against heavy rain, hail, etc.

## IMPROVED CIGAR BOX.

Simon Hood, New York city.—This cigar box admits the convenient arranging of the cigars in bundles, the exhibiting of the same, and the ready taking out for selling them. The body is made of diagonally tapering shape, with steps and guard strips, and is closed by hinged side and front parts and lid.

## IMPROVED SHEARS AND SCISSORS.

George H. Taylor, New York city.—This invention consists in constructing shear or scissor blades with a curved shoulder at the rear end of the cutting edge of the blades, to adapt them for use in ripping goods.

## IMPROVED HARNESS BUCKLE.

Benjamin F. Frazier, Grand Rapids, Wis.—By suitable construction, when a strain comes upon the strap, the tendency is to draw a frame back, and clamp the said strap between cross bars. The strap is thus held securely without holes being punched in it.

## IMPROVED CAMP STOOL.

Charles M. Lungren, Toledo, Ohio.—This invention consists of a double ferrule and hook attachment for the top of the legs, comprising in one casting the hook and the ferrule for connecting the hook to the leg, and also a socket for the attachment of the back support. This forms a stool which may be folded into small compass, and which, nevertheless, when extended, gives a comfortable seat. At the Centennial Exposition, where chairs or seats of any kind are few and far between, portable devices of this type are found very useful.

## IMPROVED BEER PUMP.

Philip Krumscheid, Boston, Mass., assignor to himself, J. Krumscheid, and John R. Foley, same place.—This invention consists of a beer pump in which a float shuts off, when raised to a certain height, the water supply, and draws off a certain quantity of water, sufficient to lower the float and re-establish the water supply. The air is forced through and retained in the barrel by a check valve, and drawn into the pump through an air pipe with another check valve, on the falling of the water level.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED GIN SAW FILER.

Frank Charter, Little Rock, Ark.—This is a machine for filing gin saws without removing the saw shaft from its frame, and in such a way as not to leave angular or wavy edges upon the surface of the saw teeth, to cut, chop, or nap the cotton fiber, and thus injure it. The novelties lie in the mechanical construction.

## IMPROVED PILE SAW.

David Bean, Le Sueur, Minn.—This consists of a standard for supporting the saw frame, with a clamping device for attaching it to the upper end of the pile to be sawed off underwater. There is also a vertically adjustable arm, on which the frame swings, and on which arm the frame is adjustable to feed the saw up to the pile as the work progresses, and to measure its depth in the water.

## IMPROVED BILLIARD TABLE LEVELER.

Samuel May, Toronto, Ontario, Canada.—This consists of a long nut, with an enlarged head at the lower end, screwing on a rod projecting from the bottom of a socket in the end of the leg, in which the nut works so as to conceal the screw rod. Said rod is either a short one, screwing into the leg at the bottom of the socket, or it is formed on the rod used to screw the leg to the table. In both cases it has a collar screwing against the bottom of the socket, and is secured by wood screws screwing into the wood through notches in the edges of the collar.

## IMPROVED WHIFFLETREE CONNECTION.

George W. Ingersoll and Harvey L. Fisher, Toledo, Iowa.—This consists in an inclined whiffletree coupling, composed of two unequal bars connected by an eye bar. The inclination of the coupling causes either end of the whiffletree that may swing back to pass above or below the double tree, according as the longer arm is placed above or below the shorter arm, so that there can be no rubbing and wear between said double tree and whiffletree.

## NEW HOUSEHOLD INVENTIONS.

## IMPROVED MEAL BIN.

John Hunter, Ashland, Pa.—This consists of a kneading trough, kneading board, and a flour sieve, contrived in connection with a flour chest, so as to be more convenient and easier to use than as commonly arranged.

## IMPROVED BED SPRING.

John Reardon, New York city, assignor to Orville D. Lovell and Frank H. Lovell, of same place.—This is a bed bottom spring formed of a rabbeted U-frame, a flanged crosshead, a guide pin, and a spiral spring, constructed and arranged so that the bedstead can be put up, taken down, and carried from place to place with as much ease as if the slats rested upon cleats, and the various parts of the spring are so arranged that they cannot cut or injure the mattress.

## IMPROVED CARPET STRETCHER.

Lewis W. Rivers, Salt Lake City, Utah Ter., assignor to himself and Hanson J. Rivers, of same place.—In using the device, the carpet is placed between jaws, and a lever is arranged with its sharp lower end resting upon the floor, and its upper part inclining forward over a bar. The upper end of the lever is then forced back or from the carpet, which draws the said carpet to its place. When the carpet has been strained sufficiently a pawl, holds the lever in place until the stay tacks can be driven.

## IMPROVED SNOW SHOVEL.

Eugene Campbell, South Westerly, N. Y.—This shovel is provided with a face plate extended beyond the edge of the shovel plate. It also has, on the under side of its front end, and in one piece therewith, the runners arranged to keep the edge of the plate from coming in contact with the surface upon which the shovel is being used.

## IMPROVED WEATHER STRIP.

William Watkins, West Joplin, Mo.—This weather strip is formed of a metallic plate, having its edges bent over upon themselves to form grooves to receive a strip of flexible metal, said flexible strip is made wider than the said metallic plate, to give its middle part a U-form.

## IMPROVED WASH BOARD.

John S. Washburn, Yonkers, N. Y.—This invention consists in an improved washboard formed of grooved side bars, over which a rubber plate is passed, so that a rubber surface and a wooden surface may alternate with each other to form the rubbing surface of the board.

## NEW TEXTILE MACHINERY.

## IMPROVED TENSION DEVICE FOR TWISTING MACHINES.

Paul A. Chadbourne, Williamstown, Mass.—This is a contrivance of guide eyes and a roller with the spool stand, from which the threads are supplied to the twister, whereby the tension of all the threads is more uniform than in the common arrangement.

## IMPROVED FEEDER FOR CARDING MACHINES.

William C. Bramwell, Terre Haute, Ind., assignor to himself and Edwin Ellis, of same place.—The invention consists of a tilting scale for weighing the wool deposited upon it by a toothed traveling apron, the two (scales and apron) being so connected by a clutch mechanism that the apron is stopped intermittently, thus shutting off further supply until the scale has deposited or discharged the wool which it already contains. The wool having been thus deposited on the feed table, and the scale returned to its original position, and while the elevating apron is delivering a fresh supply to the scale, a loosely pivoted rotating scraper is at work removing the pile of wool just dropped by the scale, and pressing it up to the edge of that which has already been fed on and is about to enter the feed rolls of the carding engine. By this operation the wool is removed out of the way, and a clear place given to the next lot, so that it may not, by piling up, obstruct the proper action of the tilting pan of the scale, and that all the wool may be dropped each time. The tilting and emptying out of the wool from the scale is entirely independent of the time it may take the scale to turn its balance, as this time is constantly varying. It is by this means that the apparatus is caused to run itself out of wool when desired, and yet keep the work even to the last.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED PLOW STOCK.

Lemuel H. Davis and Irwin Aycock, Morgan, Ga.—This consists in a plow stock formed of three iron bars, constructed and combined with each other, and with the handles, so as to form a strong and serviceable device.

## IMPROVED COMBINED LISTING PLOW AND SEED DRILL.

Alonzo M. Coston, Maryville, Mo.—This is an improved machine for preparing the soil and planting the seed at one passing over the ground, which is left in a deep furrow and ridge alternately. The subsoiler runs in the rear of the main plow, thereby loosening the soil in the bed of the furrow, forming a suitable place to deposit the seed, and dropping the seed and covering it.

## IMPROVED CORN PLANTER.

Nathan H. Meeks, Salado, Tex.—This consists of a circularly vibrating dropper slide contrived to be attached to a plow beam or other object to be drawn by a single horse, and be worked by the whiffletree, which has the requisite vibratory motion from the shoulder of the horse.

## IMPROVED HOG TROUGH.

Newton A. Clark, Harveyville, Kan.—The object here is to keep the hogs away from the trough when putting in food, to prevent the hogs from putting their feet into the trough when feeding. The mode of operation is as follows: A lever being raised into a perpendicular position, boards are thrown against the back of a frame, so as to allow the hogs to have access to the trough by passing between ribs. On the other hand, when the lever is brought to a horizontal position, or nearly so, the boards are thrown out in front of the trough, so as to exclude the hogs therefrom.

## IMPROVED FERTILIZER DISTRIBUTOR.

David C. Brown, Log Town, La.—This is a device for attachment to the rear end of a wagon body for distributing cotton seed as a fertilizer. It may be used for distributing other fertilizers, and which will enable the material to be placed wherever desired. In using the device, a man is placed in the wagon to keep the hopper filled with the fertilizer. The amount of fertilizer distributed may be regulated by increasing or diminishing the number of pins which feed out the material, and by varying the relative size of the driving pulleys.

## IMPROVED ANIMAL TRAP.

Homer S. Davis, Camp Brown, Wyoming Ter.—This improves the well known spring trap used for catching animals of large size, such as beavers, foxes, otters, etc., so as to prevent the throwing out of the leg or foot, or the breaking of the same by the action of the spring, in consequence of which the animals frequently escape.

## IMPROVED CORN-PLANTING ATTACHMENT FOR SOD PLOWS.

Sanford M. Scott, Stockbridge, Wis.—This is an attachment for breaking-up or sod plows, so constructed as to plant the corn as the sod is turned, and close to the outer edge of the furrow. The corn will thus come up between the sods of two furrows. The device is not in the way of turning the plow over to file or sharpen the share.

## IMPROVED POTATO PLOW.

Tubal C. Baxter, Monticello, Kan.—This consists of a forked beam, with a landside and cutter to each branch of the fork, between which is a shovel plow fixed on an easy incline, for the potatoes and the earth to be forced along over the rear end. From said end extend a number of rods, suitably arranged to let the earth sift through, and to carry the potatoes back and discharge them in a row on the top of the earth.

## IMPROVED PLOW.

Alva A. Preston, New Troy, Mich.—This is an improved iron beam plow, light, and at the same time strong, which may be easily adjusted to take or leave land, and to run deep or shallow, as may be desired.

## IMPROVED MILK PAIL.

Newton McKusick, Stillwater, Minn.—This is a pail with a cover having an opening closed by a strainer, and a detachable funnel with a second strainer, through which the milk passes into the pan. The double strainers prevent any foreign substances, however small, from passing into the milk.

## IMPROVED HARROW.

William C. Moore, Cairo, Pa.—This is formed in three sections hinged to each other by bolts and straps. The middle section is made rectangular, and the side sections oblique, having their forward corners beveled off. Shoes are attached to the forward sides of the front cross bars.