HARNESS TRIMMINGS.—Thomas J. Magruder, Marion, Ohio.—This invention relates to a new and improved method of constructing center bar rein hooks and terrets for various styles of harness, whereby the same are more cheaply made, and whereby they hold the rein more securely, and the same being movable, they may be used near the top of the hames, whereby also they make no swell underneath the pad, and the same are less liable to injure the horse by chafing.

PLATE FOR BORING LINKS OR EYES.—Charles Kellogg, Detroit, Mich.—This invention relates to the boring or reaming of the links or eye rods used in bridges and other structures where the distances between the centers of the two eyes of such links or rods require to be exactly equal to some distance taken as a standard, so that the links or rods so bored or reamed shall not vary one with another by any appreciable difference.

CLOTHES DRYER.—Isaac N. Deal, Brooklyn, N. Y.—This invention relates to a new and improved method of constructing an apparatus for the drying of clothes, whereby the same may be folded up either in part or in the whole, so as to be compact and occupy less space than the clothes dryers now in use. It consists of a center stand around which are arranged and to which are hinged any desired number of arms, in such way as that the arms may be folded up upon the center stand. Other devices perfect the whole and render its operation complete.

CORN PLANTER.—Curran W. Henkle, Washington, C. H., Ohio.—This invention relates to a device for planting corn, of that class in which the corn is dropped by a direct manipulation of the operator, as the device is drawn along. The invention consists in a pecullar construction and operation of the parts, whereby a very durable and economical device for the purpose specified is obtained, and one which may be manipulated with the greatest facility.

HAND CORN PLANTER.—Hermann Koeller, and Wilhelm Uecke, Camp Point, Ill.—This invention relates to a new hand corn or seed planter, which is so arranged that it can be adjusted to drop larger or smaller quantities of grain at each stroke, and consists mainly in the use of a perforated disk, which receives oscillating motion, and which rests upon a stationary plate that is perforated with one hole.

CHILDREN'S CARRIAGE.—Julius Bein and Wm. Ulrich, Newark, N. J.—This invention relates to a new child's carriage, which is so arranged that the seat and top can be reversed, and that the latter may be supported above the middle of the carriage, to act as a sun umbrella.

EQUALIZING DOUBLETREE.—Edward Griswold, Joel B. Cramer, and Wm. Blay, Helena, Montana Territory.—This invention has for its object to furnish an improved doubletree, so constructed and arranged as to promote safety and economy, and avoid noise and disarrangement.

SCHOOL DESK AND SEAT.—J. P. Scott, and S. H. La Rue, Lewisburg, Pa.—This invention has for its object to so improve the construction of school desks and seats, as to make them more convenient in use and noiseless in operation.

COMBINED PLOW AND ROLLERS.—J. A. Alley, Clifton, Ind.—This invention has for its object to furnish an improved, combined plow and roller, which shall be cheap, simple in construction, and effective in operation.

CULTIVATOR.—T. Green, and J. Sommer, Metamora, Ill.—This invention has for its object to furnish an improved cultivator, simple in construction, durable, easily adjusted to cultivate roads at any distance apart, and which may be used with great advantage for putting in wheat and other grain.

FISH AND BAIT PRESERVER.—T. D. Kellogg, New York city.—This invention has for its object to furnish an improved means for freezing and keeping frozen meat, fish, etc., for hotels, market and transportation purposes, and especially for preserving bait for fishing vessels so that the voyage need not be shortened and the vessel be compelled to return to port without completing her cargo on account of the bait spoiling.

BEEHIVE.—J. M. Patton, Tipton, Iowa.—This invention consists in a mode of constructing the hive, whereby the temperature of the same is rendered quite uniform, the bees and contents of the hive being protected from severe cold in winter and from heat in summer. The invention also consists in a new and improved trap for protecting the bees from the ravages of the bee moth.

PUMP.—J. W. Douglass, Middletown, Conn.—This invention relates to an improvement in pumps for domestic or household use, such as are commonly termed "yard pumps," and it consists in the application of a valve to the air chamber thereof, whereby the pump may be rendered available for use as a force pump to turn a stream of water a considerable distance, and also rendered available as an ordinary lift pump.

ICE PITCHER.—William Bellamy, Newark, N. J.—This invention relates to an improvement in double walled metallic pitchers designed as receptacles for ice water and iced liquids.

SKIRT HOOP FASTENING.—James F. J. Gunning, New York city.—This invention relates to a fastening for securing the ends of skirt hoops together and has for its object the production of such a fastening which, while it will firmly secure the ends of the hoop together, will admit of said ends being readily disconnected at any time when necessary or required. The invention is more especially designed for hoops to be used in skirts which are woven with or have pockets formed in them to receive hoops so that when the skirt requires to be washed the ends of the hoops may be disconnected and the latter drawn out from the skirt and after the skirts are washed the hoops replaced in them and their ends secured by the fastening.

COMBINED FRUIT MILL AND PRESS.—Henry A. Holderman, North Manchester, Ind.—This invention relates to a combination of a fruit mill and press designed for family use and for the manufacture of cider, wine, etc. The object of the invention is to obtain a simple, economical and efficient device for the purpose which, so far as expense and the convenience of operation are concerned, will be within the reach of all persons of the community requiring such an article.

DIVERTING GAME.—H. Jackson, New York city.—This invention relates to a new and diverting game which is termed the "Game of the Government," and it consists of a box divided into a suitable number of compartments representing the treasury and different departments of the Government and in using, in connection with the box, a series of counters and cards which are played in such a manner as to afford much amusement.

STAGING FRAME.—Horace Wood, Leverett, Mass.—This invention relates to a staging frame designed to facilitate the applicatton of covering materials to the pitch roofs of buildings. The invention consists of a framing constructed in a novel manner and provided with windlasses operated in a novel way, whereby the staging frame may with the greatest facility and safety be raised from the eaves to the peak of the roof and lowered from the peak to the eaves by workmen on the staging frame.

MANUFACTURE OF PAPER AND OTHER BAGS HAVING PASTED SEAMS.—James Arkell, Canajoharie, N. Y.—This invention relates to a machine for manufacturing paper and other bags having pasted seams direct from a continuous roll. The machine folds the paper or other fabric and pastes it so as to form a flat tube and then creases and cuts it at proper points in such a manner as to admit of the bottoms of the bags being properly folded and formed and finally cuts the pasted flat tube into suitable lengths. The folding and pasting of the bottoms of the bags to complete the same being afterward and separately performed.

SOLDERING TIN CANS.—John G. Borden, Brewster Station, N. Y.—This invention relates to a new apparatus for soldering tin cans or all other cans which have round heads.

FILTER FOR CISTERN WATER—Nicolas Ganner and Herman Bader, Cape Girardeau, Mo.—This invention relates to a new device for filtering rain water on its passage from the roof of a building to the cistern. Such water is generally filled with leaves, pieces of shingles and other impurities. The object of this invention is to clear it of such impurities before it enters the cistern.

GRAIN THRASHING MACHINE.—Felix A. Finn, Salt Point, N. Y.—The object of this invention is to obtain a machine by which grain may be thrashed by power and without bruising or breaking the straw. The invention consists in the employment of one or more rotating cylinders provided with pivoted bars or flails, and placed within a box having an inclined floor or bottom whereby the straw may be fed along underneath the beaters or flails by the action of the latter and the grain thoroughly thrashed out of the heads. The invention also consists in a novel manner of operating or giving the necessary shake motion to a screen which separates the grain from the straw.

CROZING MACHINE.—Henry DeBus, Cincinnati, Ohio.—This invention relates to an improvement in the construction of a machine for cutting the croze or recess in the ends of barrel staves for receiving the head of a barrel.

CARPET LINING MACHINE.—Joel F. Fales, Walpole, Mass.—This invention relates to an improvement on a carpet lining machine.

SELF ACTING WAGON BRAKE.—J. A. Williams and W. W. Williams, Mattoon, Ill.—This invention relates to an improvement in a wagon brake or wheel lock, and consists in a self-acting arrangement of the brake in connection with the singletrees of a wagon or other vehicle.

STEAM GENERATOR.—V. D. Anderson, Milton, Wis.—This invention has for its object to furnish a portable apparatus for generating steam for domestic and other purposes.

TOP PROPS FOR CARRIAGES.—John F. Mullin, New York City.—This invention consists in so forming the prop, that the working of the joint up and down shall not loosen the nut by which the joint is fastened to the prop.

WAGON SPRINGS.—Elijah Horton, Okee, Wis.—This invention relates to a method of applying springs to wagons, whereby the ordinary lumber wagon is rendered suitable for the transportation of many articles to which it is not adapted as it is ordinarily made.

CORN SHELLER.—Michael Housman and Simeon Housman, Huntington, Ind.—This improvement consists in surrounding the claw projections or clamps of the corn sheller with a shell or shield for the purpose of preventing the grains of corn from scattering, and to protect the hand of the operator from injury.

GRAIN SIEVE.—Jacob Corson, Clinton, N. J.—This invention relates to a new grain sieve, which is so arranged that the grain may be most thoroughly separated from dust and dirt, and that the small grain may also be separated from the large grain.

AXLES FOR VEHICLES.—William Knoch, Alleghany City, Pa.—This invention relates to a new manner of arranging the spindles around wagon axles, so that the hub can be easily oiled and that the spindle can be easily replaced when desired.

BELT COUPLING.—John L. Thomas, Newburgh, Ohio.—This invention relates to a device for coupling pulley belts, and the improvement consists in a metal clamp applied to both sides or ends of a lap of a belt, to hold them together.

FIRE AND BURGLAR ALARM.—O. E. Pickett, North Auburn, Pa., and R. S. Luce, Lawsville, Pa.—This invention relates to improvements in the construction of a fire and burglar alarm, which consist in an arrangement of tripping devices in connection with a clock movement and bell, whereby an alarm is sounded when by fire or the entrance of a burglar in a house the connection is broken by which the alarm is held.

SEWING MACHINE CAST-OFF.—Edmund M. Comery, Hudson, Mass.—This invention relates to an improvement in the construction of a cast-off for a wax-thread sewing machine, and consists in a slide collar fitted to the needle and attached by a pin joint to a bar or handle.

SAFETY CLASP.—C. E. Candee, Jersey City, N. J.—This invention relates to an article to be used by travelers and others in securing their passage tickets to their persons in railroad cars, and to be used also as a shawl pin and for purposes of a similar nature.

GOLD WASHING MACHINE.—Seth L. Beckwith, San Francisco, Cal.—This invention relates to a gold washing machine, and consists of a washer pan hung over a receiver.

CLOTH GIG.—Osimus M. Stillman, Westerly, R. I.—This invention relates to improvements in the construction and operation of gigs for raising the nap upon woolen cloths, and consists in simple devices for bringing the cloth into contact with one raising cylinder at four distinct points or places.

PHOTOGRAPHIC PRINTING FRAME.—Samuel F. Conant and Horace A. Manley, Showegan, Me.—This invention relates to a frame or clamp for holding the negatives while the photographs are being copied or printed therefrom. The object of the invention is to obtain a device for the purpose specified, which will admit of the paper and negative being readily fitted in and removed from the frame, the progress of the printing or copying readily inspected from time to time, and the negative and paper firmly retained in contact on the frame.

STEAK CRUSHER.—Alfred Castellaw, Chester, Ill.—This invention consists in constructing a machine with a fluted cylinder, which is geared to another smooth or plain cylinder or roller, in combination with a suitable frame, the cylinders being revolved therein, and the steak to be crushed being passed between them.

BEEHIVE.—James A. Jackson, Macon, Mich.—This invention consists in a novel manner of constructing a beehive, whereby a large number of spare honey boxes may be used or applied, the bees allowed to work with facility, and moths entrapped so that the bees will not be materially annoyed by them.

TIME REGISTER.—Wm. A. L. Kirk, Hamilton, O.—This invention relates to an improvement in the construction and arrangement of a time register, or instrument for recording the working hours of operatives in a shop or factory, and consists in a deep, horizontal cylinder, divided circumferentially into twelve compartments or other subdivisions, corresponding to hours, or fractions of time; the cylinder thus subdivided is fixed on a vertical spindle, attached to a coil spring, which gives it motion when free to move, and is provided with a catch lever connected with a clock movement that trips the lever from time to time, as desired to allow the time box to revolve a certain space to change the position of the compartments therein for receiving checks of the workmen as they commence or quit work to indicate the time, which is registered by a series of figures in the circumference of the cylinder.

WATCH.—Arthur Wadsworth, Newark, N. J.—This invention relates to the main-spring barrel of the movement of a watch, or other time pieces, and the principle of the invention consists in so constructing either one or both of the heads or end plates to such barrel, that when applied to the body portion of the barrel, such body will be confined and bound upon and around its outside, and thus strengthened and stiffened, as well as in many other respects improved and rendered more efficient and practical.

SODA WATER BOTTLES OR VESSELS FOR CONTAINING BEVERAGE FLUIDS.—Wm. W. Timmons, Rahway, N. J.—The particular object of this invention is to provide a portable substitute for soda water fountains, but the invention may be applied to other purposes for which it is suitable. It consists of a chamber attached to or forming part of the vessel containing the pure soda water or other fluid, the chamber containing the acid preparation or other ingredient which escapes therefrom and communicates with the soda water or other fluid when the latter is being poured out, whereby the effervescence takes place at that time.

HANGING WINDOW SASHES.—Charles H. Palmer, New York city.—This invention relates to a new manner of hanging window sashes, and its object is to so arrange the hanging that the sashes can be moved up and down as usual, and that they can be turned into a horizontal position so as to open the whole window whenever desired.

WEEDING IMPLEMENT.—C. S. Jewell, Black's Mills, N. J.—This invention relates to a new weeding implement, which is so arranged that, by its aid, noxious weeds can be easily drawn out of the ground, without cutting them.

CHISEL.—Amos B. Simonds, Youngstown, Ohio.—This invention relates to an improved chisel or tool for turning the heads of bolts or other articles, in connection with the turning of which hand tools are used. The tools or chisels heretofore used are made with solid shanks, and when the cutting part is worn out the whole tool is destroyed and rendered useless, and the present invention consists in so attaching the cutter to the shank of the tool that it can be removed or detached therefrom when worn and a new one applied.

APPLICATION OF SPRINGS TO WHEEL VEHICLES.—Charles L. Rice, Dunmore, Pa.—This invention relates to an application of springs to wheel vehicles, whereby the body of the vehicle is prevented from moving longitudinally forward or backward, and also prevented from tilting sidewise, in an appreciable degree, while at the same time the body is better supported than usual by the springs.

HEATING APPARATUS.—Thomas Williams, and Joseph J. Yates, New York city.—This invention relates to a device for evaporating the liquors in whisky distilleries, and for other purposes, in which liquids are to be heated by blowing steam into them. The invention is designed to overcome the difficulties heretofore experienced, that when the steam was cut off a vacuum was created in the steam pipe so that the material in the mash, or other pan, flowed into the pipe, and clogged the same, thereby creating frequent annoyance and loss of time.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information 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 gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisemets at $1 00 a line, under the head of "Business and Personal."

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

G. M. D., of Ill.—"What is the best steam joint cement that can be ready for use at any moment? How can I protect rubber packing from burning out by steam?" By "steam joint cement" we suppose you mean a cement for sections of steam pipes which are not required to be taken apart after being connected. The ordinary cement, composed of iron filings or borings, salammoniac, and water—a little sulphur being added if desired—is what you want. The exact proportions are not of great consequence, the iron filings constituting the mass. For two quarts of the iron filings, however, two ounces of salammoniac are sufficient. We do not approve of the addition of sulphur, but if used it should be in very small quantity. A packing, to be removed if desired, is made by mixing two parts white lead with one of red lead with linseed oil, making a thick paste, and used with canvas or leather glands, the pipe joints being held by bolts and nuts. Rubber packing will be more or less affected by a high temperature. For packing steam engine stuffing boxes, etc., there is manufactured a packing of cotton webbing in combination with rubber, which is durable and effective.

P. H., of Ky., asks how the glazed and highly polished surface on linen is produced. There are preparations in the market which pretend to produce this effect, but probably much of it is due to the skill and "elbow grease" of the operator or the use of heavy calendering rolls.

D. J. W., of Ky., asks if Bessemer steel can be used to make plows of, and whether it can be worked and hardened as other steel. It is claimed that steel manufactured by the Bessemer process can be made with the qualites of receiving and retaining temper. We have seen tools such as cold chisels and turning tools, made of it, but as we never tested them we are unable to say how well they retain temper. We think, however, that this steel would prove admirable for plow shares. It would probably recieve sufficient hardness for that purpose.

J. F. G., of Ohio, says we gave, in a former number of our paper, the following as a recipe for a varnish for lithographs, drawings, etc.: "Dextrine, 2 parts; alcohol, 1 part; water, 6 parts." and asks if it is applicable to oil or canvas paintings. Oil paintings on canvas are seldom varnished, but when so treated for preservation the varnish generally used is mastic.

H. M., of N. J.—"How can I extract acetic acid from pyroligneous acid." The latter may be considered an impure condition of the former. Muspratt's Chemistry or Ure's Dictionary will give you the information as to processes necessary, which it would be inconvenient to transfer to our pages.

Business and Personal.

The charge for insertion under this head is one dollar a line.