of a fluted churn, and in the construction of the same with a peculiar double winged dasher.

MACHINE FOR BRANCHING ARTIFICIAL FLOWERS.—Ambrose Giraudat, New York city.—This invention relates to a new machine for securing branches, leaves, flowers, or other ornaments, to the stems of artificial flowers by means of two layers of threads applied to the wire stem. The small stems of the said branches, leaves, or flowers, are secured between the two layers of threads, of which the upper one is wound, in one or more threads, closely around the main stem.

BENCH VISE.—O. H. Gardner, Fulton, N. Y.—This invention consists in so shaping the shank of the rear jaw of a vise, that its lower pivot is in line with the center of the upper clamping plate, so that the said jaw will work on a center and not be thrown off the bench. The invention also consists in so shaping the shank of the front jaw, that the center of its ball will be in line with the face of the jaw, for the purpose of obtaining greater accuracy of motion.

PENCIL AND RUBBER HOLDER.—J. A. Kemmis, New Orleans, La.—This invention relates to improvements in cases for holding pencils and rubbers, designed to provide a convenient article for carrying in the pockets and for use. It consists in a peculiar arrangement of sliding spring pencil holder and spring rubber holder within a tubular case.

REAPING MACHINE.—Robert Morris, Salem, Ind.—This invention relates to improvements in reaping machines, having for its object to provide a simple and improved arrangement of means for obtaining the motion for the cutter bar; also an improved arrangement of means for raking and delivering the gavels; also, an improved arrangement for suspending the apron and cutter bar from the frame of the machine, so as to dispense with the wheels commonly applied at the outer side of the apron.

HOEING MACHINE.—H. W. Clapp, Northampton, Mass.—This invention consists, first, in an arrangement upon a truck of two or more wheels, of two or more hoes or spades moving to and from the row, as the machine moves along by motion derived from the truck wheels, so as to scrape or hoe the earth up to the roots of the plants, the said spades or hoes being raised above the ground when moving away from the plants, and down into contact with it when moving up towards it. The invention consists, secondly, in the combination with the said hoes or spades, of a shield for gathering the tops of the plants and holding them up, so as not to be covered or injured by the hoes. This invention consists, thirdly, in the combination of the said hoes of cultivators, arranged to operate in the ordinary way, and provided with means for raising and lowering them; also for guiding one pair of the said cultivators, which run close to the plants, laterally by the feet, and it consists, fourthly, in certain arrangements of parts for working, guiding, and adjusting the spades and cultivators.

HAND-SPINNING MACHINE.—James Rice, Prairie Creek, Ind.—The object of this invention is to provide a hand-spinning machine, which may be readily adjusted as to hight, so that the operator may work it when either standing or sitting. It is also arranged by inclosing the gearing in a case for safety and for a better appearance.

COTTON CULTIVATOR.—R. I. Draughon, Claiborne, Ala.—This invention consists of a pair of rotary cutters for working on each side of the row, and another rotary cutter for working transversely thereto, for chopping out the plants at intervals; the said rotary cutters being suspended from a frame on two wheels by vibrating supporting frames, having means for raising or lowering them, as required, and deriving rotary motion from the axle of the said two wheels; they are also arranged for adjustment obliquely for discharging the earth directly behind or laterally.

CRANK, AXLE, AND TREADLE FOR VELOCIPEDE.—McClintock Young, Frederick, Maryland.—This invention relates to a new manner of constructing treadles for velocipede cranks, with an object of making them both light and reliable, as well as of cheap construction, and to a novel construction of crank axle and crank to enable the latter to be formed on the former,

PRESS FOR MOLDING BOOT AND SHOE SOLES.—S. D. Tripp, Lynn, Mass.—This invention relates to a machine for molding or forming the soles of boots and shoes so that they shall correspond in shape with the last.

VELOCIPEDE.—George Louden, Brooklyn, N. Y.—This invention relates to a new and useful improvement in velocipedes, and consists in the method of applying the power for driving it.

EXPLOSIVE PROJECTILE.—John Jobson, Derby, England.—The object of this invention is to admit of the head, or fore end or part of the projectile being split or broken up into a number of definite forms or parts, and to facilitate the separation and distribution of parts composing the cylindrical or parallel portion or body of the projectile.

CRANK FOR HARVESTERS.—H. L. Wanzer, Lanesville, Conn.—The object of this invention is to furnish means for varying the velocity of the cutters of harvesters to accommodate the machine to the nature of the work and speed of the team; and also to compensate for the wearing away of the knives by grinding.

ELECTRO-MAGNET.—W. E. Davis, Jersey City, N. J.—The object of this invention is to so construct the spools or cores of electro-magnets by a new system of winding the wires around them, that the electric current will move rapidly, and uniformly enter both spools, and thereby produce a more decisive action upon the same and the armature.

DITCHING MACHINE.—Henry Benett, Linden, Cal.—This invention consists of a large drum, having two end rims united by steel or other bars, suitable for cutters, arranged parallel with the shaft and pitched slightly out of the radial lines, between which are followers which recede and permit the cutters to settle into the earth to fill the spaces between them, and are then forced out to discharge the earth after it has been carried up by the wheel against a scraper following in the rear, and serving as a guide to prevent the discharge, until the earth has been carried to the proper point to be delivered to an elevating and spouting apparatus, which the invention also comprises.

ENVELOPES.—F. W. Eberman, West Salem, Ill.—This invention consists in making the flap, which is folded over on the body part in sealing, of two thicknesses, either by folding the edges of the flap, (intended for the purpose) over on itself, or by pasting other narrow strips thereon, and arranging the paste on the flap or the other part, so that it will be pasted down to the body part, at some distance from the edge of the flap, leaving a narrow strip of the outer edge free to be taken hold of by the thumb and finger for tearing open, the two thicknesses thus formed rendering the paper strong enough to overcome the adhesion of the paste. In some cases it is proposed, when the additional thickness of paper is to be formed by pasting on strips, to attach the said strips to the body of the envelope, and to seal the edge of the flap to the strips.

BISCUIT PANS.—J. C. Milligan, Brooklyn, N. Y.—This invention relates to an improved mode of uniting small biscuit pans together in clusters, and consists in providing the said pans with horizontal flanges around the top, and joining them together in rows, lapping the flanges and riveting them, joining two or more rows together in right lines, in both directions, or in zigzag lines, as may be preferred. The invention also consists in binding the whole together by wires or other bars, extending around or along the sides of the clusters, at the outer edges of the outer pans, and turning the edges of the flanges over them.

STEAM CUT-OFF.—H. Lombard, San Francisco, Cal.—This invention consists of a hollow conical or tapered valve, receiving the steam at one end, and delivering it at one side to ports in a circular tapered seat, leading to the cylinder, and exhausting through the other side from the same ports, and at the end opposite the receiving end, which valve is provided with a central auxiliary valve connected with the governor, and operating to vary the opening of the live steam passage; also to separate the passage of the said valve longitudinally to form the live steam and exhaust passages.

PLOWS.—W. R. Pool, Havanna, Ala.—This invention relates to an improved method of fastening plows detachably to the stocks, for the purpose of changing them for plows or shares of different shapes and kinds for different kinds of work.

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Patent Solicitors, No. 37 Park Row, New York.

96,534.—MODE OF SECURING TYPE IN FORMS.—Samuel Anderson and T. J. Folan, Stapleton, N. Y.
96,535.—DOUBLE-ACTING PRESS FOR "BLANKING" AND "FORMING UP" SHEET METAL.—John Annear and W. J. Gordon, Philadelphia, Pa.
96,536.—PORTABLE FENCE.—Albert Armitage, Phelps township, and J. H. Olmsted, Arcadia, N. Y.
96,537.—APPARATUS FOR SHAPING EARTHENWARE.—J. H. Baddeley, Greensborough, Pa.
96,538.—DETACHABLE BOOT AND SHOE HEEL.—C. W. Bailey, Boston, Mass.
96,539.—GAS HEATER.—John Bannihr, Hempstead, N. Y.
96,540.—DITCHING MACHINE.—Henry Benett, Linden, Cal.
96,541.—STEAM TRAP.—Samuel Bonser, Dover, N. H.
96,542.—RAILWAY CAR BRAKE.—M. S. Borthwick, Montana, Iowa.
96,543.—ORGAN-STOP HANDLE.—Wm. Boyrer, New York city.
96,544.—FASTENING FOR BUTTONS.—Edward Brady, Philadelphia, Pa.
96,545.—FAUCET-CONNECTION.—T. H. Brady, New Britain, Conn.
96,546.—SEED PLANTER.—James Campbell (assignor to himself and William Campbell), Harrison, Ohio.
96,547.—WATER ELEVATOR.—G. W. Carpenter, Butler, Ind.
96,548.—CHAIR.—Jefferson Chase, Orange, Mass.
96,549.—HOEING MACHINE.—H. W. Clapp, Northampton, Mass.
96,550.—KITE.—Samuel Clark, New York city.
96,551.—HINGE FOR A DOOR OR WINDOW FRAME OF A STOVE.—T. J. Coulston, Springville, assignor to E. S. Shantz, and Joseph Johnson, Royer's Ford, Pa.
96,552.—BOILER-TUBE CLEANER.—P. H. Coyle, Newark, N. J.
96,553.—JACQUARD MECHANISM FOR LOOMS.—E. K. Davis, New York city, assignor to Duckworth & Sons, Pittsfield, Mass.
96,554.—ELECTRO-MAGNET.—W. E. Davis, Jersey City, N. J.
96,555.—LATERAL OR DIVERGING CONNECTION FOR CEMENT WATER PIPES.—Edwin Dayton, Meriden, Conn.
96,556.—CARDING MACHINE.—James Dempster and Henry Holcroft, Media, Pa.
96,557.—STREET CAR STARTER.—T. S. E. Dixon (assignor to himself and W. H. Payne), Janesville, Wis.
96,558.—COFFEE-POT.—Johnson Dodge, New Orleans, La.
96,559.—HOSE BRIDGE.—William Donoghue and F. L. Charlton, Philadelphia, Pa.
96,560.—BALANCE SLIDE-VALVE.—David Dorman, Wheatland Furnace, Pa., assignor to himself and Thomas Johnston.
96,561.—FENCE.—J. G. Downer, Auburn, N. Y.
96,562.—COTTON CULTIVATOR.—R. I. Draughon, Claiborne Ala.
96,563.—HARNESS PAD.—Charles Drew, Newark, N. J.
96,564.—LOOM FOR WEAVING TAPE, ETC.—James Duckworth (assignor to Duckworth & Sons), Pittsfield, Mass.
96,565.—APPARATUS FOR GENERATING AND CARBURETING GASES.—C. F. Dunderdale, New York city.
96,566.—ENVELOPE.—F. W. Eberman, West Salem, Ill.
96,567.—PRINTING TELEGRAPH APPARATUS.—T. A. Edison (assignor to S. S. Laws), New York city.
96,568.—CAPSTAN.—Jacob Edson, Boston, Mass.
96,569.—BRIDGE.—Samuel Ensign, New Franklin, Ohio.
66,570.—LOOM FOR WEAVING PILE FABRICS.—LeviFerguson, Lowell, Mass.
96,571.—EAR OF WOODEN BUCKETS.—L. A. Fleming, New York city. Antedated Nov. 1, 1869.
96,572.—MANUFACTURING SHOVELS.—John Fox, New York city.
96,573.—WATER-WHEEL.—J. G. Fredenburr and W. V. Andrews, Newcastle, Cal.
96,574.—FLY NET.—John Frymire, Orangeville, Pa.
96,575.—COULTER FOR PLOWS.—Conrad Furst, Chicago, Ill.
96,576.—HORSE HAY RAKE.—Horatio Gale, Albion, Mich.
96,577.—PRINTING PRESS.—Merritt Gally, Rye, assignor to Allen Carpenter, Rochester, N. Y.
96,578.—PRINTING PRESS.—Merritt Gally, Rye, assignor to Allen Carpenter, Rochester, N. Y.
96,579.—PRINTING PRESS.—Merritt Gally, Rye, assignor to Allen Carpenter, Rochester, N. Y.
96,580.—VISE.—O. H. Gardner, Fulton, N. Y. Antedated Nov. 1, 1869.
96,581.—HEAD BRACE FOR COFFINS.—Joseph Gawler, Washington, D. C.
96,582.—MACHINE FOR BRANCHING ARTIFICIAL FLOWERS.—Ambrose Giraudat, New York city.
96,583.—MANURE HOOK OR DRAG.—Henry Gross, Middletown, Pa. Antedated Oct. 26, 1869.
96,584.—BUTTER TUB.—J. M. Hale, Georgia Plains, Vt. Antedated Nov. 1, 1869.
96,585.—PIPE COUPLING.—J. M. Hale, Georgia Plains, Vt.
96,586.—CORN PLANTER.—J. A. Hamrick, Parnassus, Va.
96,587.—MANUFACTURE OF ARTIFICIAL AND PRESERVATION OF NATURAL FLOWERS.—E. S. Harris, Philadelphia, Pa.
96,588.—STOVE GRATE.—David Hathaway, Troy, N. Y.
96,589.—SLED.—R. H. Hawkins, Akron, Ohio, assignor to himself and T. H. Dodge, Worcester, Mass.
96,590.—BEER COOLER.—August Hitscherich, Milwaukee, Wis.
96,591.—DIAMOND HOLDERS FOR ENGRAVING PRINTERS ROLLERS.—John Hope (assignor to Hope & Co.), Providence, R. I.
96,592.—WATER WHEEL.—Franklin Hoyt, Montpelier, Vt.
96,593.—GANG PLOW.—James B. Hunter, Ashley, Ill.
96,594.—PUNCHING AND SHEARING MACHINE.—William H. Ivens and Wm. E. Brooke, Trenton, N. J.
96,595.—EXPLOSIVE PROJECTILE. — John Jobson, Derby, England.
96,596.—SAW SWAGE.—Nelson Johnson, Jasper, N. Y.
96,597.—PENCIL CASE.—J. A. Kemmis, New Orleans La.
96,598.—FOUNTAIN PEN. —J. Gardner Kenyon, Ferndale, Cal.
96,599.—TOILET BEDSTEAD.—George V. Leicester, Boston, Mass.
96,600.—METAL-ROLLING APPARATUS. — John Lippincott, Pittsburgh, Pa.
96,601.—ROTARY STEAM VALVE.—H. Lombard, San Francisco, Cal.
96,602.—CORN HARVESTER.—Charles B. Maclay, Delavan, Ill.
96,603.—PADDLE WHEEL.—James Mahony, Newport, R. I.
96,604.—CHURN.—C. J. Miller, Jr., Richmond, Ky.
96,605.—BISCUIT PAN.—John C. Milligan, Brooklyn, N. Y.
96,606.—HARVESTER.—Robert Morris, Salem, Ind.
96,607.—STEAM RADIATOR.—James O. Morse, Englewood, N. J., and Gardner D. Hiscox, Brooklyn, N. Y.
96,608.—GOVERNOR FOR STEAM AND OTHER ENGINERY.—M. Murphy, Charlotte, N. C.
96,609.—STRAW CUTTER.—Harrison Ogborn, Richmond, Ind.
96,610.—WHIFFLETREE.—Anson W. Payne, Maine, N. Y.
96,611.—THRASHING MACHINE.—William H. Perry, Ripley, Ohio.
96,612.—ROCK-DRILLING MACHINE.—George B. Phillips (assignor to A. M. Cornell & Co.), Poughkeepsie, N. Y.
96,613.—HEAT RADIATOR.—S. Montgomery Pike, Cincinnati, Ohio. Antedated October 23, 1869.
96,614.—PLOW—Wm. R. Pool, Havanna, Ala.
96,615.—MODE OF TRANSMITTING MOTION.—Nelson Read, Jewett City, Conn.
96,616.—WINDOW-SASH FASTENING.—Samuel Reed, Rising Sun, Md.
96,617.—BOILER TUBE CLEANER.—John E. Regan, Chicago, Ill.
96,618.—TAP COCK.—Claude Renard, Michel Perret, and Jules César Voituret, Mâcon, France.
96,619.—HAND-SPINNING MACHINE. — James Rice, Prairie Creek, Ind.
96,620.—AXLE SKEIN.—Emry Rooks, Trenton, Tenn.
96,621.—MAKING TOY TORPEDOES.—Erastus B. Sample, and John Sparks, Brooklyn, N. Y.
96,622.—STEERING APPARATUS.—A. A. Scanlk, Nyack, N. Y.
96,623.—GAS HEATER.—Eilert O. Schartau, Philadelphia, Pa.
96,624.—LATCH.—George A. Seaver, New York city.
96,625.—WEEDING HOOK.—Thomas J. Secor and Charles E. Shumway, Phelps, N. Y. Antedated October 26, 1869.
96,626.—OIL CAN.—Franklin Skinner, Cleveland, Ohio.
96,627.—DOOR KNOB.—Thomas J. Sloan, Bronxville, N. Y Antedated October 30, 1869.
96,628.—RAILWAY-RAIL SPLICE.—Jasper Snell and John M. Crosland, Pottsville, Pa.
96,629.—ENDLESS-CHAIN WATER WHEEL.—H. S. Stewart, Yreka, Cal.
96,630.—GRAIN CLEANER.—Jacob Stroop, Joliet, Ill.
96,631.—WIND WHEEL. — Isaac H. Sutton, Coon Rapids Iowa.
96,632.—MANUFACTURE OF WATCH CASES.—Chas. L. Thiery Boston, Mass.
96,633.—PROCESS AND APPARATUS FOR CONVERTING CAST IRON INTO STEEL.—Alois Thoma, New York city.
96,634.—ENAMEL OR GLAZE FOR POTTERY, BRICK, TILES ETC.—Wm. S. Thomas, Carbon Cliff, Ill.
96,635.—WHEEL FOR SELF-MOVING CARRIAGES. — Robert William Thompson, Edinburgh, Great Britain. Patented in England April 21, 1868.
96,636.—TRACTION ENGINE. — George N. Tibbles, Hudson City, N. J.
96,637.—SIGNAL LANTERN.—David Todd, Detroit, Mich.
96,638.—MACHINE FOR SHAPING BOOT AND SHOE SOLES.—S. D. Tripp, Lynn, Mass.