### Improved Wall Paper.

Archie W. Paull, Wheeling, West Va.—This invention consists in simply taking a carefully selected and artistic design, prepared on paper, wood or other material, and photographing it directly upon the wall paper. In this manner are secured as many facsimiles as may be desired of a design whose delicacy of tint, exact imitation of nature and elaborate ornamentation are absolutely impossible in the block printing process.

### Improved Piano Tuning Key.

Alexander H. Affleck, Marshallville, Ga.—This invention relates to tuning keys for pianos, and consists in one so constructed that, no matter in what position the angular top of pin may be, the key can be quickly rotated so as to give a good purchase and a convenient hold.

### Improved Automatic Gate.

Geo. C. Crum, Barr's Store, Ill.—This invention relates to that class of gates which are opened and closed automatically as the vehicles approach, and subsequently closed behind them after the passage of the vehicles therethrough. The invention consists in combining with a gate latch a vibratory lever with arms connected at the lower end with a bar inclined on its subjacent face.

### Improved Drop Light Attachment for Chandeliers.

Napoleon W. Williams, Philadelphia, Pa.—This invention consists in attaching the ball which holds the rubber pipe to the bottom of the sliding pipe and making it movable therewith, and also in a peculiar construction of the surfaces of the friction clamp.

### Improved Automatic Hatch Closer.

Edward M. Hackett, New York city.—This invention relates to means whereby the door or doors, that cover the openings in floors through which pass elevators, may be automatically closed and opened. It consists in causing a pin on the elevator to move through two spiral grooves and thus vibrate a vertically journaled shaft, which has an arm or arms that actuate the door or doors.

### Improved Ribbon Case.

Jos. K. Landis, Bellevue, O.—The object of this invention is to furnish an improved receptacle or holder for ribbons and other like fabrics, also for threads, yarns, etc., the same being adapted for use in fancy dry goods shops, also, when in smaller dimensions, in families, by milliners, seamstresses, etc. The invention consists of a polygonal revolving case, in each of whose compartments is a series of spools or shafts on which the ribbons are wound, the same passing through slits formed in the outer face of or side of each compartment.

### Improved Gas Retort.

Joseph D. Patton, Trevorton, Pa.—This invention consists of a retort protected from direct contact of heat by the brickwork in which it is set, or partly by the same and partly by another retort, in combination with one or more retorts wholly exposed to the heat of the furnace, for gradually heating the substance of which the gas is to be made; the object being to provide an arrangement whereby resin or volatile oil can be successfully treated, in which they are subjected from the beginning to the intense heat of retorts directly exposed to the heat and sufficiently hot to convert them into fixed gas, which they cannot be in the ordinary retorts.

### Improved Paper File.

Charles Mason, New York city.—The object of this invention is to furnish to merchants and business men a cheap, durable, and convenient paper filer, by which letters, bills, checks, or other papers may be quickly and neatly filed and compactly held together. The invention consists of a device bent of suitable wire or other metal in such a manner that the top part holds, in connection with the spring action of the bottom and side parts, the papers placed on file between them.

### Improved Coupling for Elastic Hose.

Thos. J. Trapp, Williamsport, Pa.—This invention consists in a tube provided with a tapered or conical end, terminating in a right angled shoulder. The elastic hose is forced over said conical end, and past the shoulder, with which latter it engages so firmly as to resist all attempts at removal by any tension to which it may be subjected short of that which will destroy, cut through, or tear it.

### Improved Furniture Caster.

Cevedra B. Sheldon, New York city.—This invention consists in the peculiar shape of the two similar and half sections, each having its half rim, its inner face, its half hub and its cup, corresponding to like parts in the other.

### Improved Combined Walking Planter and Cultivator.

George De Vany, Jr., Darbyville, O.—This invention relates to a combined single and double walking seed planter and cultivator, the component parts of which are so constructed as to permit the planter to be changed either into a three or double shovel cultivator by a simple transposition of said parts.

### Improved Chain Harrow.

George Watt, Richmond, Va.—This invention consists in a harrow, pulverizer or cultivator composed of a series of chains connected by loop links and held in position by cross bars, together with a pair of bars attached to a clevis at one end and braced intermediately by a spacer.

### Improved Clothes Line Hook and Automatic Fastening.

John G. Ames and Preston A. Ames, Baltimore, Md.—This invention consists of an automatic hook and fastening for clothes lines, consisting of a fence grapple with slot and bearings, and a line hook having journals and rear projection. These may be attached to the top of a paling or fence without nail or rivet, and, when not in use, safely stowed away.

### Construction of Iron or Brass Pulleys or Caster Wheels.

Cevedra B. Sheldon, New York city.—This invention consists in making the pulley or caster wheel in two sections, on a plane passing through rim and at right angles to the plane of axis, and in connecting the two sections together by a hollow rivet which also serves as an axle box to take up wear.

### Improved Geared Hand Carriage.

Lewis T. McGilvray, Staunton, Va.—This invention consists in combining, with a vehicle having ordinary sustaining wheels and a guide wheel in front, a series of crank shafts and intermediate gear wheels, by which power is easily and conveniently transferred from the hand to the axle.

### Improved Paint Brush.

Syranus Standish, Eureka, Nevada.—This invention relates to paint and other brushes, and consists in a novel mode of constructing and combining the handle, bristle compressor and shell, so that the bristles may be adjusted when worn, utilized almost entirely, and then replaced with new bristles, all with but little trouble and by almost any one.

### Improved Stationary Spittoon.

Wm. H. Tyrrell, Philadelphia, Pa.—This invention relates to spittoons for cars, steamers, ships or vehicles: and consists in an improved construction which allows the same to be conveniently emptied of its contents at times intermediate between the termini of route and with ease and convenience to the operator.

### Improved Mangling or Wringing Machine.

Thomas Hall and James Newton, Lawrence, Mass.—This invention consists of an arrangement of long levers and springs to obtain the pressure on the pressure roller by light and sensitive springs, which are better adapted for obtaining a wide range of movement than the strong heavy springs which are necessary when short levers are used.

### Improved Spring Bed.

Stephen Stout, Tremont, Ill.—The object of this invention is to construct a cheap and durable spring bed of simple construction. It consists of grooved lateral supports for double acting spiral springs, which are connected by slats or cane pieces, and held in position by straps passing through the springs.

### Improved Sled Brake.

Joseph Slater, Sandy Lake, Pa.—This invention is an improvement in the class of sled brakers, wherein a pivoted bar is caused to take into the snow or ice by means of a hand lever. The improvement relates to arranging a sliding rod, provided with a hook or claw on its free end, in connection with an oscillating lever shaft and a keeper and supporting guide, so that said rod may be easily and powerfully applied as a brake, and raised and supported in a horizontal position beneath the sled beams when not in use.

### Improved Ear Protector.

Moritz Isidor, New York city.—The object of this invention is to provide suitable and convenient means for protecting the ears from frost and cold; and it consists in shields or coverings for the ears, connected together by an elastic cord, and with the central fronts or outsides formed partly of cloth and partly of gauze, so that the shield will not interfere with the transmission of sound.

### Improved Hoisting and Conveying Apparatus.

George Stancliff, New York city.—The object of this invention is to hoist, convey, and lower heavy goods in an easy and expeditious manner, for the purpose of economizing time and labor. The invention consists of a truck, hoisting and carrying the weight and moving it back and forth on an inclined track by means of a windlass, wire rope, and pulley arrangement. It is intended as an improvement on a similar invention patented by Joseph Green, August 1, 1871, and which may be found illustrated in the SCIENTIFIC AMERICAN, on page 388, December 16, 1871.

### Improved Ladies' Work Stand.

Gilbert S. Manning, Danville, Ill.—This invention consists of a stand composed of legs and boxes or trays, and an inclosed revolving table top with a cover in two parts opening and closing on pivots at one end, which secure a base plate upon the covers, whereon a revolving inclosed spool stand is provided. The arrangement is calculated to provide a neat, desirable, simple, and inexpensive table.

### Improved Car Pusher.

Alva S. Bailey, Paxton, Ill., assignor of one half his right to Edward Little, of same place.—The object of this invention is to furnish to railroad employés and others a car jack, by the use of which cars may be moved on the track without being required to wait for a locomotive, horse, or hands. The invention consists of a main beam, with clutch end placed on the track, a slide lever with rack and hook at the other end being applied to the car and acted upon by a cog wheel at the end of a hand lever, so that by successive applications the car is moved on the track.

### Machines for Swaging and Finishing Horseshoe Nails.

Robert Ross, Vergennes, Vt., assignor to National Horse Nail Company, of same place.—The first invention consists of a die on the side of a vertical wall, and a horizontal reciprocating die working toward and from it below a screw feeder, and a bar parallel with it, by which the nails are fed along, points downward, to these dies, to be beveled to the required shape flatwise at the points, the movable die being so timed as to come against the points as they pass in front of it. The feed screw and bar are adjustable vertically to regulate the length of the bevel for the points. The invention also consists of a weighted lever combined with said feed devices and beveling dies to retain the nails between the dies while being acted upon. There are also a vertical stationary die and a movable punch, and a pair of holding dies, in combination with the said feeding devices, for trimming the edges or narrow sides of the nails for about half their length from the point, more or less, the nails being presented to the said trimming dies by dropping, point foremost, from the feed devices in front of the stationary trimming die and being caught at the head by the holding dies, so that the point to be trimmed is suspended in front of the stationary trimming die and held till the movable trimming die comes up and forces it through the other one and out of the holding dies. One of the said holding dies has a slight movement to open and let the nails drop in freely, and then close on them to hold them snugly till the movable trimming die acts. The invention also consists of an arrangement of the stationary beveling and trimming dies on a supporting block, which is pivoted to the frame at one end, and confined by a locking pin at the other end in such manner that by removing the locking pin the block can be readily swung over on its pivot to afford ready access to said dies for repairing them; and an arrangement of the crank shaft is provided which works the movable die stock by a crank or wrist pin, so that it can slide away from the stock readily, to allow of withdrawing the stock to grind the dies without taking them off, and a combination of a latch and collar with the shaft for holding it in connection with the stock. The same inventor has also patented a machine for finishing horseshoe nails which operates as follows: The nail is placed between two threads of a screw. The screw being rotated carries it forward until it reaches a die where the hammer strikes and points it. It then passes to and off the screw end, against which it is held by suitable devices until the pushers carry it through other dies, the head of the nail causing the holder to rise. This effectually trims the nail. If a nail is larger than those previously pointed and trimmed, the screw is drawn back, and *vice versa*, if smaller; while increased space between the nails, as they approach the die to give room for the handle, is obtained by the increasing width of thread.