No. 15,336. Improvements on Sleighs.

(*Perfectionnements aux traîneaux.*)

David M. Kirkpatrick, Kansas, Mo., U. S., 17th August, 1882; for 5 years.

Claim—1st. The combination, with the body having openings in its sides and provided with staples, or their equivalent, of the doors arranged to cover the same and provided with suitable rods adapted to slide in the staples, their upper front corners adapted to be supported by the points of the body and be retained in that position. 2nd. The combination, with the body constructed of sheet metal, braced on the inside by suitable ribs, or braces mounted on runners, and having openings cut or otherwise formed in its sides, of the doors formed of like material and adapted to slide outside and over said openings to close the same.

No. 15,337. Steam Boiler Injector.

(*Injecteur de chaudière à vapeur.*)

Charles H. Stewart, Chelsea, and Norris H Spaulding, Boston, assignees of William T. Messinger, Boston, Mass., U. S., 17th August, 1882; (Extension of Patent No. 7783.)

No. 15,338. Improvements on Lubricators.

(*Perfectionnements aux graisseurs.*)

Ross J. Hoffman, Binghampton, N.Y.. U. S., 22nd August, 1882; for 5 years.

Claim.—1st. The combination of the main supply pipe, with two or more branch pipes, separate engines connected therewith, and an automatic lubricator connected to the main supply pipe, between the generator and the branch pipe nearest thereto. 2nd. The combination of the steam supply pipe and branch pipes, the pipe D and pipe C *c e*, all in communication with the lubricator. 3rd. The pipe *f* in combination with the pipe D, the pipes C *c e* with supply pipe and lubricator. 4th. In combination with the oil cup of a lubricator, and with the steam passage *e* thereof, the tube *h*, pipes *g* and *i*. 5th. In combination with the oil cup of a lubricator, the hollow bias, or tube K and glass *l*, and the pipe c^1 having inclined end or face.

No. 15,339. Improvements on Holdbacks, Snap Hooks, Neck Yokes, etc.

(*Perfectionnements aux ragots des limonières, crochets à ressort, jougs, etc.*)

Callender I. Calvert, Philadelphia, Penn., U, S., 22nd August, 1882; for 5 years.

Claim—1st. The hook A and attaching plate B with throat C, in combination with the spring tongue D connected at one end to said plate B and having its free end within the channelled back of the plate and extended beyond the edge of the throat. 2nd. The hook A, plate B and spring tongue D, in combination with the back rubbing plate B^1. 3rd. The hook A, attaching plate B with throat C, in combination with the spring tongue D and rubber plate B^1, said tongue having its free end within the channelled back of the plate, and extended beyond the edge of the throat, and the plate B^1 being secured back of the tongue.

No. 15,340. Improvements on Machines for Driving and Dressing Piles.

(*Perfectionnements aux machines à chasser et dresser les pieux.*)

Andrew L. Gilbert, Albany, and Horace N. Gilbert, Fulton, N. Y., U. S., 22nd August, 1882; for 5 years.

Claim.—1st. In a pile driver, the turn-table, the leaders and the brace-frame adapted to be adjusted with relation to the leaders. 2nd. The combination, with the turn-table C, the leaders D and the brace frame E provided with the pivoted slide blocks *g*, of the inclined ways *h*, whereby a greater inclination of the leaders is obtained by a shorter movement of the blocks. 3rd. The combination, with the turn-table C, the leaders and the brace frame E and the pivoted blocks *g*, of the inclined ways *h* provided with racks *i*, the shaft *l*, the pinion R and means for operating said shaft. 4th. The turn-table C carrrying adjustable pivoted leaders and sustained on a hollow pivot through which the wire rope passes. 5th. The combination of shaft *r*, back gears r^1, shafts *s*, pinions s^1 and racks *t*, with the platform B and car A. 6th. The leaders formed of T-plates a^1 and angle plates b^1. 7th. In a machine for sawing off and tenoning piles, the combination of the adjustable platform, the swinging derrick, the saw-frames carrying vertically and horizontally cutting-saws with mechanism for operating the same. 8th. The combination, with the adjustable platform C and swinging derrick D, of the saw frames E F carrying arbors, saws and operative mechanism, whereby horizontally and vertically cutting saws may be successively brought to cut the piles.

No. 15,341. Improvements in Car Couplings.

(*Perfectionnements aux accouplages des chars.*)

George W. Vunk and Byron E. Huntley, Brockport, N.Y., U.S., 22nd August, 1882: for 5 years.

Claim.—1st. The combination, with the draw-heads B B^1, of the hold pins E E^1 respectively, having the latches *c* and c^1 therein. 2nd. In combination with the draw-heads B B^1, the link pin K having the link L articulating in the eye in the upper end thereof. 3rd. In combination with the draw-heads B B^1, the tilting blocks I I^1 attached to the end of the body or frame of the car. 4th. In combination with the draw-heads B B^1, hold pins, tilting blocks, and a link pin and link.

No. 15,342. Improvements in Steam Valves.

(*Perfectionnements aux soupapes de vapeur*)

Walter S. Phelps, Wortendyke, N. J., U. S., 22nd August, 1882; for 5 years.

Claim.—1st. The grooved follower ring *p*, combined with the compressing rings *m* and packing rings *n* of the piston valve. 2nd. In a piston valve provided with two compression rings *m* and packing rings *n* separated by a follower *p*, the outer rings *m* being fitted to receive steam from the chest, and the inner rings from the cylinder.

No. 15,343. Apparatus and Process for the Manufacture of Bone Black and Ammonia.

(*Appareil et procédé pour fabriquer le noir animal et l'ammoniac.*)

Hamilton Y. Castner and Edwin B. Castner, New York U. S., 22nd August, 1882; for 5 years.

Claim.—1st. In charring the bone, combining air with the volatile portions from the bone, heating the mixed gases and then passing such gases over hot slacked lime, through a cooler and then into intimate contact with acid. 2nd. The manufacture of ammonia feeding the material continuously through a hot cylinder and from the latter into a closed vessel and simultaneously conducting the gases from the cylinder for conversion. 3rd. In charring the material, oxidising the gases by passing the same with air through heated pipes and decomposing the nitrogenous gases and forming ammonia by passing the said gases over hot slacked lime. 4th. In combination with the closed carbonizing cylinder, a closed receptacle T secured detachably to the discharge pipe of the cylinder. 5th. The combination, with the cylinder, its feed and propelling appliances, of a discharge pipe having two or more branches, and a valve e^1. 6th. The combination of a feed device, whereby the bone is introduced continuously into the cylinder, a continuous screw in the cylinder, whereby the bone is carried along the cylinder and discharged, and a pipe *a*, for conveying the gases from the cylinder to the converting apparatus. 7th. The combination, with the carbonizing and lime cylinders, of a pipe *a* having an air inlet and formed into coils arranged within a heating chamber. 8th. The combination, with the carbonizing and lime cylinders and connecting pipe and heating coil, of an air inlet and an exhauster. 9th. The combination, with the condensing coil *g* of the above bone black and ammonia apparatus, of a tank *i*. 10th. The combination of the carbonizing and lime cylinders, condensing coil, exhaust and converter and appliances whereby the gas from the coil is brought into intimate contact with acidulated fluid.

No. 15,344. Improvements on Steam Boilers.

(*Perfectionnements aux chaudières à vapeur.*)

Patrick Fitzgibbons, Oswego, N. Y., U. S., 22nd August, 1882: for 5 years.

Claim.—1st. A return flue boiler, having at the front end a subjacent fire box communicating with a combustion chamber on the rear end of the boiler by flues extended through the rear portion of the boiler, a smoke box and stack on the front end of the boiler, communicating with the rear combustion chamber by flues extended through the length of the boiler and communicating also with the fire box by flues extended through the forward portion of the boiler directly to the fire box. 2nd. The combination of the boiler B provided with the return flues *f f*, combustion chamber C and smoke box D the furnace F arranged underneath the boiler and extended part way the length thereof and having, at its rear end, a vertical extension projecting into the boiler, the flues A A^1 extended from said extension respectively rearward to the combustion chamber C and forward to the smoke box D, and valve or damper V.

No. 15,345. Improvements in Harrows.

(*Perfectionnements aux herses.*)

Benjamin F. Rix, Homer O. Hitchcock and Peyton Ranney, Kalamazoo, Mich., U.S., 22nd August, 1882: for 5 years.

Claim.—1st. In a cultivating device, having shares operated by coil springs, the combination of the share beams, having the obliquely angled plate, the reversible tooth and curved rod bearing the spring, the upper end of said rod being loosely located in the slot of the tooth. 2nd. In a harrow, the combination of the lower beam and its casting, the perforated upper beam, the hinging bolt and the hinged tooth.

No. 15,346. Improvements on Balances.

(*Perfectionnements aux balances.*)

Frederick A. Roeder and Alfred Springer, Cincinnati, Ohio, U. S., 22nd August, 1882; for 5 years.

Claim.—1st. In a scale beam, having its fulcrum support and terminal pendent connections, formed of stretched metallic wires acting tortionally. 2nd. The frame B constructed of diagonal cross braces, and a wire stretched between and around the ends of the braces and constituting one or more of the peripheral sides of a rectangular frame said side or sides, being utilized as a tortional pivot for a scale beam. 3rd. In combination with the scale beam A, the frames B having diagonal braces holding wire in tension, used as the terminal supports for the scale pendants. 4th. In a tortional pivot balance one or more auxiliary scale beams pivoted in the same vertical plane, with the main beam and connected therewith through the terminal pivot frames. 5th. In a tortional pivot balance, the combination of the main and auxiliary beams A A^1 and central and terminal pivot frames B B^1. 6th. In a tortional pivot balance, the frame B B^1 as constructed, each consisting of a wire stretched around the extremities of two cross-bars diagonally arranged. 7th. The shaft F provided with eccentric cams *g*, in combination with the springs E as a motion arrester for balances. 8th. In a platform scale the bifurcated levers $L L^2$ supported upon stretched wire pivots and connected by a suspended link B3 secur-