

adapted to be secured stationary within said seat, and having its edges beveled to fit the said seat, and provided with a series of circumferential notches or openings in its periphery for the escape of the air that may be injected through the bottom of the grate bar, substantially as set forth. 2nd. In a furnace of the class described, the caps seated in suitable openings in the furnace bed or grate bars, and having notches or openings for the passage of air, the said cap seats being provided with guards to prevent ashes and the like from passing through the openings under the caps, substantially as and for the purpose set forth. 3rd. In a furnace of the class described, the combination of the furnace bed or grate bars having openings provided with circumferential recesses, the caps having flanges fitted to said recesses and provided with notches or openings for the passage of air, and ribs or grooves to prevent ashes and the like from sifting through the openings under the caps, substantially as set forth. 4th. In a furnace of the class described, a cap composed of a series of concentric rings and a centre piece, being provided with notches or openings for the passage of air, substantially as set forth. 5th. In a furnace of the class described, the combination, with the flat furnace bed of blast and draft grate bars, of the angle or corner blast grate bars located at opposite sides of said bed and next to the side walls of the furnace, said angle or corner grates having inclined sides raised above the level of the flat grate surface and provided with blast openings in such inclined sides to direct the blast away from the walls of the furnace and toward the centre of the same, substantially as set forth.

#### No. 39,038. Table. (Table.)

Edwin Hinkell, Frank Ernest Woller and Emil Claussen, Milwaukee, Wisconsin, U. S. A., 1st June, 1892; 5 years.

*Claim.*—1st. A table comprising a series of legs, screw threaded lugs extending inward from the legs, a brace piece having slotted flanges engaging the lugs, nuts on these lugs in opposition to the brace piece flanges, and a top secured to the upper ends of said legs, substantially as set forth. 2nd. A table comprising a series of legs, screw threaded lugs extending inward from the legs, horizontal supports also extending inward from said legs, a brace piece having slotted flanges engaging the lugs, nuts on these lugs in opposition to the brace piece flanges, a shelf arranged on said supports, and a top secured to the upper ends of said legs, substantially as set forth. 3rd. A table comprising a series of incurved cast metal legs, bolts having portions thereof imbedded in the legs, a brace piece having slotted flanges engaging the bolts, nuts on these bolts in opposition to the brace piece flanges, and a top secured to the upper ends of said legs, substantially as set forth. 4th. A table comprising a series of incurved cast metal legs provided with inwardly extended horizontal supports, suitable means for bracing the legs, a shelf arranged on said supports and having slots engaging the adjacent legs, and a top secured to the upper ends of said legs, substantially as set forth.

#### No. 39,039. Combined Gaining and Sawing Machine.

(Machine à mortaiser et à scier combinées.)

Joseph Frank Birkenfeld, Collingwood, Ohio, U. S. A., 1st June, 1892; 5 years.

*Claim.*—1st. In a machine for gaining ties on opposite sides simultaneously, the combination with two shafts located in the same vertical plane and adapted to rotate in opposite directions, of one or more cutter heads mounted on the respective shafts, said cutter heads being provided with suitable cutters, the cutters of the cutter heads on one shaft being adapted to gain one side of the tie and the cutters of the cutter heads on the other shaft being adapted to gain the opposite side of the tie, substantially as set forth. 2nd. In a machine for gaining ties on opposite sides simultaneously, the combination with two horizontal shafts located at different elevations, of one or more cutter heads mounted on the respective shafts, said cutter heads being provided with suitable cutters, the cutters of the cutter head or heads on the one shaft being adapted to gain the tie on one side, and the cutters of the cutter head or heads on the other shaft being adapted to gain the opposite side of the tie, and suitable mechanism for feeding the tie between said shafts to and from the cutters, substantially as set forth. 3rd. In a machine for gaining ties on opposite sides, and sawing or trimming them to the desired length and regularity, the combination with two shafts adapted to run in opposite directions, of cutter heads mounted on the respective shafts, said cutter heads having suitable cutters and spurs, a circular saw mounted on one of said shafts at one or either end of the shaft, and feeding mechanism comprising rollers connected by endless chains and dogs secured to said chains, said dogs being adapted to engage the tie and feed the same to and from the sawing and gaining mechanism, the arrangement of parts being such that the gaining and sawing operations are effected simultaneously, substantially as set forth. 4th. In a machine for gaining ties on opposite sides, and sawing or trimming them to the required length and regularity, the combination, with a supporting frame, and two shafts supported by said frame and adapted to run in opposite directions, of cutter heads mounted on the respective shafts, said cutter heads having suitable cutters, a circular saw mounted on one of said shafts at each end of the shaft, and suitable mechanism for feeding the tie to and from the sawing and gaining mechanism, the arrangement of parts being such that

the sawing and gaining operations are effected during one and the same passage of the tie through the machine, substantially as set forth. 5th. In a machine for gaining the ties on opposite sides and sawing or trimming them to the required length and regularity, the combination, with a supporting frame and two shafts supported by said frame and adapted to run in opposite directions, of cutter heads mounted on the respective shafts, said cutter heads having suitable cutters and spurs, the spurs being adapted to act in advance of the cutters, a circular saw mounted on either end of one of the shafts, and suitable feeding mechanism for feeding the ties to and from the gaining and sawing mechanism, the arrangement of parts being such that the gaining and sawing operations are effected simultaneously, substantially as set forth.

#### No. 39,040. Scraping Tool for Soil Working Implements. (Grattoir pour instruments agricoles.)

Richard J. Edwards, Galena, Illinois, U.S.A., 1st June, 1892; 5 years.

*Claim.*—1st. The combination of a soil working implement, a leaf spring *b*, secured thereon and provided with a lug on its free end, and an independent scraper plate *a*, detachably clamped to said implement by said spring, and provided with an opening for the reception of the lug on the free end of the spring, substantially as described. 2nd. In combination, with a soil working implement provided with a spade handle, and carrying on its handle a device for detachably holding a hand scraper, of an independent hand scraper detachably secured to the handle by said device, said scraper consisting of a plate bent at one end to embrace the handle of the implement and flattened at its other end to rest on the flat side of the spade handle, substantially as described. 3rd. The combination, with a hand agricultural implement carrying a device on its handle for detachably holding a scraper, of an independent hand scraper device detachably secured to said implement by said device above the blade of the implement, substantially as described.

#### No. 39,041. Link Motion. (Mécanisme de renversement.)

John Lunz, Claffin, Kansas, U.S.A., 1st June, 1892; 5 years.

*Claim.*—1st. The combination, with the eccentric rods  $B^1$  and  $C^1$ , having the hook members *b* and *c*, and the valve rod and pin  $E^1$  and  $E$ , of the slotted reversing plate *D*, pivotally connected at its ends to the members *b* and *c*, the slot in said plate being enlarged at the ends and contracted at the center, substantially as and for the purpose shown and described. 2nd. The combination, with the eccentric *B* and *C*, the valve rod and pin  $E^1$ ,  $E$ , and the rods  $B^1$  and  $C^1$ , formed with hook members  $b^1$ ,  $c^1$ , of the reversing frame *D*, formed of the slotted plates *d*, *d*, the slots in such plates enlarged at their ends and contracted in the center, said hook members  $b^1$ ,  $c^1$ , pivotally journaled in the ends of said plates, and means for adjusting the slotted frame *D*, on the valve pin, whereby to alternately throw the hooked members in connection with said valve pin, as and for the purpose described.

#### No. 39,042. Coffin Shell Mould.

(Moules pour boîtes de cercueils.)

William John Anthistle, London, Ontario, Canada, 1st June, 1892; 5 years.

*Claim.*—1st. The combination, with the mold flask or exterior shell, of the inner core having sides  $E$ ,  $E^1$ , provided with nuts 6, and connected by rods  $F$ ,  $F^1$ , provided with right and left threads screwing into said nuts, and the extensible ends  $G$ ,  $G^1$ , having side flanges provided with nuts 14, and connected by a rod 13, provided with right and left threads screwing into said nuts, said ends provided with a nut 9, and connected by a rod 8, provided with right and left threads screwing into said nuts, to elongate, widen and contract said core, as set forth. 2nd. The combination, with the shell or flask having a removable bottom *A*, and slotted sides *B*,  $B^1$ , ends *C*,  $C^1$ , having arms 2, said sides and ends connected by keys 4, as set forth, of the inner core having a bottom and sides, the sides having nuts 6, connected by screw rods  $F$ ,  $F^1$ , the ends  $G$ ,  $G^1$ , having flanges telescoping against said sides and bottom, said ends having nuts 9, and connected by a screw rod 8, and said side flanges having nuts 14, connected by a screw rod 13, the lid *M*, fitting upon said shell and core, and the clamps fastening said lid and base or bottom *A*, removably, as set forth. 3rd. The molds for making the cover sections of the coffin shell, said molds comprising a slotted bottom plate 20, having a bead 4, a top plate 22, having side flanges provided with slotted lugs *c*, said lugs passing through the slots in plate 20, and wedges 21, inserted in the slotted lugs, as set forth.

#### No. 39,043. Machine for Testing Eggs.

(Machine pour mirer les oeufs.)

Arthur William Webb, Montreal, Quebec, Canada, 1st June, 1892; 5 years.

*Claim.*—An egg tester, comprising a box of any suitable form and size, having in the top and side thereof openings, and in the interior of the box or dark chamber, a mirror placed at an angle of forty-five (45°) degrees, so that when an egg be placed on end in the opening in the top the light passing through the egg may be reflected by the mirror through the opening in the side of the box, to the eye of the operator, substantially as and for the purpose hereinbefore set forth.