

adjustable rubbing surface cutters, and a conveyor to carry the types through between the cutters and the rubbing surfaces, substantially as specified.

No. 19,564. Pipe Tongs or Wrench.

(*Pinces ou Clé de Tubes.*)

Thomas Patton, Cleveland, Ohio, U. S., 14th June, 1884; 5 years.

Claim.—1st. In a pipe-wrench, the combination of the serrated *a*, *b*, of the cam head with the handle, as described, said part *b* having the projection adapted to fit in the part *a* forming a neck, said parts being separable, as and in the manner described. 2nd. In a pipe-wrench, the combination of the rigid cam, of two separable parts forming a continuous screw-threaded neck when put together, as described, and the socketed handle with the movable pivoted curved jaw, said jaw being serrated and formed with the side checks for holding it in position, as set forth. 3rd. In a pipe-wrench, the handle formed of either a hollow or solid bar provided at one end with a screw-threaded socket, in combination with the parts *a*, *b* joined and forming the screw-threaded neck, as described, and the curved movable jaw pivoted between them, said parts being formed and connected substantially as described. 4th. The combination, in a pipe-wrench, of the side jaws or parts provided with tongue and groove tapering joints, and central serrated piece, the former being adapted to fit a socketed handle, as set forth. 5th. The combination, in a pipe-wrench, of the side jaws tongued and grooved together and increased in thickness to form a space between the jaws, a central gripping jaw pivoted and working in said space, which jaw is enlarged at its serrated end to keep its place on the jaws and to counterbalance the pressure and gripping surface on each side of a pipe, as set forth. 6th. A pipe-wrench, consisting of the central pivoted jaw, the separable side portions of the cam, as described, and handle, the side portions being socketed in the handle, as an article of manufacture.

No. 19,565. Skate. (*Patin.*)

Patrick J. Doherty, Chelsea, Mass., U. S., 14th June, 1884; 5 years.

Claim.—1st. In a skate, in combination with the toe and heel plates, the sliding clamps operated by racks extending lengthwise of the skate and a free cog-wheel, substantially as set forth. 2nd. In a skate fore and heel clamps operated by means of rack-bars, each connected thereto respectively at one end and free at the other, and a cog wheel, whereby said bars have a direct movement lengthwise of the skate, substantially as described. 3rd. In a skate, the combination, with toe plate *A*, pivoted side clamps *D*, rack-bar *e* and cog-wheel *G* of the rack-bar *f*, heel clamps *F*, *F* and plate *B*, substantially as described. 4th. In a skate, sliding heel and fore clamps each having a rack combined with a free cog-wheel, substantially as described. 5th. In a skate, in combination with toe and heel plates *A* and *B*, pivoted side clamps *D*, movable heel clamp *F*, rack-bars *e* and *f* and cog-wheel *G* of the spring pawl *H*, substantially as described.

No. 19,566. Interchangeable Chart Frame.

(*Porte-Chart à Succession Alternative.*)

James E. Hamilton, Two Rivers, Wis., U. S., 14th June, 1884; 5 years.

Claim.—1st. In an interchangeable chart-frame, the combination of the side bars *A*, *A* and top and bottom bars *B*, *B*, forming a skeleton frame, with the transverse supports *D* and the letter or symbol blocks *E*, *E*, the contiguous surface of the parts *D* and *E* being held together by means of horizontal grooves in one of them, receiving the edges of the other both above and below, and each alternate groove being of different depth from the groove immediately above and the groove immediately below it, whereby every block *E* shall be firmly held at its upper and lower edge and yet be capable of removal, interchange or replacement without disturbing the block or either side of it, substantially as set forth. 2nd. In an interchangeable chart-frame, the combination of the skeleton frame *A B B*, the base *C* forming part of the frame and divided into compartments to retain the letter-blocks, the transverse supports *D* and the blocks *E*, *E*, substantially as set forth. 3rd. In an interchangeable chart-frame, the combination of the skeleton frame *A B B* and the transverse supports *D* having rear extended flanges *a* of greater height or depth than their front flanges, and having between said front and rear flanges the shallow grooves *a* and the deeper groove *a* with the letter or symbol blocks *E*, *E*, substantially as set forth.

No. 19,567. Harrow. (*Herse.*)

Enoch J. Rogers, Little Britain, Ont., 14th June, 1884; 5 years.

Claim.—1st. As a means of general enlorkment together of the parts in drag harrows, the tooth driven drawborewisely, as described, through an iron clip block upon the bull made in staple form and upon the cross bars in pairs, which at their intersecting point also pass through the said clip block straddleswise upon and at right angle to the tooth, substantially as and for the purpose set forth. 2nd. The combination of the single malleable iron clip *F*, the tooth *E* and the staple bull *A*, substantially as and for the purpose herein set forth.

No. 19,568. Pencil-Clasp and Pocket-Holder. (*Serre-Crayon et Agrafe.*)

Gustavus A. Schlechter, Reading, Pa., U. S., 14th June, 1884; 5 years.

Claim.—1st. In combination, with an elastic case adapted to receive and adjust itself to pencils of varying diameter, provided with a presser foot spring and an attaching pin, the movable and reversible holder *G* having at one end a pen and at the opposite end an eraser, a hook *J* on said movable holder serving to lock the pin of the case to the material, substantially as shown and for the purpose described. 2nd. The adjustable and reversible holder *G*, as shown, having at one of its ends a receptacle for and provided with an erasure, and at its opposite end provision for, and the insertion of a writing pen *K* with a pencil sharpener *Q* within the pen pocket *P*, a hook *J*

and an interlocking bead *I*, in combination with an elastic pencil case clasp pin *F*, slot *C* and bead *D*, substantially as and for the purpose set forth.

No. 19,569. Car Door. (*Porte de Char.*)

Thomas Lee, Cincinnati, Ohio, U. S., 14th May, 1884; 5 years.

Claim.—1st. A plain car-door frame, having along the floor an angled groove or recess *H* to receive the flange of the door, said groove having holes *I* through the floor, substantially as herein set forth. 2nd. The floor of the car-door opening, having the angled groove *H*, in combination with the door *D* having the projecting or flanged ends *J*, *K* to enter the grooved floor, substantially as herein set forth. 3rd. The combination of the car-door opening having the angled groove *E* into floor, and the vertical bars or rods *L* on the sides, with the door *D* having the staples or eyes *M* and the flanged lower end, substantially as herein set forth.

No. 19,570. Fruit Evaporator.

(*Séchoir à Fruits.*)

George L. Grier, Milford Del., U. S., 14th June, 1884; 5 years.

Claim.—1st. The combination of the lifting bar *B*, *B*, *B*, arranged in four pairs and provided with lifting pawls, the two rock shafts *C*, *C*, with arms *c*, *c* connected to the oppositely moving bars, the cranks *H*, *H*, the links *I* and lever *J*, as and for the purpose described. 2nd. The combination, with the evaporator case, of the bars *L*, *L*, the screen *J* and the longitudinally adjustable crank shaft *K* attached to, and operating the screen, as and for the purpose described. 3rd. The combination, with the case of fruit evaporator, of a screen or damper arranged at the bottom thereof and between it, and the heater, the said screen having an integral adjustment back or forth and to each side of the central position, as described. 4th. The combination, with a fruit evaporator case and sets of reversely working pawls, of a skeleton frame of the same dimensions as the interior of the case, and trays of smaller size resting thereon, as described. 5th. The combination of the rock shafts and their arms, of the point bolts having eyes and the vertically-reciprocating bars extended through said eyes and secured adjustably therein by nuts, as described.

No. 19,571. Ticket Punch.

(*Emporte-Pièce pour Billets.*)

Carl J. A. Sjöberg, Bridgeport, Ct., U. S., 14th June, 1884; 5 years.

Claim.—1st. The combination, in a ticket punch, of two levers *A* pivoted together, the lever *B* terminating in two arms, one carrying a punch and the other having an opening below the punch, and the lever *A* terminating in an arm extended over the punch, substantially as set forth. 2nd. The combination, in a punch, of the levers *A*, *B* having arms *b*, *c*, *f*, the arms *b* and *c* forming part of one of the levers, and a punch *C* sliding in the end of the arm *c*, substantially as set forth. 3rd. A ticket punch, in which one of the levers is provided with two arms one of which is perforated to receive the end of the punch pin while the other has a terminal head adapted to receive said pin, substantially as specified. 4th. A ticket punch, in which the punch pin is guided in a head, in an arm overhanging the portion having the opening for the reception of the end of the punch pin, the said head constituting a gauge, substantially as specified. 5th. The combination, in a punch, of a lever *B* having terminal arms *c*, *b*, the arm *c* provided with a head receiving the punch pin, and a lever *A* having an arm extended over the end of the punch pin, a id a spring connected to elevate the punch pin, substantially as set forth.

No. 19,572. Cash and Parcel Carrier.

(*Transport pour la Monnaie et les Paquets.*)

James Burns, Chicago, Ill., U. S., 14th June, 1884; 5 years.

Claim.—1st. The combination of the track wires *W*, *W*, and means for giving them proper tension, elevating slide *S* having the fingers *S*, *S*, guide wires *x*, *x*, cord *m* and pulley *i*, carrier *a* having a cash receptacle wheels *e* and hook *c* arresting and delivering slide *F* having the arm *D*, cord *n*, weight *z* and pulley *z*, all adapted to operate, as and for the purpose hereinbefore set forth. 2nd. In the cash and parcel carrier described, the combination of the track wire *W*, slide *F* having the arm *D*, guide wires *X*, *X*, cord *n*, weight *z* and carrier *a* having the wheels *e* and hook *c*, all adapted to operate as and for the purpose hereinbefore set forth. 3rd. In the cash and parcel carrier described, the combination of the wire *W*, slides *S* having the fingers *S*, *S*, guide wires *x*, *x*, cord *m* and carrier *a* having the grooved wheel *e* and hook *c*, all adapted to operate as and for the purpose hereinbefore set forth. 4th. In the cash and parcel carrier described, the combination of the track wire *W* having the enlargement *E*, carrier *a* having the parcel hook *h*, catch basket *B* having the slotted bottom *B*, bail *d*, guide bars *d*, *d*, cross bar *d* and cord *d*, pulleys *z*, *z* and weight *z*, all adapted to operate as and for the purpose hereinbefore set forth. 5th. In the cash and parcel carrier described, the combination of the track wires *W*, roller shaft *R*, levers *R*, the frame *R* and sliding bars *R*, all adapted to operate as and for the purpose hereinbefore set forth. 6th. In the cash and parcel carrier described, the combination of the track wire *W*, arresting and delivery slide *F* having the switch arm *D* and arm *D*, guide wires *x*, *x*, cord *n*, weight *z* and cross bar *D*, *D*, all adapted to operate, as and for the purpose hereinbefore set forth. 7th. In the cash and parcel carrier described, the flat track wire having the branches *W* and *W*, switches *W*, *W*, as and for the purpose hereinbefore set forth. 8th. In the cash and parcel carrier described, the basket *B* having the slot *B*, as and for the purpose hereinbefore set forth.

No. 19,573. Apparatus for Amalgamating and otherwise Treating Ores. (*Appareil pour Amalgamer et autrement Traiter les Minerais.*)

Elias Bollinger, Louisville, Md., U. S., 14th June, 1884; 5 years.