

having the brush corn B, secured integrally by cement in a single cavity, in a wooden head A, constituting the exterior upper portion of the broom or whisk.

**No. 12,389. Improvements on Ore Feeders for Stamp Mills.** (*Perfectionnements aux alimentateurs de minerais pour les moulins à pilons.*)

Isaac R. Hammond, Deadwood, Dakota, U. S., 21st February, 1881; for 5 years.

*Claim.*—1st. The combination, with band G on cylinder C, of the vibratory w-ighted clutch block H having pins h, and a slot in which the shoulder pin works.

**No. 12,390. Improvements on Reflecting Ovens.** (*Perfectionnements aux fourneaux à réflexion.*)

William A. Austin, Gloucester, Ont., 21st February, 1881; for 5 years.

*Claim.*—1st. In a reflecting baker, the pan holder C having bars across its bottom, and provided with reflectors A, having support E and provided with hinges F, and wing reflectors B having catches H and rain board D, the whole made to fold up in the form of a book.

**No. 12,391. Apparatus for Cultivating Land by Steam Power.** (*Appareil d'agriculture à vapeur.*)

Richard P. Parsons, Elsworth, Eng., 21st February, 1881; for 5 years.

*Claim.*—1st. The arrangement of mechanism, whereby a to and fro traverse motion may be imparted by a single stationary engine to a travelling carriage attached to, or fitted as a cultivator. 2nd. The combination, in a travelling carriage or cultivator to which a traverse motion is imparted by the pull on a rope from a single engine, of the drum g, clutches g, clutch levers g and travel ling wheels b b. 3rd. In a travelling carriage or cultivator to which motion is imparted by the rotation of a drum round which is passed a rope from a single engine, the combination of the head flanged steering wheels c, turn plates d, chain wheels a, chain shafts d, worms d, worm wheels d, shafts d, hand wheels a and coupling rod d.

**No. 12,392. Improvements on Telephones.** (*Perfectionnements aux téléphones.*)

Anderson Willard, Grand Rapids, Mich., U. S., 21st February, 1881; for 5 years.

*Claim.*—1st. The combination of a mouth and ear piece with a telephonic diaphragm bearing at all points, except its central portion, against the base of said mouth and ear piece. 2nd. In combination, with a diaphragm and a transmitting wire, a mouth and ear piece having a chamber or passage a, for the application of the mouth or ear, and another passage or chamber a, of straight sided conic frustum form, next outside of said diaphragm. 3rd. A telephonic diaphragm consisting of two disks of wood arranged parallel to each other, and secured together, so as to vibrate in unison. 4th. A telephonic diaphragm consisting of two disks of wood arranged parallel to each other, with their grains crossing and secured together, so as to vibrate in unison. 5th. In combination, with a transmitting wire, a spring-hanger or a series of spring-hangers, or tension devices, each drawing on the wire at two points.

**No. 12,393. Refrigerator.** (*Garde-manger.*)

Edward S. Piper, Toronto, Ont., 21st February, 1881; (Extension of Patent No 5,733.)

**No. 12,394. Improvements on Heating Boilers.** (*Perfectionnements aux chaudières de chauffage.*)

Urie Beaupré, Montreal, Que., 21st February, 1881; for 5 years.

*Claim.*—1st. The combination of the quadrangular and horizontal sections B C D, transverse tubes d d, the openings o o, the bolts p, fire bars b, doors S T and a, inlet b, outlet d and smoke collar R.

**No. 12,395. Improvements on Washing Machines** (*Perfectionnements aux machines à laver.*)

Gideon Huntington, Toronto, Ont., 21st February, 1881; for 5 years.

*Claim.*—1st. The combination of the wood and metallic boiler A B, the partition C, tube D and gate L; also the partition C, tube D and gate L, when used in a metallic boiler. 2nd. In combination, with a cylinder, the spring lid or cover a, partitions F or F', wire coils and supporting ribs or flanges H, wire coils G G, the crank I, pulleys J J, with belt or cord H, and the arrangement of cog gear M M N and worked by crank O.

**No. 12,396. Improvements on Lifting and Force Pumps.** (*Perfectionnements aux pompes élévatoires et foulantes.*)

Emory Barnes, Mount Pleasant, Mich., U. S., 21st February, 1881; for 5 years.

*Claim.*—1st. The double valve B, sleeved upon the piston rod operating within the valve, and water chamber formed by the cylinder G, and alternately seating itself at the top and bottom thereof. 2nd. The barrel A, double valve B, piston rod C, hollow piston D, valve F, cylinder G, outlet pipe H, shell I, valve J, spider H, cylinder L, valve M, hollow piston N, and pitman connection O, when the parts are constructed and combined to operate as described.

**No. 12,397. Improvements on Buttons.** (*Perfectionnements aux boutons.*)

Leonard W. Simonds, Berlin, Ont., 21st February, 1881; for 5 years.

*Claim.*—1st. A button having a circular inclined groove B, and inserted

hollow conical shank C, with slots E E, and prongs D D integral with the shank. 2nd. A button having a shank with slotted cone portion C, compressed in an annular groove B, and held by the expansion of the cone in the groove. 3rd. A button composed of head A with groove B, and shank C with prongs D D, the shank and prongs formed integrally.

**No. 12,398. Improvements on Burglar Alarms.** (*Perfectionnements aux alarmes-voleurs.*)

Albert F. R. Arndt, Detroit, Mich., U. S., 21st February, 1881; for 5 years.

*Claim.*—1st. An open backed shell provided with a thumb screw and spur, a nipple, a hammer, a spring and a detent. 2nd. A shell nipple hammer, spring and detent, said detent being reversible. 3rd. A shell, nipple, hammer, spring and detent in which the shell is provided with a spur b, thumb-screw c and bar d. 4th. A shell, nipple, hammer, spring and detent, said nipple being removable.

**No. 12,399. Improvement in Skates.** (*Perfectionnements dans les patins.*)

James A. Whelpley, Greenwich, N. B., and Valentine Graves, Boston, Mass., U. S., 21st February, 1881; for 5 years.

*Claim.*—1st. The eccentric lever arranged with the heel rest, and over and connected with the furcated slide, such slide being adapted to the slotted rest plate and jaw carriers and such eccentric lever being to operate against the heel of a shoe or boot. 2nd. The spring latch arranged and combined with the eccentric lever and the perforated and furcated slide, the said lever being arranged in front of the heel plate, and the slide being adapted to the slotted rest plate and jaw carrier. 3rd. The combination of the eccentric lever and the furcated slide, with stationary heel rest, the slotted rest plate and the slotted and pivoted jaw carriers, and being adapted and arranged in the manner set forth. 4th. The combination of the spring latch with the perforated furcated slide, the eccentric lever, stationary heel rest, slotted rest plate and the jaw carriers all being arranged and applied relatively to each other, and the runner, and to operate as set forth. 5th. The jaw carriers pivoted to the runner and supported on the rest plate, and serving to directly sustain the boot sole, when in place on them. 6th. Each jaw carrier and its jaw formed from one plate or piece of metal in the manner represented. 7th. Each jaw carrier pivoted to the runner and supported on the rest plate, and provided with one or more studs or projections to extend down from it, the said jaw carrier, and abut against the rear edge of the said rest plate. 8th. The slotted rest plate provided with the recess S arranged with one of the slots of such plate, in combination with the furcated slide, having hooked turned down parts g, t, enter the slots of the plate and catch on such plate. 9th. The stationary heel rests provided with T—projection t, in combination with the furcated slide provided with the slot h and adapted to the jaw carriers and their back rests.

**No. 12,400. Improvements on Platform Tire Coolers.** (*Perfectionnements aux rafraîchisseurs-plateformes pour les bandages des roues.*)

Manuel Jasper and William H. Hoover, Walkerton, Ont., 21st February, 1881; for 5 years.

*Claim.*—1st. A wooden box A with a partition B, for the purpose of keeping water Y, a lever M acting on partition B, from iron straps O to centre block F, in water Y. 2nd. A lever N, hinged on cover D, with the iron straps O, united by bolt to lever M, a slight pressure on the outer end of lever N forces plunger E, with cast iron plate H, in water Y, ruled by iron slides J in a level balanced position, cooling wheel and tire quickly and equally around without waste of water.

**No. 12,401. Improvements on Tongue (Pole) Supporters for Vehicles.** (*Perfectionnements aux supports des limons des voitures.*)

Oliver Hebert, Oswego, Ill., U. S., 24th February, 1881; for 5 years.

*Claim.*—1st. A vehicle tongue or thill supporter, consisting of a suspended supporting bar, its rear end resting on the under side of the front axle, and its front end sliding in a groove plate secured to the tongue or thill. 2nd. The sliding supporting bar for a vehicle tongue or thill having the forked rear end d to engage the kingbolt, and sliding front bearing p to engage a catch plate g on the tongue, in combination with the loose collar d, suspended from the pivot bolt of the tongue by hangers e and springs s. 3rd. In a vehicle tongue or thill supporter, the combination of the sliding supporting bar E, having metallic plated and sliding front bearing p, grooved catch-plate g provided with latch O, and loose collar d, suspended from the pivot bolt of the tongue.

**No. 12,402. Improvements in Proof Staves.** (*Perfectionnements aux règles d'épreuve.*)

Samuel C. Bogart and Joseph H. Milton, Chatham, Ont., 21st February, 1881; for 5 years.

*Claim.*—1st. The staff A, of any suitable material, handles C and levels B combined, and to be used as a proof staff for millstones.

**No. 12,403. Improvements in the Manufacture of Cigars.** (*Perfectionnements dans la fabrication des cigares.*)

Isaac Kaufmann, Montreal, Que., 24th February, 1881; for 5 years.

*Claim.*—1st. As a new article of manufacture, a cigar made with a filling of fine cut tobacco, and a wrapper without a binder. 2nd. The improved art or process of manufacturing cigars by rolling fine cut tobacco, putting a wrapper round such roll and pressing it in a cigar mould, when withdrawn removing temporary wrapper and putting on ordinary cigar wrapper.