

d'enlever le rateau avec le pied par le levier B B, la poulie D, le support E, le boulon F et le crochet G.

**No. 12,527. Stove Base Plate.** (*Plaque inférieure de poêle.*)

John W. Elliott, Toronto, Ont., 21st March, 1881; (Extension of Patent No. 5,882.)

**No. 12,528. Improvements on Spring Tooth Harrows.** (*Perfectionnements aux herbes à dents élastiques.*)

James B. Crosby, (Assignee of Samuel C. Cobb,) Janesville, Wis., U. S., 21st March, 1881; for 5 years.

*Claim.*—1st. In tooth bars hinged or pivoted to the frame so as to be adjustable, in combination with elastic teeth attached to the bars by devices which permit them to be adjusted thereon, and which secure them rigidly in any position to which they may be adjusted, whereby the teeth may be either adjusted independently on their respective bars, or in a series by adjusting said bars themselves. 2nd. The inclined tooth bars A, adjustable axially in bearings as described, in combination with curved elastic teeth attached to said bars and arranged at an angle to the axis thereof. 3rd. The inclined tooth bars, in combination with a series of elastic teeth, arranged thereon at an angle to the axis of the bars, and adjustable angularly on their seats. 4th. In combination with the tooth bar set at an angle, the bracket G set at an angle to the axis of said tooth bar, the longitudinally adjustable elastic tooth, and the stop *g*. 5th. The combination, with adjustable tooth bars, of a bracket secured to the upper side of the tooth bar having a concave face, to receive a circular elastic tooth, said tooth having openings to permit of its adjustment by a bolt passing through such tooth and bracket, and securing both to the tooth bar. 6th. In combination with the inclined tooth bars working in bearings in cross bars, as described and secured together in pairs, so as to be independently adjustable, the curved teeth set at an angle to the axis of such tooth bars, a bracket for holding such teeth, and means for longitudinally adjusting the teeth upon such bracket. 7th. A tooth bar A, in combination with a bracket provided with a circular seat to receive the tooth, and elastic tooth curved or coiled at its upper end to fit the bracket seat around which it may be moved, and a fastening device for rigidly securing the tooth in any position to which it may be adjusted, whereby the tooth may be readily adjusted in the direction of its length by turning it around its seat and fixed in its adjustment. 8th. The tooth bar, in combination with a flat elastic tooth F coiled at its upper end, the bracket G<sub>2</sub> mounted on the bar and provided with a convex seat *g*<sub>2</sub> for the tooth, having a longitudinal slot *i* therein and a fastening bolt *h*<sub>2</sub>, whereby the tooth may be adjusted by turning it around its seat and secured in its adjusted position. 9th. The tooth bracket G<sub>2</sub> provided with a circular seat *g*<sub>3</sub> having serrations *g*<sub>3</sub> on its opposite side and a longitudinal slot *i* therein, in combination with the fastening bolt *h*<sub>2</sub> and a washer *r* having a convex serrated face fitting the serrated surface of the bracket. 10th. The tooth bar A, in combination with the curved elastic tooth F provided with a hook *f* at its upper end, the plate M having transverse slots *m* and a fastening hook or staple *h*<sub>3</sub>.

**No. 12,529. Method of, and Apparatus for Manufacturing and Purifying Gas for Preserving Purposes.** (*Méthode et appareil pour produire et épurer le gaz pour la conservation alimentaire.*)

Charles F. Lawton, Arthur W. Lawton and Albert L. Lawton, Rochester, N. Y., U. S., 23rd March, 1881; for 5 years.

*Claim.*—1st. The method of generating and purifying mixed carbonic oxide and nitrogen gases, which consists in first subjecting hard coal, coke or charcoal to fire in a closed retort, and blowing air therein from a bellows, then passing the generated gases through a purifier packet with coarse material, through which passes water in fine streams for the purpose of washing the gases, then passing them through a second purifier having a solution of caustic lime, ferrio-proto-sulphate, sulphite or bisulphite of lime or soda, for the purpose of removing any carbonic acid sulphuretted and phosphoretted hydrogen, and any free or loosely combined oxygen from the gases, then passing them through a third purifier filled with coarse material, through which passes sulphuric acid for the purpose of removing ammonia and weak ammonia compounds, and finally passing them through a fourth purifier filled with dry calcined asbestos and magnesia, or magnesia and bone black, for the purpose of neutralizing acid vapours, absorbing odours and filtering the gases. 2nd. As a step in the purification of mixed carbonic oxide and nitrogen gases, the subjecting of the gases, in their passage to a solution of caustic lime, ferrio-proto-sulphate and sulphite or bisulphite of lime or soda, for the purpose of removing carbonic acid, sulphuretted or phosphoretted hydrogen and oxygen. 3rd. As a step in the purification of mixed carbonic oxide and nitrogen gases, the subjecting of the gases in their passage to a compound of dry calcined asbestos and magnesia, or magnesia and bone black, for the purpose of neutralizing acid vapours absorbing odours and filtering the gases. 4th. In an apparatus for generating and purifying carbonic oxide and nitrogen gases, the retort A inclosed or incased in a gas tight casing C having a dome over the retort, and with an exterior casing C, the spaces between the retort and inner casing, and between the inner and outer casing being packed with non-conducting packing. 5th. The combination, with the closed purifying case G, of the bent induction pipe *g* and the bent eduction pipe *h*, respectively at top and bottom, said pipes allowing automatic entrance and exit of the liquid and serving as traps to prevent escape of the gas from the purifier. 6th. The combination, with the purifying receptacle H of the revolving brush I revolving within the receptacle and provided with spines or paddles for the purpose of raising the liquid and presenting the same to the contact of the gas, as it passes through the receptacle. 7th. The combination, with the waste pipe E and the gas pipe F, of the valve *f* covered with asbestos paper and capable of being shifted from one pipe to the other to cover either exit.

**No. 12,530. Apparatus for Transmitting Motion.** (*Appareil de transmission du mouvement.*)

Stephen Dennis and Antonio Samper, Paris, France, 23rd March, 1881; for 5 years.

*Claim.*—1st. The mode of winding the bands or ropes over the guide rollers. 2nd. The mode of winding the bands or ropes with four guide rollers. 3rd. The mode of transmitting motion from a horizontal to a vertical shaft by means of an endless chain, rope, or band. 4th. The mode of guiding the bands or chains wound in close coils, by means of single guide rollers acting laterally on the cord, which is tangential to their circumference. 5th. The mode of guiding the bands or chains wound in open or separate coils, by means of loose tubes or rollers. 6th. The mode of winding in close coils and of guiding a band or rope having its ends free (for raising or lowering loads and other purposes). 7th. The employment, for the transmission of motion by endless chains or ropes, of cylindrical and conical drums. 8th. The arrangement of screw tension device acting on the guide rollers. 9th. The arrangement of screw tension pulley for bands or ropes wound in close coils.

**No. 12,531. Improvements on Bottle Stoppers.** (*Perfectionnements aux bouchons des bouteilles.*)

Charles G. Hutchinson, Chicago, Ill., U. S., 23rd March, 1881; for 5 years.

*Claim.*—In the flat or disk-shaped valve B, the laterally elongated eye E, and the centrally contracted spring loop F having an open lower end and upper and lower enlargements, both adapted to enter the neck of a bottle, and both lower ends of the wire of the said loop having therein eyes or openings for freely receiving and suspending the cross bar of the eye E, all combined and constituting an internal bottle stopper adapted to be held in its open and closed positions alternately by means of the said loop.

**No. 12,532. Improvements on Rail Joint Fish Plates and Nut Locks Combined.** (*Perfectionnements aux éclisses des joints des rails et arrête-noix combinés.*)

Peter McGregor and Alexander McLean, Ottawa, Ont., 23rd March, 1881; for 5 years.

*Claim.*—In combination with the rails A, fish plate B, bolts C and nuts D, the fish plate B; having longitudinal slotted bolt holes, and recesses F or projections H to stop against a side of the nut, when the plate is moved endwise, for locking the nut simultaneously.

**No. 12,533. Improvements in the Method of Ornamenting Furs.** (*Perfectionnements dans la méthode d'orner les fourrures.*)

Lucinus Havasy, New York, U. S., 23rd March, 1881; for 5 years.

*Claim.*—1st. In attaching the stems of feathers directly to the pelt and allowing the feathered tips to project over the surfaces of the fur. 2nd. As a new article of manufacture in furs ornamented, as described, by attaching the stems of feathers to the pelt of the fur, and allowing the feather tips to project over the surface of the fur.

**No. 12,534. Improvements on Coffins.** (*Perfectionnements aux cercueils.*)

John L. Wood, Maitland, Ont., 23rd March, 1881; for 5 years.

*Claim.*—1st. A pottery coffin, or burial casket composed of pulverized granite and clay tempered, moulded and baked. 2nd. In combination, with the pottery coffin or burial casket, of the metallic sectional band E for the attachment of handles F and securing the cover B by the jointed connection of the sections, provided with sleeves or shields G.

**No. 12,535. Improvements on Spark-Arresters.** (*Perfectionnements aux arrête-flammèches.*)

Rufus S. Craig and Greenleaf G. Wyman, Dover Plains, N. Y., U. S., 23rd March, 1881; for 5 years.

*Claim.*—1st. The combination of a blast pipe C consisting of a series of short pipes or cutters, increasing in diameter toward the top and having an intervening space between them, with the tube E made of wire netting, perforated sheet metal or sectional cones. 3rd. The combination of a blast pipe C and wire netting or perforated sheet metal tube E, extending from the exhaust tips to the top of the stack if desired, with a vertical series of cutters arranged on the outside of the tube E. 3rd. The combination of a blast pipe C and tube E with a series of cutters, reducing pipe D and exhaust tips *a*. 4th. The combination of a blast C wire netting or perforated sheet metal E, rings and exhaust tips *a* with the adjustable pipes *c* et. 5th. The combination of a blast pipe C consisting of a series of short pipes or cutters extending nearly the entire distance to the top of the smoke stack. 6th. In a spark arrester and pulverizer the tube E extending from the exhaust tips to the top of the stack if desired, and provided with perforations and ring cutters, having roughened surfaces, secured on the outside of the pipe. 7th. The detachable rings *o* or *l* provided with cutting edges and arranged on the outside of the tube E, or between the blast pipe and tube E or smoke stack, in combination with perforations *f*. 8th. The wire netting ring *p*, in combination with the projections *q* and perforations *f* in the tube E extending from the exhaust tips to the top of the stack if desired. 9th. In combination with the spark arrester and pulverizer, the plate F. 10th. The spark arrester, consisting of the lift pipe *c* in combination with the pipe E having perforations *f* and projections *o*, rings *o* or *l*, wire netting *p* and cutters *a*, and extending from the exhaust tips to the top of the stack, if desired.

**No. 12,536. Improvements on Car Unloaders.** (*Perfectionnements aux décharge-chars.*)

George P. Merrill, George G. Hadley, Frank W. Stewart and Brooks W. Gossage, Toledo, Ohio, U. S., 23rd March, 1881; for 5 years.

*Claim.*—1st. A device constructed as described, whereby the gravel, dirt or other material upon the platform of the car is discharged from one side only thereof, by the movement of the device along and over the platform. 2nd. A device for unloading cars having anti-friction rollers connected to the side thereof and adapted to bear against a rail connected to the platform of the car. 3rd. A device for unloading cars having anti-friction rollers connected to side thereof, and vertically adjustable rollers, for raising the device off the platform of the