

tube, continuing such high pressure supply until the oil, in the bottom of the well and rock surrounding the same, is forced outward to and up the wells, surrounding that in which the tube is, substantially as and for the purpose set forth. 3rd. The herein-described method of extracting oil from oil-bearing rock or land, and forcing the same into wells in position for being withdrawn therefrom, consisting in injecting compressed air, gas or oil through a suitable tube to said oil bearing rock, and forcing the fluid therein outward to the surrounding wells. 4th. The apparatus, herein described, for supplying compressed air, gas or fluids to oil-bearing rock or earth, consisting of a tube provided with an ordinary packer and anchored in position within a well, and an upwardly moving valve or valves hinged to said tube, for the purpose of holding the same in position within the well against the upward pressure of compressed air, substantially as and for the purpose set forth. 5th. The tube for oil wells, herein described, consisting of a tube A having a ring or band F rigidly secured thereto, and a valve or valves hinged to said ring, substantially as and for the purpose set forth.

### No. 21,221. Steam Generator.

(Appareil Vaporifère.)

Clarence E. Safford, Lancaster, N.Y., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. In a steam generator, a section B composed of an overhanging body B<sub>1</sub>, a downwardly-extending leg B<sub>2</sub> and upright enlargement f, f<sub>2</sub> and g, with passage f<sup>1</sup> above the enlargements f<sub>2</sub>, and passages g<sup>1</sup> below the enlargements g, and intermediate flame passages f<sup>1</sup>, h extending through the sections, substantially as set forth. 2nd. In a steam generator, a section B composed of an overhanging body B<sub>1</sub>, downwardly-extending leg B<sub>2</sub>, upright enlargement f, f<sub>2</sub>, g, and intermediate flame passages f<sup>1</sup>, h, substantially as set forth. 3rd. The combination, with the intermediate sections B, provided with upright enlargements f<sub>2</sub>, g, front and rear sections C and D, constructed on their inner sides with similar enlargements f<sub>2</sub>, g, hollow lugs J formed on the several sections, and connecting pipe z and k, substantially as set forth. 4th. The combination, with the sections B, having their tops b, constructed to rest closely against each other, and having receding inner faces b<sup>1</sup> and sides b<sub>2</sub>, forming flame passages of the projecting enlargements f<sub>2</sub>, g, formed on the sides of the sections, front and rear sections C and D and enclosing case A, substantially as set forth. 5th. In a steam generator, a section B provided, along its outer edge, with an enlargement g, having a recess m near its upper ends, substantially as set forth. 6th. The combination, with the casing A and the section B having enlargements g, provided with recesses m, of the tubes n extending from said recesses outwardly through the casing, and provided with removable covers, substantially as set forth.

### No. 21,222. Card Rack. (Appareil de Publicité.)

John N. Akarman, Somerville, Mass., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. An improved card rack, consisting of a set of tubes or bars, slitted longitudinally on their opposing faces, in combination with braces connecting the two and permitting a cord to be slid from the ends of the tubes centrally, between said braces, without detaching said tubes from the braces, substantially as described. 2nd. The combination of the pair of tubes or bars slitted longitudinally in their opposing faces, in combination with means for attaching said tube or bars to their support, and means permitting a card to be inserted into the ends of the slit and slid to the point desired, without removal of said tubes or bars, and means for preventing the card from becoming accidentally detached from said supports, substantially as described. 3rd. The combination of the slitted tubes or bars, provided with perforations a<sup>1</sup>, a<sup>2</sup>, of different diameters, and the cross braces c, whereby cards may be inserted in said slits at the ends of the tubes, and slid centrally to any point desired, without removal of said tubes or bars, substantially as described. 4th. In combination with the slitted bars or pipes a, a, the metal holder b<sup>1</sup> having lips b<sub>1</sub>, b<sub>2</sub>, for receiving the card b and to hold it in proper position, when the said holder and card are inserted in the said slitted bars or pipes, in a manner and for the purpose described.

### No. 21,223. Bias Tape, and Process for Making the Same. (Ruban Biass et Procédé pour le Fabriquer.)

Charles H. Farmer, Boston, Mass., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. As a new article of manufacture, bias tape, put up in sticks or rolls, and formed of uniform width in continuous lengths of fabrics, with a succession of pliable oblique and parallel joints having perfectly matched out edges without projecting threads, substantially as set forth. 2nd. The improved process of making continuous bias tape, consisting of cutting the fabric at an angle of about forty-five degrees to its warp and filling, cementing together the selvages of the successive pieces to form a continuous band, winding said band upon a cote, or pasteboard, or equivalent material susceptible of being cut with the fabric into strips, and cutting the band and its core lengthwise of said band into strips of the required width, substantially as set forth.

### No. 21,224. Belt-Tightener.

(Appareil pour Tendre les Courroies.)

John T. Fertig, Denver, Col., U.S., 9th March, 1885; 5 years.

*Claim.*—The combination, in a belt-tightener, of the sliding block A, with the slot b, the pawl l, the sliding block A<sup>1</sup> with the plates a<sub>2</sub>, the eccentric rollers C, C, covered with sand paper or other suitable material, to increase the friction when in contact with the belt, the cog-wheels h, h, the pawls t, t, the guide rods B, B, the shaft J and crank m, substantially as described, herein and for the purpose set forth.

### No. 21,225. Automatic Grain Shoveller. (Appareil Automatique pour Pelleter les Grains.)

Jesse B. Pugh, Indianapolis, Ind., U.S., 9th March, 1885; 5 years.

*Claim.*—1st. The combination, in an automatic grain shoveller, of a shaft d, d, to which ratchet-teeth o and head b with rim p are attached, and a cylinder bearing screw h h on its outer surface, and to which ratchet-teeth n and spring m, are attached, and guide-nut i with its arm l through which rope k k works, all substantially as described and for the purposes specified. 2nd. The combination, in an automatic grain shoveller, of a scraper L, rope k, k, leading blocks a and b, leading rollers r, s, t, head b, bearing rim p, or its inner surface attached to shaft d, d, cylinder bearing screw h, h, on its outer surface, encircling shaft d, d, and having lateral movement thereon, springs m and o, ratchet-teeth n and o, guide-nut i on screw h, h, with arm l and guide-nut j, all substantially as described and for the purposes specified.

### No. 21,226. Clothes Hook and Dryer.

(Crochet pour Hardes et Séchoir.)

Félix Ménard, Montreal, Que., 9th March, 1885; 5 years.

*Réclame.*—1o. La combinaison de l'ouverture K, et des barres E e F, et des crochets B, et la partie C, qui traverse l'ouverture K, dont le tout forme un crochet, à pendre les hardes et sert en même temps de séchoir. 2o. La combinaison de l'ouverture I, au crochet G et la barre H, et les parties L, qui servent aussi à pendre les hardes, et dont le tout forme encore un crochet qui peut servir de crochet et de séchoir en même temps, tel que ci-dessus décrit et pour les fins indiquées.

### No. 21,227. Machinery for Spinning and Twisting Fibrous Material. (Machine à Filer et Tordre les Matières Fibreuses.)

John Ballantyne, Almonte, Ont., 9th March, 1885; 5 years.

*Claim.*—1st. The combination, with the spindles a and their driving bands, of hinged arms f and whorls e fitted to bear on the bands for taking up the slack, substantially as described. 2nd. The combination, with the driving bands of spinning and twisting machines, of weighted tighteners for taking up the slack of the bands, substantially as described.

### No. 21,228. Method and Apparatus for Bleaching Sugar. (Méthode et Appareil pour Décolorer le Sucre.)

The Boston Sugar Refining Company, Boston (Assignee of Oscar B. Stillman, Natick, and John M. Stillman, Watertown), Mass., U.S., 11th March, 1885; 5 years.

*Claim.*—1st. In an apparatus for bleaching or decolorizing sugar, a chute or passage for the sugar, combined with an apparatus for the production of sulphurous acid gas, and with a pipe to discharge the said gas into the sugar, substantially as described, to operate as and for the purpose set forth. 2nd. The chute d for the passage of the crystallized or granular sugar, combined with the pipe f<sup>2</sup> to conduct sulphurous acid gas into the said sugar, and with a pipe h to deliver steam into the pipe f<sup>2</sup>, substantially as described. 3rd. A chute or conductor for the sugar rotary cylinder, to receive the sugar from the said chute or conductor, combined with a pipe to conduct sulphurous acid gas into the said sugar, and with an apparatus for the production of the said gas, as and for the purposes set forth. 4th. In the art of manufacturing sugar, subjecting the crystallized or granular sugar, while in motion, to the action of sulphurous acid gas, as and for the purpose described.

### No. 21,229. Portable Steam Generator and Feed Cooking Apparatus. (Appareil Vaporifère et de Cuisine Portatif.)

William Tribe, Corinth, Ont. (Assignee of Judson K. Purinton, Dalas Centre, Iowa, U.S., 11th March, 1885; 5 years.

*Claim.*—The improved steam generator and feed cooking apparatus, consisting of the portable boiler-base and furnace-grate, A, B, having a series of inwardly inclined posts 1, 2, 3, the upright cylindrical boiler C having an inclined inner wall D, a smoke-flue E at its top and an opening k at its bottom, and a flexible steam eduction tube h adapted to enter a barrel, substantially as shown and described to operate in the manner set forth.

### No. 21,230. Heel Counter.

(Contrefort de Chaussure.)

Joseph Kieffer, Montreal, Que., 12th March, 1885; 5 years.

*Claim.*—As a new article of manufacture, a heel counter or stiffener having a turned up rigid rim, formed between the vertical sides and heel, and the crimped upturn, substantially as herein set forth.

### No. 21,231. Electric Cable. (Câble Electrique.)

Richard S. Waring, Pittsburgh, Penn., U.S., 12th March, 1885; 15 years.

*Claim.*—1st. An electric cable having a body of lead, having passages therethrough, at intervals around and in close proximity to its solid centre, the thickness of metal wall between wires being less than the thickness of covering surrounding such wires, substantially as set forth. 2nd. An electric cable having a body c of lead, such body inclosing three separate insulated conducting wires c, arranged at equal intervals around, and in close proximity to the solid core a<sup>2</sup> of the body, the thickness of metal walls between wires being less than the thickness of exterior metal covering, substantially as set forth. 3rd. An electric cable, having a solid body of soft ductile metal or metallic alloy, inclosing insulated conducting wires, each in its appropriate passage through the body, such wires being arranged in close proximity around the solid core of centre of the body, with a series of strengthening wires inclosed within the soft metal body, such strengthening wires being arranged in circular order around the conducting wires, substantially as set forth. 4th. An electric