

whereby each section of the rod will move independently of one another, as set forth, for the purpose described. 4th. The combination with the drill hoe T, and drag bars D, of the divided socket R, provided with bosses R<sub>2</sub>, and slots R<sub>3</sub>, rollers S, and cutter key S<sub>1</sub>, to removably hold the hoe, having fins T<sub>1</sub>, T<sub>2</sub>, for replacement by cultivator teeth, as set forth. 5th. In combination with a flexible seed conducting tube V, provided with a button hole, near the lower end of the removable curved foot W, having a button W<sub>1</sub>, as set forth for the purposes described. 6th. The combination in a seeding machine, of the bracket 5, having cam grooves 6, 7, 8, and fixed to frame A, and arms 3, having pins 4, 4<sub>1</sub>, and secured to the ends of lifting bar 2, whereby the bar can be lifted by two successive stages, and finally become automatically locked, thereby retaining the hoes lifted from the ground, as set forth.

### No. 22,385. Weather Strip. (*Bourrelet de Porte.*)

Daniel D. Mayfield, Pleasantville, Ind., U.S., 3rd September, 1885; 5 years.

*Claim.*—1st. The weather strip, consisting of the metallic cap-plate A, having the semi-cylindrical box-bearing D, provided with the end pieces G, and the strip-plate B, having a curved offset-flange H, adapted to fit within the box-bearing of the cap-plate, substantially as specified. 2nd. The combination with the door sill and threshold provided with the metallic wear-plate Y, of the door having the sheet-metal weather-strip B, substantially as specified.

### No. 22,386. Castor Wheels for Hoisting Buckets. (*Roulettes de Godets Élévateurs.*)

Alexander E. Brown, Cleveland, Ohio, U.S., 3rd September, 1885; 5 years.

*Claim.*—1st. A hollow castor wheel for hoisting buckets, provided with an interior circumferential strengthening rib or ribs, substantially as set forth. 2nd. A hollow cast-metal castor wheel for hoisting buckets, having the holes necessary for the extrication of the core used in casting the wheels securely closed up by plugs fastened therein, for the purpose of preventing the entrance into the interior of such wheels of the fire-coal or other material, into masses of which the wheels of hoisting and conveying have to be placed.

### No. 22,387. Sleigh Brake.

(*Frein de Traîneau.*)

Burd P. Pott, Thompson Falls, Mon., U.S., 3rd September, 1885; 5 years.

*Claim.*—The combination of the short arms g<sub>2</sub>, of the lever bar g<sub>1</sub>, the foot-boards b, b<sub>1</sub>, side bars i, i<sub>1</sub> and dogs D, whereby the upward throw of the arms g<sub>2</sub>, will be arrested by the boards b and the dogs D held to their work and the sleigh prevented from backward movement, substantially as described.

### No. 22,388. Vehicle Spring.

(*Ressort de Voiture.*)

Phaon J. Kern, Frankfort, Ind., U.S., 3rd September, 1885; 5 years.

*Claim.*—1st. In a vehicle spring, the combination with the direct torsion-spring D, having the intermediate spiral portion of a reverse torsion-arm E rigidly secured to the inner portion of said torsion-spring, as shown, and provided at its outer end with a socket-plate fastening whereby it is rigidly secured to said outer end of the vehicle, substantially as specified. 2nd. In a vehicle-spring, the combination with the reversed torsion-arm having a rigid fastening at its outer end, of an axially-working spiral-spring working in journal bearings and rigidly connected to said torsion-arm at or near its inner end, and the respective arms meeting in an angular reduced terminal bearing portion, substantially as specified.

### No. 22,389. Boiler for Heating Buildings, etc. (*Chaudière à Chauffer les Bâtisses, etc.*)

William H. Byram, New York, U.S., 3rd September, 1885; 5 years.

*Claim.*—In a boiler composed of independent sections arranged one above the other, the sections B, each provided with the lugs f, the sides d and the series of parallel tapering communicating ducts C of less depth than the sides, and provided with the tubular projections h at their ends opposite sides thereof for establishing communication between the series of ducts of the several sections, the said projections being fitted together by tongue and groove joints and the several sections being secured together by bolts e, passing through the said lugs, substantially as herein shown and described.

### No. 22,390. Stereotyping Machines.

(*Machine à Clicher.*)

Noé Cameron, Quebec, Que., 3rd September, 1885; 5 years.

*Réclame.*—1o. Dans une machine à clicher, la crampe E, en combinaison avec les plateaux B et C, et la vis de pression F, tel que décrit pour les fins sus-mentionnées. 2o. Dans une machine à clicher, les vis H en combinaison avec l'essieu G et le support A, tel que décrit pour les fins mentionnées. 3o. Dans une machine à clicher, la chemise M, en combinaison avec les plateaux B et C, la crampe E, et le support A tel que décrit pour les fins mentionnées. 4o. Dans une machine à clicher, la combinaison de plateaux B et C, la crampe E, les vis F, l'essieu G, la chemise M, les vis H et le support A, le tout arrange et combiné, tel que décrit pour les fins sus-mentionnées.

### No. 22,391. Metallic Burial Casket.

(*Cercueil Métallique.*)

Seipio E. Baker, Springfield, Ohio, U.S., 4th September, 1885; 5 years.

*Claim.*—1st. In a burial casket, a main body, the upper rim of which is provided with an upwardly projecting flange extending longitudinally around the same near its outer edge, said flange being formed either integral with the rim or separately and secured thereto in any desired manner, for the purpose of holding the cement, which cements the body and cover together from outward displacement, substantially as described. 2nd. In a metallic casket, the sides A and ends B secured together and having an internally projecting flange at their lower ends to which the bottom C is fastened, as shown, and having an internally and externally projecting rim a, having the upwardly projecting flange b, formed integral therewith and extending above the horizontal plane of the rim, longitudinally around its outer edge, for the purpose and substantially as described. 3rd. In a metallic casket, the sides A and ends B, provided with the rim a, having the upwardly projecting flanges b, as described, and the flexible gasket h, secured thereto by cement or otherwise at a distance more or less remote from the upwardly projecting flange to leave a space between the casket and flange for the reception of cement, substantially as described. 4th. The combination with the body or sides and ends of a metallic casket of the cover D, the sides of which are curved at the base, vertically straight at the centre, and beaded at the top substantially as described. 5th. In a metallic casket, the cover D, of suitable shape, having face glass openings in its face, in combination with the face glass frame E, preferably T-shaped in cross section, as shown, secured to the cover and adapted to fit the face glass openings therein, and the face glass F, secured to the frame from its under side, in the manner and substantially as set forth. 6th. In a metallic casket, the cover D, secured to the body in a suitable manner, having face glass openings in its upper face, as described, provided with the face glass protecting caps E, secured to the cover by screws or otherwise, substantially as described. 7th. The combination with the cover D, having face glass openings in its face, as described, of the face glass frame E, T-shaped in cross-section, having glass-holding pins cast in its depending flange, and the face glass F held in said frame by said pins, substantially as set forth. 8th. The combination with the body of a metallic casket, of the cylindrical cap or cover I secured to the inside of the casket over the screw-holes for the purpose of sealing said holes and assisting in rendering the casket air-tight, substantially as described.

### No. 22,392. Gas Engine. (*Machine à Gaz.*)

Peter Murray, jr., Newark, N.J., U.S., 4th September, 1885; 5 years.

*Claim.*—1st. In a gas engine, the combination of a mixing chamber provided with a gas inlet, with an adjustable cock or gate controlling an air opening to said mixing chamber, and a pump for drawing the gas and air into said mixing chamber, substantially as described. 2nd. In a gas engine, the combination with a mixing chamber provided with a mixing apparatus, substantially such as described, and with openings for admitting the air and gas upon one side of said mixing apparatus, of a pump communicating with the chamber upon the other side of said mixing apparatus for withdrawing the mixture therefrom, substantially as described. 3rd. In a gas engine, the combination, with a mixing chamber provided with a mixing apparatus, substantially such as described, and with openings for admitting the air and gas upon one side of said mixing apparatus, of a pump communicating with the chamber upon the other side of said mixing apparatus for withdrawing the mixture therefrom, and an inwardly opening valve or valves for said air and gas openings, substantially as described. 4th. In a gas engine, the combination, with the mixing chamber 98, provided with the partitions 4, placed a short distance from each other, and having apertures 3, which are arranged so as not to coincide with each other, and with opening for admitting air and gas upon one side of said partitions, of a pump communicating with the chamber upon the other side of said partitions for withdrawing the mixture therefrom, substantially as described. 5th. In a gas engine, the combination, with the mixing chamber 98, provided with the partitions 4, placed a short distance from each other, and having apertures 3, which are arranged so as not to coincide with each other, and with openings for admitting air and gas upon one side of said partitions, of cocks, gates, or valves 6, 7, for controlling said openings, and a pump communicating with the chamber upon the other side of said partition, for withdrawing the mixture therefrom, substantially as described. 6th. In a gas engine, the combination, with the mixing chamber 98, provided with partitions 4, placed a short distance from each other, and having apertures 3, which do not coincide with each other, of openings for admitting the air and gas into said chamber upon one side of said partitions, a pump connected to said chamber upon the other side of said partitions, and arranged to draw the mixture therefrom, and a tank arranged to receive the mixture from said pump, substantially as described. 7th. The combination, with a gas chamber 139, of an air chamber 138, of a larger area than the gas chamber provided with a valve opening inward, a mixing chamber 137, connected by apertures with said gas and air chambers, a valve opening into said mixing chamber for controlling said apertures, and a pump with openings between said mixing chamber and the pump cylinder, and with an induction valve or valves opening from said mixing chamber toward the pump, substantially as described. 8th. The combination, with a gas chamber 139, of an air chamber 138, of a larger area than the gas chamber provided with a valve opening inward, a mixing chamber 137, provided with a mixing apparatus, and connected by apertures with said gas and air chambers, a valve opening into said mixing chamber for controlling said apertures and a pump with opening between said mixing chamber and the pump cylinder and with an induction valve or valves opening from said mixing chamber towards the pump, substantially as described. 9th. The combination, with a gas chamber 139, of an air chamber 138 of a larger area than the gas chamber, provided with a valve opening inward, a mixing chamber 137, connected by apertures with said gas and air chambers, a valve opening into said mixing chamber for controlling said apertures, and a pump with openings between said mixing chamber and the pump cylinder, and with an induction valve or valves opening from said mixing chamber towards the pump, a reservoir for receiving a mixture of gas and air from the pump, and a valve or valves opening outward from the pump, substantially as described. 10th. In a gas engine, the combination, with the pump 102, and tank 103, of the pipes or passages