

the sedimentary matter from said water, substantially as and for the purposes set forth.

### No. 24,648. Traction Rope Railway. (Chemin de Fer à Câble.)

John H. Robertson and Julius Jonson, New York, N. Y., U. S., 4th August, 1886; 5 years.

**Claim.**—1st. The combination, with a car, of a grip frame extending lengthwise thereof and suspended from the car by pairs of links, whereby provision is afforded for its lateral movement without swinging from its vertical position, substantially as herein described. 2nd. The combination, with a car and a grip-frame, of hangers wherein the frame is supported at opposite ends, and plates depending from the car between which the hangers and grip-frame may move laterally, and by which the hangers and grip frame are supported in a direction lengthwise of the car, substantially as herein described. 3rd. The combination, with a car and grip-frame, of hangers at opposite ends of the frame suspended by pairs of links D<sub>2</sub>, and the plates D<sub>1</sub> for guiding the hangers in their lateral movement, and sustaining them against movement lengthwise of the car, substantially as herein described. 4th. The combination, with a car and a grip-frame, of hangers at opposite end of the frame plates D<sub>1</sub>, guiding the hangers in their lateral movement and preventing their movement lengthwise of the car, and pairs of links D<sub>2</sub> suspending the hangers and swinging on pivots supported by the plates D<sub>1</sub>, substantially as herein described. 5th. The combination, with a grip-frame, comprising the head-piece C, of hangers at opposite ends thereof having forks or pairs of flanges open at top and bottom, and between which the head-piece C is supported by pins or bolts, substantially as herein described. 6th. The combination, with a grip-frame comprising the head-piece C, of the hangers D having pairs of flanges *b*, receiving the pins *c* between them, and pins or bolts *b* inserted through the flanges above and below the piece C, substantially as herein described. 7th. The combination, with a car, and the plates D<sub>1</sub> depending therefrom, of the hangers D, constructed with the pairs of flanges *b* and guided by the plates D<sub>1</sub> in their lateral movements, the pairs of links D<sub>2</sub> by which the hangers are suspended, and the grip-frame comprising a head-piece C, secured at the ends by pins or bolts between the pairs of flanges *b*, substantially as herein described. 8th. The combination, with a car and a stationary grip-frame and fixed jaws, of a movable frame fitted thereto and carrying a movable jaw, belt-crank levers connected with operating devices at opposite ends of the car, and slotted links or rods forming a connection between the belt-crank levers and the movable grip-frame, substantially as herein described. 9th. The combination, with a car and a fixed grip-frame and fixed jaw, of a movable frame carrying a movable jaw, belt-crank levers connected with operating devices at opposite ends of the car, and links or rods *f*, pivoted to the movable frame and having a slotted connection *g* with the belt-crank levers, substantially as herein described. 10th. The combination, with a car, and a fixed grip-frame and fixed jaw, of a movable grip-frame carrying a movable jaw, belt-crank levers *h* connected with operating devices at opposite ends of the car, and the links or rods *f* pivoted to their arms, and the links or rods *f*, pivoted in the movable grip-frame and slotted or yoked at *f*<sub>1</sub> to receive the blocks *h*, substantially as herein described. 11th. The combination, with a car, a fixed grip-frame and fixed jaw, of a movable grip-frame carrying a movable jaw, belt-crank levers *h* connected with operating devices at opposite ends of the car, and the links or rods *f* forming a connection between the movable grip-frame and said lever, constructed with slots or yokes *f*<sub>2</sub> and provided with adjusting screws *h*, substantially as herein described. 12th. The combination, with hollow jaw-holders provided with removable cap-plates on their sides, and with internal hubs or bosses, of removable jaws having their ends notched or recessed to fit said hub or bosses, and held laterally in place of said cap plates, substantially as herein described. 13th. The combination, with a fixed grip-frame comprising a base portion provided with rollers for moving cable-supporting sheaves arranged in their path, and a fixed upper jaw secured to said frame, of a movable lower jaw fitted to slide in the fixed frame and carrying at the ends cable-supporting pulleys, substantially as herein described. 14th. The combination, with the fixed frame composed of the head-piece C, the parallel uprights C<sub>2</sub> and the base portion C<sub>3</sub>; of the fixed upper jaw-holder secured to the uprights C<sub>2</sub>, the lower jaw-holder F mortised to slide on the uprights C<sub>2</sub>, and the cross-head F<sub>2</sub> and connecting bars F<sub>1</sub>, for operating the jaw-holder F, substantially as herein described. 15th. The combination, with the fixed frame composed of the head-piece C, the uprights C<sub>2</sub> and the base portion C<sub>3</sub>, of the movable frame composed of the lower jaw-holder F, the bars F<sub>1</sub> and cross-head F<sub>2</sub>, the jaw-holder F being secured to the lower ends of the plates F<sub>1</sub> and mortised to slide on the uprights C<sub>2</sub>, and the upper fixed jaw-holder E secured to the uprights C<sub>2</sub> and mortised to receive the plates F<sub>1</sub>, substantially as herein described. 16th. The combination, with a grip-frame, of belt-crank levers pivoted to swing horizontally near opposite ends thereof, and provided with rollers or projections for engaging one or other of two cables, of a vertically-movable bar having an inclined slot, a cross-bar or pin fitting said slots, and rods connecting opposite ends of the said bar or pin with said belt-crank levers, substantially as herein described. 17th. The combination, with the fixed grip-frame and the fixed upper jaw-holder secured thereon, of the belt-crank levers *h* fulcrumed to swing horizontally in opposite ends of said holder, and provided with projections or rollers *h* for engaging a cable, the vertically-movable bar *e* guided in said holder and having an inclined slot *e*<sub>1</sub>, and the cross-bar or pin *h* fitting said slot and connected at opposite ends by rods *h* with the levers *h*, substantially as herein described. 18th. The combination, with the inner spindle H and outer tubular spindle H<sub>1</sub>, of the grip-operating windlass or wheel J geared to the tubular spindle H, the brake-operating windlass or wheel K on the spindle H, and locking devices for both spindles, substantially as herein described. 19th. The combination, with a fixed grip-frame provided with a fixed jaw, of a movable grip-frame carrying a movable jaw, and comprising at the upper end a cross-head fitted to, and sliding upon the fixed frame, and anti-friction rollers interposed between the cross head and the fixed frame, substantially as herein described.

### No. 24,649. Bottle Stopper.

(Bouchon de Boutelle.)

Charles L. Morehouse, Brooklyn, N. Y., U. S., 4th August, 1886; 5 years.

**Claim.**—1st. The combination, with a bottle having a groove and shoulders in the inner surface of its head, of a soft rubber stopper having its sides tapered inward and downward from the top to near the bottom, and then bulged out and rounded at the bottom, and of a plug in the upper part of said stopper, substantially as shown and described. 2nd. A bottle having a V-shaped groove in the inner surface of its head near the bottom of said head, and outwardly and upwardly inclined parts C above said groove B, and the bevelled shoulder D above the inclined part C, substantially as shown and described.

### No. 24,650. Bottle Stopper.

(Bouchon de Boutelle.)

Charles L. Morehouse, Brooklyn, N. Y., U. S., 5th August, 1886; 5 years.

**Claim.**—1st. The combination, with a bottle provided at the inner surface of its neck with the annular groove B having the triangular rabbet C, that part of the groove above the rabbet being inclined parallel with the inner bevel of the top of the neck, and that part of the groove below the rabbet being vertical, that is parallel with the longitudinal axis of the bottle, of the packing ring D having its outer surface formed to fit in said groove and against the rabbet, and having its inner side bevelled from the top downward and inward, the lower bevel being on a concave line, whereby a sharp edged annular ridge is formed on the inner side of said packing ring, substantially as herein shown and described. 2nd. The combination, with a bottle having the triangular rabbet C, that part of the groove above the rabbet being inclined parallel with the inner bevel of the top of the neck, and that part of the groove below the rabbet being vertical, that is parallel with the longitudinal axis of the bottle, of the packing ring D having its outer surface formed to fit in said groove and against said rabbet, and having its inner side bevelled from the top downward and inward and from the bottom upward and inward, the lower bevel being in a concave line, substantially as set forth.

### No. 24,651. Boot or Shoe Heel.

(Talon de Chaussure.)

Edward J. LeGay, Boston, Mass., U. S., 5th August, 1886; 5 years.

**Claim.**—1st. A boot or shoe heel shell or wall, formed of thick leather or analogous mouldable material, moulded, shaped and set to form to comprise the sides, rear and breast of the heel with the ends of the blank united at the breast thereof, substantially as specified. 2nd. A boot or shoe heel shell or wall, formed of thick leather or analogous mouldable material, moulded, shaped and set to form to comprise the sides, rear, breast and bottom of the heel, with the meeting edges of the bottom and breast of the blank arranged at the longitudinal vertical centre of the heel, substantially as specified. 3rd. A boot or shoe heel formed with an outer shell or wall, substantially as described, and having a duly formed block of wood loosely fitted therein, and secured in place by an adhesive hard-drying material interposed between the wall and block, and filling the spaces between the same, substantially as specified.

### No. 24,652. Shoe Nail. (Clou de Chaussure.)

Edward J. LeGay, Boston, Mass., U. S., 5th August, 1886; 5 years.

**Claim.**—1st. A nail formed with two arms and a flattened and broadened head, and with a supporting-rib formed beneath the head and uniting with the arms of the nail, substantially as specified. 2nd. A nail formed with two parallel arms, united by an inclined or oblique head flattened transversely, substantially as specified.

### No. 24,653. Combination Wrench.

(Clé à Ecrou à Combinaison.)

Augustus W. Wright, Kyle, Texas, U. S., 5th August, 1886; 5 years.

**Claim.**—The bar A, having the nut wrench B and the hammer-head C formed at one end, the pipe wrench E formed at the opposite end, and the slot U made in one side, the spring H located in the bottom of the slot or opening U, and the blade K pivoted in one end of the said slot or opening, and bearing on the free end of the spring H, the said blade K forming a screw-driver, substantially as described.

### No. 24,654. Rock Drill. (Foret de Mine.)

Sylvannus Hussey, Buffalo, N. Y., U. S., 5th August, 1886; 5 years.

**Claim.**—1st. The combination, with the drill-bar and clutch-head, of a rotating driving head provided with primary lifters *i*, and a secondary lifter J, and a reciprocating sleeve or carrier E surrounding the drill-bar and bearing against the clutch-head, and provided with bearings against which the lifters *i* and *j* engage successively in lifting the sleeve or carrier and the drill bar, substantially as set forth. 2nd. The combination, with the drill frame drill bar and clutch head, of a rotating driving head provided with primary lifting arms *i* and a secondary lifting roller *j*, and a sleeve E having a reciprocating motion in the drill frame while being prevented from turning, and provided with bearings *i* and *j*, against which the arms *i* and the roller *j* engage successively in lifting the sleeve and the drill bar, substantially as set forth. 3rd. The combination, with the drill bar and drill frame, of a clutch-head G capable of turning with and on the drill bar and a lifting sleeve E having a vertical reciprocating movement in the drill frame, and held in the drill frame against turning with the drill-bar, substantially as set forth. 4th. The combination with the drill-bar, clutch-head G and detached lifting sleeve E, of a drill frame provided with a head F, having two concentric cushion rings *k*, *kl*, on which the clutch-head G and lifting sleeve