

In combination, the pulley connected with the axle of the car, the belt connecting said pulley with the air compressor, the air compressor and the compressed air storage compartment, substantially as described. 30th. In combination, the pulley connected with the axle of the car, the belt, whereby the motion of said pulley is communicated to apparatus on the car, reciprocating friction rollers bearing against said belt, and mechanism, substantially as described, whereby said rollers are caused to approach each other and exert a yielding pressure upon said belt, for the purpose set forth. 31st. In combination, the pulley connected with the car axle, the pulley whereby the motion of said belt is communicated to apparatus on the car, a reciprocating friction roller bearing against said belt and adjustable bearings, whereby said roller may automatically incline to adjust itself to the varying inclinations of the belt, substantially as described. 32nd. In combination with the pulley upon the car axle, the casing 15 secured to the spring timber *m* of the truck, substantially as described. 33rd. In combination with the pulley upon the car axle, the casing inclosing the same, and the flexible apron *n* connecting with the car body, substantially as described. 34th. In combination with the pulley connected with the car axle, and the belt connecting the same with apparatus located on the car, the friction rollers 12, 12 mounted on the guide 13, and the spring, whereby the rollers are caused to exert a yielding pressure against the belt, substantially as described. 35th. In combination with the pulley connected with the car axle, and the belt for driving apparatus on the car from the same, a friction roller arranged to be pressed against the belt by the yielding pressure of a spring, and the weighted lever 14 to which the spring is connected, whereby the belt can be released from the pressure of the spring by raising the lever whenever it is desired to stop the operation of the apparatus. 36th. In combination, the chamber surrounding the condenser, the air compressing pump having its suction pipe connected with said chamber, and the expansion cylinder of the gas compressing engine having its escape pipe also connected with said chamber, whereby the air is taken from one part of said chamber and after being compressed and expanded, is delivered into another part of said chamber, substantially as described. 37th. In combination with the compressing pump operated, substantially as described, by the motion of the car, the suction pipe provided with the cut-off valve *J*, whereby the compressing pump may cease compressing when the pressure produced has reached a predetermined intensity, substantially as described. 38th. The combination with the gas compressing engine and supply pipe leading thereto, the pressure-regulating valve *K* and the reservoir *C* interposed between the valve *K* and the gas compressing engine, substantially as described. 39th. The combination of the fan blower with the compressing apparatus and suitable connections, whereby the operation of the compressing apparatus operates the fan blower, substantially as described.

No. 18,487. Folding Ladder. (*Echelle brisée.*)

John K. Landes, Caledonia, Ohio, U. S., 21st January, 1884; 5 years.

Claim.—1st. A ladder made substantially as herein shown and described, and consisting of a series of sections pivoted to each other by the rungs, which sections are provided with spring latches for locking them together automatically, as set forth. 2nd. A ladder composed of sections pivoted to each other by rungs, which sections are rabbeted on the outer surface at the upper end, and on the inner surface at the lower end, substantially as herein shown and described and for the purpose set forth. 3rd. A ladder composed of a series of sections pivoted to each other by the rungs, which sections are rabbeted at the upper end on the outer surface, and at the lower end on the inner surface, the lower ends of the sections being tapered and rounded, substantially as herein shown and described, and for the purpose set forth. 4th. In a ladder, the combination, with a series of sections *A* provided at the lower end with a notch *D*, of the rungs *B* pivoting the sections to each other, and the spring-bolts *C* attached to the upper ends of the sections, substantially as herein shown and described and for the purpose set forth.

No. 18,488. Dynamo-Electric Machine.

(*Machine Dynamo-Electrique.*)

Elihu Thomson, New Britain, Ct., U. S., 21st January, 1884; 5 years.

Claim.—1st. The combination, with a dynamo-electric machine, of a condenser, the separate foils or surfaces of which are continuously connected to separate segments of the commutator. 2nd. The combination, with a dynamo-electric machine, of a condenser mounted upon the armature shaft, and connected to the commutator segments, in the manner described. 3rd. As a spark-absorber in a dynamo-electric machine, a set of condensing surfaces in continuous connection with terminals of the armature coils, and commutator segments connected to said terminals respectively. 4th. The combination, in a dynamo-electric machine, of an armature having three coils united in a common joint or electrical connection *J*, a three segment commutator to the segments of which the free ends of the coils are respectively connected, and a condenser connected to the segments, in the manner described. 5th. The combination, with a dynamo-electric machine, of a condenser consisting of a number of pairs or sets of condensing surfaces or plates connected, in the manner described, to the segments of the primary or main commutator, and to the segments of a secondary or supplemental commutator. 6th. The combination, with a three coil armature, of a primary or main three segment commutator, a secondary three-segment commutator, a pair of condensing surfaces or plates inductively uniting the corresponding segments of the two commutators, and electrical connections between the brushes of the primary to the brushes of the secondary commutator. 7th. In a dynamo-electric machine, the combination, substantially as described, of a primary and a secondary commutator inductively uniting through the plates or foils of a condenser, and arranged with relation to one another so that their segments shall advance of those of the other. 8th. The combination, with a dynamo-electric machine, of a condenser, the separate foils or surfaces of which are in continuous electrical connection with the separate terminals of the armature, as and for the purpose described.

No. 18,489. Plough. (*Charrue.*)

Frank Chevalier, Lexington, Ky., U. S., 21st January, 1884; 5 years.

Claim.—In a plow, the combination of the mould-board having its upper portion divided into fingers or prongs and provided with flange *DI*, with the share *C* which is attached thereto, and the brace *G*, having the upturned arm *I*, one end of the brace being secured to the land-side, the other to the mould-board, substantially as shown and described.

No. 18,490. Machine for Widening Channels through Snow-Drifts on Railways. (*Machine pour élargir les voies à travers les Bancs de Neige sur les Chemins de fer.*)

John L. Baker, Toronto, Ont., 21st January, 1884; 5 years.

Claim.—1st. The constructing of the platform or frame of a car with a recess, or the altering of a car so as to form a recess, for the reception of the plow when not in use, for the purposes hereinbefore set forth. 2nd. The plow-board, as herein described and for the purposes hereinbefore set forth. 3rd. The upright knife attached to the outer front corner of plow-board, as herein described and for the purposes set forth.

No. 18,491. Underground Conduit.

(*Conduit Souterrain.*)

Joseph S. Du Bois, Camden, N. J., U. S., 21st January, 1884; 5 years.

Claim.—1st. An underground conduit consisting of frames having supports for the wires surrounded with brick work or cement, in combination with sheet metal pocket sections, having their ends bent down, and clamping plates to clamp said pocket sections end to end, substantially as and for the purpose specified. 2nd. An underground conduit for electric wires provided with frames *A* having arms *C*, in combination with pocket sections *H*, clamping plates *E* and bolts *G*, substantially as and for the purpose specified. 3rd. The frame *A*, in combination with pocket sections *H* having bent ends *L*, and clamping plates to clamp said sections together, substantially as and for the purpose specified. 4th. An underground conduit for electric wires provided with a railway, in combination with a motor or carriage *J* provided with an adjustable arm, immovable when once set, and adapted to be supported wholly by the motor, above any desired layer of pockets or wire supports, substantially as and for the purpose specified. 5th. An underground conduit for electric wire provided with a railway, in combination with a motor or carriage *J* provided with an adjustable arm furnished with wheels *R* on its ends, adapted to be supported above any desired layer of pockets or wire supports, substantially as and for the purpose specified. 6th. In an underground conduit for electric wires, a railway, in combination with a railway carriage or motor *J*, supports *K* having slots *L*, arm *M* and means to clamp said rod in any position on said supports, substantially as and for the purpose specified.

No. 18,492. Mining Machine.

(*Machine pour Miner.*)

William Hilton, Du Bois, Cal., U. S., 21st January, 1884; 5 years.

Claim.—1st. In a coal-mining machine, a revolving cutter-bar carrying a cutter or cutters adapted to cut laterally and longitudinally, mounted in fixed bearings in a frame, which carries the driving mechanism and which is adapted to be adjusted vertically, a main-frame which carries the vertically-adjustable frame, and mechanism connected with the driving mechanism on the main frame, whereby the whole is moved laterally, as set forth. 2nd. The combination of the outer and inner frames, the rods *k* meshing into gears on the axle *a* by means of worm gears on their lower ends, and the pinions 9 splined to said rods and adapted to be thrown into, or out of connection with the gear-wheel 8 on the driving-shaft *B*, whereby, when one of said gears is in connection with said wheel 8, the rod to which the pinion is connected is revolved and, through the means described, gives corresponding movement to the axles to move the machine laterally, as set forth.

No. 18,493. Wrench. (*Clé à Erou.*)

John Lee, Mansfield, Ohio, U. S., 21st January, 1884; 5 years.

Claim.—1st. In a wrench, the combination, with the stem or shank having a fixed jaw, of the sliding jaw *D* having bevelled recess *H*, and screw *K* provided with handle *L* and annular groove *M*, and the wedge *I* having claws *N*, as and for the purpose set forth. 2nd. In a wrench, the combination, with the sliding jaw *D* having bevelled recess *H*, of the wedge *I* having claws *N*, the screw *K* having annular groove *M*, and handle *L* provided with thumb-piece *Q* and recess *P*, and the spring *O*, as and for the purpose set forth.

No. 18,494. Railroad Safety Switch Stand.

(*Bâti d'Aiguille de Sécurité de Railroute.*)

The Railway Specialty Manufacturing Company, (Assignee of G. W. Horne.) New York, N. Y., U. S., 21st January, 1884; 5 years.

Claim.—1st. In a railroad switch stand, the lever fulcrum, in combination with a spring and with detents, whereby, when the lever is locked, the fulcrum is free to yield, and when the lever is unlocked the fulcrum is fixed, substantially as described. 2nd. In a railroad switch stand, the moving fulcrum block *D* with the lever *C* pivoted thereto, and also connected with the safety spring *E*, substantially as described. 3rd. In a railroad switch stand, the pivoted locking arm *F* provided with projections *e*, *e* and detents, in combination with the lever *C* and the moving fulcrum block *D*, substantially as and for the purpose specified. 4th. In a railroad switch stand, the combination of a moving fulcrum block *D* and lever *C* pivoted thereto, the arch frame *B* with a device on it for locking lever *C*, and the locking arm *F* with its recesses *e*, *e* for the lever *G*, and with projections or detents