

No. 15,387. Improvements in the mode of Forming Electric Connections on Railway Trains. (*Perfectionnements dans la manière d'établir des communications électriques sur les trains de chemins de fer.*)

Jesse B. Lowe and Frank S. Lowe, Pulaski, N.Y., U. S., 29th August, 1882; for 5 years.

Claim.—1st. In an organized system of electric conductors attached to the cars of a railway train, for the purpose of signalling the engineer in charge of the train, the combination with the electrical conductors A and A' attached to each car, and adapted to connect and disconnect by means of the attached conducting pieces G, and the flexible conductors E provided with the metallic springs e_2 constructed and arranged to operate with the springs e_3 , and one or more push buttons F fixed in or on the cars, and electrically connected to the conductors A and A', of the battery C and electric alarm gong belt D fixed on the engine of the train. 2nd. In an open circuit system of electric conductors, the combination, with the conduction pieces G provided with the projections g_2 of separable conductors provided with springs e_2 and e_3 adapted to engage in the pieces G and with each other in such manner that a closing of the open circuit will be automatically effected by every engagement and disengagement of said spring with the pieces G. 3rd. The device for connecting and disconnecting the lines of open circuit electric conductors composed of the conductive pieces G containing the projections g_2 and insulated from each other, and the springs e_2 and e_3 insulated from each other and adapted to engage with each other and the pieces G in such manner that the open circuit will be momentarily closed every time the said springs are connected to or disconnected from the said pieces G.

No. 15,388. Improvements in Car Couplings. (*Perfectionnements aux accouplements des chars.*)

Jesse A. Quackenbush, East Saginaw, and Daniel L. C. Eaton, Saginaw, Mich., U. S., 23th August, 1882; for 5 years.

Claim.—1st. The combination of the block B having a slot f and internal shoulder W, with the pivoted trigger m occupying a position in the slot f but adapted to project from the front of the same and having a projecting finger n adapted to bear on the shoulder w of the block. 2nd. The combination of the draw head having a recess b , the block B having a recess d , slot f and shoulder w , the pin E guided by said recesses b and d , and the pivoted trigger m adapted to the slot f and having a projection n for bearing on the shoulder w .

No. 15,389. Improvements on Self-Extinguishing Stoves and Ventilators. (*Perfectionnements aux calorifères à extinction automatique et aux ventilateurs.*)

William F. Condon, East Saginaw, Mich., U. S., 30th August, 1882; for 5 years.

Claim.—1st. The combination, with a stove door having a fastening lip, of a spring actuated bolt having a bevelled end and adapted to be raised by the lip of the door striking against the same and then by the spring forced over the lip. 2nd. The combination, with a stove and its door, of a spring actuated bolt having a bevelled and recessed tongue, or end, adapted to fit down over the lip, or catch of the door and hold it closed. 3rd. The spring bolt composed of shank j , recessed and bevelled tongue k , intermediate shoulder k , a spring H and a casing for the parts. 4th. The combination, with a stove and its smoke escape, of a valve having a horizontal, circular and a vertical play and provided with lugs to limit its circular movement. 5th. The combination, of a stove and its smoke escape, a valve having a horizontal and a vertical play and provided with a rib on its bottom face, and a bar for the valve to play on provided with a groove corresponding to the rib for its reception. 6th. The combination, with a stove and its smoke escape, of a horizontally and vertically moving valve provided with lugs projecting below its face, transverse rods for the valve to move on and the lugs to strike against and pendent lips for the edge of the valve to strike against. 7th. The combination of a stove and its smoke escape, a plate K provided with pendent lips o , a valve L provided with lugs q and ribs p , and rods M provided with grooves b . 8th. The combination of a stove, a fire pot Q, water tank P and pipes connecting water tank and fire pot provided with plugs S. 9th. The combination of a stove, fire pot Q, water tank P, pipes R connecting the water tank with top of fire pot, pipes converging from the water tank to the bottom of the fire pot, and plugs S for closing the pipes. 10th. The combination, with a stove door, of a valve a provided with a head e and a strap for holding the valve to the door, provided with a recess for the head on the valve. 11th. The dumper valve c having an arm v . 12th. The combination of damper valve v provided with notch w and rod s provided with pin x fitting into the notch w . 13th. The combination of a cylinder D, water tank P and communicating air spaces $y z$ around and above the water tank.

No. 15,890. Improvements on Variable Valve Gears for Steam and other Engines. (*Perfectionnements aux appareils de soupapes variables pour les machines à vapeur et autres.*)

Wilberforce Johnson, Liverpool, Eng., 31st August, 1882; for 5 years.

Claim.—1st. In a variable valve gear for steam and other motive power engines, consisting of an inner ring, or disks c revolving with and attached obliquely to the main shaft, in combination with an outer ring or strap D connecting to the valve rod K whose relative positions to each other can be changed at pleasure, and thus the lead of the valves of the engine altered. 2nd. The combination of an inner ring or disk c pivoted on two pins or centres B on opposite sides of the main shaft A, so as to stand as required in a plane perpendicular to the axis of the shaft, or at an oblique angle on either side, with an outer ring or strap D sliding freely thereon, carrying pins F, actuating

the valve rod, the angular position of which pin can be regulated by lever or otherwise, and the lead of the valves regulated while the engine is in motion. 3rd. The pivoted ring c made in two halves and bolted together, thus enclosing the ends of the pivots, in combination with the sliding ring D fitting into the groove formed by the two halves of C. 4th. The combination of the ring C adjusted or adjustable so as to stand obliquely to the axis of the shaft, the sliding D, carrying pins F, actuating the valve gear, with the adjustable guide H regulating the angle that the pins F shall make with the pivots B. 5th. The combination of the ring D sliding on a path adjusted at, or adjustable to an angle oblique to the shaft, with the pins F and slotted frame E actuating the valve gear. 6th. The combination of the lever R, sliding ring N, sleeve M and connecting device P with the pivoted disk C. 7th. The combination of the lever R, the slide M, the quadrant or link N, the quadrant lever O and the link E with the disk C.

No. 15,391. Improvements in Car Couplers. (*Perfectionnements aux accouplements des chars.*)

Charles E. Mark, Flint, Mich., U. S., 31st August, 1882; for 5 years.

Claim.—1st. In combination with a draw-bar cored, or recessed interiorly by a longitudinal bar H pivoted to the former, near the rear end and formed at its front ends with a hook I adapted to grasp the coupling link by the vibration of the draw-bar. 2nd. In combination with the draw-bar C and bar H having the hook I, the recess b to support and strengthen the free end of the hook. 3rd. The draw-bar C and bar H arranged between guides B B in the frame A of the car, in combination with the partition D F, spring E and key J. 4th. The draw-bar C and bar H pivoted together and arranged within the guides B B on the frame A, in combination with mechanism for lifting the rear end of the draw-bar.

No. 15,392. Improvements on Bee Hives. (*Perfectionnements aux ruches.*)

Selim Pitet, Port Perry, Ont., 31st August, 1882; for 5 years.

Claim.—1st. A series of bee hives constructed with removable ends or sides and united to each other at the ends or sides. 2nd. The combination, with a bee hive A, of a removable attic C. 3rd. The combination, with a bee hive A, of the removable attic C provided with openings C covered with wire netting B. 4th. The combination, with a bee hive, of a pivoted button provided in one end with an opening closed by wire netting. 5th. The combination, with the honey board E provided with an opening G, of the pivoted button H provided in one end with an opening I covered with wire netting. 6th. The combination with the bee hive, or box A having inwardly projecting cross strips E on the upper edges of the ends of the honey board E having transverse cleats or strips F projecting over the ends. 7th. The combination, with the bee hive or box A having inner rabbets in the upper edges of the longitudinal sides, of the honey frames O provided with top and bottom cross strips O O'. 8th. The combination, with the bee hive or box A, of the frames O and the wire netting frames P. 9th. The combination, with the bee hive or box A provided with apertures or slots M, of the slide J provided with angle-shaped slots K. 10th. The combination, with the bee hive or box A, of the hooks Q and the eyes or staples R for the purpose of connecting a series of hives sidewise or otherwise. 11th. The combination, with the bee hive or box A, of the removable ends, the pins Y, the cross strips E and the screws Z. 12th. The combination, with the bee hive or box A, of the frames O, the wire netting frames P and the top plates X'.

No. 15,393. Improvements in Traction Engines. (*Perfectionnements aux machines de traction.*)

Jacob Nixon, Winfield, Ks., U. S., 31st August, 1882; for 5 years.

Claim.—1st. The combination, with the frame or truck, of two or more gangs of wheels rigidly mounted on axles within the frame, said axles being so arranged relatively, that the wheels of one gang will intermesh or overlap those of the adjacent gang. 2nd. The combination, with the frame and wheels, of an endless belt or track consisting of an inner layer of belting, transverse bars secured thereto, and an elastic covering. 3rd. In a track for traction engines, consisting of two or more strips of flexible material having transverse metallic bars interposed between them. 4th. A track for traction engines consisting of the combination, with an inner layer of flexible material of transverse metallic bars riveted thereto, and an outer layer or covering of elastic material. 5th. The combination, with the frame or truck of gangs of wheels mounted rigidly on axles within the frame, the outer wheels of the gang being provided with annular flanges and an endless track adapted to be guided by said flanges.

No. 15,394. Improvement in Fence Posts. (*Perfectionnement des pieux de clôture.*)

Samuel Heaton, Cedar Rapids, Iowa, U. S., 31st August, 1882; for 5 years.

Claim.—1st. The link D in combination with the post A and brace B, for locking the upper extremities of the braces against the post. 2nd. In combination with the post A, brace B and link D, for locking the upper extremities of the brace to the post, the link C attached to the base B and passing through the slot A'.

No. 15,395. Improvements in the Manufacture of Telegraph Conductors and Materials for Covering and Insulating Wire or other Conductors. (*Perfectionnements dans la fabrication des conducteurs télégraphiques et aux matériaux pour recouvrir et isoler les fils conducteurs ou autres.*)

William O. Callender, London, Eng., 31st August, 1882; for 15 years.