No. 14,338. Electrical Apparatus for Stopping Railway Trains, Signalling, &c. (*Appareils électrique pour arrêter les trains des chemin de fer, pour les signaux, & .*)

William C. Shaffer, Philadelphia, Penn., U.S., 6th March, 1882; for 5 years.

Claim.—1st. An electrically operated device and a locomotive engine having mechanism adapted to be engaged by a projecting part of said device, whereby, when the electric circuit is broken, the projection presents a rigid contact to a passing train and operates the aforesaid mechanism so that the engine or train is stopped, or an alarm sounded, or both, and, when the circuit is closed, the electric controlled projection is rendered inoperative. 2nd. A locomotive engine or train provided with mechanical devices which are connected to the steam valve, or steam supply of the engine, and adapted to be operated by devices controlled by electric circuits so that, in the event of danger, the circuits are broken and the devices controlled by the electric circuits are automatically set to operate the devices connected to the steam supply of the engine, whereby the steam is cut off and provision thus made for automatically stopping the train. 3rd. A locomotive engine provided with mechanical devices which are connected to the brake mechanism and adapted to be operated by devices controlled by electric circuits so that in the event of danger the circuits are broken, and the devices controlled by the electric circuits are automatically set to operate the mechanical devices of the engine, whereby the brake mechanism is operated and provision thus made for automatically stopping the train. 4th. An electric device for automatically stopping trains, sounding an alarm, &c. in combination with a signal box and an annulus connected to the armature of the electric device. 5th. In combination with an arm carried by a moving train and operating mechanism which stops the same, a device on the line of way which engages with said arm, locking mechanism for holding said device rigid, an electric circuit and devices caused by the breaking of said circuit to actuate said locking mechanism. 6th. In combination with a switch and a circuit breaking device attached thereto, an electro-magnet and armature controlled by said switch, an arm which is rigid when said circuit is broken, locking devices for said arm controlled by said magnet, and an arm carried by the train and brakes, or other stopping mechanism operated by the latter arm. 7th. An arm carried by a train and operating the brakes or other stopping mechanism thereof, in combination with a stationary device for engaging with said arm, an electro-magnet circuit wires and circuit breaking devices and armature operated in one direction by said magnet and by gravity or spring, etc., in the opposite direction, and locking devices engaged or operated by said armature, whereby the breaking of the electric circuit will cause the locking of the device that engages with the arm or levers. 8th. A rigid device for engaging with a brake operating arm carried by a locomotive, in combination with mechanism for mechanically locking said device when the electric circuit is broken, an electro-maguet which is arranged to unlock the same when magnetized, the circuit wires of said magnet and an arm arranged to be struck by an attachment of a passing train, so as to close said circuit and effect such magnetization and unlocking. 9th. The combination, with a rigid arm along the track for operating breaks or signals, and devices for mechanically locking said arm in position for operation, of an electro-magnet which is arranged to unlock said arm when magnetized and an arm arranged to be struck by a passsing train, so as to close the circuit and effect such magnetization. 10th. The combination, with the shaft M^1, of a foot *m*, the arm K, the circuit breaking lever G, magnet E, electric connections and the locking lever, whereby the breaking of the circuit causes the locking of the foot. 11th. The bent lever L, the arm G^1, the lever G, the arm K, the arm Q, the armature F, the magnet E, the lever V and circuit making devices operated thereby, which cause the magnetizing of said magnet, when the arm U is struck by an attachment of a passing train, and thereby return the parts to their normal position. 12th. A locomotive engine or train provided with the movable arm or bar N, said bar being attached to levers or mechanism connected to the whistle, the steam air or other brake and steam feed pipe of the engine, and adapted to operate with electric circuit breaking devices and necessary appliances. 13th. The combination, with lever Y and a signal apparatus operated thereby, of armature F attached to said lever, electro-magnet E, arm Q on shaft M, circuit wires for said magnet, and circuit breaking devices to signal danger when the circuit is broken.

No. 14,339. Improvements in Permutation Lock Dials. (*Perfectionnements aux cadrans des serrures à combinaison.*)

George M. Hathaway, Jersey City, N. J., U. S., 7th March, 1882; for 5 years.

Claim.—1st. In a permutation lock, a concealed auxiliary pemutation lock within the main dial, adapted to lock said main dial against manipulation. 2nd. In a safe lock, the combination of duplex dials, spindles, disks and knobs, one concealed within the other, and one adapted to lock the dial of the other, when the combination is off. 3rd. The combination of the main dial A and knob A^1 and a main locking mechanism, with the auxiliary locking mechanism, the bolt F, spindle and auxiliary knob and dial concealed within the knot A^1 and duplex spring E.

No. 14,340. Improvements on Self-Levelling Berths. (*Perfectionnements aux lits suspendus.*)

The Brunswick Ship Berth Company, (Assignee of Dana Parks,) Boston, Mass., U. S., 7th March, 1882; for 15 years.

Claim.—1st. In as elf-levelling berth, the frame A, the ends of which form the head and foot boards of the berth proper, and bottom B suspended on separate axes, the frame A being suspended from scale beams a^1 at head and foot, and the bottom B forming the bottom of the berth, being suspended from the side pieces of frame A. 2nd. The frame A suspended by means of straps *a* from the scale beams a^1 journalled on the bulk heads, in combination with bottom B, suspended by means of straps *b* from the scale beams b^1 journalled on the side boards of the frame A.

No. 14,341. Process for the Manufacture of Bows, Scarfs, &c. (*Mode de confection des boucles, écharpes, &c.*)

Norah McCormick, Toronto, Ont., 7th March, 1882; for 5 years.

Claim.—In placing between the seams of the material, pieces of gutta percha tissue, and applying thereto a hot iron for the purpose of causing the said tissue to seal the seams.

No. 14,342. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

John B. Drake, Goshen, Ind., U. S., 7th March, 1882; for 5 years.

Claim.—1st. In a drain tube to prevent freezing, having a valve seat, a valve, and means for automatically closing the same when the bucket is applied. 2nd. In a drain tube a valve seated therein, a lever for receiving the bucket, and a connecting rod for operating the valve. 3rd. In a drain tube, a valve seated therein, lever for receiving the bucket, a connecting rod for closing the valve, and a spring for opening the valve.

No. 14,343. Improvements on Steam Boiler Furnaces. (*Perfectionnements aux foyers des chaudières à vapeur,*)

George H. Watson, Louis, Mo., U. S., 7th March, 1882; for 5 years.

Claim.—1st. The combination of a boiler furnace, a feed water pipe running horizontally in front of said furnace, and branch pipes extending from said feed water pipe to form a water pipe to form a water grate, and water sides for said furnace. 2nd. In a boiler furnace, a double series of water tubes diverging from the feed water tube to form water grate bars, and coiled adjoining the side walls of the furnace, and connected with the boiler. 3rd. The combintion of the boiler furnace, the feed water pipe tubes branching from said pipe, coiled in the furnace and connected with the boiler, tubes diverging from said branches and connected with the boiler and valves $N N^1 O O^1 P P^1 Q Q^1$ and $R R^1$. 4th. The combination of one or more boiler furnaces, the feed water pipe having hand valve and check valve, and the system of generating and feeding pipes and their valves.

No. 14,344. Improvements on Gas Apparatus. (*Perfectionnements aux appareils à gaz.*)

Alfred Wilson, Handsworth, Eng., 7th March, 1882; for 5 years.

Claim.—1st In apparatus for making gas, the novel combination of the retort A, combustion chamber B, solid hearth C, openings D D, crupper boxes M M and temporary bars O O. 2nd. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, tuyere F with dip pipe P, and water box Q. 3rd. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, cruppers boxes M M, temporary bars O O, tuyere F with dip pipe P and water box Q. 4th. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, crupper boxes M M, temporary bars O O, tuyere F with dip pipe P and water box Q, feeding cone H and doors L L,

No. 14,345. Improvements on Coal Stoves. (*Perfectionnements aux poêles à charbon.*)

John W. Elliott, Toronto, Ont., 7th March, 1882; (Extension of Patent No. 7182.)

No. 14,346. Improvements in the Art of Forging Hammers. (*Perfectionnements dans l'art de forger les marteaux.*)

David Maydole, Norwich, N.Y., U.S., 7th March, 1882; (Extension of Patent No. 7228.)

No. 14,347. Improvements on Meat Choppers. (*Perfectionnements aux hache-viande.*)

Martin L. Edwards Salem, Ohio. U. S., 7th March, 1882; for 5 years.

Claim.—1st. The combination of an intermittently rotating chopping block with a standard having a davit head B, and the open guide box C, the endwise slide bar E carrying the knives, and the toggle arms *b c* carrying said slide, the said davit head and guide box overhanging the tub with the slide bar, and the toggle-arm davit connections in vertical line in front of said standard. 2nd. The combination of a rotary chopping block with a cross-head carrying the knives, and having the shouldered and bevelled face-projection, with a vertically reciprocating slide having the shouldered and bevelled face-socket within which said cross-head projection is secured. 3rd. The combination, with the toggle-arms *b c*, of the reciprocating slide E carrying the cross-head for the knives, and the standard davit-head C, with the adjustable screw-stem G connecting the upper toggle-arm *c* with said davit-head and the toggle crank connecting rod H, whereby the knife carrying cross-head is adjusted through the toggle-arms and their connecting-slide. 4th. The davit-head standard, the guide box C, the bar slide E and the toggle-arms connected and arranged in front of said standard, with the guide-box and toggle-arm davit-head connections overhanging the tub in vertical line, the slide and the guide-box being open or slotted, and the lower toggle-arm connected to the slide within the box free to flex therein, and in which the slide bar is supported in the direct line of the davit-head connection. 5th. The combination of the intermittently rotating chopping block with the standard having a davit-