

*Claim.*—1st. The shell A, perforated diaphragm C, tubular plug e, and screw or valve f; 2nd. The employment in connection with the globe or chamber A, of the perforated diaphragm c, whereby the gas is spread out and compelled to come about the entire inner surface of the chambers a; 3rd. The tubular plug e, and screw or valve f, in combination with the chamber a, and diaphragm c, whereby the amount of gas admitted under its original pressure to the burner is regulated without disturbing or removing any portion of the device; 4th. The construction of the block or cock l, and plug o.

No. 3515. JAMES L. SPRAGUE, Hermon, N. Y., U. S., 5th June, 1874, for 5 years: "Milking Stool." (Banc pour traire les vaches.)

*Claim.*—1st. The combination of an adjustable pail holder consisting of the board J, arm I, and post H, with a milking stool having a device for holding the tail of the cow while milking; 2nd. The manner of securing the lever E, to the seat by a screw G, passing through an elongated hole, as set forth.

No. 3516. WILLIAM WEST and PETER WEST, (Assignees of W. A. West), Toronto, Ont., 8th June, 1874, for 5 years: "Manufacture of Burial Cases." (Fabrication des cercueils.)

*Claim.*—The application of a silver or nickel plated frame work stamped or rolled to any ornamental design of thin sheet metal for the purpose set forth.

No. 3517. AUSTIN D. CABLE, Montreal, Que., (Assignee of G. Murray), 8th June, 1874, for 5 years: "Improvements on Faucets." (Perfectionnements aux robinets.)

*Claim.*—1st. The shell a, having projection or seat k, in combination with the valves e, operated by end of nozzle m, n, said end m, n, forming joint on lower side of k; 2nd. In a faucet, the projection k, forming a double valve-seat, in combination with the valve e, (actuated by the end of nozzle m, n,) and valve formed by m, n, as set forth.

No. 3518. AUSTIN D. CABLE, (Assignee of L. Danze), Montreal, Que., 8th June, 1874, for 5 years: "Improvements on Lifting Jacks." (Perfectionnements aux crics.)

*Claim.*—1st. The combination of the cylinder a, sleeve c, bar f, pin h, and lever k, having end m, at right angles, all working together as described; 2nd. In a lifting jack a, sleeve c, guided as described, in combination with a bent lever k, and adjustable bar f.

No. 3519. ELIZA M. JONES, wife of C. JONES, Brockville, Ont., 8th June, 1874, for 5 years: "Tucking Device." (Appareil à plisser.)

*Claim.*—1st. An engraved, marked or in any other way delineated scale or plate on the cloth plate A, of any sewing machine having letters or figures or both of reference thereon; 2nd. A chart or book of, or patterns of tucks b, having letters or figures, or both of reference relating to and corresponding with a scale B, engraved, marked or otherwise delineated, on the cloth plate of any sewing machine; 3rd. The combined use of a book or chart of pattern-tucks letters or figured and a relative scale on the cloth plate of any sewing machine correspondingly lettered or figured to indicate the position for placing the gauge D, and marker E, of a tucker, to make a certain width of tuck selected or chosen from the chart and delineated thereon.

No. 3520. JOHN ABSTERDAM, New York, U. S., 8th June, 1874, for 5 years: "Process of Manufacturing Steel and Welding Steel and Iron." (Procédé de fabrication de l'acier et de soudage de l'acier et du fer.)

*Claim.*—1st. In a bar, plate, sheet or slab of semi-steel of cementation produced by subjecting unrefined wrought iron bars or rough flats of old wrought iron rails to a process of cementation and then refining the metal by welding the same together into a merchantable article as described; 2nd. A railway bar made of wrought iron and semi-steel of cementation produced by subjecting the crude unrefined iron bars, puddled bars, scrap bars, muck bars or flats from old iron rails to a process of cementation, and finishing the metal after cementation into a head bar by welding the same together under a hammer or by the action of rolls, then welding the said head bar to an iron pile in finishing the whole into a merchantable railway bar; 3rd. A railway bar made of semi-steel of cementation and wrought iron by subjecting the crude, unrefined iron bars, puddled bars, muck bars, scrap bars or flats of old iron rails to a process of cementation and then refining the metal during the process of conversion into a steel headed rail in the manner specified; 4th. In a bar, plate, sheet or slab of wrought iron with steel surfaces produced by subjecting blooms, billets, loops, bars or slabs of wrought iron to a process of cementation superficially or of case hardening, before the metal is finished through the finishing rolls, and then reheating the said case of hardened iron and finishing the same through the finishing rolls into a merchantable steel plated wrought iron; 5th. The process of welding cast or Bessemer steel and wrought iron into one body by placing between the plates or bars of cast or Bessemer steel and the bars or plates of wrought iron which are to be united, a body of semi-steel of cementation, spring steel or shear steel or other

steel of cementation, blistered steel, puddled steel or case hardened wrought iron, which forms an intermediate welding metal or soldering agent as set forth, 6th. The process of welding together cast or Bessemer steel and wrought iron into one body by first case hardening the surface of the pieces, then placing the case hardened surfaces against each other in the pile or forge and heating and rolling the same into a merchantable article; 7th. The process of renovating the welding properties of old rails or flats made of the same by subjecting said rails or flats to a process of case hardening as described; 8th. Providing the surfaces of the metal to be welded with depressions, indentations or corrugations for the purpose of retaining the flux between the welding surfaces as set forth.

No. 3521. THOMAS J. REYNOLDS, Irvington, Ill., U. S., 8th June, 1874, for 5 years: "Railway Switch." (Aiguille de railroute.)

*Claim.*—1st. The combination of the rails C, B, rod F, spring G, and target rod H, with the rails A, D, and piece E; 2nd. The combination of the piece E, with the rails A, D, and lugs b, b, b, as set forth.

No. 3522. WILLIAM M. WISWELL, Portland, Me., U. S., 8th June, 1874, for 5 years: "Improvements on Car-couplings." (Perfectionnements aux attelages de wagons.)

*Claim.*—Let A drawbar of a railway car, constructed and provided with the axial or central bore C, and bolt F, and spring H, and the pin E, with the plate d, for permitting the removal of a bent pin; 2nd. The pin E, with its channel or groove a, in combination with the plate d, drawbar A, and spring bolt F; 3rd. The drawbar A, formed with the internal abutment a', pin receiving hole a, and provided with the elastic seat l, under and at the rear end of said abutment a'; 4th. In self-locking car-couplings, the combination with the drawbar of a vertically sliding latch F, and coupling-pin f, connected together to be operated simultaneously by a single lever J; 5th. In combination with the sliding gate or latch F and coupling pin f, the T shaped lever J, connected to said parts so that the lever may be operated from either the side or platform of the car to effect the simultaneous movement of both the latch and the coupling pin; 6th. In combination with the coupling link N, having the hole Q, and hook P, the sliding gate F, and coupling pin f, connected so that the link on entering the drawbar will raise the latch, lift the coupling pin simultaneously and afterwards drop with the latch when the latter clears the hook P, the pin entering the hole Q, at the same time that the latch drops in front of the hook P, as set forth.

No. 3523. ROBERT LITSTER, Halifax, N. S., 8th June, 1874, for 5 years: "Improvements on Coffer-dams." (Perfectionnements aux boîtes à eau.)

*Claim.*—1st. A coffer-dam having an inner and outer shell constructed of the superstructure sections A, and sections D, and inserted interposing pieces F, to receive a clay puddling, the several parts being adjusted together and capable of separation by screw bolts, as set forth; 2nd. The section pieces D, with cross-pieces E, bolted together and adjustable in the section of the superstructure frame A, in the manner set forth.

No. 3524. JOHN S. ELLIS, Washington, D. C., U. S., 8th June, 1874, for 5 years: "Nut Lock." (Bride de noix.)

*Claim.*—The use of the wire B, of tough iron or other suitable metal secured in the groove A, in the side of the bolt, in combination with the projection or lugs D, cast on the lower surface of the nut C, when constructed, arranged and operating as specified.

No. 3525. LUCIUS GILL and ELIAH S. COON, Watertown, N. Y., U. S., 8th June, 1874, for 5 years: "Improvements on Spring Bed Bottoms." (Perfectionnements aux fonds de lits à ressorts.)

*Claim.*—1st. Securing the springs D, to the slats C, by a flat headed button E having a shank passing through the slats and bent to form a hook for receiving the loop of the springs; 2nd. Fastening the ends of the springs D, to the cross-bars B, by tabetting the latter and inserting the former diagonally in the bars as specified; 3rd. The bent-rod G, having pivotal connection at each end with the head rest F, and centrally with a bar H, sliding on the head of a bedstead and operated by cord M, and knob J, in the manner set forth; 4th. The employment of metallic bearings K, secured to the side rails of a bedstead for receiving the end of the cross-bars B; 5th. The employment of metallic sockets L, secured to the side rails of a bedstead receiving the projecting ends of the cross-bar of the head rest F, cylindrically to form a pivotal connection therewith as set forth.

No. 3526. GEORGE L. ELSON, Des Moines, Iowa, U. S., 8th June, 1874, for 5 years: "Improvements in Corsets." (Perfectionnements dans les corsets.)

*Claim.*—1st. The method of securing a stay-busk to the edge of the corset by means of eyelets b, b, and studs d, d, in the manner set forth; 2nd. The auxiliary leaf or stay C, in combination with a corset A, and stay-busk B, when constructed and arranged to operate as specified.