

volving axis of the machine, I claim to make the number of armature bobbins in each ring double the number of the electro-magnets in the magnet ring whether the armature bobbins are fixed and the magnets carried by the revolving axis or vice versa. 3rd. I claim the improvement in dynamo machines applicable to all machines where one end of each armature core is acted on by the magnets and the other ends of the cores are connected by an iron plate consisting in lengthening the cores beyond the length required for the wire and thus setting back the iron plate into a field of greatly diminished inductive action. 4th. The construction of the flanges of the fixed coils which are next to the magnets of German silver, for the purpose described. 5th. The construction of the flanges of the fixed coils with a slit through their outer end and with lugs projecting from the edges of the slit to enter an opening in the core, substantially as described. 6th. In the construction of the revolving wheel of dynamo machines, the combination of the two discs A, distance piece D, ring E, electro magnets G, coned bosses F and coned plates B, substantially as described. 7th. The combination of the ring E, the iron cores G, projecting from either side of it, the bobbins (2) slipped on to each iron core and the pole pieces (3), substantially as described. 8th. The construction of the sole or bed plate of dynamo machines with a gap through which a portion of the wheel descends into a pit below. 9th. The combination with the boss of the revolving wheel of loose iron collars pressed outwards from the boss by screw studs to cause them to bear lightly against the sides of the bearings in which the axle of the wheel is carried, substantially as described. 10th. The combination of the bed plate I with the slot or gap I, therein, the fixed rings M bolted to the inside of the gap I, the tie rods M₂, the law standards carrying the axis of the revolving wheel and the struts from the top of the standards, substantially as described. 11th. The construction of the fixed rings M which carry the induction bobbins each in three segments, one much smaller than either of the other two, substantially as and for the purpose described. 12th. The construction of the cores of the fixed coils, of T pieces with wedge shaped heads welded into V shaped pieces formed of iron plate bent to an acute angle, substantially as described. 13th. The alternative construction of the same cores with stud bolts instead of fixed stems for convenience of removing the fixed coils, substantially as described. 14th. The construction of the stationary iron rings of this or any other dynamo machine where one end of the iron core of each of the armature bobbins is attached to such a ring with a channelled section and a water service for the removal and recovery of the waste heat. 15th. The method of regulating separately excited dynamo machines by driving the exciter by a separator engine and bringing the stop valves of the small or of both engines into the photometer room, substantially as described.

No. 17,621. Shoes. (*Soutiers*.)

Isaiah A. Reals, Brocton, Mass., U. S., 11th September, 1883; 5 years.

Claim.—The shoe provided in its leg portion with an elastic gore on both sides of and around the front of such leg portion and projecting above the inelastic instep portion, in combination with a stay *b* fastened to the instep portion and to the fore pulling-loop but unattached to the gore, all substantially as set forth.

No. 17,622. Thill Coupling.

(*Armons des timonnières*.)

John E. Power, Dartmouth, N.S., 11th September, 1883; 5 years.

Claim.—The thill coupling, consisting of the clip band B provided with clips or hooks C C, the T headed thill-iron D with bushed journals *e*, the packing-block E and taper compensating screw F with flexible locking device for said compensating screw, all combined as set forth.

No. 17,623. Signal Lamp. (*Lampes à signaux*.)

E. S. Piper, Toronto, Ont., 11th September, 1883; 5 years.

Claim.—1st. In connection with a railway car or any chamber lighted by artificial means, a box or case fitted into or applied to an aperture made in the said chamber in such a manner that the interior of the said box shall be illuminated by the light within the said chamber, in combination with a reflector placed within the box or case for the purpose of refracting the light thus obtained on to a lens or signal glass inserted into the box, substantially as and for the purpose specified. 2nd. A box or case having two lenses or signal glasses inserted in it opposite to each other and an open side for the admission of light, in combination with a double reflector placed within the box or case in such a manner as to form a partition between the lenses and refract separate rays of light into each lens, substantially as and for the purpose specified. 3rd. In a box or case having two lenses or signal glasses inserted in it opposite to each other and a reflector extending obliquely from the side of each glass towards the centre and open side of the box for the purpose of forming a partition between and a separate reflector for each glass, the combination of coloured glass so placed over the open side of the box that the rays of light admitted there through shall be differently coloured for each compartment formed within the box by the partition, as specified, so that the light from each lens shall be of a different colour.

No. 17,624. Oil Can. (*Bidon à huile*.)

John W. Jackson, Sharpville, Pa., U.S., 11th September, 1883; 5 years.

Claim.—In a self-closing oiler, the spout F, slipped through the screw-cap H, provided with the guide I, and valve-seat *f*, and having its inner end perforated and closed by a perforated cap; the valve rod G, provided with spring pressing against the guide I, and keeping the valve *f* upon the seat-pin *f*, in combination with the rod C, provided with a slot *d*, and held outward by a suitable spring in the cylinder B, the latter having wing-piece D, to which is pivoted the dog E, having cupped end *e*, substantially as shown and described, and for the purpose set forth.

No. 17,625. Rubber Cloth. (*Drap de Caoutchouc*.)

F. E. Aldrich, Boston, Mass., U.S., 11th September, 1883; 5 years.

Claim.—1st. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, substantially as set forth. 2nd. As an improved article of manufacture, a rubber cloth or fabric, composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures, in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and a coloring material or materials, substantially as specified. 3rd. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces painted or stamped with useful or ornamental designs or figures, in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and containing sulphur or some ingredient for rendering the ink vulcanizable, substantially as set forth. 4th. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures, in an ink or printing compound of a different color or shade from the body of the cloth or fabric, and varnished, substantially as specified. 5th. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures, in an ink or printing compound analogous to the coating of the cloth or body of the fabric, and of a different color or shade therefrom, substantially as set forth. 6th. As an improved article of manufacture, a rubber cloth or fabric, composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures, in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound containing rubber and sulphur, or an ingredient for vulcanizing the rubber when subjected to heat or the sun's rays, substantially as specified. 7th. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures, in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound containing rubber, lead, and sulphur, or means for vulcanizing the rubber when subjected to heat or the sun's rays, substantially as set forth.

No. 17,626. Chronometer Escapement.

(*Echappements au Chronomètre*.)

A. W. Kentoff, Dalas, Oregon, U.S., 11th September, 1883; 5 years.

Claim.—1st. The combination, with the escapement wheel *h*, of the balance-staff *i*, carrying the balance wheel *k*, and roller *m*, spring *q*, oscillating lever *o*, and locking lever *t*, substantially as described, and for the purpose set forth. 2nd. The combination, with the escapement-wheel *h*, balance-staff *i*, roller *m*, spring *q*, and oscillating lever *o*, of the frame *r*, cross-bar *s*, locking lever *t*, springs *u*, *w*, substantially as described, and for the purpose set forth.

No. 17,627. Waterproof Coats.

(*Habits hydrofuge*.)

William and John Maguire, Toronto, Ont., 11th September, 1883; 5 years.

Claim.—1st. A waterproof coat, having the bottom edge of its skirt turned up, forming a trough or channel to receive water flowing on the surface of the coat, and convey it away from the legs of the wearer of the garment. 2nd. A waterproof coat, having the bottom edge of its skirt turned up to form a trough, in combination with a tube or pipe leading from the trough, substantially as and for the purpose specified. 3rd. In a waterproof coat having the bottom edge of its skirt turned up to form a trough, the combination of the piece C arranged to form the bottom of the trough, as specified. 4th. In a waterproof coat having the bottom edge of its skirt turned up to form a trough, a piece C arranged to form the bottom of the trough, in combination with the tie-pieces D, as specified.

17,628. Games. (*Jeux*.)

P. H. Johnston, Boston, Mass., U.S., 11th September, 1883; 5 years.

Claim.—1st. A game consisting of a series of differently colored blocks, adapted to be combined to form designs or figures, and a top or tetotum, having its sides respectively colored or marked to correspond with the colors of the blocks, the game being played substantially as set forth. 2nd. In a game, substantially such as described, the colored blocks A, each of said blocks having a diameter at its centre corresponding with the length of each of its sides, or being in the form of two equilateral triangles, united at their bases, in combination with a top or tetotum, having as many straight or angular sides as there are colors represented by the blocks, substantially as specified. 3rd. In a game, substantially such as described, a top, having the flat hexagonal body C, provided with the spindle D, each angle of the body being colored or marked to correspond with a color on one of the blocks A, substantially as set forth. 4th. The blocks A, colored and otherwise constructed as described, and put up in sets for use, substantially as set forth.

No. 17,629. Apparatus for Screwing the ends of Sheet Metal Pipes.

(*Appareil à visser les bouts des tuyaux en fer métallique*.)

A. Cameron, Montreal, Que., 11th September, 1883; 5 years.