

Claim.—1st. In a carriage or buggy gear in which the axles are made of tempered steel, a metal head plate having a sleeve *f* formed by the stock punched out of the hole made to receive the king bolt and fitting into a recess made in the axle or axle plate, the said head plate being connected to the hind axle, by the tempered steel reaches *C* clamped and stayed thereto, in combination with elliptic springs clipped and supporting the spring bar plates *M*, the ends of which are supplied with free shackles *N* to carry the body loops. 2nd. In a buggy or carriage gear made entirely of metal, a head plate *F* having a sleeve *f* formed in its centre by the stock punched from the hole to receive the king bolt, the said sleeve fitting into a recess made in the axle or axle plate and forming the pivoted bearing point, in combination with the metal spring block *I* resting on the head plate *F* and supporting the elliptic spring *J*. 3rd. A projecting sleeve or test formed by the stock punched out of the plate, at the connecting points of the gear, for the purpose of sustaining the lateral strain which would otherwise be exerted on the connecting bolts or clips. 4th. In a buggy or carriage gear having elliptic springs, the spring bar plates *M* attached to the top of the spring, in combination with the free shackles *N* attached to the ends of the bars *M* and arranged to support the body loops *L*, so that the body supported thereon shall have a free swinging movement.

No. 13,422. Improvements on Clothes Wringers. (*Perfectionnements aux essoreuses à linge.*)

Charles J. Shirreff, Brockville, Ont., 17th September, 1881; for 5 years.

Claim.—1st. The combination of the main frame having curved ends *A* carrying the journals of the top roller *C* at their upper extremity, provided with a screw *D* or other clamping device at the lower extremity, and curved springs *F* *F* carrying on their upper extremity the journals of lower roller *G*, said springs having a rocking or pivoted connection with the end *A* above the lower or straight extremity, whereby the wringer is clamped to the tub, and the rollers compressed simultaneously. 2nd. The combination of the curved ends *A* connected together and carrying the upper roller *C*, curved springs *F* *F* carrying the lower roller *G* and having terminations to clamp against the tub, and the apron *K* supported by the ends *A*.

No. 13,423. Improvements on Electro-Magnetic Motors. (*Perfectionnements aux moteurs électro-magnétiques.*)

Moses G. Farmer, Newport, R. I., U.S., 17th September, 1881; for 15 years.

Claim.—1st. The method of neutralizing or destroying the induced current generated in the helix of an electro-magnet, upon the cessation of the primary current traversing the same, which consists in uniting with each other the respective opposing terminals of the two sections of the divided helix and thereby forming a closed circuit, immediately upon the disconnection of the generator. 2nd. The combination of two helices included in the same circuit and acting in unison upon the same core or armature, a commutator automatically operated by the movement of said core or armature and circuit connections, whereby the connections of the terminals of the respective helices are reversed, so that the current is made to traverse said helices alternately in the same and in an opposite direction with reference to each other. 3rd. The combination of a movable core or armature, two helices or coils arranged to act simultaneously upon said core or armature to impel it in a given direction, a commutator automatically operated by the movement of said core or armature, and circuit connections from the commutator to the helices, whereby the opposing or like terminals of said coils are united at the termination of the stroke to form a closed circuit, before the disconnection of the generator.

No. 13,424. Improvements on Paper Machines. (*Perfectionnements aux machines à papier.*)

John H. Henry, Hinsdale, N. H., U.S., 17th September, 1881; for 5 years.

Claim.—1st. The combination, with the cylinder of movable covers and means for adjusting the same upon the cylinder without stopping its rotation. 2nd. The combination, in a cylinder paper making machine, of the rotating cylinder, the non-rotating ring, its packing and the case attached to the end of the vat within which the rings slide. 3rd. The combination of a rotating cylinder provided with sliding covers at each end, the cover receiving cases attached to the pulp vat, and means for preventing leakage of fibre from the vat. 4th. The cylinder *C* sliding heads *F* *F*, racks *e* *e* and pinions *h*, in combination with the carrier *H*, screw *F* and nut *J*. 5th. The ring *K* provided with lugs *a* *a*, in combination with packing *P* and heads *F*. 6th. The semi-cylindrical cases *B* *B* provided with the bearings for the shaft *D*, in combination with the pulp vat *A*.

No. 13,425. Improvements on Coffee Roasters. (*Perfectionnements aux torréfacteurs à café.*)

Peter Pearson, Manchester, Eng., 17th September, 1881; for 5 years.

Claim.—1st. The combination of a slowly revolving screw or worm and semi-cylindrical trough with a curved metal plate above heated by gas, or other analogous means. 2nd. The combination with a slowly revolving screw or worm (in a semi-cylindrical trough) of a quickly revolving cage or wire gauze enclosing the same, also with a curved metal plate above heated by gas, or other analogous means.

No. 13,426. Improvements on Ruling Pens. (*Perfectionnements aux plumes à régler.*)

Edward W. Blackhall, Toronto, Ont., 17th September, 1881; for 5 years.

Claim.—1st. The reservoir or fountain *A* with aperture *D*, rubber valve *F* and spring *C*. 2nd. The rolling pen *E* with channels *G* cut in the solid metal and spring end or top *e* *e*. 3rd. The reservoir of fountain *A* with aperture *D*, self-regulating lip or valve *F* and spring *C*, in combination with the pen *E* the whole being applicable to ruling machines.

No. 13,427. Improvements on Spark-Arresters. (*Perfectionnements aux arrêto-flammèches.*)

Alexander M. Kerr, Westminster, Ont., 17th September, 1881; for 5 years.

Claim.—1st. In creating a return current down the tube *A* by steam or air. 2nd. The tube *A* with a conical end. 3rd. The semi-cylindrical ring *E* connected to the smoke stack or furnace top.

No. 13,428. Improvements in Doors. (*Perfectionnements dans les portes.*)

William F. Sexton, Sr., and William F. Sexton, Jr., Toronto, Ont., 17th September, 1881; for 5 years.

Claim.—1st. A hinged door *A* having a spindle *B* extending from its pivotal point, a pulley or level pinion *D* fastened to the said spindle, in combination with a weight *J* connected to and arranged to operate through the pulley or pinion *D* upon the door *A*. 2nd. A hinged door *A* having a spindle *B* extending from the pivotal point and adjustably supported on the bracket *C*, a pulley *D* fastened to the spindle *B*, in combination with an endless strap *E* passing around the pulleys *D* *F* *G* and weighted by the weight *J*. 3rd. A hinged door having a spindle extending from its pivotal point, a pulley fastened to the spindle, in combination with a strap adjustably fastened to the pulley on the said spindle and weighted so as to exert a counterbalancing power over the hinged door. 4th. A hinged door having a spindle extending from its pivotal point, a bevel spur wheel *D* fastened to the spindle and meshing with a bevel spur wheel *M*, in combination with a weight connected to the bevel spur wheel *M* and arranged to exert a counterbalancing power over the hinged door.

No. 13,429. Fabric for the Lining of Overcoat Sleeves. (*Etoffe à doublure pour les manches des patetots.*)

Thomas Houston, Toronto, Ont., 17th September, 1881; for 5 years.

Claim.—As a new article of manufacture, a fabric, one side of which is composed of fine highly polished cotton thread, and the other side of dry finished cotton thread, the former being woven so as to produce a smooth surface, which will be found equal to satin de chine or silk, while the later is woven so as to form a strong backing for the smooth surface.

No. 13,430. Improvements on Writing Charts. (*Perfectionnements aux cartes d'écriture.*)

John H. Reed, Lancaster, Wis., U.S., 17th September, 1881; for 5 years.

Claim.—The combination, with the chart, of a series of covers having parts of letters written on one side. The method of illustrating in penmanship, consisting of forming and illustrating letters by means of covers, which cover parts of letters on a chart and have parts of letters written on their rear side.

No. 13,431. Improvements on Engine Governors. (*Perfectionnements aux gouverneurs des machines.*)

Benjamin B. Brewer, (Co-inventor with Addison G. Waterhouse,) and Barton B. Ward, Sacramento, Cal., U.S., 17th September, 1881; for 5 years.

Claim.—1st. The frame carrying the valve working mechanism of a governor valve adapted to move in a vertical direction by means of a pin and a recessed slot in the frame, and thereby close the valve when the spring belt becomes inoperative. 2nd. In a steam governor, the valve shell *V* provided with the cylindrical chamber or dome *D*, having the stop *O*, in combination with the sleeve *H*, having recessed slot *r*, the frame *F*, the pulley *P* and belt, whereby the belt tends to hold up the frame by pressing the recess of the slot against the stop. 3rd. In a governor, the spiral spring *C* and rod *r*, provided with a head *n*, a hollow governor stem *P*, an adjustable bushing *b*. 4th. The cylindrical sleeve *H*, a governor valve provided with a cylindrical dome *D* and a pulley *P*. 5th. The sleeve *H* held adjustable on the dome *D* by pointed screws *Q* to diminish frictional contact.

No. 13,432. Improvements on Metallic Packings. (*Perfectionnements aux garnitures métalliques.*)

Josiah A. Osgood, Grantville, Mass., and Edwin P. Monroe, New York, U.S., 17th September, 1881; for 5 years.

Claim.—1st. The improvement in metallic packing for piston and other similar rods consisting of the segments *B* *B* corresponding in form having parallel sides and of a width sufficiently less than the diameter of the rod with which they are to be used, to permit their contact while compensating for their wear, and at the same time practically surround the rod, in combination with the babbitt metal or soft filling *G* in the cavity. 2nd. The segments *B* *B* and guide blocks *C* *C*, having the cavities and babbitt or soft filling *G* *G* *G* provided with springs. 3rd. The combination of packing blocks or segments, having cavities filled with babbitt or soft filling. 4th. The adjustable packing segments *B* *C* formed with cavities, in combination with the babbitt metal or soft filling *G*. 5th. The combination of the packing blocks or segments, having cavities filled with babbitt or other anti-friction metal, with the vibrating ring *A* and springs *F*. 6th. The combination of the stuffing box *X* or case *X*, and the compound packing blocks or segments, filled with anti-friction metal or soft filling, with the rod *Y*.

No. 13,433. Improvements on Car Couplings. (*Perfectionnements aux accouplages des chars.*)

James McCree, Lansing, Mich., U.S., 17th September, 1881; for 5 years.

Claim.—1st. A draw-bar for railway cars, pivotally supported and adapted to have a vertical radial movement. 2nd. As a means for pivotally supporting a draw-bar and providing for the necessary spring