

supply during upward motion of slide valve to prevent extinction of igniting flame; 10th. The combination of ignitor with an air pipe *i*, spring acted cock *z* and an air pumping apparatus to supply air to the ignitor instantly after the explosion for expelling the gases of combustion and relighting the burner; 11th. The combination of wheel casing *C* having liquid channels *p* and *q* and clutches *p* with the paddle wheel *C*; 12th. The combination of liquid valves *E* *E* with the wheel casing *C* and paddle wheel *C* to govern the flow of liquid in forward and return directions; 13th. The liquid reservoir *D* having central open tube *D*; for admission of atmospheric air; 14th. The liquid reservoir *D* having interior guard cover *q* with extension *q*; 15th. The combination of liquid reservoir *D* by pipe *q* with drip receptacle *q* of explosion dome to conduct liquid escaping from dome to reservoir; 16th. The combination of governor *m* and fulcrum lever arm *m* with clutch *l* of disk shaft of slide valve to interrupt or continue motion of slide valve for regulating speed of engine; 17th. The combination of disk shaft of slide valve having toothed wheel *l* with the catch *l*, and sliding and spring acted tooth or bolt *l* of driving pulley shaft; 18th. The explosion dome having top extension chamber *A* with exit opening for gases of combustion in combination with slide valve *a* and under swinging valve *n*; 19th. The combination of extension chamber *A* of explosion dome having exit opening *n* with slide valve *n* and pendulum valve *s* sliding along inside of dome to assist expulsion of gases and closing of exit opening; 20th. The combination of slide valve *n* of the extension chamber *A* with fulcrum and spring acted lever *n*; rod *n* and crank *n* of valve *l* of syphon pipe; 21st. The combination of horizontal plate *s* attached to slide valve *n* and having central pin *s* with sliding and pendulum valves *s*; 22nd. The central guide pin of plate *s* having collar at lower end to retain pendulum valve at lowermost position on receding of liquid.

No. 6924. Improvements on Seal Locks and Seals.

(*Perfectionnements aux serrures à cachet et aux cachets.*)

Franklin W. Brooks, New York, U. S. (Assignee of Wilson Hollmann), 4th January, 1877, for 5 years.

Claim.—1st. A seal lock composed of two parts, one sliding upon the other and enclosing or adapted to enclose a locking device and a seal, when said lock is constructed with a central shackle formed or supported by projections on the respective parts of the lock, the projection which forms or supports the lower member of the shackle being arranged on the back of the lock and serving also to accommodate a chamber for the locking device; 2nd. The locking pin *L* having its head constructed with an enlargement *l* at its extremity in combination with the parts *A* *B* of the lock, the former constructed with the socket to having a corresponding enlargement at bottom; 3rd. The seal composed wholly or in part of glass or analogous material and having a transparent or translucent portion or space through which the condition of the locking device can be seen when the seal is in position; 4th. A seal lock having its locking device arranged at one end of its seal chamber in combination with a seal having a transparent or translucent portion or space at one or both ends to expose the locking device to view.

No. 6925. Improvements on Bearings for Upright Shafting.

(*Perfectionnements aux collets des arbres verticaux.*)

James L. Reed and William L. Peters, Brooklyn, N. Y., U. S. (Assignees of John H. Teah), 4th January, 1877, for 5 years.

Claim.—1st. The combination of the funnel shaped receiver *A*, cage *C* with slotted arms *A* having sliding boxes *b*, and the tapering rollers *D* with the spindle *B*; 2nd. The lid or cover *E* having notches *x* and top flange *d*, in combination with the receiver *A* having shoulder *y*, flange *z* and the washer *G*.

No. 6926. Improvements on Screw Jacks.

(*Perfectionnements aux crics à vis.*)

James Findlay and George A. Burns, Toronto, Ont., 4th January, 1877, for 5 years.

Claim.—1st. The circular recess *a* going round the circumference of the screw *C* by removing one thread *a*, from the same or other recess of any suitable form, taking out only a portion of the thread *a*; 2nd. The box *A* constructed with one or more openings *b* in the chamber *B* by means of which the end of the screw *C* can be felt as well as seen when approaching the limit of action before readjustment of the jack.

No. 6926. Improvements on Abdominal

(*Perfectionnements aux corsets abdominaux.*)

Catharine A. Griswold, New York, U. S., 4th January, 1877, for 5 years.

Claim.—1st. An abdominal corset provided with it supporter attached to the front and sides, and extending below the lower part of the corset; 2nd. The abdominal supporter *C* formed of a central band *D* and curved side bands *D*, the former attached to the lower front part of the corset and the latter to side stays or hip bands for the purpose of throwing the usual strain upon the hips and shoulders; 3rd. A lady's corset having rear extensions constructed and arranged in connection with lateral adjustable brace bands or lacing; 4th. A lady's corset provided with rear extensions above the usual height of the corset, said extensions being tapered or reduced in width to the width of the connecting shoulder straps.

No. 6928. Improvements on Wood Planing Machines.

(*Perfectionnements aux machines à raboter le bois.*)

Harlow M. Wilcox and Edmund G. Stiles, Chicago, Ill., U. S., 4th January, 1877, for 5 years.

Claim.—1st. The rock pressure bar *D* hung at two points at each end in combination with the bearing *R* and rubber rings *S*; 2nd. The housing *M* provided with a horizontal slot to receive the lubricating packing which communicates with the roller *I* by means of an opening through the part *M*.

No. 6929. Improvements on Scroll Sawing Machines.

(*Perfectionnements aux machines à évider.*)

Albert H. Shipman and Julius F. Binder, Rochester, N. Y., U. S., 4th January, 1877, for 5 years.

Claim.—1st. In combination with the saw *D* of the hangers *G* *G*, washers

h *h* and clamping screws *e* *e*, 2nd. The combination with the straight open ended spring arms *C* *C*, having an inherent elasticity for straining the saw of the fulcrum bar *E* pivoted permanently to the lower arm and constructed at the top with a wedge-shaped end which fits loosely into the notch *F* of the upper arm, whereby the said arm may be thrown open for the insertion or removal of the saw without disconnection of any of the parts; 3rd. The frame consisting of the standard *A*, the legs *J* *J* and the diagonal brace *S*; 4th. The bearing consisting of the shank *m* with flange *g* the screw stem *z*, washers *z* *z* and nut *y*.

No. 6930. Improvements on Lamp Burners.

(*Perfectionnements aux becs de lampes.*)

James Curzon, Darien, Ct., U. S., 4th January, 1877, for 5 years.

Claim.—1st. A lamp burner made of flat angular or curved wick tubes which radiate from the centre of the burner to form a star-shaped flame; 2nd. The combination of a dome provided with radial recesses extending from the center with a burner having radial wick tubes or sections; 3rd. The combination with radially arranged wick tubes of a perforated screen having a central orifice for supplying air to the inner edges of the flames.

No. 6931. Improvements on Railway Car Trucks.

(*Perfectionnements aux trécaux des voitures de railroads.*)

Laban B. Lyons and David M. Lyons, Gallichothe, Ohio, U. S., 4th January, 1877, for 5 years.

Claim.—1st. The detachable Lyons and confining link and hooks in combination with the truck beams; 2nd. The angular truck irons in combination with the metal frame provided with lateral and vertical projections; 3rd. The U-shaped hangers made in one piece in combination with the vibrating bearing or beam; 4th. The detachable hook hangers for suspending the brake beam in combination with the brackets *ab* having removable pins; 5th. The combination of the hangers with the pivoted brake shoes and the brake head, the latter having a notch or open slot to receive the rod where-by the shoe is held in proper position on the head; 6th. The combination with the brake beams of the sliding hook *X* the link or staple *O* for securing the latter and the operating lever; 7th. The brake beam double hook hanger and recessed blocks attached to the beam to support the beams and to adapt them for convenient detachment; 8th. The cast frames *A* *A* having mortises for reception of the ends of the truck timbers.

No. 6932. Processes of Eliminating Phosphorus from Iron.

(*Procédés pour chasser le phosphore du fer.*)

John B. Kunkel, Catoctin Furnaces, Md., U. S., 9th January, 1877, for 5 years.

Claim.—1st. Reducing the oxide of iron to the metallic state in presence of dolomite; 2nd. The process of purifying metallic iron and eliminating phosphorus therefrom the same consisting in treating the molten metal with dolomite.

No. 6933. Composition of Matter for the Cure of Diseases of Horse Hoofs and Feet.

(*Composé pour la guérison des maladies des sabots et des pieds des chevaux.*)

Hiram Soper, Port Hope, Ont., 9th January, 1877, for 5 years.

Claim.—A compound composed of the following ingredients, viz iodine iodate of potash, hyposulphate of soda, gum, camphor, castor oil, glycerine, ammonia and hog's lard mixed in the proportions stated.

No. 6934. Improvements on Chairs.

(*Perfectionnements aux chaises.*)

Guillaume S. De Bonald, Berthier (en haut), Que., 9th January, 1877, for 5 years.

Claim.—The combination with a chair *A* the rocking holder *B* fixed to the transverse axis *C* with a bush *D*, the peg rod *J* *J*, one on each side of the chair seat *L*, and the disk or hat *s*, and *K* attached under the chair seat *L* to make the improved chair.

No. 6935. Improvements on Shirts.

(*Perfectionnements aux chemises.*)

Sarah J. Angus, Assignee of James Angus, Ottawa, Ont., 9th January, 1877, for 5 years.

Claim.—Two bosoms overlapping either one over the other uniformly or equally which bosoms are attached to the shirt.

No. 6936. Improvements on Vehicle Axles and Wheels.

(*Perfectionnements aux essieux et aux roues de voitures.*)

Benjamin F. Richardson, Cincinnati, Ohio, U. S., 9th January, 1877, for 5 years.

Claim.—1st. The axle *D* having its arm in two lengths offset to make different diameters the larger of which has greater sectional area and strength than the sectional area and strength of the body of the axle; 2nd. The carriage or wagon wheel having an axle box of different diameters so as to give great depth of spoke tenons and a separate shoulder *e*, for the spokes to shoulder and rest thereon; 3rd. In connection with the axle arm the lubricator grooves *F* *G*; 4th. The combination of dust and dirt prevent ing chambers *J* *L*, washers *K* *M*, axle collar *d* and retaining nut *M*, with the combination of chambers *J* *L*, washers *K* *M*, axle collar *d* and grooves *F* *G* *H* *I*; 6th. A wheel having spokes with alternating straight and tapering tenons all being driven into mortises; 7th. The tightening plate *N* with two sockets or chambers *L* *L*; 8th. The deep annular chamber *H* of the axle arm *d* for giving flexibility and elasticity to the latter; 9th. The box *E* and flanged band *E* *K* having bevelled faces *e* *L*; 10th. The oiling groove *e* located in the rear side of the axle; 11th. The chamber *J* provided with groove *e*; 12th. The collar *d* having the groove *ds*; 13th. The chamber *L* having the groove *L*; 14th. The nut *M* having on its inner face the groove *m*; 15th. The two part nuts *M* *m*.