

strengthening and confining cover of canvas or a like material enveloping said tube, said cover being formed or provided with edges or flaps enveloping and secured to the inner face of the rim, as set forth. 4th. The combination, with the rim of a cycle wheel, and an inflated expansible tubular tire, of a tubular non-expansible confining envelope surrounding the said tire and formed or provided with flaps or free edges turned over and cemented to the inner face of the rim, as set forth. 5th. The combination, with the rim of a cycle-wheel, and an inflated expansible tubular tire, of a tubular non-expansible confining envelope surrounding said tire and provided with flaps or free edges secured to the rim, and an outer protective covering of India-rubber, the edges of which are secured to the inner face of the rim, as set forth. 6th. The combination, with the rim of a cycle-wheel, of an inflated expansible tubular tire, a strengthening strip *c*, secured to the periphery of the rim, a strip *b*, of canvas or like material around the tire and rim, said strip being united to and forming with the strip *c*, a non-expansible envelope for the tire, as set forth. 7th. The combination, with the rim *C*, of an inner expansible tube *B*, and outer protective covering *A*, and strengthening folds or layers *b*, *c*, of cloth canvas or linen, and protective strips *D*, of caoutchouc interposed between the edges of the rim and the strengthening fold or layer *c*, as set forth. 8th. The improved non-return air-valve herein described, consisting of a plug contained in a tube of elastic material, as set forth. 9th. The valve consisting of a circumferentially grooved plug or cylinder of hard rubber or the like, in combination with an elastic tube surrounding the same and entering the compartment or space in which the air is to be compressed. 10th. An improved tire, comprising an outer or protective covering *A*, having cemented or molded therewith one or more layers or folds of canvas or other fabric elastic or giving in one direction, and in elastic or unyielding in the other the folds *b*, *c*, and an inflated tube *B*, as set forth.

No. 36,553. Boot and Shoe Slugging Machine. (*Machine à poser les clous métalliques pour la protection des chaussures.*)

Solomon M. Cutter, of Quebec, Quebec, Canada, 8th May, 1891; 5 years.

Claim.—1st. In a boot and shoe slugging machine, the combination of a vertically operating driver, a work supporting horn automatically adjustable vertically and means for effecting the automatic adjustment thereof, work feeding mechanism, a supply pot for the slugs, and an inclined guideway leading from such pot to the driver with means for feeding the slugs from the pot to the guideway, retaining devices for controlling the feed of the slugs to the driver, and means for supporting and operating the whole, as set forth. 2nd. In a boot and shoe slugging machine, the combination, with a vertically operating driver and means for feeding slugs to same, of a work supporting horn held at a normal height by yielding pressure devices and capable of movement above or below such normal height, and means for effecting such movement in either direction, as and for the purposes set forth. 3rd. In a boot and shoe slugging machine, the combination, with a vertically operating driver and a work supporting horn, of an inclined expansible guideway, means for supporting same and means for feeding slugs to same, as set forth. 4th. In a boot and shoe slugging machine, the combination, with a guideway, of a pot or receptacle for slugs, a plunger adapted to work vertically up through same, and having a hinged head normally flush with the bottom of such pot and extended in part out beyond the hinging point, a guard for preventing slugs interfering with such hinging point, an inclined guide plate extending from the top of said guideway to a point within the line of movement of the extended part of said head, and means for imparting a reciprocating movement to said plunger, as and for the purpose set forth. 5th. In a boot and shoe slugging machine, a driver for the slugs secured to a vertically reciprocating cross head, the upward movement of which is secured by means of a roller projection on the face of the driving shaft and the downward movement by a spring plunger, as shown and described. 6th. In a boot and shoe slugging machine, the combination, with an inclined guideway for the slugs, of an escapement device located at the foot of same and consisting of a spring with an end normally inserted in the way of the heads of the slugs, and a finger plate with bevelled end adapted to be inserted between the bodies of the slugs, and means for imparting to said spring and finger a reciprocating movement transversely to the guideway so that the spring will move out of the way of the slugs and the finger enter between the lowermost two, as and for the purpose set forth. 7th. In a boot and shoe slugging machine, the combination, with the chute *Q*, having a channel *Q'*, for the vertical driver to work in and a channel *Q''*, for the slugs to pass down, of a channel *Q'''*, converging with that *Q'*, to a point of entry into the said channel *Q'*, a spring holder *Q''''*, projecting transversely across the channel *Q'*, near the lower end thereof and a reciprocating "placer," with means for operating same, working through said channel *Q''*, and adapted to push the slug into position between the end of said holder and the side of the channel *Q'*, for the purpose set forth. 8th. The combination, with the perforated and grooved head *G*, and guiding channel *Q'*, in chute *Q*, of driver *O*, cross head *O'*, cut away at *O''*, means for securing said driver to said cross-head, driving shaft *F*, and roller projection *O'''*, on the end of same, spring plunger *O''''*, and means for supporting same as shown and described. 9th. The combination, with the horn *E*, its stand *D*, *D'*, and the driving shaft *F*, of lever *D''*, rods *K'*, and *L'*, ledge *L''*, clamp plates *K''*, *K'''*, springs *K''''*, *K'''''*, and *k'*, bar *K''''*, and cams *K* and *L*, as shown and described. 10th. The raceway composed of body *S*, and cover strips *S'*, *S''*, inclined and bevelled for the purpose set forth. 11th. The combination of the raceway body *S*, cover strips *S'*, *S''*, having transverse slots *s*, *s'*, and set screws *S'''* for the purpose set forth. 12th. The combination, with the raceway cover strip *S'*, and screws *S'''*, of the removable cover *X*, for the purposes set forth. 13th. The agitating rod *X'*, located in the raceway and means for carrying and operating same for the purpose set forth. 14th. The combination, with the raceway support *S''*, of the set screw *X''*, projecting into the line of movement of the rise *k*, on the cam *K*, for the purpose set forth. 15th. The combination, with the chute *Q*, of the spring re-

tainer *X'*, having a projecting ear *X''*, and being located at the mouth of the channel *Q'*, the adjusting screw *X'''*, threaded in such spring, the opener *X''''*, and means for carrying and operating same for the purpose set forth. 16th. The knocker *Y*, located above the mouth of the channel *Q'*, in chute *Q*, and means for carrying and operating same for the purpose set forth.

No. 36,554. Means of Stopping and Regulating the Flow of Oil from Lamps, etc. (*Moyen d'empêcher et régler l'écoulement de l'huile des lampes, etc.*)

Samuel Noton, Oldham, Lancaster, England, 8th May, 1891; 5 years.

Claim.—1st. The application to the outlet end *a*, or pipe *e*, of the supply vessel *b*, of a disk or other suitable valve *f*, employed internally thereof, substantially as and for the purpose specified. 2nd. The valve *f*, specified in the preceding claim, formed or furnished with a rod or chain *g*, and opened from the exterior of the supply vessel *b*, by means of a nut or plug *h*, or lever *i*, substantially as and for the purpose specified.

No. 36,555. Liquid Hydro-Carbon Burner. (*Foyer à hydro-carbures.*)

John Eugene Hersey, Montreal, Quebec, Canada, 8th May, 1891; 5 years.

Claim.—1st. The combination, in a liquid hydro-carbon burner, of a sleeve provided with a blast of air passing through it, also provided with a flow of liquid hydro-carbon fuel presented in proper form to be atomized by the said blast passing through the sleeve, with openings formed outside the sleeve, the said sleeve projecting beyond the said outer openings, the whole substantially as described. 2nd. The combination, in a liquid hydro-carbon burner, of the sleeve *O*, provided with a means of presenting liquid fuel to be atomized by means of a blast of air passing through the said sleeve, openings *g*, situated outside the sleeve *O*, said sleeve extending beyond the openings *g*, the whole substantially as described for the purposes set forth.

No. 36,556. Box for Cigars. (*Boite à cigares.*)

Pierre Dunan and Jean Baptiste Peloquin, both of Montreal, Quebec, Canada, 8th May, 1891; 5 years.

Claim.—1st. In a mechanical cigar box, the handle *H*, pieces *h*, *f* and *g*, projection *G*, and *g''*, guides *e* and *g'*, bell crank *K*, support *k''*, pieces *k'''*, guides *k''''*, springs *O*, *o*, and *M*, drawer *L*, and piece *J*, substantially as described and for the purpose set forth. 2nd. In a mechanical cigar box, the handle *H*, pieces *h*, *f*, and *g*, projection *G*, guides *e*, and *g'*, springs *O*, and *o*, piece *p*, and cigar conveyor *P*, substantially as described and for the purpose set forth. 3rd. In a mechanical cigar box, the handle *H*, pieces *h* and *f*, guide *e*, spring *O*, pieces *g*, and *g'*, and magnet *Q*, substantially as and for the purposes set forth. 4th. In a mechanical cigar box, the combination of the handle *H*, pieces *h*, *f*, *g*, *k''*, *p*, *g*, and *g'*, projections *G*, *g''*, and *J*, guides *e*, *k'* and *g'*, bell crank *K*, support *k''*, springs *O*, *o*, and *M*, cigar conveyor *P*, and magnet *Q*, with the cigar boxes *A*, and *B*, substantially as described and for the purposes set forth.

No. 36,557. Protector for Piles or other Timber. (*Couverture de pieu, etc.*)

James Clark, George L. Palmer and Le Roy A. Palmer, all of Tacoma, Washington, U.S.A., 8th May, 1891; 5 years.

Claim.—1st. A protector for piles or other timbers, consisting of a ring or shell surrounding said pile or piles or other timber, and free to move up and down thereon by the motion of the water, said ring or shell being provided with a roughened or brush-like surface on its interior face, substantially as described. 2nd. The combination, with the float surrounding the pile or other timber, of a ring or rings arranged below said float and secured in a pendent manner thereto, substantially as described. 3rd. A pile-protector, consisting of a ring or shell surrounding the pile and free to move up and down thereon by the action of the water, substantially as described. 4th. A pile-protector, comprising one or more rings or shells surrounding the pile and free to move thereon by the action of the water, in combination with a float, substantially as described.

No. 36,558. System of Harmonious Colouring. (*Système de couleur avec harmonie.*)

Harmonious Colouring Company, Manchester, assignees of Charles Henry Wilkinson, Longwood, York, both in England, 8th May, 1891, 15 years.

Claim.—1st. The herein described system or method of harmonious colouring in which an octave or scale in colour corresponding to the gamut or diatonic scale in harmony is produced by setting the three primary colours, red, yellow, and blue, respectively in the order named to the notes C, E, G, of the common chord in the natural key, and then by mixing these said primaries in certain definite proportions based upon the mathematical relation which exists between the different notes of the musical scale, the remaining principal or prismatic colours, orange, green, indigo and violet, are obtained and placed in corresponding positions respectively to the remaining natural notes D, F, A, B, of the musical scale, while the intermediate colours representing the sharps and flats are produced by equal admixtures of the principal colours on each side of them respectively, the octave or prismatic scale of colours thus obtained being darkened in descending octaves by adding black, and lightened in ascending octaves by adding white, all substantially as and for the