

about seamless plated exterior surface of metal and an interior portion of inferior metal, substantially as and for the purpose set forth. 2nd. The ring or other analogous articles hereinbefore described, consisting of a piece of plated or composite externally seamless wire bent and united at the abutting ends by solder, substantially as specified. 3rd. A composite ring, having a roundabout seamless exterior surface of suitable metal, as alloyed gold, and an interior or filling portion, as *b*, of inferior metal or composition of metals united to said exterior portion, and having the ends of the ring united, substantially as shown and hereinbefore described. 4th. The ring hereinbefore described, consisting of the exterior plate or shell *a* of alloyed gold, seamless roundabout, and the interior or filling portion *b*, of gold of less value united to the shell, thereby producing filled ring having gold of different qualities, substantially as shown and set forth. 5th. The composite tubular ring hereinbefore described, consisting of the longitudinally seamless exterior plate or shell *a* and the longitudinally seamless interior shell of inferior metal united to the outer shell, substantially as set forth.

### No. 34,457. Flash Light Advertising Sign.

(*Enseigne d'annonce à jet de lumière.*)

Frederick J. Mitchell and Benjamin F. Wheelwright, New York, N.Y., U.S., 2nd June, 1890; 5 years.

*Claim.*—1st. In a flash light advertising device, the combination with a design to be illuminated, of a clock train, a cam actuated by said train, a valve and valve chamber, the said cam and valve being operatively connected, and a main for supplying an illuminant to the valve chamber and to the design, substantially as described. 2nd. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam actuated by said train, a valve and valve chamber, the said cam and valve being operatively connected, a main for supplying an illuminant to the valve chamber, and a by-pass connecting the said main and design, substantially as described. 3rd. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam actuated by said train, a valve chamber *P* and *P'*, a "water cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, the said cam and "water cock" being operatively connected, substantially as described. 4th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a valve chamber *P* and *P'*, a "water cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, mechanism for operatively connecting the "water cock" and cam, a main *Q*, *Q'*, and a by-pass *S* connecting the design and main, substantially as described. 5th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam *G* actuated by said train, a fly-fan *X* for controlling said cam, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, the said cam and "water-cock" being operatively connected, substantially as described. 6th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam *G* actuated by said train, a fly-fan *X* for controlling said cam, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, rocker arm *H* pivotally supported at one end and in operative contact with said cam at the other, and levers *I* and *J* pivotally connected with arm *H* and "water-cock," substantially as described. 8th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, rocker arm *H* pivotally supported at one end and in operative contact with said cam at the other, levers *I* and *J* pivotally connected with the arm *H* and "water-cock," substantially as described. 9th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam *G* actuated by said train, a fly-fan *X* for controlling said cam, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, rocker arm *H* pivotally supported at one end and in operative contact with said cam at the other, the levers *I* and *J* pivotally connected with the arm *H* and "water-cock," substantially as described. 10th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam *G* actuated by said train, a fly-fan *X* for controlling said cam, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, rocker arm *H* pivotally supported at one end and in operative contact with said cam at the other, levers *I* and *J* pivotally connected with the arm *H* and "water-cock," substantially as described. 11th. In a flash light advertising device, the combination, with a design to be illuminated, of a clock train, a cam *G* actuated by said train, a fly-fan *X* for controlling said cam, a valve chamber *P* and *P'*, a "water-cock" comprising the outer tube *L*, inner tube *N* and valve and stem *O*, *O'*, rocker arm *H* pivotally supported at one end and in operative contact with said cam at the other, levers *I* and *J* pivotally connected with the arm *H* and "water-cock," substantially as described.

### No. 34,458. Treatment of Sewage and Apparatus therefor. (*Traitement des produits des égouts et appareil pour cet objet.*)

William Clark, William A. Clark, Charlton, Richard Ginman and William Ginman, Plumstead, Eng., 2nd June, 1890; 5 years.

*Claim.*—1st. A separator or filter, comprising a cylinder or casing, helical rotary blades arranged therein for the purpose of imparting a whirling motion to the substances to be separated, filtering mate-

rial contained in the wall of the said cylinder or casing, and through which the liquid will be driven by the centrifugal force, and separate outlets, one for the discharge of the liquid and the other for the discharge of the solid or semi-solid matter separated therefrom, substantially as and for the purposes set forth. 2nd. In a separator or filter, the combination, with a cylinder or casing, and rotary helical blades arranged therein for imparting a whirling motion to the substances to be separated, of removable segments fitted in apertures in the wall of the said cylinder or casing, and containing filtering material through which the liquid is forced by the centrifugal force, separate outlets being provided for the discharge of the liquid and of the solid or semi-solid matter, substantially as and for the purposes set forth. 3rd. In a separator or filter, the combination of the cylinder or casing *a*, the helical blades *c* arranged to rotate therein, and removable doors or segments *b* provided with the adjustable lids *b'* and forming parts of the wall of the said cylinder or casing, substantially as and for the purposes described. 4th. The combination, with a sewer, of separators or filters, each comprising a cylinder or casing, rotary helical blades arranged therein, and filtering material contained in the wall of the said cylinder or casing, and pipes connecting the said separators or filters with the said sewer, so that the sewage is divided and sub-divided into small streams, which are passed through the said separators or filters, substantially as and for the purpose set forth.

### No. 34,459. Artificial Fuel.

(*Combustible artificiel.*)

Daniel C. Fischel and W. Frank Kelly, Troy, N. Y., U. S., 2nd June, 1890; 5 years.

*Claim.*—An artificial fuel composed of vegetable refuse, thirty-five parts, coal tar, five parts, charcoal, ten parts, coal dust, ten parts, furnace slag, thirty parts, and oyster or clam shells, ten parts, substantially as set forth.

### No. 34,460. Railway Spike.

(*Chevillette de chemin de fer.*)

The Dunham Manufacturing Company, Boston, Mass., (assignee of James Churchward, Brooklyn, N.Y.), U.S., 2nd June, 1890; 5 years.

*Claim.*—1st. A railway spike having the lower end of its body formed with a sword edge lying in a plane at an obtuse angle to the base line of the head of the spike, substantially as shown and described. 2nd. A railway spike having the forward face of the lower end of its body formed with a sword edge lying in a plane at a right angle to the base line of the head of the spike, substantially as shown and described. 3rd. A railway spike having the lower end of its body formed with two sword edges, one lying in a plane at an obtuse angle to the base line of the head of the spike and the other at a right angle to said base line, said edges meeting at an acute angle, substantially as shown and described.

### No. 34,461. Fabric for Machine Belting and other like purposes. (*Tissu pour les courroies de machines et autres fins similaires.*)

The Globe Patent Right Company, (assignee of Joshua P. Maddox), Portland, Me., U.S., 2nd June, 1890; 5 years.

*Claim.*—The herein described material for belting and other like purposes, consisting of two or more interior plies bound together by a metallic binder warp and facing plies bound to said interior plies, substantially as described.

### No. 34,462. Oyster Pail. (*Seau à huîtres.*)

Bruce Murphy, Orillia, Ont., 3rd June, 1890; 5 years.

*Claim.*—The combination, in an oyster pail, of the sides *A* formed of wood veneer, a wood cover or lid *C*, having metallic strips or catches *d*, affixed thereto for bending over the sides *A*, a wood bottom *B*, and wire bail attached to sides, all constructed substantially as and for the purpose specified.

### No. 34,463. Secondary Battery.

(*Pile secondaire.*)

Henry Woodward, Toronto, Ont., 3rd June, 1890; 5 years.

*Claim.*—1st. An electrode for a secondary battery composed of a series of cylindrical or otherwise shaped perforated tubes made of vulcanized rubber or other acid proof non-conducting material, the said tubes being passed through one or more holders or separators made of vulcanized rubber or other acid-proof non-conducting material, each tube containing a spindle or stem surrounded with lead filings, shavings, or other small pieces of lead, or alloy of lead, the upper ends of each spindle being attached to a horizontal lead connector, and two or more of the electrodes so constructed placed in a cell preferably made of glass and containing the ordinary solution of sulphuric acid, substantially as and for the purpose specified. 2nd. An electrode for a secondary battery composed of a series of cylindrical or otherwise shaped perforated tubes made of vulcanized rubber or other acid proof non-conducting material lined with lead likewise perforated, the said tubes being passed through one or more holders or separators made of vulcanized rubber or other acid-proof non-conducting material, each tube containing a spirally-shaped or corrugated spindle or stem surrounded with lead filings, shavings, or other small pieces of lead, or alloy of lead, the upper ends of each spindle being attached to a horizontal lead connector, and two or more of the electrodes so constructed placed in a cell preferably made of glass and containing the ordinary solution of sulphuric acid, substantially as and for the purpose specified.