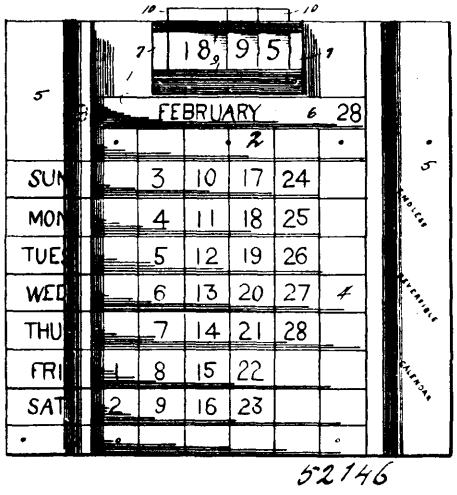
combination, with the endless conveyer suitably supported, of a discharging chute and a supplemental endless conveyer in proximity to the discharging roller and a scraper for such conveyer, as and for the purpose specified. 24th. In a road-grading machine, the combination, with a wheeled carriage carrying a frame, of a plough adjustably mounted on said frame, a transverse inclined conveyer upon which the plough deposits the earth, and a retaining plate extending across from side board to side board above the bottom roller, as and for the purpose specified. 25th. In a machine of the class described, the combination, with the endless conveyer and frame and clearing scoop secured in front of the bottom roller on the frame, of the upright c^2, having a downward extension, as shown and for the purpose specified.

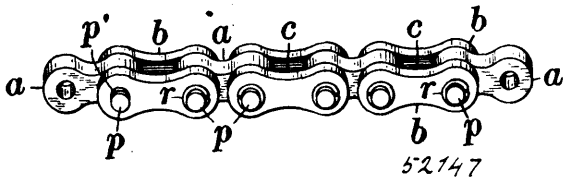
No. 52,146. Calendar. (*Calendrier.*)



Amos S. Walmer, Palmyra, Pennsylvania, U.S.A., 1st May, 1896; 6 years. (Filed 12th March, 1896.)

Claim.—A perpetual calendar, having a back provided upon its front and rear faces with vertical guides which are set out from the plane of the back, a vertical column of characters indicating the days of the week permanently arranged upon one of the front vertical guides, a series of horizontal separate day slats corresponding in number with the days of the week, and each bearing a plurality of numerals representing days of the month, a plurality of said slats being inscribed upon both sides and adapted to be reversed when the number of days of the current month exceeds twenty-eight, a series of month slats adapted to be arranged when not in use in the said guides at the rear side of the back, said month slats being inscribed upon both sides and one of them being adapted for arrangement above the plane of the column week characters on the front side of the back, pockets arranged respectively upon the front and rear sides of the back, and a series of separate year slats having numerals adapted to be arranged in a vertical position in either of said pockets, the exposed numerals of the year slats in the front pocket being designed to indicate the current year, substantially as specified.

No. 52,147. Sprocket-Chain. (*Chaine dentée.*)



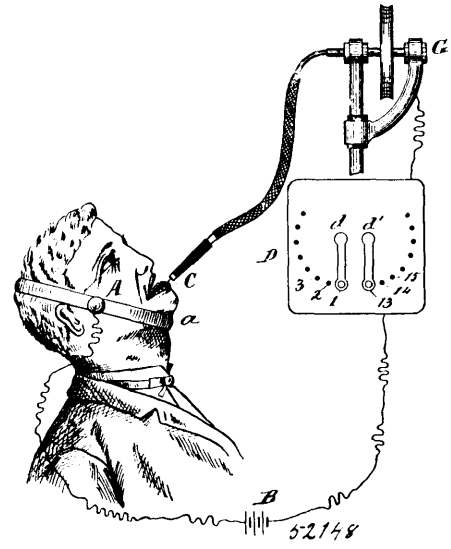
Benjamin Franklyn Sparr, Newark, New Jersey, U.S.A., 1st May, 1896; 6 years. (Filed 12th March, 1896.)

Claim.—1st. In a sprocket-chain formed of series of links with overlapped ends pivoted together, the combination, with the pivotal pins for said links provided at one end with peripheral grooves, of spring clips applied to said pins within said grooves and adapted to grasp the same, as and for the purpose set forth. 2nd. The sprocket-chain formed of a series of central links a, series of lateral links b, pivoted pins p, with annular peripheral grooves p^1, and split rings r, applied to said pins within the grooves p^1, as herein shown and described.

No. 52,148. Process of and Apparatus for Obtunding the Sensory Nerves of a Tooth during the Excavation of a Cavity therein. (*Appareil dentaire électrique.*)

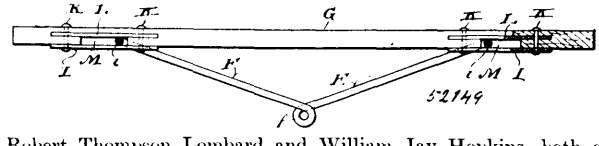
William Perry Horton, jr. and Ansel B. Jones, both of Cleveland, Ohio, U.S.A., 1st May, 1896; 6 years. (Filed 14th March, 1896.)

Claim.—1st. The herein described process of obtunding the sensory nerves of a tooth during the excavation of a dental cavity therein, which consists in (1) applying to that side of the patient's face on which the tooth is located, an electrode which is connected with one pole of an electrical generator, (2) connecting the excavating instrument with the other pole of said generator, and (3) varying the



current outside the body of the patient, substantially as and for the purpose specified. 2nd. The herein described process of obtunding dental nerves during the excavation of a tooth, which consists in (1) applying to that side of the patient's face on which the tooth to be excavated is located, an electrode which is connected with the negative pole of a galvanic battery, (2) connecting the excavating instrument with the positive pole of said battery, and (3) varying the resistance in the circuit outside of the patient during the progress of the excavating operation, substantially as and for the purpose specified. 3rd. In an apparatus for excavating dental cavities and simultaneously obtunding the sensory nerves which are being affected by the operation, the combination of an electrical generator, an electrode connected with one pole of said electric generator, and means for securing the same against the patient's face, with the revolving burr of a dental engine having an insulating hand-piece, suitable electrical connections between said burr and the other pole of said generator, and mechanism connected in the circuit for varying resistance in the circuit by small increments, substantially as and for the purpose specified.

No. 52,149. Vehicle Spring. (*Ressort de voitures.*)



Robert Thompson Lombard and William Jay Hopkins, both of Racine, Wisconsin, U.S.A., 4th May, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. A vehicle-spring, comprising arc-shaped bearings rising upwardly and outwardly from the centre, two pairs of spring-leaves or rods pivotally attached at a common centre to said bearings below the lowest bearing line of said arcs, and normally in contact with some portion of said arc-shaped bearings, and terminating in outer transverse ends, and a beam or board loosely connected at its ends to said outer transverse ends of the spring leaves or rods for affording play thereto, substantially as set forth. 2nd. A vehicle-spring, comprising two pairs of arc-shaped bearing plates connected together so as to straddle and rest upon a bolster, and rising upwardly and outwardly from a lowest point at the centre thereof, two pairs of spring leaves or rods pivotally attached at a common centre to said bearing-plates at the centres thereof, and normally in contact with some portion of said arc-shaped bearing plates and terminating in outer transverse ends, and a beam or board provided with slots or loops for the reception of the said transverse ends of the said spring leaves or rods, substantially as set forth. 3rd. A vehicle-spring, comprising two pairs of arc-shaped bearing plates, each pair rising upwardly and outwardly from a lowest point at the centre thereof and connected together so as to straddle and rest upon a bolster, two pairs of spring leaves or rods pivotally attached at a common centre to bolts projecting from the described centres of the