G, for operating the conveyor or conveyors, a shaft H1, provided with a bevel gear or gears, as H, for giving motion to the shaft or shafts E, a hopper, or hoppers, as I, for containing the articles to be fed to the conveyor or conveyors, and a graduated receptacle or receptacles to receive the articles as they are carried forward by the conveyor or conveyors, all substantially as described.

No. 22,633. Combined Bill Distributing and Advertising Machine. (*Machine à Distribuer les Affiches et Armoncer.*)

James Castle, Toronto, Ont., 14th October, 1885; 5 years.

Claim.—1st. A combined bill-distributing and advertising machine, composed of a series of rollers and elastic bands, located within a suitable case, having a glass panel in the front, and displaying a travelling advertising sheet, and a notice placed above a protruding handbill inviting visitors or passers by to take one, substantially as shown and described and for the purposes set forth. 2nd. In a combined bill-distributing and advertising machine, constructed as described, the rollers E, F, G, H, I, J and K, in combination with the elastic bands L, L, and a protruding hand-bill C, in front of others wound upon a roller, as specified and described, and operating as set forth. 3rd. In a combined bill-distributing and advertising machine, constructed as described, the rollers N, O, P, in combination with the travelling sheet D and the bands L, L, arranged and operating substantially as set forth.

No. 22,634. Gearing and Relief Mechanism for Driving Rolls, etc. (*Mécanisme d'Engrenage et de Secours pour Mettre en Mouvement les Cylindres, etc.*)

William F. Cochrane, Cambridge, Ind., U. S., 14th October, 1885; 15 years.

Claim.—1st. In combination with a hollow roll mounted in adjustable bearings, and a driving shaft passing longitudinally through said roll, and supported in fixed bearings, the improved universal gear or coupling, consisting essentially of the two adjacent sleeves or hubs provided with toothed flanges at their opposite ends, and attached, the one to the journal of the roll, and the other to the driving shaft, and the sleeve or coupling surrounding the first-mentioned sleeves or hubs, and provided with teeth at each end engaging the teeth on the flanges of said sleeves or hubs, substantially as described. 2nd. The improved universal coupling, constructed substantially as described and arranged for connection, two rotating shafts lying in parallel planes, and adjustable laterally, the one with respect to the other, consisting of the two hubs or sleeves with toothed flanges upon their opposite ends, and the hollow coupling or sleeve having spherical bearings at each end upon one of said hubs, and provided with teeth engaging the flanges, substantially as described. 3rd. As a means for connecting and driving both of a pair or set of rolls, of which one roll is adjustable towards and from the other, the combination of the rolls supported in independent bearings, the driving shaft passing through the enlarged longitudinal opening in the movable roll, and supported in fixed bearings, the gears applied to the said shaft and the rolls supported in fixed bearing, and the universal coupling applied intermediate the shaft and movable roll for driving the latter, substantially as described. 4th. In combination with a pair of rolls, one of which is adjustable towards and from the other, a driving shaft mounted in bearings having a fixed relation to the journal of the non-adjustable roll, and connected thereto by gears applied directly to the shaft and roll, and a universal coupling, such as described, connecting the adjustable roll and shaft, substantially as and for the purpose set forth. 5th. The herein described improved system of gearing for driving, from a single line of shafting, two or more pairs of rolls arranged in series, which consists in arranging in line two or more sets or pairs of rolls, each provided with a back roll mounted in fixed bearings, a hollow front roll mounted in adjustable bearings, a shaft mounted in fixed bearings and passing through the adjustable roll, said shaft being connected to the back roll, by gears to the adjustable roll by a universal coupling, uniting the proximate ends of the shafts of adjoining pairs of rolls by detachable couplings, and applying the power to drive the rolls to one of the said shafts, substantially as described, whereby all the rolls are driven from a single line shaft, and any pair or set of rolls can be removed without disturbing the remaining pairs or sets in the series. 6th. The combination, to form a series of two or more sets or pairs of rolls, substantially as described, each set provided with a separate frame or bed plate, upon which are mounted the back roll in fixed bearings, the hollow front roll in movable bearings, and the shaft passing through the hollow roll and connected to the latter, said shaft being also supported in fixed bearings and connected to the shaft of the succeeding pair of rolls by a detachable coupling, substantially as and for the purpose set forth. 7th. The combination of two or more sets or pairs of rolls, each arranged to be driven by a shaft mounted in bearings on the frame and passing through the centre of the adjustable roll to which latter it is connected by a universal coupling, such as described, with detachable couplings applied to the proximate ends of the said shaft, thereby forming a sectional driving shaft and permitting the removal of any set of rolls from the series, as and for the purpose set forth. 8th. In combination with the bed plate or frame provided with bearings for the back roll, and movable bearings for the hollow adjustable roll, the driving shaft passing through the adjustable roll, and connected to the latter at one end by a universal coupling, and at the other end to the back roll by gearing said shaft being supported in bearing attached to the bed plate or frame, substantially as described. 9th. In combination with the rolls mounted in bearings upon the bed plate or frame, the driving shaft connected directly to one roll by a universal coupling, and to the other roll by gearing, as described, of the enclosing casings for the gears and couplings secured to the bed plate or frame and provided with bearings for the driving shaft, substantially as and for the purpose set forth. 10th. The combination with a roll and its driving gear, of a relief mechanism, substantially as indicated, connected to the bearings of a roll, and actuating the clutching devices, to effect the disengagement of the roll and its driving mechanism when the former is forced back, substantially as described. 11th. In combination with a roll mounted in movable bearings, and held to its work by an elastic or yielding pressure device, a driving shaft with intermediate gearing connecting it to said roll, a clutch for connecting and disconnecting said gearing, and a relief mechanism, substantially such as indicated, connected to, and actuated by, the movable bearings of the roll, to ship the clutch and stop or start the roll, substantially as and for the purpose set forth. 12th. In combination with the main driving shaft, the rolls and the gearing intermediate the shaft and rolls, a relief mechanism of the character described, connected to, and actuated by the bearings of the movable roll, said relief mechanism being provided with shippers for disengaging the gearing from the driving shaft, and stopping the rolls, substantially as described. 13th. In combination with the driving gearing of a pair of rolls, one of which rolls is mounted in movable bearings, a relief mechanism connected to said movable bearings and provided with devices for unclutching or disengaging the driving gearing, substantially as and for the purpose set forth. 14th. In combination with the adjustable roll mounted in laterally movable bearings, a shaft connected to and actuated by the said bearings when the latter are moved outward, and a clutch operating or disengaging mechanism connected to, and operated by said shaft to uncouple the driving shaft from the roll, and stop the latter, substantially as described. 15th. In combination with a roll supported at each end in laterally movable and pivoted bearings, a relief mechanism, such as described, for actuating the clutch or disengaging devices, said relief mechanism being provided with independent attachments to each of the movable bearings, whereby the movement of either or both bearings will serve to set in motion the relief mechanism and stop the roll, substantially as described. 16th. The combination, with a roll supported in movable bearings and elastic or yielding pressure devices applied to each of said bearings, a main driving shaft, gearing connecting the main shaft and the roll, a shipping or unclutching device intermediate the said shaft and the roll, and a relief mechanism, such as indicated, for actuating said shipping or unclutching devices, said mechanism having an independent connection with each bearing, substantially as and for the purpose specified. 17th. The combination, with a pair of rolls supported respectively in fixed and movable bearings, the driving shaft passing through the adjustable roll, gearing intermediate said shaft and the rolls, and clutches for controlling the application of the gearing to the shaft, of a pair of shippers connected with the clutches, and a rock shaft actuating said shippers to simultaneously disengage both rolls from the driving shaft, substantially as described. 18th. In combination with a rock shaft, which actuates the disengaging mechanism, the toothed sleeve secured thereto, the sleeve connected to the bearing of the roll, and provided with the movable extension having teeth engaging the said toothed sleeve, substantially as described. 19th. In combination with the shaft for actuating the clutch shipping devices, the toothed sleeve applied thereto, the two sleeves, each connected to one of the movable bearings, and the extensions connected to said sleeves by a movable coupling, and provided with inclined teeth engaging the toothed sleeve fastened to the shaft. 20th. In combination with the shaft connected to, and actuated by, the movable bearings of the roll, substantially as described, the reciprocating sleeve carrying the shippers for engaging the movable sections of the clutch, and provided with the inclined teeth or cam surfaces, and the hub fixed to the shaft, and provided with a corresponding series of teeth or inclined cams, substantially as described. 21st. In combination with the movable bearings of the roll, the links or latches, the sleeves mounted upon the clutch operating shaft, the toothed extensions rotating with, but capable of longitudinal movement with respect to said sleeve, and the toothed collar fastened to the said shaft and in position to engage the said toothed extensions, substantially as described. 22nd. In combination with the clutch operating shaft, and devices connected to the movable bearings for actuating said shaft, the ratchet secured to the shaft and engaging a pawl on the frame, to prevent the accidental starting of the roller after its disengagement from the driving mechanism, substantially as described. 23rd. In combination with the roll, the driving shaft and the shipping mechanism, the compound interlocking and friction clutch, consisting essentially of the two sections provided with a series of interlocking projections with their ends bevelled, substantially as described. 24th. In combination with a hollow roll, mounted in movable bearings, a driving shaft passing through said roll and supported in fixed bearings, a universal coupling intermediate the shaft and roll, a clutch for connecting the said coupling to the shaft, a shipper engaging the movable section of the clutch, a sleeve carrying the shipper, and provided with inclined teeth or cams, a shaft carrying a hub provided with a corresponding series of teeth or cams and a spring for holding the said sleeve in engagement with the hub, substantially as described. 25th. The combination, with a pair of rolls, one of which is supported in movable bearings and held in operating position by an elastic pressure device, a driving shaft detachably connected to said rolls through intermediate gearing or driving mechanism, shippers for uncoupling or detaching the gearing from the driving shaft, a shaft connected to, and actuated by the bearings of the rolls, when the latter is forced back from the opposite roll, said shaft in turn being connected to, and actuating the shippers, in the manner and for the purpose set forth.

No. 22,635. Dental Engine. (*Engin Dentaire.*)

Arthur W. Browne, Westfield, N.Y., U.S., 14th October, 1885; 15 years.

Claim—1st. The combination of the driving shaft with the chuck or tool-holder by means of a slip-joint, or telescoping driving connection, consisting of rigid tapered or bevelled end driving ribs or fingers, substantially as described. 2nd. The combination of the driving shaft with the chuck or tool-holder by means of a slip-joint, or telescoping driving connection, consisting of rigid driving ribs or fingers projecting from the chuck or tool holder and the driving shaft, respectively, and the central socket and pin guiding and steadying connection, substantially as described. 3rd. The combination of a hand-piece casing, with a supporting sleeve, by means of a telescoping or slip-joint connection, and a sectional screw-rib locking con-