

compression and expansion of the draw-bar or buffer respectively. 19th. A device for reversing the connection between the balanced brake-beams and the adjusting-bar consisting of a reversing link operated by the brake-beams through the medium of a pitman and crank, and a connecting rod adjustable in said link, substantially as set forth. 20th. The combination, with the reversing link and a connecting rod adjustable in relation thereto, of a bell-crank for effecting the adjustment of the said rod. 21st. In combination with a reversible connection between the brake-beams and the adjusting-bar of the engaging levers, a rotating shaft bearing at one end a crank for effecting the reversing adjustment, and at the other end a lever for operating it. 22nd. The combination of a lever actuated by the movement of the draw-bar, a brake chain connection actuated by engagement with such lever, and an adjusting device determining the engagement or disengagement of the said lever and chain connection by the direction of wheel rotation, or by the will of an operator.

No. 17,264. Improvements in Railroad Brakes. (*Perfectionnements aux freins de railroutes.*)

Dolphus Torry, New York, N.Y., U.S., 13th July, 1883; 5 years.

Claim.—1st. The accumulator brake apparatus, substantially as described. 2nd. A brake actuating apparatus having two springs, one serving as an accumulator to receive and store power derived from the rotation of the wheels, the other receiving power from the first when this is released, and holding such power to apply the brakes when it is itself released. 3rd. The combination of a pair of spring levers, a connection with the wheel or axle applying a strain to one of said levers by the rotation of the wheels, and a connection between the levers applying strain to the second by the reverse movement of the first lever when released. 4th. A pair of levers moved in opposite directions by springs catching and tripping devices acting alternately on said levers, to lock and release the same, a connection putting the spring of the first lever under strain by the rotation of the wheels, a connection between the levers putting the spring of the second lever under strain by the reverse movement of the first when released, and a connection from the second lever applying the brakes by the reverse movement thereof when released. 5th. In combination with a pair of levers or springs, a pivoted catch, the opposite arms of which alternately receive and hold the levers or springs, and a pivoted keeper which determines by its engagements the retention or release of the respective levers or springs. 6th. The combination of a pair of levers or springs, a pivoted keeper having two teeth facing in opposite direction, said teeth having inclined faces which engage with a latch, and a latch having notches set in reverse relation to the keeper for controlling the movement of the same. 7th. The combination of a pair of levers or springs, a vibrating catch or keeper for alternately locking or holding the same under strain, and a vibrating latch to retain the catch or keeper against the pressure of the levers in opposite directions. 8th. The combination, with a pair of levers or springs, of a latch controlling the movements of a catch or keeper, which itself determines the retention or release of the levers or springs, and an electro-magnet controlling the said catch or keeper. 9th. An automatic car brake having the corresponding ends of two brake-beams connected to opposite ends of rotating shafts mounted in the car timbers longitudinally to the car, substantially as described. 10th. A brake actuating apparatus having two springs, one connected with the draw-bar or buffer serving as an accumulator, to receive and store power derived from the movement of the draw-bar or buffer, the other receiving power from the first when this is released, and holding such power to apply the brakes when it is itself released. 11th. A pair of levers moved in opposite directions by springs catching and tripping devices acting alternately on said levers, to lock and release the same, a connection putting the spring of the first lever under strain by the movement of the draw-bar or buffer, a connection between the levers putting the springs of the second lever under strain by the reverse movement of the first when released, and a connection from the second lever applying the brake by the reverse movement thereof when released. 12th. A releasing clutch composed of a shaft bearing a crank and a ratchet, which ratchet, by engaging with a pulley, compels the shaft to rotate when the pulley is rotated by stress from the draw-bar or other source of power, and permits the crank to rotate independently of the pulley after it has passed its centre. 13th. The combination of the releasing clutch with a receiving spring of a brake actuating apparatus, substantially as set forth. 14th. A brake apparatus having receiving spring strained by any suitable source of power, a working spring strained by the recoil of the receiving spring and serving to apply the brakes when released, and a catch for holding the working spring under constraint controlled by a hand-cord or by air pressure, or other means, at the will of the engineer or attendant.

No. 17,265. Art of, and Apparatus for Working and Vulcanizing Compounds of Caoutchouc and Analogous Gums. (*Art de travailler et vulcaniser les compositions de caoutchouc et les gommes analogues et appareil pour cet objet.*)

Albert C. Eddy, Providence, R.I., U.S., 13th July, 1883; 15 years.

Claim.—1st. The improvement in the art of working and vulcanizing articles or goods of great length composed wholly or in part of vulcanizable gum compounds, which consists in delivering said articles or goods directly and continuously from gum working mechanism to a vulcanizing chamber, and subjecting the same to a vulcanizing heat during their transit within and through said chamber, substantially as described. 2nd. The process of progressively and continuously vulcanizing compounds of caoutchouc and analogous gums, substantially as described, by moving them through a heated vulcanizing chamber of sufficient length and at such speed as will enable said compounds to be properly vulcanized during their transit, as set forth. 3rd. The process of progressively and continuously vulcanizing articles of great length composed in whole or in part of

vulcanizable compounds, substantially as described, by moving said articles, without tension thereon, through a heated vulcanizing chamber of sufficient length and at such speed as will enable the compounds to be properly vulcanized during their transit, as set forth. 4th. The combination, substantially as described, of a vulcanizing chamber having suitable apertures for feeding and discharging, and a movable bed extending throughout said chamber, whereby vulcanizable goods may be continuously fed to, and discharged from said chamber. 5th. The combination, substantially as described, of a vulcanizing chamber having an induction and ejection aperture, and an intervening bed and coiling or winding apparatus whereby articles of great length can be vulcanized during their passage through said chamber and thereafter coiled or wound in a finished condition. 6th. The combination, substantially as described, of a vulcanizing chamber having an induction and ejection aperture, a movable bed and coiling or winding apparatus whereby goods of great length can be passed through said chamber and vulcanized in transit without tension thereon. 7th. A tubular vulcanizing chamber provided with a series of steam jackets, each having independent steam induction and ejection pipes, substantially as described, whereby the whole or any portion of said chamber can be heated for service, as set forth. 8th. A tubular vulcanizing chamber open at each end and provided with steam jackets, and with the air vents having caps or valves, substantially as described, whereby the heat can be retained in or freely discharged from said chamber at various points throughout its length. 9th. The combination of the tubular vulcanizing chamber open at each end for feeding and discharging and a tubular steam jacket slip jointed thereon, substantially as described, whereby said chamber and jacket are independently enabled to longitudinally expand and contract, as set forth. 10th. The combination, substantially as described, of mechanism for working vulcanizable gum compounds into proper form for vulcanization and a vulcanizing chamber containing a movable bed, and adapted to continuously receive the product of said gum working mechanism, and to vulcanize the same during its passage through said chamber. 11th. The combination, substantially as described, of mechanism for working vulcanizable gum compounds into articles of great length composed wholly or in part of said compounds, a coiling or winding mechanism and a vulcanizing chamber interposed between the gum working and the coiling mechanism, whereby the product from the gum working mechanism is delivered to, and drawn through said chamber, is vulcanized therein, and then coiled in a finished condition. 12th. The combination, substantially as described, of mechanism for working vulcanizable gum compounds into articles of great length composed wholly or in part of said compound, coiling or winding mechanism, and a vulcanizing chamber containing a movable bed whereby the product of the gum working mechanism is delivered to, and carried through said chamber, is vulcanized therein without tension, and is coiled in a finished condition on leaving said chamber. 13th. A tubular vulcanizing chamber open at each end for the entrance and exit of articles to be vulcanized therein, a flat bed within and extending throughout the length of said chamber, and a steam jacket substantially as described.

No. 17,266. Improvement on Carriage Body Supports. (*Perfectionnement dans la suspension des caisses de voitures.*)

Patrick G. Clancy, Lexington, Miss., U.S., 13th July, 1883; 15 years.

Claim.—1st. The combination, with the two end springs A A₁, of the semi-elliptical spring bars B B having their ends jointed to the ends of the end springs, a spring connection interposed between the middle of the spring bars and cross-bar C C fixed to the spring bars between the spring connection and the ends of said bars, whereby the spring bars find an abutment against each other and rock upon said spring connection, as described. 2nd. The combination, with the two inwardly curved semi-elliptical spring bars B B and the cross-bars C C, of the additional cross-bar C₁, spring stirrup E and U-shaped spring plate F having its branches connected respectively to the two spring bars, as described. 3rd. The combination, with the two semi-elliptical spring bars B B having a rocking abutment against each other, of the cross-bars C C connected to each spring bar by sets of bolts or clips g g, and made adjustable to or from the ends of the spring bars, as described. 4th. The combination, with the duplicate end springs A A₁, of the duplicate spring bars B B and the axles having duplicate seats for the duplicate end springs, as and for the purpose set forth. 5th. The plate H having slotted legs, in combination with the spring A, the axle, the clip I and the bolts j securing the said legs to the axle, as described.

No. 17,267. Improvements in Mowing Machines. (*Perfectionnements aux faucheuses.*)

Charles W. Love, Fairpoint, Ohio, U.S., 13th July, 1883; 5 years.

Claim.—1st. A mowing-machine track-clearer having a coupling hinged to the end-shoe of the finger-bar, two boards at an angle to each other and to the ground, and two slightly bent rods, one attached to the rear of inclined boards and the other to the hinged coupling, as shown and described. 2nd. The combination, with the hinged coupling D having an inwardly projecting arm, of the board F, bolted at its forward end to said arm placed at an angle of about forty-five degrees to the surface and inwardly inclined, as shown and described. 3rd. The combination, with the board F arranged as described, of a board G inclined upwardly toward its outer edge, as and for the purpose set forth. 4th. The combination, with the boards F G arranged as described, of the two curved rods I K, one attached to the rear of boards and the other to the hinged coupling D, as shown and described.

No. 17,268. Apparatus for Treating Artificial Butter, &c. (*Appareil de traitement du beurre artificiel, etc.*)

John Hobbs, Boston, Mass., U.S., 13th July, 1883; 5 years.

Claim.—1st. A cooler which consists of a tank having two or more