

a sheet of paper or similar material, strengthened throughout by parchment, cloth or similar stronger material, and turned over edges provided at the ends of the said sheet, which is gummed at the top and bottom on one side of the sheet and at the corners on the opposite-side. 3rd. A blank for book cover protectors, consisting of a sheet of paper or similar material, substantially of rectangular form, provided with gum upon one side of the sheet, near two opposite edges, and at the corners on the opposite side of the sheet, and with rulings parallel to one another on that side of the paper on which is the first named gum.

No. 39,334. Spring Bed. (*Sommier élastique.*)

Arthur Henry Viel, Fenton, Michigan, U.S.A., 14th July, 1892; 6 years.

Claim.—1st. In a mattress, the combination, with a frame, of a fabric secured thereto consisting of a series of horizontal members arranged in line, and yielding connections between the members having horizontal curves between their connecting points, substantially as described. 2nd. In a mattress, the combination, with a frame, of a fabric secured thereto comprising a series of longitudinal and crimped sections transversely arranged, and a series of horizontal laterally curved and yielding connecting links hooked into the spaces of said crimped sections, substantially as described. 3rd. In a mattress, the combination, with a frame, of a fabric secured therein and comprising a transverse horizontal section B, formed of a continuous wire, bent as shown and described, and the yielding connecting transverse sections C, consisting of single pieces of wire with a lateral horizontal bend extending from end to end, and hooks D formed at the ends thereof, the parts arranged and connected substantially as and for the purpose described.

No. 39,335. Traction Apparatus. (*Appareil de traction.*)

Roger William Wallace, London, England, 14th July, 1892; 6 years.

Claim.—1st. A cable railway or tramway in which endless cables are arranged in succession, in combination, with tripping devices for automatically disconnecting the vehicles from one or other of the said cables and connecting them with the next succeeding cable, for the purposes specified. 2nd. A cable railway or tramway consisting of cables arranged in sections, and electric motors for driving the said cables, substantially as described. 3rd. In a cable railway or tramway, the combination, of endless cables arranged in succession, electric motors for driving the said cables, and tripping devices whereby the disconnection of the vehicles from one or other of the said cables and their connection with the next succeeding cable are automatically effected, substantially as and for the purposes set forth. 4th. In a cable railway or tramway, the combination, with an endless cable and an electric motor for driving the same, of an auxiliary or supplementary electric motor, and automatically operated switches, whereby such auxiliary or supplementary electric motor, is switched into and out of circuit as required, substantially as and for the purposes set forth. 5th. In a cable railway or tramway, the combination, with an endless cable, and an electric motor for driving the same, of another electric motor and an automatically operated switch, whereby, in the event of the first motor becoming inoperative, the second motor is switched into the circuit so that it will work the said cable, substantially as described. 6th. In a cable railway or tramway, the combination, with an endless cable, and an electric motor for driving the same, of another electric motor and automatically operated switches, whereby the second motor is started either when the first motor becomes inoperative or when the load on the first motor exceeds a predetermined limit, substantially as described. 7th. In combination, with a cable railway or tramway, comprising a series of endless cables, and provided with tripping devices, substantially as described, a gripper comprising a movable jaw provided with inclined surfaces through the medium of which it is operated automatically by the said tripping devices, and a lever connected with the said jaw for operating it by hand, substantially as described. 8th. In a cable railway or tramway, the combination, with an endless cable, a shaft for driving the same, and an electric motor geared with the said shaft, of another electric motor and an electrically operated clutch which, when the first motor becomes inoperative or the load on this motor exceeds a predetermined limit, automatically puts the second motor in gear with the said driving shaft, substantially as described. 9th. In a cable railway or tramway, the combination, with an endless cable, of a driving shaft therefor, electric motors, each capable of driving such cable and its load independently of the other motor, and clutches which, when one of the said motors becomes inoperative, will put the same out of gear with the driving shaft, and put the other motor into gear therewith, substantially as and for the purposes set forth. 10th. In a cable railway or tramway, the combination, of endless cables, supporting, guiding and driving pulleys therefor mounted upon shafts working in ball bearings, and electric motors geared with the driving pulleys, substantially as and for the purposes set forth.

No. 39,336. Steam Engine. (*Machine à vapeur.*)

John Alexander Groshon, New York, State of New York, U.S.A., 14th July, 1892; 6 years.

Claim.—1st. The main rocking lever connected at one end by a link with the piston rod of the engine, and at the other end by a rod with the auxiliary rocking lever, combined with the rod extending

from said auxiliary lever to a source of pressure, to resist the movement of the main piston rod during the first portion of its stroke and assist said rod during the latter portion of its stroke, substantially as and for the purposes set forth. 2nd. The main rocking lever connected at one end by a link with the piston rod of the engine, and the auxiliary rocking lever connected by a rod with the other end of said main rocking lever, combined with the rod extending from said auxiliary lever, the piston connected with said rod and the cylinder receiving said piston and being in communication with a source of pressure, substantially as and for the purposes set forth. 3rd. The atmospheric accumulator containing differential pistons and having the pipe leading thereto from the condenser, combined with the system of levers under the pressure of said accumulator for opposing the movement of the piston rod of the engine during the first portion of its stroke and assisting the same during the latter portion of its stroke, substantially as set forth. 4th. In a direct acting steam engine, one or more plungers in the main water cylinder and lever mechanism connecting the same with the main piston rod or rods, whereby the pressure of the water in said cylinder is caused to act in opposition to said rod or rods during the first portion of the stroke and in conjunction therewith during the latter part of the stroke, substantially as set forth. 5th. The main water cylinder having the plunger and partition, combined with an auxiliary plunger or plungers, whose ends are exposed to the pressure of the water at opposite sides of said partition, and lever mechanism connecting the auxiliary plunger or plungers with the main piston rod, whereby the pressure of the water may be caused to oppose the main piston rod during the first portion of its stroke and to assist the same during the latter portion of its stroke, substantially as set forth. 6th. The water cylinder, with its main and auxiliary plungers, combined with lever d^1 , the link connecting the same with the main piston rod, the connecting rod m^1 , and intermediate mechanism between the end of said rod and the rod of the auxiliary plunger, whereby the pressure of the latter is transmitted to said rod m^1 , substantially as and for the purposes set forth. 7th. The water cylinder, with its main and auxiliary plungers, combined with lever d^1 , the link connecting the same with the main piston rod, the connecting rod m^1 , connected at its upper end with the upper end of the lever d^1 , the shaft a^1 , the crank wheel c^1 thereon and securing the lower end of the rod m^1 , the frame x on the shaft a^1 , the rods t extending upward from the opposite sides of said frame, and the lever k connected with the upper ends of said rods t , and by a link with the slide of the auxiliary plunger rod, substantially as set forth.

No. 39,337. Brick Machine. (*Machine à brique.*)

Frederick Lindley Hunt Sims, Toronto, Ontario, Canada, 14th July, 1892; 6 years.

Claim.—1st. In combination, a stationary shaft, the section H, with spaces between forming a series of molds, the covers for said molds, the plungers, and the catches extending through said spaces, and the central cams for operating the plungers and the catches respectively, substantially as described. 2nd. In a brick machine, the molds A, each mold of which is provided with a hinged door N, which is held rigidly in position by the locking lever O, provided with the catch o , and plunger M, having rollers f , in combination with the stationary cam L, designed to operate the plunger M, substantially as and for the purpose specified. 3rd. In combination, the molds having covers with means for automatically holding and releasing them, the plungers operating against the resistance of said covers, and a cam for operating the plungers, having a depression b^1 , acting upon the plungers after the brick is pressed and in unison with the cover leasing means, substantially as described. 4th. In combination, the molds having covers with automatic holding and releasing means therefor, the plungers operating against the resistance of said covers, and a cam for operating the plungers, having a rise to press the bricks, a depression to permit the covers to fly back without undue pressure, and a further rise to discharge the bricks, substantially as described. 5th. In a brick machine, the molds A^1 , each mold of which is provided with a hinged door N, in combination with the locking lever O, provided at one end with the catch o , and at the other with a friction roller p , designed to run in the groove g^1 , in the stationary wave cam P, substantially as and for the purpose specified. 6th. In a brick machine, the locking lever O, provided at one end with the catch o , and at the other end with a friction roller p , which is operated by the waves r , in the groove g^1 , of the wave cam P, substantially as and for purpose specified. 7th. In a brick machine, a door N, provided with plate i , having a groove i^1 , and the plate j , having a groove k , and holes l , substantially as and for the purpose specified. 8th. In a brick machine, the molds, the covers N, the plates S secured within the molds to the side thereof, the core rods secured to the said plates, the plungers M, operating over the core rods, and the plates j secured to the cover and having recesses s^1 , substantially as described. 9th. In a brick machine, the core rods R, secured to the plate S, in combination with set screws designed to hold the plate S rigidly in the space K, between the sections H, and legs of the plunger M, substantially as and for the purpose specified. 10th. In a brick machine, an octagonal frame formed of the section H, each of which is bolted at both sides to the large gear wheels B, in combination with the lugs J, on the gear wheels B, substantially as and for the purpose specified. 11th. In a brick machine, the molds A^1 , secured in the space