atter to normal position, a circuit for the operating electro-magnet, including all save one of the contacts on the escapement, and a local circuit made operative by the engagement of the last contacts at predetermined intervals and detents at intervals, a lever having long and short limit pawls alternately engaging the detents, an electro-magnet of the costagement device, an electro-magnet in which is included an armature of a relay and a main circuit for twing contacts at predeterrial pulsations, a lever cost of a relay and a main circuit for twing contacts arranged with reference to a predetermined combination of electrical upons, a lever carrying a long and short limit pawls alternately engaging the vice having contacts arranged with reference to a predetermined combination of electrical uponsaid escapement device, sind contact but one 23a, upon said escapement device, lying in a separate circuit and the latter circuit operating the drop contact 41, said circuit being made operative by the engagement of the contact 23a, with one of the pawls of the lever, substantially as described. 6th An escapement device having contacts arranged with accordance with a predetermined combination of such impulses and electrically connected to restoring circuit passing through the restoring electronagnet. Substantially as described. 7th A main line circuit, arelay operative to restore the parts to normal position, substantially as described. 7th A main line circuit, arelay operative to restore the parts of one contact 25a, in a separate circuit substantially as described. 7th A main line circuit, arelay operating the local circuit, an escapement device, and a restoring circuit as escapement device, and a restoring circuit as escapement device or a startie of the impulses, and operative to restore the parts to normal position, substantially as described. 7th A main line circuit, arelay operating the clocal circuit, an escapement device, and a restoring circuit ande operative only by the last but one advance of a series of

No. 36,136. Freight Car. (Char à marchandises.)

Charles Henry Kimball, Chelsea, Massachusetts, U.S.A., 13th March, 1891; 5 years.

Charles Henry Kimball, Chelsea, Massachusetts, U. S. A., 13th March, 1891; 5 years. Claim.—1st. A freight car, composed of a compartment for a source of heat,one or more compartments for storage, three courses of sheathing around the storage compartments, and a non-heat-conduct-ing material between the outside and middle courses, and between the middle and inside courses, there being an air space completely closed from the outside continuing around the compartments and opening only into the heating compartment, as set forth. 2nd. The box car having the top, bottom, and ends, and also the sides of it from the door-ways therein to the said ends formed of two courses of sheath-ing a, and b, properly supported and arranged apart, and having the spaces between said courses packed with saw-dust or other suitable material, for the purpose set forth, and also having arranged within the inner course b, another course c, of the sheathing, a connected air space being left between said courses b, and c, within and throughout the bottom and ends, and also in the top, and sides, of the car, between the door-ways of the car and the said ends, sub-stantially as shown and described. 3rd. The box car having the top, bottom, and ends, and also the sides of it from the door-ways in said sides to the said ends, formed of two courses between the said courses being packed with saw-dust or other suitable material, for the purpose set forth, and also having arranged within the inner course b, another course c, of sheathing, a connected air space be-tween the said courses b, and c, within and throughout the bottom, and ends, and also in the top, and sides, from the door-ways to the said ends of the car, and also having guides secured to each side of the chambers F, or G, in grooves between which are arranged to slide boards z¹, also being arranged to slide in the groove in which the door E, slides, all substantially as shown and described. 4th. A freight car, composed of two storage compartment, and around the entire car outside o

guides in which they are supported, either overhead or when drawn down into a vertical position against the inner face of the casing, or so as to close the door-ways and form a space S, between them and the sliding doors, to receive a packing of saw-dust or other proper material, substantially as shown and for the purpose described. proper m described.

No. 36,137. Automatic Guide for Circular Saws. (Guide automatique pour scies rondes.)

Dexter Hazard and Frederick O. Clark, both of Marquette, Michi-gan, U.S.A., 14th March, 1891: 5 years.

Dexter Hazard and Frederick O. Clark, both of Marquette, Michi-gan, U.S.A., 14th March, 1891: 5 years. *Claim.*—1st. The combination, with a circular saw, of guides or supports adapted to sustain the said saw at several points about its of upports adapted to sustain the said saw at several points about its the combination, with a circular saw, of guides or support adapted three or more points about its periphery, substantially as and for the purposes described. 3rd. The combination, with a circular saw, of guides or support embracing a considerable segment of the said saw, substantially as and for the purposes described. 4th. The com-bination, with a circular saw, of guides or supports at several points and guide or support embracing a considerable segment of the said saw, substantially as and for the purposes described. 4th. The com-bination, with a circular saw, of guides or supports at several points and in the form of segments, and means for adjusting said seg-ments toward and from the saw mandrel, substantially as and for of guides or supports at several points upon its surface adjacent to its periphery, each said guide or support provided with ribs e⁴, and intermediate air channels e⁶, substantially as and for the purposes described. 6th. The combination, with a circular saw, of guides or supports at several points surface adjacent to its periphery, and provided with lubricators for lubricating the bearing surfaces of subguides, substantially as and for the purposes described. 7th. The combination, with a circular saw, of guides or supports at several points those portions of the guides or sup-ports which are in substantially as described. 7th. The combination, with a circular saw, of guides adapted to be prough against both sides of the saw, and means for simultaneously adjusting in opposite directions those portions of the guides or sup-ports which are in substantially as and for the purposes described. 10th. As a means for simultaneously adjusting gainst the combination, with he guides upon

No. 36,138. Tack Driver.

(Chasse-broquette.)

Horace Malcolm Barnes, John Stephen Barnes, and Arthur Welling-ton Barnes, all of Detroit, Michigan, U.S. A., 14th March, 1891 ; 5 years.

5 years. Claim.—Ist. In a tack driver, the combination of the magizine F, to hold the tacks, with the finger M, to separate the tacks, the rock-ing-bar L, on the rock-shaft K, actualing the fingers M, and N, the finger N, the rock-shaft K, the spring to rotate the rock-rotating ta B, as and for the purposes set forth. 2nd. In a tack driver, the com-bination of the magazine A to hold the tacks, with the finger M, sliding into the magazine A to hold the tacks, with the finger M, sliding into the magazine and actuated by the rocking-bar L, the rocking-bar L, and sliding into the magazine, the rock-shaft K, the arm k', projecting from the rock-shaft K, the spring actuating the rocking-bar L, and sliding into the magazine, the rock-shaft K, the arm k', projecting from the rock-shaft K, the spring actuating the rocking-bar L, and the feeding tube G, connecting the magazine with the cylinder A, all substantially as described. 3rd. In a tack driver, the combination of the magazine to hold the tacks, with the fingers M, and N, actuated by the rocking-bar L, and inserted in the magazine to hold and separate the tacks, the rocking-bar L, on the rock-shaft K, the rock-shaft K, the cylinder A, containing the spring rotating the rock-shaft K, the cylinder A, containing the spring rotating harmer B, the reciprocating hammer B, the feeding tube G, through which the tacks pass from the magazine to hold the tacks for the hammer, all substantially as described.

No. 36,139. Sheet Metal Bar for Glazed (Barreau de fenêtre en Structures. feuille de métal.)

William A. Bass, Streator, Illinois, U.S.A., (assignee of Williard F. Mills, Kalamazoo, Michigan, U.S.A., 14th March, 1891; 5 years.

Millis, Kalainazoo, Michigan, U.S.A., 14th March, 1891; 5 years. Claim.—Ist. In a metallic window frame, the combination, with a series of multiform frame bars oppositely channeled, and each bent from a single blank of sheet metal, of a series of re-enforcing rods or bars that are enveloped with sheet metal, and then attached to the assembled frame bars, substantially as set forth. 2nd. In a structure of the character described, the box or rod B, having a sheet or strip being formed into the attaching flangesg, substantially as set forth. 3rd. The combination, with the channeled bar A, form-ed of sheet metal bent to form parallel flanges a, a, e, a and spaced webs c, of the bar B, having a sheet metal covering strip, the longi-tudinal edges of which are bent to form flanges g; to enter the space between the two webs c, substantially as set forth.