

movent of the said bridge. 3rd. In combination with the outer pier, the cable and the bridge, the device O, or its equivalent, capable of being moved out of the way of the carriage D, whenever the bridge may be down, all substantially as hereinbefore set forth. 4th. In combination with the outer pier and cable tramway, a hinged bridge or apron, arranged and operating, as described, to receive the pulling strain of the cable in a direction corresponding substantially with the direction of the length of the bridge, as set forth. 5th. In combination with the piers, the bridge, the main cable C and the counter-balance cable *e*, the device for holding the counter-balance cable, whenever the bridge and main cable may be turned up, so that it will continue to work as well then as when the bridge may be down, all substantially as hereinbefore set forth. 6th. The movable or adjustable counter-balance cable holder device *k*, constructed and operating as specified, so that it may be moved or adjusted out of the way when the counter-balance cable extends in a substantially horizontal direction from the back pier to the outer end of the bridge, and can be set or adjusted to come over and in line with said counter-balance cable for the purpose of holding the latter properly when the said cable and bridge shall be turned up, all as hereinbefore set forth. 7th. In combination with the apron or bridge, weighted hold-down rods, chains or guys, provided with fasteners and having arranged with them guide-sheaves, such as seen at *t*, the whole arranged and operating to render easy the securing of the outer end of the bridge to the hold-fast piers, near the base of the pier, and their release therefrom as occasion may require. 8th. In combination with the base of a pier and the track on which it rests, rollers mounted on vertical axes and adapted to facilitate the adjustment of the pier on its tracks, and at the same time prevent any displacement of the pier from the track side wise of the latter, all as hereinbefore set forth. 9th. In combination with a pier and the track on which it rests, and on which it is designed to be adjusted, a device, substantially such as specified, for distributing the side strain on the track-beam, and at the same time creating a frictional contact which tends to hold the pier in place end wise on the track, the same constructed and operating substantially as hereinbefore set forth. 10th. The said clamping device shown and described for holding the pier down on the track rail consisting essentially of claw-like devices adapted to catch beneath the head of the rail, means for exerting a downward pressure on the rail, and means for easily adjusting the claw-like device toward each other and for holding them in place, all substantially as hereinbefore set forth.

No. 21,964. Lamp Case. (*Lanterne*.)

Edward S. Piper, Toronto, Ont., 2nd July, 1885; 5 years.

Claim.—1st. As an improved article of manufacture, a cast-metal lamp-case composed of the sides A, bolted together and provided with a top B, and bottom E likewise bolted to the sides A, and the door K hinged to one of the sides A, the sides A and door K being pierced for the insertion of the lenses L, the whole being constructed substantially as and for the purpose specified. 2nd. In a cast metal lamp-case, constructed substantially as described, the combination of a detachable false bottom H, set within the lamp-case so as to leave a space between it and the bottom E, which space is supplied with the outer air through suitable perforations, and discharges the air so admitted into the lamp-case through an opening made in its bottom. 3rd. In a cast metal lamp-case having a perforated bottom, a false bottom H set within the case as specified, and having a hole I made through it, in combination with the lamp J supported above the hole I by the perforated flange *l*, substantially as and for the purpose specified. 4th. In a cast metal lamp-case having its sides pierced for the insertion of the lenses L, the combination of the perforated false sides M fixed to the metal sides, substantially as and for the purpose specified. 5th. In a cast metal lamp-case provided with a top B, having a funnel C, the inverted saucer Q, having lugs *e* and *f* cast on its bottom, in combination with the cap N and bolt R, arranged to detachably connect the parts together, substantially as and for the purpose specified. 6th. The inserted cap saucer Q having the holes *g* made in it, in combination with the plate P, having holes *h* made in it, arranged and operating substantially as and for the purpose specified. 7th. An inverted saucer Q, having holes *g* made in it, in combination with the inverted perforated cup O, substantially as and for the purpose specified. 8th. An inverted saucer Q, having lugs *e* and *f*, and holes *z*, in combination with the plate P having holes *h* made in it, and notches *i*, substantially as and for the purpose specified.

No. 21,965. Mosquito-Net Support. (*Support de Moustiquaire*.)

Alfred L. Edwards, New York, N. Y., U.S., 2nd July, 1885; 5 years.

Claim.—1st. The herein-described support for mosquito-nets, consisting of brackets A, each composed of two parts *a* and *b* jointed together and provided with a clamp at the joint and the band C attached to and supported by said brackets, substantially in the manner shown. 2nd. In combination with supporting brackets, substantially as described and shown, a flexible band composed of separable sections alternately provided at their ends with slots or eyes and turn-buttons, substantially as and for the purpose set forth. 3rd. The herein-described bracket for mosquito-canopies, consisting of parts *a*, *b*, united by a friction-joint and provided with turn-buttons *f* and *g*, as and for the purpose explained.

No. 21,966. Multiple Signal Box for Fire and Police Telegraphs. (*Boîte à Signaux Multiples pour Télégraphes d'Incendie et de Police*.)

Lewis H. McCullough, Richmond, Ind., U.S., 2nd July, 1885; 5 years.

Claim.—1st. In a signalling box for fire-alarm telegraphs, the combination of the wheel D, pivoted lever E, rods *r* and *v*, one of which slides in air-tight bearings, and the exhausted tube *m*, whereby dust is prevented from collecting on the contact surfaces and positive contact is made when the circuit controller is operated, substantially as

specified. 2nd. In combination with a signal wheel, adapted to open or close an electric circuit, and suitable gearing therefor, a second signal wheel also adapted to open or close an electric circuit and separate gearing therefor, and a motor for operating either set of gearing. 3rd. The signal wheel D and suitable gearing for operating the same connected with the shaft F, the signal wheels D1 and suitable gearing for operating the same connected with the barrel H, and a motor connected with both shaft and barrel. 4th. The circuit wheel D1 movable along the shaft *v*, and contact lever E, in combination with the screw-threaded shaft *v*1, and the nut or hub L, and the spring *z*, whereby the position of the wheels D1 and the shaft *v*1 may be adjusted.

No. 21,967. Electro-Mechanical Gong Striker. (*Gong Electro-Mécanique*.)

Lewis H. McCullough, Richmond, Ind., U.S., 2nd July, 1885; 5 years.

Claim.—1st. The combination, with a spring actuated ratchet, a pawl for retaining the same, a spring actuated hammer for removing the pawl, and electro-magnet for releasing the hammer, of independently driven gong striking mechanism connected to the ratchet, and means made operative by the movement of the ratchet for releasing the said mechanism, substantially as set forth. 2nd. In combination, with a spring-actuated ratchet, a pawl for retaining the same, a spring-actuated hammer for removing the pawl, and means for releasing the hammer, of an actuating spring for a gong hammer, a pawl connecting the same with the ratchet, and means made operative by the movement of the ratchet for removing the said pawl, whereby the spring for the gong hammer will be released to strike a blow, substantially as set forth. 3rd. In combination with a spring actuated ratchet wheel, a retaining pawl therefor, and a hammer for removing the same by percussion, a spring connected to the ratchet wheel so as to act against the driving spring and, thereby, cause the ratchet wheel to move against its retaining pawl after release, without shock or jar. 4th. In combination with a spring-actuated ratchet wheel, a pawl for retaining the same, and means for removing the pawl, a second pawl for the same ratchet connected to a retractile spring, and means made operative by the movement of the ratchet for removing the said pawl, and a gong hammer also connected to the said spring, substantially as described, whereby the ratchet wheel is caused to move against the retaining pawl after release, without shock and the hammer is operated. 5th. The shaft *d*2 spring *d*1, arms *d*, *e* and *e*1, pivoted arm *e*2, pin *f* and catch or hook *a*2, in combination with the ratchet wheel T and pawl *g*, whereby on the rotation of the ratchet wheel, after the release of the shaft *d*2 and the consequent release of the ratchet wheel, the parts are restored to operative position, as set forth. 6th. The combination, with an electro-magnet, its armature lever and a catch or hook thereon, of the shaft *d*2, spring *d*1, arms *d*, *e* and *e*1, pivoted arm *e*2 and pin *f*, ratchet wheel T and pawl *g*, whereby, on the passage of an electric current, the shaft *d*2 and the ratchet wheel T are released, and after release are restored to operative position as set forth.

No. 21,968. Flying Target. (*Cible Volante*.)

Albert H. Hebbard, Knoxville, Tenn., U.S., 2nd July, 1885; 5 years.

Claim.—1st. A flying target consisting of a disk concealed on its lower side, and having flanges on its upper and lower portions to form journals, all substantially as described and for the purpose set forth. 2nd. A flying target consisting of the curved portion D, provided with a journal, in combination with a trap or sender provided with the forked arms B and the curved arm A1, whereby the target is held in said trap by its journals and periphery, and when forced or thrown out receives a spinning axial rotation through the air substantially as described and set forth. 3rd. A flying target consisting of a concave disk having journals E, as specified, in combination with a trap provided with an arm having an inside facing of soft elastic material the outer and inner ends of said arm being straight, the central portion thereof being curved, and a straight bifurcated arm B pivoted to the inner end of the curved arm, substantially as described and for the purpose set forth. 4th. A flying target consisting of a concave disk having journals E, as specified, in combination with a trap provided with an arm having an inside facing of a soft elastic material, the outer and inner ends of said arm being straight, the central part thereof being curved, and a straight bifurcated arm B provided with a rear projection C, said arm being pivoted to the arm A, and a spring pivoted to the arm A, and a spring interposed between said arms, substantially as described and for the purposes set forth.

No. 21,969. Combination Tool. (*Combinaison d'Outils*.)

Adon D. Crosby, Cuba, N. Y., U.S., 2nd July, 1885; 5 years.

Claim.—The combination tool comprising the two limbs, one having a screw-driver at one end, a tack claw and wrench-jaw at the other end, a serrated or toothed surface upon one edge at said latter end, and a serrated or toothed surface upon its opposite edge intermediately between its ends, the other limb having a serrated or toothed surface upon one edge at one end, a hammer head and a wrench jaw disposed oppositely to each other, and a toothed or serrated corresponding surface of the aforesaid limb, substantially as shown and described.

No. 21,970. Dry Closet. (*Latrine*.)

Frederick F. Street, Hartford, Ct., U.S., 2nd July, 1885; 5 years.

Claim.—1st. The combination of the discharge chamber, the cover at the top of the said chamber, the disk at the bottom of the said chamber, and an elastic connection from said cover to said disk, whereby the disk is operated from the cover, substantially as described and for the purpose set forth. 2nd. The combination of the discharge chamber *a*, the disk *b*, the lever *d*, the rest *h*, the spring *f*, the rod *e* furnished with the nuts *g* and *i* and the seath *l* furnished with