[DECEMBER, 1906.]

## INTERNATIONAL PATENT RECORD



Dominion Houses of Parliament.

## CANADIAN PATENTS.

Specially compiled by Messrs. Fetherstonhaugh, Dennison and Blackmore Patent Attorneys Star Bldg., 18 King St. W., Toronto; Montreal and Ottawa.

**Electric Weighing Apparatus.**—99,297.—The invention consists of a cylindrical casing adapted to be supported from the top and a pair of solenoids arranged within said casing, one of the said solenoids being secured to the lower portion of the casing, and the other supported upon a spiral spring. and adapted to enter the aforesaid solenoids from the upper end. A weight-supporting member is secured to the end of the latter solenoid, and projects downwardly through the bottom of the cylindrical casing, the spiral spring supporting the said solenoid supporting the weight



put upon the weight-supporting member. The upper solenoid has an alternating electric current passing through it to induce the current in the winding of the other solenoid m proportion to the extent to which the upper solenoid enters the other, and the lower solenoid is wired to an electrical measuring device to indicate the variations in the induced current upon a dial, thus indicating the weight of the material weighed by the extent to which the upper solenoid is drawn downwardly against the spring tension into the lower solenoid.

**Caining Machines.**—Alexandre Leclair.—98,337.—A perspective view of an improved gaining machine is shown, desioned to simplify the finishing of belt rails used in car construction, and without changing the position of the said belt rails in the carriage of the machine before finishing the necessary number of cuts. The machine is constructed on a plurality of standards, with a saw and knife shaft journalled therein, the knives being suitably covered. Under these knives a carriage is arranged, to which the rail is secured. The carriage is then propelled forward on the standards under the knives by means of one of three handwheels to give the rail four rightangular cuts, after which it is returned to its outward position and locked. Adjustable pedestals are arranged on a bed-plate in front of the machine, and surmounted by crowns, which may be moved by another of the hand-wheels and a set of bevel gears inwardly over the table, bringing rotating knives, which are mounted in said crowns into contact with the belt rail to make the necessary angular cuts therethrough. It will be thus seen that the two operations, namely, moving the



table under one set of knives, and then moving the knives journalled in the crowns over the rail, is all that is necessary to make a complete belt rail.

**Air-Brakes.**—Charles S. Jackson.—93,977.—The illustration shows an improved system for air-brakes, where the only exhaust occurs at the engine. It consists essentially of the brake cylinder, with a viston spring held therein, and an auxiliary cylinder arranged in proximity to said brake cylinder, and having suitable pipe connection therewith connected to this auxiliary cylinder is the operating valve. This valve is of a very simple construction, and is essential in the operation of the device as normally when the air pressure is on the train line; the valve is lifted from its seat, which allows the air to enter the by-pass and fill the auxi-



iliary cylinder, and from there into the operating end of the brake cylinder. At the same time, however, the air is allowed to enter by a suitable pipe into the opposite end of the brake cylinder, thereby balancing the piston until the air from the train line is released, when the air exhausts from one end of the brake cylinder by the above mentioned pipe, and at the same time the valve is dropped to its seat, which closes the by-pass and retains the pressure of air in the auxiliary cylinder. This pressure now acts on the operating side of the brake viston and sets the brakes. To release them it is only necessary to allow the pressure to enter the train line, when the pressure in the brake cylinder is again balanced.