



THE NEW AUSTRALIAN PATENT ACT.

On the inauguration of the Commonwealth of Australia on the 1st of January, 1901, inventors and their representatives looked forward to an early change in the patent practice of that British colony. Under the laws then in force, it was necessary to secure separate patents in each of the seven Australian colonies in which the inventor was desirous of protecting his invention, but when it was known that the confederation of six of the colonies was an accomplished fact, it seemed that it would be but a short time before the patent laws would be amended and an inventor would be enabled to protect his invention in the several states forming the new colony, under a patent granted on a single application, with the payment of only one government fee. But in that, interested persons were mistaken, for time passed and the question of the passage of a new law received little, if any, attention of the Australian legislators, whose time was much occupied with the consideration of other questions which the general changes in the administrative departments made of prime importance.

The new law after receiving the consideration of the legislators for several months was not passed until October 22, 1903, and it was even then provided that the law would not go into effect until it was subsequently proclaimed. At last the new law has been proclaimed, and the new provisions are now in full force. With the exception of New Zealand, the commonwealth includes all the Australian colonies, including Tasmania.

While under the law it remains for the commissioner of patents to define the section referring to the novelty of invention, it is thought that from the other sections and the general provisions of the patent laws of Great Britain and its colonies, the commissioner will, without doubt, rule that patent applications should be filed before the invention is publicly known in the commonwealth, either by the publication of the invention in public print or the public use of the new device. As the United States Patent Office Gazette is sent to Australia, and as most inventions are fully disclosed in the claims and drawings which appear in the Gazette, inventors should not delay their Australian applications, but should file them before the issue of the United States patent. Applications will be examined to ascertain whether the inventions are novel in Australia.

There is no requirement that the patented invention be manufactured, but if the patentee fails to supply the reasonable requirements of the public, he may, after two years from the granting of the patent, be compelled to grant licenses to others for a reasonable consideration.

Patents previously granted under the Australian state patent acts remain in force for their full time, and, under the commonwealth act, they may be extended throughout the commonwealth, provided action is taken before the invention is publicly known in the states other than the one in which the patent was granted. Inventors who have secured patents under the old laws and who desire to extend them under the new law, should proceed with their commonwealth applications without loss of time.

Provision has been made for the Australian commonwealth to join the International Convention for the Protection of Industrial Property, but until it is so ordered by the King of Great Britain, through an order in council, inventors will be unable to claim in Australia protection under the provisions of that treaty.

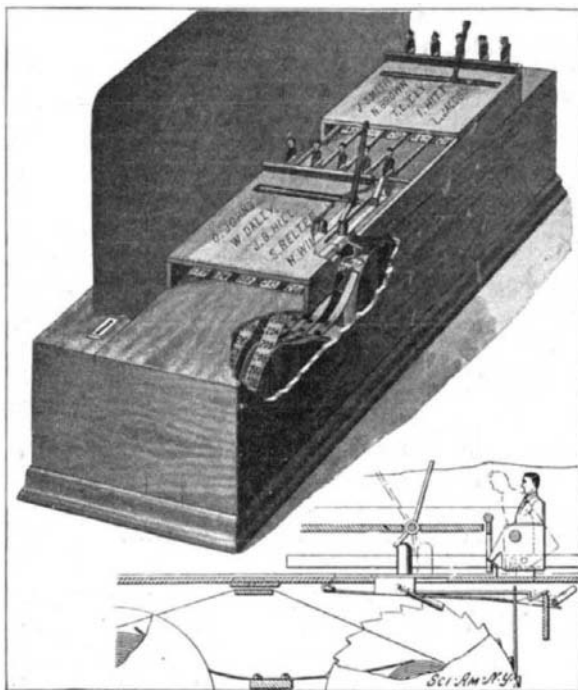
Instead of annual taxes, the new law makes it necessary to pay after the issue, and during the life of the patent, only one tax of £5, which becomes due before the expiration of the seventh year of the patent term of fourteen years.

Every patented article sold in Australia under a patent granted in that country should be marked with the word "Patented," together with the number or the patent and the day and year it was granted. Failure to so mark the patented goods may prevent the patentee from recovering damages for the infringement of the patent.

Henry C. Peabody, the inventor of the rifle bearing his name, who died a short time ago, left an estate valued at \$375,000 which, by the terms of his will, was left for the founding of the Peabody Industrial School for Girls.

VOTING MACHINE.

We illustrate herewith a novel type of voting machine, invented by Mr. Andrew H. Hart, of Winchester, Ky. This machine is designed to carry a bust or photograph of each candidate to be voted for, so that



A NOVEL TYPE OF VOTING MACHINE.

the voter may be given some idea of the man for whom he is voting. Our illustration shows the voting machine as arranged for only two tickets of six candidates each, but it will be evident that a machine could be built on the same principle for recording the votes on any desired number of candidates and any number of tickets. The machine consists of a casing inclos-

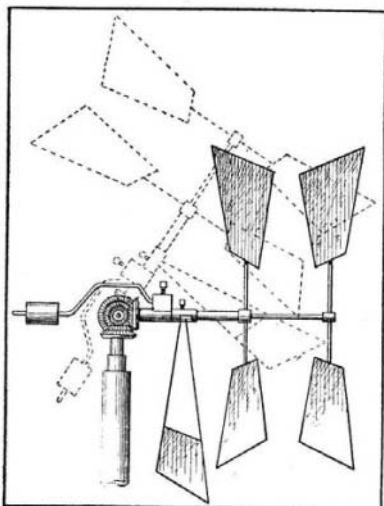
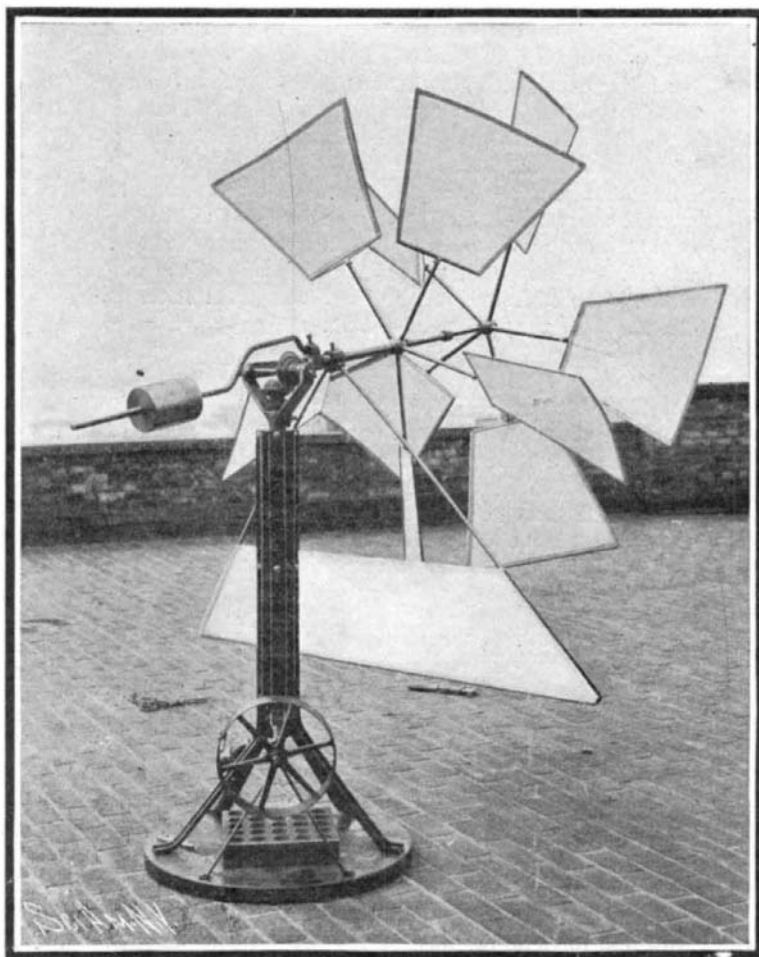


DIAGRAM SHOWING TWO POSITIONS OF WINDMILL.



A COMPENSATING WINDMILL.

ing two groups of rolls, one for each ticket, and arranged one in advance of the other. These groups consist of pairs of rolls, one pair for each candidate. Coiled on the forward roll of each pair is a tape which is printed with consecutive numbers. This tape passes under a glass-covered opening in the casing, and thence to the second roll, on which it is wound up. The flanges of the latter roll are formed with ratchet teeth which are engaged by a dog carried by a movable slide in the top of the casing. This slide is formed with a pin which is adapted to be engaged by the lower arm of a bell crank loosely mounted on a transverse shaft at the top of the casing. This bell crank may be moved laterally on this shaft to engage any one of the pins desired, and then when drawn forward to the dotted position shown, it moves back the slide which is engaged, rotating the ratchet one notch, thus bringing the next consecutive number into line with the glass-covered opening in the casing. The slide carries a spring latch which locks the parts against further movement. The portraits of candidates are mounted on hinged blocks, which are tipped forward as they are voted for by bars attached to the slides and engaging the lower edges of the blocks. To prevent a voter from casting votes for two candidates for the same office, the portrait blocks of rival candidates are connected by rods in such manner that when one is tipped forward, the other one will be also tipped. Each block is provided with a projecting finger which, when the block is tipped, engages the end of the bar on the slide and prevents the latter from being advanced to move the numbered tape. Thus when one candidate is voted for, no vote can be cast for the rival candidate for that same office. After the voter leaves the voting booth, an official turns a rock-shaft which releases all the latches and brings the parts to normal position. In order to compensate for the gradually increasing diameter of the tape on the take-up roll, the numbers are spaced gradually further apart, so that they will always register accurately with the glass-covered opening in the casing. If desired, a record of the number and names of the voters may be kept by requiring each one on entering the booth to write his name on a slip of paper and put it in a chamber in the machine through the slot shown in our illustration.

A COMPENSATING WINDMILL.

Inventors have been endeavoring for some time to invent a windmill of such construction, that no matter how great the velocity of the wind, the power transmitted would be practically constant, or not above a predetermined limit. Many such constructions have been patented, but in the majority of cases they have proved impracticable when put to an actual test. In the accompanying engraving we show a construction which gives every promise of success, and which, moreover, is very ingeniously contrived. This windmill is so designed that as the strength of the wind increases, the windwheels will be tilted upward, as indicated by dotted lines in our diagram, so that the force of the wind upon them will be modified. The windmill is preferably made with two windwheels, whose sails are oppositely inclined, so that they will rotate in opposite directions, and thus tend to balance each other. The inner windwheel is secured to a hollow shaft, through which the shaft of the outer wheel passes. These shafts are mounted in a bracket, which has a universal joint connection with the windmill standard, and the weight of the windwheels is balanced by an adjustable counterweight. At their inner ends the shafts carry bevel gears which, through the medium of a pair of idlers on the horizontal hinge pin of the windwheel bracket, transmit power to a pair of concentric bevel gears turning on a vertical axis. The outer one of these gear wheels is mounted on a hollow shaft which, at its lower end, carries a bevel gear engaging the upper teeth of the gear wheel on the power shaft of the windmill. The lower teeth of the power wheel are engaged by a bevel gear, secured to a shaft, which passes through the center of the hollow shaft, and carries at its upper end the inner bevel gear wheel of the concentric pair. As a result of this arrangement both windwheels, though turning in opposite directions, act together to drive the power shaft in the same direction. The vane of the windmill consists of a blade or sail, which lies adjacent to and below the level of the windwheels, and occupies a plane normally transverse to the direction of the wind. As the velocity of the wind increases, the pressure against this blade causes the windwheels to rise, so that they will rotate at an acute angle with the direction of the wind, thus modifying the force of the wind upon them. It will be obvious that any increase in the velocity of the wind will be compensated by an increase in the angle between the axis of the