

(h) "37. Every patent granted under this Act shall be subject and be expressed to be subject to the condition that such patent and all the rights and privileges thereby granted shall cease and determine, and that the patent shall be null and void, at the end of two years from the date thereof, unless the patentee or his legal representative or his assignee, within that period or any authorized extension thereof, commences, and, after such commencement, continuously carries on in Canada the construction or manufacture of the invention patented, in such manner that any person desiring to use it may obtain it, or cause it to be made for him, at a reasonable price, at some manufactory or establishment for making or constructing it, in Canada,—and that such patent shall be void if, after the expiration of twelve months from the granting thereof or any authorized extension of such period, the patentee or his legal representatives or his assignee for the whole or a part of his interest in the patent, imports, or causes to be imported into Canada, the invention for which the patent is granted; and any difference which arises as to whether a patent has or has not become null and void under the provisions of this section may be adjudicated upon by the Exchequer Court of Canada,—which court shall have jurisdiction, upon information in the name of the Attorney-General of Canada, or at the suit of any person interested, to decide any such question: provided that this section shall not be held to take away or affect the jurisdiction which any court, other than the Exchequer Court of Canada, possesses." 53 V., c. 13, s. 2, *part*.

(i) 39. The following fees shall be payable before an application for

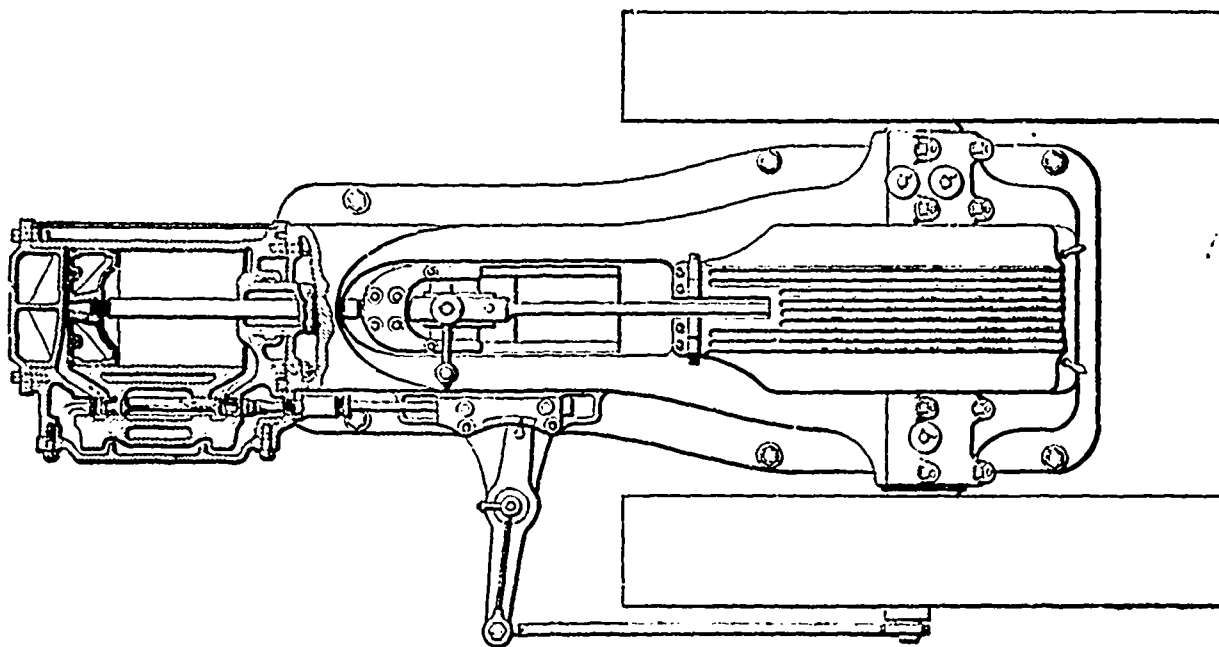
any of the purposes herein mentioned shall be received by the commissioner, that is to say:—

Full fee for 15 years.....	\$60 00
Partial fee for 10 years.....	40 00
Partial fee for 5 years.....	20 00
Fee for further term of 10 years.....	40 00
Fee for further term of 5 years.....	20 00
On lodging a caveat.....	5 00
On asking to register a judgment <i>pro tanto</i>	4 00
On asking to register an assignment or any other document affected or relating to a patent.....	2 00
On asking to attach a disclaimer to a patent.....	2 00
On asking for a copy of patent with specification..	4 00
On petition to re-issue a patent after surrender and on petition to extend a former patent to the whole of Canada for every unexpired year of the duration of the provincial or sub-patent, the fee shall be at the rate of.....	4 00

On office copy of documents, not above mentioned, the following charges shall be made:

For every single or first folio of certified copy....	\$0 50
For every subsequent hundred words (fractions from and under fifty not being counted, and over fifty being counted for one hundred).....	0 25

(j) A new clause.



THE ROBB-ARMSTRONG ENGINE.—FIG. 1.

THE "ROBB-ARMSTRONG" ENGINE.

We herewith illustrate a new single-valve automatic engine recently brought out by the Robb Engineering Co., of Amherst. In general appearance it does not differ greatly from several popular high-speed engines, and no radical departure has been made in principles of construction, the aim being to combine as many as possible of those points which have proven best in practice, with such improvements in details as have been suggested by observation and experience with other engines. In other words, it is not an attempt to develop a new species, but to advance one step in the evolution of that already highly developed machine, the American high-speed engine. The following is a brief description of the main features:—

The frame is of the Porter type with double-disk crank; it has considerable sectional area, carried well above the centre line, and is particularly thick at the top, thus bringing the metal in the direct line of strains between the cylinder and shaft bearings. The engine weighs a little over 100 pounds per horse power, not an unusual weight, but the metal is distributed to give the greatest

attainable stiffness, and without much regard to the "anvil principle," the foundation being expected to furnish all the weight required in that direction at less cost.

The crank is built up of cast disks and forged steel pin and shafts, the peculiar arrangement of the crank permitting the fit of the shafts and pin in the disks to be very long, without separating the shaft bearings unduly, as is shown in the cross-section at the right of Fig. 2; the counter-weight is of equal moment with the reciprocating parts. The shaft bearings run in cast-iron shells, babbitted; they are not provided with means of adjustment for wear. The bearings are finished by grinding operations of great delicacy, and are round and parallel within a limit of variation smaller than the average machinist will usually detect, even with the aid of the micrometer. The shafts are made to gauge, and the shells are interchangeable, as are the other parts of the engine; hence, a duplicate set of shells may be kept for emergencies. The crank is covered by a cast-iron case, shutting it completely in except at the slot through which the connecting rod works. The crank disks are without the usual finished flanges on the periphery, the crank case being designed to have a substantial and finished