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SECTION XXXIV.

MISCELLANEOUS.

§ 1. Immigration.

(A) The Encouragement of Immigration into Australia.

1. **Introduction.**—Various measures have from time to time been adopted by the Commonwealth and State Governments, as well as by private societies and individuals, with a view to promoting the immigration of suitable classes of settlers into Australia. Since the outbreak of war, however, little is being done. The activities of the Commonwealth Government (which is vested with constitutional powers in regard to immigration under Sec. 51, xxvii., of the Constitution Act 1900) with respect to the encouragement of immigration, have hitherto practically been confined to advertising the resources and attractions of Australia in handbooks, newspapers, and periodicals.

2. **State Immigration.**—The advertising in the United Kingdom of the resources of the individual States has been carried out by their Agents-General in London. During 1910 and the three subsequent years, a great advance was made in Australian immigration generally, the State Governments having adopted more active and direct means than had hitherto existed for making the advantages and opportunities of their respective States better known to the people of the United Kingdom, Europe, and America. At the present time, however, owing to war, no State action is being taken in the matter of immigration. In previous issues of the Year Book will be found in detail the various methods under which intending immigrants could obtain information and assistance (see Year Book No. 8, p. 1053).

Particulars of the net immigration to the Commonwealth are given on page 116, and of assisted immigration on page 129 hereinbefore.

3. **Commonwealth Scheme of Immigration.**—It is the function of the Commonwealth Department of Home and Territories to advertise the attractions of Australia for settlers, farm workers, and tourists. The Commonwealth carries on the general advertising of Australia by means of paragraphs and illustrated articles in British, European, and American publications, while the several States advertise for the class of immigrants they specially require. Bioscope films are utilised for the illustration of lectures. Exhibitions are held throughout the chief rural districts and at the important agricultural shows in Great Britain, and handbooks for settlers and tourists, as well as folders and other publications, have been issued. Pictorial posters are also utilised. The outbreak of war, however, interrupted the vigorous campaign that had been initiated, and for the present, the matter of advertising and recruiting for immigrants is practically at a standstill.

4. **The High Commissioner for Australia and the Agents-General.**—Intending settlers or immigrants may, on application, obtain information from the High Commissioner for Australia—

THE RIGHT HON. A. FISHER, P.C.,

AUSTRALIA HOUSE,

STRAND,

LONDON, W.C. .

Information regarding individual States may be obtained from the officials specified below :—

AUSTRALIAN AGENTS-GENERAL.

<i>New South Wales</i>	Hon. C. G. WADE, K.C. ...	123-125 Cannon St., London, E.C.
<i>Victoria</i> ...	Sir PETER MCBRIDE ...	Australia House, Strand, London
<i>Queensland</i> ...	Col. the Hon. Sir T. B. ROBINSON ...	Marble Hall, 409-10, Strand, London
<i>South Australia</i>	Hon. EDWARD LUCAS ...	85 Gracechurch St., London, E.C.
<i>Western Australia</i>	Hon. J. W. CONNOLLY ...	Savoy House, Strand, London.
<i>Tasmania</i> ...	Major the Hon. SIR J. MCCALL, M.D. ...	56 Victoria St., Westminster, London

(B) The Regulation of Immigration into Australia.

1. **Pre-Federal Restrictions.**—(i.) *Alien Races.* The several States of Australia had regarded it as desirable, long prior to Federation, to impose certain restrictions upon the admission of persons wishing to become inhabitants of those States. The influx of Chinese, for example, was limited by stringent statutes, and later, general Acts were passed in some of the States which had the effect of restricting the immigration of other—principally Asiatic—races.

(ii.) *Undesirable Immigrants.* Further restrictions were placed upon the admission of persons who were undesirable as inhabitants, either for medical or moral reasons, or who were likely to be an economic burden upon the community.

2. **Powers and Legislation of the Commonwealth.**—(i.) *Constitutional Powers.* By Chap. I., Pt. V., Sec. 51, xxvii. and xxviii. of the Commonwealth Constitution Act the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals. (See page 24 herein.)

(ii.) *Legislation.* The powers above specified have now been exercised by the Commonwealth Government, and the laws passed in pursuance thereof supersede the previously existing State laws.

The first Act passed, dealing with this matter, was the Immigration Restriction Act 1901, which contained provisions restricting the immigration of the classes of persons previously mentioned, and also persons under contract to perform manual labour. The provisions regarding contract labour were repealed and amended by the Contract Immigrants Act 1905, and the principal Act was also amended by the Immigration Restriction Amendment Act 1905, and subsequently by the Immigration Restriction Acts of 1908 and 1910, and the Immigration Act of 1912. The immigration of alien races and undesirable persons is now regulated by the Immigration Act 1901-12. Admission of immigrants under contract to perform manual labour is, however, still controlled by the provisions of the Contract Immigrants Act 1905, and will be permitted if the contract is in writing, is made by or on behalf of some person named, who must be resident in Australia, and approved by the Minister. Such approval, which must be obtained before the immigrant lands in Australia, will not be given if the contract is made with the view to affecting an industrial dispute, or if the remuneration and other terms are not as advantageous to the contract immigrant as those current for workers of the same class at the place where the contract is to be carried out.

There is an additional provision where the proposed immigrant is not a British subject born in the United Kingdom or descendant of such a person. In such case it has to be proved that there is a difficulty in the employers obtaining in the Commonwealth a worker of at least equal skill and ability.

In case of infraction of the law it is provided that the contract is absolutely void and the immigrant and employer are both liable to penalties, the employer is also liable to compensate the immigrant until he obtains employment, or, at the option of the immigrant, to provide expenses for his return to the country whence he came.

3. Prohibited Immigrants.—(i.) *Provisions of the Act.* Persons comprised in the following classes are prohibited from entering the Commonwealth:—(a) Any person who fails to pass the dictation test; that is to say, who fails to write out not less than fifty words of a language prescribed by regulation when dictated to him by an officer administering the Act. (b) Any person not possessed of the prescribed certificate of health. (c) Any idiot, imbecile, feeble-minded person, or epileptic. (d) Any person suffering from a serious transmissible disease or defect. (e) Any person suffering from pulmonary tuberculosis, trachoma, or from any loathsome or dangerous communicable disease, either general or local. (f) Any person suffering from any other disease or mental or physical defect, which from its nature is, in the opinion of an officer, liable to render the person concerned a charge upon the public or upon any public or charitable institution. (g) Any person suffering from any other disease, disability, or disqualification which is prescribed. (h) Any person who has been convicted of a crime and sentenced to imprisonment for one year or more, unless five years have elapsed since the termination of the imprisonment. (i) Any person who has been convicted of any crime involving moral turpitude, but whose sentence has been suspended or shortened conditionally on his emigration, unless five years have elapsed since the expiration of the term for which he was sentenced. (j) Any prostitute, procurer, or person living on the prostitution of others.

Regarding (a) it may be stated that the Act of 1901 provided for the dictation of not less than fifty words of a European language. The Act of 1905 provided for the retention of this test until regulations be passed prescribing the languages to be employed. No such regulations have yet been made, and the provision of the Act of 1901 is therefore *de facto* still in force. It may be stated that in general practice the dictation test is not imposed upon persons of European race.

Regarding (b), the Amending Act of 1912 provides for the establishment of Commonwealth Medical Bureaux at places outside the Commonwealth, and the appointment of medical referees to examine intending immigrants and issue certificates of health in the prescribed form, on payment of a prescribed fee. A chief medical officer has already been appointed to take charge of the Bureaux attached to the High Commissioner's Office in London. This officer arranges for the selection of suitable medical referees for appointment to act at various centres throughout the United Kingdom.

Provision is also made for the medical examination of, and the issues of certificates of health to intending immigrants who embark at a port where there is no medical referee, or who arrive in the Commonwealth without a certificate in the prescribed form.

Pending the proper organisation in the United Kingdom of the Medical Bureaux and the appointment of medical referees, the requirement that immigrants must produce a certificate of health on arrival in Australia will not be enforced.

(ii.) *Exemptions.* From these restrictions the following persons are exempted:—(a) Any person holding an exemption certificate. (b) Members of the King's regular land and sea forces. (c) The master and crew of any public vessel of any Government. (d) The master and crew of any other vessel landing during the stay of the vessel in a Commonwealth port. The exemption of members of a crew during the vessel's stay in port is subject to the production of identification cards to an officer on demand. This provision will not be enforced in respect of white members of a crew, but there is a further provision which empowers an officer to refuse any member of a crew permission to land unless he is satisfied that such person is free from a communicable disease. Before the ship can obtain her outward clearance the crew must, at the demand of an officer administering the Act, be mustered, and if any member of the crew be missing,

and would otherwise, in the opinion of the officer, have been a prohibited immigrant, then such person is deemed to be a prohibited immigrant, and until the contrary be proved, to have entered the Commonwealth contrary to the Act. (e) Any Commissioner of, or other person accredited from the Imperial or any other Government.

(iii.) *General Provisions.* An immigrant may be required to pass the dictation test at any time within two years after he has entered the Commonwealth. This applies particularly to coloured persons, but any immigrant found within three years of entering the Commonwealth to be suffering from a prohibitory disease or defect may be deemed to be a prohibited immigrant unless it is proved to the Minister's satisfaction that he was free from the disease or disability at the time of his arrival in Australia.

A prohibited immigrant within the meaning of (a) above may, at the discretion of an officer, be allowed to enter the Commonwealth, or to remain within it, upon depositing £100 and within thirty days either obtaining an exemption certificate or departing from the Commonwealth; in either case the deposit is returned.

The punishment for breach of the Act by a prohibited immigrant is imprisonment for six months and deportation in addition to or in substitution for such imprisonment, if so ordered.

4. Liabilities of Shipmasters and Others.—The master, owners, agents, and charterers of a vessel from which a prohibited immigrant enters the Commonwealth are jointly and severally liable to a penalty of £100 for each entrant. The vessel may be detained as security, but may be released upon the giving of a bond with two sureties for the payment of any penalties; it may also be seized and sold in default of payment of penalties. The master, owners, agents, and charterers may be required to provide a return passage for the prohibited emigrant and to pay for his maintenance during his detention prior to deportation. Masters of the vessels are authorised to prevent such a person from landing, and to obtain any necessary assistance.

Under the Immigration Restriction Act 1908, any person on board a vessel at the time of her arrival from any place outside Australia at any port in Australia who is not (a) a *bonâ fide* passenger of the vessel, or (b) a member of the crew of the vessel whose name is on the articles, is deemed to be a stowaway, unless the master gives notice that the person is on board the vessel, and does not permit him to land until an officer has had an opportunity of satisfying himself that the person is not a prohibited immigrant. The master, owners, agents, and charterers of a vessel are jointly and severally liable to a penalty of £100 for each stowaway brought into any port in Australia. The immigration Act 1912 provides for a penalty of £200 for each stowaway in cases where the master has been convicted of a similar offence within the preceding twelve months. Power is given to search vessels for stowaways. The Immigration Restriction Act 1910 provides penalties for being concerned in bringing immigrants secretly to the Commonwealth.

5. Agreements with other Countries.—Arrangements may be made with the Government of any country regulating the admission into Australia of the subjects or citizens of such country, such subjects not being, during the subsistence of the arrangement, required to pass the dictation test.

Persons who have resided either continuously or from time to time in the Commonwealth for a period of five years in the whole, and who are about to depart from it, being persons, who, if they return, would be prohibited immigrants, may obtain a certificate of exemption entitling them to return.

Certificates of exemption are granted by the Minister for Home and Territories, whose department administers the Act, and by the Collector of Customs in each State.

6. Statistics.—The following tables shew the number of persons who desired but were not permitted to land, those who were allowed to land, and the nationality of the persons admitted.

**PERSONS ADMITTED OR REFUSED ADMISSION TO COMMONWEALTH UNDER
PROVISIONS OF IMMIGRATION RESTRICTION ACT, 1909 to 1917.**

Year.	Persons Admitted who Passed Education Test.	Persons Admitted without Passing Education Test.	Persons Refused Admission.
1909 ...	1	83,324	108
1910 ...	Nil	94,543	42
1911 ...	Nil	139,020	83
1912 ...	Nil	163,990	187
1913 ...	Nil	140,251	109
1914 ...	Nil	110,701	54
1915 ...	Nil	70,436	56
1916 ...	Nil	59,140	233
1917 ...	Nil	53,036	13

NATIONALITY OF PERSONS ADMITTED WITHOUT TEST, 1909 to 1917.

Nationality.	1909. (a)	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
EUROPEANS—									
Austrians ...	895	815	1,184	855	794	676	(f) 27	(f) 10	...
Belgians ...	35	50	84	95	63	63	105	69	35
British ...	71,201	81,457	124,061	146,602	122,443	93,136	60,505	50,469	45,988
Danes ...	272	269	393	371	444	478	305	173	137
Dutch ...	187	175	307	435	288	287	182	156	194
French ...	1,347	1,160	1,166	1,238	1,491	1,187	595	516	676
Germans ...	2,109	2,449	2,517	3,501	3,155	3,395	(f) 890	(f) 452	(f) 58
Greeks ...	327	380	583	736	480	772	361	160	265
Italians ...	1,078	883	1,365	1,632	1,963	1,642	645	179	96
Maltese ...	...	...	41	122	193	464	57	173	212
Poles ...	24	11	34	17	7	12	2	...	1
Portuguese ...	10	3	6	9	25	12	1	...	7
Rumanians ...	11	3	13	24	9	34	6	8	13
Russians ...	466	735	994	1,159	1,334	1,446	716	497	341
Scandinavians ...	891	1,210	1,384	1,303	1,285	1,489	1,202	736	552
Spaniards ...	56	49	128	118	116	169	206	51	37
Swiss ...	131	109	130	209	202	220	64	40	21
Turks ...	14	10	10	6	5	19	1	1	...
Other Europeans (b) ...	16	22	27	(c) 57	5	(d) 165	13	7	1
AMERICANS—									
North Americans ...	692	746	914	1,386	1,713	1,529	1,066	1,050	870
South Americans ...	14	13	17	37	14	31	5	16	24
American Indians ...	...	...	31	9	...	1	1	...	...
Negroes ...	6	14	13	47	7	23	9	...	9
West Indians ...	6	13	11	8	1	3	2	9	1
ASIATICS—									
Afghans ...	3	2	14	17	7	2	3	...	...
Arabs ...	1	1	1	18	14	19	2	6	...
Burmese ...	1	...	...	...	1	1	1	...	...
Chinese ...	1,729	1,817	2,009	2,250	2,286	1,975	2,287	2,289	2,016
Cingalese ...	10	14	4	17	8	9	6	18	11
Eurasians ...	6	14	7	13	2	...	...	...	...
Filipinos ...	37	66	17	13	12	4	15	15	15
Hindoos ...	130	156	188	157	187	305	144	133	111
Japanese ...	509	610	459	698	822	387	423	1,089	888
Javanese ...	52	4	12	6	3	20	3	4	20
Malays ...	309	304	479	326	303	291	285	254	190
Syrians ...	73	95	104	75	31	19	5	14	13
OTHER RACES—									
Maoris ...	108	62	31	32	41	21	16	6	2
Mauritians ...	3	4	9	2	7	1	...	...	...
Pacific Islanders ...	94	54	69	92	105	101	37	59	40
Papuan ...	439	622	139	196	171	189	185	178	132
St. Helena Blacks ...	1	...	...	...	...	...	...	...	...
Unspecified ...	31	141	(e) 65	(e) 102	(e) 214	(e) 104	(e) 58	(e) 225	63
Total ...	83,324	94,543	139,020	163,990	140,251	110,701	70,436	59,140	53,036

(a) One person was admitted, after passing the test, in each of the years 1908 and 1909. (b) Not specified. (c) Bulgarians. (d) Including 162 Bulgarians. (e) A large percentage of these immigrants was Timorese. (f) Principally prisoners of war and their families.

The following table has been prepared, shewing to what extent immigration has taken place into the several States of the Commonwealth from 1909 to 1917:—

IMMIGRATION INTO THE SEVERAL STATES OF THE COMMONWEALTH, 1909-1917.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	C'wealth.
1909	51,170	13,602	6,720	3,169	6,343	2,172	148	83,324
1910	53,029	14,942	10,353	3,988	9,881	2,168	182	94,543
1911	69,640	21,488	17,778	7,039	18,386	4,563	126	139,020
1912	86,239	34,568	11,820	10,035	16,624	4,480	224	163,990
1913	73,946	29,121	10,496	8,220	15,985	2,350	133	140,251
1914	67,221	20,727	8,594	4,820	6,954	2,249	143	110,708
1915	44,899	13,028	3,963	1,847	4,358	1,925	416	70,436
1916	36,782	12,970	2,426	924	4,054	1,735	249	59,140
1917	32,825	10,701	1,814	1,540	4,761	1,133	262	53,036

§ 2. Patents, Trade Marks, and Designs.

1. **Devolution of Jurisdiction upon the Commonwealth.**—Prior to the establishment of Federation, and for a few years thereafter, each Australian State possessed independent jurisdiction in respect of patents, copyrights, trade marks, and designs, and had, with the exception of Tasmania in regard to copyrights, enacted its own laws. Any person, therefore, who desired to obtain the grant of a patent, or the registration of any copyright, trade mark, or design had necessarily, with the exception aforesaid, to incur the trouble and expense of making separate applications in each State. The Commonwealth Constitution Act conferred upon the Federal Parliament power to legislate respecting these matters. (See page 24 hereinbefore.) The Patents Act of 1909 applied the laws relating to patents for inventions to the Territory of Papua.

The State Acts, though in general based upon the Imperial Statutes dealing with these subjects, were not wholly governed by them. The Commonwealth Acts, both in regard to principle and practice, have the same general foundation as the Imperial Statutes, but in some respects have been modified and brought into line in accordance with Australian experience.

2. **Patents.**—The first Commonwealth Patents Act was passed in 1903, and was amended in 1906, 1909, 1910, 1915 and 1916. (See page 42 *ante*.) Under these Acts, which are administered by a "Commissioner of Patents," the powers and functions vested under the States Acts became vested in the Commonwealth. A single Commonwealth patent now gives throughout the Commonwealth and the Territory of Papua that protection which formerly could only be obtained by procuring a patent in each State and the said Territory. The rights of State patentees or the patentees in the Territory of Papua are in all cases reserved to them. The holder of a State patent in force may obtain, for a period not exceeding the unexpired time thereof, a Commonwealth patent for the invention comprised in the State patent; provided, however, that any State other than the State in which the patent under the States Patent Act was granted may be excepted from the patent if the Commissioner of Patents is satisfied that the invention either (a) is not novel, (b) has been made the subject of a pending application, or (c) has been published in such State. Comparatively small fees, totalling £3, are now sufficient to obtain for an inventor protection throughout the Commonwealth and the Territory of Papua, and the only renewal fee (£5) is payable before the expiration of the seventh year of the patent, or within such extended time, not exceeding one year, and upon payment of further fees as may be allowed.

(i.) *Applications for Patents.* Any of the following persons may make application for a patent :—(a) The actual inventor. (b) His assignee, agent, attorney, or nominee. (c) The actual inventor or his nominee jointly with the assignee of a part interest in the invention. (d) The legal representative of a deceased actual inventor or of his assignee. (e) Any person resident in the Commonwealth to whom the invention has been communicated by the actual inventor, his legal representative, or assignee (if the actual inventor, his legal representative, or assignee is not resident in the Commonwealth). An application for a patent must be for one invention only, and must be made in the form prescribed, and lodged by being left at or sent by post to the Patent Office at Melbourne. It must be accompanied either by a provisional or a complete specification. The application must contain a declaration in the prescribed form setting out the facts relied on to support the application, and must be signed by the applicant before a witness.

(ii.) *Term for which Granted.* The term for the duration of every patent is limited to fourteen years from the date of application. A patent ceases if the patentee fails to pay the renewal fee within the prescribed time.

(iii.) *Opposition to Grant of Patent.* Within three months of the advertisement of the acceptance of a complete specification, or within such further time, not exceeding one month, as the Commissioner on application made within the three months allows, any person may give notice at the Patent Office of opposition to the grant on any of the following grounds :—(a) That the applicant has obtained the invention from the opponent or from a person of whom he is the legal representative or assignee or nominee. (b) That the invention has not been communicated to the applicant by the actual inventor, his legal representative or assignee (if the actual inventor, his legal representative or assignee is not resident in the Commonwealth). (c) That the invention has been patented in the Commonwealth on an application of prior date or has been patented in a State. (d) That the complete specification describes or claims an invention other than that described in the provisional specification, and that the opponent has applied for a patent for such other invention in the interval between the leaving of the provisional and complete specifications. (e) Want of novelty. (f) Prior publication.

The case is heard and decided by the Commissioner, from whose decision an appeal lies to the High Court or to the Supreme Court of the State in which the Patent Office is situated.

(iv.) *Single Patent for Cognate Inventions, etc.* The provisions of the Act relative to single patents for cognate inventions, patents of addition and revocation of patents, will be found in detail in previous issues of the Year Book. (See No. 6, p. 1163.)

(v.) *Compulsory Working and Licenses.* At any time not less than four years after the date of a patent, and not less than two years after the 13th December, 1911, any person may apply to the High Court or the Supreme Court of the State in which the Patent Office is situated for an order declaring that the patent article or process is not manufactured or carried on to an adequate extent in the Commonwealth. From and after the time when any such order may take effect, the patent is not deemed to be infringed by the manufacture or carrying on in the Commonwealth of the patented article or process, or by the vending within the Commonwealth of the patented article made within the Commonwealth. By Act No. 13 of 1916, section 87(a), which provides for compulsory working, has been suspended during the continuance of the present war and for a period of six months thereafter, and in reckoning the said period of four years, the period during which section 87(a) is suspended shall not be taken into account. Any person interested may, after the expiration of two years from the granting of the patent, present a petition to the Commissioner alleging that the reasonable requirements of the public with respect to a patented invention have not been satisfied and praying for the grant of a compulsory license or, in the alternative, for the revocation of a patent. If the parties do not come to an arrangement between themselves, the Commissioner, on being satisfied that a *prima*

facie case has been made out, must refer the petition to the High Court or the Supreme Court of the State in which the Patent Office is situated. If the Commissioner is not satisfied that a *prima facie* case has been made out he may dismiss the petition.

(vi.) *Restoration and Surrender of Patents, and Contracts and Proceedings.* The provisions of the Act with reference to restoration and surrender of patents, contracts, etc., are given in detail in previous issues of the Year Book. (See No. 6, p. 1164.)

(vii.) *International Protection of Patents.* The Patents Act contains provisions under which the international arrangements for the protection of patents contained in the Imperial Acts can be made applicable to the Commonwealth by order of the King-in-Council. Applicants for patents, subject to the country in which first application is made being a party to the arrangement, are now, if they apply in Australia within twelve months of their first foreign application, entitled to make application for patents for their inventions in priority to other applicants, and such patents have the same date as the date of the first application abroad. Corresponding arrangements have also been made by the Commonwealth with New Zealand.

(viii.) *Patent Attorneys.* Any person on passing the prescribed examination, and on paying a fee of £5, may be registered by the Commissioner as a patent attorney. A solicitor may practise as a patent attorney without passing the prescribed examination and without being registered as a patent attorney. No person may describe himself as a patent attorney, or as a patent agent, or as an agent for obtaining patents unless he is registered or entitled to practise as a patent attorney.

(ix.) *Patent Office Publications.* Complete specifications are printed shortly after they become open to public inspection by advertisement of acceptance, or under Section 121 of the Act, provided the complete specification is not accepted and advertised. Each specification is open to public inspection. A number of publications, of which a list may be found in the Australian Official Journal of Patents, is on sale at the Government Printing Office, Melbourne.

The *Australian Official Journal of Patents* is issued weekly, and contains lists of applications and proceedings, with illustrated notes of accepted complete specifications. A supplementary annual volume contains statistics, indexes to names of persons concerned, classified indexes to subject matter of applications lodged, and a numerical index to proceedings on Commonwealth applications which have been advertised during the year; there are also names and number indexes to proceedings on State applications.

(x.) *Applications Filed, Provisional Specifications Accepted, and Letters Patent Sealed.* The numbers of individual inventions in respect of which applications were filed in the States or Commonwealth during each year from 1910 to 1917 inclusive are shewn in the following table. The number of applications accompanied by provisional specifications and the number of patents sealed in respect of applications made in each year are also shewn.

PATENTS.—APPLICATIONS FILED AND LETTERS PATENT SEALED IN THE COMMONWEALTH, 1910 to 1917.

Year	...	...	...	...	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
No. of applications	...	...	...	...	3,605	3,497	4,071	4,163	3,436	3,117	2,906	3,244
No. of applications accompanied by provisional specifications	...	...	...	...	2,294	2,290	2,273	2,626	2,232	2,133	1,980	2,186
Letters patent sealed during each year	...	...	...	...	1,552	2,027	1,502	1,495	2,098	1,279	1,162	1,218

(xi.) *Revenue of Patent Office.* The revenue of the Commonwealth Patent Office for each year from 1910 to the end of the year 1917 is shewn in the subjoined table:—

REVENUE OF COMMONWEALTH PATENT OFFICE, 1910 to 1917.

Particulars.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
Fees collected under—	£	£	£	£	£	£	£	£
States Patents Acts ...	1,940	768	118	50	16	19	15	11
Patents Acts 1903-10 ...	17,042	19,640	18,542	18,800	21,575	15,463	14,055	15,629
Receipts from publications...	208	237	305	283	274	298	294	281
Petty receipts ...	33	48	50	49	81	6	4	...
Total ...	19,223	20,693	19,015	19,182	21,946	15,786	14,368	15,921

3. **Trade Marks.**—The remarks made concerning the unification of the patent system of the Commonwealth apply equally to trade marks. Under the Trade Marks Act 1905, which came into force on the 2nd July, 1906, the Commissioner of Patents is appointed to act also as “Registrar of Trade Marks.” The Trade Marks Act of 1905 was amended by the Patents, Trade Marks, and Designs Act 1910, assented to on the 14th November, 1910, and by the Trade Marks Act 1912, and is now cited as The Trade Marks Act 1905-1912. The principal objects of the amending Act were to enlarge the scope of marks capable of registration, and repeal the provisions of the Act of 1905 relating to the “Workers Trade Mark,” the provisions regarding which were held to be unconstitutional. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the Act of 1905 and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that in their opinion the conditions as to remuneration of labour in connection with their manufacture are fair and reasonable.

(i.) *Essential Particulars of Trade Marks.*—

Section 15. “A registrable trade mark shall consist of essential particulars with or without additional matter.”

Section 16. (1) “A registrable trade mark must contain or consist of at least one of the following essential particulars:—(a) The name of a company, individual, or firm represented in a special or particular manner; (b) the signature of the applicant for registration or some predecessor in his business; (c) an invented word or invented words; (d) a word or words having no direct reference to the character or quality of the goods, and not being according to its signification a geographical name or a surname; (e) any other distinctive mark, but a name, signature, or word or words, other than such as fall within the descriptions in the above paragraphs (a), (b), (c) and (d) shall not, except by order of the Registrar, Law Officer, or Court, be deemed a distinctive mark.”

(2) “For the purposes of this section ‘distinctive’ means adapted to distinguish goods of the proprietor of the trade mark from those of other persons.”

(3) “In determining whether a trade mark is so adapted, the Registrar, Law Officer, or Court may, in the case of a trade mark in actual use, take into consideration the extent to which such user has rendered such trade mark in fact distinctive for the goods with respect to which it is registered or proposed to be registered.”

(ii.) *State Registrations.* State registrations cease to be in force at the expiration of fourteen years from the date of the Commonwealth Act, or at the time when, under the State Trade Marks Act, the trade mark would, if after the commencement of the Commonwealth Act no fee for the continuance of its registration were paid, first become liable to removal from the register, whichever first happens. It is also provided that no fee shall be receivable nor shall any act be done after the commencement of the Commonwealth Act for the continuance of the registration of a trade mark under a State Act.

Commonwealth registration of a State registered mark may be effected, and the fact of its registration in a State prior to the coming into force of the Commonwealth Act may entitle the registered proprietor in the State to Commonwealth registration, notwithstanding the existence of defects which might be grounds for refusal of an application for the registration of a new trade mark.

(iii.) *Duration of Registration and General Provisions.* The registration of a trade mark is for a period of fourteen years, but may be renewed from time to time. International and intercolonial arrangements for the mutual protection of trade marks may be made in a manner similar to that provided for the protection of patents. In this regard Australia has become a party to the International Convention for the protection of industrial property. Registration may be opposed by any person lodging a notice of opposition at the Trade Marks Office within three months after the advertisement of the application, or such further time, not exceeding three months, as may, on application made within the first three months, be allowed.

(iv.) *Publications.* The *Australian Official Journal of Trade Marks* is issued weekly, and contains lists of applications and proceedings, with representations of marks (when accepted) sought to be registered. Lists of registered owners of designs and the subject matter of applications are also published weekly in this Journal. Indexes to names of applicants and subject matter of applications are compiled and are on sale.

4. **Designs.**—The Designs Act of 1906 came into operation on the 1st January, 1907, being subsequently amended by the Patents, Designs and Trade Marks Act 1910, and the Designs Act 1912, and is now cited as the Designs Act 1906-12. Under this Act a Commonwealth Designs Office has been established and the Commissioner of Patents appointed "Registrar of Designs."

(i.) *Registration.* Any new and original design which has not been published in Australia before the lodging of an application for its registration may be registered in respect of all or any of the articles enumerated in the classification contained in the regulations, which comprise jewellery, paperhangings, carpets, floor-cloths, lace, hosiery, millinery, wearing apparel, textile fabrics, bookbinding, and articles composed wholly or chiefly of a variety of solid substances. A separate application must be made in respect of each class in which the owner of the design desires it to be registered. After an application for the registration of a design has been lodged, the design may be published and used without prejudice to the validity of the registration.

(ii.) *Duration of Copyright in Designs.* The registration takes effect as from the date of the lodging of the application, and, subject to the provisions of the Act, remains in force for a period of five years from that date. Provision is made by the amending Act of 1912 for an extension of the period of registration to fifteen years, subject to applications for extensions being made and the prescribed fees paid before the expiration of five and ten years respectively. The owner of a registered design must within two years after registration substantially use the design, or cause it to be used in Australia, and if he fails to do so the copyright ceases. If, however, such design is used in any manufacture abroad, the above period is limited to six months.

(iii.) *General.* The Act also contains provisions regarding the remedies for infringement of designs and the rectification of the register. Arrangements for the international and intercolonial protection of copyright in designs were made by the same proclamation referred to above with regard to patents and trade marks. The owner of a registered design must cause each article to which the design is applied to be marked before delivery for sale with the prescribed mark to denote that the design is registered.

5. **Applications for Trade Marks and Designs.**—The following table gives particulars of applications for trade marks and designs received and registered under the Commonwealth Acts from 1909 to 1917 inclusive :—

**APPLICATIONS FOR TRADE MARKS AND DESIGNS RECEIVED AND REGISTERED
UNDER COMMONWEALTH ACTS, 1909 to 1917.**

Applications.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
RECEIVED.									
Trade Marks	1,688	1,729	1,977	1,803	1,957	1,619	1,526	1,636	1,532
Designs ...	187	186	203	235	301	267	326	298	266
REGISTERED.									
Trade Marks	1,455	1,190	1,323	1,389	1,468	1,272	1,015	1,126	1,033
Designs ...	166	160	180	211	281	220	266	253	236

The following table shows the revenue of the Trade Mark and Design Office during the years 1914 to 1917:—

REVENUE OF TRADE MARK AND DESIGN OFFICE, 1914 to 1917.

Particulars.	1914.			1915.			1916.			1917.		
	Trade Marks.	Desig's	Publi- cations	Trade Marks.	Desig's	Publi- cations	Trade Marks.	Desig's	Publi- cations	Trade Marks.	Desig's	Publi- cations
	£	£	£	£	£	£	£	£	£	£	£	£
Fees collected under State Acts ...	42	...	...	32	...	...	21	...	...	28	...	...
Fees collected under Commonwealth Acts ...	4,610	266	102	4,024	329	95	4,280	354	89	3,978	312	94
Total ...	4,652	266	102	4,056	329	95	4,301	354	89	4,006	312	94

6. Enemy Patents and Trade Marks.—On the outbreak of the European war the Commonwealth Government deemed it advisable to extend the powers of the Governor-General of the Commonwealth during the continuance of hostilities with reference to patents, trade marks, and designs, the property of alien enemies.

Acts Nos. 15 and 16 of 1914 were accordingly passed by the Commonwealth Parliament in November, 1914, giving the Governor-General power to make regulations as follows:—

- (a) for avoiding or suspending in whole or in part any patent or license the person entitled to the benefit of which is the subject of any State at war with the King;
- (b) for avoiding or suspending the registration, and all or any rights conferred by the registration, of any trade mark or design the proprietor whereof is a subject as aforesaid;
- (c) for avoiding or suspending any application made by any such person under any of the Acts referred to in this section;
- (d) for enabling the Minister to grant, in favour of persons other than such persons as aforesaid, on such terms and conditions, and either for the whole term of the patent or registration or for such less period, as the Minister thinks fit, licenses to make, use, exercise or vend patented inventions and registered designs so liable to avoidance or suspension as aforesaid; and
- (e) for extending the time within which any act or thing may or is required to be done under any of the Acts referred to in this section.

The regulations prescribed by the Governor-General for giving effect to the provisions of these Acts may be found in the official journals issued by the Commonwealth Commissioner of Patents (see *Australian Official Journal of Patents*, vol. 20, No. 47 *et seq.*).

To the end of June, 1918, twenty-one applications had been made under these Acts to avoid or suspend patents, of which six were granted and three refused, the others being withdrawn. Thirty-five applications were also made to avoid or suspend trade marks, of which eight were granted and subsequently revoked, twenty-two refused, three withdrawn, and two are still pending. Five hundred and fifty-eight Commonwealth and 319 State registrations of trade marks, and all rights conferred by such registrations, also have been suspended in favour of the Minister of State for Trade and Customs. Two Commonwealth trade marks—"Lysol" and "Aspirin"—were avoided from the 23rd July, 1917, ten patents were suspended in favour of the Minister of State for the Navy, and in addition, four patents were suspended in favour of the Engineer-in-Chief for the Commonwealth Railways and such person or persons as may be licensed by the Minister.

7. Publication of Inventions during Present State of War.—Under the War Precautions (Patents) Regulations 1916 (Statutory Rules 140), any person intending to apply for a patent outside the Commonwealth must give notice of his intention to the Commissioner of Patents, who, if he is of the opinion that it is obvious no reason exists for prohibiting publication in the country in which it is intended to make application for a patent, shall notify the applicant that the desired application may be made. In all other cases the Commissioner will refer the notice to the Patents Inquiry Board. If the Board is of opinion that the invention is one which would be of assistance to the enemy, or its publication outside the Commonwealth would be detrimental to the interests of the Commonwealth, the applicant is directed not to publish or communicate his invention.

Under the same regulations every application for a patent, except applications the publication of which in the opinion of the Commissioner of Patents would obviously not be detrimental to the Commonwealth, shall also be referred to the Board. If the Board determines that an invention might be of assistance to the enemy, the applicant shall not, during the continuance of the present state of war, proceed with his application either within or beyond the Commonwealth. It is also forbidden in respect to all applications for patent made since 30th October, 1917, for the applicant to publish his invention either within or outside the Commonwealth until he has received permission from the Commissioner of Patents.

Provision is also made under these regulations for the Attorney-General to give permission in writing for an application to be made abroad under the terms of the International Convention in respect of any invention the subject of an application in the Commonwealth lodged prior to the 12th January, 1916.

§ 3. Copyright.

1. Copyright Legislation.—Prior to the 1st January, 1907, the date on which the Commonwealth Copyright Act of 1905 came into operation, the subject of copyright was regulated by the laws of the separate States. In general, the State laws were under the like provisions of the Imperial Copyright law, including the law of 1842 and the earlier unrepealed or subsequent Acts, the most important of which were the Colonial Copyright Act 1847 and the International Copyright Act of 1886. They were also generally included under British international relations embracing the Berne-Paris provisions of the International Copyright Union and the reciprocal relations with the United

States of America, with the exception that in the Austria-Hungary Treaty, New South Wales and Tasmania were not parties, because they did not exercise the right of ratification especially reserved to individual colonies.

Though the Commonwealth Copyright Act of 1905 took the place of the State Copyright Acts formerly in force, it left unaffected existing rights under the State laws, but transferred the administration thereof to the Commonwealth. Provision was also made under the law of 1905 for the registration of International and State copyrights. The principal features of the Act of 1905 are given in previous issues of the Year Book (see No. 9, p. 1119). This Act was repealed by the Copyright Act of 1912, which was assented to and became operative on the 20th November, 1912. Subject to modifications relating to procedure and remedies, the Commonwealth law of 1912 adopted the British Copyright Act of 1911, and declared the latter law to be in force within the Commonwealth as from the 1st July, 1912. The British Act extends throughout the whole of His Majesty's dominions, but it is not to be in force in a self-governing dominion unless enacted by the legislature thereof either in full or with modifications relating exclusively to procedure and remedies necessary to adapt the Act to the circumstances of the dominion.

Under the Commonwealth Law of 1912, copyright subsists in "every original literary, dramatic, musical, and artistic work," first published within parts of His Majesty's dominions to which the British Copyright Act of 1911 extends, and in the case of an unpublished work, the author of which was "at the date of the making of the work," a British subject or a resident domiciled within the aforesaid parts of His Majesty's dominions (or under protection through international copyright provisions). The old Common Law right is abrogated by the Act of 1912, and all copyright property is now the creature of statute from the date when it takes shape, either written in words or in some other material form.

Copyright is defined to mean the sole right to produce or reproduce the work or any substantial part thereof in any material form whatever, or any translation thereof, to publish, perform, or deliver the work in public, to dramatise or novelise it, and in the case of a literary, dramatic or musical work, to make any record, cinematograph film or other contrivance by means of which it may be mechanically performed or delivered, or to authorise any of such acts. Architectural works of art are included as to design, but not as to process or methods of construction.

By an Order-in-Council made by the Government of the Commonwealth of Australia, simultaneously with the issue of a Proclamation by the President of the United States of America on the 15th March, 1918, reciprocal protection was extended to citizens of the respective countries in regard to unpublished literary, dramatic, musical and artistic works in which copyright existed on the date mentioned, or may thereafter subsist under the laws of these countries. The enjoyment of the rights conferred by the Order-in-Council shall be subject to the accomplishment of the conditions and formalities prescribed by law of the United States of America, or, in other words, registration at the Library of Congress, Washington, D.C., U.S.A., is made a condition precedent to the protection of Australian copyright property in the United States of America.

Further details relative to the provisions of the Act of 1912 will be found in previous issues of the Year Book (see No. 8, p. 1066).

2. Applications for Copyright.—The following table gives particulars of copyright applications received and registered under the Commonwealth Acts from 1913 to 1917 inclusive:—

APPLICATIONS FOR COPYRIGHT RECEIVED AND REGISTERED UNDER
COMMONWEALTH ACTS, 1913 to 1917.

Year.	Copyrights.			
	Literary.	Artistic.	International and State.	Total.
APPLICATIONS RECEIVED.				
1913	505	340	...	845
1914	743	219	5	967
1915	740	237	4	981
1916	845	180	...	1,025
1917	835	141	...	976
APPLICATIONS REGISTERED.				
1913	429	245	...	674
1914	693	184	5	882
1915	742	222	3	967
1916	797	168	...	965
1917	793	140	...	933

The revenue from copyright for the years 1913, 1914, 1915, 1916 and 1917, was £169, £239, £252, £268, and £256 respectively.

§ 4. Old-age and Invalid Pensions.

1. General.—In previous issues an account has been given of the introduction of the old-age pension system into Australasia. Then followed a detailed description of the Commonwealth Invalid and Old-age Pensions Act of 1908, which became operative on 1st July, 1909. It is not intended to repeat these sections in the present publication; enquirers into the subject are referred to previous issues (3-8) of the Official Year Book. In view, however, of the interest attaching to the working of the system, the series of statistical tables which have hitherto been published will be continued.

Details of the several States as at 30th June, 1917, are as follows :—

COMMONWEALTH OLD-AGE PENSIONS, YEAR ENDED 30th JUNE, 1917.

	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	C'w'lth.
Claims examined during year ending 30th June, 1917	4,457	3,331	1,526	1,042	530	443	11,329
Claims rejected	714	199	303	81	39	10	1,346
Claims granted	3,743	3,132	1,223	961	491	433	9,983
Transfers from other States	413	357	135	153	90	58	1,206
Existing 30th June, 1916	33,249	28,446	12,049	9,318	4,199	4,522	91,783
	37,405	31,935	13,407	10,432	4,780	5,013	102,972
To be deducted—							
Deaths	2,727	2,192	808	689	259	303	6,978
Cancellations, and transfers to other States	797	679	286	303	168	144	2,322
	3,464	2,871	1,094	997	427	447	9,300
Old-age Pensions existing on 30th June, 1917	33,941	29,064	12,313	9,435	4,353	4,566	93,672

2. **Sexes of Old-age Pensioners.**—Of the 93,672 persons in receipt of pensions at 30th June, 1917, 38,063 (or 41 per cent.) were males, and 55,609 (or 59 per cent.) were females. Details for the several States are as follows:—

SEXES OF PENSIONERS, 30th JUNE, 1917.

State.	Males.	Females.	Total.	*Masculinity.
New South Wales	14,591	19,350	33,941	75.41
Victoria	10,931	18,183	29,064	60.28
Queensland	5,514	6,799	12,313	81.10
South Australia	3,530	5,905	9,435	59.79
Western Australia	1,917	2,436	4,353	78.70
Tasmania	1,580	2,986	4,566	52.91
Total	38,063	55,609	93,672	68.45

* Number of males to each 100 females.

3. **Ages and Conjugal Condition of Old-age Pensioners Granted Pensions during 1916-17.**—The recorded ages of the 9983 persons to whom pensions were granted during the year 1916-17 varied considerably, ranging from 2109 at age 60 to two at age 93. Particulars for quinquennial age-groups are as follows:—

AGES AND CONJUGAL CONDITION OF PERSONS GRANTED PENSIONS DURING 1916-17.

Age at Admission.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed	Total.	Single.	Married.	Widowed	Total.	
60-64	54	160	61	275	386	1,833	1,645	3,864	4,139
65-69	619	1,414	560	2,593	82	483	484	1,049	3,642
70-74	136	435	219	790	35	231	317	583	1,373
75-79	52	143	93	288	12	70	153	235	523
80-84	18	33	53	104	8	12	101	121	225
85-89	5	9	23	37	3	1	26	30	67
Above 90 ... ..	...	1	7	8	...	1	5	6	14
Total	884	2,195	1,016	4,095	526	2,631	2,731	5,888	9,983

4. **Commonwealth Claims for Invalid Pensions.**—The situation as at 30th June, 1917, was as follows:—

COMMONWEALTH INVALID PENSIONS.—YEAR ENDED 30th JUNE, 1917.

	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total C'wealth.
Claims examined during year ending 30th June, 1917 ...	2,281	2,193	919	466	313	331	6,503
Claims rejected	434	445	251	86	83	62	1,361
Claims granted	1,847	1,748	668	380	230	269	5,142
Transfers from other States ...	73	70	23	29	7	28	230
Existing 30th June, 1916 ...	9,356	6,869	2,954	1,675	1,057	1,528	23,439
	11,276	8,687	3,645	2,084	1,294	1,825	28,811
Deduct—							
Deaths	362	538	206	136	67	95	1,404
Cancellations and Transfers to other States ...	111	228	90	95	27	75	626
	473	766	296	231	94	170	2,030
Invalid Pensions existing 30th June, 1917	10,803	7,921	3,349	1,853	1,200	1,655	26,781

5. **Sexes of Invalid Pensioners.**—Of the 26,781 persons in receipt of an invalid pension on 30th June, 1917, 12,904, or 48.18 per cent., were males, and 13,877, or 51.82 per cent., were females. Details for the several States are as follows:—

SEXES OF INVALID PENSIONERS, 30th JUNE, 1917.

State.	Males.	Females.	Total.	*Masculinity.
New South Wales	5,106	5,697	10,803	89.63
Victoria	3,812	4,109	7,921	92.77
Queensland	1,798	1,551	3,349	115.93
South Australia	759	1,094	1,853	69.38
Western Australia	668	532	1,200	125.56
Tasmania	761	894	1,655	85.12
Commonwealth	12,904	13,877	26,781	92.99

* Number of males per 100 females.

6. **Ages and Conjugal Condition of Persons Granted Invalid Pensions during 1916-17.**—The recorded ages of the 5142 persons who received invalid pensions in the period under review varied from 16 to 90. The following table gives particulars for those up to age 20 and in decennial age-groups after age 20:—

AGE AND CONJUGAL CONDITION OF PERSONS GRANTED INVALID PENSIONS IN 1916-17.

Age at Admission	Males.				Females.				Grand Total.
	Single.	Married.	Widowed	Total.	Single.	Married.	Widowed	Total.	
16-19	162	...	...	162	184	...	...	184	346
20-29	158	54	...	212	254	12	7	273	485
30-39	143	169	6	318	197	47	37	281	599
40-49	142	280	21	443	201	124	143	468	911
50-59	243	552	102	897	246	328	421	995	1,892
60-69	174	381	105	660	28	51	90	169	829
70-79	12	13	10	35	3	12	25	40	75
80 and over ... ..	...	1	1	2	...	...	3	3	5
Total	1,034	1,450	245	2,729	1,113	574	726	2,413	5,142

7. **Cost of Administration.**—Under the State régime the cost of administration differed considerably in the several States, and for 1908-9 represented in New South Wales 4.17 per cent. of the amount actually paid in pensions. In Victoria for the same year the corresponding percentage was 0.70. During the year 1916-17 the total cost to the Commonwealth of administering the Old-age and Invalid Pensions Department was £54,393, or about 1.5 per cent. of the amount actually paid in pensions. Details concerning the cost of administration for 1916-17 are as follows:—

	£
Salaries	12,196
Temporary assistance	3,232
Services of magistrates, registrars, clerks of courts, and police	3,701
Commission to Postmaster-General's Dept., at 12s. 6d. per £100 paid	21,076
Postage and telegrams	4,555
Other expenses	9,633
Total	£54,393

The actual sum disbursed in Old-age and Invalid Pensions in the financial year 1916-17, apart from the cost of administration, was £3,518,987.

8. **Liability Undertaken in Granting Old-age Pensions.**—As an indication of the extent of the responsibility which an old-age pension scheme involves, it may be mentioned that in connection with the evidence tendered to the Commonwealth Commission on Old-age Pensions a computation was made of the total liability in respect of accrued pensions which the Commonwealth would have incurred if, at 31st March, 1901, the date of the Census, 39 per cent. of the persons aged sixty-five and upwards were entitled to pensions of ten shillings per week. The present value at that date of the liability so computed was £10,415,820. (See Minutes of Evidence of Royal Commission on Old-age Pensions, p. 80.)

The following table gives detailed statistical information concerning the working of the Act since 1st July, 1909:—

INVALID AND OLD-AGE PENSIONS.—SUMMARY 1910-17.

Financial Year ended 30th June.	Number of Pensioners.			Amount Paid in Pensions.	Amount Paid to Asylums for Maintenance of Pensioners.	Total Payment to Pensioners and Asylums.	Cost of Administration.	Cost of Administration per £100 paid to Pensioners and Asylums.	Average Fortnightly Pension on last day of Financial Year
	Old-Age.	Invalid.	Total.						
				£	£	£	£	£ s. d.	s. d.
1910	65,492	...	65,492	1,497,330	155	1,497,485	37,146	2 9 7 %	19 1
1911	75,502	7,451	82,953	1,868,648	2,592	1,871,240	39,244	2 1 11 %	19 1
1912	79,071	10,763	89,834	2,148,034	7,447	2,155,481	41,794	1 18 9 %	19 0
1913	82,943	13,739	96,682	2,289,048	13,287	2,302,335	44,523	1 18 8 %	19 6
1914	87,780	16,865	104,645	2,577,965	14,236	2,592,201	47,015	1 16 3 %	19 5
1915	90,892	20,417	111,309	2,704,309	27,630	2,731,939	48,018	1 15 4 %	19 5
1916	91,783	23,439	115,222	2,859,766	31,831	2,891,597	44,401	1 10 9 %	19 4
1917	93,672	26,781	120,453	3,518,987	35,148	3,554,135	54,393	1 10 7 %	24 3

9. **Pensions Act, 1916.**—On 30th September, 1916, an Act was assented to, which amended the original Pensions Act in a very important particular. It had been felt for some time that, owing to the increased cost of living, the grant of ten shillings a week was insufficient. Accordingly amendments were made in the case of the two important sections, twenty-four and twenty-six.

Section 24 of the Invalid and Old-age Pensions Act 1908-1912 originally enacted that the pension "shall not exceed the rate of twenty-six pounds per annum in any event, nor shall it be at such a rate as will make the pensioner's income, together with pension, exceed fifty-two pounds per annum." It was amended (a) by omitting the words "twenty-six pounds," and inserting in their stead the words "thirty-two pounds ten shillings": and (b) by omitting the words "fifty-two pounds" and inserting in their stead the words "fifty-eight pounds ten shillings."

Section 26 originally enacted that if an applicant for pension was in receipt of board or lodging, the actual or estimated value or cost of this should be counted as income, to an extent not exceeding five shillings per week. This has now been amended by omitting the words "five shillings" and inserting in their stead the words "seven shillings and sixpence."

The effect of these amendments is to increase the liability under the heading of Invalid and Old-Age Pensions by about twenty-five per cent. This is the cause of the great increase in the amount paid in pensions in 1916-17. It is also the cause of the fall in the percentage cost of the administration.

§ 5. Maternity Allowance.

The Federal Parliament, during the session of 1912, passed an Act (assented to on 10th October, 1912) providing under certain circumstances for the payment of maternity allowances. The scope and main provisions of the Act will be gathered from the following sections and sub-sections, given in full :—

4. "Subject to this Act, there shall be payable out of the Consolidated Revenue Fund, which is hereby appropriated accordingly, a maternity allowance of Five pounds to every woman who, after the commencement of this Act, gives birth to a child, either in Australia or on board a ship proceeding from one port in the Commonwealth or a Territory of the Commonwealth to another port in the Commonwealth or a Territory of the Commonwealth."
5. (1) "A maternity allowance shall be payable in respect of each occasion on which a birth occurs, and the child is born alive, or is a viable child, but only one allowance shall be payable in cases where more than one child is born at one birth."
6. (1) "The maternity allowance shall be payable only to women who are inhabitants of the Commonwealth or who intend to settle therein."
- (2) "Women who are Asiatics or are aboriginal natives of Australia, Papua, or the islands of the Pacific, shall not be paid a maternity allowance."

The following table gives a statistical summary of the most important points in connection with the working of the Maternity Allowance Act since 10th October, 1912, when the first payments were made :—

COMMONWEALTH MATERNITY ALLOWANCE.—SUMMARY, 1913-17.

Year ended 30th June.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration.	Cost per £100 of allowance paid.
			£	£	£ s. d.
1913 (a)	82,475	619	412,375	6,547	1 11 9
1914	134,998	709	674,990	10,281	1 10 6
1915	138,855	640	694,275	12,900	1 17 2
1916	131,943	504	659,715	12,165	1 16 11
1917	132,407	459	662,035	13,735	2 1 6

(a) From 10th October, 1912.

§ 6. War Pensions.

1. **General.**—An Act for the provision of war pensions was passed in 1914 and amended in 1915 and 1916. Its scope can be determined by the following extract from Section 3. "Upon the death or incapacity of any member of the forces whose death or incapacity results, or has resulted, from his employment in connection with warlike operations in which His Majesty is, or has since the commencement of the present state of war been engaged, the Commonwealth shall, subject to this Act, be liable to pay to the member or his dependents, or both, as the case may be, pensions in accordance with this Act."

A very great latitude is allowed in the interpretation of the word "dependents." It includes the wife or widow of any member of the forces; the widowed mother of an unmarried son; the children (including ex-nuptial children); the parents, if without adequate means of support; and such other members of his family as were wholly or in part dependent upon his earnings at any time within twelve months prior to his enlistment.

2. Rates of Pension: (1) The rates of pension payable under this Act are as follows:—

(A) In case of the death of a member of the Forces :

- (i.) To the widow, or the widowed mother of an unmarried son, the rate specified in column two of the first schedule opposite to the rate of pay of the member, and
- (ii.) to each child, the rate of twenty shillings per fortnight for the first child, fifteen shillings per fortnight for the second child, and ten shillings per fortnight for the third and each subsequent child, and
- (iii.) to the other dependents such rates as are assessed by the Commissioner or the Deputy-Commissioner, as the case may be, but not exceeding in the aggregate the rate specified in column two of the first schedule opposite to the rate of pay of the member plus two pounds per fortnight :

Provided that the maximum rate of pension payable to any one dependent of a member shall not in any case exceed the amount specified in column two of the first schedule opposite to the rate of pay of the member.

(B) In case of the total incapacity of a member of the Forces :—

- (i.) To the member the rate specified in column three of the first schedule, opposite to the rate of pay of the member, and
- (ii.) to the wife of a member fifty per centum of that rate, and
- (iii.) to each child of the member, the rate of twenty shillings per fortnight for the first child, fifteen shillings per fortnight for the second child, and ten shillings per fortnight for the third and each subsequent child, and
- (iv.) to the other dependents such rates as are assessed by the Commissioner, or the Deputy-Commissioner, as the case may be, but not exceeding in the aggregate the rate specified in column two of the first schedule, opposite to the rate of pay to the member, plus two pounds per fortnight. Provided that the maximum rate of pension payable to any one dependent of a member shall not in any case exceed the amount specified in column two of the first schedule, opposite to the rate of pay of the member.

(C) In case of the partial incapacity of a member of the Forces, such less rates than those referred to in paragraph (B) as are assessed by Commissioner, or the Deputy-Commissioner, as the case may be, having regard to the nature and probable duration of the incapacity.

(2) Notwithstanding anything contained in this section, the maximum rate of pension payable to a child, both of whose parents are dead, shall be :—

- (i.) up to ten years of age, one pound per fortnight ;
- (ii.) from ten to fourteen, twenty-five shillings per fortnight ; and
- (iii.) from fourteen to sixteen years of age, thirty shillings per fortnight.

(3) The amount of pension granted and payable to a member of the Forces shall not be reduced within the period of six months from the date of the commencement of the pension.

4) Any member of the Forces who is incapacitated by reason of a disability specified in the second schedule, shall receive the rate of pension shewn opposite to the description of the disability in that schedule.

- (5) If a member of the Forces who is unmarried or whose wife is either dead or a permanent invalid is incapacitated to an extent which necessitates the constant services of an attendant, and the member has not the means to pay for such services, the rate of his pension may be increased by a sum not exceeding one pound per fortnight.

3. **Schedules of Pensions.**—The schedules to which reference has been made in the preceding section are as follows :—

THE FIRST SCHEDULE.

Scale of pensions payable to widow on death of a member of the Forces, or to a member upon total incapacity:

Rate of Pay of the Member per Day.			Pension Payable to Widow on Death of Member.			Pension Payable to Member upon Total Incapacity.		
s.	d.		£	s.	d.	£	s.	d.
6	0	and under	2	0	0	3	0	0
7	0	"	2	3	0	3	2	0
9	0	"	2	9	0	3	6	0
10	0	"	2	12	3	3	8	0
10	6	"	2	13	9	3	9	0
11	6	"	2	16	0	3	11	0
12	0	"	2	17	3	3	12	0
13	0	"	2	19	6	3	14	0
17	6	"	3	10	0	4	0	0
22	6	"	3	17	6	4	5	0
30	0	"	4	9	0	4	15	0
37	6	"	5	0	9	5	5	0
45	0	"	5	12	3	5	15	0
50	0	and upwards	6	0	0	6	0	0

THE SECOND SCHEDULE.

Description of Disability.				Rate of Pension Payable.	
Loss of leg or foot	...	...	...	The maximum rate for six months, there- after three-fourths of the maximum rate.	
Loss of hand or arm	...	...	...	The maximum rate for six months, there- after three-fourths of the maximum rate.	
Loss of one eye	...	...	...	Half of the maximum rate.	
Loss of both legs	...	...	...	The maximum rate.	
" " arms	...	...	...
" " feet	...	...	...
" " hands	...	...	...
" " eyes	...	...	...
Loss of arm and leg	...	...	...
Loss of hand and foot	...	...	...
Loss of one eye, together with loss of leg, foot, hand, or arm	...	...	...

4. **Number of Pensioners, 1917.**—The following statistical tables shew the position of affairs as at the 30th June, 1917 :—

TABLE I.—PARTICULARS OF WAR PENSIONERS, AT 30th JUNE, 1917.

Classification.	In respect of Deceased Members.	In respect of Incapacitated Members.	Total.
(i.) Dependents of members of the Forces—			
(a) Wives or widows	3,420	4,288	7,708
(b) Children under 16 years	5,581	6,880	11,961
(c) Children over 16 years'	83	42	125
(d) Widowed mothers of unmarried members	2,570	136	2,706
(e) Other mothers of members	4,654	312	4,966
(f) Fathers	869	13	882
(g) Brothers and sisters	602	37	639
(h) Others	232	56	288
Total number of dependents of members of the Forces	18,011	11,264	29,275
(ii.) Incapacitated members of the Forces ... ..	...	15,916	15,916
Total number of war pensioners at 30th June, 1917	18,011	27,180	45,191

TABLE II.—NUMBER OF WAR PENSIONERS ON 30th JUNE, 1917.

Where Paid.	Incapacitated Members of the Forces.	Dependents of		Total.
		Deceased Members.	Incapacitated Members.	
South Africa	9	20	5	34
New Zealand	40	91	20	151
New South Wales	5,543	4,772	3,407	13,722
Victoria	5,233	5,840	4,112	15,185
Queensland	1,671	1,432	965	4,068
South Australia	1,357	1,658	1,257	4,272
Western Australia	1,169	1,760	725	3,654
Tasmania	568	895	451	1,914
London	326	1,543	322	2,191
	15,916	18,011	11,264	45,191

TABLE III.—EXPENDITURE IN 1916-17.

£		£	
New South Wales	359,349	Tasmania	43,422
Victoria	449,446	London	62,743
Queensland	108,314		
South Australia	114,685		
Western Australia	74,026		
		Total	(a) £1,212,632

(a) Including £647 for South Africa.

The cost of administration was £10,187 in 1915-16, and £38,190 in 1916-17.

§ 7. Local Option.

1. **General.**—The principles of local option as to the sale of fermented and spirituous liquors have been applied in all the States of the Commonwealth. The last State to adopt these principles was Western Australia, where provision was made for a system of local option by the Licensing Act 1911. Since the outbreak of war in 1914, various enactments have been made in several of the States relative to the control of the liquor traffic. While not in any way pertaining to the scheme of local option, these measures are referred to in this section, as possibly, if not probably, affecting future public opinion in regard to this matter.

2. **New South Wales.**—(i.) *Local Option.* The Act in force relating to local option in this State is the Liquor Act 1912, which consolidated the laws relating to publicans, brewers and other persons engaged in the brewing, manufacture or sale of liquor. The local option vote is taken in every electorate on the day fixed for the poll therein at each general election, but special provision was made under The Liquor Amendment Act 1916 to suspend the taking of the local option vote at the general election in 1917. The option with regard to licenses extends to public-houses, wineshops, and clubs, and the persons entitled to vote are those entered on the Parliamentary electoral rolls. The first local option vote under the Liquor (Amendment) Act of 1905 was taken at the general election in 1907, and the second at the election in 1910, while the vote in 1913 was taken under the Liquor Act 1912. In 1907, when the first local option vote was taken, there were 3023 hotels in existence; of this number 293 were ordered to be closed at varying dates. At the election of 1910 there were 2869 hotels, and of these, 28 were ordered to be closed. At the 1913 election there were 2719 hotels, of which 23 were closed before July, 1917. The number of wine licenses at the time of the vote of 1907 was 633, of which 46 were abolished. In 1910, 5 out of 565 were closed, and in 1913, 7 out of 514 were ordered to be closed. The resolutions to be submitted, and the effects of such resolutions, if carried, are given *in extenso* in previous issues of this book. The following statement shews the number of electorates in which each of the resolutions was carried:—

NEW SOUTH WALES.—EFFECTS OF LOCAL OPTION VOTES, 1907, 1910, and 1913.

Particulars.	General Election, 1907.		General Election, 1910.		General Election, 1913.	
	Elector-ates.	Votes.	Elector-ates.	Votes.	Elector-ates.	Votes.
<i>Results in favour of—</i>						
(a) Continuance ...	25	209,384	76	324,973	75	380,707
(b) Reduction ...	65	75,706	14	38,856	15	44,453
(c) No license ...	Nil	178,580	Nil	212,889	Nil	245,202

(ii.) *Liquor Referendum Act 1916.* On 17th February, 1916, a proclamation was issued, in terms of the War Precautions Act, by the Minister for Defence, ordering that licensed premises be closed at 6 p.m. in the County of Cumberland, and within a radius of five miles from any military camp; a week later the closing hour was varied from 6 to 8 p.m. Subsequently the Liquor Referendum Act 1916 was passed in the State Parliament to decide by referendum the hour of closing for premises licensed under the Liquor Act 1912. At the referendum the electors were enabled to record votes in order of preference for each hour from 6 to 11 p.m. inclusively. The count of the first preference

votes resulted in a large majority for 6 o'clock, and from 21st July, 1916, all licensed premises and registered clubs in New South Wales have been closed at that hour. This determination prevails during the currency of the war and for a period not exceeding six months thereafter.

3. *Victoria*.—The Acts dealing with the subject of local option as to the sale of fermented and spirituous liquors, and with the compulsory closing of hotels in this State, are the Licensing Act 1915, No. 2683, and the Licensing Act 1916, No. 2855. Other Acts, now repealed, which dealt with the subject, were the Licensing Acts 1876, 1885, 1888, 1890, 1906, and 1907.

Part XIII. of the Act of 1915 relates to the subject of local option. Under this part the local option provisions were to come into operation at the first general election subsequent to 1st January, 1917. The 1916 Act provides that the first local option polls are not to be held till the second general election following on the above date. In the meantime, the Licenses Reduction Board, which by the same Act has been constituted the Licensing Court for the whole State, is empowered to continue the work of closing hotels, which it has carried out since 1906.

The reduction of a statutory number of hotels for each licensing district disappeared with the old provisions relating to closing, and the Court is now authorised to close hotels in any licensing district, as if resolution B (Reduction), under the local option provisions, had been carried in each district. This allows of a reduction proportionate to the existing number, the maximum closing not to exceed one-fourth. Power has also been given to accept the surrender of any victualler's license irrespective of the number otherwise closed. A greater number must not be closed than can be compensated, and the old limitation, that hotels licensed after 1886 were not entitled to compensation, has been removed.

(i.) *The Licenses Reduction Board*. This Board was established by the 1906 Act, with power to reduce the number of licensed victuallers' premises, up to December, 1916, in districts where there were more than the statutory number of licenses. It had also the duty of fixing and awarding compensation to the owners of licenses of the closed hotels. The compensation was provided by an annual percentage fee of 3 per cent. on all liquor purchased by licensed victuallers. The compensation fund obtained in this manner has risen from £48,233 in 1907, to £63,623 in 1916, which was the highest figure reached. In 1916, with the restricted hours of trading, the amount received was £60,396. The licensing fund, which was distinct from the compensation fund, was protected by a provision that the remaining hotels, by a *pro rata* assessment, had to make up annually the amount of the license fees lost by the closing of hotels; the license fees for hotels were of varying amounts, based on the annual municipal value of the premises, ranging from £5 to £50, in four classes, viz., £5, £15, £25, £50. By the 1916 Act, this system of fixed fees was abolished, as was also the *pro rata* assessment of lost fees and the 3 per cent. compensation fees. The two funds referred to above were merged into one, and a system of percentage fees was applied to all licenses for the sale of liquor in the State, whether wholesale or retail, and the amount received is paid into one fund.

Under this system, all vendors of liquor pay in proportion to the benefit they derive from the license. The amount charged the wholesale trade is four per cent. on the cost of all liquors sold to non-licensed persons, no charge being made on sales to other licensed vendors. The retail trade is charged six per cent. on liquor purchases, except the holders of Australian wine licenses, who are charged four per cent.

During 1916, prior to the passing of the above Act, a number of owners and licensees, fearing that no provision would exist for the acceptance of surrenders when Part XIII. came into operation, took advantage of the existing provisions. Consequently, the number closed, 143, was in excess of the average, and the 1917 compensation funds had to be drawn upon to the extent of £18,087. The closings of 1917 had to be

somewhat curtailed for this reason. The maximum compensation payable is still governed by the trading results and the rents of the years 1903-6, though a concession was made in the Amending Act by which licensees are entitled to be compensated on a three years' tenure, if they are in possession of a lease of that extent when deprived of their license. Under the 1916 Act 83 hotels have been closed and £49,608 awarded as compensation. The total number of hotels closed up to the 31st December, 1917, was 1137, and the compensation paid, £590,459, or an average of £520 per hotel. The following table shows particulars of the operations of the Board and Court up to the 31st December, 1917 :—

VICTORIA.—OPERATIONS OF LICENSES REDUCTION BOARD, 31st DECEMBER, 1917.

Particulars.	Licenses in December, 1906.			Hotels Deprived of Licenses	Compensation Awarded.		Hotels Surrendered.	Compensation Awarded.	
	Number in Existence.	Statutory Number.	* Number in Excess.		Owner.	Licensee.		Owner.	Licensee.
Metropolitan & Suburban Country ...	1,020	877	401	291	£ 217,913	£ 42,763	19	£ 5,973	£ 1,149
	2,428	1,622	967	553	119,693	32,580	281†	72,643	7,746
Total ...	3,448	2,499	1,368	844	337,605	75,343	293	78,616	8,895

* In some districts the number of hotels was below the statutory number; in these districts the total number of hotels less than the statutory number was 418. † Including 2 Roadside licenses.

(ii.) *Early Closing of Hotels.* Consequent on the war, an Act (No. 2584) was passed, and came into operation on 6th July, 1915, restricting the hours for the sale of intoxicating liquors, the restriction being limited to the duration of the war. Sale was permitted only between the hours of 9 a.m. and 9.30 p.m. By a subsequent Act (No. 2776), tenants of licensed premises were given the right to apply to the Licenses Reduction Board to adjust the rents of their premises. The hours of trading in the evening were further restricted as from 25th October, 1916—six o'clock being fixed as the time of closing.

The provisions of the Rent Adjustment Act were extended so as to enable the Board to deal with applications for reductions of rent arising from fresh restrictions. Between 300 and 400 additional applications were received, the amounts involved being substantial.

Special provision was made in the 1916 Act for the granting of victuallers' licenses in the Mallee. Power was given to proclaim areas containing 500 resident electors, when petitions signed by a majority of the residents were lodged, and where the licensing court, after enquiring, recommended this course.

On the proclamation of an area, a poll of the electors is to be taken at which one-third of those enrolled must vote. A majority of those voting decides whether a license is to issue or not. These hotels must be at least twelve miles apart, except at Mildura, where special provision is made for the issue of three licenses. Under these provisions six areas have been proclaimed, in four of which polls were taken and resulted in favour of license.

4. Queensland.—The local option clauses of the Liquor Acts of 1912-1914 provide for the following :—

- (i.) The conditions under which new licenses may be granted until the completion of the business of the Licensing Court in April, 1916.
- (ii.) The continuance of the local option clauses of the Licensing Act of 1885 until the 31st December, 1916.
- (iii.) The institution of a new scheme, under which electors from and after the year 1917 will have the opportunity of voting every three years on the question of reduction or increase of licenses.

(i.) *New Licenses.* With regard to the granting of "new licenses" from the 1st April, 1913, and until the completion of the business of the Licensing Court in April, 1916, it is provided that no new licensed victualler's or wine seller's or provisional licenses shall be granted, unless at a local option vote of the electors of the local option area in which the premises or proposed premises are situated, a resolution "that new licenses shall be granted in this local option area" has been carried.

If the resolution is carried, the Court may, but need not, grant applications; but if the resolution is not carried, the Court shall not grant any application during the said years in the said local option areas.

The Acts of 1912 and 1914 provided that a local option vote following on an application for a license might be taken in any of the years 1913, 1914, 1915, and 1916 in a local option area, but having been taken once should not be taken again during those years in the same local option area. During 1913 a vote was taken in 10 districts on the resolution "that new licenses be granted." In five of these the resolution was carried, the other five districts declaring against any increase in the number of licenses. In 1914, 16 districts voted on the same resolution, in 11 of which it was carried, while in 1915, 16 districts also voted, the resolution being carried in 10 cases.

(ii.) *Continuance of Present System until 1917.* With the exception of the third resolution, viz., "that no new licenses be granted," the local option provisions of the Licensing Act of 1885 remain in full force and effect until the 31st December, 1916, with certain modifications and additions. These will be found fully described in previous issues of the Year Book (see No. 6, p. 1177).

(iii.) *General Local Option.* The first vote may be taken in the year 1917, either on the same day as the election of senators takes place, or if no senate election is held in 1917 before the 30th September, then on a day to be appointed by the Governor-in-Council, and the vote will be by ballot.

The vote will be taken on the request of one-tenth of the number of electors in an area, which is defined in the request, and such area may be:—(a) an electoral district, (b) an electoral division of an electoral district or (c) a group of two or more divisions of an electoral district, provided that the whole of such local option area is wholly comprised within one and the same electoral district.

There must be a separate request for each resolution on which a vote is required to be taken.

The resolutions on which a vote may be taken are:—(a) reduction by one-fourth of the existing number, (b) further reduction by one-fourth of the existing number, (c) further reduction by one-fourth of the existing number, (d) prohibition, and (e) new licenses.

On the 5th May, 1917, 57 polls were taken, 55 being on the question of reduction (resolution a) and 2 being on the question of increase (resolution e). Reduction was carried in only four local option areas—Biggenden, Ipswich, Maryborough, and Toowoong. Increase was carried in both local option areas, i.e., Atherton and Cloncurry.

In previous issues of the Year Book (see No. 6, p. 1178) will be found fuller reference to the effect of the carrying of any of these resolutions.

5. South Australia.—In this State the subject of local option is now regulated by Part VIII. of the Licensing Act 1917.

Under this Act, each electoral district for the House of Assembly is constituted a local option district, and each electoral district may be divided into local option districts by proclamation of the Governor. A quorum consisting of 500 electors, or one-tenth of the total number of electors, whichever be the smaller number, in any district may petition to the Governor for a local option poll. The persons entitled to vote at the poll are those whose names appear on the electoral roll and who reside in the local option district.

The resolutions to be submitted, together with the effects such resolutions would have, are set out in detail in previous issues of the Year Book (see No. 6, p. 1179).

(i.) *Local Option Poll.* On the 2nd April, 1910, local option polls were taken under the Act of 1908 in twenty-four districts; the electors in the remaining nine local option districts did not petition for polls. A resolution that the number of licenses be reduced, was carried in only one district, Wallaroo; in the remaining 23 districts a resolution that the number of licenses be not increased or reduced, was carried. At the General Election of the House of Assembly held on the 10th February, 1912, no local option polls were held in any local option district. On the 27th March, 1915, (the same day as the Parliamentary elections), a local option poll was taken in the Flinders Southern (Port Lincoln) local option district, when the resolution "that the number of licenses be not increased or reduced" was carried. There have been no further polls in any of the districts up to the end of 1917.

(ii.) *Early Closing of Hotels.* On the 27th March, 1915, a referendum was held as to the hour for the closing of bar-rooms in licensed premises. Out of a total of 178,362 votes cast, 100,418 were cast in favour of closing bar-rooms at 6 p.m., those in favour of closing at 11 p.m. being 61,362. Electors had the choice of voting for hours other than the two mentioned, but the votes so cast were comparatively few.

(iii.) *Re-proclamation of Districts.* Local option districts were re-proclaimed on the 29th November, 1917, the districts, which number 35, being given in the Government Gazette of the same date.

6. **Western Australia.**—The law relating to local option in Western Australia is contained in Part V. (sections 75 to 86) of the Licensing Act 1911, which was assented to on 16th February, 1911, and came into force on the 7th April following. Prior to the passing of this Act there was no provision for any system of local option in Western Australia.

The resolutions to be submitted under the above-mentioned Act and the effect such resolutions would have, are given in detail in previous issues of the Year Book (see No. 6, p. 1180).

The first vote under the Act of 1911 was taken on 26th April, 1911, the main question being confined (as prescribed by the Act when the vote is taken prior to 1920) to a resolution "that the number of licenses be increased," the only other questions submitted being those of State control of new publicans' general licenses and State management throughout all licensing districts.

The following table shows the result of this local option poll:—

**WESTERN AUSTRALIA.—RETURN SHEWING THE RESULT OF LOCAL OPTION
POLL OF 26th APRIL, 1911.**

Result of Local Option Poll.		Do you vote that all new Publicans' General Licenses be held by the State.		Are you in favor of State Management throughout all Licensing Districts.	
Votes given in favor of the number of Licenses in the various districts being increased.	Votes given in favor of the number of Licenses in the various districts not being increased.	Yes.	No.	Yes.	No.
4,554	17,623	27,007	14,387	26,631	14,944

Under the 1911 Act a second poll was due on 26th April, 1914, but an amending Act was passed in December, 1913, continuing the present conditions until April, 1915. Subsequently, by an amending Act of 1915, the present conditions were further continued until 1918, and by an Act assented on the 7th August, 1917, the poll was postponed until 30th September, 1918, with a proviso that on a resolution passed by both Houses of Parliament the present conditions shall continue for a further period as may be expressed in such resolution.

(i.) *Regulation of Liquor Traffic during the War.* In 1914, upon the outbreak of war, a special Act was passed in Western Australia which empowered the Government by Proclamation to restrict or prohibit the sale or supply of liquor within any licensing district, or any portion of a licensing district, and rendered it an offence for any person, licensed or unlicensed, to offer for sale or supply liquor contrary to such Proclamation, with a penalty of £200, or imprisonment for twelve months.

Provision was also made to limit and fix the hours during which licensed premises in any district, or portion thereof, might be open for the sale of liquor. The Act also contained the necessary powers to enforce the provisions thereof, including power to search without warrant and seize any liquor where there was reason to believe that such liquor existed in a prohibited area.

The Act was passed solely as an emergency measure, and so far there has been no necessity to issue any Proclamation thereunder.

In 1915, a further Act was passed *regulating the sale of liquors*. That Act divided the State into four districts—Metropolitan, Goldfields, Agricultural, and North-West, the latter being exempt from the provisions of the Act.

The main feature, as regards the Metropolitan and Agricultural districts, was to reduce the period during which licensed premises could be open for the sale of liquor to the hours between 9 a.m. and 9 p.m., the previous period being between the hours of 6 a.m. and 11 p.m.

As regards the Goldfields district, the Act provided that upon receipt of a requisition signed by not less than 2000 electors in the district, a referendum should be held.

In submitting the referendum, each elector had one vote, and the voting paper set out the hours of 6 o'clock, 7 o'clock, 8 o'clock, 9 o'clock, 10 o'clock, and 11 o'clock p.m. as alternative hours of closing. Each elector was to indicate his vote by marking an "X" opposite the hour which he desired to have fixed as the hour of closing. If the majority of votes were cast in favour of any particular hour, that hour was to be certified as being the result of the vote and proclaimed as the hour of closing. If there was no majority, then the votes cast for the earliest hour were to be transferred to the next later hour, and so on until a majority was thus obtained, when such majority would have the same effect as if the votes were originally given in favour of the hour to which they had been transferred, and such hour would be proclaimed the hour of closing.

A petition signed by the necessary number of electors was duly received, and a referendum was taken on the 24th May, 1916, the result of the poll being that the majority of all votes cast was in favour of the hour of 11 o'clock p.m. being fixed as the hour of closing.

The hour of 11 o'clock p.m. was the same as the hour originally fixed in the Licensing Act, and the result of the referendum therefore left the hour of closing the same, in so far as the goldfields district was concerned, as existed prior thereto.

7. *Tasmania.*—In this State the subject of local option is dealt with in Part VI. (sections 72 to 84) of the Licensing Act 1902, as subsequently amended by section 8 of the Licensing Act 1908, which later Act, however, does not come into full operation until the first of January, 1917. Other Acts which formerly dealt with the subject, but are now repealed, are the Licensing Acts 1889-1890, the Inn Keepers Relief Act 1894, and the Licensing Act Amendment Act 1898. Under the Act of 1902, opposition to the grant of a license may be made (i.) by any resident ratepayer, (ii.) by petition of ratepayers resident in the neighbourhood, or (iii.) by local option poll.

The conditions under which applications may be made to the Licensing Bench, opposing the granting of licenses, are set out in detail in previous issues of the Year Book. (See No. 6, p. 1181.)

(i.) *Local Option Poll.* Any number of ratepayers not less than seven, resident in the neighbourhood of the house in respect of which a provisional certificate or an hotel license has been applied for, may require, by petition lodged with the Clerk of Petty Sessions, that a poll of the ratepayers resident in the neighbourhood be taken upon

the question whether such provisional certificate be granted or not. If a majority of the votes taken be against the granting of the certificate the Licensing Bench must refuse to grant it.

Particulars as to operations under Part VI. of the Act are not available.

(ii.) *Early Closing of Licensed Premises.* A referendum on the question of the closing time for the sale and supply of liquor on licensed premises (6 Geo. V., No. 63) was taken on the 25th March, 1916, when 42,713 votes were cast in favour of closing at six o'clock p.m., against 26,153 votes in favour of ten o'clock, and 3951 votes for other hours. The majority in favour of closing at six o'clock over all other hours was 12,609, and the Licensing Act (No. 2) of 1916 gives effect to the wishes of the electors.

§ 8. Preferential Voting.

In previous issues of the Year Book, a description in detail has been given of the systems of preferential voting now in force in the States of Victoria, Queensland, Western Australia and Tasmania. It is not intended to repeat the description in the present issue.

§ 9. Valuation of Commonwealth Production.

The want of uniformity in methods of compilation and presentation of Australian statistics renders it an extremely difficult task to make anything like a satisfactory valuation of the various elements of production. At present there is so little accurate statistical knowledge regarding such industries as forestry, fisheries, poultry, and bee-farming, that any valuation of the production therefrom can only be regarded as the roughest approximation. As a matter of fact, complete information as to value of production in all States is available in regard to the mining industry alone, and even in this case adjustments have to be made before the returns are strictly comparable. Careful estimates have been made in connection with the value of production from the agricultural and pastoral industries, which, it is believed, in the main give fairly accurate results. In the case of manufactures, prior to 1909, five of the States collected statistics of the value of production, while for the sixth State, Tasmania, an estimate has been prepared which it is believed gives a fair approximation. The returns given in the following table are fuller and more approximate than those which have been given previously, and the returns collected in 1909 and subsequent years may be taken as substantially correct. The table hereunder shews the approximate value of the production from all industries during the years 1909 to 1916 :—

ESTIMATED VALUE OF PRODUCTION FROM INDUSTRIES, 1909 to 1916.

Year.	Agriculture.	Pastoral.	Dairy, Poultry, & Bee-farming.	Forestry and Fisheries.	Mining.	Manufacturing.*	Total.
	£1000.	£1000.	£1000.	£1000.	£1000.	£1000.	£1000.
1909 ...	41,056	50,864	15,064	4,462	23,039	39,713	174,198
1910 ...	39,752	56,993	17,387	4,789	23,215	45,598	187,734
1911 ...	38,774	50,725	19,107	5,728	23,480	50,767	188,581
1912 ...	45,754	51,615	20,230	6,432	25,629	57,022	206,732
1913 ...	46,162	57,866	20,341	6,338	25,808	61,586	218,101
1914 ...	36,052	60,265	21,562	6,419	22,265	62,922	209,485
1915 ...	73,769	65,607	21,156	5,777	22,397	62,853	251,589
1916 ...	60,207	89,940	26,949	5,505	23,621	64,205	270,427

* These amounts differ from those given in Section XIII., Manufacturing Industries, owing to certain products which are there included having been included in Dairy Farming and Forestry in this table.

The total production from all industries during 1916 was £270,427,000, equal to an average of £55 2s. 2d. per inhabitant.

In Year Books Nos. 1 to 5 will be found the value of production in each State at decennial intervals since 1871, and for the year 1909. Details for individual States are not available for subsequent years owing to discontinuance by the Customs Department of the collection of statistics of interstate trade.

§ 10. Norfolk Island.

1. Area, Location, etc.—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3' 45" south, longitude 167° 58' 6" east. Its total area is 8528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from New Zealand 400 miles. The coast line is 20 miles, and its form that of an irregular ellipse. Except on the south-west, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 56° and 82° with a mean of 68°. The average annual rainfall is 53 inches. It has been said that the salubrious climate coupled with the beauty of its land and sea scapes should combine to render Norfolk Island "the Madeira of the Pacific."

2. Settlement.—The first colonisation, in 1788, was by Lieutenant King, who in H.M.S. *Sirius* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1806, and thence for 20 years its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers having become too numerous to subsist on Pitcairn Island were removed thence to Norfolk Island in 1856. The new community numbered 193—94 males and 99 females—and were the descendants of British sailors and Tahitian women.

In 1856 the island was severed from Tasmania, and created a distinct and separate settlement under the jurisdiction of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and was administered by the Chief Secretary's Department through a resident Chief Magistrate, in whom was vested the executive government of the settlement, and the penal supervision of its affairs. In 1913, however, a Bill was passed by the Federal Parliament providing for the taking over of the island as a territory of the Commonwealth. The Act came into force on 1st July, 1914, and the island is now administered by the Department of Home and Territories, Melbourne, through an Administrator and Chief Magistrate.

3. Population and Live Stock.—The population on 31st December, 1916, was 927, including 113 Melanesians being trained at the mission station. The latest returns of live stock shew that there are in the island 1735 cattle, 619 horses, 667 sheep, and 306 pigs. In addition there were about 6600 head of poultry.

4. Production, Trade, etc.—The soil throughout is rich, and is specially suitable for the cultivation of citrus fruits, bananas and (in parts) coffee. Various other sub-tropical fruits thrive. During 1916 the production of oranges was given as 21,000 bushels; lemons, 226,000 bushels; bananas, 265,000 dozen. About 147,000 bushels of guavas and small quantities of pineapples and passion fruit were also raised, as well as 27,000 lbs. of coffee. The island is visited annually by schools of whales, both of the sperm and hump-backed variety, and whaling was at one time an important industry, but in recent years it has been allowed to languish. In 1916-17 the imports were valued at £16,694. The exports were valued at £8868, the chief items being lemon peel, £3320; lemon juice, £2660;

fish, £1010; hides, £504; and seeds, £298. Nearly all the export trade was with the Commonwealth, only small amounts going to New Zealand and the South Sea Islands. There is little other production. A five-weekly steam service is maintained with Sydney; other communication is irregular. The "all red" cable from Great Britain *via* Vancouver, Fanning Island and Fiji, bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane.

5. Social Condition.—Education is compulsory, but free of cost, and there is a public school under the N.S.W. Department of Public Instruction, with standards corresponding to the State public schools. The number of scholars enrolled on the 30th June, 1917, was 160 (73 boys and 87 girls). A mission station has for many years been in existence for the education and general training of Melanesians, mostly from the Santa Cruz and Solomon Islands.

The magistrate's court has criminal jurisdiction in all crimes except capital offences, civil jurisdiction in all matters, and authority to grant probate and letters of administration.

§ 11. Lord Howe Island.

1. Area, Location, etc.—Between Norfolk Island and the Australian coast is Lord Howe Island in latitude $31^{\circ} 30'$ south; longitude $159^{\circ} 5'$ east. It was discovered in 1788. The total area is 3220 acres, the island being seven miles in length and from one-half to one and three-quarter miles in width. It is distant 436 miles from Sydney, and in communication therewith by monthly steam service. The flora is varied and the vegetation luxuriant, with shady forests, principally of palms and banyans. The highest point is Mount Gower, 2840 feet. The climate is mild and the rainfall abundant, but on account of the rocky formation only about a tenth of the surface is suitable for cultivation.

2. Settlement.—The first settlement was by a small Maori party in 1853; afterwards a colony was settled from Sydney. Constitutionally, it is a dependency of New South Wales, and is included in the King division of the Sydney electorate. A Board of Control manages the affairs of the island and supervises the palm seed industry referred to hereunder.

3. Population.—The population at the Census of 3rd April, 1911, was 56 males, 49 females, total 105.

4. Production, Trade, etc.—The principal product is the seed of the native or *Kentia* palm. The lands belong to the Crown. The occupants pay no rent, and are tenants on sufferance.

§ 12. Interstate Conferences.

1. Reference to the various Interstate Conferences, held in 1914 and 1915, will be found on page 1081, Official Year Book No. 8. Considerations of space preclude their insertion in the present issue.

2. Premiers' Conference, Adelaide, 1916.—On the 22nd May, 1916, and following days, a conference of Premiers was held at Adelaide. The following is a summary of the more important resolutions adopted:—

(i.) *Uniform Federal and State Rolls.* The electoral officers having recommended that it is practicable and advisable to have uniformity in regard to the State and Commonwealth Rolls, the respective States be invited to take the necessary steps to give effect to the recommendation.

(ii.) *Employment of Persons of Enemy Origin.* It is not desirable that persons of enemy birth, other than those already in the State service who have given full and satisfactory proof of their loyalty to the British Empire, should be engaged for employment in any Government Department while suitable persons of British origin are available.

(iii.) *Support of Unemployed Persons of Enemy Birth.* The internment or other support of destitute persons of enemy birth should be a Commonwealth responsibility.

(iv.) *Collection of Commonwealth and State Income Tax, Land and Probate Duty by One Authority.* The Commonwealth Government and the Governments of the several States shall direct their leading taxation officers to meet at an early date and prepare a uniform scheme for—Income tax (rates excepted), land tax (rates excepted), probate duties (rates excepted).

The Conference reaffirmed the desirability of uniform valuation for Commonwealth and State purposes being adopted as early as practicable, and that the necessary legislative or administrative steps in that direction be taken by the States.

(v.) *Employment of Returned Soldiers after the War.—Settlement of Returned Soldiers on the Land.—Repatriation Appeal.—Emigration to Australia of ex-Service Men from the United Kingdom.* With the view to meeting and solving the difficulties likely to arise on the return of large bodies of men to Australia, a committee comprising one Minister from each State and one Minister to represent the Commonwealth be established to secure co-ordination in matters connected with the repatriation of soldiers. That it be a recommendation to the respective State Governments—

- (a) To treat (after the war) returned British soldiers in a manner similar to that in which returned Australian soldiers are treated.
- (b) To ask the British authorities to create a suitable organisation to co-operate with the Agents-General of the States in placing before returned British soldiers who contemplate emigrating from Great Britain the advantages accruing to them, and to Imperial interests, from their making their future homes in the Dominions, and to arrange for their immigration to the Australian States in such numbers and at such times as the respective State Governments are of opinion that such immigrants can be satisfactorily absorbed.

(vi.) *Securing Shipping for Overseas and Interstate Trade.*

- (1) *Re Export of Goods from Australia.* It would appear that present arrangements in this connection are satisfactory. If any State finds that cargoes of greater value to that State are being left whilst goods of lesser value are exported, it is suggested that representations might be made to the controlling body set up by the Federal authorities.
- (2) *Re Imports.* Where goods are urgently required by a State, and the freights available are being used for the carrying of other goods less urgently needed, it is submitted that the States might invite the Agents-General to meet and make representations to the authorities in Britain.
- (3) Should this course become necessary, the representations might be made in the first instance to the Commonwealth authorities and the co-operation of the High Commissioner sought.

(vii.) *British Council of Scientists.* The State Governments to have this matter permanently brought under their notice with a view to their—

- (1) Using all the means at their disposal of applying science to the development of their industries and their production.
- (2) Actively co-operating with the organisation being established by the Commonwealth Government.

(vii.) *Strategic Railways.*

- (a) Any proposed railway to be submitted in each State to the Railways Standing Committee, or the Public Works Committee, or such similar authority as any State or States may appoint for the purpose, together with such representatives as the Commonwealth Government may appoint.
- (b) That such committees or authorities in formulating their recommendations be requested to give consideration to the developmental possibilities of the proposed lines, and to make such recommendations as will meet the strategic and developmental needs of the States interested.
- (c) That where the interests of two or more States are concerned, combined meetings of the committees or authorities appointed should be held for the purpose of making a joint recommendation.

(ix.) *Transfer of State Powers to the Commonwealth.* With regard to the proposed transfer of certain powers to the Commonwealth, the States represented at this conference reaffirm the desirableness of giving effect to the agreement entered into between the Premiers and the Prime Minister at the conference held in Melbourne in November, 1915.

(x.) *Bulk Handling of Grain.* It is desirable that the States should co-operate in the adoption of bulk handling of grain.

(xi.) *Centralisation of Statistical Departments.* It is desirable that the statistical bureaux of the States of the Commonwealth should, so far as practicable, be amalgamated, and each State Government to give consideration to this question.

(xii.) *Periodical Conferences of Directors of Education.* It is desirable that periodical conferences of the Directors of Education be held.

(xiii.) *Teaching of Modern Languages.* The State Governments were urged to give greatly increased attention to the teaching of modern languages, particularly the French language, in the public schools of the States.

(xiv.) *Imperial Education Conference.* The Australian States should be well represented at the conference shortly to be held in Great Britain in regard to education and science.

3. Premiers' Conference, Melbourne, 1916-1917.—On 12th December, 1916, and following days, and again on 5th January, 1917, and following days, a conference of Premiers (with Ministers of Lands) was held at Melbourne. The following is a summary of the more important resolutions agreed to:—

(i.) *Marriage Facilities for Absent Soldiers.* The Commonwealth Government to be asked to take into consideration the question of marriage facilities for absent soldiers.

(ii.) *Preference to Soldiers.* Other things being equal, preference shall be given by the Governments to returned soldiers for any employment in their services.

(iii.) *Financial Provisions for the Settlement of Returned Soldiers on the Land.* The Commonwealth agreed to make, available for the calendar year 1917 a sum not exceeding £2,000,000, half the amount to be available up to 30th June, 1917.

Allocation: Queensland, £500,000; New South Wales, £500,000; Western Australia, £500,000; South Australia, £250,000; Victoria, £150,000; Tasmania, £100,000.

(iv.) *The Treatment of Soldiers and Sailors and the Dependents of Soldiers and Sailors.* That it be the business of the central Commonwealth authority to devise a substantially uniform system of dealing with returned soldiers and sailors and the dependents of soldiers and sailors on service, or of soldiers and sailors who have died as a result of service in respect of—

- (a) *Immediate Amelioration, i.e.,* the provision of means for meeting immediate cash necessities. This, either by supplementing the military or naval pay before discharge, or by sustenance after discharge until employment or remunerative occupation can be found.
- (b) *Care of the Totally Incapacitated:* To include housing where necessary.
- (c) *Training of the Partially Disabled for a Useful Vocation:* To include the provision and renewal of artificial limbs and other aids.
- (d) *Employment Generally.*
- (e) *Assistance Towards Permanent Re-establishment by:*
 - (1) Sustenance during the initial period of settlement on the land or establishment in other vocations.
 - (2) Small businesses where such deemed a desirable form of provision.
 - (3) Grants for tools of trade.
 - (4) Assistance towards house establishment—(a) loans for house building or purchase (to include the conversion of existing mortgages where terms onerous); (b) grants for furniture to a prescribed amount.
- (f) *Care of Dependents:* (a) of men who die; (b) of men on service.
- (g) The co-ordination of governmental and private efforts for the expansion of existing, and the promotion of new, industries to meet the demand for general and special employment.
- (h) The assembling and administration of funds.

The States to be asked to agree to a uniform scale of advances to soldiers and sailors desiring to build or purchase dwellings in certain areas, or to convert existing mortgages of an onerous character, the Commonwealth authority to advance 25 per cent. of the value, the sum so advanced by the Commonwealth authority not to exceed £75.

The States to be asked to co-operate in the development of large national enterprises calculated to provide employment for men who cannot be otherwise placed.

On all bodies concerned with the repatriation of men under the Commonwealth scheme, the representation of soldiers and sailors who have been on active service is desirable.

§ 13. Interstate Commission.

In accordance with the provisions of the Commonwealth Constitution Act (sections 101 to 104, see pages 31, 32) an Act providing for the appointment of the Commission was assented to on the 24th December, 1912. The personnel of the Commission was, however, not decided until the 11th August, 1913, when Messrs. A. B. Piddington, K.C. (Chief Commissioner), Hon. George Swinburne, and N. Lockyer, I.S.O., were appointed. On the 8th September, 1913, a request was received from the Executive Government of the Commonwealth that the Commission should make an investigation in regard to the Tariff. This investigation was made and in all 70 reports were issued in connection therewith. (*Vide* Official Year Book No. 9, p. 1134, and No. 10, p. 1140.)

In January, 1915, complaints were lodged with the Commission in respect to contravention of the provisions of the Constitution relating to trade and commerce. In this connection, the case of the Commonwealth of Australia v. The State of New South Wales and another was subsequently heard before the Commission, but on an appeal to the High Court against its decision it was held that under section 101 of the Constitution the Interstate Commission had not been given judicial powers.

On the 14th September, 1915, the Minister for Trade and Customs requested the Commission to furnish for the information of Parliament a report as to the new industries which, in its opinion, could with advantage be established in the Commonwealth, and in pursuance of this request such report was prepared and presented.

On the 7th March, 1916, the Commission was entrusted with an inquiry into the subject of British and Australian trade in the South Pacific, with the result that a report was furnished which deals with all factors affecting the progress of the island possessions in which Great Britain and Australia are interested.

On the 19th April, 1916, the Commission was invited by the Postmaster-General, on behalf of the Commonwealth and the several States, to act as arbitrator on the question of charges, etc., by the Railway Commissioners of the States for the carriage of mails. Subsequently sittings were held in this matter and decisions and awards made.

On the 4th August, 1917, the Prime Minister, as the result of complaints made to him, requested the Commission to inquire into the causes of increased prices of food, clothing, house rent, etc. This inquiry is now in progress, and interim reports are being presented as it proceeds. In connection with this investigation a regulation under the War Precautions Act was passed to permit each Commissioner to sit alone, and while so sitting to exercise all the powers of investigation conferred by the Interstate Commission Act of 1912.

The Chief Commissioner (Mr. A. B. Piddington, K.C.) is a member of the Commonwealth Advisory Council of Science and Industry. Mr. Commissioner Swinburne, who is also a member of the Commonwealth Advisory Council, is chairman of the Central Board of the Business Administration in connection with the Department of Defence.

Mr. Commissioner Lockyer was granted six months' leave from 15th October, 1917, for the purpose of complying with the desire of the Government that he should act temporarily as Comptroller and supervise the organisation of the Department which will administer the Australian Soldiers Repatriation Act. Mr. Stephen Mills, Comptroller-General, Department of Trade and Customs, was thereupon appointed a Deputy-Commissioner.

§ 14. Commonwealth Advisory Council of Science and Industry.

1. General. An account of the origin of the Advisory Council and the proceedings which led to its formation was given in Year Book No. 9 (p. 1135). The Advisory Council was appointed by order of the Governor-General in Council on the 16th March, 1916. Since that date certain additional appointments have been made, so that the council now consists of thirty-six members representative of both science and industry, and includes members from all the Australian States. It is a temporary body, designed to prepare the ground for a proposed permanent Institute of Science and Industry, and to exercise in a preliminary way the functions that will in future belong to the Institute. The chief of these functions are—

- “(i.) To consider and initiate scientific researches in connection with, or for the promotion of, primary or secondary industries in the Commonwealth”; and
- “(ii.) the collection of industrial scientific information and the formation of a Bureau for its dissemination amongst those engaged in industry.”

The Advisory Council itself has held only three meetings, viz., the inaugural meeting in April, 1916, and meetings in August, 1916, and July, 1917, called to receive reports and at which certain resolutions referred to below were passed. The work of the Council has been done by means of committees.

(i.) *The Executive Committee.* In accordance with instructions given by the then Acting Prime Minister, the Advisory Council at its first meeting elected an Executive committee of six members. Four additional members of the Executive have since been appointed. It was decided that the Prime Minister, or in his absence a Minister representing him, should be chairman of the Executive committee. In addition, it was decided that the chairman of each State committee should be *ex officio* a member of the Executive in order to keep the various committees in touch with one another. Such *ex officio* members were to receive copies of the Executive's minutes, and to keep in touch with it by correspondence, but were not expected to attend its ordinary meetings except when they happened to visit Melbourne. Similarly, the Executive receives copies of the minutes of each State committee. In addition a monthly summary of the work of the Executive is sent to all the members of each of the State committees.

(ii.) *The State Committees.*—At the first meeting of the Advisory Council it was decided that all of its members resident in any one State should form a local committee to co-operate with the Central Executive, especially in relation to questions involving local industries. By arrangement with the Commonwealth Government, certain additional members of the Advisory Council were added to the original list, so as to insure that there should be at least three such members available for the formation of each State committee, and it was decided that the chairman of each of these should be *ex officio* a member of the Executive, as explained above. Further procedure was formulated whereby any State committee could be strengthened by the appointment of associate members, representative of particular branches of science or industry. The associate members of the State committees are not members of the Advisory Council. A State committee has been established in each State.

It is to be noted that these so-called State committees are really local committees of the Federal organisation, their members and associate members being appointed by the Commonwealth Government. They must be clearly distinguished from certain "New Industries" and "Research" committees, which have originated as separate organisations in some of the States.

The chief functions of these State committees are to collect locally such information as may be required by the Executive, and to forward to the Executive such recommendations as local knowledge or local enquiries may suggest. They have no independent executive or financial powers, but they are an extremely important part of the business machinery.

2. Summary of the Work of the Council.—An account of the work carried out by the Council is given in the report of the Executive Committee up to the 30th June, 1917, but since that time considerable progress has been made. The work may be summarised under the following heads:—(i.) Preliminary work; (ii.) Systematic enquiries and investigations under the control of special and standing committees; (iii.) Conferences; (iv.) Miscellaneous.

(i.) *Preliminary Work.*—This work has been largely completed and comprises:—

1. A register or census—(a) of Australian industries, their distribution and importance; (b) of problems connected with them; (c) of the equipment and *personnel* of laboratories throughout the Commonwealth available for industrial scientific research; (d) of research work in actual progress in laboratories and at Government experimental farms; (e) of the facilities available for training scientific investigators.

2. The establishment of relations with other authorities, such as State Governments, scientific and technical departments, universities, technical colleges, scientific societies and associations, and committees representing the pastoral, agricultural, manufacturing, and other industries.
3. The encouragement and co-ordination of researches already in progress.

(ii.) *Special Committees.*—After making full enquiries and collecting all available information from reports and experts on any special question, the Executive has adopted the plan of appointing in each approved case a small special committee either to report further or to carry out actual experimental investigations. In forming these committees, special attention has been paid to securing adequate representation on the industrial as well as the scientific side. Twenty-six special committees have been appointed, and most of them have issued either interim or final reports. An account of the work carried out by these committees up to 30th June, 1917, appears in the last report of the Executive committee. In cases where the investigations have been completed or are sufficiently advanced for publication the results have been made available in the form of Bulletins, of which six have been published. Others are in course of preparation.

The following is a list of the special committees established up to April, 1918:—

- | | |
|---|--|
| 1. Ferro Alloys (Melbourne). | 15. Grass Tree Resin (Adelaide). |
| 2. Mode of Occurrence of Gold in Quartz (Bendigo). | 16. Development of Mechanical Cotton Picker (Brisbane). |
| 3. Alunite (Melbourne). | 17. Utilisation of Phosphatic Rocks (Melbourne, Sydney and Perth). |
| 4. Yeasts and Breadmaking (Sydney). | 18. Life History of the Cattle Tick (Brisbane). |
| 5. Damage by Insects to Grain in Store (Sydney). | 19. Substitutes for Tin Plate (Melbourne). |
| 6. Purification of Damaged Wheat by Lime (Melbourne). | 20. Commercial Utilisation of Kelp (Hobart). |
| 7. Electrical Sterilisation of Milk (Sydney). | 21. Blow-fly Pest (Brisbane). |
| 8. Tanning Methods (Sydney). | 22. Cold Storage Problems (Melbourne and Sydney). |
| 9. Utilisation of Mangrove Bark for Tanning (Brisbane). | 23. Tuberculosis in Stock (Sydney, Melbourne, Adelaide, Perth & Hobart). |
| 10. Utilisation of Redgum for Tanning (Perth). | 24. Bye-products of Wool-Scouring Industry (Geelong). |
| 11. Means of Transmission of Worm Nodule Parasite (Sydney). | 25. Nitrogen Requirements of Australia (Melbourne). |
| 12. Control of Sparrow Pest (Adelaide). | 26. Classification of Imports of Chemicals (Melbourne). |
| 13. Alcohol Fuel and Engines (Melbourne). | |
| 14. Posidonia Fibre (Sydney). | |

The members of these special committees act in a purely honorary capacity. Grants are made from the funds of the Advisory Council for the purchase of apparatus and equipment, and for the reimbursement of travelling and out-of-pocket expenses of the members of the committees whilst engaged on the work. In a number of cases salaried investigators and assistants are employed to give their whole time to the work under the direction of the several committees.

(iii.) *Standing and other Investigational Committees.*—In cases where the investigational work is of a permanent or prolonged nature, standing committees have been established. These include the Chemicals Committee, the committees inquiring into the marine biological economics of tropical Australia, the committee on the metric system and decimal coinage, the committee on native grasses and fodder plants, and the seed improvement committee which has been established to undertake the examination, comparison and classification of different varieties of cereals.

In addition certain investigations are being conducted in co-operation with committees established by other institutions, such as the Society of Chemical Industry of Victoria, the New South Wales Pastoral Committee for the blow-fly pest, and the Electrical Association of Australia.

In the case of the flax industry a committee has been established under the War Precautions Act to control and develop the industry. It is anticipated that the action taken by the Advisory Council in this matter alone will result during the present season in an increase in wealth produced, which will pay several times over for the total expenditure on the work of the Advisory Council from the day of its inception.

There are a number of other matters of importance under investigation which have not yet reached the stage at which they can be referred for systematic work by committees of experts, or which cannot be dealt with adequately until the permanent institute is established. These include paper-pulp, the prickly-pear pest, the control and eradication of certain weed-pests, destructive distillation of hardwoods, and other problems affecting forest products, ceramics, enamels and glazes, diseases of stock, the introduction of new plants, and cultivation in arid and semi-arid regions.

(iv.) *Conferences.*—An Interstate conference of agricultural scientists was held under the auspices of the Advisory Council towards the end of 1917, and has already been productive of results of much value. A conference was held in Brisbane in January, 1918, to devise a scheme of co-operative action between the Commonwealth and New South Wales and Queensland State Governments for the repression, with a view to the eradication, of the cattle-tick pest. The report of this conference has been published as Commonwealth Parliamentary Paper No. 40, 1917-18. The Advisory Council was represented at the Interstate Forestry Conference held at Perth in 1917, and as a result is taking action for the compilation of data on a uniform basis on the forest products of Australia. This is one of the first steps necessary towards the establishment of a Forest Products Laboratory. Other conferences are projected.

(v.) *Miscellaneous.*—A large number of inquiries and investigations of a varied nature have also been made. Some of these have reached finality, others are still receiving attention. They have arisen largely through inquiries made by persons engaged in industries for advice on scientific and technical matters and by inventors or discoverers of new processes or raw materials. At present they fall into no considered plan, but it is probable that many of those which are still receiving attention will find their place later in some co-ordinated scheme of work under the permanent institute.

3. Publications and Supply of Information. The Executive Committee has issued three reports dealing with its work, the last covering the period from its appointment up to 30th June, 1917. It has also begun to publish bulletins on the researches carried out under its auspices, those already issued or about to appear being :—

1. The cattle tick in Australia.
2. Worm nodules in cattle.
3. The alunite deposits of Australia and their utilisation.
4. The factors influencing gold deposition in the Bendigo goldfield.
5. Wheat storage problems (damaged grain and insect pests).
6. Power alcohol: Proposals for its production and utilisation in Australia.
7. Agricultural research in Australia.

Other publications issued by the Advisory Council are:—Memorandum on the Organisation of Scientific Research Institutions in the United States of America, by G. Lightfoot; Recent developments in the organisation of National Industrial Research

Institutions, by G. Lightfoot; The Economics of Trochus niloticus, by C. Hedley; The Physiography of Australian Rains, by Griffith Taylor; and Resolutions passed by the Advisory Council, July, 1917, together with report and recommendations on the organisation and work of the proposed permanent Institute of Science and Industry.

Information is being collected and indexed for the use of the Bureau of Information, which will be one of the sections of the proposed future institute. In connection with this work steps are being taken to prepare a catalogue of the scientific and technical periodicals in all the libraries of Australia.

A considerable amount of information on a great variety of topics has already been supplied to applicants from all parts of Australia.

4. The Proposed Permanent Institute of Science and Industry.—At its last meeting in July, 1917, the Advisory Council passed among others the following resolutions:—

1. That the Advisory Council is of the opinion that the immediate establishment of the permanent institute is a matter of urgency, as the financial and executive powers of the temporary organisation are wholly inadequate to the purposes in view.
2. That in the work of the future institute provision be made for co-operation between the Commonwealth and State Governments. It is suggested that this might be effected by arranging for the estimates of expenditure of the institute to be discussed at the Premiers' Annual Conference.

The Council also adopted a report and recommendations which had been drawn up by the Executive Committee, setting out the general features of the organisation and work of the proposed permanent Institute of Science and Industry. The recommendations are substantially the same as those drawn up by the committee of the conference held in January, 1916, which were published in Year Book No. 9. Certain modifications have, however, been introduced in the light of eighteen months' experience.

The principal recommendations are as follows:—

1. There should be established, under Act of Parliament, a Commonwealth Institute of Science and Industry.
2. The functions of the institute should be:—
 - (i.) To consider and initiate scientific researches in connection with, or for the promotion of primary or secondary industries in the Commonwealth.
 - (ii.) The collection of industrial scientific information, and the establishment of a Bureau of Information for the benefit of those engaged in industry.
 - (iii.) The establishment of National Laboratories.
 - (iv.) The general control and administration of such laboratories, when established.
 - (v.) To promote the immediate utilisation of existing institutions, whether Federal or State, for the purposes of industrial scientific research.
 - (vi.) To make recommendations from time to time for the establishment or development of special institutions or departments of existing institutions for the scientific study of problems affecting particular industries and trades.
 - (vii.) The establishment and award of industrial research studentships and fellowships, to include either travelling fellowships or fellowships attached to particular institutions.
 - (viii.) To draw attention to any new industries which might be profitably established in the Commonwealth.

- (ix.) To keep in close touch with, and seek the aid of all Commonwealth and State Government departments, learned and professional societies, and private enterprises concerned with, or interested in scientific industrial research.
- (x.) The co-ordination and direction of scientific investigation and of research and experimental work, with a view to the prevention of undesirable overlapping of effort.
- (xi.) To recommend grants by the Commonwealth Government in aid of pure scientific research in existing institutions.
- (xii.) To seek the co-operation of and to advise the educational authorities and scientific societies in the States, with a view to—
 - (a) Advancing the teaching of science in schools, technical colleges, and universities, where its teaching is determined by those authorities.
 - (b) The training of investigators in pure and applied science and of technical experts.
 - (c) The education of skilled artisans.
- (xiii.) To report annually and from time to time to Parliament.

3. *Constitution of Institute.*

- (i.) That for the purpose of controlling and administering the Institute three highly-qualified salaried directors, of whom one should be chairman, shall be appointed by the Governor-General in Council.
- (ii.) That of the three directors one should be an expert business and financial man, with ability in organisation; the other two should be chosen mainly on account of scientific attainments and wide experience.
- (iii.) That the tenure of the directors shall be fixed by the Act.
- (iv.) That an Advisory Council, representing Science and the principal Primary and Secondary Industries, be appointed in each State, who shall advise the directors in respect to the affairs of the Institute. That the directors shall meet each Advisory Council at least once a year.
- (v.) That the members of the Advisory Council in each State be appointed by the Governor-General in Council on the nomination of the State Government, and should receive fees for attendance.
- (vi.) That the staff of the Institute should be appointed by the Governor-General in Council on the recommendation of the directors, and should be exempted from the operation of the Public Service Act.

§ 15. Department of Chemistry, South Australia.*

In South Australia, a Department of Chemistry was formed in 1916. The Department is largely engaged in the chemical investigation of local products and industries. A series of bulletins is in course of publication. Up to July, 1918, nine had been issued as follows:—

- No. 1.—*Paper Making*: An investigation into the prospects of establishing a paper-making industry in South Australia. A number of local materials have been investigated, and special attention is directed to straw as the most valuable available material, owing to the very large supply obtainable at a low price and near to the principal sea-ports.

* Information supplied by the Director, Dr. W. A. Hargreaves, D.Sc., M.A., F.I.C.

- No. 2.—*Potash*: Its economic sources in South Australia. Many local sources have been investigated, and wool scour is indicated as especially worthy of attention.
Lanoline: A process for obtaining wool fat from locally scoured wool is described.
- No. 3.—*Cream of Tartar*: An examination of local grape products as sources of cream of tartar.
- No. 4.—*Marine Fibre*.—The fibrous portion of the leaf sheath of the sea plant *Posidonia Australis* grows abundantly in the shallow waters around the coasts of South Australia, and on other parts of the Australian Coast. This bulletin has been written to gather together and publish all the available information respecting it. The sum of £220,000 has already been spent in this industry, and a large amount of experimental work has been done in finding methods of collection and purification and market uses.
- No. 5.—*Boiler Waters*: Foaming and priming of boiler waters have been studied with a view to the suggestion of a remedy for these faults.
- No. 6.—*Grass Tree*: An investigation of the economic products of the species *Xanthorrhoea*. The trunk, leaves, and resin were examined. Special attention is drawn to the resin as similar to the high-priced resins, such as dragon's blood, benzoin, etc. It was found that 8 per cent. of para-oxybenzoic acid was readily obtained from the gum.
- No. 7.—*Gypsum and Plaster of Paris*: An investigation of the gypsum deposits in South Australia and their uses, with special reference to the manufacture of plaster of paris.
- No. 8.—*Alcohol as a Source of Power*: This bulletin discusses the use of alcohol as a motor fuel, details tests carried out under practical conditions, and indicates sources from which alcohol can be obtained.
- No. 9.—*Bonedust*: Its adulteration with Phosphate Rock. The results of this particular form of adulteration are dealt with, and a method of detection described.

§ 16. Standard Times in Australia.

Prior to 1895 the official time adopted in the several colonies was for most purposes the mean solar time of the capital city in each.

In November, 1892, an intercolonial conference of surveyors was held in Melbourne to consider, among other things, the advantages of introducing the system of standard time. In this system it was proposed to make the initial meridian that of Greenwich, and to change local standard time by whole hours according to the longitude east or west of that of Greenwich. Thus for every difference of 15° in longitude a change of one hour would be required. The minutes and seconds would then be identical everywhere.

The personnel of the conference was as follows:—New South Wales, Mr. E. Twynam, Chief Surveyor; Mr. R. M'Donald, District Surveyor, on behalf of the Government; Mr. G. H. Knibbs, President of the Institution of Surveyors; Mr. J. F. Furber, Secretary, on behalf of the Institution. Queensland: Mr. A. C. Gregory, M.L.C.; Mr. A. M'Dowall, Surveyor-General, on behalf of Government. South Australia: Mr. G. W. Goyder, Surveyor-General; Sir (then Mr.) C. Todd, Postmaster-General, on behalf of the Government; Mr. William Cummins and Mr. J. L. Packard, Vice-President

and Secretary respectively of the Institute. Victoria: Mr. R. L. J. Ellery, Government Astronomer, and Chairman of Board of Examiners for Land Surveyors; Mr. J. M. Coane, one of the examiners; Mr. T. N. Fowler, President of the Institute; Mr. Stuart Murray, of the Victorian Water Supply Department, on behalf of the Institute. Western Australia: Mr. J. S. Brooking, Deputy Surveyor-General, President of Board of Examiners, and Vice-President of the Institute, on behalf of both Government and Institute; and New Zealand, Mr. A. O. N. O'Donahoo, Surveyor-General. No representative from Tasmania attended the conference, but a report to it was sent by Mr. E. A. Counsell, at that time Deputy Surveyor-General for Tasmania. This report dealt with the general business of the conference, and touched upon the subject of standard time.

To give effect to this proposal it was suggested that Australia should be divided into three zones, the standard times for which should be respectively the mean solar times of the meridians of 120° , 135° , and 150° east longitude, thus giving standard times 8, 9, and 10 hours respectively, ahead of Greenwich time. It was proposed that the 120° zone should comprise Western Australia, that the 135° zone should comprise South Australia and the Northern Territory, and that the 150° zone should comprise Queensland, New South Wales, Victoria, and Tasmania.

The matter was also considered by several intercolonial postal conferences, and eventually in 1894 and 1895 legislation was enacted by each of the colonies in accord with the recommendations of the surveyors' conference of 1892.

In 1899 the South Australian legislature amended its earlier provision, and adopted the mean solar time of the meridian of $142^{\circ} 30'$ east longitude as the standard time for that colony, thus reducing the difference between the standard time of Adelaide and those of the capitals of the eastern colonies from an hour to half an hour, and forfeiting the great advantage of the system, viz., that the minutes and seconds should be identical throughout the world.

Particulars concerning these enactments are as follows:—

STANDARD TIMES IN AUSTRALIA.

Colony.	Date when Act came into operation.	Meridian selected.	Time ahead of Greenwich.
New South Wales	1st February, 1895	150° E.	10 hours
Victoria	"	"	"
Queensland	1st January, 1895	"	"
South Australia	1st February, 1895	135° E.	9 hours
" " " " " " " "	1st May, 1899	$142^{\circ} 30'$ E.	$9\frac{1}{2}$ hours
Western Australia	1st December, 1895	120° E.	8 hours
Tasmania	1st September, 1895	150° E.	10 hours

Consequent upon the opening of the Trans-Australian Railway an arrangement has been made by which the change of time between South Australia and Western Australia (viz., $1\frac{1}{2}$ hours) is divided into two changes of 45 minutes each. Going east from Kalgoorlie the first change is made at Rawlinna, 235.18 miles out, where the time is put forward by 45 minutes. The second change of the same amount is made at Tarcoola, 794.05 miles out. Thenceforward South Australian standard time is kept. The advantage of standard time has thus been still further sacrificed, as there is not now even a whole half-hour difference; the essential idea of standard zone time has to this extent, therefore, been abandoned.

§ 17. Anthropometrical Measurements of Military Cadets.

1. **General.**—Under the Defence Act of 1910, the principle of compulsory training was brought into operation in Australia on 1st January, 1911. Advantage was taken of this to secure a record of certain measurements and other particulars in respect of the cadets subjected to inspection, and an analysis of the data so obtained concerning height, weight, and minimum chest measurement, according to age, is given hereunder for the year ended 30th June, 1912. These particulars are in respect of urban and rural areas combined and relate to the Commonwealth as a whole.

2. **Height according to Age.**—(i.) *Numerical and Proportionate Distribution.* Leaving out the cases in which height, age, or both were omitted from the record, the number of measurements available for the height analysis was 120,702, of which 98,980 were in the eight half-yearly age periods comprised between the ages of 13 and 17, the remaining six age periods containing but 21,722. The age period most largely represented was that from 13½ to 14. The succeeding tables give the number and proportion in each age and height group, also the proportions shewing the distribution according to height of 10,000 in each age period. Owing to the evident tendency to state measurements in whole and half inches, the figures obtained in respect of records involving half inches have been equally divided between the preceding and succeeding whole inch records, and the other fractions have been carried to the nearest inch, thus giving results approximately true to the nearest inch.

HEIGHT ACCORDING TO AGE.—DATA FOR THE WHOLE COMMONWEALTH FOR YEAR ENDED 30th JUNE, 1912.

NUMBER AND PROPORTION IN EACH GROUP.

Height to nearest inch.	Age of Cadets (Males).															Total.
	11½ and under 12	12 and under 12½	12½ and under 13	13 and under 13½	13½ and under 14	14 and under 14½	14½ and under 15	15 and under 15½	15½ and under 16	16 and under 16½	16½ and under 17	17 and under 17½	17½ and under 18	18 and over.		
NUMBER OF CADETS.																
Inches.																
50 & under	219	141	67	68	63	26	10	9	6	3	...	3	...	...	...	615
51	247	184	67	68	59	30	16	7	6	4	1	...	...	...	...	689
52	417	341	133	164	149	67	31	21	7	2	3	1	...	...	...	1,336
53	606	537	245	387	332	166	79	49	19	5	5	4	...	...	...	2,434
54	802	732	376	704	739	384	175	76	48	25	7	6	...	...	1	4,075
55	796	773	547	1,036	1,139	628	323	191	77	50	17	6	...	...	...	5,585
56	759	804	550	1,387	1,653	932	571	318	146	73	35	17	...	...	...	7,245
57	545	676	579	1,534	2,073	1,295	835	502	259	146	65	15	...	...	...	8,544
58	379	502	470	1,536	2,135	1,570	1,086	712	420	231	117	36	...	...	...	9,197
59	221	310	341	1,301	1,968	1,613	1,232	908	575	364	168	77	2	...	...	9,100
60	142	195	258	1,077	1,852	1,578	1,385	1,116	844	562	331	142	10	...	...	9,492
61	67	95	157	718	1,362	1,371	1,363	1,263	1,036	798	548	212	8	2	...	9,000
62	21	50	75	471	1,025	1,183	1,199	1,246	1,270	1,053	763	349	18	9	...	8,662
63	17	24	42	294	712	871	1,073	1,294	1,302	1,268	1,081	531	52	25	...	8,586
64	6	11	19	177	448	641	919	1,153	1,447	1,392	1,377	694	93	51	...	8,428
65	7	5	12	113	282	417	750	967	1,335	1,494	1,527	806	117	70	...	7,902
66	7	10	8	57	165	314	516	821	1,116	1,315	1,476	875	131	67	...	6,878
67	5	7	1	35	83	168	293	529	811	1,065	1,221	745	104	73	...	5,140
68	2	...	2	30	49	105	182	335	508	726	900	572	99	54	...	3,555
69	2	...	2	17	22	68	82	184	291	426	566	371	64	43	...	2,138
70	1	3	1	10	18	34	41	87	153	211	340	236	48	24	...	1,207
71	...	...	...	6	8	8	23	35	62	107	169	114	19	11	...	562
72	...	...	...	...	3	2	8	19	26	44	72	43	11	5	...	273
73	...	...	...	...	...	...	2	5	4	16	19	17	4	2	...	200
74	...	...	...	...	...	...	1	1	3	5	4	7	...	...	...	91
75	...	...	...	...	...	...	1	1	...	2	1	1	...	...	1	8
Total ...	5,268	5,400	3,953	11,204	16,339	13,479	12,195	11,849	11,701	11,397	10,833	5,880	783	438	120,702	

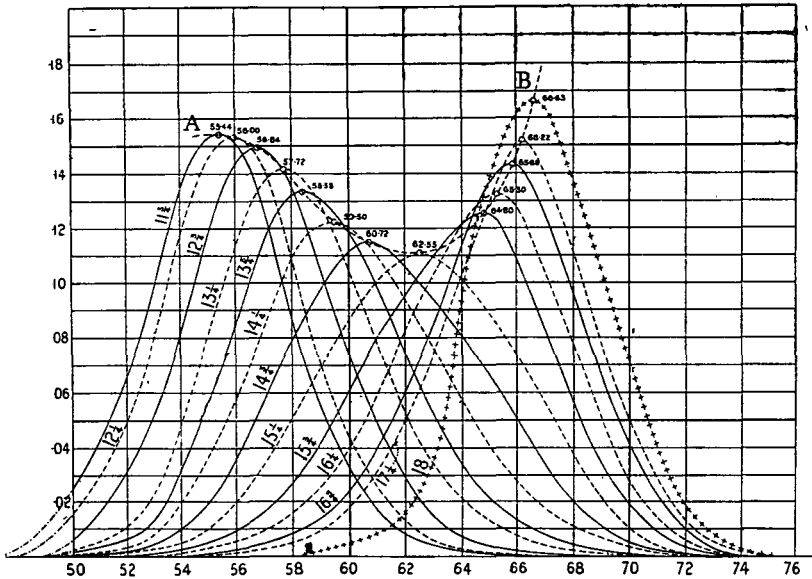
HEIGHT ACCORDING TO AGE.—DATA FOR THE WHOLE COMMONWEALTH
FOR YEAR ENDED 30TH JUNE, 1912—Continued.

PROPORTIONATE DISTRIBUTION OF THE NUMBER IN EACH AGE GROUP
ACCORDING TO HEIGHT.

Height to nearest inch.	Age of Cadets (Males).															
	11½ and under 12	12 and under 12½	12½ and under 13	13 and under 13½	13½ and under 14	14 and under 14½	14½ and under 15	15 and under 15½	15½ and under 16	16 and under 16½	16½ and under 17	17 and under 17½	17½ and under 18	18 and over.	17½ and over.	
Inches.																
50 & under	416	261	169	61	39	19	8	8	5	3	...	5	...	...	...
51	469	341	169	61	36	22	13	6	5	4	...	1	...	...	...
52	792	631	336	146	91	50	25	18	6	2	3	2	...	...	...
53	1,150	994	620	346	203	123	65	41	16	4	5	7	...	...	...
54	1,522	1,356	951	628	462	285	143	64	41	22	6	10	...	23	8	
55	1,511	1,431	1,384	927	697	466	265	161	66	44	16	10	...	...	...
56	1,441	1,489	1,391	1,238	1,012	692	468	268	125	64	32	29	...	...	...
57	1,035	1,252	1,465	1,397	1,269	961	685	424	221	128	60	25	...	...	...
58	720	930	1,189	1,371	1,307	1,165	891	601	359	203	108	61	38	...	25	
59	419	574	863	1,161	1,204	1,197	1,010	766	492	320	173	131	26	...	16	
60	269	361	653	961	1,133	1,171	1,136	942	721	493	306	241	128	...	82	
61	127	176	397	641	834	1,018	1,118	1,066	885	701	506	361	102	45	82	
62	40	93	190	420	627	878	983	1,052	1,026	925	704	594	230	206	221	
63	32	44	106	262	436	647	880	1,092	1,113	1,114	998	903	664	571	631	
64	11	20	48	158	274	476	754	973	1,237	1,222	1,271	1,180	1,188	1,164	1,179	
65	13	9	30	101	173	310	615	816	1,141	1,312	1,410	1,371	1,494	1,598	1,531	
66	13	19	20	51	101	233	423	693	954	1,155	1,363	1,488	1,673	1,530	1,622	
67	10	13	3	31	51	125	240	446	693	935	1,127	1,267	1,328	1,667	1,450	
68	4	...	8	18	30	78	149	283	434	637	831	973	1,264	1,233	1,253	
69	4	...	5	15	13	50	67	155	249	374	522	631	817	982	876	
70	2	6	3	9	11	25	34	73	131	185	314	401	613	548	590	
71	...	...	...	5	5	6	19	30	53	94	156	194	243	251	246
72	...	...	...	...	2	2	6	16	22	39	66	73	141	114	131
73	...	...	...	1	...	...	2	4	3	14	17	29	51	45	49
74	...	...	...	...	...	1	...	1	2	4	4	12	...	...	...
75	...	...	...	1	...	...	1	...	...	2	1	2	...	23	8
Total ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	

(ii.) *Graphical Representation.* Further facilities for the study of the data in respect of heights are furnished by the graph relative thereto which appears below. In the preparation of this graph the data given in the foregoing table in respect of proportionate distribution were plotted as a series of rectangles on units of abscissæ representing the successive heights in inches. Smooth curves were then drawn through the upper portions of these rectangles, and these after adjustment to accord closely with the data, and after slight graduation, gave the results produced in the graph. As will be seen from the table hereinafter on page 1205, there is a tendency towards symmetry in all the curves, the general trend being that of progress from negative skewness at the lower ages through a range of positive skewness to negative skewness again at the higher ages, the deviations from symmetry being relatively small in all cases. The curve marked A B is that which passes through the maximum points of the curves for successive age periods. Its minimum value corresponds to a height of 62.22 inches and accords fairly closely with the mode for the curve for age 15½, indicating that for the ages under review the scatter of the distribution in respect of height is greatest in the neighbourhood of that age. The curve marked 18 has been obtained from a combination of the numbers recorded for the age periods "17½ to 18" and "18 and over." The portions of the curves corresponding to abscissæ earlier than 50 have been inserted by graphical extrapolation. The mean height of the 120,702 cadets recorded was 60.81 inches, whilst the average of the mean heights for the successive age periods was 60.80 inches.

PROPORTIONATE DISTRIBUTION OF CADETS IN EACH AGE GROUP
ACCORDING TO HEIGHT.



DESCRIPTION OF GRAPH.—The base of each small rectangle represents two inches, while the vertical height represents a proportionate distribution of .01. The figures written at the base indicate the heights of the Cadets in inches, while those written along the curves indicate the central age of the age group. The number written at the maximum point of each curve is its mode. J

3. Weight According to Age.—(i.) Numerical and Proportionate Distribution.

Exclusive of the cases in which weight, age, or both were unrecorded, the number of cases available for the weight analysis was 119,960, the age distribution being sensibly the same as that in the case of heights. The next table gives the number and proportion in each age and weight group, the proportions shewing the distribution according to weight of 10,000 in each age period.

WEIGHT ACCORDING TO AGE—DATA FOR THE WHOLE COMMONWEALTH FOR YEAR
ENDED 30th JUNE, 1912.

NUMBER AND PROPORTION IN EACH GROUP.

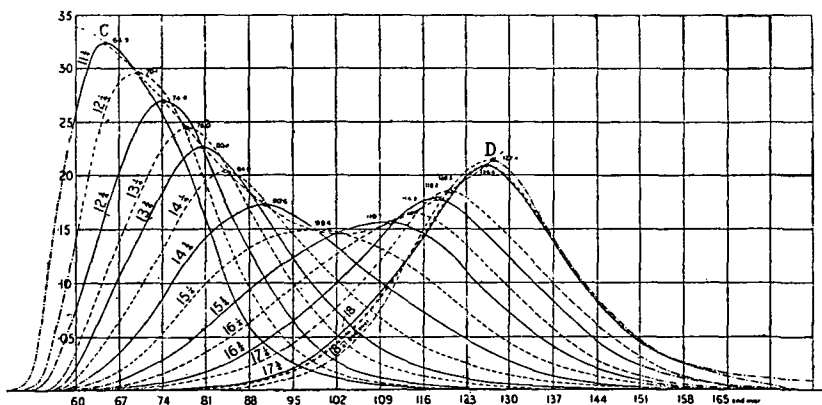
Weight to nearest lb.	Age of Cadets (Males).																		Total.
	11½ under 12	12½ under 13½	13½ under 14	14½ under 15½	15½ under 16½	16½ under 17½	17½ under 18½	18½ under 19½	19½ under 20	20½ under 21½	21½ under 22½	22½ under 23½	23½ under 24½	24½ under 25½	25½ under 26½	26½ under 27½	27½ under 28½	28½ under 29½	
66 & under	1,726	1,338	606	1,020	1,053	499	247	109	43	19	4	7	...	...	...	...	...	...	6,671
67-73	1,516	1,542	988	2,017	2,399	1,342	694	373	195	93	44	14	...	...	...	...	...	...	11,217
74-80	1,126	1,341	1,009	2,810	3,634	2,266	1,451	931	465	263	113	41	...	...	...	...	...	...	15,454
81-87	543	639	672	2,153	3,272	2,615	1,860	1,378	840	545	271	107	3	...	...	...	...	...	14,899
88-94	195	329	387	1,541	2,451	2,243	2,048	1,677	1,205	916	490	197	5	...	...	...	...	...	13,686
95-101	89	116	163	786	1,547	1,663	1,786	1,720	1,634	1,252	916	374	29	...	...	...	...	...	10,078
102-108	34	42	59	397	884	1,166	1,393	1,676	1,760	1,575	1,314	603	53	...	...	...	...	...	12,085
109-115	10	14	27	210	480	716	1,105	1,438	1,715	1,757	1,705	883	56	...	...	...	...	...	10,193
116-122	2	5	15	116	256	431	715	1,057	1,531	1,815	1,968	1,049	135	...	...	...	...	...	9,076
123-129	1	1	7	35	116	218	423	672	972	1,317	1,534	893	153	...	...	...	...	...	6,423
130-136	2	3	5	18	59	119	233	409	674	870	1,189	749	136	...	...	...	...	...	4,547
137-143	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
144-150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
151-157	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
158-164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
165 & over	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	5,244	5,376	3,940	11,126	16,209	13,377	12,140	11,793	11,643	11,303	10,764	5,835	778	432	...	...	...	...	119,960

WEIGHT ACCORDING TO AGE.—DATA FOR THE WHOLE COMMONWEALTH
FOR THE YEAR ENDED 30TH JUNE, 1912—Continued.

PROPORTIONATE DISTRIBUTION OF EACH AGE GROUP ACCORDING TO WEIGHT.

Weight to nearest lb.	Age of Cadets (Males).															
	11½ and under 12	12 and under 13½	13½ and under 15	15 and under 16½	16½ and under 18	18 and under 19½	19½ and under 21	21 and under 22½	22½ and under 24	24 and under 25½	25½ and under 27	27 and under 28½	28½ and under 30	30 and under 31½	31½ and over	31½ and over
66 & under	3,291	2,489	1,538	917	650	373	203	92	37	17	4	12	...	...	...	...
67-73	2,891	2,868	2,507	1,813	1,480	1,003	572	316	163	82	41	24	...	...	...	...
74-80	2,147	2,494	2,561	2,396	2,137	1,639	1,195	789	399	233	105	70	51	...	...	...
81-87	1,035	1,188	1,706	2,064	2,124	2,010	1,532	1,169	721	462	262	183	39	23	33	33
88-94	372	612	992	1,385	1,512	1,677	1,687	1,422	1,035	810	455	338	64	46	58	58
95-101	170	216	414	706	954	1,243	1,471	1,459	1,404	1,108	851	641	375	232	328	328
102-108	65	78	150	357	545	872	1,148	1,421	1,453	1,349	1,170	1,033	681	509	620	620
109-115	19	26	68	189	296	535	910	1,219	1,531	1,599	1,634	1,513	1,105	1,088	1,099	1,099
116-122	...	...	38	104	158	310	589	896	1,315	1,606	1,735	1,798	1,735	1,875	1,785	1,785
123-129	2	2	18	31	72	175	349	570	835	1,166	1,425	1,531	1,967	1,875	1,934	1,934
130-136	4	6	13	16	36	89	192	347	579	769	1,105	1,284	1,748	1,875	1,793	1,793
137-143	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
144-150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
151-157	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
158-164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
165 & over	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

(ii.) **Graphical Representation.**—The graph given below relative to weights has been constructed on principles similar to those described in the case of the height graph. In this case also there is a marked tendency towards symmetry in all the curves, the general trend being from positive skewness at the earlier ages to negative skewness at the later ages, with relatively small deviation from symmetry in any case. The curve marked CD is that which passes through the maximum points of the

PROPORTIONATE DISTRIBUTION OF CADETS IN EACH AGE GROUP
ACCORDING TO WEIGHT.

DESCRIPTION OF GRAPH.—The base of each small rectangle represents 7 lbs., while the vertical height represents a proportionate distribution of .05. The figures written at the base indicate the weights of the Cadets in lbs., while those written along the curves indicate the central age of the age group. The number written at the maximum point of each curve is its mode.

curves for successive age periods. Its minimum value corresponds to a weight of 103 lbs., and would accord approximately with the mode for a curve for age $15\frac{1}{2}$, indicating that for the ages under review the scatter of distribution in respect of weight is greatest in the neighbourhood of that age. The curve marked "18" has been obtained from a combination of the numbers recorded for the age periods " $17\frac{1}{2}$ to 18" and "18 and over." The portions of the curves corresponding to abscissæ earlier than 60 and later than 151 have been inserted by graphical extrapolation. The mean weight of the 119,960 cadets was 96.35 lbs., while the average of the mean weights for the several age periods was 96.98 lbs.

4. Chest Measurement according to Age.—(i.) *Numerical and Proportionate Distribution.* Excluding the cases in which chest measurement, age, or both were unrecorded, the number of cases available for analysis in respect of chest measurement was 120,054, the age distribution being sensibly the same as for heights and weights. The following table gives the number and proportions in each age and minimum chest group, the proportions shewing the distribution according to the minimum chest measurement of 10,000 in each age period. Owing to the evident tendency to state measurements in whole inches, the figures obtained in respect of records involving half inches have been equally divided between the preceding and succeeding whole inch records, thus giving results approximately true to the nearest inch.

MINIMUM CHEST MEASUREMENT ACCORDING TO AGE. DATA FOR THE WHOLE COMMONWEALTH FOR YEAR ENDED 30th JUNE, 1912.

NUMBER AND PROPORTION IN EACH GROUP.

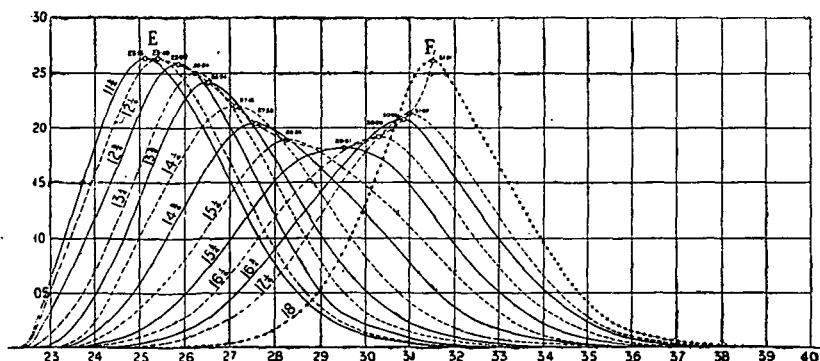
Minimum Chest Measurement to nearest inch.	Age of Cadets (Males).																Total.
	11½ and under 12	12 and under 12½	12½ and under 13	13 and under 13½	13½ and under 14	14 and under 14½	14½ and under 15	15 and under 15½	15½ and under 16	16 and under 16½	16½ and under 17	17 and under 17½	17½ and under 18	18 and over.			
23 & under	658	473	273	436	275	92	52	33	18	9	2	...	...	...	2,321
24	1,214	1,148	606	1,248	1,536	806	439	232	105	53	22	7	1	...	7,417		
25	1,299	1,350	924	2,334	2,973	1,815	1,115	641	387	206	104	27	1	...	13,176		
26	1,050	1,153	909	2,627	3,805	2,707	1,926	1,316	840	516	251	99	1	...	17,200		
27	593	694	650	2,190	3,346	2,869	2,333	1,962	1,491	1,040	667	244	10	1	18,090		
28	253	330	313	1,229	2,165	2,238	2,199	2,196	1,937	1,588	1,169	528	24	10	16,179		
29	104	120	112	607	1,167	1,453	1,750	1,882	2,093	2,008	1,753	864	70	34	14,022		
30	30	37	63	239	569	766	1,165	1,607	1,962	2,152	2,133	1,130	163	62	12,078		
31	...	10	19	20	113	267	394	673	1,004	1,447	1,725	1,964	1,141	196	103	9,076	
32	5	7	12	41	86	174	307	537	774	1,031	1,378	897	145	80	5,524		
33	...	4	5	22	52	66	128	252	372	561	767	491	93	80	2,893		
34	1	4	4	5	17	31	51	95	154	271	382	259	37	41	1,352		
35	...	...	...	3	3	10	15	30	53	87	134	89	14	13	451
36	...	...	1	3	3	3	8	14	29	45	39	5	5	5	169
37	...	...	...	...	1	1	1	5	8	10	11	14	1	3	55
38	...	1	...	1	2	1	1	...	4	3	5	5	1	1	25		
39	...	...	...	1	2	...	...	...	2	4	1	1	...	1	12
40	...	...	...	...	...	...	...	1	1	...	1	2	...	...	5
41	...	...	...	...	...	...	1	1	...	1	...	...	...	...	3
42	...	...	...	...	...	2	...	...	...	1	...	...	...	...	4
43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
44 and over	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
Total ...	5,217	5,340	3,892	11,099	16,269	13,428	12,165	11,808	11,663	11,345	10,795	5,837	762	434	120,054		

PROPORTIONATE DISTRIBUTION OF EACH AGE GROUP ACCORDING TO
MINIMUM CHEST MEASUREMENT.

Minimum Chest Measure-ment to nearest inch.	Age of Cadets (Males.)															
	11½ and under 12	12 and under 12½	12½ and under 13	13 and under 13½	13½ and under 14	14 and under 14½	14½ and under 15	15 and under 15½	15½ and under 16	16 and under 16½	16½ and under 17	17 and under 17½	17½ and under 18	18 and over	17½ and over.	
23 & under	1,261	886	701	393	169	69	43	28	15	6	2	...	...	...	...
24	2,327	2,150	1,557	1,124	944	600	361	196	90	47	20	12	13	...	8	
25	2,490	2,528	2,374	2,103	1,827	1,352	916	543	332	181	96	46	13	...	8	
26	2,013	2,159	2,336	2,367	2,339	2,016	1,583	1,115	720	455	233	170	13	...	9	
27	1,137	1,300	1,670	1,973	2,057	2,137	1,918	1,682	1,278	917	618	418	131	23	92	
28	485	618	804	1,107	1,331	1,667	1,803	1,860	1,661	1,400	1,083	904	315	230	284	
29	199	225	288	547	717	1,082	1,439	1,594	1,795	1,770	1,628	1,480	919	784	870	
30	58	69	162	215	350	570	958	1,361	1,682	1,897	1,976	1,936	2,139	1,429	1,881	
31	19	36	51	102	164	293	553	850	1,241	1,520	1,819	1,955	2,572	2,373	2,500	
32	9	13	31	37	53	130	252	455	664	953	1,276	1,537	1,903	1,843	1,881	
33	...	7	13	20	32	49	105	213	319	494	711	841	1,220	1,843	1,447	
34	2	7	10	4	10	23	42	80	132	239	354	444	486	945	652	
35	...	...	...	3	3	2	7	12	25	45	77	124	152	184	300
36	...	...	...	...	2	2	6	12	19	25	42	67	66	115	84
37	...	...	...	...	1	1	1	4	7	9	10	24	13	69	34
38	...	2	...	...	1	1	1	...	3	5	9	13	23	16	16
39	...	...	...	...	1	...	...	...	2	3	1	2	...	23	8
40	...	...	...	...	...	...	...	1	1	...	1	3	...	...	...
41	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
42	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
44 and over	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
Total ...	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	

(ii.) *Graphical Representation.*—The graph given below relative to minimum chest measurement has been constructed on similar lines to those described in the case of the height graph. In this case the tendency towards symmetry is less marked than with heights or weights. The general trend is from well marked positive skewness at the lower ages to less defined negative skewness or symmetry at the higher ages. The curve for 18, which deviates slightly from this trend by giving positive skewness, is based on relatively meagre data.

PROPORTIONATE DISTRIBUTION OF CADETS IN EACH AGE GROUP ACCORDING
TO MINIMUM CHEST MEASUREMENT.



DESCRIPTION OF GRAPH.—The base of each small rectangle represents one inch, while the vertical height represents a proportionate distribution of .05. The figures written at the base indicate the minimum chest measurements of the Cadets in inches, while those written along the curves indicate the central age of the age group. The number written at the maximum point of each curve is its mode.

The curve marked E F is that which passes through the maximum points of the curves for the several age periods. Its minimum value corresponds to a chest measurement of 29.12 inches, and would accord with the mode for an age slightly above 15½, indicating that for the ages under review the scatter of distribution in respect of minimum chest measurement is greatest in the neighbourhood of that age. The curve marked "18" has been obtained from a combination of the numbers recorded for the age periods "17½ to 18" and "18 and over." The portions of the curves corresponding to abscissæ earlier than 23 have been inserted by graphical extrapolation. The mean minimum chest measurement of the 120,054 cadets was 27.84 inches, whilst the average of the means for the several age periods was 27.92 inches.

5. **Skewness of Curves.**—The following table, which has been referred to above, furnishes particulars of the means and modes of the several curves and thus indicates the nature and extent of their deviation from symmetry :—

TABLE OF MEANS AND MODES OF HEIGHTS, WEIGHTS AND MINIMUM CHEST MEASUREMENTS, AT AGES 11½ TO 18.

Ages.	11½	12½	12½	13½	13½	14½	14½	15½	15½	16½	16½	17½	18
HEIGHTS (IN INCHES).													
Mean ...	55.0	55.6	56.6	57.8	58.6	59.7	60.9	62.1	63.2	64.1	65.0	65.4	66.3
Mode ...	55.4	56.0	56.8	57.7	58.4	59.5	60.7	62.6	64.8	65.3	65.9	66.2	66.6
Mean—Mode	— 0.4	— 0.4	— 0.2	+ 0.1	+ 0.2	+ 0.2	+ 0.2	— 0.5	— 1.6	— 1.2	— 0.9	— 0.8	— 0.3
WEIGHTS (IN LBS.)													
Mean ...	71.9	74.0	77.5	81.7	84.7	89.6	95.6	101.4	107.6	112.2	117.5	120.3	126.8
Mode ...	64.9	70.1	74.3	78.0	80.7	84.2	90.6	98.4	110.7	114.2	118.2	120.3	126.4
Mean—Mode	+ 7.0	+ 3.9	+ 3.2	+ 3.7	+ 4.0	+ 5.4	+ 5.0	+ 3.0	— 3.1	— 2.0	— 0.7	0.0	+ 0.4
MINIMUM CHEST MEASUREMENTS (IN INCHES).													
Mean ...	25.2	25.4	25.8	26.2	26.5	27.1	27.7	28.4	29.0	29.6	30.2	30.5	31.4
Mode ...	25.1	25.4	25.9	26.3	26.5	27.1	27.6	28.3	29.5	30.3	30.9	31.0	31.5
Mean—Mode	+ 0.1	0.0	— 0.1	0.0	0.0	0.0	+ 0.1	+ 0.1	— 0.5	— 0.7	— 0.7	— 0.5	— 0.1