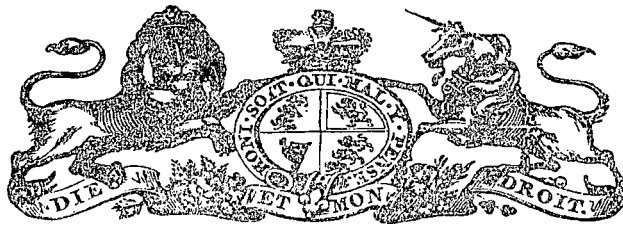


(No. 61.)



1886.

PARLIAMENT OF TASMANIA.

FRIENDLY SOCIETIES IN TASMANIA:

REPORT ON CONDITION.

Presented to both Houses of Parliament by His Excellency's Command.

1886.

T A S M A N I A.

R E P O R T

ON

F R I E N D L Y S O C I E T I E S :

THEIR PRESENT CONDITION; THE STATE OF THE LAW RELATING
THERETO AND AMENDMENTS SUGGESTED THEREIN;

AND

THEIR RIGHT RELATIONS TO THE STATE.

BY

E V A N F . O W E N ,

Actuary for Friendly Societies in the Department of the Government Statist of Victoria.

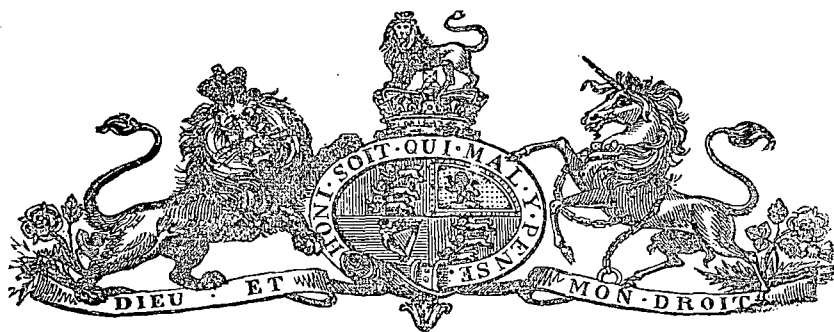
TOGETHER WITH

A N I N T R O D U C T O R Y R E P O R T ,

BY

R O B E R T M . J O H N S T O N ,

Government Statistician of Tasmania.



Tasmania:

WILLIAM THOMAS STRUTT, GOVERNMENT PRINTER. HOBART.

1886.

TABLE OF CONTENTS.

THE GOVERNMENT STATISTICIAN'S REPORT	Page 7
MR. OWEN'S REPORT :—	
Explanation of Abbreviations.....	10
Introductory	11
1. The present Condition of the Societies	11
Table 2. Members, Branches, Funds, 1873-84.....	12
„ 3. Funds per Member, Rate of Interest realised, &c., 1883-4	13
„ 4. Societies in order of Rate of Interest received, 1883-4	15
„ 5. Contributions and Benefits, 1884	16
„ 6. Experience of the M.U. and A.O.F., England	23
„ 7. Table of Quarterly Contributions adopted by M.U., Victoria	24
„ 8. „ „ „ I.O.R., „	25
„ 9. Valuation Balance Sheet	27
„ 10. Societies in order of Financial Condition.....	28
2. Present state of the Law	28
3. Amendments recommended therein	30
4. The relation of the Societies to the State	32
Appendix A. Valuation Tables, at 4 per cent., &c.	35
„ B. Form of Return prescribed by Government Statistician	64
„ C. Copy of Letter to Secretaries	65
„ D. Date of Applications to Secretaries, and their Replies thereto	66
„ E. Copy of Cards, Forms of Returns, &c., Victoria.....	67
„ F. Summary of Recommendation of Royal Commission, Victoria	75
„ G. Instructions and Fees to Public Auditors, Victoria.....	76
„ H. „ to Public Valuers, Victoria	77
ERRATA	79



STATISTICIAN'S REPORT on the Investigation into the State of the Friendly Societies of Tasmania recently conducted by E. F. OWEN, Esq., Government Actuary, Victoria.

*Statistical and General Register Office,
Hobart, 6th May, 1886.*

SIR,
I HAVE the honor to report that Mr. Owen, the able Actuary of the Victorian Government, has now finally completed his Report on the Friendly Societies of Tasmania.

The Report is most exhaustive, and embodies the results of much painstaking enquiry into the following matters relating to Friendly Societies generally; viz.—

- 1. Progress made during last twelve years.
- 2. Object of Association.
- 3. Financial Condition.
- 4. State of the Law.

As I had the honor to be selected by you to confer with and otherwise to assist Mr. Owen in determining the mode and extent of the enquiry into these important matters, it may be desirable that I should briefly summarise the results of the investigation.

The Progress made during the last Twelve Years.

The progress made by the various Societies during the twelve years, 1873–84, is indicated by the following comparison :—

	1873.	1884.	Increase since 1873.
Branches and Districts.....	16	75	59
Members	2179	6545	4368
Receipts£	5040	17,827	12,787
Expenditure£	3673	18,020	14,347
Capital£	12,501	43,211	30,711
Population	104,217	130,541	26,324

From these figures Mr. Owen arrives at the conclusion that the membership increased seven times as fast as the population, and the funds eight times as fast. An allowance must be made, however, for the very imperfect state of Friendly Society statistics in the earlier years, which, if known, would materially lessen the apparent progress as compared with the rate at which population has increased during the same period.

It is interesting to notice that 6545 persons, equal to 5 per cent. of the total population, or 18·8 per cent. of the adult males, belong to some Friendly Society. When we consider that this represents nearly 1 in every 5 adult males, it is manifest that the interests of Friendly Societies are of the widest national importance.

The following comparative statement shows the extent of the Friendly Societies in Victoria, Tasmania, and New Zealand:—

In Victoria, 1 person in every 16 is a member of some Friendly Society; in Tasmania, 1 in 20; in New Zealand, 1 in every 33. So far the progress made by the Friendly Societies of Tasmania compares favourably with the progress made in the neighbouring Colonies.

Objects of Association.

The principal object of the various Societies is, by means of small periodical payments, to provide for medical and monetary relief in sickness, and for the payment of certain sums to the families of members at the death of themselves and their wives.

A very full statement regarding the provisions made by the principal Societies is contained in Mr. Owen's Report.

Financial Condition.

It is obvious if certain liabilities are incurred in respect of the probable sickness and death payments, that the initial and periodical payments made by the members, together with accrued interest, must be adequate to meet the ultimate claims. Absolute knowledge of what these ultimate claims may amount to, and the sufficiency of contributions to meet them, cannot be obtained precisely, because such matters are affected by two very important variable factors, viz., (1) the number of years which each member *will live*; (2) the number of years which each member *will contribute to the funds*.

It has been ascertained, however, from the extended experience of such matters, when ages of members are carefully ascertained, that *approximate* values can be arrived at which are sufficient to gauge the present financial condition of any society whose numbers are sufficient to admit of using the average law with safety.

From such sources Mr. Owen has given most valuable information in his report; and, by careful computation with such figures as were available, he has arrived at the following conclusions; viz.:—That the scale of periodical payments adopted by the various societies is too low to secure the objects for which liabilities are incurred; that the rates of entrance fee, graduated in respect of age, are, in many cases, either imperfectly appropriated or unsatisfactory in their determination; and that the present values of all possible assets are at least from 11·2 to 36·2 per cent. below the estimated present values of liabilities.

In these conclusions I quite concur; and, were it not that I place such great reliance in Mr. Owen's experience and judgment, I would, from independent calculations, have placed even a lower value upon the *present value of contributions* than that given by him in Table 9.

The mean age, 31·8 years, seems to me to be too favourable, and may be due to lack of care on the part of the Secretaries in not ascertaining the exact age of each member. There is no reason, however, for extreme alarm at such deficiencies, nor for forming very adverse conclusions; for an able authority has stated—"It would be strange if it were otherwise, when for the first time scientific tests are applied to contracts that have been in operation without a scientific basis for a long series of years. It must be borne in mind, however, that nothing is more elastic than the contract made by a Friendly Society with its members,—no error more easy of remedy, if found out in time, than one existing in the original terms of such a contract. Hence, the words "insolvency," "rottenness," and the like, which we sometimes hear freely used as describing the general condition of Friendly Societies, are utterly out of place. Of Friendly Societies in general it may be said that, as there are no associations the benefits of which are more important to their members, so there are none that are managed with greater rectitude, and few with equal success."*

Mr. Owen's recommendations are—To raise the rates of contributions for benefits; to abolish the entrance fee, and in lieu thereof to adopt a graduated rate of weekly payments.

State of the Law, &c.

Mr. Owen has also carefully examined the present state of the law in its relation to Friendly Societies, and recommended certain amendments therein. Among other requirements, he recommends the establishment of a department similar to that in Victoria, to which registration, periodical audit, and valuation, and other important matters affecting the welfare of Societies, would be entrusted.

* "The Relations of the State to Thrift: Ten years' Statistics of Friendly Societies and similar Institutions." By W. Bradbrook, F.S.A., F.R.S.L. (*Journal Statistical Soc.*, March, 1885, p. 29.)

This would entail the services of at least one trained Actuary and one skilled Accountant, who should be able to devote their whole time to work of this kind, free from the distraction of any other duty whatsoever. The actuarial work involved in such supervision is enormous.

It is also of the utmost importance that a more strict provision should be made for securing that separate accounts are kept for every fund for which distinct contributions are levied, and that the utmost care is taken that the interest derived from investments should be scrupulously placed to the credit of the proper funds; otherwise, all attempts to indicate the true state of a Society's affairs would be useless.

In conclusion, I may confidently add that the exhaustive investigation completed by Mr. Owen will be of the greatest service to the Friendly Societies of this Island, in which I know you have always taken so deep an interest.

I have the honor to be,

Sir,

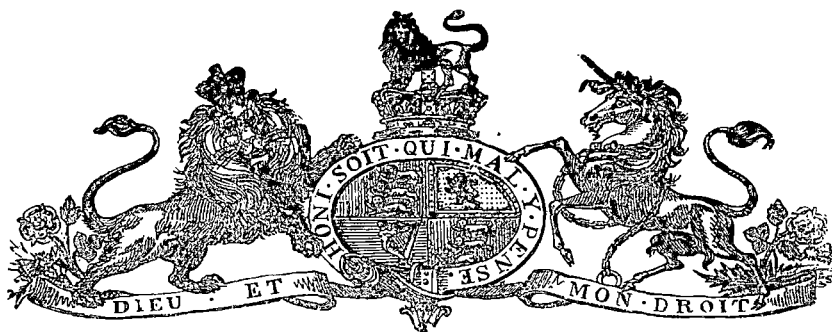
Your obedient Servant,

ROBT. M. JOHNSTON, *Government Statistician.*

The Hon. W. H. BURGESS, M.H.A., Treasurer.

EXPLANATION OF ABBREVIATIONS USED IN THE REPORT.

A. & I.O.O.F.	Ancient and Independent Order of Odd Fellows.
A.O.F.	Ancient Order of Foresters.
H.A.C.B.S.	Hibernian Australasian Catholic Benefit Society.
I.O.O.F., M.U.	Independent Order of Odd Fellows, Manchester Unity.
I.O.O.F.	Independent Order of Odd Fellows.
I.O.R.	Independent Order of Rechabites.
P.A.F.S.	Protestant Alliance Friendly Society.
St. J.F.S.	St. John's Friendly Society.
St. P.S.	St. Patrick's Society.
T.G.R.S.F.S.	Tasmanian Government Railway Servants' Friendly Society.
T.M.L.R.S. & P.S.	Tasmanian Main Line Railway Sick and Provident Society.
U.A.O.D.	United Ancient Order of Druids.



Office of the Government Statistician,
Hobart, 20th April, 1886.

SIR,

IN accordance with your instructions, I have the honour to submit my Report on the present condition of the Friendly Societies in Tasmania, the state of the Law relating thereto, and the amendments which it is, in my opinion, desirable should be made therein.

2. To assist me in prosecuting the enquiry, I was placed by the Government Statistician, Robt. M. Johnston, Esq., in possession of the volumes of the "Statistics" published by him for the three years 1882, 1883, and 1884, containing such particulars of the membership, income, expenditure, and accumulated funds of the Societies during those years as had been returned to him by the respective Secretaries, according to a form prescribed by him under the authority of the "The Statistical Returns Act, 1877," Sections 2 and 3 (41 Vict. No. 15), a copy of which is given herewith, in Appendix B. I thought it advisable to apply also to the Secretary of each independent Society, District, or Branch for a copy of the Rules registered with the Clerk of the Peace under the provisions of the Friendly Societies Statute, 1856. (*See* Appendices C. and D.)

3. The Act of 1875 relating to Friendly Societies at present in force in Great Britain was based upon the recommendations of a Royal Commission appointed in 1870, "to make a complete investigation into the working of the Societies, the benefits they confer upon Society at large, and their right relations to Government and Legislation."

The Fourth Report of this Commission gives a "complete survey of the Societies in the Mother Country, their history and condition, their beneficial action, and their many defects." The present Friendly Societies Act of the neighbouring Colony of Victoria (41 Vict. No. 590), came into force on 1st January, 1878, and was the result of an enquiry made by a Royal Commission during a period extending from February, 1875, to the 10th March, 1876, into "the working of the Friendly Societies Statute (28 Vict. No. 254, 9th May, 1865), the position and operations of the Societies registered under it, and what amendment, if any, is desirable in the existing law," and embodies the recommendations made thereby. I shall avail myself of the valuable labours and suggestions of both these important bodies.

I.—THE PRESENT CONDITION OF THE SOCIETIES.

4. From the Statistics placed at my disposal, I find that the number of members in the Societies which furnished returns at the end of the year 1884, at each quinquennial age period, were as shown in the subjoined Table.

TABLE I.

Age.	No. of Members.
Under 25.....	1627
25-30	1261
30-35	979
35-40	699
40-45	471
45-50	317
50-55	203
55-60	103
60 and upwards	115
<i>All Ages.....</i>	<u>5775</u>

To these must be added 770 members whose ages were not specified,—making the number of members on 31st December, 1884, 6545 altogether, the average age of whom, excluding the 770 members just referred to, was 31·8 years.

5. The Decennial Returns of Friendly Societies contained in the "Statistics" for the years 1882 and 1884 furnish the following information of their aggregate numerical and financial condition during the twelve years 1873-1884 :—

TABLE 2.

STATEMENT of the Number of Branches, Districts, and Members; Receipts, Expenditure, and Capital, in the Friendly Societies which filed Returns during the Twelve Years 1873-1884.

Year.	Branches and Districts.	Members.	Receipts.	Expenditure.	Capital.
	No.	No.	£	£	£
1873.....	16	2179	5040	3673	12,501
1874.....	18	1863	5313	3875	12,552
1875.....	24	1902	6082	5386	12,133
1876.....	27	2149	7119	6616	16,513
1877.....	49	3624	11,354	9663	28,082
1878.....	35	3755	10,191	8439	24,643
1879.....	44	4107	11,912	9996	30,849
1880.....	47	3937	13,282	10,416	30,027
1881.....	43	4164	13,910	11,250	30,241
1882.....	50	4815	15,258	12,639	34,346
1883.....	66	5944	15,940	14,126	40,502
1884.....	75	6545	17,827	18,020	43,211

6. I notice that the progress which the Societies have made, both numerically and financially, is greatly in excess of that of the population in the same period of time. At the Enumeration of the 7th February, 1870, the population of Tasmania was found to be 99,328; at the Census of the 3rd April, 1881, the population was 115,705,—an increase in 11 years and 55 days (11·15 years) of 16½ per cent., equivalent to a uniform annual increase of 1½ per cent. In the Friendly Societies the number of members increased in the twelve years, 1873-1884, upwards of 200 per cent., or over 9½ per cent. per annum; and the capital increased 246 per cent., or at the rate of 10½ per cent. per annum. In other words, the membership increased seven times as fast as the population, and the funds eight times as fast.

7. The population of Tasmania at the end of 1884 was estimated to be 130,541, and the members of Friendly Societies are seen by the above table to have been 6545. 5 per cent., therefore, of the population, or 1 in 20, belonged to some Friendly Society. The corresponding figures for Victoria at the same point of time were—Population, 961,276; members of Friendly Societies, 60,531; and the latter number is to the former in the ratio of 6·3 per cent., that is, 1 in every 16 of the people was a member of some Friendly Society.

8. From particulars given as to the financial operations of all Societies during the year 1884, taken in the aggregate, I have deduced the following Balance Sheet:—

	£	s.	d.	£	s.	d.
BALANCE at the end of 1883 .....	..			40,832	16	9
RECEIPTS during 1884—						
Initiation and Proposition Fees.....	927	13	2			
Contributions	13,855	6	8			
Interest	1174	19	4			
Other Receipts	2849	5	11			
				18,807	5	1
<i>Total</i> .....	..			£59,640	1	10
EXPENDITURE during 1884—						
Medical Attendance and Medicines	5007	7	4			
Sick Pay (3842 weeks)	3961	4	5			
Funeral Claims of—						
Members	745	10	0			
Wives	324	0	0			
Widows' Endowments	50	0	0			
Other Expenditure	5341	8	7			
				15,429	10	4
<i>Balance at end of 1884</i> ....	..			£44,210	11	6

The interest entered above is that obtained by the Branches on the funds under their control, the interest realised on the District and Grand Lodge funds of the I.O.O.F., M.U., I.O.O.F., the I.O.R., and the P.A.F.S., amounting at the end of 1884 to £15,401, not being distinguished from the receipts from other sources. The number of weeks' sickness given in the printed returns are stated to be estimated, the information received being incomplete.

9. Information in detail of the above character in respect of every Lodge, Court, Tent, and Branch in Tasmania is contained in the volumes of "Statistics" for the years 1883 and 1884, a few only excepted, from whom repeated applications were unavailing to produce any response. I have extracted therefrom the particulars which appeared to show the progress of the individual Societies, grouping them together according to the plan following:—

TABLE 3.

STATEMENT of Amount of Funds, Funds per Member, Interest received, and Rate of Interest realised, during the Years 1882, 1883, and 1884, together with Number of Branches and Members, at the end of each Year, in all the Friendly Societies in Tasmania.

SOCIETY AND DISTRICT YEARS	I.O.O.F., M.U.*									I.O.R.*					
	Hobart District.			Buckingham District.			Cornwall District.			Southern Cross District.			Tasmanian District.		
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Funds at beginning of Year 1882	2557	..	..	4784	..	..	11,387	..	..	2030	..	..	4931	..	..
Funds at end of Year	2586	2699	2865	4853	5124	5462	10,098	10,538	11,588	2069	3457	3639	5411	4654	6600
Interest received .....	..	56	78	..	180	188	..	147	188	..	77	118	..	99	82
Rate of Interest per cent. ....	..	2·6	4·8	..	4·5	4·7	..	2·1	4·4	..	3·4	4·7	..	2·9	3·9
Funds per Member	£ 5 15s.	4 19s.	4 11s.	7 9s.	7 3s.	6 13s.	10 7s.	13 9s.	11 11s.	7 14s.	7 17s.	7 5s.	11 0s.	8 0s.	9 13s.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Number of Branches at end of Year	4	4	4	4	5	6	12	7	9	5	8	9	8	11	13
Number of Members at end of Year	450	548	631	653	713	820	975	802	1005	268	440	502	492	581	693

SOCIETY AND DISTRICT YEARS	ST. JOHN'S FRIENDLY SOCIETY.						I.O.O.F.*			A.O.F.		
	Hobart.			Launceston.								
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
	£	£	£	£	£	£	£	£	£	£	£	£
Funds at beginning of Year 1882	963	..	..	672	..	..	..	1231	..	3415	..	..
Funds at end of Year	980	1224	1183	753	806	850	..	1917	2236	3502	4483	4882
Interest received .....	..	50	60	..	7	6	..	37	35	..	188	225
Rate of Interest per cent. ....	..	4·5	5·0	..	0·9	0·8	..	2·7	2·2	..	4·7	4·8
Funds per Member	£ 1 14s.	2 8s.	2 6s.	2 17s.	3 0s.	3 3s.	..	3 6s.	3 2s.	11 0s.	10 13s.	10 13s.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Number of Branches at end of Year	1	1	1	1	1	1	..	5	6	3	4	4
Number of Members at end of Year	576	511	512	260	270	270	..	583	630	318	421	459

13

* In the I.O.O.F., M.U., I.O.O.F., I.O.R., and P.A.F.S., the Balances to the credit of the District Lodges are included in the funds, but the rate of Interest is calculated on the funds under the control of the Branches.

TABLE 3.—Statement of Amount of Funds, &c.—continued.

SOCIETY AND DISTRICT	P.A.F.S.			T.M.L.R.S. & P.S.			T.G.R.S.F.S.			U.A.O.D.		
	..			Hobart.			Launceston.					
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Funds at beginning of Year 1882.....	£ 681	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ 489	£ ..	£ ..
Funds at end of Year	561	372	1544	..	185	187	..	37	37	301	526	692
Interest received.....	..	8	26	..	..	..	..	2	2	..	8	22
Rate of Interest per cent. ....	..	1·7	3·8	..	..	..	..	5·7	5·7	..	1·9	3·6
Funds per Member £	3 0s.	1 16s.	3 13s.	..	0 18s.	0 18s.	..	0 11s.	0 10s.	1 7s.	2 3s.	2 11s.
Number of Branches at end of Year	No. 3	No. 3	No. 6	No. 1	No. 1	No. 1	No. 1	No. 1	No. 1	No. 2	No. 2	No. 2
Number of Members at end of Year	190	203	421	..	208	211	..	69	74	221	244	274

SOCIETY AND DISTRICT	A. & I.O.O.F.			ST. PATRICK'S SOCIETY.						H.A.C.B.S.		
	..			Hobart.			Launceston.					
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Funds at beginning of Year 1882.....	£ 3672	£ ..	£ ..	£ ..	£ 178	£ ..	£ 362	£ ..	£ ..	£ 245	£ ..	£ ..
Funds at end of Year.....	3502	2026	2080	..	197	216	440	474	560	288	461	498
Interest received.....	..	116	110	..	..	..	..	37	32	..	..	..
Rate of Interest per cent. ....	..	4·2	5·4	..	..	..	..	8·1	6·2	..	..	..
Funds per Member £	12 13s.	14 16s.	16 10s.	..	10 7s.	8 6s.	5 13s.	4 12s.	6 3s.	5 1s.	5 0s.	4 17s.
Number of Branches at end of Year	No. 2	No. 2	No. 2	No. 1	No. 1	No. 1	No. 1	No. 1	No. 1	No. 1	No. 1	No. 1
Number of Members at end of Year	277	137	126	..	19	26	78	103	91	57	92	103

10. Next to the adoption of rates of contributions adequate to provide benefits given to the members, the most important element in securing the prosperity of a Friendly Society is the regular and close investment of the funds, and at as high a rate of interest as is procurable consistently with safety. I furnish a list of the above Societies, placed in the order of the average rate of interest realised in 1883 and 1884, calculated on the *total* funds in the middle of each year, not on the portion of the funds under investment, since the latter plan may indicate that the rate of interest was high, while as a matter of fact the effective rate was low, in consequence of a large proportion of the funds remaining unproductive.

TABLE 4.
SOCIETIES in the order of the Return obtained from Investments relatively to the Total Funds.

	Rate per cent.		Rate per cent.
1. St. P.S., Launceston.....	7·2	10. I.O.R., Tasmanian District.....	3·0
2. T.G.R.S.F.S., Launceston	5·7	11. P.A.F.S.	2·8
3. A.O.F.	4·8	12. U.A.O.D.....	2·8
4. A. & I.O.O.F.	4·8	13. I.O.O.F.	2·5
5. I.O.O.F., M.U., Buckingham District...	4·6	14. St. J.F.S., Launceston	0·9
6. St. J.F.S., Hobart.....	4·3	15. { T.M.L.R.S. & P.S., Hobart.....	0·0
7. I.O.R., Southern Cross District	4·1	St. P.S., Hobart	0·0
8. I.O.O.F., M.U., Hobart District.....	3·7	H.A.C.B.S.....	0·0
9. " " Cornwall District	3·3		

11. In a great majority of the Societies the income during the three years comprised in Table 3 has exceeded the expenditure, and the funds have steadily increased. In the Cornwall District I.O.O.F., M.U., this advance has been irregular, as also in the St. J.F.S. and U.A.O.D., and very irregular in the P.A.F.S. In the A. & I.O.O.F. there has been a decrease in the capital, the expenditure having exceeded the income during the three years by £1590. It will be, however, noticed, by referring to the fifth line of the table, that the membership has declined at a greater rate than the funds.

12. On examination of the fifth line, showing the funds per member, it will be seen that in the Societies given below the membership increased faster than the capital.

I.O.O.F., M.U., Buckingham District.	A.O.F.
I.O.R., Southern Cross District.	St. P.S., Hobart.
" Tasmanian District.	H.A.C.B.S.
I.O.O.F.	

In the Hobart District of the I.O.O.F., M.U., both funds and membership decreased, but the former decreased quicker than the latter.

13. By Sections 5 and 6 of "The Friendly Societies Act, 1856," (see paragraph, *post*) it is provided that a Society or Branch shall not be deemed to be legally established under the Act, nor be entitled to any of the provisions thereof, until the Attorney-General, or a Barrister-at-Law appointed by the Governor therefor, has certified that its "Rules are framed in conformity with law, that no Rule or part thereof is repugnant to another, and that the same are reasonable and proper;" and a copy of such Rules with such Certificate annexed has been filed and registered by the Secretary or officer of the Society with the Clerk of the Peace of the District in which the place of business of such Society is held.

14. I have made a careful examination of the registered Rules of all the independent Societies, copies of which were placed in my possession by the Secretaries, in response to my application mentioned in paragraph 2 above, with the view of ascertaining the benefits each Society professed to confer upon its members, and the contributions, fixed and periodic, it required its members to make to the funds in return therefor. By Section IV. of the Act it is made imperative that "the Rules of a Society shall provide that all monies received or paid on account of each and every particular Fund or Benefit assured to the members for which a separate Table of Contributions payable shall have been adopted, shall be entered in a separate Account, distinct from the moneys received and paid on account of any other Benefit or Fund." The result of my enquiry into the benefits given in the several Societies doing business in Tasmania, the contributions payable by members, and the manner in which such contributions are appropriated between the various funds, when the appropriation contemplated by the section of the Act just cited has been effected in the Rules, is given in the subjoined Table.

TABLE 5.—A STATEMENT of the Separate Funds, Members' Contributions thereto, and objects thereof, in all the Friendly Societies in Tasmania.

N.B.—Figures preceding Initiation Fees and Contributions, thus—18-20, indicate the entry Age of Members making such payments. Figures in Brackets, thus—[44] refer to the registered Rules of the Society authorising the provisions indicated.

SOCIETY.	SICK AND FUNERAL FUND.						MEDICAL AND MANAGEMENT FUND.			REMARKS.
	Income from Member's—				Expenditure : the Sum payable—		Income from Member's—		Expenditure : the Sum payable as—	
	Entrance Fee.		Annual Contribution.		As weekly Sick Pay during— 1st 6 mo. 1° 2nd „ „ 2° 3rd „ „ & after 3°+	At Death of Member..(M.) Wife .....(W.)	Entrance Fee.	Annual Contribution.		
	Sick Fund.	Funeral Fund.	Sick Fund.	Funeral Fund.						
1	2	3	4	5	6	7	8	9	10	11

1. I.O.O.F., MU., HOBART DISTRICT.	[GENERAL FUND.]					[INCIDENTAL FUND.]					Interest equally divided between the two Funds. Amended Rules registered, 24. 6. 81. [47]
	18-20..... s. 12 20..... 13 21..... 14 ... 25..... 20 ... 30..... 30 ... 33..... 50 34..... 65 35..... 80 [44]		18-36..... s. d. 34 8		As Sick Pay— s. 1° 21 2° 15 3° + 5, not less than, and as Medical Expenses. [45]		18-36... s. d. 17 4		Fun.Donation— £12 (M.) £12 (W.) from Dt. F.F., £25 (M.) from Dt. W. & O.F., and as Lodge and Dt. Management Expenses. [19, 45]		
	2	3	4	5	6	7	8	9	10		

BUCKINGHAM DISTRICT.	[GENERAL FUND.]					[INCIDENTAL FUND.]					Interest equally divided between the two Funds. Amended Rules registered, 17. 7. 83. [30]
	(Entrance Fee same as in Hobart District.) [46]		18-36..... s. 39		As Sick Pay— s. 1° 20 2° 15 3°+ ... 5 As Funeral Donation— £12..... (M.) £10..... (W.) from Dt. F.F., as Medical Expenses and as District Management Expenses. [19, 32]		18-36... s. 13		Fun.Donation— £25 (M.) from District W. & O.F., and as Lodge Management Expenses. [20]		
	2	3	4	5	6	7	8	9	10		

CORNWALL DISTRICT.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	INCIDENTAL FUND.			Additional Contributions and Benefits— Fun. Don. { £10 (M.) £5 (W.) for each additional 4s. 4d. paid annually up to— £40 ... (M.) £20 ... (W.) Lodges divide Contributions differently, and pay different rates of Sick Pay (see cols. 4 & 9). Amended Rules registered; 1.8.83.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s.	s.	s.	s. d.			
18-25 { 8 6 to 14 6		3 6	2 6										Medical and Management Expenses.
25-30 { 13 6 to 7 0			5 0	{ 26 0 15 2 17 4	{ 4 4 6 6 4 4	{ 4 4 4 4 4 4	1° ... 20 2° ... 12 3° ... 5	£30... (M.) £15... (W.)	£30... (M.)	18-40 { 23 10 32 6 32 6			
30-36 { 24 0 21 0 to 14 0 96 0			{ 15 0 20 0 25 0 30 0										
over 36 89 0 with back contributions from 36.		21 0											
	[7, 12]	[7]		[10]	[10]	W. & O.F. Laws. [3]	Lodge Laws.	[13]	W. & O.F. Laws. [4]	Lodge Laws.	Lodge Laws.		
2. I.O.R. SOUTHERN CROSS DISTRICT.	s. 15-20 10 20-25 10 25-30 15 ... 35 ... 24 ... 40 ... 46 ... 45 ... 76 ... 49 ... 100	s. 2 3 4 ... 6 ... 36 ... 66 ... 90		s. 15-50 ... 28	s. 6		s. 1° 20 2° 20 3° 10 4° + ... 5	£35 (M.)		s. 15-20 4 with Medical Fees.	Medical and Management Expenses.		Wife, if assured, to pay Entrance Fee, ranging from— s. d. 1 6 at age 20, to 67 6 " " 49, and 4s. a year, to secure payment of £15 at death. Half Benefit members pay half contributions to "Sick and Funeral Fund," and secure half these benefits. Amended Rules registered, 21. 12. 83.
	[38]			[40]	[40]		[42]	[25]		[41]	[41]		[38]

I.O.R. TASMANIAN DISTRICT.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	Sick Fund.	Funeral Fund.	Widow & Orphan Fund.	CONTINGENT FUND.			Additional Contributions and Benefits— Fun. Don. { £10 ... (M.) £5 ... (W.) for each additional 4s. 4d. paid annually, up to— { £40 ... (M.) £20 ... (W.) Amended Rules registered, 28. 10. 81.
	s. d.	s. d.	s.	s. d.	s. d.	s. d.	s.	s.	s.	s.			
16-30 { 0 0 30... 7 6 31... 11 6 32... 15 6 33... 19 6 34... 23 6 35... 27 6		s. d. 2 6	s. 5	s. d. 21 8	s. d. 4 4	s. d. 4 4	1° ... 20 2° ... 10 3° + 5	£30... (M.) £15... (W.)	£30... (M.)	15-56 26	Medical and Management Expenses.		[24]
		[33]		[37]	[37]	W. & O.F. Laws. [III.]	[39]	[24]	[IV.]	[38]	[38]		

TABLE 5.—A Statement of the Separate Funds, &c.—continued.

SOCIETY.	[SICK AND FUNERAL FUND.]						MEDICAL AND MANAGEMENT FUND.			REMARKS.
	Income from Member's—				Expenditure : the Sum payable—		Income from Member's—		Expenditure : the Sum payable as—	
	Entrance Fee.		Annual Contribution.		As weekly Sick Pay during— 1st 6 mo. 1° 2nd „ „ 2° 3rd „ „ & after 3°+	At Death of Member..(M.) Wife ....(W.)	Entrance Fee.	Annual Contribution.		
	Sick Fund.	Funeral Fund.	Sick Fund.	Funeral Fund.						
1	2	3	4	5	6	7	8	9	10	11

3. ST. JOHN'S FRIENDLY SOCIETY, HOBART.	[FUNERAL AND MEDICAL FUND.]							Step children and adopted children reckoned in children. No Sick Pay given. Amended Rules registered, 18. 12. 83.
		<div>15-25...1 25-35...2 35-45...3 45-50...5 Over 50...3</div> <div>[24]</div>	<div>}</div>	<div>s. d. 34 8 34 8 for Medical Bene- fits only. s. d. 17 4 in 6 mo. and 19 6 per ann. after, for Fu- neral Money only.</div> <div>[24]</div>		<div>Member of ½ Year's stand- ing, £11 (M.) or (W.) £ s. 1½ ditto 13 10 2 & over 16 0 4 „ 2 0 add. (M.) 6 „ 4 0 add. (M.) On death of Child— 1-17, boy } £3 1-21, girl } and as Medical and Manage- ment Expenses.</div> <div>[28]</div>		

ST. JOHN'S FRIENDLY SOCIETY, LAUNCESTON.	[FUNERAL AND MEDICAL FUND.]							Additional Special Contri- bution and Benefit—4s. per annum to secure £6 on death of member. No Sick Pay given. Amended Rules registered, 28. 10. 81.
		<div>17-25 1 25-35 2 35-45 3 45-50 5 over 50 ... 5</div> <div>[22]</div>	<div>}</div>	<div>s. 26 52 26 for Medical Benefits only.</div> <div>[22]</div>		<div>Member of ½ Year's stand- ing, £5 (M.) or (W.) £ s. 1 ditto 7 10 2 & over 10 0 4 „ 2 0 add. (M.) 6 „ 4 0 add. (M.) On death of Child— 1-16, boy } £3 1-17, girl } and as Medical and Manage- ment Expenses.</div> <div>[29]</div>		

12

4. I.O.O.F.	Sick and General Fund.		Sick and General Fund.	Funeral Fund.	Widow and Orphan Fund.	Sick and General Fund.	Funeral Fund.	Widow & Orphan Fund.												
	<div><div><div><div>Under 22</div><div>22-25</div><div>25-30</div><div>30-34</div><div>34-37</div><div>37-40</div><div>40-45</div></div><div><div>15</div><div>20</div><div>25</div><div>40</div><div>50</div><div>80</div><div>100 and back contributions after 40.</div></div></div></div>	<div><div><div>s.</div><div>40</div></div><div>decreased by new Laws to—</div><div><div>s.</div><div>42</div></div></div>	<div><div><div>s.</div><div>8</div></div><div>s.</div><div>8</div></div>	<div><div><div>s.</div><div>4</div></div><div>s.</div><div>6</div></div>	<div><div><div>s.</div><div>d.</div></div><div>1° ... 20 0</div><div>2° ... 12 6</div><div>3° ... 5 0</div><div>during pleasure of Lodge; and as Management Expenses of Lodge and Order.</div></div>	<div><div><div>s.</div><div>d.</div></div><div>£20 (M.)</div><div>£10 (W.)</div></div>	<div><div><div>s.</div><div>d.</div></div><div>£20 (M.)</div><div>£10 (W.)</div></div>	<div><div><div>s.</div><div>d.</div></div><div>New Lodge Laws.</div></div>												
	[109]	[109]	[114]	[115]	[115, 116]	[54]														Amended Rules registered, 9. 6. 84. Rules of Cornwall Lodge, 26. 1. 86,

5. A.O.F., TASMANIAN DISTRICT, COURT SHERWOOD.	<div><div><div><div>18-21... 2 6</div><div>21-24... 7 6</div><div>24-26... 12 6</div><div>26-28... 17 6</div><div>28-30... 22 6</div><div>30-36... 27 6</div><div>36-40... 32 6</div></div><div><div>s.</div><div>d.</div></div><div>2 6</div></div></div>	<div><div><div>s.</div><div>d.</div></div><div>18-30... 20 0</div><div>30-34... 24 4</div><div>34-36... 28 8</div><div>36-38... 33 0</div><div>38-40... 37 4</div></div>	<div><div><div>s.</div><div>d.</div></div><div>s.</div><div>6</div></div>	<div><div><div>s.</div><div>d.</div></div><div>1° 20 0</div><div>2° 12 0</div><div>3° +... 8 0</div><div>Increased to—</div><div><div>s.</div><div>d.</div></div><div>1° 21 0</div><div>2° 15 0</div><div>3° +... 10 0</div></div>	<div><div><div>s.</div><div>d.</div></div><div>£20 (M.) and 10s. per annum additional for each year's standing up to 10 years.</div><div>£10 ... (W.)</div><div>Increased to—</div><div>£15 ... (W.)</div></div>	<div><div><div>s.</div><div>d.</div></div><div>18-40 5</div></div>	<div><div><div>s.</div><div>d.</div></div><div>s.</div><div>26</div></div>	<div><div><div>s.</div><div>d.</div></div><div>Medical and Management Expenses.</div></div>	<div><div><div>s.</div><div>d.</div></div><div>Supplementary Assurance Fund—to assure—</div><div>Annual Contribution.</div><div><div>s.</div><div>d.</div></div><div>18-21 4 4</div><div>21-25 5 5</div><div>25-30 6 6</div><div>30-35 7 7</div><div>35-40 8 8</div><div>40-43 9 9</div><div>43-46 10 10</div><div>46-48 11 11</div><div>48-50 13 0</div><div>Double these Contributions, £40.</div></div>	<div><div><div>s.</div><div>d.</div></div><div>£20</div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
---	--	--	---	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

TABLE 5.—A Statement of the Separate Funds, &c.—continued.

SOCIETY.	SICK AND FUNERAL FUND.						MEDICAL AND MANAGEMENT FUND.			REMARKS.	
	Income from Member's—				Expenditure : the Sum payable—		Income from Member's—		Expenditure : the Sum payable as—		
	Entrance Fee.		Annual Contribution.		As weekly Sick Pay during— 1st 6 mo. 1° 2nd „ „ 2° 3rd „ „ & after 3°+	At Death of Member..(M.) Wife .....(W.)	Entrance Fee.	Annual Contribution.			
	Sick Fund.	Funeral Fund.	Sick Fund.	Funeral Fund.							
1	2	3	4	5	6	7	8	9	10	11	
6. P.A.F.S.	<div><div><div><div>17-21.....</div><div>21-24.....</div><div>24-28.....</div><div>28-30.....</div><div>...</div><div>34-36.....</div><div>...</div><div>40 .....</div><div>...</div><div>44 .....</div></div><div><div>s. d.</div><div>5 0</div><div>6 3</div><div>8 9</div><div>10 0</div><div>...</div><div>16 3</div><div>...</div><div>55 0</div><div>...</div><div>105 0</div></div></div></div> <div>[84, 143]</div>		<div><div>s.</div><div>26</div></div> <div>[143]</div>		<div><div>s.</div><div>1° 21</div><div>2° 15</div><div>3°+ ... 5</div></div> <div>[145]</div>	<div><div>£25 (M.)</div><div>£5 additional if of 5 years' standing.</div><div>£15 (W.)</div></div> <div>[47]</div>	<div><div>s. d.</div><div>17-21 5 0</div><div>21-24 6 3</div><div>24-28 8 9</div><div>28-30 10 0</div><div>...</div><div>34-36 16 3</div><div>...</div><div>40 ... 55 0</div><div>...</div><div>44 ... 105 0</div></div> <div>[84, 144]</div>	<div><div>s.</div><div>26</div></div> <div>[143]</div>	Medical and Management Expenses. <div>[144]</div>	Amended Rules registered, 19. 2. 84.	
7. T.M.L.R.S. & P.S., HOBART.			<div><div>s.</div><div>26</div></div> <div>with levy, if necessary.</div> <div>[v.]</div>		<div><div>s.</div><div>1° 20</div><div>2° 15</div><div>3° 10 for 1 year, and as Management Expenses.</div></div> <div>[vii.]</div>	<div><div>£20.....(M.)</div><div>£10.....(W.)</div></div> <div>[viii.]</div>		<div><div>s. d.</div><div>30 4</div></div> <div>Single Member 13 0</div> <div>[xvii.]</div>	Medical Expenses. <div>[x.]</div>	An Annual dividing Society; surplus Funds above £200 being divided each year; but Sick Pay received by Member during year deducted from his share on division. Amended Rules adopted, 12. 2. 84.	
T.G.R.S.F.S., LAUNCESTON.	[GENERAL AND RESERVE FUND.]										An Annual terminating Society. [28] No Medical Benefits given. Retiring Member receives share of "General Fund" in ratio of sum contributed in year, less 10 per cent. Amended Rules adopted, -. 1. 77.
	<div><div>s. d.</div><div>2 6</div></div> <div>[17]</div>		<div><div>s. d.</div><div>32 6</div></div> <div>with 1s. per Member at each death, at discretion of Committee.</div> <div>[17, 32]</div>		<div><div>s.</div><div>20 for 13 weeks in 1 year, if quarterly contributions exceed expenditure; claims may be disallowed; and as Management Expenses.</div></div> <div>[6, 17, 27]</div>	<div><div>£15 ... (M.)</div><div>£10 ... (W.)</div></div>				<div>[21]</div>	
1	2	3	4	5	6	7	8	9	10	11	

8. U.A.O.D.	s. d. 16-20... 0 0 20-25... 5 0 25-30... 10 0 30-35... 20 0 35-40... 50 0 [44, 87, 93]	s. d. 2 6 [93]	s. { 16-35 22 } { 35-40 35 } [91, 93]	s. 6 [44]	s. 1° 20 2° 10 3° + 5 [109 A]	£20 ... (M.) £10 ... (W.) [46]	s. d. 16-40... 7 6 [93]	s. 32 [93]	Medical and Management Expenses. [93]	Branches of the U.A.O.D. in Victoria; Funeral Do- nations paid by Grand Lodge thereof. Amended Rules registered (in Victoria), 8. 4. 84.
9. A. & I.O.O.F. UNITED BROTHERS LODGE, HOBART.	[GENERAL FUND.]									
	s. d. 18-20... 15 6 20-24... 21 6 24-28... 27 6 28-32... 37 6 32-36... 57 6 36-40... 81 6 [201]	s. d. 2 6 [Branch Law, p. 8.]	s. d. 18-40... 30 4 [13 8]	(Funeral Fund) s. d. 13 8	s. 1° 20 2° 10 reduced at dis- cretion of Branch; and as Medical and Management Expenses. [13 8]	(Funeral Fund) £33 ... (M.) £10 ... (W.)			Amended Rules registered, 9. 5. 72.	
TASMANIAN PRIMITIVE LODGE, HOBART	[GENERAL FUND.]									
	s. 18-20 18 20-24 24 24-28 30 28-32 40 32-36 60 36-40 84 [74]		s. 52 or 42s. if not to receive Medi- cal Attendance, with 1s. per Member at each death.		s. d. 1° ... 15 0 2° ... 7 6 3° ... 5 0 afterwards con- tributions paid only; and as Medical and Management Expenses. [98, 100]	£20 ... (M.) £10 ... (W.)			Amended Rules registered, 9. 5. 84.	
10. ST. PATRICK'S SOCIETY, HOBART.	s. d. 18-26... 0 0 26 0 6 27 0 9 28 1 6 29 2 0 30 2 6 ... 35 7 6 ... 40 25 0 ... 45 87 6 [9, 20]	s. d. 0 0 0 6 0 9 1 6 2 0 2 6 ... 7 6 ... 25 0 ... 37 6 [20]	s. d. 23 10 [2]	s. d. 8 8 [20]	s. 1°...20 2° { 15... 3 mo. { 10... " 3°...10 [26]	£20 ... (M.) £10 ... (W.) [36]	s. 18-45 ... 16 [9, 20]	s. d. 19 6 [20]	Medical and Management Expenses. [20]	Amended Rules registered, 11. 2. 71.

TABLE 5.—A Statement of the Separate Funds, &c.—continued.

SOCIETY.	[SICK AND FUNERAL FUND.]						MEDICAL AND MANAGEMENT FUND.			REMARKS.
	Income from Member's—				Expenditure : the Sum payable—		Income from Member's—		Expenditure : the Sum payable as—	
	Entrance Fee.		Annual Contribution.		As weekly Sick Pay during— 1st 6 mo. 1 ^o 2nd „ „ 2 ^o 3rd „ „ & after 3 ^o +	At Death of Member..(M.) Wife(W.)	Entrance Fee.	Annual Contribution.		
	Sick Fund.	Funeral Fund.	Sick Fund.	Funeral Fund.						
1	2	3	4	5	6	7	8	9	10	11
ST. PATRICK'S SOCIETY, LAUNCESTON.	<div><div><div>s. d.</div><div>16-18... 2 6</div><div>18-20... 4 2</div><div>20-24... 5 10</div><div>24-28... 8 3</div><div>28-30... 10 6</div><div>30-32... 12 10</div><div>32-34... 15 4</div><div>34-36... 18 8</div><div>36-38... 24 0</div><div>38-40... 30 4</div></div><div>[13, 16]</div></div> <div><div><div>s. d.</div><div>2 6</div><div>4 2</div><div>5 10</div><div>8 3</div><div>10 6</div><div>12 10</div><div>15 4</div><div>18 8</div><div>24 0</div><div>30 4</div></div><div>[13, 16]</div></div> <div><div><div>s. d.</div><div>21 8</div></div><div>[13, 16]</div></div> <div><div><div>s. d.</div><div>8 8</div></div><div>[18]</div></div> <div><div><div>s.</div><div>1^o...20</div><div>2^o { 12... 3 mo.</div><div>10... "</div><div>3^o+10</div></div><div>£20 ... (M.)</div><div>£10 ... (W.)</div><div>Amount not stated in Rules.</div></div> <div><div><div>s. d.</div><div>16-18... 2 6</div><div>18-20... 4 2</div><div>20-24... 5 10</div><div>24-28... 8 3</div><div>28-30... 10 6</div><div>30-32... 12 10</div><div>32-34... 15 4</div><div>34-36... 18 8</div><div>36-38... 24 0</div><div>38-40... 30 4</div><div>and 6s. payable during 1st year.</div></div><div>[13, 16]</div></div> <div><div><div>s.</div><div>23</div></div><div>[16]</div></div> <div><div><div>s.</div><div>Medical and Management Expenses.</div></div><div>[1]</div></div> <div><div><div>The whole of the Interest payable to Medical and Magement Fund.</div><div>Amended Rules registered, 11. 3. 84.</div></div><div>[17]</div></div> <tr><td>11. H.A.C.B.S.</td><td><div><div><div>s. d.</div><div>16-18... 0 0</div><div>18-20... 0 0</div><div>20-22... 1 3</div><div>22-25... 2 6</div><div>25-30... 10 0</div><div>30-35... 15 0</div><div>35-38... 22 6</div><div>38-40... 40 0</div></div><div>[74, 75,</div></div><div><div><div>s.</div><div>5</div></div><div>112, 43]</div></div><div><div><div>s.</div><div>20</div></div><div>[76]</div></div><div><div><div>s.</div><div>6</div></div><div>[43]</div></div><div><div><div>s.</div><div>1^o...20</div><div>2^o { 15... 3 mo.</div><div>10... "</div><div>3^o+ 5</div></div><div>£20 ... (M.)</div><div>£10 ... (W.)</div></div><div><div><div>s. d.</div><div>16-18... 3 9</div><div>18-20... 5 0</div><div>20-22... 6 3</div><div>22-25... 7 6</div><div>25-30... 15 0</div><div>30-35... 20 0</div><div>35-38... 27 6</div><div>38-40... 45 0</div></div><div>[74, 75]</div></div><div><div><div>s.</div><div>30</div></div><div>[76]</div></div><div><div><div>s.</div><div>Medical and Management Expenses.</div></div><div>[78]</div></div><div><div><div>A Branch of the Melbourne District, H.A.C.B.S., the Funeral Donations being paid thereby.</div><div>Amended Rules registered, 13. 3. 84.</div></div><div></div></div></td></tr>	11. H.A.C.B.S.	<div><div><div>s. d.</div><div>16-18... 0 0</div><div>18-20... 0 0</div><div>20-22... 1 3</div><div>22-25... 2 6</div><div>25-30... 10 0</div><div>30-35... 15 0</div><div>35-38... 22 6</div><div>38-40... 40 0</div></div><div>[74, 75,</div></div> <div><div><div>s.</div><div>5</div></div><div>112, 43]</div></div> <div><div><div>s.</div><div>20</div></div><div>[76]</div></div> <div><div><div>s.</div><div>6</div></div><div>[43]</div></div> <div><div><div>s.</div><div>1^o...20</div><div>2^o { 15... 3 mo.</div><div>10... "</div><div>3^o+ 5</div></div><div>£20 ... (M.)</div><div>£10 ... (W.)</div></div> <div><div><div>s. d.</div><div>16-18... 3 9</div><div>18-20... 5 0</div><div>20-22... 6 3</div><div>22-25... 7 6</div><div>25-30... 15 0</div><div>30-35... 20 0</div><div>35-38... 27 6</div><div>38-40... 45 0</div></div><div>[74, 75]</div></div> <div><div><div>s.</div><div>30</div></div><div>[76]</div></div> <div><div><div>s.</div><div>Medical and Management Expenses.</div></div><div>[78]</div></div> <div><div><div>A Branch of the Melbourne District, H.A.C.B.S., the Funeral Donations being paid thereby.</div><div>Amended Rules registered, 13. 3. 84.</div></div><div></div></div>							
11. H.A.C.B.S.	<div><div><div>s. d.</div><div>16-18... 0 0</div><div>18-20... 0 0</div><div>20-22... 1 3</div><div>22-25... 2 6</div><div>25-30... 10 0</div><div>30-35... 15 0</div><div>35-38... 22 6</div><div>38-40... 40 0</div></div><div>[74, 75,</div></div> <div><div><div>s.</div><div>5</div></div><div>112, 43]</div></div> <div><div><div>s.</div><div>20</div></div><div>[76]</div></div> <div><div><div>s.</div><div>6</div></div><div>[43]</div></div> <div><div><div>s.</div><div>1^o...20</div><div>2^o { 15... 3 mo.</div><div>10... "</div><div>3^o+ 5</div></div><div>£20 ... (M.)</div><div>£10 ... (W.)</div></div> <div><div><div>s. d.</div><div>16-18... 3 9</div><div>18-20... 5 0</div><div>20-22... 6 3</div><div>22-25... 7 6</div><div>25-30... 15 0</div><div>30-35... 20 0</div><div>35-38... 27 6</div><div>38-40... 45 0</div></div><div>[74, 75]</div></div> <div><div><div>s.</div><div>30</div></div><div>[76]</div></div> <div><div><div>s.</div><div>Medical and Management Expenses.</div></div><div>[78]</div></div> <div><div><div>A Branch of the Melbourne District, H.A.C.B.S., the Funeral Donations being paid thereby.</div><div>Amended Rules registered, 13. 3. 84.</div></div><div></div></div>									

15. The original promoters of Friendly Societies, in proceeding to combine for mutual relief, have almost universally arranged for securing three classes of benefits :—1st. Medical attendance and medicines for themselves, wives, and children. 2nd. The receipt of a definite income during the time when earnings might cease, owing to the ability to labour being suspended by disease ; and 3rd. Sums payable at death, to defray the cost of funeral expenses in the case of themselves or wives. These may be termed Health or Medical Advice Assurances, Sickness Annuities, and Life Assurance, in a modified form. Members' contributions must therefore be sufficient to provide for four items of expenditure, viz., the cost of medical attendance, with medicines, the cost of sickness claims, of funeral claims, and the cost of managing the business of the Society.

The Society being formed upon the mutual principle, it is evident that equal justice between man and man demands that each member's in-payments to the funds should be commensurate with the estimated outgo therefrom on his account, according to the scale of benefits fixed upon.

It is found that the amount of money which a Society will probably expend in any given time in discharging sickness and death claims, being the second and third of the above benefits, is capable of being calculated by way of average ; and that, with regard to particular members, when the number is sufficiently great, and the length of time of their being under observation sufficiently long, to allow the principle of average to have full play, the liability of the Society with regard to them increases regularly with their age.

16. An examination of the number of deaths in comparison with the number living in the I.O.O.F., M.U., during the five years 1866–70 was made by Mr. Henry Ratcliffe, Corresponding Secretary of the Order ; as also of the amount of sickness which fell to their lot, and the rate at which they forfeited their membership by allowing their contributions to fall into arrears. Similar information with respect to the A.O.F. in England, during 1871–5, was collected by Mr. F. G. P. Neison, the eminent Actuary. Both these extensive observations coincide in demonstrating that liability to sickness and death increases as the age of the member advances. The result of these two observations, between the ages 20 and 60, is given in the following Table :—

TABLE 6.—*EXPERIENCE of the M.U., England, during the Five Years 1866–70 (RATCLIFFE), and of the A.O.F., England, during the Five Years 1871–75 (NEISON).*

Age.	Annual Mortality per 1000 in the—		Annual Withdrawals per 1000 in the—		Annual Sickness per Member in the—	
	M.U.	A.O.F.	M.U.	A.O.F.	M.U.	A.O.F.
20.....	6·03	7·29	49·03	99·28	Weeks. ·702	Weeks. ·845
21.....	6·25	7·32	51·75	97·16	·722	·833
22.....	6·46	7·36	53·40	93·20	·741	·823
23.....	6·67	7·40	53·97	87·90	·757	·816
24.....	6·88	7·41	53·47	81·76	·770	·817
25.....	7·08	7·37	51·89	75·36	·780	·824
26.....	7·28	7·32	49·23	69·44	·791	·837
27.....	7·47	7·36	46·54	64·13	·806	·853
28.....	7·65	7·50	43·84	59·22	·824	·870
29.....	7·83	7·74	41·10	54·74	·845	·887
30.....	7·99	8·07	38·35	50·72	·867	·906
31.....	8·14	8·44	35·57	47·03	·897	·931
32.....	8·34	8·84	33·02	43·53	·926	·965
33.....	8·59	9·27	30·70	40·26	·952	1·007
34.....	8·89	9·71	28·62	37·23	·981	1·052
35.....	9·25	10·13	26·78	34·41	1·012	1·089
36.....	9·65	10·52	25·17	31·78	1·034	1·117
37.....	10·05	10·90	23·55	29·25	1·061	1·145
38.....	10·45	11·28	21·92	26·78	1·096	1·181
39.....	10·86	11·68	20·29	24·37	1·133	1·223
40.....	11·27	12·08	18·64	21·98	1·175	1·272
41.....	11·68	12·49	17·00	19·60	1·222	1·326
42.....	12·10	12·96	15·46	17·35	1·277	1·385
43.....	12·55	13·55	14·04	15·29	1·340	1·446
44.....	13·02	14·27	12·73	13·55	1·411	1·510
45.....	13·52	15·11	11·53	12·14	1·489	1·580
46.....	14·03	15·91	10·44	10·98	1·576	1·653
47.....	14·64	16·63	9·47	9·97	1·670	1·722
48.....	15·35	17·27	8·62	9·08	1·769	1·783
49.....	16·17	17·91	7·89	8·25	1·876	1·851
50.....	17·08	18·65	7·29	7·45	1·989	1·953
51.....	18·09	19·66	6·81	6·66	2·110	2·106
52.....	19·17	21·01	6·38	5·81	2·245	2·299
53.....	20·29	22·64	6·00	4·82	2·393	2·508
54.....	21·48	24·45	5·67	3·76	2·554	2·712
55.....	22·72	26·26	5·40	2·65	2·729	2·894
56.....	24·02	27·90	5·17	1·65	2·920	3·053
57.....	25·59	29·35	4·96	·88	3·146	3·213
58.....	27·42	30·68	4·75	·38	3·407	3·410
59.....	29·53	32·01	4·54	·10	3·702	3·647

The table may be read thus :—Out of every 1000 members in a Society at the beginning of the year, of the age of 25, 7 may be expected to die in the course of the year, according to the M.U. experience, and over 7 according to the A.O.F. experience ; over 51 and 75 may be expected to withdraw, according to the M.U. and the A.O.F. experience respectively ; and according to the former experience they will probably have among them 780 weeks' sickness, and 824 weeks according to the latter. (Ratcliffe's complete Table of the Experience of the Manchester Unity in England is given in Appendix A.)

17. A slight examination of either Ratcliffe's or Neison's Table of Experience will be sufficient to show that, to enable him to participate in the sickness and funeral benefits given in any particular Society, a person entering at the age of 20 should not contribute to its funds as much as one initiated at 25 ; and a person admitted at 30 should pay more than one entering at 25 and less than one at 35.

18. To make my meaning more clearly understood, I insert below a copy of Tables of Contributions, prepared for the use of the Manchester Unity, Independent Order of Odd Fellows, and the Independent Order of Rechabites in Victoria.

TABLES of Quarterly Contributions, without Initiation Fees, to provide the Sick and Funeral Benefits given in the M.U., I.O.O.F., and the I.O.R. in Victoria, prepared in 1884 and 1885 by the Actuary attached to the Department of the Government Statist, Victoria.

TABLE 7.—M.U., I.O.O.F.

AGE AT ENTRY.	QUARTERLY CONTRIBUTIONS.					
	SICK BENEFITS—		FUNERAL BENEFIT. £20 at Death of Member.	FUNERAL BENEFIT. £10 at Death of Wife.	SICK AND FUNERAL BENEFITS.	
	20s. per week for 1st six months' Sickness.				Quarterly Contribution.	Weekly Contribution.
	13s. 4d. 2nd 10s. 3rd and subsequent	" " " "				
1	2		3	4	5	6
	s. d.		s. d.	d.	s. d.	s. d.
16	5 6		1 0	4	6 10	0 6½
17	5 8		1 0	4	7 0	0 6½
18	5 10		1 0	5	7 3	0 6½
19	6 0		1 1	5	7 6	0 7
20	6 2		1 1	5	7 8	0 7
21	6 4		1 2	5	7 11	0 7½
22	6 6		1 3	5	8 2	0 7½
23	6 8		1 3	5	8 4	0 8
24	6 11		1 4	5	8 8	0 8
25	7 1		1 5	6	9 0	0 8½
26	7 4		1 5	6	9 3	0 8½
27	7 6		1 6	6	9 6	0 9
28	7 10		1 6	6	9 10	0 9
29	8 0		1 7	7	10 2	0 9½
30	8 4		1 8	7	10 7	0 10
31	8 7		1 9	7	10 11	0 10
32	8 11		1 9	8	11 4	0 10½
33	9 3		1 10	8	11 9	0 11
34	9 7		1 11	8	12 2	0 11½
35	9 11		2 0	8	12 7	0 11½
36	10 4		2 1	8	13 1	1 0

TABLE 8.—I.O.R.

AGE AT ENTRY.	QUARTERLY CONTRIBUTIONS.						
	SICK BENEFITS—		FUNERAL BENEFIT.	TOTAL for Sick and Funeral Benefit of Member.	FUNERAL BENEFIT.		
	20s. per week for 1st six months' Sickness.						
	20s.	2nd				"	"
	10s.	3rd				"	"
	5s.	4th	"	"			
	and subsequently.		£20 at Death of Member.		£15 at Death of Wife.		
1	2		3	4	5		
	s.	d.	s.	d.	s.	d.	
16	5	3	0	10	6	1	
17	5	5	0	11	6	4	
18	5	6	0	11	6	5	
19	5	8	1	0	6	8	
20	5	10	1	0	6	10	
21	6	0	1	1	7	1	
22	6	3	1	1	7	4	
23	6	5	1	2	7	7	
24	6	8	1	2	7	10	
25	6	10	1	3	8	1	
26	7	1	1	4	8	5	
27	7	4	1	4	8	8	
28	7	7	1	5	9	0	
29	7	10	1	5	9	3	
30	8	1	1	6	9	7	
31	8	5	1	7	10	0	
32	8	9	1	8	10	5	
33	9	0	1	9	10	9	
34	9	4	1	10	11	2	
35	9	8	1	11	11	7	
36	10	1	2	0	12	1	
37	10	5	2	1	12	6	
38	10	10	2	2	13	0	
39	11	3	2	3	13	6	
40	11	9	2	4	14	1	
41	12	2	2	5	14	7	
42	12	8	2	6	15	2	
43	13	3	2	8	15	11	
44	13	9	2	9	16	6	

19. I may point out that in the construction of these Tables I took into account the facts brought out in my valuation of these Societies; and I assumed that the number of members in each Lodge and Tent would always be sufficiently great to realise a fair approximation to average results.

20. Some comparisons will be useful between the rates prevailing in the Societies in Tasmania, as shown in Table 5 above, and the rates contained in Tables 7 and 8 in the Tasmanian District, I.O.R. 1s. 1d. per quarter at every age of entry from 16 to 36, with 5s. initiation fee, is considered sufficient to provide the benefit of £30 payable at death of member (Table 5, cols. 3, 5, and 7); and 1s. 1d. per quarter, with 2s. 6d. at entry, is made to provide £30 at death of member, together with £15 at death of wife (cols. 2, 4, and 6).

On referring to Table 8, prepared for the I.O.R. in Victoria, it will be seen that, to provide £20 at death of member, the sum of 10d. per quarter is considered necessary at the youngest age of entry, 16. This is equivalent to 1s. 3d. per quarter for £30 at death, or 2d. per quarter higher at 16 than is payable in the above Society from 16 to 36. It is scarcely necessary to state that I consider these contributions of the Tasmanian District, I.O.R., inadequate to provide the benefits.

With regard to the additional sums of 1s. 1d. per quarter payable to secure £10 on death of member, and £5 on that of wife, additional for each of such quarterly payments, I consider the contribution adequate at the entry age of 26 and the ages below 26, and inadequate at every age above 27. I will not pursue the comparison further; the table speaks for itself. It will be sufficient to state that, in my opinion, the rates generally prevailing in the Tasmanian Societies are inadequate to provide the benefits promised to the members. I may, however, before taking leave of this branch of the subject, draw attention to the peculiar views which the original framers of the Rules of some of the Societies must have entertained of the relations subsisting between contributions and benefits. It is generally assumed in business that as much of any particular commodity may be obtained for 13d. as can be purchased for 1s. 1d. But this does not appear to be the opinion of the authors of the laws of the Cornwall District of the I.O.O.F., M.U. Thirteen pence a quarter purchases the benefit of £30 at death of member, together with £15 at death of wife, in the Funeral Fund, but only £30 at death of a member in the Widow and Orphans' Fund; while, to obtain the benefits first mentioned, costs 3s. 3d. per quarter in the subsidiary Funeral Fund.

21. It will be noticed that, with the single exception of the A.O.F., uniform periodic (weekly, monthly) payments at all ages at entry are payable in all the Societies; and, in the majority of cases, graduated rates of initiation fees are in force. Provided the contribution is high enough, it is practically of no importance in the interest of the Sick Fund, or of the Funeral Fund, whether the payment is made in one sum at entry, or whether it is made periodically, such as every quarter, month, or fortnight, during the continuance of membership, or partly in the one way or partly in the other. There is this, however, to be said,—that an adequate scale of initiation fees, in conjunction with a weekly payment of 6d. or 7d.—

the contribution most frequently occurring in the above Table (No. 5)—would be so high at all except the youngest ages, as to be found practically prohibitory; no members would be found to join under it; but a graduated scale of weekly payments, without any entrance fees, would not, I think, be objected to. At the A.M.C. held in Prahran in 1885, the M.U., I.O.O.F., in Victoria adopted the graduated scale of weekly payments, which is substantially identical with that of Table 7, given above, and abolished the previous somewhat high graduated entrance fees, with the exception, I believe, of a small sum payable to the Medical and Management Fund. In his address to the A.M.C. held at Hamilton last month, Grand Master Charles Stewart attributed the considerable accession of new members which he had to report at that meeting to the wise policy adopted on that occasion. "The number of members," he observed, "is greater than in any previous year. The increase, I am of opinion, is caused by the alterations made by the last A.M.C. in reducing the amount of initiation fee, which came into force on the first day of July last. It may be interesting to know that, out of 1897 members initiated, 1200 joined during the last half year. This item speaks for itself, and shows the good already resulting from the Prahran A.M.C." I may also quote here some of the observations of the Editor of the *Temperance News and Rechabite Journal* (Melbourne, 1 March, 1886) on the graduated scale of contributions (Table No. 8) adopted last February by the I.O.R. :—

"First in importance among the subjects dealt with as bearing upon the future position of the Order is the adoption of the graduated scale of contributions for members, according to the respective ages at which they join. While the value of Friendly Societies hitherto can be cheerfully recognised, a moment's consideration suffices to convince any unprejudiced observer that it cannot be equitable that the young man with, in the natural course of events, a long life before him, should pay as much as one of riper years, with only half the expectancy. It is justly claimed for Friendly Societies that they are not benevolent but provident institutions,—every man who becomes a claimant for benefits taking as a right that which he has provided for himself. But, with the teachings of experience to guide us, this has been only partially true,—the younger members, by their uniform contribution, providing in some measure for the older ones. This objection will have no force in regard to future members; and we anticipate that though at the outset some perplexity may disturb Secretaries' minds, owing to the different rates of contributions, the gradual manner in which the change will be brought about will facilitate its adoption without serious confusion."

22. It will be noticed that in some of the Societies entrance fees, increasing in some cases rapidly, in other cases more slowly, with the age of the member when initiated, are payable to the fund which I have termed the "Medical and Management Fund," on account of the purposes which it serves, but known to the Societies as the "Incidental Fund," "Contingent Fund," "Management Fund," "Incidental Expense Fund." In Court Pride of Tasmania, A.O.F., for example, and the P.A.F.S., the St.P.S., Launceston, and the H.A.C.B.S., graduated periodic payments, the increase being, however, but small, are made to the same fund in Court Pride of Tasmania, A.O.F. Now graduated rates are paid to the Sick and Funeral Fund, because, as I have shown above in paragraph 16, the older a man is when he joins a Society the greater is the liability in respect to sickness and death claims which the Society undertakes on his behalf. But there is no such justification or necessity for imposing differential payments to the fund used to defray the cost of medical attendances and medicines, and of managing the business of the branch and central body. The medical officer and the chemist contract to serve the branch at so much per head all round, quite irrespective of the age at which the members originally joined the Society; and I suppose it will not be contended that the older members, or rather those who were older when admitted, entail greater expense on the funds in the shape of management, than members who were younger when initiated. The whole of the increase in contributions on account of age of admission should go to the S. and P. Fund.

23. An inference may be drawn as to the financial position of a Society from an examination of its scale of contributions and benefits; but an accurate estimate as to its ability to discharge its life-long liabilities to its members can be obtained only by means of a carefully conducted valuation, the material for effecting which, in respect to the Tasmanian Societies, is not in my possession, supposing that an undertaking of that magnitude was within the scope of my instructions. A rather rough approximation to accuracy is, however, not unattainable, and this method I propose to adopt.

24. I shall make the following assumptions :—From the "Statistics" for the year 1884 I can obtain the average age of the members of each independent Society on the 31st December, 1884. I shall assume that the members were all of that age, and that the wives were of the same age with their husbands (they being probably four or five years younger); and that the liability in respect to the present and probable future wives is obtainable by taking their number, which I have no means of ascertaining, as 70 per cent. of the number of members, that is, that seven out of every ten of the members were married and had their wives registered in the Funeral Fund. The contributions and benefits I obtain in most cases from Table No. 3. In the remaining cases the contributions I derive from that Table, in combination with the information given in the "Statistics" for the years 1883 and 1884. I shall also assume, with respect to the I.O.R., that the members are all full benefit members, which is very probably not the case; but I shall exclude the liability on account of wives, because, when assured, they pay separate contributions. I shall assume, besides, that the funds will, in future, be invested so as to return not less than 4 per cent. interest on the whole.

25. It will not fail to be noticed that in such a method there are several elements of uncertainty, some of which may be favourable, some unfavourable, to the Societies. It is necessary, however, to point out that a method of valuation, in which the average age of the members, as a whole, is taken, instead of the value of the contributions and claims of every member calculated separately—or, to speak with greater precision, taken in classes according to ages—must of necessity bring out a result too favourable to the Society in every instance, because the liability in respect to the members older than the mean age will exceed the liability of the mean age to a much greater extent than that of those below that age will come short of it. By a reference to Table No. 4 it will be noticed also that the assumption of 4 per cent. interest gives another advantage (unless there is a considerable improvement in this branch of the business) to a majority of the Societies.

26. The valuation of the Societies, conducted in this manner just described, is given in the subjoined Table :—

TABLE 9.—APPROXIMATIVELY Correct Valuation of the Friendly Societies in Tasmania as at the 31st December, 1884.

SOCIETY.	Number of Members.	Average Age.	Annual Contribution per Member.	Benefits.	Liabilities.			Assets.			Deficiency, —; Surplus, +.	In proportion to Liabilities taken as equal to £1, the—			
				Sick Pay. Funeral Donations.	Present Value of—		Total.	Present Value of Contributions.	Capital	Total.		Future Contribution equal—	Capital equals—	Assets equal—	
					Sickness Claims.	Death Claims.									
		Years.	s. d.		£	£	£	£	£	£	£	s. d.	s. d.	s. d.	
1. I.O.O.F., M.U., Hobart District...	631	2406	30½	24 0	21/ 15/ 5	18,261	8721	26,982	12,951	2865	15,816	— 11,166	9 7	3 2	12 9
„ Buckingham Dt...	770		31½	26 0	£37, £12 20/ 15/ 5/	22,715	10,648	33,363	16,933	5462	22,395	— 10,968	10 2	3 3	13 5
„ Cornwall District	1005		31½	26 0	£37, £10 20/ 12/ 5/ 0/	26,158	22,321	48,479	22,101	11,588	33,689	— 14,790	9 1	4 10	13 11
2. I.O.R., Southern Cross District ...	502	1195	30¼	34 0	£60, £15 20/ 20/ 10/ 5/	15,153	5574	20,727	14,753	3639	18,392	— 2335	14 3	3 6	17 9
„ Tasmanian District	693		29	30 4	£35 20/ 10/ 5/	18,572	14,425	32,997	18,370	6658	25,028	— 7969	11 2	4 0	15 2
3. St. John's F.S., Hobart.....	512		—	34 8	£60, £15 Sums at death, & Medical & Management Expenses.	...	...	...	...	1183	...	...	...	...	...
„ Launceston	270	782	31½	52 0	Sums at death, & Medical & Management Expenses.	...	...	...	...	850	...	...	...	...	...
4. I.O.O.F.	630		29	26 0	20/ 12/ 6 5/ during pleasure £40, £10	15,123	8744	23,867	14,202	2237	16,439	— 7428	11 11	1 11	13 10
5. A.O.F.	459		33½	26 10	21/ 15/ 10/ £22, £15	16,356	4609	20,965	10,172	4872	15,044	— 5921	9 9	4 8	14 5
6. P.A.F.S.....	421	285	28½	26 0	21/ 15/ 5/ £27, £15	11,737	4452	16,189	9557	1545	11,102	— 5087	11 10	1 11	13 9
7. T.M.L.R.S. & P.S., Hobart	211		37¼	26 0	20/ 15/ 10/ 10/ 0/ £20, £10	...	...	...	...	187	...	...	...	...	...
T.G.R.S.F.S., Launceston	74		39¾	32 6	20/ for 3 months £15, £10 and Manage-ment Expenses.	...	...	...	...	37	...	...	...	...	...
8. U.A.O.D.....	274	117	30	28 0	20/ 10/ 5/ £20, £10	7480	2149	9629	6631	692	7323	— 2306	13 9	1 5	15 2
9. A. & I.O.O.F.	126		46½	50 2	20/ 10/ ? £33, £10 & Medical & Management Expenses.	...	...	...	...	2080	...	...	...	..	...
10. St. P.S., Hobart.....	26		46½	32 6	20/ { 15/ } 10/ 0/ £20, £10	931	294	1225	571	216	787	— 438	9 5	3 7	13 0
„ Launceston	91	103	34	30 4	20/ { 12/ } 10/ { 10/ } £20, £10	3058	778	3836	2281	560	2841	— 995	11 11	2 11	14 10
11. H.A.C.B.S.	103		31½	26 0	20/ { 15/ } 5/ { 10/ } £20, £10	3014	843	3857	2265	498	2763	— 1094	11 9	2 7	14 4

27. I am unable to furnish valuations of the two St. John's Friendly Societies and the A. & I.O.O.F., owing to the necessary data being defective, uncertain, or altogether wanting.

The two Societies of Railway Servants being annually dividing Societies, are necessarily exempt from valuation.

28. With regard to the result brought out by the above roughly approximated method of valuation, I may state generally that if exact data were available, the financial position of the Societies would not in any instance, in my opinion, be improved. Their true condition is most probably something worse than is presented in the Table.

29. The following is a list of the Societies arranged in the order of their deficiency per £ of their liabilities according to the last column of the Table :—

TABLE No. 10.—*Societies in the Order of Relative Financial Condition.*

Society.	Amount per £ of the Deficiency.	
	s.	d.
1. I.O.R., Southern Cross District.....	2	3
2. „ Tasmanian District.....	4	10
3. U.A.O.D.....	4	10
4. St. P.S., Launceston.....	5	2
5. A.O.F.....	5	7
6. H.A.C.B.S.....	5	8
7. I.O.O.F., M.U., Cornwall District.....	6	1
8. I.O.O.F.....	6	2
9. P.A.F.S.....	6	3
10. I.O.O.F., M.U., Buckingham District.....	6	7
11. St. P.S., Hobart.....	7	0
12. I.O.O.F., M.U., Hobart District.....	7	3

30. I noticed a paragraph in the daily press a few days ago referring to the annual meeting of a Society rather low down in the above list, wherein the writer observes :—“ We have received a copy of the Report of It shows that the Society, firm in its bond of union, is steadily increasing in numbers and in financial prosperity. In this latter respect the figures given are conclusive.” I should have been glad if the result of the above examination had been such as to enable me to agree with the writer.

The contributions in the Societies generally are too low to provide the benefits. To avert financial disaster they ought to be increased. The scale of contributions has been, in most cases, constructed upon no intelligible principle. The system of weekly or monthly contributions, when high enough, requires that those who join young should pay too much in order that those who join later in life should pay too little : every man should bear his own burden and liability.

31. I recommend the Societies to revise their rates of contributions and benefits, to abolish assurances, and content themselves with providing for the payment of sums at death sufficient to defray the cost of interments only; to increase adequately the contributions of present members; to do away with entrance fees in respect to future members, except about 10s. or so to be paid into the Medical and Management Fund, simply for the purpose of making new members shareholders in the property of the Lodge Room, furniture, regalia, &c., and to require such a member to pay a weekly or monthly contribution proportionate to the liability he brings upon the funds at the age which he joins the Society. I recommend them also to require both present and future members to pay the same weekly sum to the Medical and Management Fund, quite irrespective of the entry age. The members should, in their own interests, be careful to provide in their Rules that the fund to which they have a right to look for relief when sickness overtakes them,—a contingency becoming less remote the older they grow,—and which is to furnish the cost of interment at the last, is kept entirely distinct from the annual fund whence is derived the money to pay the medical fees, the chemist or dispensary fees, and to defray the cost of managing the business of the Branch and Order or District, and of affording assistance to members in temporary distress, providing furniture, and so on.

The expenses of the Medical and Management Fund are known every quarter, half-year, or year; and if it is found that the expenditure exceeds the income, a levy should be struck, but on no account should the Sick and Funeral Fund be trenched upon. On the other hand, it would be well if, by economy of management, an occasional sum were available from the Annual Fund (the M. and M. Fund) to fortify the fund (the S. and F. Fund) whose liabilities are contingent and prospective. I am glad to see that many of the Societies possess such rules already. Let them be adopted by all. The mixing up of incongruous elements observable in the Hobart and Buckingham Districts, M.U. (see Table 3), is detrimental to the interests of these Societies, and is, besides, I may be permitted to add as a member of the Order of nearly 30 years' continuous standing, unworthy the reputation attained by the Society elsewhere.

II.—THE PRESENT STATE OF THE LAW RELATING TO FRIENDLY SOCIETIES.

32. The Act at present in force in Tasmania, passed 1st February, 1856, is founded, not on the English Act of 1885 (18 and 19 Vict. c. 63), as I learn from E. C. Nowell, Esq., Clerk of the Executive Council, who was good enough to look the matter up for me, but the English Act of 1850 (13 and 14 Vict. c. 115.)

FRIENDLY SOCIETIES ACT, 1856 (7th February, 1856), 19 Vict. No. 26.)

PREAMBLE.—Whereas the protection and encouragement of Friendly Societies, for raising by voluntary subscriptions of the members thereof separate funds for the purpose of affording relief and maintenance to the members thereof in sickness, old age, and for other purposes of a provident and benevolent nature, is likely to be attended with very beneficial effects by promoting the happiness of individuals, and at the same time diminish public burthens; and it is expedient to give protection to such Societies and the funds thereof established, and to afford encouragement to form like Societies: Be it therefore enacted by His Excellency the Governor of Tasmania, by and with the advice and consent of the Legislative Council, as follows:—

Section I. Any number of persons may establish a Society or Branch for raising by voluntary subscriptions, with or without the aid of donations, for any of the following objects:—

1. Insuring a sum of money at death of a member, or for defraying expenses of burial of member, or wife, husband, child, or kindred of member.
2. Relief, maintenance, or endowment of members, their wives, husbands, children, or kindred, in infancy, old age, sickness, widowhood, or any other natural state of which the probability may be calculated by way of average.
3. Insuring any loss by fire, &c. of goods, &c.
4. Frugal investment of savings for purchasing food, &c., tools, &c., or education of children.
5. Any purpose specially authorised by Attorney-General. Provided assurance be limited to £100, annuity to £30 per annum, sick pay to 21s. per week.

Section II. Insurance on child limited to £3 for funeral expenses, and on production of certificate by surgeon, &c.

Section III. Power to make or alter Rules and appoint officers. Rules to set forth:—

1. Name, place, objects of Society.
2. Manner of altering Rules and appointing officers.
3. Mode of investing funds.
4. Manner of settling disputes.

Section IV. Separate accounts to be kept of each fund or benefit assured to members &c., having to each a separate table of contributions.

Section V. Society or Branch not legally established nor entitled to provisions of Act, unless Rules and amendments certified thereunder.

Section VI. Attorney-General or appointed barrister to certify whether Rules are according to law, are consistent with one another, and are reasonable and proper. Certificate to be deposited with Clerk of Peace of the District.

Section VII.—Fee for Certificate of Rules of Society, £2 2s.; of Branch and of amendment of Rules, £1 1s., payable to Attorney-General or barrister on certifying.

Section VIII. Treasurer, &c. to give bond in sum deemed expedient by Trustees or Board of Management, upon which, on forfeiture, Trustees may sue.

Section IX. Trustees or Treasurer, &c. to invest funds not wanted for usual accruing expenses in Savings' Banks, in public funds, Government securities, on mortgage of freeholds, or leaseholds of 20 years, Government stocks, funds, or debentures, authorised rates, loans to members on life policies, and in purchase of premises for holding the meetings.

Section X. Property of Society to be invested in Trustees, who may sue and be sued; Suit not to abate by death thereof. Person to be deemed a Trustee on deposit with the Clerk of the Peace of resolution appointing same.

Section XI. Treasurer liable for sums received only, unless his declaration of liability, limited to a sum specified, is deposited with the Clerk of the Peace.

Section XII. Trustee or other officer, &c. to transmit Annual Account of Funds to Clerk of the Peace, before 1st February in each year, attested by two Trustees, by Auditor if any, and countersigned by keeper of accounts; any member to receive a copy for 6d.

Section XIII. Return not transmitted by last day of February, or fraudulent return filed, Trustees to be incapable of bringing action.

Section XIV. When Trustee absent, &c., Judge may order transfer of stocks and management of dividends.

Section XV. Act to be an indemnity for acts authorised by Judge.

Section XVI. Disputes between members and Trustees to be settled according to Rules; Suits in Equity may be referred by either party to Justices of the Peace in Petty Sessions.

Section XVII. If Rules provide for settlement of disputes by Arbitrators, mode of appointment thereof to be stated in Rules. Award of Arbitrators to be enforced by Justices in Petty Sessions.

Section XVIII. If no Arbitrators appointed or award given, Justices may decide.

Section XIX. On unjustifiable expulsion of member, Arbitrators or Justices may cause member to be reinstated or to be compensated.

Section XX. In case of fraud by officers, member, or other person, Justices may hear and determine case, and may award return of double the amount fraudulently obtained; in default distress, next imprisonment.

Section XXI. Sentence of Justices not to be barred by *certiorari*.

Section XXII. Treasurer to render accounts; and, on demand by two Trustees or three members of Committee, pay over money, otherwise Justices may summarily compel thereto.

Section XXIII. Minors may be members.

Section XXIV. Dissolution only by consent of five-sixths of members, and of all receiving relief; otherwise Trustees liable to penalties as for fraud. Section to be no bar to amalgamation of two or more Societies or Branches.

Section XXV. Rules, &c. certified by Clerk of the Peace to be received in evidence.

Section XXVI. Circulation of false copies of Rules or amendments thereof to be a misdemeanor.

Section XXVII. On death, &c. of officer possessing funds, &c. of Society, Society to have priority of claim on effects.

Section XXVIII. Benefits of member of more than one Society not to exceed an assurance endowment of £100, an annuity of £30 per annum, or a sum in sickness of 21s. per week; otherwise such member liable to penalties for fraud.

Section XXIX. Maximum of £50 payable to widow, &c. of deceased intestate member, without Letters of Administration.

Section XXX. Such payments valid, but next of kin to have remedy, in case of error, against receiver.

Section XXXI. Payment of assurance to be to widow or assigns of member, not to nominee.

Section XXXII. Societies may receive bequests or donations.

Section XXXIII. Explanation of terms.

Section XXXIV. Act to be in force till expiration of six months after first meeting of Parliament.

Schedule A.—*Form of Certificate to Rules.*

„ B.— „ *Medical Certificate.*

„ C.— „ *Bond.*

„ D.—[*Heads of Information to be furnished to the Clerk of the Peace by every Society*]:—

RETURN of _____ Society established at _____, for the year ending
Date of balancing books in each year

MEMBERS.

Number admitted since last balance

Number died since last balance

Number withdrawn or expelled

Number of Members at this date { Male.....
Female.....
Honorary

SICKNESS.

Number of Members sick in year { Male.....
Female.....

INCOME.

Donations and Honorary Subscriptions

Entrance-money.....

Contributions for sickness.....

Contributions for sums on death.....

Contributions for endowments

Contributions for annuities

Interest received.....

Total Income.....

Total Capital of Society [*here state where the sum is placed.*]

EXPENDITURE.

Sick pay or allowances.....

Annuities

Death of { Members.....
Wives.....

Endowments

Extra Expenses.....

Total Expenditure.....

OBSERVATIONS.

day of _____ in the year _____

[*To be signed by two Trustees, Auditor, and the Officer who keeps the Accounts of the Society.*]

Act made permanent by Friendly Societies Act Continuation Act (28 April, 1857), 20 Vict. No. 14.

THE STATISTICAL RETURNS ACT, 1877, (11 December), 41 Vict. No. 15.

Section 2. "For the purpose of collecting and publishing statistical information for public purposes, it shall be lawful for the Statistician to deliver to such persons as he sees fit such forms as he deems necessary for procuring such information as aforesaid, in order that such forms may be filled up by such persons," the same to be filled up within one calendar month after delivery, "to the best of their knowledge, information, and belief."

Section 3. Penalty for refusing or neglecting to fill up such forms, inserting false information therein, or refusing or neglecting to return same to Statistician, any sum not exceeding Ten Pounds.

Section 11. "If the General Statement mentioned in Sections Twelve and Thirteen of "The Friendly Societies Act" is not transmitted by the officer of any Friendly Society who shall keep the books and accounts of such Society, to the Clerk of the Peace, before the last day of February in any year, such officer shall, for every neglect so to do, be liable to a penalty not exceeding Five Pounds."

III.—AMENDMENTS RECOMMENDED TO BE MADE IN THE ACT.

33. Section I.—After "persons" in line 1 insert "amounting to ten or more."

Sub-sections 1, 2, 3, 4, and 5.—The Victorian Commissioners, referring to the objects of the Societies, here observe (see paragraph 12 of their Report):—

12. The objects of the Societies, as set forth in the Victorian Statute, extend far beyond simply making provision for sickness or old age, and payment of a limited sum at death. They are, indeed, so comprehensive as to include almost every purpose of mutual benefit for which voluntary associations can be formed. In the recent English Act, however, these objects are much more strictly defined than they were in the previous Act of 1855. But there are still included (in addition to relief in sickness or old age, and payments at death) payments to members in distress, or seeking employment, or in case of shipwreck or damage at sea, endowments to members or their nominees to the extent of an annuity of £50 per annum, or a gross sum of £200, and insurance against fire of the tools or implements used by members in their trades or callings to the extent of £15. Friendly Societies in Victoria have hitherto, as a rule, limited their operations to the formation of sick and funeral funds, and have not (with some trifling exceptions) engaged in the business of life assurance. We are decidedly of opinion, for the reasons subsequently stated, that the limits now adopted by the Societies, founded on their experience, should be expressly fixed by law, and that no registered Friendly Society ought to be allowed to engage in any operations connected with life assurance on however limited a scale. . . . The whole weight of the evidence before us, indeed, is decidedly against any life assurance business being undertaken by Friendly Societies. It is urged that the organisation of those Societies is wholly unfitted for safely conducting such business; that the latter object is a totally different one from that for which they are founded; that the medical examination is not by any means as strict in the case of Friendly Societies as in the case of assurance associations; that the uniform table of rates is precisely the reverse in principle of a life assurance table; that the £20 payable at death is not, in fact, an insurance on life; and that the latter business requires both special legislation and a special organisation. These arguments seem to us unanswerable. A Friendly Society, in our opinion, ought not in any case to be also an association for life assurance purposes.

In Sub-section 1 I recommended that all the words from "insuring" in the first line to "for" in the fourth line, inclusive, be struck out, thereby abolishing payment of sums at death otherwise than for interment only.

Strike out Sub-section 3, permitting Societies to engage in fire, marine, cattle insurance business.

Strike out Sub-section 4. Societies for providing for the frugal investment of savings should, I think, be registered under the Building Societies Act.

Strike out Sub-section 5, relating to specially authorised Societies.

Insert new sub-section (3)—"For dispensing medicines to the members, their husbands, wives, widows, children, or kindred."

Insert new sub-section (4)—"For the relief or maintenance of the members when on travel or in search of employment, or when in distressed circumstances, or in case of shipwreck or loss or damage of or to boats or nets."

The Victorian as well as the English Act has in addition (Sub-section 5):—"For the insurance against fire to any amount not exceeding fifteen pounds of the tools or implements of the trade or calling of the members;" which may be adopted if thought advisable. I do not, however, know of any case where advantage has been taken of the provision.

In line 5 of provision at foot of Section I., and in Section XXVIII. *post*, strike out "One hundred," and insert "Twenty"; strike out "nor any annuity exceeding Thirty Pounds per annum." Friendly Societies should not engage in annuity business. In the last line of Section strike out "one."

In Section III., Sub-section 4, after the word "disputes," in the first line, insert "the Society or a Branch or." The absence of some such words has recently created a difficulty in England, to remedy which an amended Act was passed during the last Session of Parliament.

Section IV.—Strike out the Section, and substitute—"In all Societies and Branches all moneys received or paid on account of each and every particular fund or benefit shall be kept separate and distinct, and shall be entered in a separate account, distinct from the monies received and paid on account of any other fund or benefit; and the monies belonging to a fund or benefit providing for the payment of a sum of money in sickness, at death, or in any natural state of which the probability may be calculated by way of average, shall not be used in any manner for the advantage or otherwise of any other fund or benefit. Provided always that the members may, if they see fit, pay any portion of the surplus money there may be in the fund used for managing the business of the Society to the credit of the fund whose liabilities are calculable by way of average." The object of the Section is to prohibit the payment of money from the Sick and Funeral Fund to the Medical and Management Fund, but not *vice versa*.

Sections VI. and XII.—At present Societies are required to deposit registered Rules and forward General Statement (Schedule D.) to the Clerk of the Peace, under a maximum penalty of £5; and under "The Statistical Returns Act" they are required to furnish also information in form prescribed (see Appendix B.) to the Government Statistician, under a maximum penalty of £10.

I recommend that Rules should be registered by, and Returns sent to, a Government Officer specially appointed to have control of all matters connected with the Societies.

It should be a condition, precedent to registration, that their Rules are, in the opinion of the certifying barrister, in conformity with law; but they should also satisfy the Government Officer that their rates of contributions are adequate, and their funds are to be properly divided, &c., to whom, also, all returns should be made; whose duty it should be to see that their own laws are complied with, especially in the matter of keeping their funds distinct, &c. according to the new Section IV. above.

Sections XII. and XIII. I recommend that the incapacity of prosecuting actions be removed, and that a penalty for neglect, say, up to £10, be substituted.

34. A clause should be inserted requiring Societies to have periodic valuations made of their assets and liabilities, under a penalty for neglect.

The observations of the Victorian Commissioners on this branch of the subject are as follow:—

It is certain that the contingent liabilities of the societies increase with the advancing ages of their benefit members. On this ground alone most actuaries hold that it is absolutely necessary for the societies to make periodical valuations of their assets and liabilities, in order to ascertain whether they have sufficient funds in hand to meet all the claims coming upon them. This necessity becomes all the greater when the inadequate tables of rates are taken into account. It would add very largely to the security of the societies if the adequacy of their tables of rates were from time to time tested by accurate valuations. The main objection to insisting on the latter is the costliness of making them; and a minor objection is the different results deduced from the same data by different actuaries. We think that, considering the importance of the matter to the members of the societies, the Government might undertake to provide for periodical valuations, at intervals of (say) five years, upon sufficient data being in each case

furnished to the Registrar, and on payment of a small fee. On these conditions the furnishing of the requisite data should be made compulsory on the societies.*

The societies have within themselves a self-rectifying power which, if faithfully exercised, is always sufficient to prevent dissolution from insolvency. They can make levies of extraordinary contributions to meet unusual emergencies. At the same time, the Government should take upon itself the duty of urging upon them the imperative necessity of framing adequate tables of contributions; it should disseminate, for their guidance, information upon the various questions relating to the average of sickness and mortality amongst the several classes of society; and it should make compulsory upon them periodical actuarial investigation into their affairs. By adopting these safeguards the continued and secure existence of the societies would be assured, whilst at the same time there would be no necessity for unduly interfering with their self-government.

35. Provision should be made for ensuring the proper audits of the accounts of each Branch by competent Auditors, who are besides conversant with the internal working of the Societies, with the provisions of the Act, and are acquainted with the Rules of each Society. On the Audit of Accounts the Victorian Commissioners observe:—

“33. A thoroughly efficient system of audit is one of the most important elements in the proper management of Friendly Societies. That this essential consideration is not attended to as it should be by many of the branches we have abundant evidence before us to show. It would be desirable to make efficient and regular auditing of accounts by competent accountants compulsory on every Society and Branch, if the cost were not often an insuperable difficulty. The charges made by competent accountants would be beyond the means of small and weak branches, and it would be unfair, and in some cases even ruinous, to compel them to incur the expense. We are not inclined, therefore, to recommend that periodical audits should be made compulsory, and would rather rest upon the provision for sending in annual returns to the Government, provided that the penal clause, as recommended by us, be inserted in the proposed new Act. Those returns will, of course, be examined by the Registrar, and any errors or discrepancies will thus be detected. In the meantime, the Societies ought to be warned of the extreme danger attending on any permitted neglect or inefficiency in this matter of auditing, and the imperative necessity of appointing competent auditors on every occasion strongly pressed on their attention.”†

36. I recommend that Schedule D. should be excised, and that the form in which the Annual Returns are to be forwarded to the Government officer superintending the operations of the Societies should be prescribed by him, subject to the approval of the Responsible Minister.

The financial form should provide for presenting a balance sheet of the Sick and Funeral Fund, distinct from that of the Medical and Management Fund.

37. I recommend that a record of the facts relating to the members of each Branch should be kept on specially prepared cards, in the Government Department above referred to. Having furnished full particulars as to date of birth, and entry of each member immediately after the passing of the contemplated amended Act, it would not be necessary for Secretaries to do more than render an account of any events which may happen to the members during the year.

38. In Appendix E. I supply an extract from the Annual Report on Friendly Societies for the year 1877, of the Acting Government Statist, H. H. Henmen, Esq., containing copies of the cards in use in Victoria, and the forms of Annual Returns, with his observations thereon.

39. If the entire administration of the Act is placed under one Government officer, or Comptroller of Friendly Societies, the audit of the accounts would be carried out, on the failure of the Branch or Society to submit its financial returns in a proper manner, under the direction and to the satisfaction of such officer.

40. These are the principal recommendations as to the amendments of the Act which I think it proper to make. I do not think matters relating to the registration of Societies, the appointment and removal of Trustees, &c., come within the scope of my instructions. I have, however, in Appendix F. to this Report, inserted a copy of the “Summary of Recommendations” made by the Victorian Commissioners, as likely to prove useful to the framers of an amended Act.

IV.—THE RELATION OF THE STATE TO THE FRIENDLY SOCIETIES.

41. I think it would be well before I conclude to refer to the proper attitude of the State towards these institutions, the beneficial action of which has been recognised by every individual or Committee of Enquiry who have enquired into the character of their operation, and to the extent to which it would be wise for the State to interfere with their operations. Both the English and the Victorian Commissioners draw special attention to the utility and extent of the Societies. The latter observe:—

The Fourth Report of the English Royal Commission states‡ that in England and Wales alone there are 32,000 Friendly Societies (with their branches), registered and unregistered, having a total membership of over 4,000,000

* “We attach even more importance to properly conducted periodical valuations, and to corrections made from time to time in the tables according to the results of those valuations, than to the original tables themselves; and we consider that such valuations should be made compulsory on all registered societies. Two difficulties at present discourage many societies from having recourse to them, though all persons conversant with the subject agree as to their utility and importance. The first difficulty is the costliness of the process; the second, the uncertainty of the results arrived at by different actuaries proceeding on different principles. Both these difficulties might be to a great extent obviated if model forms, not only of tables, but also of valuations, were prepared under the direction of the Government. With these, and with the aid of well-arranged returns, which the societies would have to furnish, valuations might be conducted cheaply and on a uniform principle. Perhaps it would be well that the Government should, in the case of the first valuation of any society, allow it to call in the services of a Government valuer free of charge. For subsequent valuations a small fee should be demanded.”—*Fourth Report*, as above, page 207.

† By the 14th Section of the English Act of 1875 yearly audits of accounts are made compulsory. By the 35th Section the Treasury is empowered to appoint public Auditors and Valuers, who shall transact the business for the Societies on a scale of charges fixed by the Treasury. But the employment of the public Auditors and Valuers is optional with the Societies.

‡ *Fourth Report of the Royal Commission on Friendly and Benefit Building Societies*.—London, 1874.—Appendix I., page 16.

of persons; and there is good reason to suppose that there are at least as many more—making in all 8,000,000—interested in the promised benefits of the Societies. Their accumulated funds amount to over £11,000,000 sterling. By other authorities the estimated numbers of the classes indirectly interested in the Societies are stated to be even larger than those given in the report. But taking the smaller numbers, it will be seen that the Societies include within the sphere of their operations the great bulk of the industrial population of Great Britain. On these grounds the English Commissioners claim that the importance of their inquiry gives to it a national character.

Besides their social importance in relation to the State, the Societies are of incalculable advantage to the industrial classes themselves. Their very existence, it has been well remarked, springs from that spirit of independence and self-reliance which has always been the chief characteristic of the English people. However they may vary in name, “they really form one whole, as representing the different modes in which the working of the spirit of self-help among what the Acts often term the ‘industrious classes’ has been recognised and deemed worthy of encouragement by the Legislature.”*

The foregoing facts and testimonies serve to show how closely the well-being of the industrial sections of the community is allied to the beneficial action of the Societies. As incentives to the development of those personal virtues which check improvidence in the working-man, and at the same time preserve his household from its evil consequences, their value is simply inestimable; but they have, in addition, direct practical importance for the State, inasmuch as they form a safeguard against the encroachments of pauperism. It may with justice be affirmed that this latter consideration counts for far more in this colony than even in the mother country. An elaborately organised system of poor laws has there been in existence for generations; but in this new country we have as yet no such system, and the drift of public feeling is very decidedly against its introduction. But in order to ward off the necessity for taking such a step, it is needful that the Government should, by means of judicious legislation and otherwise, hold out every inducement to the industrial classes to cultivate those habits of thrift, self-reliance, and mutual help which are the best defences against the growth of pauperism. And such inducements can best be offered by encouraging the spread of Friendly Societies; by watching over their internal working, so as to check the evils springing from mismanagement, whether caused by negligence or inefficiency; whilst at the same time leaving the spontaneous action of the working classes in regard to them untrammelled by any unnecessary State interference.

42. After some observations of similar import the Royal Commissioners for Victoria continue:—“We are therefore entirely in accord with the English Commissioners in holding that the State ought to interfere no further in the working of the Societies (so long as they keep to their legitimate purposes) than by framing for their guidance a general law, at once simple, comprehensive, and protective in its main principles; by providing for the registration of all *bonâ fide* Societies of this kind; by publishing for their use a model table of contributions and benefits, framed on the most accurate tables of sickness and mortality; by enforcing an efficient periodical audit of their accounts; by securing them, in so far as legislation and careful supervision can do, from internal mismanagement, fraud, and incompetency on the part of Trustees; failure through insolvency or other causes, and the perversion to indirect ends of their proper objects. By these means it would be possible so to ensure the safe working of the Societies, and to confirm public confidence in them, that the benefits they offer would speedily be extended over the entire area of our industrial population.—(Report of Royal Commission on Friendly Societies, Victoria, paragraph 8).

43. Sir F. M. Eden, upwards of eighty years ago (“History of the Labouring Classes in England from the Conquest to the present time”) draws special attention to the fact that the existence of the societies is due, not to the fostering care of the Government, but to a commendable spirit of independence and forethought on the part of the members themselves. “These societies,” he observes, “whose object is to exemplify one of the wisest political maxims—that by an association of the many the few may be assisted—do not owe their origin to Parliamentary interference, nor to private benevolence, nor even to the recommendations of men of acknowledged ability, or professed politicians. The scheme originated among the persons on whom chiefly it was intended to operate. They foresaw how probable it was that they, in their turn, should be overtaken by the general calamity of the times, and wisely made provision for it. A stronger proof could not well be given to show that the great mass of the people were convinced of the inefficacy of all legislative regulations, and therefore resolved to legislate for themselves, rejecting a provision gratuitously held out to them.

“They chose to be indebted for relief to their own industry and frugality. And I would fain hope that I do not deserve to be set down as wanting in due respect for Parliamentary wisdom, if, in a case like this, I should declare my preference for the wisdom of the people. I cannot recollect any Act of the Legislature for many years that has either produced such important national advantages, or been so popular, as the institution and extension of Friendly Societies. Under the guidance of this principle, Friendly Societies have now established, on the broad basis of experience, one great fundamental truth of infinite importance—that, with very few exceptions, the people in general are perfectly competent to their own maintenance. . . . I do not find that any parish has been burthened with the maintenance of a member of any Friendly Society, nor are the cases numerous of the families of members being burthensome. This

* Fourth Report of the Royal Commission on Friendly and Benefit Building Societies.—London, 1874.—Appendix I, page 16. “It is because the Benefit Societies of the working classes are calculated to cherish the habit of genuine self-reliance and self-respect that we consider them eminently worthy of public encouragement. Viewed in this light they are entitled to be regarded as amongst the most important economic institutions of our time. They exercise an amount of social influence which it would be difficult to over-estimate. It is certainly a striking fact that some four millions of working-men, representing an aggregate of about eight millions of the population of these islands, should have spontaneously organised themselves into voluntary associations for the purpose of mutual support in time of sickness and distress.”—*Quarterly Review*, October, 1864, page 318.—“That the Societies do excellent work in the main; that they foster provident habits; that they do, if not perfectly, yet in the main satisfactorily, provide for needful help in times of severe pressure, no one can reasonably doubt.”—*Chambers’s Encyclopædia*: art. “Friendly Societies,” 1874.—“There can be no doubt of the beneficial influence exercised upon Poor Law expenditure by Friendly Societies, even in their present condition. It has been frequently alleged that no less a sum than £2,000,000 is annually saved to the ratepayers by the operation of the Societies; and if this be true under present circumstances, it is clear that any improvement in the stability of these Societies, or encouragement to people to join them, would not only benefit the labouring classes by leading them to help themselves instead of depending on others, but might tend to alleviate in no slight degree the pressure of local taxation now so generally complained of.”—*Fourth Report of English Royal Commission*, page 189.

being the case, it is evident that the Nation must have saved many thousands of pounds (perhaps millions) by these useful institutions. They are beneficial to the Nation, not merely by preventing many thousands of their members, who are not less liable to misfortune, disease, impotency, and old age, than others, from being burthensome, but by countenancing and promoting a spirit of independence, and better habits of industry and frugality than are usually found among the labouring classes of society."

44. The business training which the operation of "passing through the chairs" of a well-conducted Friendly Society confers upon the members is well brought out, among other points of interest, by Mr. R. W. Moffrey, the winner of the first prize for the best essay on "Superannuation," presented by the Hon. W. E. Foster, recently deceased. Mr. Moffrey's remarks are to the following effect:—"Let it be always borne in mind that the work attempted at their formation was such as would have taxed the ability of great financiers; that they began their work before the least glimmering of knowledge on vital statistics had been vouchsafed to them; that, as it had become manifest their position was unsound, they boldly grappled with the difficulties discovered; and these self-formed and self-governed institutions have given to the world an amount of information that could never have been obtained except by their means. And although they are not perfect (what human institution is?), the amount of suffering they have alleviated is simply incalculable. They have provided means of thrift and self-dependence to a class which could not have been reached by any other agency, and have laid deeply the foundations of provident habits among the mass of the population. Am I, therefore, too sanguine in my belief that they will yet rise still further and so adapt themselves to the growing needs of the time that no one who becomes a member need fear a pauper's end? Nor can I pass without remark the educational effect of membership in a Friendly Society, apart from the teaching conveyed by the mere fact of putting by money for a future contingency. They have, by their self-governing principles, in numerous instances, been the means of developing business talents, which, but for them, would perhaps never have been called into existence. Many a man owes his rise in social position to the practical lessons learned while filling honorary offices in his Society. They are, too, a potent influence for good in teaching their members respect for constituted authority, thus making them better citizens; while the capital under their control gives them such a stake in the country that no more loyal subjects are to be found in the Commonwealth than members of Friendly Societies."

45. I have now passed under review every branch of the subject which I thought it proper, both in the interests of the Societies and of the State, to bring under your notice. I have made large use of the Reports of the English and Victorian Commissioners, but there were many important points brought out therein to which I have not had time to refer. I would, however, suggest that the Report of the Royal Commission of Victoria and the Fourth Report of the English Commission should be procured and studied by those to whom it may be assigned to draft an Amended Act.

46. As they may probably prove of use to the future Comptrollers of Friendly Societies, I leave with the Government Statistician a complete set of the forms in use by the Government Statist of Victoria in administering the Act, as well as a copy of "The Friendly Societies Act, 1875" (Victoria), now in force. If in perusal of this Report any point should appear obscure, or if further information is thought desirable on some branch of the subject, I shall be happy to render any assistance in my power in either direction.

47. At the suggestion and request of the Government Statistician I have given, in Appendix A, a copy of tables for valuing Friendly Societies, and for framing rates of contributions, together with an explanation of the manner of their construction, and examples of their application.

I hope the treatise will prove of use to the members of Friendly Societies in Tasmania.

48. So much time has been occupied in getting together the information relating to the Societies here upon which this Report is based, that I have been under the necessity of spending less time in its preparation than I originally contemplated.

I feel that, with more time at my disposal, I could perhaps have submitted to your consideration a more finished production.

I am led, however, to anticipate, from experience gained in Victoria, that the manner in which the present condition of the several Societies is here exhibited in a tabular form will prove beneficial to the members, and useful to you.

49. It would not be proper for me to close without expressing my obligations to Mr. Charles de Burgh Kirwan, of the Audit Department, whose services you were good enough to place at my disposal during the latter part of the time I have been engaged in this enquiry, for the assistance he has afforded me during, and long after, the usual regulation hours of duty.

I have the honor to be,

Sir,

Your obedient Servant,

EVAN F. OWEN, *Actuary for Friendly Societies in the
Department of the Government Statist, Victoria.*

The Hon. W. H. BURGESS, Treasurer of Tasmania.

APPENDICES.

A.

TABLES FOR EFFECTING THE VALUATION OF THE ASSETS AND LIABILITIES
OF FRIENDLY SOCIETIES AND FOR CONSTRUCTING SCALES OF CON-
TRIBUTIONS EQUIVALENT TO SUMS OF MONEY PAYABLE ON DEATH,
IN SICKNESS, OR OLD AGE.

BASED UPON

RATCLIFFE'S MANCHESTER UNITY EXPERIENCE 1866-70.

RURAL, TOWN, AND CITY DISTRICTS COMBINED.

INTEREST 4 PER CENT.

PREPARED BY

E V A N F. O W E N.

*Extracted from the 2nd and 5th Annual Reports, in connection with Friendly Societies, of the Government Statist
of Victoria, H. H. HAYTER, Esq., C.M.G., published in the Years 1880 and 1884.*

TABLE I.—*THE Manchester Unity Experience, England, 1866-70. Compiled by HENRY RATCLIFFE, Corresponding Secretary of the Order.*

AGE.	LIFE TABLE.		PROBABILITY OF LIVING a year at age 18, 19, &c.	EXPECTATION OF LIFE. The average number of years which persons of the ages 18, 19, &c., will LIVE.	PROBABILITY OF DYING OR WITHDRAWING.		LIFE AND DURATION OF MEMBERSHIP TABLE.			EXPECTATION OF LIFE AND DURATION OF MEMBERSHIP. The average number of years which persons of the ages 18, 19, &c., will REMAIN in the Society.	RATE OF SICKNESS. †					AGE.
	The number of persons				Out of 100,000 persons of the ages 18, 19, &c., the number who, during the ages 18-19, 19-20, &c., will		The number of persons				The annual average number of weeks' sickness which each 100 persons of the age 18, 19, &c., will experience during the years 18-19, 19-20, &c., under the scale of pay of the—					
	LIVING at each age, 18, 19, &c.	DYING during succeed- ing years, 18-19, 19-20, &c.			DIE.	WITHDRAW.	REMAINING in the Society at each age, 18, 19, &c.	DYING during succeed- ing years, 18-19, 19-20, &c.	WITHDRAWING during succeed- ing years, 18-19, 19-20, &c.		First Six Months.	Second Six Months.	Third Six Months and after.	Third Six Months.	Fourth Six Months and after.	
	l_x	d_x			$p_x = 1 - q_x$	E_x *	q_x † 100,000	u_x ‡ 100,000	$(l \& r)_x$		d_x †	w_x	$(E \& R)_x$	$sk_x^{i \circ / \circ}$	$sk_x^{ii \circ / \circ}$		$sk_x^{iii + \circ / \circ}$	$sk_x^{iii \circ / \circ}$	$sk_x^{iv + \circ / \circ}$
x	l_x	d_x	$p_x = 1 - q_x$	E_x *	q_x † 100,000	u_x ‡ 100,000	$(l \& r)_x$	d_x †	w_x	$(E \& R)_x$	$sk_x^{i \circ / \circ}$	$sk_x^{ii \circ / \circ}$	$sk_x^{iii + \circ / \circ}$	$sk_x^{iii \circ / \circ}$	$sk_x^{iv + \circ / \circ}$	x
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1
18....	100,000	560	.99440	42.87	560	4358	100,000	560	4357	20.78	64.1	1.9	.2	.2	.0	18
19....	99,440	578	.99418	42.10	582	4630	95,083	553	4402	20.83	65.2	2.4	.6	.4	.2	19
20....	98,862	596	.99397	41.35	603	4903	90,128	544	4418	20.95	66.2	2.8	1.2	.6	.6	20
21....	98,266	614	.99375	40.60	625	5175	85,166	532	4404	21.14	67.3	3.3	1.6	.7	.9	21
22....	97,652	631	.99354	39.85	646	5340	80,230	518	4284	21.41	68.3	3.9	1.9	.9	1.0	22
23....	97,021	647	.99333	39.10	667	5397	75,428	503	4070	21.74	69.1	4.0	2.6	1.1	1.5	23
24....	96,374	663	.99312	38.36	688	5347	70,855	487	3788	22.11	69.7	4.3	3.0	1.3	1.7	24
25....	95,711	678	.99292	37.61	708	5189	66,580	471	3454	22.50	70.2	4.6	3.2	1.4	1.8	25
26....	95,033	692	.99272	36.89	728	4923	62,655	456	3084	22.87	70.5	4.8	3.8	1.6	2.2	26
27....	94,341	705	.99253	36.16	747	4654	59,115	443	2751	23.21	71.1	5.0	4.5	1.8	2.7	27
28....	93,636	716	.99235	35.43	765	4384	55,921	428	2451	23.51	71.9	5.3	5.2	2.0	3.2	28
29....	92,920	727	.99217	34.14	783	4110	53,042	417	2195	23.76	72.9	5.6	6.0	2.2	3.8	29
30....	92,193	736	.99201	33.96	799	3835	50,430	403	1933	23.96	74.2	6.0	6.5	2.5	4.0	30
31....	91,457	744	.99186	33.23	814	3557	48,094	391	1710	24.10	75.7	6.5	7.5	2.8	4.7	31
32....	90,713	756	.99166	32.54	834	3302	45,993	383	1518	24.18	77.2	6.8	8.6	3.1	5.5	32
33....	89,957	773	.99141	31.77	859	3070	44,092	378	1353	24.20	78.7	7.1	9.4	3.3	6.1	33
34....	89,184	793	.99111	31.04	889	2862	42,361	376	1212	24.17	80.2	7.4	10.5	3.4	7.1	34
35....	88,391	817	.99075	30.32	925	2678	40,773	377	1091	24.09	81.7	7.6	11.9	3.5	8.4	35
36....	87,574	845	.99035	29.60	965	2517	39,305	379	989	23.98	83.1	7.7	12.6	3.6	9.0	36
37....	86,729	871	.98995	28.88	1005	2355	37,937	381	893	23.82	84.8	7.9	13.4	3.8	9.6	37
38....	85,858	898	.98955	28.15	1045	2192	36,663	383	803	23.63	86.6	8.3	14.7	4.0	10.7	38
39....	84,960	923	.98914	27.46	1086	2029	35,477	385	719	23.41	88.6	8.9	15.8	4.3	11.5	39
40....	84,037	947	.98873	26.75	1127	1864	34,373	387	640	23.14	90.8	9.6	17.1	4.7	12.4	40
41....	83,090	971	.98832	26.05	1168	1700	33,346	390	566	22.84	93.2	10.5	18.5	5.1	13.4	41
42....	82,119	994	.98790	25.30	1210	1546	32,390	392	501	22.50	95.9	11.4	20.4	5.7	14.7	42
43....	81,125	1018	.98745	24.66	1255	1404	31,497	394	441	22.12	98.9	12.4	22.7	6.2	16.5	43
44....	80,107	1043	.98698	23.97	1302	1273	30,662	399	390	21.71	102.2	13.4	25.5	6.9	18.6	44
45....	79,064	1068	.98648	23.28	1352	1153	29,873	403	344	21.27	105.9	14.5	28.5	7.6	20.9	45
46....	77,996	1094	.98597	22.59	1403	1044	29,126	408	304	20.80	109.8	15.6	32.2	8.4	23.8	46
47....	76,902	1125	.98536	21.91	1464	947	28,414	415	269	20.31	114.1	16.9	36.0	9.2	26.8	47
48....	75,777	1163	.98465	21.22	1535	862	27,730	425	239	19.80	118.9	18.2	39.8	10.0	29.8	48
49....	74,614	1206	.98383	20.50	1617	789	27,066	437	213	19.27	124.0	19.6	44.0	10.8	33.2	49
50....	73,408	1254	.98292	19.87	1708	729	26,416	451	192	18.74	129.4	21.1	48.4	11.7	36.7	50

51....	72,154	1305	*98191	19.21	1809	681	25,773	466	175	18.19	135.3	22.8	52.9	12.6	40.3	51
52....	70,849	1358	*98083	18.55	1917	638	25,132	481	160	17.64	141.7	24.6	58.2	13.7	44.5	52
53....	69,491	1410	*97971	17.91	2029	600	24,491	497	146	17.09	148.6	26.7	64.0	15.0	49.0	53
54....	68,081	1462	*97852	17.27	2148	567	23,848	512	135	16.54	156.0	29.0	70.4	16.6	53.8	54
55....	66,619	1513	*97728	16.64	2272	540	23,201	527	125	15.99	164.0	31.5	77.4	18.4	59.0	55
56....	65,106	1564	*97598	16.01	2402	517	22,549	541	116	15.43	172.4	34.3	85.3	20.3	65.0	56
57....	63,542	1626	*97441	15.39	2559	496	21,892	560	108	14.88	181.7	37.6	95.3	22.7	72.6	57
58....	61,916	1698	*97258	14.78	2742	475	21,224	581	100	14.33	191.8	41.4	107.5	25.5	82.0	58
59....	60,218	1778	*97047	14.19	2953	454	21,543	606	92	13.79	202.7	45.9	121.6	28.6	93.0	59
60....	58,440	1864	*96810	13.60	3190	434	19,845	633	86	13.26	214.4	50.8	138.1	32.2	105.9	60
61....	56,576	1954	*96546	13.04	3454	415	19,126	660	79	12.74	226.9	56.4	156.6	36.1	120.5	61
62....	54,622	2033	*96280	12.48	3720	396	18,387	684	72	12.23	240.5	62.8	177.6	40.6	137.0	62
63....	52,589	2097	*96012	11.95	3988	378	17,631	703	66	11.74	255.3	70.1	200.8	45.7	155.1	63
64....	50,492	2149	*95743	11.42	4257	361	16,862	717	61	11.25	271.2	78.2	226.6	51.5	175.1	64
65....	48,343	2189	*95472	10.91	4528	344	16,084	728	55	10.77	288.3	87.2	254.6	57.5	197.1	65
66....	46,154	2216	*95199	10.40	4801	327	15,301	734	50	10.29	306.4	97.0	285.2	64.3	220.9	66
67....	43,938	2261	*94853	9.90	5147	302	14,517	747	43	9.82	323.5	107.5	324.7	72.4	252.3	67
68....	41,677	2319	*94434	9.42	5566	269	13,727	763	36	9.36	339.4	118.5	373.4	81.9	291.5	68
69....	39,358	2384	*93943	8.94	6057	227	12,928	784	29	8.91	354.2	130.0	431.3	92.8	338.5	69
70....	36,974	2448	*93379	8.49	6621	177	12,115	802	21	8.47	368.0	142.1	498.2	105.0	393.2	70
71....	34,526	2506	*92740	8.05	7260	119	11,292	819	13	8.05	380.6	154.8	574.1	118.6	455.5	71
72....	32,020	2510	*92159	7.64	7841	61	10,460	820	6	7.65	391.0	167.5	651.6	131.4	520.2	72
73....	29,510	2527	*91437	7.25	8563	2	9634	825	2	7.26	399.6	179.9	730.4	143.3	587.1	73
74....	26,983	2490	*90770	6.87	9230	..	8807	811	..	6.90	406.2	192.0	810.8	154.4	656.4	74
75....	24,493	2426	*90094	6.53	9906	..	7996	786	..	6.55	410.5	204.2	892.7	164.7	728.0	75
76....	22,067	2337	*89409	6.20	10,591	..	7210	763	..	6.21	413.0	216.0	976.0	174.1	801.9	76
77....	19,730	2237	*88663	5.87	11,337	..	6447	730	..	5.88	413.0	228.1	1069.1	182.3	886.8	77
78....	17,493	2124	*87857	5.56	12,143	..	5717	694	..	5.56	410.4	240.4	1172.3	189.3	983.0	78
79....	15,369	1995	*86990	5.26	13,010	..	5023	652	..	5.27	405.4	252.8	1285.4	195.0	1090.4	79
80....	13,374	1864	*86063	4.97	13,937	..	4371	609	..	4.98	397.9	266.1	1407.8	199.4	1208.4	80

* "Hence we find the mean duration to be $= \frac{1}{2} + \frac{l_1 + l_2 + l_3 + \dots}{l_0} - \frac{\mu}{12}$. It is, in fact, the same as the value of an annuity payable momentarily, and supposing money to have no interest. Thus it appears that the tabular expectations of life usually given are in excess of the truth by one-twelfth of the force of mortality at the respective ages. The values of this force, of which a table has been given (see q x , i.e., the quantities in column 6 above divided by 100,000, its near equivalent), will show that the requisite correction is decidedly appreciable at the advanced ages; but the error is not of much consequence, as the mean duration of life is an element that is only made use of in cursory comparisons, and is not required in professional calculations." W. S. B. Woolhouse on "Interpolation, Summation, and the Adjustment of Numerical Tables." *Jo. I. A.*, vol. xi., p. 328.

† The quantities contained in columns 9 and 10 Mr. Ratcliffe obtains by calculating lq and lu . But on the usual assumption of the uniform yearly distribution of departures and deaths, and taking the number who die and who withdraw into consideration *separately*, the effective number at risk in the former case at the beginning of the year is $l - \frac{1}{2}w$, and in the latter $l - \frac{1}{2}d$, therefore $d = (l - \frac{1}{2}w)q$, and $w = (l - \frac{1}{2}d)u$, and, on solving these equations, we find that $d = lq \cdot \frac{2-u}{2-\frac{1}{2}qu}$, and $w = lu \cdot \frac{2-q}{2-\frac{1}{2}qu}$; so that the value of d_{23} and w_{23} , for example, would be, according to the formulæ, 499 and 4062 respectively, and that of $(l \& r)_{24}$, therefore 70,865, a closer approximation than 70,855 (column 8) to the number which would be actually found remaining at the end of the year under the combined influence of the given rates of mortality and withdrawals. Mr. Ratcliffe's method serves to ascribe undue weight to the effect of withdrawals. See "Probabilities which occur in the question of Invalidity," by D. J. A. Samot, of Rotterdam, and "The Construction of a Combined Marriage and Mortality Table," by T. B. Sprague, *Jo. I. A.*, vol. xxi., pp. 288, 406.

‡ For Table of average sickness per member, see *post*.

TABLE I (a).—*PRESENT Value of £1 payable at the end of every Year, from 1 to 102.*

Interest, 4 per Cent.					
Years.	4 per Cent.	Years.	4 per Cent.	Years.	4 per Cent.
1	2	1	2	1	2
0.....	1·000,000	34.....	·263,552	68.....	·069,460
1.....	·980,581	35.....	·253,415	69.....	·066,788
2.....	·961,538			70.....	·064,219
3.....	·924,556	36.....	·243,669		
4.....	·888,096	37.....	·234,297	71.....	·061,749
5.....	·854,804	38.....	·225,285	72.....	·059,374
	·821,927	39.....	·216,621	73.....	·057,091
6.....	·790,315	40.....	·208,289	74.....	·054,895
7.....	·759,918			75.....	·052,784
8.....	·730,690	41.....	·200,278		
9.....	·702,587	42.....	·192,575	76.....	·050,754
10.....	·675,564	43.....	·185,168	77.....	·048,801
		44.....	·178,046	78.....	·046,924
11.....	·649,581	45.....	·171,198	79.....	·045,120
12.....	·624,597			80.....	·043,384
13.....	·600,574	46.....	·164,614		
14.....	·577,475	47.....	·158,283	81.....	·041,716
15.....	·555,265	48.....	·152,195	82.....	·040,111
		49.....	·146,341	83.....	·038,569
16.....	·533,908	50.....	·140,713	84.....	·037,085
17.....	·513,373			85.....	·035,659
18.....	·493,628	51.....	·135,301		
19.....	·474,642	52.....	·130,097	86.....	·034,287
20.....	·456,387	53.....	·125,093	87.....	·032,969
		54.....	·120,282	88.....	·031,701
21.....	·438,834	55.....	·115,656	89.....	·030,481
22.....	·421,955			90.....	·029,309
23.....	·405,726	56.....	·111,207		
24.....	·390,121	57.....	·106,930	91.....	·028,182
25.....	·375,117	58.....	·102,817	92.....	·027,098
		59.....	·098,863	93.....	·026,056
26.....	·360,689	60.....	·095,060	94.....	·025,053
27.....	·346,817			95.....	·024,090
28.....	·333,477	61.....	·091,404		
29.....	·320,651	62.....	·087,889	96.....	·023,163
30.....	·308,319	63.....	·084,508	97.....	·022,272
		64.....	·081,258	98.....	·021,416
31.....	·296,460	65.....	·078,133	99.....	·020,592
32.....	·285,058			100.....	·019,800
33.....	·274,094	66.....	·075,128	101.....	·019,039
		67.....	·072,238	102.....	·018,316

TABLE II.

TABLE II.—*COMMUTATION Table based upon the Mortality and Sickness Experience of the M.U.I.O.O.F., England, 1866-70.*

Interest, 4 per Cent.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
Age (ω)	D_{ω}	N_{ω}	C_{ω}	M_{ω}	$D_{\omega y}$	$N_{\omega y}$	$C_{\omega y}$	$M_{\omega y}$	K_{ω}	L_{ω}	K_{ω}^1	L_{ω}^1	K_{ω}^2	L_{ω}^2	K_{ω}^{3+}	L_{ω}^{3+}	K_{ω}^3	L_{ω}^3	K_{ω}^{4+}	L_{ω}^{4+}	Age (ω)
18	49,363	976,008	271.06	12,058.3	49,363	849,814	540.61	17,007	32,044	1,459,820	31,027	935,109	919.7	142,062	96.81	379,619	96.81	84,167	0.00	295,457	18
19	47,198	926,645	269.02	11,787.3	46,934	800,451	533.46	16,467	31,564	1,427,776	30,176	905,082	1110.8	141,142	277.69	379,522	185.13	84,070	92.56	295,457	19
20	45,119	879,447	266.72	11,518.2	44,606	753,517	525.79	15,933	31,059	1,396,212	29,289	874,906	1238.8	140,031	530.92	379,245	265.46	83,885	265.46	295,364	20
1	43,122	834,328	264.21	11,251.5	42,375	708,911	517.64	15,407	30,530	1,365,153	28,458	844,617	1395.4	138,792	676.56	378,714	296.00	83,619	380.57	295,099	1
2	41,205	791,206	261.08	10,987.3	40,237	666,536	508.26	14,890	29,940	1,334,623	27,506	816,159	1575.8	137,397	767.69	378,037	363.64	83,323	404.05	294,718	2
3	39,364	750,001	257.41	10,726.2	38,191	626,299	497.81	14,381	29,220	1,304,683	26,672	788,563	1544.0	135,821	1003.6	377,269	424.60	82,960	578.99	294,314	3
4	37,598	710,637	253.63	10,468.8	36,234	588,108	487.18	13,884	28,388	1,275,463	25,697	761,891	1585.3	134,277	1106.0	376,266	479.28	82,535	626.75	293,735	4
5	35,903	673,039	249.39	10,215.2	34,363	551,874	475.70	13,396	27,460	1,247,075	24,714	736,194	1619.5	132,692	1126.6	375,160	492.88	82,056	633.70	293,108	5
6	34,277	637,136	244.75	9965.8	32,575	517,511	463.49	12,921	26,587	1,219,615	23,696	711,480	1613.4	131,072	1277.2	374,033	537.79	81,563	739.46	292,475	6
7	32,719	602,859	239.76	9721.1	30,867	484,936	450.60	12,457	25,859	1,193,028	22,811	687,784	1604.2	129,459	1443.8	372,756	577.51	81,025	866.26	291,735	7
8	31,226	570,140	234.13	9481.3	29,238	454,069	436.79	12,007	25,230	1,167,169	22,015	664,973	1622.8	127,855	1592.2	371,312	612.38	80,448	979.81	290,869	8
9	29,795	538,914	228.59	9247.2	27,685	424,831	423.14	11,570	24,688	1,141,939	21,299	642,958	1636.1	126,232	1753.0	369,720	642.76	79,835	1110.2	289,889	9
30	28,425	509,119	222.52	9018.6	26,206	397,146	408.65	11,147	24,166	1,117,251	20,682	621,659	1672.4	124,596	1807.6	367,967	696.82	79,193	1114.9	288,779	30
1	27,114	480,694	216.28	8796.1	24,797	370,940	394.00	10,738	23,848	1,093,085	20,126	600,977	1728.1	122,923	1994.0	366,159	744.43	78,496	1249.6	287,664	1
2	25,858	453,580	211.32	8579.8	23,457	346,143	381.79	10,344	23,480	1,069,237	19,575	580,851	1724.2	121,195	2180.6	364,165	786.05	77,751	1394.6	286,414	2
3	24,657	427,722	207.76	8368.5	22,180	322,686	372.18	9962.1	23,017	1,045,757	19,028	561,276	1716.6	119,471	2272.7	361,985	797.87	76,965	1474.9	285,020	3
4	23,505	403,065	204.94	8160.7	20,962	300,506	363.92	9590.0	22,610	1,022,740	18,485	542,248	1705.6	117,755	2420.1	359,712	783.64	76,167	1636.4	283,545	4
5	22,400	379,560	203.02	7955.8	19,799	279,544	357.24	9226.0	22,228	1,000,130	17,945	523,763	1669.3	116,049	2613.8	357,292	768.76	75,384	1845.0	281,909	5
6	21,339	357,160	201.90	7752.7	18,687	259,745	351.92	8868.8	21,636	977,902	17,388	505,818	1611.2	114,380	2636.5	354,678	753.29	74,615	1883.2	280,064	6
7	20,320	335,821	200.11	7550.8	17,624	241,058	345.36	8516.9	21,141	956,266	16,897	488,430	1574.1	112,768	2670.0	352,042	757.18	73,862	1912.9	278,180	7
8	19,343	315,501	198.38	7350.7	16,607	223,434	338.86	8171.5	20,788	935,125	16,425	471,533	1574.3	111,194	2788.1	349,272	758.68	73,105	2029.5	276,267	8
9	18,405	296,158	196.06	7152.3	15,636	206,827	331.33	7832.7	20,447	914,337	15,989	455,108	1606.2	109,620	2851.4	346,584	776.01	72,346	2075.4	274,238	9
40	17,504	277,753	193.42	6956.3	14,710	191,191	323.26	7501.3	20,168	893,890	15,585	439,119	1647.8	108,024	2935.1	343,732	806.71	71,570	2128.3	272,163	40
1	16,641	260,249	190.69	6762.9	13,827	176,481	315.04	7178.1	19,941	873,722	15,208	423,534	1713.4	106,366	3018.8	340,797	832.21	70,763	2186.6	270,034	1
2	15,814	243,608	187.70	6572.2	12,986	162,654	306.41	6863.0	19,802	853,781	14,871	408,326	1767.8	104,653	3163.4	337,778	883.90	69,931	2279.5	267,848	2
3	15,022	227,794	184.84	6384.5	12,186	149,668	298.02	6556.6	19,738	833,979	14,568	393,455	1826.5	102,885	3343.7	334,615	913.26	69,047	2430.5	265,568	3
4	14,263	212,772	182.10	6199.6	11,425	137,482	289.84	6258.6	19,734	814,241	14,293	378,887	1874.1	101,058	3566.4	331,271	965.02	68,134	2601.4	263,138	4
5	13,536	198,509	179.29	6017.5	10,702	126,057	280.94	5968.8	19,763	794,507	14,056	364,594	1924.6	99,184	3782.7	327,705	1008.7	67,169	2774.0	260,536	5
6	12,839	184,973	176.59	5838.2	10,014	115,355	273.54	5687.8	19,842	774,744	13,824	350,538	1964.0	97,260	4053.9	323,922	1057.6	66,160	2996.4	257,762	6
7	12,172	172,134	174.61	5661.7	9360.7	105,341	266.59	5414.3	19,933	754,902	13,619	336,714	2017.2	95,296	4296.9	319,868	1098.1	65,103	3198.8	254,766	7
8	11,533	159,962	173.57	5487.0	8739.3	95,981	261.03	5147.7	20,005	734,969	13,446	323,095	2058.2	93,278	4500.9	315,571	1130.9	64,004	3370.1	251,567	8
9	10,919	148,429	173.06	5313.5	8147.2	87,241	256.17	4886.7	20,086	714,964	13,277	309,649	2098.6	91,220	4711.1	311,070	1156.4	62,874	3554.7	248,197	9
50	10,329	137,510	173.02	5140.4	7582.6	79,094	251.86	4630.5	20,146	694,878	13,107	296,372	2137.2	89,122	4902.4	306,359	1185.1	61,717	3717.3	244,642	50
1	9762.5	127,181	173.14	4967.4	7044.0	71,511	247.59	4378.6	20,199	674,732	12,952	283,265	2182.6	86,984	5064.1	301,457	1206.2	60,532	3857.9	240,925	1
2	9217.2	117,418	173.24	4794.3	6530.3	64,467	243.13	4131.0	20,291	654,533	12,807	270,313	2223.4	84,892	5260.3	296,393	1238.2	59,326	4022.0	237,067	2
3	8692.8	108,201	172.96	4621.0	6047.0	57,937	237.94	3887.9	20,398	634,242	12,667	257,506	2275.9	82,578	5455.4	291,133	1278.6	58,088	4176.8	233,045	3
4	8188.9	99,508	172.44	4448.1	5575.1	51,896	232.27	3650.0	20,508	613,844	12,527	244,839	2328.7	80,303	5653.0	285,677	1333.0	56,809	4320.1	228,868	4
5	7704.9	91,319	171.59	4275.6	5132.9	46,321	226.03	3417.7	20,618	593,336	12,391	232,312	2379.9	77,974	5847.7	280,024	1390.2	55,476	4457.6	224,548	5
6	7240.3	83,615	170.55	4104.0	4713.8	41,188	219.41	3191.7	20,731	572,718	12,240	219,921	2435.2	75,594	6056.0	274,176	1441.2	54,086	4614.8	220,091	6
7	6794.5	76,374	170.40	3933.5	4317.4	36,475	213.90	2972.3	20,961	551,937	12,106	207,681	2505.1	73,159	6349.5	268,120	1512.4	52,645	4837.1	215,476	7
8	6366.0	69,580	171.19	3763.0	3941.6	32,157	209.09	2758.4	21,268	531,026	11,973	195,575	2584.4	70,654	6710.6	261,771	1591.8	51,132	5118.8	210,639	8
9	5953.3	63,214	172.36	3591.8	3585.0	28,216	204.52	2549.3	21,611	509,758	11,833	183,602	2679.5	68,069	7698.7	255,060	1669.6	49,540	5429.1	205,520	9

60	5555-3	57,260	173-75	3419-4	3246-5	24,631	199-84	2344-8	21,970	488,147	11,679	171,769	2767-3	65,300	7522-9	247,962	1754-1	47,871	5768-8	200,091	60
1	5171-3	51,705	175-14	3245-7	2925-7	21,384	194-75	2144-9	22,307	466,177	11,506	160,090	2860-0	62,632	7941-0	240,439	1830-6	46,117	6110-4	194,322	1
2	4800-7	46,534	175-21	3070-5	2622-2	18,458	187-84	1950-2	22,638	443,870	11,321	148,584	2956-3	59,762	8360-4	232,408	1911-2	44,286	6449-2	188,212	2
3	4444-2	41,733	173-77	2895-3	2337-2	15,836	179-13	1762-3	22,931	421,232	11,126	137,263	3054-9	56,896	8750-7	224,137	1991-6	42,375	6759-1	181,762	3
4	4102-9	37,289	171-23	2721-6	2071-6	13,499	169-24	1583-2	23,174	398,301	10,911	126,137	3146-1	53,751	9116-6	215,387	2072-0	40,383	7044-6	175,003	4
5	3777-2	33,186	167-71	2550-3	1826-0	11,427	158-48	1414-0	23,338	375,127	10,678	115,226	3229-7	50,605	9429-9	206,270	2129-7	38,311	7300-2	167,959	5
6	3467-4	29,409	163-25	2382-6	1600-4	9601-4	147-08	1255-5	23,413	351,789	10,418	104,548	3298-1	47,375	9697-1	196,840	2186-3	36,182	7510-8	160,658	6
7	3174-0	25,941	160-16	2219-4	1394-6	8001-0	137-12	1108-4	23,520	328,376	10,068	94,130	3345-8	44,077	10,106	187,143	2253-3	33,995	7852-5	153,148	7
8	2894-9	22,767	157-95	2059-2	1206-5	6606-4	127-99	971-27	23,598	304,856	9634-4	84,062	3363-8	40,732	10,600	177,037	2324-9	31,742	8274-7	145,295	8
9	2628-6	19,873	156-13	1901-3	1034-6	5399-9	119-18	843-28	23,598	281,258	9129-9	74,428	3350-9	37,358	11,117	166,437	2392-0	29,417	8725-2	137,020	9
70	2374-4	17,244	154-16	1745-1	877-93	4365-3	110-22	724-10	23,477	257,660	8568-3	65,298	3308-6	34,017	11,600	155,320	2444-8	27,025	9155-0	128,295	70
1	2132-0	14,870	151-74	1591-0	736-08	3487-3	100-98	613-88	23,195	234,183	7956-7	56,730	3236-2	30,708	12,002	143,720	2470-4	24,580	9522-5	119,140	1
2	1901-2	12,738	146-14	1439-2	608-75	2751-3	89-917	512-90	22,559	210,988	7289-2	48,773	3122-6	27,472	12,147	131,718	2449-6	22,101	9697-8	109,618	2
3	1684-8	10,836	141-47	1293-1	497-17	2142-5	79-919	422-98	21,640	188,429	6601-5	41,484	2972-0	24,349	12,066	119,571	2367-4	19,651	9699-1	99,920	3
4	1481-2	9151-5	134-03	1151-6	309-68	1645-3	68-995	343-06	20,465	166,780	5899-9	34,882	2788-7	21,377	11,777	107,505	2242-6	17,284	9534-0	90,221	4
5	1292-8	7670-3	125-57	1017-6	316-65	1245-7	58-464	274-07	19,110	146,324	5204-0	28,983	2588-7	18,589	11,317	95,728	2087-9	15,041	9229-0	80,687	5
6	1120-0	6377-5	116-31	892-02	247-15	929-00	48-613	215-60	17,627	127,214	4525-8	23,770	2372-2	16,000	10,719	84,411	1912-0	12,953	8806-7	71,458	6
7	962-85	5257-5	107-05	775-71	189-97	681-85	39-847	166-99	16,147	109,587	3890-9	19,253	2153-6	13,628	10,094	73,692	1721-2	11,041	8372-8	62,651	7
8	820-85	4294-6	97-732	668-66	143-59	491-88	32-117	127-14	14,674	93,440	3303-3	15,362	1935-0	11,474	9436-0	63,598	1523-7	9320-2	7912-3	54,278	8
9	663-44	3473-8	88-266	570-92	106-58	348-29	25-370	95-025	13,216	78,766	2756-6	12,059	1719-0	9539-2	8740-4	54,162	1326-0	7796-5	7414-5	46,366	9
80	580-22	2780-4	79-298	482-66	77-599	241-71	19-733	69-655	11,788	65,550	2263-9	9301-9	1514-0	7820-2	8009-7	45,422	1134-5	6470-5	6875-2	38,952	80
1	480-15	2200-1	70-276	403-36	55-205	104-11	14-970	49-922	10,233	53,762	1809-4	7038-0	1317-8	6306-2	7106-1	37,412	1011-3	5336-0	6094-8	32,076	1
2	392-77	1720-0	61-594	333-08	38-460	108-85	11-098	34-952	8787-0	43,529	1414-2	5228-6	1142-7	4988-4	6230-1	30,306	891-22	4324-7	5338-8	25,982	2
3	317-27	1327-2	53-288	271-49	26-098	70-386	8-0161	23-854	7453-4	34,742	1078-3	3814-4	984-33	3845-7	5390-3	24,076	774-96	3433-5	4615-8	20,643	3
4	252-81	1009-9	45-711	218-20	17-234	44-288	5-6576	15-838	6238-1	27,289	799-48	2736-1	840-63	2861-4	4598-0	18,685	664-12	2658-6	3933-9	16,027	4
5	198-26	757-13	38-218	172-49	11-023	27-054	3-8321	10-181	5138-9	21,051	573-32	1936-6	709-23	2020-8	3856-4	14,087	559-71	1994-4	3296-7	12,093	5
6	153-16	558-87	31-604	134-27	6-8417	16-031	2-5264	6-3484	4075-3	15,912	439-75	1363-3	504-78	1311-5	3130-8	10,231	447-11	1434-7	2683-7	8796-3	6
7	116-28	405-71	25-604	102-67	4-1012	9-1892	1-6033	3-8220	3181-2	11,837	335-45	923-56	347-20	806-76	2493-6	7100-1	351-87	987-61	2146-7	6112-6	7
8	86-701	289-43	20-329	77-065	2-3713	5-0880	9-791	2-2187	2442-4	8655-5	254-29	588-11	229-46	459-56	1958-3	4601-5	272-65	635-74	1686-0	3965-9	8
9	63-431	202-73	15-782	56-736	1-3200	2-7167	5-735	1-2396	1842-3	6213-1	191-26	333-82	144-40	230-10	1566-5	2642-9	207-68	363-00	1298-9	2279-9	9
90	45-517	139-30	12-013	40-954	7-069	1-3967	3-229	6-661	1364-6	4370-8	142-56	142-56	85-61	85-61	1136-4	1136-4	155-41	155-41	981-0	981-0	90
1	31-986	93-785	8-9259	28-9410	3-630	6-898	1-738	3-432	980-47	3006-2	..	..	..	..	..	..	..	..	..	..	1
2	22-003	61-799	6-4834	20-0151	1-787	3-268	0-895	1-694	690-56	2025-7	..	..	..	..	..	..	..	..	..	..	2
3	14-800	39-796	4-5989	13-5317	0-841	1-481	0-440	0-799	476-14	1335-2	..	..	..	..	..	..	..	..	..	..	3
4	9-7207	24-996	3-1937	8-9328	0-377	0-640	0-206	0-359	320-96	859-02	..	..	..	..	..	..	..	..	..	..	4
5	6-2152	15-275	2-1496	5-7391	0-160	0-263	0-091	0-153	210-82	538-06	..	..	..	..	..	..	..	..	..	..	5
6	3-8682	9-0598	1-4082	3-5895	0-065	0-103	0-038	0-062	134-92	327-24	..	..	..	..	..	..	..	..	..	..	6
7	2-3386	5-1916	2-1813	2-1813	0-025	0-038	0-015	0-024	83-944	192-32	..	..	..	..	..	..	..	..	..	..	7
8	1-3706	2-8530	5-460	1-2859	0-009	0-013	0-006	0-009	50-668	108-38	..	..	..	..	..	..	..	..	..	..	8
9	7825	1-4824	3-231	7-399	0-003	0-004	0-002	0-003	29-811	57-708	..	..	..	..	..	..	..	..	..	..	9
100	4356	6999	2136	4168	0-001	0-001	0-001	0-001	17-112	27-897	..	..	..	..	..	..	..	..	..	..	100
1	2094	2643	1493	2032	0-000	0-000	0-000	0-000	8-4874	10-785	..	..	..	..	..	..	..	..	..	..	1
2	0549	0549	0539	0539	0-000	0-000	0-000	0-000	2-2971	2-2971	..	..	..	..	..	..	..	..	..	..	2

TABLE III.—VALUES of Contributions and of Sums of Money payable on Death and in Sickness.
M.U., I.O.O.F. Experience, England, 1866-70. Interest 4 per cent.*

1	2	3	4	5	Value of ONE POUND a week SICK PAY payable—						1	
Age nearest birthday.	Value of Annual Contribution of £1 during whole term of life (first payment at the age x).	Annual Contribution during life (first payment at age x) to which one payment of £1 is equal.	Value of £1 payable on death of Member.	Value of £1 payable on death of wife (Y) provided the husband (X) be then living (equal ages).	6	Until 91 Years of Age, under the Scale of the—					Age nearest birthday.	
						To the end of Life.	7	8	9	10		11
x	$\frac{N_x}{D_x} = A_x$	$\frac{D_x}{N_x} = a_x$	$\frac{M_x}{D_x} = II_x$	$\frac{M_{xy}}{2D_{xy}} = II_{xy}^1$	$\frac{L_x}{D_x} = SP_x$	$\frac{L_x^1}{D_x} = sp_x^1$	$\frac{L_x^1}{D_x} = sp_x^2$	$\frac{L_x^{3+}}{D_x} = sp_x^{3+}$	$\frac{L_x^3}{D_x} = sp_x^3$	$\frac{L_x^{4+}}{D_x} = sp_x^{4+}$	x	
	£	£	£	£	£	£	£	£	£	£		
18	19.772	.0506	.2443	.1723	29.573	18.944	2.878	7.690	1.705	5.985	18	
19	19.633	.0509	.2497	.1754	30.251	19.176	2.990	8.041	1.781	6.260	19	
20	19.492	.0513	.2553	.1786	30.945	19.391	3.104	8.405	1.859	6.546	20	
1	19.348	.0517	.2609	.1818	31.658	19.587	3.219	8.782	1.939	6.843	1	
2	19.202	.0521	.2667	.1850	32.390	19.807	3.335	9.175	2.022	7.153	2	
3	19.053	.0525	.2725	.1883	33.144	20.033	3.450	9.584	2.108	7.477	3	
4	18.901	.0529	.2784	.1916	33.924	20.264	3.571	10.008	2.195	7.813	4	
5	18.746	.0533	.2845	.1949	34.735	20.505	3.696	10.449	2.286	8.164	5	
6	18.588	.0538	.2907	.1983	35.581	20.757	3.824	10.912	2.380	8.533	6	
7	18.425	.0543	.2971	.2018	36.463	21.021	3.957	11.393	2.476	8.916	7	
8	18.259	.0548	.3036	.2053	37.378	21.296	4.095	11.891	2.576	9.315	8	
9	18.087	.0553	.3104	.2090	38.327	21.579	4.237	12.409	2.680	9.730	9	
30	17.911	.0558	.3173	.2127	39.305	21.870	4.383	12.945	2.786	10.159	30	
1	17.729	.0564	.3244	.2165	40.314	22.165	4.534	13.504	2.895	10.609	1	
2	17.541	.0570	.3318	.2205	41.350	22.463	4.687	14.083	3.007	11.076	2	
3	17.347	.0577	.3394	.2246	42.412	22.763	4.845	14.681	3.121	11.559	3	
4	17.148	.0583	.3472	.2288	43.512	23.070	5.010	15.304	3.241	12.063	4	
5	16.945	.0590	.3552	.2330	44.649	23.382	5.181	15.951	3.365	12.585	5	
6	16.737	.0598	.3633	.2373	45.827	23.704	5.360	16.621	3.497	13.125	6	
7	16.527	.0605	.3716	.2416	47.060	24.037	5.550	17.325	3.635	13.690	7	
8	16.311	.0613	.3800	.2460	48.344	24.377	5.749	18.062	3.779	14.283	8	
9	16.091	.0622	.3886	.2505	49.679	24.727	5.956	18.831	3.931	14.900	9	
40	15.868	.0630	.3974	.2550	51.068	25.087	6.171	19.637	4.089	15.549	40	
1	15.639	.0639	.4064	.2596	52.504	25.451	6.392	20.479	4.252	16.227	1	
2	15.405	.0649	.4156	.2643	53.989	25.821	6.618	21.359	4.422	16.937	2	
3	15.164	.0660	.4250	.2690	55.517	26.192	6.849	22.275	4.596	17.679	3	
4	14.918	.0670	.4347	.2739	57.088	26.564	7.085	23.226	4.777	18.449	4	
5	14.665	.0682	.4446	.2789	58.696	26.935	7.327	24.210	4.962	19.248	5	
6	14.407	.0694	.4547	.2840	60.343	27.303	7.575	25.230	5.153	20.077	6	
7	14.142	.0707	.4651	.2892	62.020	27.663	7.829	26.279	5.349	20.931	7	
8	13.870	.0721	.4758	.2945	63.728	28.015	8.088	27.363	5.550	21.813	8	
9	13.594	.0736	.4866	.2999	65.479	28.359	8.354	28.489	5.758	22.731	9	
50	13.313	.0751	.4977	.3053	67.275	28.693	8.628	29.660	5.975	23.685	50	
1	13.028	.0768	.5088	.3108	69.115	29.016	8.910	30.879	6.201	24.679	1	
2	12.739	.0785	.5201	.3163	71.012	29.327	9.200	32.157	6.436	25.720	2	
3	12.447	.0803	.5316	.3218	72.962	29.623	9.500	33.491	6.682	26.809	3	
4	12.152	.0823	.5432	.3274	74.961	29.899	9.806	34.886	6.937	27.949	4	
5	11.852	.0844	.5549	.3329	77.008	30.151	10.120	36.344	7.200	29.144	5	
6	11.549	.0866	.5668	.3386	79.101	30.375	10.441	37.868	7.470	30.398	6	
7	11.241	.0890	.5789	.3442	81.240	30.566	10.767	39.461	7.748	31.713	7	
8	10.930	.0915	.5911	.3499	83.416	30.722	11.099	41.120	8.032	33.088	8	
9	10.618	.0942	.6033	.3556	85.626	30.840	11.434	42.844	8.322	34.522	9	
60	10.307	.0970	.6155	.3611	87.871	30.920	11.771	44.635	8.617	36.018	60	
1	9.999	.1000	.6276	.3666	90.147	30.957	12.110	46.495	8.918	37.577	1	
2	9.693	.1032	.6396	.3719	92.459	30.951	12.449	48.430	9.225	39.205	2	
3	9.391	.1065	.6515	.3770	94.782	30.886	12.782	50.434	9.535	40.899	3	
4	9.088	.1100	.6633	.3821	97.078	30.743	13.101	52.496	9.843	42.654	4	

Instead of A_x (col. 2), when
the payments are reckoned
as made at the end of—

1 Every — year,	use A_x —	$\frac{n+1}{2n}$	$\frac{n^2-1}{12n^2}$	$(m_x + \delta)$;
Every week,	„ „ —	.5096	— .0832	$(m_x + .0392)$;
Every fortnight,	„ „ —	.5192	— .0832	„ „
Every four weeks,	„ „ —	.5385	— .0828	„ „
Every month,	„ „ —	.5417	— .0828	„ „
Every quarter,	„ „ —	.6250	— .0791	„ „
Every half year,	„ „ —	.7500	— .0625	„ „
Every year,	„ „ —	1.		

E.g.—Value of £1 a year paid at end of each quarter at age 25 is £18.746 — £.625 = £18.121 approximately, i.e., neglecting the correction for age.

* The 5th Annual Report on Friendly Societies, of the Government Statist of Victoria, contains Tables at 3, 3½, 4, 4½, 5, and 5½ per cent.

TABLE III.—VALUES of Contributions and of Sums of Money payable on Death, &c.—continued.

1 Age nearest birthday.	2 Value of Annual Contribution of £1 during whole term of life (first payment at the age x).	3 Annual Contribution during life (first payment at age x) to which one payment of £1 is equal.	4 Value of £1 payable on death of Member.	5 Value of £1 payable on death of wife (Y) provided the husband (X) be then living (equal ages).	Value of ONE POUND a week SICK PAY payable—						1 Age nearest birthday.
					6 To the end of Life.	Until 91 Years of Age, under the Scale of the—					
						7 First Six Months.	8 Second Six Months.	9 Third Six Months and after.	10 Third Six Months.	11 Fourth Six Months and after.	
x	$\frac{N_x}{D_x} = A_x$	$\frac{D_x}{N_x} = a_x$	$\frac{M_x}{D_x} = II_x$	$\frac{M_{xy}}{2D_{xy}} = II^1_{xy}$	$\frac{L_x}{D_x} = SP_x$	$\frac{L^1_x}{D_x} = sp^1_x$	$\frac{L^2_x}{D_x} = sp^2_x$	$\frac{L^{3+}_x}{D_x} = sp^{3+}_x$	$\frac{L^3_x}{D_x} = sp^3_x$	$\frac{L^{4+}_x}{D_x} = sp^{4+}_x$	x
	£	£	£	£	£	£	£	£	£	£	
65	8.786	.1188	.6752	.3872	99.314	30.506	13.398	54.609	10.143	44.466	65
6	8.482	.1179	.6872	.3922	101.456	30.152	13.663	56.769	10.435	46.334	6
7	8.173	.1224	.6992	.3974	103.458	29.657	13.887	58.961	10.711	48.251	7
8	7.865	.1272	.7113	.4025	105.308	29.038	14.070	61.155	10.965	50.190	8
9	7.560	.1323	.7233	.4075	106.999	28.315	14.216	63.318	11.191	52.127	9
70	7.262	.1377	.7350	.4124	108.516	27.501	14.327	65.414	11.382	54.033	70
1	6.974	.1434	.7462	.4170	109.842	26.609	14.404	67.411	11.529	55.882	1
2	6.700	.1493	.7570	.4213	110.976	25.654	14.450	69.282	11.625	57.657	2
3	6.432	.1555	.7675	.4254	111.841	24.622	14.452	70.970	11.664	59.307	3
4	6.178	.1619	.7775	.4292	112.604	23.550	14.433	72.580	11.669	60.911	4
5	5.933	.1686	.7871	.4328	113.184	22.418	14.379	74.047	11.635	62.412	5
6	5.694	.1756	.7965	.4362	113.584	21.231	14.286	75.367	11.566	63.802	6
7	5.460	.1831	.8056	.4395	113.815	19.996	14.154	76.535	11.467	65.068	7
8	5.232	.1911	.8146	.4427	113.833	18.715	13.978	77.479	11.354	66.125	8
9	5.010	.1996	.8233	.4458	113.587	17.389	13.756	78.107	11.243	66.864	9
80	4.792	.2087	.8319	.4488	112.974	16.032	13.478	78.284	11.152	67.132	80
1	4.582	.2182	.8401	.4517	111.969	14.658	13.134	77.918	11.113	66.805	1
2	4.379	.2284	.8480	.4544	110.826	13.312	12.701	77.160	11.011	66.149	2
3	4.183	.2391	.8557	.4570	109.504	12.023	12.121	75.885	10.822	65.064	3
4	3.995	.2503	.8631	.4595	107.943	10.823	11.318	73.910	10.516	63.395	4
5	3.819	.2619	.8700	.4618	106.178	9.768	10.193	71.055	10.060	60.996	5
6	3.649	.2741	.8767	.4640	103.891	8.901	8.563	66.799	9.368	57.432	6
7	3.489	.2866	.8830	.4660	101.795	7.943	6.938	61.060	8.493	52.568	7
8	3.338	.2996	.8889	.4678	99.832	6.783	5.301	53.073	7.333	45.742	8
9	3.196	.3129	.8945	.4696	97.951	5.263	3.628	41.666	5.724	35.943	9
90	3.060	.3268	.8998	.471	96.026	3.132	1.881	24.967	3.414	21.552	90
1	2.932	.3411	.9048	.472	93.985	..	..	..	..	..	..
2	2.809	.3560	.9097	.474	92.066	..	..	..	..	..	..
3	2.689	.3719	.9143	.475	90.213	..	..	..	..	..	..
4	2.571	.3889	.9190	.477	88.370	..	..	..	..	..	..
5	2.458	.4069	.9234	.478	86.572	..	..	..	..	..	..
6	2.342	.4270	.9280	.479	84.597	..	..	..	..	..	..
7	2.220	.4504	.9327	.480	82.238	..	..	..	..	..	..
8	2.082	.4804	.9381	..	79.071	..	..	..	..	..	..
9	1.895	.5278	.9455	..	73.749	..	..	..	..	..	..
100	1.607	.6223	.9568	..	64.043	..	..	..	..	..	..
1	1.262	.7923	.9703	..	51.495	..	..	..	..	..	..
2	1.000	1.0000	.9806	..	41.828	..	..	..	..	..	..

Instead of A_x (col. 2), when the payments are reckoned as made at the end of—

1		$n + 1$	$n^2 - 1$	
Every — year,	use A_x	$\frac{2n}{12n^2}$	$\frac{1}{12n^2}$	$(m_x + \delta)$;
Every week,	..	..	..	$(m_x + .0302)$;
Every fortnight,	..	..	..	..
Every four weeks,	..	..	..	..
Every month,	..	..	..	..
Every quarter,	..	..	..	..
Every half year,	..	..	..	..
Every year,	..	..	..	..

TABLE IV.—*COMMUTATION Table based upon the Mortality, Sickness, and Withdrawals Experience of the M.U.I.O.O.F., England, 1866-70. Interest, 4 per Cent.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
Age (x)	D _x	N _x	C _x	M _x	D _{xy}	N _{xy}	C _{xy}	M _{xy}	K _x	L _x	K _x ¹	L _x ¹	K _x ²	L _x ²	K _x ³⁺	L _x ³⁺	K _x ³	L _x ³	K _x ⁴⁺	L _x ⁴⁺	Age (x)
18	49,363	580,866	271.06	5762.2	49,363	367,374	528.79	5352.8	32,044	683,005	31,027	488,260	919.7	58,027	96.81	135,719	96.81	31,518	00.00	104,201	18
19	45,130	531,503	257.38	5401.1	42,911	318,011	476.70	4824.0	30,181	650,961	28,854	457,233	1062.1	56,108	265.52	135,622	177.02	31,421	88.51	104,201	19
20	41,133	486,373	243.45	5233.7	37,072	275,100	426.75	4347.3	23,315	620,780	26,701	428,379	1129.4	55,046	484.01	135,356	242.01	31,244	242.01	104,112	20
1	37,374	445,240	228.93	4990.3	31,830	238,028	378.64	3920.6	26,460	592,465	24,664	401,678	1209.4	54,916	586.37	134,872	256.54	31,002	329.83	103,870	1
2	33,853	407,866	214.33	4761.3	27,161	206,198	333.62	3541.9	24,598	566,005	22,673	377,014	1294.6	53,707	630.73	134,286	298.76	30,745	331.96	103,541	2
3	30,603	374,013	200.12	4547.0	23,083	179,037	292.74	3208.3	22,717	541,407	20,736	354,341	1200.4	52,412	780.23	133,655	330.10	30,447	450.13	103,209	3
4	27,642	343,410	186.30	4346.9	19,586	155,954	256.04	2915.6	20,871	518,690	18,892	333,605	1165.5	51,212	813.16	132,875	352.37	30,117	460.79	102,758	4
5	24,975	315,768	173.25	4160.6	16,629	136,368	223.90	2659.5	19,102	497,819	17,192	314,713	1126.6	50,046	783.69	132,062	342.86	29,764	440.82	102,298	5
6	22,530	290,793	161.28	3987.3	14,159	119,739	196.39	2435.6	17,529	478,717	15,623	297,521	1063.7	48,920	842.08	131,278	354.56	29,421	487.52	101,857	6
7	20,502	268,194	150.66	3826.1	12,120	105,580	173.31	2239.3	16,204	461,188	14,294	281,898	1005.2	47,856	904.68	130,436	361.87	29,067	542.81	101,369	7
8	18,648	247,692	139.96	3675.4	10,428	93,460	152.50	2065.9	15,068	444,984	13,148	267,604	969.17	46,851	950.89	129,531	365.73	28,705	585.16	100,827	8
9	17,008	229,044	131.12	3535.4	9021.4	83,032	135.67	1913.4	14,093	429,916	12,158	254,456	933.95	45,882	1000.66	128,580	366.91	28,339	633.75	100,241	9
30	15,549	212,036	121.84	3404.3	7841.1	74,010	120.04	1777.8	13,219	415,823	11,313	242,298	914.79	44,948	991.03	127,580	381.16	27,972	609.86	99,608	30
1	14,258	196,487	113.67	3282.5	6857.2	66,169	106.95	1657.7	12,541	402,604	10,584	230,985	908.77	44,033	1048.6	126,589	391.47	27,591	657.11	98,998	1
2	13,111	182,229	107.06	3168.8	6030.9	59,312	96.445	1550.8	11,905	390,063	9924.9	220,401	874.21	43,124	1105.6	125,540	393.54	27,200	707.08	98,341	2
3	12,085	169,118	101.60	3061.8	5328.7	53,282	87.836	1454.3	11,232	378,158	9326.5	212,476	841.40	42,250	1114.0	124,435	391.07	26,801	722.89	97,634	3
4	11,164	157,033	97.171	2960.1	4729.3	47,953	80.782	1366.5	10,740	366,876	8779.9	201,149	810.12	41,408	1149.5	123,321	372.22	26,410	777.27	96,911	4
5	10,333	145,869	93.682	2863.0	4212.9	43,224	75.019	1285.7	10,253	356,136	8277.7	192,370	770.02	40,598	1205.7	122,171	354.62	26,038	851.08	96,133	5
6	9577.4	135,536	90.557	2769.3	3764.4	39,011	69.948	1210.7	9710.7	345,883	7804.3	184,092	723.14	39,828	1183.3	120,965	338.09	25,683	845.23	95,282	6
7	8888.5	125,958	87.534	2678.7	3372.0	35,247	65.300	1140.8	9247.6	336,173	7391.1	176,288	688.56	39,106	1167.9	119,782	331.20	25,345	886.73	94,437	7
8	8259.6	117,070	84.609	2591.2	3028.2	31,875	61.037	1075.5	8876.8	326,925	7013.9	168,896	672.24	38,417	1190.6	118,614	323.97	25,014	866.62	93,600	8
9	7685.1	108,810	81.779	2506.6	2726.4	28,847	57.123	1014.4	8538.1	318,048	6676.7	161,883	670.69	37,744	1190.6	117,424	324.04	24,690	866.62	92,734	9
40	7159.5	101,125	79.043	2424.8	2460.9	26,120	53.527	957.29	8249.1	309,510	6374.6	155,206	673.97	37,074	1200.5	116,233	329.96	24,366	870.54	91,867	40
1	6678.5	93,966	76.592	2345.8	2227.0	23,659	50.349	903.77	8002.6	301,261	6103.5	148,831	687.62	36,400	1211.5	115,032	333.99	24,036	877.54	90,997	1
2	6237.5	87,287	74.023	2260.2	2020.3	21,432	47.291	853.42	7810.6	293,258	5865.6	142,728	697.27	35,712	1247.7	113,821	348.63	23,702	899.11	90,119	2
3	5832.2	81,050	71.540	2195.2	1837.0	19,412	44.469	806.13	7663.4	285,448	5656.1	136,862	709.15	35,015	1298.2	112,573	354.58	23,353	943.63	89,220	3
4	5459.3	75,217	69.661	2123.6	1673.9	17,575	42.169	761.66	7553.4	277,784	5471.0	131,206	717.33	34,306	1365.1	111,275	369.37	22,999	995.70	88,276	4
5	5114.2	69,758	67.653	2054.0	1527.8	15,901	39.915	719.49	7467.2	270,231	5310.8	125,735	727.16	33,588	1429.2	109,910	381.13	22,629	1048.1	87,281	5
6	4794.5	64,044	65.858	1986.3	1396.5	14,373	37.895	679.57	7409.5	262,763	5162.2	120,424	733.42	32,861	1513.9	108,481	394.92	22,248	1118.9	86,233	6
7	4497.4	59,849	64.412	1920.4	1277.9	12,977	36.163	641.68	7364.9	255,354	5031.9	115,262	745.31	32,128	1587.6	106,967	405.73	21,853	1181.9	85,114	7
8	4220.4	55,352	63.427	1856.0	1170.3	11,699	34.755	605.52	7320.8	247,989	4920.6	110,230	753.19	31,383	1647.1	105,379	413.84	21,448	1233.2	83,932	8
9	3960.9	51,132	62.709	1792.6	1072.1	10,529	33.538	570.76	7286.3	240,667	4816.1	105,310	761.25	30,629	1708.9	103,732	419.47	21,034	1289.5	82,699	9
50	3717.1	47,171	62.229	1729.9	981.90	9456.5	32.477	537.22	7249.7	233,382	4716.5	100,493	769.07	29,868	1764.1	102,023	426.45	20,614	1337.7	81,409	50
1	3487.1	43,454	61.826	1667.7	898.73	8474.6	31.473	504.75	7214.9	226,133	4626.4	95,777	779.62	29,099	1808.9	100,259	430.84	20,188	1378.0	80,071	1
2	3269.6	39,966	61.361	1605.8	821.71	7575.8	30.449	473.27	7197.7	218,918	4543.0	91,151	788.70	28,319	1866.0	98,450	439.24	19,757	1426.3	78,693	2
3	3063.7	36,697	60.904	1545.5	750.32	6754.1	29.469	442.82	7189.0	211,720	4464.2	86,608	802.11	27,531	1922.7	96,584	450.62	19,318	1472.0	77,267	3
4	2868.5	33,633	60.388	1483.5	684.08	6003.8	28.412	413.35	7183.8	204,531	4387.9	82,143	815.70	26,729	1980.2	94,662	466.92	18,867	1513.3	75,795	4
5	2683.3	30,765	59.767	1423.1	622.56	5319.7	27.343	384.94	7180.6	197,347	4315.2	77,755	828.83	25,913	2036.6	92,681	484.14	18,400	1552.4	74,281	5
6	2507.6	28,081	58.995	1363.4	565.44	4697.2	26.218	357.60	7180.0	190,167	4239.2	73,440	843.41	25,084	2097.5	90,645	499.16	17,916	1598.3	72,729	6
7	2340.9	25,574	58.718	1304.4	512.47	4131.7	25.317	331.38	7221.5	182,987	4170.8	69,201	863.99	24,241	2187.6	88,547	521.07	17,417	1666.5	71,131	7
8	2182.2	23,233	58.577	1245.7	463.15	3619.3	24.466	306.06	7290.4	175,705	4104.2	65,030	885.88	23,377	2300.3	86,360	545.65	16,896	1754.7	69,464	8
9	2030.9	21,051	58.747	1187.1	417.22	3156.1	23.727	281.60	7372.5	168,475	4036.8	60,926	914.10	22,492	2421.7	84,059	569.57	16,350	1852.1	67,709	9

60	1886-5	19,020	59-005	1128-3	374-37	2738-9	22-995	257-87	7460-4	161,102	3966-1	56,889	939-72	21,578	2554-6	81,638	595-65	15,781	1959-0	65,857	60
1	1748-2	17,133	59-155	1069-3	334-36	2364-5	22-191	234-88	7541-0	153,642	3889-6	52,923	966-84	20,638	2684-5	79,083	618-84	15,185	2065-7	63,898	1
2	1616-0	15,335	58-948	1010-2	297-14	2030-2	21-232	212-60	7620-5	146,101	3811-0	49,034	995-15	19,671	2814-3	76,399	643-36	14,566	2170-0	61,833	2
3	1490-0	13,769	58-256	051-22	262-70	1733-0	20-094	191-45	7688-0	138,480	3730-0	45,223	1024-2	18,676	2933-8	73,584	667-69	13,923	2266-1	59,662	3
4	1370-2	12,279	57-131	892-96	231-04	1470-3	18-822	171-36	7738-9	130,792	3643-7	41,493	1050-7	17,652	3044-5	70,650	691-94	13,255	2352-6	57,396	4
5	1256-7	10,909	55-776	835-83	202-13	1239-3	17-505	152-54	7764-6	123,053	3552-7	37,849	1074-6	16,001	3137-4	67,606	708-56	12,563	2428-8	55,043	5
6	1149-5	9652-1	54-073	780-06	175-89	1037-1	16-123	135-03	7761-9	115,289	3453-8	34,296	1093-4	15,526	3214-8	64,469	724-79	11,855	2490-0	52,614	6
7	1048-7	8502-6	52-914	725-98	152-24	861-25	14-945	118-91	7771-0	107,527	3326-6	30,842	1105-4	14,433	3338-9	61,254	744-50	11,130	2594-4	50,124	7
8	953-47	7453-9	51-963	673-07	130-88	709-01	13-852	103-96	7772-3	99,577-9	3173-2	27,516	1107-9	13,328	3491-1	57,915	765-73	10,385	2725-4	47,530	8
9	863-44	6500-4	51-345	621-10	111-63	578-13	12-858	90-112	7751-3	91,983-6	2998-9	24,343	1100-7	12,220	3651-7	54,424	785-71	9619-6	2366-0	44,804	9
70	778-02	5637-0	50-504	569-76	94-257	466-50	11-821	77-254	7692-4	84,232-3	2807-5	21,344	1084-1	11,119	3800-8	50,772	801-05	8833-9	2999-8	41,938	70
1	697-27	4859-0	49-591	519-25	78-736	372-24	10-787	65-433	7586-1	76,539-9	2602-3	18,536	1058-4	10,035	3925-3	46,971	810-91	8032-8	3114-4	33,939	1
2	621-06	4161-7	47-742	469-66	64-963	293-51	9-5933	54-646	7369-5	68,953-8	2381-2	15,934	1020-1	8976-4	3968-2	43,046	800-22	7221-9	3168-0	35,824	2
3	550-01	3540-6	46-185	421-92	52-988	228-54	8-5170	45-053	7604-7	61,584-3	2155-2	13,553	970-26	7956-3	3939-3	39,078	772-86	6421-7	3166-4	32,656	3
4	483-46	2990-6	43-655	375-73	42-578	175-55	7-3353	36-536	6679-7	54,519-6	1925-7	11,397	910-22	6986-1	3843-8	35,138	731-97	5648-8	3111-8	29,490	4
5	422-06	2507-2	40-682	332-08	33-748	132-98	6-1861	29-200	6238-6	47,839-9	1698-9	9471-7	845-11	6075-8	3694-5	31,295	681-63	4916-9	3012-9	26,378	5
6	365-93	2085-1	37-973	291-40	26-384	99-228	5-1860	23-014	5759-2	41,601-3	1478-7	7772-8	775-07	5230-7	3502-1	27,600	624-72	4235-2	2377-4	23,365	6
7	314-62	1719-2	34-933	253-42	20-284	72-344	4-2493	17-828	5276-2	35,842-1	1271-4	6294-1	703-72	4455-7	3298-3	24,098	562-42	3610-5	2735-9	20,488	7
8	268-27	1404-5	31-933	218-49	15-337	52-560	3-4296	13-579	4795-8	30,565-9	1079-6	5022-7	632-39	3751-9	3083-8	20,800	497-97	3048-1	2585-9	17,752	8
9	226-64	1136-3	28-847	186-56	11-384	37-223	2-7099	10-149	4319-4	25,770-1	900-94	3943-1	561-81	3119-6	2856-6	17,716	433-36	2550-1	2423-3	15,166	9
80	189-63	909-63	25-908	157-71	8-2889	25-839	2-1071	7-4395	3852-5	21,450-7	739-90	3042-2	494-81	2557-7	2617-8	14,859	370-79	2116-8	2247-0	12,743	80
1	156-93	720-00	22-943	131-80	5-9039	17-550	1-5979	5-3324	3344-7	17,698-2	591-39	2302-3	430-73	2062-9	2322-6	12,242	330-55	1746-0	1002-1	10,496	1
2	128-40	563-07	20-099	108-85	4-1100	11-646	1-1840	3-7345	2372-5	14,253-5	462-32	1710-9	373-55	1632-2	2036-6	9918-9	291-34	1415-4	1745-3	8503-5	2
3	103-75	434-67	17-397	88-755	2-7909	7-5357	8-559	2-5505	2437-4	11,381-0	352-61	1248-6	321-89	1258-7	1762-9	7882-3	253-42	1124-1	1509-4	6758-2	3
4	82-700	330-92	14-946	71-358	1-8442	4-7448	6-052	1-6946	2040-6	8943-57	261-53	895-96	274-99	936-76	1504-1	6119-4	217-25	870-65	1286-9	5248-8	4
5	64-863	248-22	12-483	56-412	1-1799	2-9006	4-096	1-0894	1681-2	6902-97	187-57	634-43	232-03	661-77	1261-6	4615-3	183-12	653-40	1078-5	3961-9	5
6	50-128	183-36	10-322	43-929	7-329	1-7207	2-701	6-798	1333-8	5221-77	143-93	446-86	165-21	429-74	1024-7	3353-7	146-33	470-28	878-34	2883-4	6
7	38-079	133-23	8-3730	33-607	4-398	9-878	1-717	4-097	1041-8	3887-97	109-85	302-93	113-70	264-53	818-21	2329-0	115-23	323-95	702-98	2005-0	7
8	28-404	95-152	6-5900	25-234	2-545	5-480	1-041	2-380	800-13	2846-17	83-306	193-08	75-173	150-833	641-66	1510-8	89-32	208-72	552-33	1302-0	8
9	20-849	66-748	5-1709	18-644	1-426	2-935	6-618	1-339	605-54	2046-04	62-866	109-77	47-492	75-660	495-18	869-10	68-26	119-40	426-92	749-70	9
90	14-977	45-899	3-9948	13-473	0-765	1-509	0-353	0-721	449-00	1440-50	46-907	46-907	28-168	28-168	373-92	373-92	51-14	51-14	322-78	322-78	90
1	10-484	30-922	2-9016	9-4785	0-390	0-744	0-185	0-368	321-35	991-50	..	..	..	..	..	..	..	..	..	..	1
2	7-2351	20-438	2-1257	6-5769	0-193	0-354	0-097	0-183	227-07	670-15	..	..	..	..	..	..	..	..	..	..	2
3	4-8724	13-203	1-5074	4-4512	0-091	0-161	0-047	0-086	156-76	443-08	..	..	..	..	..	..	..	..	..	..	3
4	3-2068	8-3303	1-0318	2-9438	0-041	0-070	0-022	0-039	105-88	286-32	..	..	..	..	..	..	..	..	..	..	4
5	2-0717	5-1235	7-087	1-9120	0-018	0-029	0-010	0-017	70-273	180-438	..	..	..	..	..	..	..	..	..	..	5
6	1-2971	3-0518	4-543	1-2033	0-007	0-011	0-004	0-007	45-243	110-165	..	..	..	..	..	..	..	..	..	..	6
7	8018	1-7547	3-058	7-490	0-003	0-004	0-002	0-003	28-781	64-922	..	..	..	..	..	..	..	..	..	..	7
8	4712	9529	1-890	4-432	0-001	0-001	0-001	0-001	17-417	36-141	..	..	..	..	..	..	..	..	..	..	8
9	2677	4817	1-212	2-542	0-000	0-000	0-000	0-000	10-199	18-724	..	..	..	..	..	..	..	..	..	..	9
100	1386	2140	0-777	1330	0-000	0-000	0-000	0-000	5-4448	8-5252	..	..	..	..	..	..	..	..	..	..	100
1	0571	0754	0373	0553	..	..	..	..	5-3147	3-0804	..	..	..	..	..	..	..	..	..	..	1
2	0183	0183	0180	0180	..	..	..	..	7657	7657	..	..	..	..	..	..	..	..	..	..	2

TABLE V.—VALUES of Contributions, and of Sums of Money payable on Death and in Sickness, the Element of Withdrawals being taken into account. M.U., I.O.O.F. Experience, England, 1866-70. Interest 4 per cent.*

1 Age nearest birthday.	2 Value of Annual Con- tribution of £1 during whole term of life (first payment at the age x).	3 Annual Contribution during life (first pay- ment at age x) to which one payment of £1 is equal.	4 Value of £1 payable on death of Member.	5 Value of £1 payable on death of wife (Y) provided the husband (X) be then living (equal ages).	Value of ONE POUND per week SICK PAY payable—						1 Age nearest birthday.
					6 To the end of Life.	Until 91 Years of Age, under the Scale of the—					
						7 First Six Months.	8 Second Six Months.	9 Third Six Months and after.	10 Third Six Months.	11 Fourth Six Months and after.	
x	$\frac{N_x}{D_x} = A_x$	$\frac{D_x}{N_x} = a_x$	$\frac{M_x}{D_x} = \Pi_x$	$\frac{M_{xy}}{2D_{xy}} = \Pi_{xy}^1$	$\frac{L_x}{D_x} = SP_x$	$\frac{L_x^1}{D_x} = sp_x^1$	$\frac{L_x^2}{D_x} = sp_x^2$	$\frac{L_x^{3+}}{D_x} = sp_x^{3+}$	$\frac{L_x^3}{D_x} = sp_x^3$	$\frac{L_x^{4+}}{D_x} = sp_x^{4+}$	x
	£	£	£	£	£	£	£	£	£	£	
18	11.767	.0850	.1167	.0542	13.836	9.891	1.176	2.740	.639	2.111	18
19	11.777	.0849	.1217	.0562	14.424	10.131	1.243	3.005	.696	2.309	19
20	11.824	.0846	.1272	.0586	15.092	10.415	1.338	3.291	.760	2.531	20
1	11.913	.0839	.1335	.0616	15.852	10.748	1.460	3.609	.830	2.779	1
2	12.048	.0830	.1407	.0652	16.720	11.137	1.587	3.967	.908	3.059	2
3	12.221	.0818	.1486	.0695	17.691	11.579	1.713	4.367	.995	3.373	3
4	12.424	.0805	.1573	.0744	18.765	12.069	1.853	4.807	1.090	3.718	4
5	12.643	.0791	.1666	.0800	19.933	12.601	2.004	5.288	1.192	4.096	5
6	12.868	.0777	.1764	.0860	21.183	13.165	2.165	5.809	1.302	4.507	6
7	13.081	.0764	.1866	.0924	22.495	13.750	2.334	6.362	1.418	4.944	7
8	13.283	.0753	.1971	.0991	23.862	14.350	2.512	6.946	1.539	5.407	8
9	13.467	.0743	.2079	.1061	25.277	14.961	2.698	7.560	1.666	5.894	9
30	13.637	.0733	.2189	.1134	26.743	15.583	2.891	8.205	1.799	6.406	30
1	13.781	.0726	.2302	.1209	28.237	16.200	3.088	8.878	1.936	6.943	1
2	13.899	.0720	.2417	.1286	29.751	16.810	3.289	9.575	2.075	7.501	2
3	13.994	.0715	.2534	.1365	31.292	17.416	3.496	10.297	2.218	8.079	3
4	14.066	.0711	.2652	.1445	32.862	18.018	3.709	11.046	2.366	8.681	4
5	14.117	.0708	.2771	.1526	34.466	18.617	3.929	11.823	2.520	9.304	5
6	14.152	.0707	.2892	.1608	36.115	19.222	4.159	12.630	2.682	9.949	6
7	14.171	.0706	.3014	.1692	37.821	19.833	4.400	13.476	2.852	10.625	7
8	14.174	.0706	.3137	.1776	39.581	20.449	4.651	14.361	3.029	11.332	8
9	14.159	.0706	.3262	.1860	41.385	21.065	4.911	15.279	3.213	12.067	9
40	14.125	.0708	.3387	.1945	43.231	21.678	5.178	16.235	3.403	12.832	40
1	14.070	.0711	.3512	.2029	45.109	22.285	5.450	17.224	3.599	13.625	1
2	13.994	.0715	.3638	.2112	47.015	22.882	5.725	18.248	3.800	14.448	2
3	13.897	.0720	.3764	.2194	48.943	23.467	6.004	19.302	4.004	15.298	3
4	13.778	.0726	.3890	.2275	50.883	24.034	6.284	20.383	4.213	16.170	4
5	13.640	.0733	.4016	.2355	52.839	24.586	6.568	21.491	4.425	17.066	5
6	13.483	.0742	.4143	.2433	54.805	25.117	6.854	22.626	4.640	17.986	6
7	13.308	.0752	.4270	.2511	56.778	25.629	7.144	23.784	4.859	18.925	7
8	13.115	.0763	.4398	.2587	58.760	26.118	7.436	24.969	5.082	19.887	8
9	12.909	.0775	.4526	.2662	60.761	26.587	7.733	26.189	5.310	20.879	9
50	12.690	.0788	.4654	.2736	62.786	27.035	8.035	27.447	5.546	21.901	50
1	12.461	.0803	.4782	.2808	64.848	27.466	8.345	28.751	5.789	22.962	1
2	12.224	.0818	.4911	.2880	66.956	27.878	8.661	30.111	6.043	24.068	2
3	11.978	.0835	.5041	.2951	69.106	28.269	8.986	31.525	6.305	25.220	3
4	11.725	.0853	.5172	.3021	71.302	28.636	9.318	33.000	6.577	26.423	4
5	11.465	.0872	.5304	.3092	73.546	28.978	9.657	34.540	6.857	27.683	5
6	11.199	.0893	.5437	.3162	75.836	29.287	10.003	36.148	7.145	29.003	6
7	10.925	.0915	.5572	.3233	78.169	29.562	10.355	37.826	7.440	30.386	7
8	10.647	.0939	.5708	.3304	80.545	29.800	10.713	39.575	7.743	31.832	8
9	10.365	.0965	.5845	.3375	82.956	30.000	11.075	41.390	8.051	33.340	9

Instead of A_x (col. 2), when the payments are reckoned as made at the end of—

Every — year,	use A_x	$\frac{n+1}{2n}$	$\frac{n^2-1}{12n^2}$	$(m_x + \delta)$;
Every week,	„ „	.5096	.0832	$(m_x + .0892)$;
Every fortnight,	„ „	.5192	.0832	„ „
Every four weeks,	„ „	.5385	.0828	„ „
Every month,	„ „	.5417	.0828	„ „
Every quarter,	„ „	.6250	.0791	„ „
Every half year,	„ „	.7500	.0625	„ „
Every year,	„ „	1		

E.g.—Value of £1 a year paid at end of each quarter at age 25 is £12.643 — £.625 = £12.018 approximately, i.e., neglecting the correction for age.

TABLE V.—VALUES of Contributions, and of Sums of Money payable on Death, &c.—continued.

1	2	3	4	5	Value of ONE POUND a week SICK PAY payable—						1
Age nearest birthday.	Value of Annual Contribution of £1 during whole term of life (first payment at the age x).	Annual Contribution during life (first payment at age x) to which one payment of £1 is equal.	Value of £1 payable on death of Member.	Value of £1 payable on death of wife (Y) provided the husband (X) be then living (equal ages).	6	Until 91 Years of Age, under the Scale of the—					Age nearest birthday.
					To the end of Life.	7	8	9	10	11	
						First Six Months.	Second Six Months.	Third Six Months and after.	Third Six Months.	Fourth Six Months and after.	
x	$\frac{N_x}{D_x} = A_x$	$\frac{D_x}{N_x} = a$	$\frac{M_x}{D_x} = \Pi_x$	$\frac{M_{xy}}{2D_{xy}} = \Pi_{xy}^1$	$\frac{L_x}{D_x} = SP_x$	$\frac{L_x^1}{D_x} = sp_x^1$	$\frac{L_x^2}{D_x} = sp_x^2$	$\frac{L_x^{3+}}{D_x} = sp_x^{3+}$	$\frac{L_x^3}{D_x} = sp_x^3$	$\frac{L_x^{4+}}{D_x} = sp_x^{4+}$	x
	£	£	£	£	£	£	£	£	£	£	
60	10.082	.0992	.5981	.3444	85.397	30.156	11.438	43.275	8.365	34.910	60
1	9.801	.1020	.6117	.3512	87.886	30.273	11.805	45.237	8.686	36.551	1
2	9.520	.1050	.6251	.3579	90.409	30.343	12.173	47.276	9.014	38.263	2
3	9.241	.1082	.6384	.3644	92.940	30.351	12.534	49.385	9.344	40.041	3
4	8.962	.1116	.6517	.3708	95.455	30.282	12.882	51.562	9.674	41.889	4
5	8.681	.1152	.6651	.3773	97.918	30.118	13.210	53.796	9.997	43.800	5
6	8.397	.1191	.6786	.3839	100.295	29.836	13.507	56.084	10.313	45.771	6
7	8.108	.1233	.6923	.3905	102.534	29.410	13.763	58.409	10.613	47.797	7
8	7.818	.1279	.7059	.3972	104.624	28.859	13.978	60.741	10.892	49.849	8
9	7.529	.1328	.7193	.4036	106.532	28.193	14.152	63.031	11.141	51.891	9
70	7.245	.1380	.7323	.4098	108.265	27.433	14.291	65.258	11.354	53.904	70
1	6.969	.1435	.7447	.4155	109.771	26.584	14.392	67.364	11.520	55.844	1
2	6.701	.1492	.7562	.4206	111.026	25.656	14.453	69.310	11.628	57.682	2
3	6.437	.1553	.7671	.4251	111.969	24.641	14.466	71.049	11.676	59.374	3
4	6.186	.1617	.7772	.4290	112.770	23.575	14.450	72.681	11.684	60.997	4
5	5.940	.1683	.7868	.4326	113.349	22.442	14.396	74.147	11.650	62.498	5
6	5.698	.1755	.7963	.4361	113.686	21.241	14.294	75.425	11.574	63.851	6
7	5.464	.1830	.8055	.4395	113.922	20.005	14.162	76.594	11.476	65.119	7
8	5.236	.1910	.8144	.4427	113.937	18.723	13.986	77.533	11.362	66.171	8
9	5.014	.1995	.8231	.4458	113.705	17.398	13.764	78.168	11.252	66.916	9
80	4.797	.2085	.8317	.4488	113.119	16.043	13.488	78.359	11.163	67.197	80
1	4.588	.2180	.8399	.4516	112.140	14.671	13.146	78.006	11.126	66.881	1
2	4.385	.2281	.8478	.4543	111.009	13.325	12.712	77.250	11.023	66.227	2
3	4.190	.2387	.8555	.4569	109.696	12.034	12.132	75.974	10.834	65.139	3
4	4.002	.2499	.8629	.4594	108.145	10.834	11.327	73.995	10.528	63.468	4
5	3.827	.2613	.8697	.4617	106.424	9.781	10.203	71.155	10.074	61.081	5
6	3.658	.2734	.8763	.4638	104.169	8.914	8.573	66.903	9.382	57.520	6
7	3.499	.2858	.8826	.4658	102.104	7.955	6.947	61.162	8.507	52.654	7
8	3.350	.2985	.8884	.4676	100.203	6.798	5.310	53.188	7.348	45.840	8
9	3.202	.3124	.8943	.4695	98.136	5.265	3.629	41.686	5.727	35.959	9
90	3.065	.3263	.8996	.471	96.181	3.132	1.881	24.966	3.415	21.552	90
1	2.949	.3391	.9041	.472	94.573	..	..	..	..	..	1
2	2.825	.3540	.9090	.474	92.625	..	..	..	..	..	2
3	2.710	.3691	.9136	.475	90.937	..	..	..	..	..	3
4	2.598	.3850	.9180	.477	89.285	..	..	..	..	..	4
5	2.473	.4044	.9229	.478	87.097	..	..	..	..	..	5
6	2.353	.4250	.9277	.479	84.932	..	..	..	..	..	6
7	2.189	.4569	.9341	.48	80.970	..	..	..	..	..	7
8	2.022	.4945	.9406	..	76.700	..	..	..	..	..	8
9	1.799	.5557	.9496	..	69.954	..	..	..	..	..	9
100	1.544	.6477	.9597	..	61.509	..	..	..	..	..	100
1	1.320	.757	.9684	..	53.95	..	..	..	..	..	1
2	1.000	1.000	.981	..	41.84	..	..	..	..	..	2

Instead of A_x (col. 2), when the payments are reckoned as made at the end of—

Every $\frac{1}{n}$ year,	use $A_x - \frac{n+1}{2n} - \frac{n^2-1}{12n^2} (m_x + \delta);$
Every week,	" " — .5096 — .0832 $(m_x + .0392);$
Every fortnight,	" " — .5192 — .0832 " "
Every four weeks,	" " — .5385 — .0828 " "
Every month,	" " — .5417 — .0828 " "
Every quarter,	" " — .6250 — .0791 " "
Every half year,	" " — .7500 — .0625 " "
Every year,	" " — 1.

AN EXPLANATION OF THE TABLES, ILLUSTRATIONS OF VALUATION OF ASSETS AND LIABILITIES OF FRIENDLY SOCIETIES, AND OF MODE OF DETERMINING RATES OF CONTRIBUTIONS.

For the sake of brevity and precision some of the ordinary arithmetical symbols will be employed when convenient, the signification of which will be readily understood from the following illustrations:—

1. The expression $7 + 9 = 16$, means 9 added to 7 equals 16; $12 - 8 = 4$, means 12 less 8 = 4; $6 \times 3 = 18$, means 6 multiplied by 3 = 18; $20 : 5 = 4$, means 20 divided by 5 = 4, which is also the meaning of $\frac{20}{5} = 4$, being two distinct modes of indicating division; $3 : 7 = 12 : 28$, means 3 divided by 7 equals 12 divided by 28, or, the ratio of 3 to 7 is the same as the ratio of 12 to 28, or 3 is to 7 as 12 is to 28, two equal ratios constituting a proportion or analogy.* Also $3^4 = 3 \times 3 \times 3 \times 3 = 9 \times 9 = 9^2 = 81$; $128 \times 4^{-3} = 128 : 4^3 = \frac{128}{4^3} = \frac{128}{4 \times 4 \times 4} = \frac{128}{64} = 2$.

2. The several present values in the Valuation Tables are, for facility of calculation, presented almost of necessity in the form of decimals of £1, instead of in the more familiar shillings, pence, and farthings, and this mode of statement will doubtless prove a serious obstacle to many. But it is a difficulty which such persons would find it, on making the attempt, very easy to remove.†

3. When numbers are written or printed they are expressed in words at length as spoken, as, for instance, *two thousand eight hundred and ninety-four*; or they are represented by signs or symbols. Of symbols we have the choice of two sets; the above quantity we may indicate by Roman numerals, where letters of the alphabet are used instead of numbers, as MMDCCCXCIV; or we may employ Arabic numerals, as 2894. The peculiarity and advantage of this system is that each of its nine digits, with a 0 to mark position, has two values, one when standing alone, and another due to its relative position. The figure 8 standing in the 3rd place from the right in the above number represents 8 hundreds; if moved to the place in which now stands the 9 it would be reduced to 80, one tenth of its present value, and if moved to the place now occupied by the 4 it would be still further reduced to a tenth of its preceding value, or to 8.‡

4. If the symbol £ be written before the above number and 782 after it, thus £2894.782, the figures 2, 8, 9, 4 would have just the same relative value they had before, the 4 now meaning of course 4 pounds, and so on, instead of numbers in the abstract. The dot . is used to indicate that the figures to the right represent values less than a unit, that is, in this case, than £1, every step in that direction serving to cause the value of a figure to descend to a tenth of that it had in the preceding place. Thus 7 represents so many tenths of £1, or 7 florins; the 8 so many tenths of a florin, or hundredths of £1; the 2, two thousandths of £1, or, taking the last two figures together, 82 indicates 82 thousandths of £1. Since £1 contains 960 farthings, we may look upon 82 thousandths of £1 as 82 short-weight farthings, 25 of which are of the same value as 24 ordinary farthings. The above sum may therefore be written thus, £2894, 7 florins, 82 short farthings, which amount, if 3, that is, 1 for each 25 short farthings in 82, be deducted to give the equivalent number of full farthings, is plainly the same as £2894 14s. 79 farthings, and finally equals £2894 15s. 7½d.

* The common use of the sign \div , instead of $:$, to represent division, and of $::$, instead of $=$, to indicate equality of ratios, has occasioned much confusion of thought; the two symbols \div and $::$ are redundant.

† "The decimal form is not adopted by actuaries for the purpose of enshrouding the matter in mystery, as I know some members of these Societies have imagined; neither is it used with the view of investing the process with a pedantic appearance of learning. Decimal fractions are preferred simply because the calculations can be made with more exactness and less trouble than by the adoption of the other method."—*Hardwick (Manual, p. 128)*.

‡ "The clumsy Roman notation was discarded and was replaced by the beautiful Arabic notation, where each figure is ten more, or a tenth less, than the same figure to its right or left, hence all the transcendent achievements of modern arithmetic. . . . It is difficult to estimate the economy of time and thought through the whole of life to be realised by the substitution of units (representing money of account, weights and measures) decimally related to each other in place of the units now in use."—*Dr. Farr. Report (on Decimal Systems) to International Statistical Congress held at the Hague in 1869. Reports of Registrar-General (England), No. 31, p. 257.*

The change of currency into decimals of £1. 5. Sums of money, such as £7 9s. 1½d., may be put into a decimal form by reversing the above process :—£7 9s. 1½d. = £7 8s. 13½d. = £1, 4 florins, 53 farthings; this sum, when 2 short farthings are added to it, being 1 for every 24 full farthings, becomes £7, 4 florins, 55 short farthings = £7.455.*

Table 1 contains the Experience of the Manchester Unity, collected by Henry Ratcliffe. 6. The Report on Friendly Societies, by the Government Statist, for 1881, contained an abstract of a memorandum by the Chief Registrar of Friendly Societies for England and Wales, explaining as far as practicable the meaning and purpose of a valuation, wherein Mr. Ludlow observes :—

“In order to know whether a society is likely or not to be able to meet all the engagements it has entered into, it is necessary to make an estimate of what the future claims of the members are likely to be, and of what their future contributions are likely to amount to. In other words, having regard to the ages of the members at the time of valuation, we have to try to find out how much sickness they are likely to be subject to, and when they are likely to die, or as they are termed, their rates of sickness and mortality. These are matters which have been the subject of much observation and calculation. It has been ascertained that in any large number of persons of the same age, and whose trade or calling is carried on under the same or like circumstances, there will be an average or probable number of days’ sickness, as well as an average or probable rate of deaths, for every year of their after life. Starting from this fact, there have been calculated what are called tables of sickness and mortality which show how many days’ sickness and how many deaths are to be expected for every year of life.”

7. For the collection of the Rates of Sickness and Mortality, Table 1., given on pages xc. and xci., we are indebted to Mr. Henry Ratcliffe, for many years the Corresponding Secretary of the Manchester Unity in England, being the third of such tables published by him. The first, issued in 1850, included members who during the three years 1846–8 had passed through 621,561 years of life and experienced 609,112 weeks’ sickness; the second, in 1862, included such as had passed through 1,006,272 years of life, and experienced 1,321,202 weeks of sickness during the five years 1856–60; and the third, in 1872, included members who had passed through 1,321,006 years of life and experienced 1,975,032 weeks’ sickness during the five years 1866–70, “being the largest experience ever collected by any person or society.”

“Taking into consideration (says Mr. Ratcliffe in the Supplementary Report for 1872) that a period of 10 years had elapsed between the first and second data being obtained, that the same number of years had elapsed between the second and third data being called for, that during each interval a large number of members left and a large number joined the Unity, and that from a change in the circumstances of the members arising from the nature of employment and locality, it is not at all surprising to find some change in the average sickness and rate of mortality experienced by members.”

8. The facts relating to sickness collected in the three periods referred to are, for purposes of comparison, given in the subjoined Table.

* (a) To convert shillings, pence, and farthings into the decimal of £1 of three places, i.e., into florins (dimes), cents, and mills of the proposed £1 unit coinage, insert half the number of shillings in the first decimal place; enter in the second and third in addition to 50 when there is an odd number of shillings, the number of farthings to which the pence and farthings are equal, increased by its 24th part, that is approximately and correctly as far as three places, increased by 1 for sums between 3d. and 9d., and by 2 when 9d. and upwards.

(b) In order that the result may be substantially correct when the sum expressed decimally has to be multiplied, a greater number of places than three will usually be required, and the most ready known method of making such addition of the 24th part of the number of farthings is the following :—

Any number of 24th parts of any unit may be expressed by an equivalent number of 8ths, either exactly or with $\frac{1}{24}$ or $\frac{2}{24}$ added, therefore for 3, 6, 9 . . . 21 farthings in the sum, or in the excess above 6d., equal respectively to $\frac{1}{8}$, $\frac{2}{8}$, $\frac{3}{8}$. . . $\frac{7}{8}$ of 24, enter in the fourth, fifth, sixth places the corresponding 8th parts of 1000, i.e., 125, 250, 375 . . . 875; when the number of farthings exceeds such 8th part by 1, add to these figures 0416 ($= \frac{1}{24}$); when it exceeds it by 2, add 083 ($= \frac{2}{24}$).

(c) Otherwise, since any number of pence is that number of 6ths of 6d., e.g., 5d. $= \frac{5}{6}$, enter in the fourth place, and fifth if necessary, 16, 3, 5, 6, or 83, according to the number of pence or the excess above 6d. in the sum, and for $\frac{1}{2}$ d. add 0416, for $\frac{1}{4}$ d. 083 as before, and for $\frac{3}{4}$ d. ($= \frac{3}{8}$ $= \frac{1}{2}$) add 125.

(d) From an examination of the above processes it is clear that when there are no pence or farthings any sum may be represented as the decimal of £1 by 2 places at most, and when there are no farthings by 5 at most; when the pence and farthings, or the excess above 6d. form an exact 8th part of 6d., the limit will be 6 places, and in every other case the maximum number of places will be 7. Any decimal of £1 containing a 3 or a 6 (the symbol of an interminable series, but nevertheless equal to the determinate value $\frac{1}{3}$ or $\frac{2}{3}$) may be made to furnish, without additional calculation, when multiplied by a factor of two or more figures, a result not approximately merely but exactly correct, by simply filling in omitted figures in the several partial products.

(e) The decimals of £1 may conveniently be valued by the following Rule, three decimal places being taken :—

Double the first decimal figure for the shillings, but if the second be 5 or upwards, take 5 from it and make the shillings 1 more, the remaining figures, diminished by 1, if they be 25 or upwards, are the farthings in the required sum.

(f) Should it be at any time considered desirable to obtain an exact result, the following plan may be adopted :—In the preceding rule, omit the words “three decimal places being taken,” and after the words “remaining figures” read “a fresh decimal point being placed between the third and fourth figures, and the resulting number, which will then represent mills or short farthings, multiplied by (1 - .04), i.e., the number diminished by quadruple its value moved two places to the right, will give the farthings exactly.”

These processes, though apparently long, are much simpler when performed mentally than when laid out at length on paper. A very little practice will enable any one to use this method of conversion and re-conversion with great facility.

NOTE.—The two approximate Rules (a) and (c) have been taken from the Treatise on Arithmetic in Chambers’ Educational Course, edition 1880, pp. 141–143. For other methods of conversion see *The Science of Arithmetic*, by Cornwell and Fitch, 1864, p. 180, and *Rules to be observed in converting the parts of £1 into Decimals*, by Professor De Morgan, *Jo. I. A.*, 1864, Vol. XI., p. 54.

THE Average Sickness per annum to each person experienced by Members of the Manchester Unity in England at three distinct periods during 1846 to 1870.

Age.	1846-8.				1856-60.				1866-70.			
	Weeks.	W.	D.	H.	Weeks.	W.	D.	H.	Weeks.	W.	D.	H.
18.....	5449	=	3	19	8265	=	5	19	6620	=	4	15
19.....	5648	=	3	23	8263	=	5	19	6821	=	4	18
20.....	5849	=	4	2	8260	=	5	19	7022	=	4	21
21.....	6247	=	4	8	8253	=	5	19	7223	=	5	1
22.....	6589	=	4	14	8240	=	5	19	7405	=	5	4
23.....	6878	=	4	17	8234	=	5	19	7565	=	5	7
24.....	7111	=	4	23	8218	=	5	18	7699	=	5	9
25.....	7288	=	5	2	8198	=	5	18	7813	=	5	11
26.....	7409	=	5	4	8173	=	5	17	7913	=	5	12
27.....	7544	=	5	6	8178	=	5	16	8061	=	5	15
28.....	7693	=	5	9	8212	=	5	18	8240	=	5	18
29.....	7856	=	5	11	8273	=	5	19	8444	=	5	21
30.....	8034	=	5	15	8367	=	5	21	8668	=	6	1
31.....	8225	=	5	18	8488	=	5	23	8771	=	6	6
32.....	8424	=	5	21	8659	=	6	0	9258	=	6	11
33.....	8633	=	6	1	8979	=	6	7	9522	=	6	15
34.....	8850	=	6	4	9148	=	6	10	9811	=	6	20
35.....	9077	=	6	8	9467	=	6	15	10115	=	1	0
36.....	9312	=	6	12	9834	=	6	21	10339	=	1	0
37.....	9600	=	6	17	10218	=	1	0	10613	=	1	0
38.....	9940	=	6	23	10620	=	1	0	10956	=	1	0
39.....	10333	=	1	0	11040	=	1	0	11327	=	1	0
40.....	10779	=	1	0	11478	=	1	1	11747	=	1	1
41.....	11277	=	1	0	11933	=	1	1	12217	=	1	1
42.....	11834	=	1	1	12424	=	1	1	12766	=	1	1
43.....	12451	=	1	1	12951	=	1	2	13395	=	1	2
44.....	13128	=	1	2	13512	=	1	2	14104	=	1	2
45.....	13864	=	1	2	14110	=	1	2	14893	=	1	3
46.....	14659	=	1	3	14760	=	1	3	15761	=	1	4
47.....	15523	=	1	3	15521	=	1	3	16695	=	1	4
48.....	16457	=	1	4	16391	=	1	4	17693	=	1	5
49.....	17460	=	1	5	17371	=	1	5	18758	=	1	6
50.....	18533	=	1	5	18461	=	1	5	19887	=	1	6
51.....	19675	=	1	6	19641	=	1	6	21082	=	2	0
52.....	21103	=	2	0	21005	=	2	0	22219	=	2	1
53.....	22819	=	2	1	22550	=	2	1	23899	=	2	2
54.....	24821	=	2	3	24278	=	2	3	25523	=	2	3
55.....	27111	=	2	4	26189	=	2	4	27288	=	2	5
56.....	29687	=	2	6	28283	=	2	5	29197	=	2	6
57.....	32660	=	3	1	30730	=	3	0	31455	=	3	1
58.....	36031	=	3	4	33529	=	3	2	34064	=	3	2
59.....	39799	=	3	6	36681	=	3	4	37023	=	3	4
60.....	43985	=	4	2	40245	=	4	0	40332	=	4	0
61.....	48548	=	4	5	44040	=	4	2	43991	=	4	2
62.....	52662	=	5	1	48150	=	4	5	48088	=	4	5
63.....	56330	=	5	4	52517	=	5	1	52624	=	5	1
64.....	59548	=	5	6	57139	=	5	5	57598	=	5	5
65.....	62299	=	6	1	62018	=	6	1	63010	=	6	2
66.....	64621	=	6	3	67152	=	6	5	68862	=	6	6
67.....	69126	=	6	6	73398	=	7	2	75569	=	7	3
68.....	75815	=	7	4	80757	=	8	0	83131	=	8	2
69.....	84688	=	8	3	89208	=	8	6	91550	=	9	1

"It must be clearly and distinctly understood (observes Mr. Ratcliffe) that, from these observations, *the members of the Unity included in these Returns have experienced this average sickness* For the first 10 years, from ages 20 to 30, the aggregate sickness is least from the data 1846-8, greatest in 1856-60, and the aggregate sickness experienced in 1866-70 greater than in 1846-8, and less than 1856-60. In the next period of 10 years, from ages 30 to 40, the aggregate sickness is least in 1846-8, greatest in 1866-70, and in 1856-60 a medium between the other two periods. For the periods between the ages 40 and 50, the least aggregate sickness was experienced in 1846-8, the next greatest in the years 1856-60, and the highest aggregate sickness during the years 1866-70. And in the last period, between ages 50 to 60, the least aggregate sickness experienced was in the years 1856-60, the highest aggregate during the years 1846-8; the aggregate sickness in 1866-70, in passing from 20 to 70, had been 122 weeks 23 hours. Such is the experience of sickness in the Manchester Unity. That it has been experienced, and will again be experienced, is certain: and if the members do not make provision for a continual increase in sickness as they increase in age, they will find that they will fail to meet their engagements; the amount already realized will become exhausted, and the member who has paid longest into the society, and who has supported others in receiving greater benefits than they have contributed for, will find no assistance in his greatest time of necessity, for the amount already received, having been insufficient, will have become exhausted."

9. "The Report for 1872," remarks Mr. Cornelius Walford, in the excellent article on *Friendly Societies, Mortality and Sickness of*, contained in the Insurance Cyclopædia, now issuing from the press, whence most of the preceding details were taken, "contains a number of useful Monetary Tables (calculated at 3 per cent.) based upon the preceding data, and will on the whole be found *one of the most valuable works* which an actuary engaged practically in valuing the assets and liabilities of Friendly Societies can have at hand." *

Table I (a)
The present
value of sums
at compound
interest.

10. Table I (a) contains the present value, at 4 per cent. interest, of £1 due in any number of years from 1 to 102. An illustration will serve to indicate the relation which subsists between the several quantities contained in any one column. At 4 per cent., £100, with principal and interest added, will amount in a year to £104; then £104 being the amount of £100 in a year, it follows that the sum which will amount in the same time to £100 will be obtained by dividing £100 by 104, and is equal to £96.1538; for amount £104: principal £100 = amount £100: principal £96.1538. If we take £1 as the amount instead of £100, as being the more convenient unit, the sum which must be now invested to accumulate to £1 in a year's time is £.961,538, being the same as the above divided by 100. The same ratio exists between any two consecutive values in the column—thus, for instance, at the years 20 and 21, $104 : 100 = 1 : .961,538 = .456,387 : .438,834$ —as, therefore, the years ascend in equidifferent progression the values descend in equirational progression.†

11. It is thus apparent that the whole column *could*, at some considerable expenditure of time and trouble, be constructed by ordinary multiplication; calculators usually perform such work, however, by the Calculating Machine (Arithmometer), or by Logarithmic Tables, or by the aid of both combined.

The Valuation
Tables, Nos.
III. to IX.

12. The Valuation Tables, at any required rate of interest, are formed by combining the quantities given in the Life and Sickness Tables, No. I., with the present value of £1 contained in the proper column of Table No. II., in the manner shown in the subjoined Table.

* "In connection with this part of the subject, it is due to the memory of a remarkable man to record the serious loss experienced by Friendly Societies in the death of Mr. Henry Ratcliffe, Secretary of the Manchester Unity of Odd Fellows, occurring as it did only a few months after the official recognition of his merits as an actuary, through his appointment as a public valuer under the Friendly Societies Act. A self-taught man, Mr. Ratcliffe's name will be remembered not only through the tables of sickness and mortality, known as Ratcliffe's Tables, founded on the experience of the Manchester Unity adopted by the Actuarial Commissioners as the basis for the tables of rates of contributions recommended by them but through the valuation of the Manchester Unity as a whole as at 1st January, 1871, the largest work of the kind ever carried out. . . . It may be safely said that no man had ever so large an experience in the valuing of Friendly Societies, or contributed so much to the practical diffusion among them of the elements of actuarial knowledge as Mr. Ratcliffe. . . . His example shows that there is no reason why Friendly Societies should be compelled to have recourse to the skill of gentlemen occupied in other fields of actuarial science, but that their own is amply sufficient as a training ground, if, in addition to a profitable use of the ordinary means of education, those habits of careful calculation and accurate observation are cultivated which are the foundation of actuarial merit."—*Report for 1876 of the Chief Registrar of Friendly Societies, England and Wales*, p. 17.

† The present value of £1 due in 20 years at 4 per cent. £.456,387, multiplied by
" " " 1 year, " 8351,69.0 (inverted)

				410,748
				27,388
				456
				228
				14
				4
gives	"	21 years,	"	£.438,833

For an explanation of this expeditious method of performing multiplication, which is applicable to integral numbers as well as decimal, see Arithmetic, *Chambers' Educational Course*, p. 150.

† The terms equidifferent and equirational accurately express the relations which they serve to indicate, but their respective synonyms, arithmetical and geometrical, usually employed do not.

TABLE illustrating a mode of calculating the Values of Contributions and Funeral Donations.—Interest, 4 per cent.

Age.	The number Living at each age.	Value of £1 due at the end of the same number of years as the age.	The Product of (2) and (3).	The sum of the Products from age 102.	The Division of (5) by (4).	The Quotient : value of £1 a year for life, first payment due.	The Number Dying during each year.	Value of £1 due at the end of the same number of years as the age.	Value of £1 due at the end of half a year.	The Product of (8), (9), and (10).	The sum of the Products from age 102.	The Division of (12) by (4).	The Quotient : value of £1 payable at death.	Age.
x	l_x	1.04^{-x}	D_x	N_x	$\frac{N_x}{D_x}$	A_x	d_x	1.04^{-x}	$1.04^{-\frac{1}{2}}$	C_x	M_x	$\frac{M_x}{D_x}$	II_x	x
1	2	3	4	5	6	7	8	9	10	11	12	13	14	1
18	100,000 ×	·493,628 =	40,363	976,008	$\frac{976,008}{40,363} =$	19.772	560 ×	·493,628 ×	·980,581 =	271.06	12,058.3	$\frac{12,058.3}{40,363} =$	·2443	18
19	99,440 ×	·474,642 =	47,198	926,645	$\frac{926,645}{47,198} =$	19.633	578 ×	·474,642 ×	„ =	269.02	11,787.3	$\frac{11,787.3}{47,198} =$	·2497	19
20	98,862 ×	·456,387 =	45,119	879,447	$\frac{879,447}{45,119} =$	19.492	596 ×	·456,387 ×	„ =	266.72	11,518.2	$\frac{11,518.2}{45,119} =$	·2553	20
21	98,266 ×	·438,834 =	43,122	834,328	$\frac{834,328}{43,122} =$	19.348	614 ×	·438,834 ×	„ =	264.21	11,251.5	$\frac{11,251.5}{43,122} =$	·2609	21
22	97,652 ×	·421,955 =	41,205	791,206	$\frac{791,206}{41,205} =$	19.202	631 ×	·421,955 ×	„ =	261.08	10,987.3	$\frac{10,987.3}{41,205} =$	·2667	22
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
95	258 ×	·024,090 =	6.2152	15.275	$\frac{15.275}{6.2152} =$	2.459	91 ×	·024,090 ×	·980,581 =	2.1496	5.7391	$\frac{5.7391}{6.2152} =$	·9234	95
96	167 ×	·023,163 =	3.8682	9.0598	$\frac{9.0598}{3.8682} =$	2.342	62 ×	·023,163 ×	„ =	1.4082	3.5895	$\frac{3.5895}{3.8682} =$	·9280	96
97	105 ×	·022,272 =	2.3386	5.1916	$\frac{5.1916}{2.3386} =$	2.220	41 ×	·022,272 ×	„ =	·8954	2.1813	$\frac{2.1813}{2.3386} =$	·9327	97
98	64 ×	·021,416 =	1.3706	2.8530	$\frac{2.8530}{1.3706} =$	2.082	26 ×	·021,416 ×	„ =	·5460	1.2859	$\frac{1.2859}{1.3706} =$	·9381	98
99	38 ×	·020,592 =	·7825	1.4824	$\frac{1.4824}{.7825} =$	1.895	16 ×	·020,592 ×	„ =	·3231	·7399	$\frac{.7399}{.7825} =$	·9455	99
100	22 ×	·019,800 =	·4356	·6999	$\frac{.6999}{.4356} =$	1.607	11 ×	·019,800 ×	„ =	·2136	·4168	$\frac{.4168}{.4356} =$	·9568	100
101	11 ×	·019,039 =	·2094	·2643	$\frac{.2643}{.2094} =$	1.262	8 ×	·019,039 ×	„ =	·1493	·2032	$\frac{.2032}{.2094} =$	·9703	101
102	3 ×	·018,306 =	·0549	·0549	$\frac{.0549}{.0549} =$	1.000	3 ×	·018,306 ×	„ =	·0539	·0539	$\frac{.0539}{.0549} =$	·9806	102

13. These processes may be thus stated in words.

The value of £1 a year for life. The number living at each age, found in Table I., column 2, is multiplied by the present value, at 4 per cent. of £1 due in the same number of years as the age, Table I (a), and the several products are placed in the column marked D. These products, beginning at the oldest age, are then added up year by year successively, and each sum placed opposite the last number added to it in the column marked N. The quantity in the N column at any age, divided by the corresponding quantity in column D, gives as the quotient the present value of £1 a year for life, the first payment being supposed to be due but not paid.

The value of £1 at death. 14. In the case of the sum payable at death, the number dying during each year, found in column 3, Table I., is multiplied by the present value of £1 due the same number of years as the age, and also by the value of £1 due in half a year, Table I (a); that is, in effect, multiplied by the present value of £1 due in a number of years half a year older than the age, the several results being placed in column C. These quantities are then added up from the bottom of the column as before, the sums entered in column M, and each quantity in column M, divided by the quantity in the same horizontal line in column D as before, gives the present value of £1 payable on death of member.

Value of £1 a year during joint lives. 15. Continuing the description of the manner of constructing the Valuation Table No. II., I observe that column 6 is obtained by multiplying the quantity found in column D at each age by the number living at that age, and dividing the product by 100,000, in order to reduce the figures within convenient limits. These quantities, column 6 (D_{xy}), summed up from below, form column 7 (N_{xy}). The number in column 7 (N_{xy}), divided at any age, if divided by that in column 6 (D_{xy}), would give the value of £1 a year payable during the joint continuance of two lives both of that age—that is, payable until the first death.

Value of £1 payable at death of wife. 16. The quantities in column 8 (C_{xy}), at any age are obtained by multiplying the quantity in column 4 (C_x) by the sum of the number living at that age and at the next older, in Table I., column 2; the sum of these quantities as before forming column 9 (M_{xy}), which, divided by double the number in column 6 (D_{xy}), gives the value of £1 payable at the death of the wife provided she dies before her husband, their ages being assumed to be the same.

Value of £1 a week in sickness at full and reduced pay. 17. The numbers in columns 10, 12, 14, are obtained by multiplying the number in column 2 (D_x) by the number of weeks' sickness experienced by each person in Table I., columns 12, 13, 14 respectively; and the quantities in columns 11, 13, 15, their sum divided by the number in column 2, gives the value of £1 a week in sickness during the first six months' disablement, the second, or after the second six months, as the case may be.*

* It will be convenient to have, also, an explanation of the mode of constructing the Valuation Tables given in symbolical form:—

$$D_x = (1+r)^{-x} \quad l_x, D_{x+1} = (1+r)^{-(x+1)} l_{x+1} \quad . \quad . \quad .$$

$$N_x = D_x + D_{x+1} + D_{x+2} + \quad . \quad . \quad .$$

$$A_x = \frac{N_x}{D_x} [= 1 + a_x \text{ in Inst. Act. notation}]$$

$$A_x \text{ } 70 = \frac{N_{70}}{D_x}$$

$$C_x = (1+r)^{-(x+\frac{1}{2})} d_x, C_{x+1} = (1+r)^{-(x+1\frac{1}{2})} \quad . \quad . \quad .$$

$$M_x = C_x + C_{x+1} + C_{x+2} + \quad . \quad . \quad .$$

$$\Pi_x = \frac{M_x}{D_x}$$

$$D_{xy} = l_x l_x (1+r)^{-x} = l_x D_x, \text{ equal ages.}$$

$$C_{xy} = \{ (l_x)^2 - (l_{x+1})^2 \} (1+r)^{-(x+\frac{1}{2})} = l_x + l_{x+1} (l_x - l_{x+1}) (1+r)^{-(x+\frac{1}{2})} = (l_x + l_{x+1}) (1+r)^{-(2+\frac{1}{2})} d_x$$

$$M_{xy} = C_{xy} + C_{x+1, y+1} + C_{x+2, y+2} + \quad . \quad . \quad .$$

$$M_{xy}^1 = \frac{1}{2} M_{xy}$$

$$\Pi_{xy}^1 = \frac{M_{xy}}{2 D_{xy}} = \frac{M_{xy}^1}{D_{xy}}$$

$$K_x^i = s h_x^i l_x (1+r)^{-(x+\frac{1}{2})} = s h_x^i (1+r)^{-\frac{1}{2}} D_x$$

$$K_x^{ii} = \quad . \quad . \quad . \quad . \quad s h_x^{ii} (1+r)^{-\frac{1}{2}} D_x$$

$$K_x^{iii+} = \quad . \quad . \quad . \quad . \quad s h_x^{iii+} (1+r)^{-\frac{1}{2}} D_x$$

$$L_x^i = K_x^i + K_{x+1}^i + K_{x+2}^i + \quad . \quad . \quad .$$

$$L_x^{ii} = K_x^{ii} + K_{x+1}^{ii} + K_{x+2}^{ii} + \quad . \quad . \quad .$$

$$L_x^{iii+} = K_x^{iii+} + K_{x+1}^{iii+} + K_{x+2}^{iii+} + \quad . \quad . \quad .$$

$$s p_x^i = \frac{L_x^i}{D_x}; \quad s p_x^{ii} = \frac{L_x^{ii}}{D_x}; \quad s p_x^{iii+} = \frac{L_x^{iii+}}{D_x}.$$

In the formula for $K_x = s h_x l_x (1+r)^{-(x+\frac{1}{2})}$ it is assumed that the sickness and the deaths take place in the middle of the year, and that all the former precede the latter. But, on this assumption of the deaths being uniformly distributed throughout the year, half the number may be taken as occurring in the first, and the other half in the second six months. This view of the case would be represented in the formula by writing $l_x - \frac{1}{2} d_x = \frac{1}{2} (l_x + l_{x+1})$ instead of l_x , and the effect would be to somewhat diminish the value of $s p_x$.

Valuation Table
of a non-invest-
ing society.

18. In consequence of the extremely meagre returns received from the investment of their funds by several of the societies whose operations have come under review, I think it advisable to strive to impress upon the minds of the members the absolute necessity which exists, in order to ensure the prosperity of a Friendly Society, that the management should see that the funds are invested at the highest rate of interest consistently with security. In order to show the effect of the absence of this important source of income, I have prepared the subjoined Table, giving the value of the income and outgo at each age, from 18 to 70, the element of interest being altogether excluded.

*VALUES of Contributions and of Sums payable on Death and in Sickness (M.U. Experience, England, 1866-70), assuming Money to bear no Interest.**

Age.	Value of £1 a year for life, first pay- ment due.	Value of £1 a year for life, first pay- ment at age 70.	Value of £20 pay- able on death of Member.	Value of £10 pay- able on death of Wife.	Value of Weekly Sick Pay till the 70th Year.		
					During 1st Six Months, at 20s.	During 2nd Six Months, at 10s.	After 2nd Six Months, at 5s.
1	2	3	4	5	6	7	8
	£	£	£	£	£	£	£
18	43.37	3.3228	20	5	47.905	4.194	5.194
19	42.60	3.3425	20	5	47.530	4.208	5.222
20	41.85	3.3620	20	5	47.152	4.220	5.251
21	41.10	3.3824	20	5	46.772	4.232	5.280
22	40.35	3.4037	20	5	46.389	4.242	5.300
23	39.60	3.4258	20	5	46.003	4.250	5.330
24	38.86	3.4488	20	5	45.616	4.258	5.368
25	38.11	3.4727	20	5	45.231	4.266	5.398
26	37.39	3.4975	20	5	44.846	4.273	5.429
27	36.66	3.5231	20	5	44.465	4.281	5.459
28	35.93	3.5496	20	5	44.084	4.288	5.489
29	34.64	3.5770	20	5	43.699	4.294	5.518
30	34.46	3.6052	20	5	43.309	4.300	5.546
31	33.73	3.6342	20	5	42.909	4.304	5.574
32	33.04	3.6641	20	5	42.498	4.306	5.601
33	32.27	3.6949	20	5	42.076	4.308	5.627
34	31.54	3.7183	20	5	41.647	4.310	5.652
35	30.82	3.7603	20	5	41.212	4.312	5.676
36	30.10	3.7954	20	5	40.772	4.313	5.699
37	29.38	3.8324	20	5	40.330	4.316	5.722
38	28.65	3.8713	20	5	39.882	4.320	5.747
39	27.96	3.9122	20	5	39.429	4.324	5.770
40	27.25	3.9551	20	5	38.966	4.326	5.794
41	26.55	4.0002	20	5	38.492	4.327	5.817
42	25.80	4.0475	20	5	38.004	4.325	5.839
43	25.16	4.0971	20	5	37.499	4.320	5.858
44	24.47	4.1492	20	5	36.974	4.312	5.875
45	23.78	4.2039	20	5	36.426	4.301	5.888
46	23.09	4.2615	20	5	35.851	4.287	5.897
47	22.41	4.3221	20	5	35.248	4.269	5.899
48	21.72	4.3863	20	5	34.613	4.246	5.895
49	21.00	4.4546	20	5	33.945	4.220	5.886
50	20.37	4.5278	20	5	33.242	4.190	5.871
51	19.71	4.6065	20	5	32.504	4.155	5.850
52	19.05	4.6914	20	5	31.724	4.116	5.823
53	18.41	4.7830	20	5	30.900	4.071	5.788
54	17.77	4.8821	20	5	30.023	4.019	5.745
55	17.14	4.9892	20	5	29.088	3.959	5.691
56	16.51	5.1052	20	5	28.085	3.890	5.625
57	15.89	5.2308	20	5	27.010	3.810	5.545
58	15.28	5.3682	20	5	25.855	3.717	5.446
59	14.69	5.5196	20	5	24.612	3.609	5.324
60	14.10	5.6875	20	5	23.272	3.482	5.172
61	13.54	5.8740	20	5	21.824	3.334	4.986
62	12.98	6.0851	20	5	20.255	3.162	4.759
63	12.45	6.3203	20	5	18.540	2.958	4.482
64	11.92	6.5828	20	5	16.651	2.715	4.145
65	11.41	6.8754	20	5	14.558	2.428	3.738
66	10.90	7.2015	20	5	12.229	2.036	3.248
67	10.40	7.5647	20	5	9.627	1.682	2.663
68	9.92	7.9751	20	5	6.739	1.207	1.952
69	9.44	8.4450	20	5	3.542	.650	1.078
70	8.99	..	20	5	..	..	..

19. The Expectation Table, No. I., column 5, serves to indicate the average number of years persons constituting the several groups contained in the Life Table column will live, the number dying in any year being supposed to live only half of that year; the figures in that Table, therefore, with $\frac{1}{2}$ added, are equivalent to £1 a year for life, first payment due, money being assumed to be unproductive.

20. According to columns 4, 5 of the table just given, it is seen that members bring upon a non-investing society, at all ages of entry, a liability of £20 each in respect to their own death claims, and, half the wives being assumed to outlive their husbands, every married member brings a liability of £5 in addition on account of his wife.

* This Table is taken from the 5th Annual Report, on Friendly Societies, of the Government Statist of Victoria, and is constructed in conformity with the Tables contained therein.

21. The result of summing up the quantum of sickness under full pay, assigned year by year to each person in Table I, column 12, from the 18th to the 69th year, both inclusive, gives 111·324 weeks altogether, which implies a future outgo, at 20s. a week, of £111 6s. 6d. on account of each member 18 years of age. The sum contained in the above Table, column 6, opposite age 18, is £47 18s. 1d., is less than the sum just mentioned by £63 8s. 5d., the difference being due to the circumstance that as age advances the ranks of the members are thinned year by year by death, leaving fewer and fewer to lay claim to the sick allowance.

The effect of interest on the liabilities and contributions. 22. To illustrate the relative effects of a high and a low rate of interest, I have prepared the following Table, containing, for the age of 29, at various rates per cent., the value of the Assurance Benefits given by a majority of the societies, and the equivalent annual contributions at the same age, assuming the future experience in respect to sickness and mortality to be the same as that of the members of the M.U. in England during 1866-70; assuming, also, that all the members will continue their membership during life, and that the rate of interest realized on the entire capital will be that given in column 1 :—

THE Liability imposed on a Society by a New Member of the age of 29, and the equivalent Annual Contribution payable quarterly for life thereby—on the basis of the M.U. experience, England, 1866-70, at 4 per cent. interest, and when the funds remain uninvested.

Rate of Interest per Cent.	Sick Benefits.					Funeral Benefits.			Sick and Funeral Benefits.	Annual Contribution equivalent to—		
	Value of Weekly Sick Pay till 70th Year.			Value of Allowance after 70 of 2s. 6d. per week.	Total value of Sick Pay.	Value of £20 payable on death of Member.	Value of £10 payable on death of Wife.	Total Value of Funeral Donations.		Sick Benefits.	Funeral Benefits.	Sick and Funeral Benefits.
	During 1st Six months, at 20s.	During 2nd Six months, at 10s.	After 2nd Six months, at 5s.									
1	2	3	4	5	6	7	8	9	10	11	12	13
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
4	21 11 7	2 2 4	3 2 1	.. *	26 16 0	6 4 2	2 1 10	8 6 0	35 2 0	1 10 4	0 9 6	1 19 10
0	43 14 0	4 5 11	5 10 4	23 5 0	76 15 3	20 0 0	5 0 0	25 0 0	101 15 3	2 5 2	0 14 8	2 19 10

* Included in columns 2, 3, 4.

23. Columns 11, 12, 13 of this Table serve to bring out pretty clearly that the larger the income a society derives from its investments the smaller may be the income which it can afford to receive, in the form of contributions from its members, in return for the advantages which it contracts to confer upon them.

24. The remaining part of this paper is taken from the 2nd Annual Report, in connection with Friendly Societies, of the Government Statist of Victoria. The first ten and some subsequent paragraphs, which contain an explanation in another form of the mode of constructing the Tables, I have not thought it advisable to excise, because some persons may have a preference for the following mode of treating the subject.

25. "The Scheme of Life" and Sickness "Assurance is supported solely on the hypothesis that the contributions of the members taken by themselves, year by year, and invested in some fund which will produce an interest thereon, will be sufficient of themselves," together with the initiation fee invested at entry, to discharge all the obligations a society assumes in respect to each member.

Accumulation of capital through interest.

26. The way in which the capital of a society increases by adding, as received, to its interest-producing funds, the profit obtained from its investments, will be best perceived by noticing the growth of one sum of one pound (whence the amount for any other sum can be directly obtained), when interest only is annually added; £4 in the £100 in a year being assumed as the rate of increase, equivalent to £·04, or 4 cents in the pound.†

† Before reading this Table, paragraphs 1 to 5, pages 48 and 49, of this Appendix, with the notes at foot of page, should be studied.

Amount of £1 in
a given time.

				£	
1st year ..	{	Sum invested ..	1.		
		Interest ..	04		
		Amount ..	1.04	= £1 × 1.04	
			1.04		
2nd „ ..	{	Sum invested ..	1.04		
		Interest ..	0416		
		Amount ..	1.0816	= £1.04 × 1.04	
			1.04		
3rd „ ..	{	Sum invested ..	1.0816		
		Interest ..	043264		
		Amount ..	1.124864	= 1.04 × 1.04 × 1.04 = 1.04 ³ (a)	
			6180.1	= 1.04 ² , inverted (b)	
4th „ ..	{	Sum invested ..	1.12486		
			8999		
			113		
			67		
5th „ ..	{	Amount ..	1.21665	= 1.04 ⁵	
			56612.1	= 1.04 ⁵ , inverted	
10th „ ..	{		1.48024	= 1.04 ¹⁰	
			42084.1	= 1.04 ¹⁰ , inverted	
20th „ ..	{		2.19112	= 1.04 ²⁰	
			21191.2	= 1.04 ²⁰ , inverted	
40th „ ..	{		4.80100	= 1.04 ⁴⁰	
			108.4	= 1.04 ⁴⁰ , inverted	
80th „ ..	{		23.04960	= 1.04 ⁸⁰	
			21191.2	= 1.04 ⁸⁰ , inverted	
100th „ ..	{		50.50445	= 1.04 ¹⁰⁰	
			40.1		
101st „ ..	{		52.52463	= 1.04 ¹⁰¹	
			40.1		
102nd „ ..	{		54.62562	= 1.04 ¹⁰² (c)	
		Also ..	1.0198	= 1.04 ¹ (d)	

27. It is thus seen that £1 invested becomes, in 5 years, by the operation of interest alone, without any other addition, a capital of £1.217; in 10 years it amounts to £1.48; in 20, to £2.191; in 40, to £4.801; in 80, to £23.05; and in 100, to 50.504.

A caution.

28. To guard against the possibility of misconception here, and to impress upon the attention the fact that safety is immediately dependent on the closeness with which practice is made conformable to theory, the subjoined judicious observations are introduced, taken from that excellent “*Manual for Patrons and Members of Friendly Societies*,” published at Manchester in 1869, by Mr. Charles Hardwick, P.G.M., M.U.I.O.O.F., England, p. 105:—

“Most of the actuaries’ tables of rates are calculated on the supposition that the subscriptions will produce, on the average, about three per cent. per annum compound interest.” [He is referring, of course, to the practice in

(a) This, 1.04³, is a convenient way of indicating that the same number is used *thrice* as a multiplier.

The employment of the same number thrice as a *divisor* is shown in a precisely similar manner, the only difference being that the negative sign is inserted before the 3; thus 1.04⁻³ represents [$\frac{1}{(1 : 1.04) : 1.04} : 1.04$] (†), the successive divisions by 1.04, and is the same as $\frac{1}{1.04 \times 1.04 \times 1.04}$, which equals $\frac{1}{1.04^3}$. (†) Division is expressed by writing either : *before*, or — *over*, the divisor.

(b) To avoid encumbering the calculation with superfluous figures, *invert* the multiplier, place its *unit* figure underneath that place in the decimal beyond which it is not necessary to carry the product, and commence multiplying, in each case, at the figure standing immediately above, neglecting all those to the right, except to *carry* therefrom. Ciphers to the right of the point, as the several partial products gradually recede to the right, can also be advantageously dispensed with. This method of lessening the labor of multiplication is shown above at the 5th year, the succeeding products, obtained in the same way, the reader can verify for himself.*

(c) The correct amount for 102 years is £54.62615, the above is therefore too small by £0.00053, or by half a mil.

(d) The sum to which £1 will amount in *half a year*, expressed by 1.04^{1/2}, is found by ascertaining what quantity, *multiplied by itself*, will produce 1.04. This is 1.0198.

* Another illustration is given at foot of page 51 hereof, *ante*.

England.] "Now it must be evident that a large portion of the subscriptions, being required for the liquidation of immediate engagements, will produce no interest at all, while another proportion must, for a certain time, lie comparatively unproductive in the hands of the treasurer, or be temporarily lodged, at very small interest, in some banking establishment. Such being the case, the bulk of the accumulated reserve fund ought to be permanently invested in good securities, or the aggregate subscriptions will fail to realize the expectation of the most careful actuary. The investment of a large portion of the funds on mortgage at five per cent. will not realize that amount at *compound* interest, as the half-yearly or yearly profits either remain for some time uninvested or are productive of merely the current bank interest. It will thus be apparent that, in order to effect an aggregate *compound* interest of three per cent. per annum, considerable sums ought to be invested at four or five per cent. upon unexceptionable security. . . . It is thus evident" [alluding to two tables of illustrations he had just given, pp. 106, 107] "that the regular and judicious investment of the funds of Friendly Societies is a primary condition of success. It matters not how carefully the rates of contributions and benefits have been adjusted if this important item has been neglected. The actuary only tells the society that his table of rates will meet the liability on the express understanding that the surplus subscriptions will be safely invested, and a given rate of compound interest secured on the aggregate."

29. The sum to which £1 a year would amount in, say, 5 years, will be found (by adding £1 as well Amount of £1 a year in a given time. as the interest made, each year, and proceeding then to calculate the amount) to be £5.416. This may be obtained with greater readiness by dividing the interest of £1 for the time, £.2167, by the interest for 1 year, £.04.

30. Calculating the value *now* of £1 to be received in 5 years resolves itself into the process of Value of £1 due in a given time. finding the *investment* when the *amount* is given, and may be obtained by Proportion, thus;—

Amount, £1.217, is to investment, £1, as sum receivable, £1, is to its present value, or, £1.217 : £1 = £1 : $\frac{£1}{1.217}$, and the present value, £.8219, is found by dividing 1 by 1.217, that is, by 1.04⁵, or, which is the same thing, by dividing 1000.0 by 1217.

31. The sum which must be deducted from the sum receivable to obtain the present value, in this case £.1781 (£1 — £.8219), is the *discount*.

32. The present value of £1 due in 1 year	=	£.9615	=	$\frac{1}{1.04}$	=	$\frac{100.0}{104}$	=	1.04 ⁻¹
" " ½ "	=	.9806	=	$\frac{1}{1.0198}$	=	$\frac{10000.0}{10198}$	=	1.04 ^{-½}
" " 2 "	=	.9246	=	$\frac{1}{1.0826}$	=	$\frac{10000.0}{10816}$	=	1.04 ⁻²
" " 3 "	=	.8890	=	$\frac{1}{1.1249}$	=	$\frac{10000.0}{11249}$	=	1.04 ⁻³
" " 100 "	=	.0198	=	$\frac{1}{50.5045}$	=	$\frac{1000.000}{505045}$	=	1.04 ⁻¹⁰⁰
" " 101 "	=	.0190	=	$\frac{1}{52.525}$	=	$\frac{100.000}{52525}$	=	1.04 ⁻¹⁰¹
" " 102 "	=	.0183	=	$\frac{1}{54.626}$	=	$\frac{100.000}{54626}$	=	1.04 ⁻¹⁰²

33. The present value of £1 *per annum* for, say, 3 years, will be the sum of .9615, .9246, and .8890 Value of £1 a year for a given time. ($= 1.04^{-1} + 1.04^{-2} + 1.04^{-3}$), or £2.7751. This may be found with greater expedition by dividing the discount of £1 for the time, £.1110, by the interest for 1 year, £.04.

34. But, instead of being a certainty, suppose the receipt of the contribution at £1 a year were dependent on the contributor being alive year by year to pay it, the several values given above would have then to be *reduced* in the ratio of the fractions which express the probability of dying before the termination of each year, or, which is the same thing, multiplied by the probability of surviving. Thus, of 11 persons living at 101 years (Table I., col. 2), only 3 survive to 102 and none to 103; the value of £1 a year receivable from some one of 11 members of that age, including the contribution of 101, supposed to have been just received, will equal $1 + 1.04 \times \frac{3}{11} = 1 + .9615 \times \frac{3}{11} = 1.262$, as given in Table III., col. 2, opposite age 101. Value of £1 a year for life.

Of 22 living at 100, 11 survive to 101, and 3 to 102, the value is therefore—

$$1 + 1.04 \times \frac{11}{22} + 1.04 \times \frac{3}{22} = 1 + .9615 \times \frac{11}{22} + .9246 \times \frac{3}{22} = 1 + .481 + .126 = 1.607 \text{ at age 100.}$$

Similarly, the value at 99 is $1 + 1.04 \times \frac{22}{38} + 1.04 \times \frac{11}{38} + 1.04 \times \frac{3}{38}$.

35. The number living at the given age, 99, that is 38, being used as a divisor in each operation, this may be put under the form following:—

$$\begin{aligned} \text{The value of £1 a year for life at age 99} &= \frac{38 + 1.04 \times 22 + 1.04 \times 11 + 1.04 \times 3}{38} \\ &= \frac{38 + .9615 \times 22 + .9246 \times 11 + .8890 \times 3}{38} = \frac{38 + 21.1530 + 10.1706 + 2.6670}{38} \\ &= \frac{71.9906}{38} = 1.895, \text{ as given in col. 2, Table III., at age 99.} \end{aligned}$$

36. The value, at age 99, of £1 payable at death, is found in a similar manner, the number *dying* Value of £1 at death. being substituted for the number *surviving*, and *half a year's* interest being allowed for, in this case, each

year. The value of £1 at death at 99 thus equals $\frac{16 \times 1.04^{-1} + 11 \times 1.04^{-1\frac{1}{2}} + 8 \times 1.04^{-2\frac{1}{2}} + 3 \times 1.04^{-3\frac{1}{2}}}{38}$
 $\frac{16 \times .9806 + 11 \times .9615 \times .9806 + 8 \times .9246 \times .9806 + 3 \times .8890 \times .9806}{38} = \frac{15.6896 + 10.3713 + 7.2532 + 2.6153}{38}$
 $= \frac{35.9294}{38} = .9455$, agreeing with the value given in col. 4, Table III., opposite age 99.

An Annuity and an Assurance Society, formation, and proceedings of, illustrated. 37. To throw additional light on the mode pursued in the construction of such Tables, and to present the matter from another point of view, the following instructive illustrations are introduced, taken from the article "Life Assurance," in *Chambers' Information for the People*, the one example there given being here expanded into two, and thereby made to apply to annuity as well as assurance transactions. The figures taken as a basis are those of Table I., cols. 2 and 3, for the age of 99, and upwards, as before; (*i.e.*, of 100,000 persons of the age of 18, 38 will be living at the age of 99; of these, 16 will die in the course of the succeeding year, leaving 22 to attain to 100; 11 of these will not, and 11 will, survive to 101; of these 8 will not, and 3 will, live to 102; and the lives of the last 3 will fail in the course of the 103rd year).

38. It is a favourite mode of exemplifying life annuity and life assurance calculations, to suppose these 38 persons aged 99, associating for the purpose of securing to each, say, £20 a year for life; and also of assuring £20 to each at death. They are supposed to proceed upon the principle of paying all that is required in one sum at first, thus forming a fund which is to answer all the demands which are to be made upon it. In these calculations the improvement of money has been assumed at 4 per cent. The object is to ascertain what sum, by way of present payment, each is to contribute to the fund, so that it may discharge, in the first case, £440, or £20 each to 22 persons, at the end of the first year; £220 in two years; and £60 in three years; and, in the second case, that £320 may be paid on the death of 16 persons *during* the first year; £220 during the second; £160 during the third; and £60 during the fourth.

The Annuity Society, formation of. 39. In order then to discharge £440 at the end of a year, the society must be provided now with that sum which in a year will amount to £440, or with £440 : 1.04 = 423.0769
To disburse £220 in two years there will be required now £220 : 1.04² (*i.e.* : 1.0816) = 203.4024
To pay £60 in three years there must be possessed now £60 : 1.04³ (*i.e.* : 1.12486) = 53.3398
In all 679.8191

This, divided by 38, gives £17.890 as the sum each person would have to pay in at the foundation of the society.

(To bring this into accord with col. 2, Table III., count in an additional £20, *just received*, making then £37.890 as the one payment, which will be found to agree with the value set down in that column opposite the given age, 99, for a contribution of £1; £37.890 : 20, being equal to £1.895.)

Proceedings of. 40. Supposing such a society to be constituted, and £679.8191 paid in by the 38 members, we shall see how its business would proceed year by year.
The original contribution of £679.8191 being put out to interest, at the end of the first year amounts to £679.8191 × 1.04 = 707.0119
From which deduct £20 paid to each of the 22 survivors = 440
Fund remaining at commencement of the second year = 267.0119
Which, bearing one year's interest, will amount to = 277.6923
From which deduct the sum paid to the 11 survivors = 220
Fund remaining at commencement of the third year = 57.6923
Which, bearing one year's interest, will amount to = 60.0000
Which will just pay the last 3 survivors £20 each = 60

The Assurance Society, formation of. 41. In proceeding to ascertain, under the conditions of the second case, the sum each of the 38 members must contribute towards the formation of a fund whence £20 is to be withdrawn on the occurrence of every death, it must be borne in mind that the lives, being supposed to fail at equal intervals, during the year, may all be assumed to cease together, on the average, in the middle of the year. The process is thus as follows:—

To be able to pay away £20 on the occurrence of each of the 16 deaths in the middle of the first year, the society must have that sum now which will amount in *half a year* to £320, or £320 : 1.04^½ (*i.e.* : 1.0198) = 313.7858
To pay £220 in a year and a half it must have £220 : 1.04^{1½} (*i.e.* : 1.0198 × 1.04) .. = 207.4305
To pay £160 in two and a half years, it must have £160 : 1.04^{2½} (*i.e.* : 1.0198 × 1.0816) = 145.0563
To pay £60 in three and a half years, it must have £60 : 1.04^{3½} (*i.e.* : 1.0198 × 1.12486) = 52.3040
In all 718.5766

Making the contribution of each member, in this case, £18.91.
(The value given in col. 4, Table III., at age 99, is £.946 which, at £20, agrees with above amount.)

42. The society being supposed to be constituted upon this basis, we shall see how its business would proceed until, in the midst of the fourth year, death put a period to the account. Proceedings of.

	£
The sum of £718·5766 amounts, <i>in half a year</i> , to £718·5766×1·04 ^½ (i.e.×1·0198) ..	732·8073
From which deduct	320·
Fund remaining <i>in the middle of the first year</i> is	412·8073
This amounts in a year to	427·3196
Deduct	220·
There remains in the middle of the second year	207·3196
This amounts in a year to	217·6923
Deduct	160·
The remainder in the middle of the third year is	57·6923
This amounts in a year to	60·0000
Which will exactly discharge, in the middle of the fourth year, the last remaining claim of	60·

43. On comparing together the examples given in paragraphs 61 to 63, it will be observed that the labour employed in finding the value for one age is not directly available for finding that for the next younger. Tables were, for a long time, constructed by the application of a certain relation found to exist between the value as above given for one age and that for one year older, until the method discovered by Mr. Barrett, subsequently improved upon by Mr. Griffith Davies, was generally adopted. This is to multiply each of the quantities above the line, and also the divisor below it, by the present value of £1 due in the same number of years as the age of the member whose case is under treatment, that is, at age 101, for example, by 1·04⁻¹⁰¹, resulting in no difference *in value*, but in an immense improvement *in form*, and in facility of calculation. Construction of Table II.

44. The value of £1 a year during life at age 101 is represented by $\frac{11+3 \times 1 \cdot 04^{-1}}{11}$. Then multiply both the quantities above the dividing line by 1·04⁻¹⁰¹, and also the divisor, this becomes $\frac{11 \times 1 \cdot 04^{-101} + 3 \times 1 \cdot 04^{-102}}{11 \times 1 \cdot 04^{-101}}$

$$= \frac{11 \times \cdot 0190 + 3 \times \cdot 0183}{11 \times \cdot 0190} = \frac{\cdot 2094 + \cdot 0549}{\cdot 2094} = \frac{\cdot 2643}{\cdot 2094} = 1 \cdot 262.$$

For age 100 the value is $\frac{22 \times 1 \cdot 04^{-1} + 3 \times 1 \cdot 04^{-2}}{22}$, which, multiplied as above, by 1·04⁻¹⁰⁰, becomes $\frac{22 \times 1 \cdot 04^{-100} + 11 \times 1 \cdot 04^{-101} + 3 \times 1 \cdot 04^{-102}}{22 \times 1 \cdot 04^{-100}}$

$$= \frac{22 \times \cdot 0198 + 11 \times \cdot 0190 + 3 \times \cdot 0183}{22 \times \cdot 0198} = \frac{\cdot 4356 + \cdot 2094 + \cdot 0549}{\cdot 4356} = \frac{\cdot 6999}{\cdot 4356} = 1 \cdot 607;$$

that is, the value is obtained from $\frac{D_{100} + D_{101} + D_{102}}{D_{100}} = \frac{N_{100}}{D_{100}}$; (see cols. 2 and 3, Table II., and col. 2, Table III., opposite these ages.)

45. The value of £1 at death, at age 101, is similarly derived from $\frac{8 \times 1 \cdot 04^{-\frac{1}{2}} + 3 \times 1 \cdot 04^{-1\frac{1}{2}}}{11}$, which, when multiplied as above, by 1·04⁻¹⁰¹, becomes $\frac{8 \times 1 \cdot 04^{-101\frac{1}{2}} + 3 \times 1 \cdot 04^{-102\frac{1}{2}}}{11 \times 1 \cdot 04^{-101}} = \frac{8 \times \cdot 9806 \times \cdot 01904 + 3 \times \cdot 9806 \times \cdot 0183}{11 \times \cdot 01904}$

$$\frac{\cdot 1493 + \cdot 0539}{\cdot 2094} = 1 \cdot 970.$$

For age 100 the value of the assurance is $\frac{11 \times 1 \cdot 04^{-\frac{1}{2}} + 8 \times 1 \cdot 04^{-1\frac{1}{2}} + 3 \times 1 \cdot 04^{-2\frac{1}{2}}}{22}$, becoming, when both terms are multiplied by 1·04⁻¹⁰⁰, $\frac{11 \times 1 \cdot 04^{-100\frac{1}{2}} + 8 \times 1 \cdot 04^{-101\frac{1}{2}} + 3 \times 1 \cdot 04^{-102\frac{1}{2}}}{22 \times 1 \cdot 04^{-100}}$

$$\frac{\cdot 2136 + \cdot 1493 + \cdot 0539}{\cdot 4356} = \frac{\cdot 4168}{\cdot 4356} = \cdot 957.$$

The value of £1 at death, at age 100, is thus obtained from $\frac{C_{100} + C_{101} + C_{102}}{D_{100}} = \frac{M_{100}}{D_{100}}$ (see cols. 4, 5, and 2, Table II.).

46. After attentively perusing this detailed explanation, no practical difficulties are likely to present themselves in understanding the mode of constructing the several columns. The construction of the several columns.

- D. 47. Col. D. contains, opposite each age, the product of the number living, at that age, as given in Table I., multiplied by the value of £1 due in the same number of years as the age.
- N. 48. Col. N, opposite each age, contains the sum of the several values of D counted successively upwards to that age, from the oldest in the Table.
- C. 49. Col. C contains, at each age, the product of the number dying set down in Table I. opposite that age, multiplied by the value of £1 due in the same number of years as the age, *and a half*.
- M. 50. Col. M. contains the successive sums of the C's, from the oldest age upwards.
- D, N, C, M, for joint lives. 51. For joint lives:—
 D, for any age, is the product of the corresponding D for one life, multiplied by the number living at the age.
 N is the sum of the D's, as above.
 C is the product of the C's for one life, multiplied by the sum of the living at that age and the next older.
 M is the sum of the C's, as before.
- K. 52. K, for any age (col. 10, Table II.), is the aggregate average sickness (col. 5, Table I.), at that age, multiplied by the number then living, and by the value of £1 due in the same number of years as the age, *and a half*; or, which is the same thing, K is the product of the average sickness, multiplied by the corresponding value of D, and of £1 due in half a year.
- L. 53. L is the sum of the several K's, as above.
- K¹, L¹; K², L²; &c. 54. The successive values of K¹, L¹; K², L²; &c. (cols. 12 to 21, Table II.), are calculated in exactly the same way, the average sickness under the several scales of sick pay (cols. 6 to 10, Table I.), being respectively substituted for the aggregate sickness.
- £1 a year for life and to and after a given age. 55. In Table III., running along the head of the columns, a line is found, indicating at a glance (*see* paragraph 26, note (a)) how the several quantities contained in the preceding Table are to be combined to obtain the money values. For example, the value of £1 a year for life, at age 30, $A_{30} = \frac{N_{30}}{D_{30}} = \frac{509,119}{28,425}$ (substituting the values of N and D given in Table II.); and 509,119 divided by 28,425, will be found to equal £17·911, as given.
56. If the payment is not to commence until the expiration of 40 years, or when the member is 70 years old, the value is, $A_{30} \overline{_{40}} = \frac{N_{70}}{D_{30}} = \frac{17,244}{28,425} = £607$.
57. If it is to *cease* immediately before reaching 70, the value is $A_{30} \overline{_{40}} = \frac{N_{30} - N_{70}}{D_{30}}$
 $= \frac{509,119 - 17,244}{28,425} = \frac{491,875}{28,425} = £17·304$.
58. These examples will, it is thought, be sufficient, in addition to Table III. itself, and the illustrations of valuations to come, to show how the Tables are to be employed to determine any particular value.
59. It is unnecessary to enter into a detailed explanation of the mode of constructing Tables IV. and V., in which effect is given to the element of WITHDRAWALS. These constitute, of course, an entirely distinct and independent set of Tables, and it will be readily understood that the same observations with regard to the mode of constructing the several columns as was made in reference to the preceding Tables will apply equally well to Tables IV. and V. The only difference is that the number of members "LIVING and REMAINING in the Society at each age," and the number "DYING during the succeeding year," of cols. 14 and 13, Table I., have been employed in the construction, instead of the numbers given in cols. 2 and 3.
- Valuation, examples of. 60. It only remains to exemplify the mode of using the Tables in effecting valuations, and in the determination of rates of contribution and entrance fees. In the construction of these Tables three points have been steadily kept in view:—
 (a) That everything necessary for the purpose aimed at should be contained therein;
 (b) That they should be presented in the form that was best adapted for ready manipulation;
 (c) That everything not absolutely necessary should be excluded therefrom. Attention to the illustrations about to be given will serve to show how far these objects have been attained.
61. Take the case of a member of the Manchester Unity, 25 years of age, married, and having his wife registered, paying a contribution of 1s. a fortnight to the sick and funeral fund: to receive 20s. a week for the first six months', 13s. 4d. for the second, and 10s. for the third and subsequent sickness; £20 to be payable at death, and £10 at death of wife, if it occurs during his lifetime.

First, let it be assumed that all the members will remain in the Society until removed by death.

62. The valuation of the Society's prospective income and outgo on that member's account will be made mainly by means of the quantities given in Table III. in line with age 25. Without withdrawals.

Tables III. and II.

					£
Value of sick pay to 91	$\left\{ \begin{array}{l} sp_{25}^1 \\ sp_{25}^2 \\ sp_{25}^{3+} \end{array} \right.$	$\left\{ \begin{array}{l} @ 20/ \\ @ 13/4 \\ @ 10/ \end{array} \right.$	$=$		$= 20\cdot505$
				$3\cdot696 \times \frac{2}{3}$	$= 2\cdot464$
				$10\cdot449 \times \frac{1}{2}$	$= 5\cdot225$
„ „ after 91...	$\frac{L_{91}}{D_{25}}$	@ 10/	$= \frac{1}{2} \frac{3,006\cdot2}{35,903}$	$= 0\cdot084 \times \frac{1}{2}$	$= 0\cdot042$
„ husband's assurance..	Π_{25}	@ £20	$=$	2845×20	$= 5\cdot690$
„ wife's „ ..	$\Pi_{25,25}^1$	@ £10	$=$	1949×10	$= 1\cdot949$
Total value of prospective outgo.....					$= 35\cdot875$
Value of a contribution of 1/ per fortnight for life = (A ₂₅ , 18·746, -·523*)					
@ 26/ per annum = 18·223 × 1·3.....					$= 23\cdot690$
Excess of the value of outgo above that of income.....					$= 12\cdot185$

63. Next, let it be assumed that col. 12, Table I., correctly represents the number of members who will probably withdraw from the Society at the different ages. The values will then be obtained in line with age 25 in Table V. With withdrawals.

Tables V. and IV.

					£
Value of sick pay to 91.....	$\left\{ \begin{array}{l} sp_{25}^1 \\ sp_{25}^2 \\ sp_{25}^{3+} \end{array} \right.$	$\left\{ \begin{array}{l} @ 20/ \\ @ 13/4 \\ @ 10/ \end{array} \right.$	$=$		$= 12\cdot601$
				$2\cdot004 \times \frac{2}{3}$	$= 1\cdot336$
				$5\cdot288 \times \frac{1}{2}$	$= 2\cdot644$
„ „ after 91.....	$\frac{L_{91}}{D_{25}}$	@ 10/	$=$	$\frac{991\cdot5}{24975} \times \frac{1}{2}$	$= 0\cdot020$
„ husband's assurance	Π_{25}	@ £20	$=$	1666×20	$= 3\cdot332$
„ wife's „	$\Pi_{25,25}^1$	@ £10	$=$	$0\cdot08 \times 10$	$= 0\cdot8$
Value of liabilities					$= 20\cdot733$
Value of a contribution of 1/ per fortnight for life = (A ₂₅ , 12·643, -·523*)					
@ 26/ per annum = 12·120 × 1·3					$= 15\cdot756$
Excess of value of liabilities above that of income					$= 4\cdot977$

64. The sum which the society should have, *in deposit*, to the credit of that particular member—in other words, the sum it ought to have *saved* from the entrance fee and contributions, after paying from the same, improved at interest, *his* share of the claims that were discharged during his membership—is £12 3s. 8½*d.* on the former supposition; £4 19s. 6½*d.* on the latter.

65. Let the conditions in the case just given be modified to this extent:—The payment of contributions and the receipt of sick pay are to cease on attaining the age of 70, an annuity of 6s. a week, or £15 12s. a year, being thence substituted for the sick pay. Sick benefits commuted into a fixed allowance at a given age.

The weekly allowance, commencing at 70, is calculated from $\frac{N_{70}}{D_{25}}$; and the sick pay, until 70, from $\frac{L_{25}^1 - L_{69}^1}{D_{25}}, \frac{L_{25}^2 - L_{69}^2}{D_{25}},$ &c. In this case, D₂₅ being the divisor in every instance but one, the wife's assurance, the better plan is to adjust all the numerators to the several rates of allowance, and then to divide their sum by D₂₅, once for all.

66. Applying to the numerators the rates of sick pay up to 70—				Adj. Num.
(L ₂₅ ¹ — L ₆₉ ¹) @ 20/	=	314,713 — 24,343.....		= 290,370
(L ₂₅ ² — L ₆₉ ²) @ 13/4	=	(50,046 — 12,220) × $\frac{2}{3}$	= 37,826 × $\frac{2}{3}$	= 25,217
(L ₂₅ ³⁺ — L ₆₉ ³⁺) @ 10/	=	(132,062 — 54,424) × $\frac{1}{2}$	= 77,638 × $\frac{1}{2}$	= 38,819
applying the funeral donation of husband—				
M ₂₅ @ £20	=	4,160·6 × 20		= 83,212
the weekly allowance after the age of 70—				
N ₇₀ @ 6/per week	=	5637 @ £15 12/per annum	= 5637 × $\frac{12\cdot13^\dagger}{12\cdot643}$ × 15·6	= 84,370
In all.....				$= 521,988$

* This sum, which is deducted because the payments are supposed to be made every fortnight, is obtained thus from the value of the correction given at the foot of Tables III. and V., the mortality *per member* at age 25 *m_x*, ·00708, as given in col. 4, Table I., being, of course, employed :—
The second part of the correction = (·0832 × ·00708 + ·0392) = ·0832 × ·0463 = ·0038; to which add the first part, and the whole correction = ·5192 + ·0038 = ·523, as given above.
† The figures for adjustment are obtained thus :—The weekly correction is ·5096 + ·0038 = ·513; the value of £1 a year paid by weekly instalments is therefore (Table V. col. 2) 12·643 — ·513 = 12·13; the number 5637 is consequently *diminished* in that proportion.

Then, dividing this sum by D_{25} , the value of these benefits is obtained thus:—	£
Sum of Adjusted Numerators, 521,988	
$D_{25}, 24,975$	= 20·900
adding to this the value of the funeral donation of the wife—	
$\frac{M_{25,25}}{2D_{25,25}} @ £10 = \frac{2659·5}{2 \times 16629} \times 10$	= ·8
Total value of benefits	= 21·700
The value of the contribution, ceasing immediately before obtaining the age of 70, is obtained in this manner:—	
$\frac{N_{25} - N_{70}}{D_{25}} @ 1/ \text{ per fortnight} = \frac{315,768 - 5637}{24,975} @ 26/ \text{ per annum}$	
$= \frac{310,131}{24,975} \times \frac{12 \cdot 12^*}{12 \cdot 643} \times 1 \cdot 3 = 12 \cdot 4177 \times \cdot 9586 \times 1 \cdot 3$	= 15·475
Excess of value of benefits above that of contributions	= 6·225

Determination of entrance fees. 67. To illustrate the manner of applying the Tables to the determination of rates of initiation fees and of contributions, let the candidate be of the age of 25, as before, and the other conditions the same as in the case above given.

. First, let the contribution be given as 1s. a fortnight, and it is required to ascertain the entrance fee payable to balance the account.

By the 101st general law of the Order (1879) no member is entitled to sick pay until six months, nor to the funeral money until twelve months, *after the whole of his initiation fee has been paid*. Let it be taken for granted that such fee will be paid, in this case, at entry; and as a sufficiently near approximation, in view of the relative values of the sick pay and funeral money, count six weeks' subscriptions in addition to the six months when the new member will be entitled to benefits, or 32 weeks altogether.

Without withdrawals.	68. Total liability as already given, not reckoning withdrawals.....	£35·875
	Value of income.....	£23·690
	Add 32 weeks' contributions, during non-effective membership, 16/=	·8
	Total.....	24·490
	Difference.....	11·385
	The entrance fee should therefore be £11 7s. 8½d.	
With withdrawals.	69. Total liability, counting withdrawals	£20·733
	Total income.....	£15·756
	Add 32 weeks' contributions	·8
	Total.....	16·556
	Difference.....	4·177
	The initiation fee in this case would be £4 3s. 6½d.	

70. If both sick pay as well as funeral donation were payable in twelve months after entry, the quantities in Tables II. and IV., in line with age 26, might be taken and divided by D_{25} , a proceeding which would be equivalent to deferring the corresponding benefits one year, in which case the allowance for 32 weeks' non-effective contributions would not, of course, be made.

Contributions. Without withdrawals.	71. Lastly, let the entrance fee payable be that given in the 118th general law, £1 16s., £1 of which being payable to the incidental expense fund.	
	Total liability given in the first case	£35·875
	Deduct 32 weeks' contributions, 16/	£·8
	And entrance fee, 16/	·8
	Total	1·6
	Remaining value	34·275

It is required now to be ascertained what should be the fortnightly contribution equivalent to this sum. The contributions being assumed to be payable fortnightly, this amount must be *increased* in the ratio the value of fortnightly bears to that of annual payments, before applying it to a_x (col. 3, Table III.), to find the *annual* contribution, that is, in this case, in the ratio of 18·223 to 18·746, as given in paragraph 62.

The annual payment is therefore $34 \cdot 275 \times \frac{18 \cdot 746}{18 \cdot 223} \times a_{25} \cdot 0533 = £1 \cdot 880$; this divided by 26 gives £0·723, or 1s. 5¼d., as the fortnightly contribution equivalent to these benefits.

* This is the value of the contribution of £1 paid fortnightly, divided by the value of the same paid annually, as given before in paragraph 63.

72. Deducting the same amount, £1·6, from the value of the liabilities, counting withdrawals, £20·733, ^{With with-}_{drawals.} gives £19·133; multiplying by $\frac{12·643}{12·12}$ (paragraph 90), gives £19·9586; multiplying by ·0791, a_{25} (Table V., col. 3), gives £1·5787, the annual payment; then, dividing by 26, there results £0·0607, or 1s. 2 $\frac{3}{4}$ d., as the fortnightly payment.

73. It may be as well to repeat that, in the above cases, the individual is supposed to be married, and to pay the whole of the initiation money at entry; and to add, that it is implicitly taken for granted that the gain and loss to the society from clearances will be about equal.

EVAN F. OWEN, *Actuary for Friendly Societies*
in the *Department of the Government Statist, Victoria.*

Office of the Government Statistician,
Hobart, 16th April, 1886.

B.

RETURN from Friendly Societies prescribed by Government Statistician.

S.—23.

RETURN FOR YEAR 188 .

In forwarding Returns &c., if not authorised to frank, write "Statistical Information only" on the Envelope, and sign name immediately underneath. Vide Act 45 Vict. No. 13.

		DISTRICT	
		LODGE	
		Established	
Ages of Members on Books at 31 Dec.		Number of Members at beginning of year	
		Number of Members admitted during year	
		Less Members died	
		Ditto left or struck off	
		Remaining at end of year (Married Single). Total (A.)	
		Number of Members sick during year	
		Total Number of days of sickness	
		RECEIPTS :	£ s. d.
		Balance at beginning of year	
		Contributions of Members	
		Ditto Foreign Members	
		Ditto Members' Widows	
		Initiations and Proposals	
		Special Medical Fees	
		Interest on Investments	
		Other Receipts	
		Total (C.)	
		EXPENDITURE :	£ s. d.
		Levies to Management Fund	
		Ditto Funeral Fund	
		Ditto Widow and Orphan Fund	
		Medical Attendance	
		Amount paid for Sick Relief	
		Other Expenditure	
		Balance at end of year	
		Total (D.)	
		FUNDS INVESTED TO CREDIT OF LODGE :	£ s. d.
		Bank, Current Account	
		Ditto Deposits	
		Debentures	
		Mortgages	
		In hands of Treasurer	
		Otherwise	
		TOTAL	
TOTAL (B.)		Certified—	

Secretary.

NOTE.—In the preparation of this Return the Secretary will be good enough to see that the Total Number marked A. agrees with the Total Number marked B., and that the Total Amount marked C. agrees with the Total Amount marked D.

C.

COPY OF LETTER TO SECRETARIES.

Government Statist's Office, 77, Macquarie-street, Hobart, 16th March, 1886.

SIR,

To assist me in my examination into the condition of Friendly Societies in Tasmania, undertaken, as you are doubtless aware, at the instance of your Government, may I request you to be good enough to favour me with a copy of the registered rules of your society, of any quarterly or half-yearly balance-sheet thereof for the year 1885 you may have in your possession, together with any information which will throw further light on the position of the societies here.

My stay in Hobart being necessarily limited, I should be glad to receive these documents, &c. as soon as possible.

Very faithfully yours,

EVAN F. OWEN, (*Actuary for Friendly Societies, Victoria.*)

Esq.,

Secy.

Dt., Hobart.

D.

ADDRESSES OF SECRETARIES APPLIED TO FOR COPIES OF RULES, &c.

<i>Society.</i>	<i>Applications made to</i>	<i>Rules, and Explanation thereof, &c. applied for.</i>	<i>Reply received.</i>
1. I.O.O.F., M.U., Hobart District	A. T. Smallhorn, P.C.S., M.U. Hall, Hobart; or Govt. Printing Office, Hobart	16/3	17/3, 17/4, (P), 19/4 (P).
Ditto, Buckingham District	E. G. Jackson, P.C.S., c/o Mr. J. R. Meech, Collins-street, Hobart	16/3, 18/3, 22/3	17/3, 21/3, 25/3.
Ditto, Cornwall District	F. Lakin, P.C.S., M.U. Hall, Launceston	16/3, 18/3, 22/3, 24/3	18/3, 21/3, 24/3.
2. I.O.R., Southern Cross District	C. Miller, D.S., Letitia-street, Hobart; or Harvey & Co., Hobart	16/3, 18/3, 19/3, 23/3,	17/3 (return), 20/3, 24/3, 25/3, 29/3.
Ditto, Tasmanian District	H. Stephens, I.O.R. Chambers, York-street, Launceston; or Messrs. P. O. Fysh & Co., Charles-street, Launceston	16/3, 18/3	19/3, 23/3.
3. St. John's Friendly Society, Hobart	T. W. Blindle, Secretary, St. J.F.S., Hobart; or E. C. Nowell, Treasurer, Legislative Council Chambers, Hobart	18/3, 18/3, 24/3	22/3, 23/3 (P), 2/4.
Ditto, Launceston	G. Brown, Secretary, St. John's School-room, Launceston	18/3	20/3.
4. I.O.O.F., Grand Lodge	G. Good, G.S., Canning-street, Launceston	16/3, 22/3	18/3, 25/3, 26/3, 25/3, 29/3 (P), 1/4.
5. A.O.F., Court Sherwood	A. R. Fowler, Secretary, A.O.F. Chambers, Launceston	16/3	18/3 (no Dt.), 21/3, 25/3.
Ditto, Court Pride of Tasmania	W. Culf, Secretary, Victoria Gardens, near Hobart	16/3	17/3.
6. P.A.F.S.	R. M. Pollard, G. S., Liverpool-street, Hobart	16/3, 19/3	17/3 (P), 19/3, 29/3, back, 5/4.
7. T.M.L.R.S. & P.S. (Hobart)	Secretary T.M.L.R.S. & P.S., Railway Offices, Hobart; or E. F. Lovett, Secretary T.M.L.R.S. & P.S., Railway Offices, Hobart	18/3	22/3.
T.G.R.S.F.S. (Launceston)	Secretary T.G.R.S.F.S., Railway Offices, Launceston; or W. H. Woolnough, Secretary T.G.R.S.F.S., Railway Offices, Launceston	18/3	20/3.
8. U.A.O.D. Oak Branch Lodge	M. Henry, Secretary Workmen's Club, Hobart; or T.M.L. Railway, Hobart	16/3	23/3 (P).
Ditto, Heart of Oak Lodge	R. Simpson, Fire Brigade Hall, Launceston; or c/o Mr. J. Dunning, Brisbane-street, Launceston	16/3	19/3, 1/4.
9. A.I.O.O.F., United Brothers' Lodge	W. Mason, Secretary, <i>Eardley Arms</i> , Melbourne-street, Hobart; or Town Hall, Hobart	17/3	20/3 (P).
Ditto, Tasmanian Primitive Lodge	A. Hodgins, Secretary, <i>Eardley Arms</i> , Hobart; or 257, Elizabeth-street, Hobart	16/3, 26/3, 1/4, 25/3	26/3 P, 2/4, R. only.
10. St. P. S., Hobart	J. V. Sullivan, Secretary, C.Y.M.S. Rooms, Hobart	17/3	22/3.
Ditto, Launceston	T. Murphy, Secretary, Mechanics' Institute, Launceston	17/3, 1/4	31/3, 6/4.
11. H.A.C.B.S., St. Joseph's Branch	H. Shirley, Secretary, 221, Liverpool-street, Hobart	16/3	24/3 (P), 25/3.
I.O.O.F., M.U., Cornwall District, Cornwall Lodge	A. Cook, Secretary I.O.O.F., M.U., Cornwall Lodge, Cornwall District, Launceston	26/3	29/3.
I.O.O.F., M.U., Cornwall District, Pride of the West Lodge	J. Hope, Secretary Pride of the West Lodge, Deloraine	26/3	3/4.
Ditto, Clarendon Lodge	H. Carter, Secretary Clarendon Lodge, Evandale	26/3	31/3.
I.O.O.F., Cornwall Lodge	Secretary Cornwall Lodge, Workmen's Club, Launceston; or Harry M. Latham, Secretary Cornwall Lodge, H.M. Customs, Launceston	19/3	25/3, 29/3, 1/4.

FRIENDLY SOCIETIES.—RETURN A.

General Statement of the Receipts and Expenditure, Funds and Effects of the Society during the year ended 31st December 18 , as audited.—Prescribed by the Government Statist, pursuant to the "Friendly Societies Act, 1877" (41 Vict. No. 590), Section 13 I. (c and d) and VI.—Approved by the Governor in Council, 25th November, 1878.

Name of Society—

Name of District—

Name of Branch—

(This form to be filled up and returned to the Government Statist, Melbourne, on or before the 1st February next, together with copies of any other Balance Sheets which may have been issued during the year.)

Balance Sheet of the Sick and Funeral Fund.				Balance Sheet of the Incidental Expense or Management Fund.			
Balance brought forward from previous year.....		£	s. d.	Balance brought forward from previous year.....		£	s. d.
ITEMS OF RECEIPT.				ITEMS OF RECEIPT.			
Proportion of Contributions		£	s. d.	Proportion of Contributions		£	s. d.
* " Levies				* " Levies			
* " Initiation Fees, Clearance Fees, and Fees for Registration of Wives (less Proposition Fees returned)				* " Initiation Fees, Clearance Fees, and Fees for Registration of Wives (less Proposition Fees returned)			
Interest arising from the investment of any portion of this fund				Interest arising from the investment of any portion of this fund			
Funeral Donations.....				Other Receipts (<i>state particulars</i>) ...		£	s. d.
Other Receipts (<i>state particulars</i>) ...		£	s. d.	Sale of Goods			
				Fines			
				Medical Fees from other Branches			
				Other receipts from other Branches			
Total Receipts				Total Receipts			
Total				Total			
ITEMS OF EXPENDITURE.				ITEMS OF EXPENDITURE.			
† Sick Pay (less amount received from other Lodges)		£	s. d.	Medical Attendance and Medicines for Members of this Branch only, including those on other Doctors' lists.....		£	s. d.
District or Grand Lodge Levies and Dues				District or Grand Lodge Levies and Dues.....			
‡ Funeral Donations.....				Management—			
Other Expenditure (<i>state particulars</i>)—		£	s. d.	Officers' Salaries.....		£	s. d.
				Rent, Lighting, and Cleaning.....			
				Committee Expenses and Audit Fees.....			
				Printing, Stationery, Postage, &c..			
				Guarantee Premiums			
				Delegates' Expenses			
Total Expenditure				Other Expenditure (<i>state particulars</i>)—			
Balance				Donations			
				Goods purchased for sale.....			
				Furniture, Repairs, &c.....			
				Amounts Paid to Doctor for Attendance on and Medicines for Members of other Branches.....			
				Payments to other Branches			
Total Expenditure				Total Expenditure			
Balance				Balance			

Particulars of Funds.	Disposal of Funds.	Total amount of Debts and Liabilities (specifying the same).	Number of Members on the 31st December.
Sick and Funeral Fund..	In Savings' Bank.....		Financial
Incidental Fund	Invested at per cent. ..		Unfinancial
	" " ..		Honorary
	" " ..		
	" in Halls, &c. ...		
	Bank Current Account...		
	Cash in hands of Trustees or other officer ...		
Total Fund\$	Total Fund\$	Total	Total

"I" or "We" to be entered as the case may be. have examined this General Statement and verified the same with the accounts and vouchers relating thereunto, and have examined the securities held by the Society, and have found them to be correct, duly vouched, and in accordance with law.

(Seal of Branch.)

Signature of Public Auditor

Public Auditor appointed under Friendly Societies Act, 1877."

Signature of other Auditors.

Occupation

Auditors appointed by this Branch under its registered rules.

Signature of Secretary

Address by post

*The sum of these two amounts must agree with total of column 4 in Return B.
 † This amount must agree with total of column 12 in Return B.

‡ This amount must agree with total of column 8 in Return B.
 § These amounts must agree.

Name of District, Grand Lodge, &c.—

(This form to be filled up and returned to the Government Statist, Melbourne, on or before the 1st February next, together with copies of any other Balance Sheets which may have been issued during the year.)

•These amounts must agree.

† have examined this General Statement and verified the same with the accounts and vouchers relating thereunto, and have examined the securities held by the Society, and have found them to be correct, duly vouched, and in accordance with law.

Signature of Public Auditor

Public Auditor appointed under "Friendly Societies Act, 1877."

{ _____ *Occupation* _____ }
 { _____ " _____ }
 { _____ " _____ }
Signature of Secretary *Address by post*

Auditors appointed
by the Society.

RETURN A.—FOR DISTRICTS, GRAND LODGES, ETC.—continued.
(This form is printed for convenience on the back of the preceding form.)

FUNERAL FUND.						INCIDENTAL FUND.					
Particulars of Receipts from Branches.			Particulars of Funeral Donations paid.			Particulars of Receipts from Branches.					
Names of Branches.		Amount.	Names of Branches in which Deaths occurred.		Amount.	Names of Branches.		Amount.			
Total			Total			Total					

As the Act now requires that these Returns shall be made out to the 31st December, the District Secretaries are particularly requested to see that the amounts given above agree in every particular with the amounts set down under the same headings in the Returns of the respective Branches of their Society; but Societies which pay Funeral Donations direct are not required to show them in the Returns of the Branch.

Should the Returns of any Branch show different amounts to those in the District Accounts, they should be returned to the Secretary of the Branch for amendment before forwarding to the Government Statist.

30. Unless the districts, grand lodges, &c., and the various branches, conform to the Act, and make up their returns both to the same date (namely, 31st December), discrepancies will constantly occur between the amounts shown in this return as received from the branches and the amounts the branches state they have paid to the district, grand lodge, &c.

FRIENDLY SOCIETIES.—RETURN B.

Sickness, Mortality, and other Contingencies experienced during the year ended 31st December, 18 .—Prescribed by the Government Statist, pursuant to the “Friendly Societies Act, 1877, (41 Victoria, No. 590), Section 13 (I.d) and VI.).—Approved by the Governor in Council, 25th November, 1878.

Name of Society— Name of District, &c.— Name of Branch—
Established in the year 18 . Situated at—

INSTRUCTIONS.

- Particulars to be entered.
- Year of birth.
- New members and registered wives.
- Deaths.
- Members leaving.
- Sickness.
- Columns to be added.
- Remarks.
1. This form is to be filled up and returned to the Government Statist, Melbourne, on or before the 1st February next. Unless a full list of members of the branch is specially asked for, no entry need be made of any members except such as have joined, had their wives registered, received sick pay or other benefits, died or left for other reasons during the year, or whose wives have died during the year.
2. It is to be borne in mind that a card containing particulars respecting each individual member is kept in the office of the Government Statist (the information to be used hereafter for actuarial purposes), and that the cards are arranged together in order according to the year of birth of the member they represent. It is therefore necessary that the information in column 2 should be correctly inserted, due enquiry being made in the case of new members.
3. The names of all members who have joined within the year are to be entered first in column 1. If their wives were also registered, the letter R is to be inserted in column 3. The fees paid on entry, including fee for registration of wife (if paid), are to be entered in column 4. The names of any old members whose wives may have been registered during the year are to follow next, the letter R being in like manner inserted in column 3, and the fee paid in column 4. The date of initiation and the occupations of new members are to be inserted in column 14 as remarks.
4. The names of members who died or whose wives died during the year are to be next entered in column 1, the date of death being placed in column 6, the cause in column 7, the amount of funeral donation paid in column 8, and where the entry refers to the death of a wife, the letter W in column 14. If a member or member's wife should die whilst the former is in arrears, and so not entitled to benefits, no entry need be made in column 8, but the cause of the omission is to be explained in column 14.
5. The names of members leaving from any other cause than death are to come next in order in column 1, the date of leaving being entered in column 6, and the cause in column 9.
6. The names of members who were sick during any portion of the year are to be placed last in column 1; the period of sickness at each rate being entered in column 10, the rate in column 11, the amount of sick pay in column 12, and the number of attacks of sickness during the year in column 13. If a member has received sick pay at more than one rate, an extra line is to be taken for each rate, but the name is to be entered once only. Days are considered as working days unless otherwise stated.
7. The figures in columns 4, 8, and 12 are to be added, and the totals must agree with the amounts entered under the same heads in Return A.
8. Particulars respecting any member not provided for in the earlier columns, but which it appears desirable to place on record, as well as the dates of initiation and the occupations of new members, are to be entered in column 14 as remarks.

Members who have joined, whose Wives have been registered, who have died, or whose Wives have died, who have left, or who have received Sick Pay or other benefits during the year.		Particulars relating to Members joining during the year.			Particulars relating to Deaths and Members leaving during the year.			Particulars relating to Sickness during the year.			14. Remarks.				
1. Name.	2. Year of Birth.	3. Wives registered during the year. Insert R.	4. Amount of Initiation Fees, Clearance Fees, and Fees for Registration of Wives received.			5. Name of Branch from which Clearance Members received during the year came.	6. Date of Death or Departure.	Deaths of Members or of registered Wives.		9. Departures for other reasons. (State cause, if by Clearance, Expulsion, Arrears, &c.)		10. Period during which Sick Pay was received at each rate.	Sick Pay.		
			7. Cause.	8. Amount of Funeral Donations.	11. Rate per Week.			12. Total Amount at each Rate.	13. Number of attacks.						
													£	s.	d.	£	s.	d.
Total Initiation, &c., Fees					Total Funeral Donations..			Total Sick Pay							

(Seal of Branch.)

Signature of Secretary—

31. To avoid the omission of names of members which were admitted during the year, the column for initiation fees was inserted in Return B; to avoid a death being overlooked a column was made for funeral donations; and that the whole of the sickness experienced during the year may be returned the amount of sick pay is also to be entered. The totals of all these columns must agree with the respective amounts in Return A, so that if the cash account balances there can be no omission, as no doubt there was in former years.

32. Perhaps the greatest defect in the forms under the old system was that no return was asked for of the different rates of sick pay paid for long and short sicknesses, so that branches having one or two pensioners, at perhaps £12 10s. per annum, appeared as having one or two members sick the whole year. The absence of the rate has also prevented any return being made of the sick pay paid in this colony to members of various ages, and has necessitated the use of figures taken from English returns in the tables given in the latter part of this Report.

33. The information contained in return B will be transferred to the cards, and as the experience of the years 1876 and 1877 is already entered, and that of 1878 will shortly be received by the department, in little more than two years the information for making out a quinquennial return, such as that contemplated by the English Act, will be in this office. This return will not only show the experience of individuals of various ages over a period of five years, but will show during three years of the time the experience of sickness at the various rates of sick pay paid by different societies.

MODEL FORMS OF ACCOUNTS AND BALANCE-SHEETS.

37. Section 8, sub-section (a) of the Friendly Societies Act prescribes that the Government Statist shall from time to time, with the approval of the Minister, prepare or cause to be prepared, model forms of accounts, balance-sheets, and valuations. A form of valuation has already been prepared, approved by the Governor in Council, and gazetted, and a copy thereof is published in Appendix A. Forms of account, and of balance-sheets, for the preparation of which ministerial sanction was duly obtained, are now submitted.

38. The first book recommended may be called "The Register," in which the opening pages should be devoted to noting such particulars respecting members and their wives as it is desirable to place permanently on record. The following form appears to be a suitable one for the purpose, and may be headed as the "Register of Members":—

REGISTER No. 1.

Register of Members.

Name of Society _____

Name of Branch _____

Particulars relating to Members.										Particulars relating to Wives of Members.				Remarks. — (Particulars relating to Second or subsequent Wives may be entered in this column.)
Number.	Name.	Residence.	Present Occupation.	Country of Birth.	Year of Birth.	Admissions.		Departures.		Wife's Name.	Year of Birth.	Date of—		
						Date.	Manner of Admission.	Date.	Manner of Leaving.			Registration.	Death.	
							Whether by Clearance or Initiation.		If by Clearance, Name of Branch from which received.						Whether by Clearance, Death, or Neglected Payments, &c.	If by Death, Cause of Death.

39. Further on in the same book is the "Register of Members' Payments," in which the names of the members may be printed in alphabetical order, a space being left at each letter for the insertion of fresh names in ink. In the form given below, the part for the amounts paid by members fortnightly is ruled with seven columns for a quarter's payments, but the number of columns may be increased to fourteen if a balance is struck half-yearly; or to twenty-seven if one is only struck annually.

REGISTER No. 2.

Register of Members' Payments.

Name of Parent Society _____

Name of Branch _____

Member's		Date of last Payment in pre- vious Quarter.*	Amounts to be paid.						Amounts paid during the Quarter*—							Arrears carried forward.	Remarks.	
Number.	Name.		Arrears brought forward.	Rate of Contri- bution.	Levies.	Fines.	Other Pay- ments.	Total to be paid.	On the followingNights of Meeting.									Total.

* Half-year or year, as the case may be.

40. The last portion of this book may be called the "Register of Sickness," and should be ruled after the following form. Three lines should be left for each sick member, in order that space for an entry for each rate of pay a member might receive during the year may be available in the total column :—

REGISTER No. 3.

Register of Sickness.

Name of Parent Society _____ Name of Branch _____ Year _____.

Number.	Name of Sick Member.	Last Sickness in previous Year.		—	Number of Working Days' Sickness and Rate of Sick Pay in each Fortnight of the present Year.																Total Period of Sickness in the Year at each Rate.		Disease or Cause of Disablement																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Date of Termination.	Pay at Termination.		Period for which that Rate had been received.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.		Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate

41. I may remark that the three forms contained in "The Register," if kept up regularly, will furnish all necessary data for compiling the second of the returns (Return B), which the Act requires to be furnished annually to the Government Statist. Particulars respecting members joining, leaving, and dying, and the registration and death of wives, are taken from the first part (Register of Members), whilst the second part (Register of Members' Payments) will serve as a check on the entries relating to members leaving in arrears. Mistakes frequently occur through secretaries returning members who are only temporarily unfinancial as having terminated their connection with the society, and these are only discovered when, in a subsequent year, the same members are set down as having received some benefit without any record having been made of their re-admission. It should be understood that a statement should always be made in Return B of those who have finally ceased to belong to the society, but that no entry is necessary respecting members who are merely unfinancial for the time being. The third part (Register of Sickness) contains all the particulars relating to sickness during the year required for making up that portion of the return.

42. The second, or "Night Book," is intended to be carried by the secretary to the branch meetings for the purpose of entering the receipts of each evening. The leaves may be ruled throughout according to the following form :—

NIGHT BOOK.

Name of Parent Society _____ Name of Branch _____

Date _____

No.	Name of Member.	Contribution.	Levies.	Initiation, &c., Fees.	Clearance Fees.	Fines.	Goods.	Other Receipts.	Total.
		s. d.	s. d.	£ s. d.	s. d.	s. d.	£ s. d.		£ s. d.

43. The receipts of each evening should be added when the meeting is over, and the totals appropriated to the different funds in accordance with the rules of the society.* The amounts entered having been thus divided should then be carried into the third or "Cash Book," and credited to the fund to which they belong. In this book a single line under each fund will be sufficient to devote to the entries in each column of the "Night Book," except that for "Other Receipts," every item of which should be shown separately. Full particulars of the expenditure are to be entered in the "Cash Book," of which the following is the form suggested, about an equal number of the leaves of the book being headed for each of the funds :—

CASH BOOK No. 1.

Name of Parent Society _____ Name of Branch _____
Receipts—Sick and Funeral Fund. *Expenditure—Sick and Funeral Fund.*

18	Particulars of Receipts.	£	s.	d.	£	s.	d.	18	Particulars of Expenditure.	No. of Cheque.	£	s.	d.	£	s.	d.

CASH BOOK No. 2.

Name of Parent Society _____ Name of Branch _____
Receipts—Incidental or Management Fund. *Expenditure—Incidental or Management Fund.*

18	Particulars of Receipts.	£	s.	d.	£	s.	d.	18	Particulars of Expenditure.	No. of Cheque.	£	s.	d.	£	s.	d.

44. The sum of the payments by each member, as shown in the “Night Book,” must be posted into the “Register of Members’ Payments,” already referred to (Register No. 2). When a member is seen to have become “run out” through neglect of payment, an entry of the circumstance should immediately be made in the “Register of Members” (Register No. 1).

45. The particulars of sickness are to be posted from the “Cash Book” into the “Register of Sickness” (Register No. 3), and it should always be observed whether the rate of sick pay is in accordance with the rules. When a name appears for the first time in the year, a reference should at once be made to the record for the preceding year, and if the member is found to have received sick pay in that year, the date of the termination of his sickness, and the last rate paid him, should be entered in the proper columns.

46. The entries in the total column of the “Register of Sickness” are used in making up the portion of the Annual Return B headed “Particulars of Sickness during the year.” The amounts in column 12 of that return must be calculated according to the period for which each sick member received pay at the different rates, and the total of this column should agree exactly with the sum of the sick pay during the year taken from the expenditure side of the “Cash Book.”

47. Of course it will be necessary to keep accounts with the borrowers of the Society’s funds. The book for these may be ruled according to the ordinary ledger form.

48. The balance-sheets and the Annual Return A are a summary and classification of the entries in the Cash Book. A form of balance-sheet is subjoined, which it is believed would be found suitable for most societies, and indeed closely resembles the form at present in use by some of them :—

* It should be pointed out that in societies where the contributions of different members are divided in different proportions, e.g., where one member pays weekly 6d. to each fund, and another of an older age pays, say, 8d. to the sick and funeral fund and 6d. to the incidental fund, it may be necessary to have two columns for contributions, and to enter the amount of each member’s payment in the column relating to the fund to which it is contributed. In other cases only one column will be required, and the amounts can be divided in the total.

QUARTERLY, Half-Yearly, or Annual Balance-Sheet for the { Quarter
Half-Year } ending
Year

18

Name of Parent Society _____ Name of District _____ Name of Branch _____

BALANCE-SHEET of the Benefit Fund.*			BALANCE-SHEET of the Incidental Expense or Management Fund.*		
Balance as per last balance-sheet.....			Balance as per last balance-sheet		
ITEMS OF RECEIPT.			ITEMS OF RECEIPT.		
Proportion of weekly contributions.....	£	s. d.	Proportion of weekly contributions at per member.....		
Amount by levy (only).....	£	s. d.	Amount by levy (only)	£	s. d.
Proportion of initiations			Proportion of initiations.....		
(Less initiation fees returned)			(Less initiation fees returned)		
Amount of rent or interest arising from investment of this fund.....			Clearance fees		
Sick and Funeral money repaid by district...			Amount of rent or interest arising from investment of this fund only.....		
Other receipts :—	£	s. d.	Other receipts :—		
Sick pay repaid by other branches			Sale of goods.....		
Funeral donations repaid by other branches			Fines		
(State full particulars of any other receipt.)			Medical attendance and medicines for members of other branches		
Total.....			Contributions received from members of other branches on account of their own branch.....		
ITEMS OF EXPENDITURE.			(State full particulars of any other receipt.)		
weeks days sick pay to members			Total.....		
at per week			ITEMS OF EXPENDITURE.		
weeks days sick pay to members			By Medical attendance and medicines for members of this branch.....		
at per week			District levy on members for ending at per member.....		
weeks days sick pay to members			District levy on members for ending at per member.....		
at per week			Levies for central board of directors.....		
District levy on members for ending at per member.....			Management :—	£	s. d.
District levy on members for ending at per member.....			Officers' salaries.....		
Funeral donations			Rent, lighting, and cleaning.....		
Other expenditure :—			Committee expenses and audit fees		
Sick pay advanced on account of branch...			Printing, stationery, postage, &c.		
Funeral donations advanced on account of branch.....			Guarantee premiums.....		
Cash balance.....			Delegates' expenses.....		
SUMMARY OF FUNDS.			Other expenditure :—		
On mortgage at per cent.			Donations		
" at per cent.			Goods purchased for sale		
" at per cent.			Furniture, repairs, &c.....		
" at per cent.			Medical attendance and medicines for members of other branches		
Cash invested in hall property at per cent.			Payments to other branches.....		
" in bank on deposit receipt at per cent.			Total expenditure		
" in savings bank.....			Cash balance.....	£	
" in bank to credit of trustees					
" in the hands of treasurer					
Total Funds.....£					

* The chief sources of income to this fund are :—The proportion of contributions and initiation moneys accruing to it, also the levies specially made for its sustenance, and the rent or interest arising from the whole or any portion of this fund which may be invested.

† This line not required if there are only three rates of sick pay.

* The chief sources of income to this fund are :—The proportion of contributions and initiation moneys accruing to it ; all levies, except such as are specially made for the sustenance of the Benefit Fund ; all fines, goods, and clearance fees ; and any rent or interest which may arise from the investment of THIS FUND ONLY.

Audited and found correct this day of 18 .

(SEAL) (Signature) } Auditors. (Signature) Chief Officer.
(Signature) (Signature) Secretary.

EXTRACT FROM REPORT FOR YEAR 1880.

23. With the view of carrying out the provisions of section 8, sub-section (a) of the Friendly Societies Act, I embodied in my Second Annual Report a series of forms of accounts and balance-sheets, the adoption of which would enable the societies to keep a record of their various transactions in a systematic and comprehensive manner, and to supply readily the information for filling up the annual returns to this department, or any other particulars respecting their operations which might from time to time be required.

24. One of the most necessary of the forms is that of a Night Book, on which are to be entered the cash receipts of each evening, the sum owing in any particular case being ascertained from the Register of

Members' Payments (No. 2) which, under this system, it will be necessary for the secretary also to take with him to the branch meetings.

25. It has been suggested that it would be more convenient to use for the Night Book a form drawn up in such a manner as to show the sum due by, and received from, every member throughout an entire quarter, by which plan the necessity of carrying the register to the lodge room on each night of meeting would be avoided.

26. For this purpose, the following form of Night Book is submitted for adoption in place of that given at page 12 of my Second Annual Report :—

NIGHT BOOK.

Name of Society _____

Name of District, &c. _____

Name of Branch _____

CONTRIBUTIONS received during quarter ending _____ 188 _____

No.	Name.	Age at Entry.	Rate per Fortnight.	Month and Day of Fortnightly Meetings.															
				Due.	Paid.	Due.	Paid.	Due.	Paid.	Due.	Paid.	Due.	Paid.	Due.	Paid.	Due.	Fines, Goods, &c.	Paid.	

27. Under this system the secretary copies into the Night Book at the commencement of each quarter, from the Register of Members (No. 1), the names of the members according to seniority of membership or any other convenient order, and the sum due on the first night of meeting ; also, in societies using a scale graduated according to age, the ages at initiation, and the corresponding rates of contribution. In the interval between the meetings the receipts are posted into the Register of Members' Payments (No. 2) the sum due from the accrued contributions and levies, entered in the column headed with the date of the next branch meeting, and the Night Book is again ready for use. The receipt of initiation and clearance fees, payable but once by any member, and of such items as usually occur at long intervals are entered in a space reserved therefor at the end of each quarterly division of the book.

F.

SUMMARY OF RECOMMENDATIONS OF THE ROYAL COMMISSION ON FRIENDLY SOCIETIES, VICTORIA.

62. We sum up our recommendations as follows :—

- (1.) That there should be an amended Act passed relating exclusively to Friendly Societies.
- (2.) That the new Act should include amongst the objects of the societies, in addition to the sick and funeral benefits, provision for mutual relief when on travel in search of employment, or in shipwreck, and for insurance of workmen's tools against fire to a small amount.
- (3.) That all provision for granting annuities and endowments should be excluded from the Act.
- (4.) That all Building Societies at present registered under the Friendly Societies Act should transfer their registration to the Building Societies Act.
- (5.) That reserves of land for general recreation purposes might still be granted to the societies, but no special grants should be made to particular societies for ostensibly charitable purposes, and that the reserves granted to four of the societies on Emerald Hill, and all similar grants which have not been put to the stipulated use, should be resumed by the Government, with compensation for improvements.
- (6.) That the offices of Registrar and Certifying Barrister should be combined, with a central office ; the appointment to be made by the Governor in Council, and the qualification to be seven years' standing at the bar.
- (7.) That the right of appeal to the Supreme Court against the refusal of the Registrar to grant a certificate of registration to a new society should be allowed.
- (8.) That a fixed and moderate scale of fees for registration should be included in the new Act, but that no fees should be paid for reperusal of rules or verbal alterations.
- (9.) That the furnishing of periodical returns and statements of accounts to the Government should be made compulsory on the societies, with a penalty for non-compliance.
- (10.) That the furnishing of requisite data for quinquennial valuations of their assets and liabilities should also be made compulsory, the Government undertaking to make the valuations.
- (11.) That the necessity for making effective periodical audits of their accounts should be urged on the attention of the societies by the Government.
- (12.) That in the rules of the societies, as revised by the proposed new Act, provision should be made for an improved system of clearances.

- (13.) That the Government should procure for the guidance of the societies a model table of rates of contributions for sickness, drawn up by a competent actuary, its use being left optional with the societies; and should also disseminate information relating to the average of sickness and mortality under variable conditions and circumstances.
- (14.) That the office of Certifying Actuary should be continued, and his powers and duties more clearly defined.
- (15.) That new provisions should be made for the appointment and removal of trustees, and their powers and duties more clearly defined in a new Act.
- (16.) That trustees should be legally prohibited from borrowing money from the societies they represent.
- (17.) That all the authorised officers of the societies should be brought within the cognizance of the law.
- (18.) That provision should be made for summary conviction and punishment in all cases of frauds committed by officers.
- (19.) That branches should only be registered as integral parts of the parent societies, the power of dissolution without the concurrence of the latter be taken away from them, and also the power of passing special resolutions for their own amalgamating with other societies or transfer of their engagements.
- (20.) That provision should be made in the new Act for the transfer to the parent society of the funds of any branch on its becoming insolvent or voluntarily severing its connection with the society.
- (21.) That the new Act should contain provisions against any deceptive similarity of name in the case of any new society.
- (22.) That the amended Act should clearly specify the obligations and duties of societies, the general character of their rules, the mode of settling disputes, the mode of proceeding in the case of a lunatic member, and the forms to be followed in case of dissolution of a society.
- (23.) That the limits of investment for the funds of societies fixed by the present Act should be extended.
- (24.) That the societies should be prohibited by law from investing any part of their funds in real property for speculative purposes; and that branches should not be allowed to build halls for meetings, &c., excepting on certain stringent conditions.
- (25.) That the formation of local dispensaries by combination of the societies, for their own sole use and benefit, should be legalised.
- (26.) That all Friendly Societies should be compelled to register themselves under the new law, and no new society should be allowed to be established without being registered.
- (27.) That the new Act should contain a definition of legal offences, together with a general penalty clause.
- (28.) That the present rule as to the maximum of benefit to be allowed to any member should remain unaltered.
- (29.) That the duties assigned to the office of treasurer in the existing Act be transferred to the trustees in the new Act.
- (30.) That the guarantees required from officers holding positions of trust in the societies be enlarged to include guarantee associations.
- (31.) That the new Act should contain provisions to compel officers holding positions of trust to pay over on demand all moneys or securities held by them on behalf of the societies.
- (32.) That the Registrar's certificate should be held to be legal evidence of the existence of a society; and that, in all legal cases, the presumption of proof should be on the side of the societies.
- (33.) That in case of the insolvency or death of any officer holding moneys belonging to a society, a preferential claim should be allowed on his estate.
- (34.) That the Registrar should have power to order an audit of the accounts of a society, on being memorialised to that effect by ten members.

G.

INSTRUCTIONS AND FEES TO PUBLIC AUDITORS.

Instructions for the guidance of Public Auditors appointed under "The Friendly Societies Act, 1877,"
(41 Vict. No. 590).

1. The attention of Public Auditors is directed to section 13, sub-sections (i. c.), (i. d.), and (iii.) of *The Friendly Societies Act, 1877*, which relate to matters especially connected with their duties.

2. The Public Auditor is bound to accept for audit (except as hereinafter mentioned) the accounts of any society (the term "society" to include a "branch" of a society) at the scale of fees hereafter laid down, the society complying with the terms of these instructions; but no Public Auditor can audit the accounts, balance-sheet, or general statement of any society of which he is accountant, or any account, balance-sheet, or statement which he has himself prepared.

3. The Public Auditor is not bound to leave his office or place of residence for the purpose of audit, therefore any society desirous of having its accounts audited by him should forward to his address all necessary books and documents. If, however, a society should prefer that the Public Auditor should attend at its place of business, he is at liberty to do so; but in such case he is entitled to claim, in addition to his ordinary fee, travelling expenses and payment for loss of time on a scale to be arranged between him and such society.

4. The audit is to involve the examination not only of the ordinary books and accounts, and the verification of the same with vouchers, and the examination of the securities held by the society, but the checking of the contributions and arrears from the contribution cards or pass books: the checking of the sick pay from the doctors' certificates; the checking of the funeral donations from the certificates of death; and the examination and verification of the annual balance-sheet and of the general statement (Return A), which last-named document is to be made out according to the prescribed form.

5. After verifying the annual balance-sheet and general statement with the accounts and vouchers relating thereto, the Public Auditor is either to sign the same as being correct, duly vouched, and in accordance with law, or specially to report to the society in what respect he finds them incorrect, unvouched, or not in accordance with law.

6. In the event of the Public Auditor discovering errors in the balance-sheet, the general statement, or in the books, accounts, or vouchers submitted to him, they are to be returned (at the cost of the society) for correction, unless the Public Auditor be requested by the society to correct the inaccuracies, in which case he is entitled to extra payment, to be arranged between him and the society.

7. The Public Auditor shall, in all cases, make a report to the society upon the accounts and other documents submitted to him; and in case he has called for explanation or further information, he shall state whether such explanations or information have been given, and whether they have been satisfactory.

8. Each Public Auditor shall send to the Government Statist, on or before the 15th April of each year, a list containing the names of the societies audited by him during the twelve months ended with the previous 31st March, and the fees received from each society.

9. The following is the scale of fees authorised to be paid to Public Auditors by the societies. Public Auditors are, however, at liberty to accept audits at lower terms than those laid down in the scale:—

Fees to Public Auditors for Auditing the Annual Accounts of Friendly Societies or Branches, consisting of—

	£	s.	d.
Not more than 50 members.....	1	10	0
Over 50 members but not exceeding 300 members, for each } 50 members or part thereof	1	0	0
Over 300 members, in respect to the first 300 members	6	0	0

With a further sum of 10s. in respect of each additional 50 members or part thereof up to 3000 members, and for each 50 members or part thereof over 3000 members a further sum of 5s.

Chief Secretary's Office,
Melbourne, 8th August, 1878.

H.

INSTRUCTIONS TO PUBLIC VALUERS.

Instructions prepared by the Government Statist for the guidance of Public Valuers appointed under "The Friendly Societies Act, 1877," (41 Vict. No. 590).

1. Public Valuers should make themselves acquainted with *The Friendly Societies Act 1877*, and the Friendly Societies' Regulations. Their attention is particularly directed to sections 13 and 30 of *The Friendly Societies Act*.

2. A Public Valuer is bound to undertake every valuation under the Act tendered to him by a society (the term "society" to include a branch of a society), the society supplying him with all the necessary information, and giving him reasonable security for the payment of his fee. He should make his valuation, and furnish the society with the report and abstract thereof required by section 13, sub-section (1.) (c) within three months after full information has been supplied, unless there be just and sufficient reason for delay.

3. The Valuer may require that the particulars for valuation shall be supplied to him in such form as he may think fit, together with copies of the rules for the time being, and of the annual returns and balance-sheets of the society, also such further information as to the affairs of the Society as he may deem expedient for the purpose of his valuation.

4. Until the average rates of sickness and mortality prevailing at each age in this colony shall have been accurately determined, in the valuation of a society's liabilities in respect to sickness and death, and of its assets in respect to the future contributions of members, the total rate of sickness taken as expected to be experienced at each age up to the age of 70 is not to be lower, nor the rate of mortality at any age to be higher, than those given in Ratcliffe's Sickness and Mortality Experience for the years 1866-70 of the Manchester Unity Order of Odd Fellows, Rural, Town, and City districts combined.

5. In reference to sick allowance beyond the age of 70, the Valuer is to call attention in his report to the principles on which he has valued this portion of the sickness liabilities, with the probable effect of the cases of prolonged sickness on the funds of the society.

6. In the case of a society having many of its members engaged in occupations more than usually hazardous or injurious to health, the Valuer is in his valuation to make such allowance therefore as he may deem expedient, and is to call special attention thereto in his report on the valuation.

7. The Valuer may, in estimating the value of a society's liabilities under its assured benefits, use such rate of interest as he may consider expedient; but when such rate exceeds 4 per cent. he is, in his report on the valuation, to state fully the grounds on which a higher rate of interest is made use of.

8. No allowance is to be made for possible future profits arising from secessions, unless the number of contributing members to the society, and the nature of the society's business, be such as to justify an allowance being made; and the valuer is in all cases to state in his report what allowance has been made, and the grounds on which it has been made.

9. The method of valuation must in no case have the effect of treating any of the society's assurance contracts (or sums payable at sickness and death) as assets. In other words, the liability of the society under its assurance contracts must in no case be treated as having a negative value.

10. The Valuer is called upon to value the benefit funds only, but his report should in all cases state distinctly what provision is made for future expenses of management, and whether, in his opinion, judging from the past experience of the society, such provision is adequate.

11. The valuer should draw attention in his report to any breaches of the law which may come under his notice, as, for instance, the application of any portion of the benefit funds of the society to purposes of management.

12. In his report the Valuer should give a satisfactory explanation of the cause of a surplus or deficiency shown by the valuation, and advise how a deficiency ought to be dealt with, and the principles on which it should be made good.

13. In estimating the capital of the society, the valuer is to satisfy himself that all moneys invested are adequately secured. He is also to be careful not to place a higher value upon debts owing to the society than is likely to be realised therefrom; nor any value whatever upon contributions which are more than fourteen weeks in arrear; nor to consider as capital the value of any property except such as belongs to, or the value of any debts except such as are payable to, the benefit funds.

14. No valuation, whether made by a Public Valuer or any other person, will be deemed to be a valuation under *The Friendly Societies Act, 1877*, unless it is accepted as such by the Government Statist; and no Public Valuer will be entitled to his fee until such acceptance is given. Subject to this, the Valuer may take such steps as he thinks fit assure payment of his fee.

15. Each Public Valuer is to send to the Government Statist, on or before the 15th of April in each year, a list containing the names of the societies valued by him during the twelve months ended with the previous 31st March, and the fees received from each society.

16. The annexed scale of fees to Public Valuers and form of valuation of a Friendly Society have been duly approved by the Governor in Council, in accordance with the provisions of *The Friendly Societies Act*.

HENRY HEYLYN HAYTER,
Government Statist.

Office of the Government Statist,
Melbourne, 20th September, 1879.

ERRATA.

I AVAIL myself of the opportunity afforded me by the courtesy of R. M. Johnston, Esq., to correct certain errors which, on revision of the printed copy placed a few days since in my possession, were found in the Report. Particular attention is drawn to Tables 3 and 4, with the comments thereon, which are to be substituted for those given in the Report.

EVAN F. OWEN.

*Department of the Government Statist,
Melbourne, 14th July, 1886.*

Pages 13, 14—for Table 3, substitute the following Table.

TABLE 3.

STATEMENT of Amount of Funds, Funds per Member, Interest received, and Rate of Interest realised, during the Years 1882, 1883, and 1884, together with the Number of Branches and Members at the end of each Year, in all the Friendly Societies in Tasmania which furnished Returns to the Government Statistician.

SOCIETY	I.O.O.F., M.U.*									I.O.R.*					
	Hobart District.			Buckingham District.			Cornwall District.			Southern Cross District.			Tasmanian District.		
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Number of Branches at end of Year	4	4	4	4	5	6	12	7	9	5	8	9	8	11	13
„ Members	450	548	631	653	713	770	975	802	1005	268	440	502	492	581	693
Funds at beginning of Year 1882	£ 2520	...	...	4784	...	...	8809	...	...	2030	...	...	4991	...	...
Funds at end of Year	£ 2587	2699	2865	4853	5229	5462	10,433	10,538	11,588	2069	3457	3639	5411	5811	6658
Funds per Member	£ 5 15s.	4 19s.	4 11s.	7 9s.	7 7s.	7 2s.	10 14s.	13 3s.	11 11s.	7 14s.	7 17s.	7 5s.	11 0s.	10 0s.	9 12s.
Interest received by Branches	£ ...	56	78	...	180	188	...	147	188	...	77	118	...	99	82
Rate of Interest per cent. ....	...	3·4	4·6	...	4·9	4·7	...	3·7	4·5	...	3·4	4·7	...	4·4	3·1

SOCIETY	St. J.F.S.						I.O.O.F.*			A.O.F.		
	Hobart.			Launceston.								
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Number of Branches at end of Year	1	1	1	1	1	1	1	5	6	2	4	4
„ Members	576	511	512	260	270	270	207	492	630	318	421	459
Funds at beginning of Year 1882	£ 963	...	...	672	...	...	836	...	...	3333	...	...
Funds at end of Year	£ 981	1224	1183	753	806	850	874	1917	2236	3502	4483	4872
Funds per Member	£ 1 14s.	2 8s.	2 6s.	2 18s.	3 0s.	3 3s.	4 4s.	3 16s.	3 11s.	11 0s.	10 13s.	10 13s.
Interest received by Branches	£ ...	50	59	...	7	6	...	37	35	...	188	225
Rate of Interest per cent. ....	...	4·5	4·9	...	0·9	0·7	...	3·1	3·2	...	4·8	4·8

TABLE 3.—Statement of Amount of Funds, &c.—continued.

SOCIETY	P.A.F.S.*			T.M.L.R.S. & P.S.			T.G.R.S.F.S.			U.A.O.D.		
				Hobart.			Launceston.					
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Number of Branches at end of Year.....	3	3	6	..	1	1	..	1	1	2	2	2
Number of Members at end of year	190	203	421	..	208	211	..	69	74	221	244	274
Funds at beginning of Year 1882..... £	441	..	..	..	..	..	..	..	..	112	..	..
Funds at end of Year..... £	561	371	1544	..	185	187	..	23	37	301	526	692
Funds per Member	£ 2 19s.	1 17s.	3 13s.	..	0 18s.	0 18s.	..	0 7s.	0 10s.	1 7s.	2 3s.	2 11s.
Interest received by Branches	£ ..	8	26	..	..	..	..	2	2	..	8	22
Rate of Interest per cent. ....	..	1·7	3·8	..	..	..	..	6·8	6·7	..	1·9	3·6

SOCIETY	A. & I.O.O.F.			St. P.S.						H.A.C.B.S.		
				Hobart.			Launceston.					
	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.	1882.	1883.	1884.
Number of Branches at end of Year.....	1	2	2	..	1	1	1	1	1	1	1	1
Number of Members at end of Year.....	70	137	126	..	19	26	78	103	91	57	92	103
Funds at beginning of Year 1882	£ 1627	..	..	..	..	..	362	..	..	245	..	..
Funds at end of Year	£ 1628	2206	2080	..	197	216	440	474	560	288	461	498
Funds per Member.....	£ 23 5s.	16 2s.	16 10s.	..	10 7s.	8 6s.	5 13s.	4 12s.	6 3s.	5 1s.	5 0s.	4 17s.
Interest received by Branches	£ ..	116	110	..	..	..	..	37	32	..	..	21
Rate of Interest per cent. ....	..	6·0	5·1	..	..	..	..	8·1	6·2	..	..	4·4

* In the I.O.O.F., M.U., I.O.R., I.O.O.F., and P.A.F.S., the Balances to the credit of the District are included in the Funds, but the rate of Interest is calculated on the Funds under the control of the Branches.

Page 15—for Table 4, substitute the following Table :—

TABLE 4.
SOCIETIES in the Order of the Average Rate of Interest realised in 1883-4.

	Rate per cent.		Rate per cent.
1. St. P.S., Launceston.....	7·2	10. I.O.R., Tasmanian District.....	3·8
2. T.G.R.S.F.S., Launceston.....	6·8	11. I.O.O.F.....	3·2
3. A. & I.O.O.F.....	5·6	12. P.A.F.S.....	2·8
4. I.O.O.F., M.U., Buckingham District....	4·8	13. U.A.O.D.....	2·8
5. A.O.F.....	4·8	14. H.A.C.B.S.....	2·2
6. St. J.F.S., Hobart.....	4·7	15. St. J.F.S., Launceston.....	0·8
7. I.O.O.F., M.U., Cornwall District.....	4·1	16. T.M.L.R.S. & P.S., Hobart.....	0·0
8. I.O.O.F., M.U., Hobart District.....	4·0	17. St. P.S., Hobart.....	0·0
9. I.O.R., Southern Cross District.....	4·0		

I may point out in this connection that the rate of interest allowed on deposits by the Savings Banks in Tasmania is five per cent. per annum.

Page 15—for paragraphs 11, 12, read—

11. In a great majority of the Societies the income during the three years comprised in Table 3 has exceeded the expenditure, and the funds have steadily increased. In the St. J.F.S. and the P.A.F.S. this advance has been somewhat irregular. On examination of the fifth line, showing the funds per member, it will be seen that in the following Societies the membership increased faster than the capital:—I.O.O.F., M.U., Hobart and Buckingham Districts; I.O.R., Southern Cross and Tasmanian Districts; I.O.O.F., A.O.F.; St. P.S., Hobart; and H.A.C.B.S.

12. It is necessary, however, to point out that the financial and numerical progress of the Societies during 1882-3-4 is correctly shown by the figures contained in Table 3, provided, and as far as, the Returns furnished during those years to the Government were accurate and complete, which there is reason to believe was not the case.

Page 15, paragraph 13—after “paragraph” insert 32.

Page 19, I.O.O.F., column 4—for “decreased” read increased.

Page 19, A.O.F., Tasmanian District, Court Sherwood—instead of the remarks in column 11, read—

SUPPLEMENTARY ASSURANCE FUND.

Age.	Annual Contribution.	Sum Assured.
	s. d.	
18-21.....	4 4	£20
21-25.....	5 5	
25-30.....	6 6	
30-35.....	7 7	
35-40.....	8 8	
40-43.....	9 9	
43-46.....	10 10	
46-48.....	11 11	£40
48-50.....	13 0	
Double these Contributions.....		£40
S.A.F. Rules [10]		

Amended Rules registered, 27. 10. 79.

Page 25, read the first three lines of paragraph 20 as follows :—

20. Some comparisons will be useful between the rates prevailing in the Societies in Tasmania, as shown in Table 5 above, and the rates contained in Tables 7 and 8. In the Tasmanian District, I.O.R., 1s. 1d. per quarter at every age of entry from 16 to 36, with 5s. initiation fee, is considered sufficient to . . .

Page 26, paragraph 22; read the first seven lines and the last sentence as follows :—

22. It will be noticed that in some of the Societies entrance fees, increasing in some cases rapidly, in other cases more slowly, with the age of the member when initiated, are payable to the fund which I have termed the “Medical and Management Fund,” on account of the purposes which it serves, but known to the Societies as the “Incidental Fund,” “Contingent Fund,” “Management Fund,” “Incidental Expense Fund;” in Court Pride of Tasmania, A.O.F., for example, and the P.A.F.S., the St. P.S., Launceston, and the H.A.C.B.S. Graduated periodic payments, the increase being, however, but small, are made to the same fund in Court Pride of Tasmania, A.O.F. . . . The whole of the increase in contributions on account of age of admission should go to the Sick and Funeral Fund.

Page 27, Table 9, I.O.O.F., M.U., Hobart District, Sick Pay—for “21s., 15s., 5s.,” read 20s., 15s., 5s.

Page 27, Table 9, St. J.F.S., Launceston, Annual Contribution per Member—for “52s.” read 26s.

Page 27, Table 9, I.O.O.F., M.U., Hobart District, column 14—for “3s. 2d.” read 2s. 2d. Column 15—for “12s. 9d.” read 11s. 9d.

Page 28, paragraph 32—for “1885” read 1855.

Page 28, Table 10, I.O.O.F., M.U., Hobart District—for “7s. 3d.” read 8s. 3d.

Page 32, paragraph 38—for “H. H. Henmen, Esq.,” read H. A. Hendren, Esq.