

PROCEEDINGS OF THE SIXTY-FIRST MEETING,  
BEING THE SIXTH ANNUAL GENERAL MEETING.

HELD in the Applied Science Department, The University, Sheffield, on Wednesday, April 18th, 1923, the President in the chair.

The Sixth Annual Report of the Council (together with the Accounts) having been circulated, was taken as read, approved, and adopted.

The Report ran as follows :—

SIXTH ANNUAL REPORT OF THE COUNCIL.

THE membership of the Society on December 31st, 1922, stood at 649. During the year 1922, 46 new members were elected (7 Collective and 39 Ordinary), 11 of whom were resident in the United States.

The statement of membership may be summarised in the following tables, which enable a survey to be made of the geographical distribution of membership.

A. *Total Members elected up to the end of 1922.*

Honorary .....	1
Collective .....	155
Ordinary .....	608
Student .....	24
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	788
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B. *Members on the Roll, December 31st, 1922.*

Location.	Honorary.	Collective.	Ordinary.	Student.	Total.
British Isles .....	1	112	357	2	472
Argentina .....	—	—	1	—	1
Australia .....	—	2	2	—	4
Belgium .....	—	1	1	—	2
Canada .....	—	—	5	—	5
China .....	—	—	2	—	2
Czecho-Slovakia ...	—	1	—	—	1
France .....	—	5	9	—	14
Germany .....	—	—	2	—	2
Holland .....	—	2	1	—	3
India .....	—	1	11	—	12
Japan .....	—	2	15	—	17
South Africa .....	—	1	1	—	2
Spain .....	—	—	1	—	1
Sweden .....	—	—	7	—	7
U.S.A. ....	—	6	98	—	104
	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
	1	133	513	2	649
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The foreign membership continues to increase and numbered 177 at the end of 1922. It is noteworthy that for the first time the Society records members in Czecho-Slovakia and Germany, and it is certain that but for the effect of depreciated exchanges in many European countries, a large number of applications for membership would be received and a largely increased sale of the JOURNAL effected abroad.

The losses in membership during the year were considerable, the result of post-war conditions and trade depression.

The Council has to regret the deaths of the following six members during the year :—

Dr. J. F. Bottomley.  
Preston M. Bruner.  
Major A. H. Heisey.

Harry J. Powell.  
Prof. C. W. Waggoner.  
A. Wilson.

The following thirty-six members have resigned :—

(a) *Collective* (14).

Aylesford Sand Co., Ltd.  
Amalgamated Glass Bottle Works,  
Ltd. (Dissolved).  
John Baird, Ltd.  
Barr & Stroud, Ltd.  
Boulton & Mills.  
Caledonian Bottle Works, Ltd. (Dis-  
solved).  
Dennistoun Glass Works, Ltd. (Dis-  
solved).

Down Bros., Ltd.  
English Electric Co., Ltd.  
J. J. Griffin & Sons, Ltd.  
O. C. Hawkes, Ltd.  
Hyposol, Ltd.  
Queenborough Glass Bottle Works.  
Sheraton Glass Manufacturing Co.,  
Ltd.

(b) *Ordinary* (22).

E. Ambrose.  
J. B. Arch.  
P. B. Arch.  
C. Archer.  
F. Beddow.  
M. L. Burgess.  
E. F. Chance.  
J. B. Coppock.  
F. R. Dixon-Nuttall.  
J. Field.  
W. Galbally.

F. W. Hampshire.  
J. G. Kaufmann.  
S. Lamb.  
F. Shelly.  
A. Smales.  
H. J. Stobart.  
J. Seddon.  
N. Shaw.  
F. P. Wainwright.  
N. F. Wheeler.  
H. B. White.

The Council also took the step of making its list of members a healthy one by removing the names of nineteen members (eighteen ordinary and one collective), through the non-payment, without reasonable cause, of subscriptions due.

In spite of these losses, the total number of members on the roll at the end of 1922 was only fourteen less than at the end of 1921, owing to the continued influx of new members.

At the Annual Dinner, held in Sheffield, the Society had the pleasure of welcoming as guests: The Right Honourable The

Lord Mayor of Sheffield (Alderman Charles Simpson); Sir W. H. Hadow, C.B.E., D.Mus.; Sir Albert J. Hobson, J.P., LL.D., and the Dean of York (The Very Reverend W. Foxley Norris, D.D.).

Of special interest were the October meeting at York (when Dr. W. Foxley Norris, Dean of York, showed members the mediæval glass in the Minster and described the work of restoration), and the November meeting, when presentations of the Frank Wood Medal were made.

During the year arrangements were made for members to have tea together after the meetings in order to encourage social intercourse. The opportunities thus afforded have been found of great value.

In order to stimulate interest among members of the Society resident in France, the programme of meetings for the session 1922-23 was drawn up so as to include a visit to Paris.

The Council has again to record its appreciation of the courtesy extended by several firms in allowing members of the Society to visit their works. The Council cordially thanks the firms in question for the privileges so afforded.

The good relations subsisting between this Society and the American Ceramic Society have been further enhanced by an exchange of advertisements. This Society's advertisement appears in the *Journal of the American Ceramic Society*, while an advertisement of the American Ceramic Society appears in the *Journal of the Society of Glass Technology*.

During the year the Society was invited to nominate a representative on Panel No. 5, "Clay, Glass and Silica Ware, and Refractories," of the British Engineering Standards Association. Professor W. E. S. Turner, D.Sc., was nominated, with Mr. W. J. Rees as alternative.

The sixth volume of the *Journal* contained 51 pages of Proceedings, 25 original papers, contributed to the Society and occupying 308 pages, and 445 Abstracts and Reviews, occupying 335 pages. The total number of pages, excluding advertisements and indexes, was 694, compared with 627 for 1921. This increase of 67 pages was largely due to a very considerable increase in the number of Abstracts and Reviews.

The number of volumes in the Society's Library at the end of 1922 was 230, an increase of 40. The Council would be glad to see the library made use of more extensively by members.

During the year the preparation of the Society's "Directory for the British Glass Industry" was actively prosecuted, but the work involved has been so great that it was not possible to complete it before the end of the year.

The Income and Expenditure Account for the year 1922 shows an adverse balance of more than £50, although the excess of assets over liabilities on December 31st, 1922, amounted to some £60. Analysis of the accounts, however, shows the position to be a very satisfactory one. Thus, the grant of £50 to the Glass Research Delegacy was included in the current year's account instead of in that for 1921, whilst a change in procedure was made, as compared with previous years, by which the sum of £65 9s. received in 1922 for 1923 *Journals* was not treated as Income for 1922. Again, of the Expenditure, more than £20 was on account of the "Directory," for which as yet the Society has had no return. It will thus be recognised that the balance sheet has been conservatively constructed and should lead to a favourable position in 1923. The cost of printing, preparing, and distributing the *Journal* was about £1,150, out of a total income of some £1,600.

## SOCIETY OF GLASS TECHNOLOGY.

### DINNER ACCOUNT, 1922.

EXPENDITURE.						INCOME.										
						£	s.	d.								
To Royal Victoria Station Hotel	...	...	...	...	...	25	5	0	By Balance from 1921	...	...	...	...	...	1	
„ Gratuities	...	...	...	...	...	1	10	0	„ Tickets Sold (39 at 12s. 6d.)	...	...	...	24	7	6	
„ Printing	...	...	...	...	...	3	15	6	Less Returned	...	...	...	12	6		
„ Entertainer	...	...	...	...	...	2	2	0					23	15	0	
„ Bank Charges	...	...	...	...	...		2	6	Received from President, <i>re</i> Guests	...	...	...		1	2	9
„ Postages	...	...	...	...	...		4	9	Deficit, made good out of General Account	...	...	...	8	1	11	
						<u>£32</u>	<u>19</u>	<u>9</u>					<u>£32</u>	<u>19</u>	<u>9</u>	

## SOCIETY OF GLASS TECHNOLOGY.

### INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING DECEMBER 31ST, 1922.

EXPENDITURE.	£	s.	d.	£	s.	d.	INCOME.	£	s.	d.	£	s.	d.
To Abstractors' Remuneration ...				72		15	By subscriptions :						
„ Advertising ...				5		0	(a) Collective ...	362		5			
„ Bank Charges ...				5		10	(b) Ordinary ...	495					
„ Binding Books and Periodicals ...				6		9	(c) Student ...			5			
„ Binding and Cases for "Journal," Vol. VI., 1922				20		15	(d) American ...	136		2		6	
„ Books and Periodicals ...				13		11	(e) Odd Amounts ...			14	16		1
„ Deficit on Annual Dinner ...				8		1	(f) In Arrears paid up	22		16		0	
„ Grant to Glass Research Delegacy ...				50		0					1031		4
„ Insurance at Bungay ...				6		10	„ Bank Interest ...					12	7
„ Meetings Expenses ...				10		11	„ Binding Cases Sold						
„ Office Expenses ...				7		18	(1) To Members ...	5		12			
„ Postages, etc. ...				56		15	(2) To Non-members ...			9			
„ Printing, etc., of "Journal" No. 21	286	14	2									6	1
No. 22	268	9	5				„ Commission on Advertisements in						
No. 23	223	2	2				"Journal," 1922 ...				316		0
No. 24	229	6	0				„ Journals Sold						
				1007		11	(i) To Members ...	60		8		245	15
„ Printing Excerpts, "Journal" No. 21	14	15	0				(ii) To Non-members ...	185		6			3
No. 22	15	8	3				„ "Refractories Specifications" Sold						2
No. 23	9	19	9				„ Registration Fees ...						5
No. 24	13	14	5				„ Balance, being Excess of Expenditure over						59
				53		17	Income ...					18	0½
„ Printing Notices and Stationery, etc. ...				91		7							
„ Salaries ...				240		0							
„ Travelling Expenses ...				5		2							
„ Telephones ...				3		2							
„ Refunds of Cash ...				4		10							
„ Repurchase of "Journals" ...				2		5							
				£1671		13					£1671		13
						4½							4½



Mr. FRANK WOOD, C.B.E., B.Sc., F.I.C., Past President of the Society, proposing a vote of thanks to the authorities of Sheffield University for their courtesy in providing accommodation for the Society's meetings from time to time, said it was a great honour and a very great pleasure to him to be asked to propose this vote of thanks to the University of Sheffield, and particularly to the Department of Applied Science. They all knew that ever since the Society was founded the University and the Department had been kindness itself and had always given them housing free of charge, which was a very great thing, and he was sure he was only expressing their feelings when he thanked the University for all they had done.

The Vice-Chancellors in turn, Mr. H. A. L. Fisher, afterwards their friend Dr. Ripper, and later Sir Henry Hadow, as well as Mr. W. M. Gibbons the Registrar, Sir Albert Hobson, and all the Professors in the other Departments of the University had always taken the keenest interest in their Society. They owed a very deep gratitude to the Department and to the various Professors and officers, and he was sure they all felt it a great honour that Dr. Ripper had spared a few minutes to visit them that afternoon, because he had always helped to the very best of his ability. He had not spared himself in any way, and had attended deputations all over the country to help the Society and the Department of Glass Technology. Dr Ripper really embodied the whole of the Department of Applied Science, and he was very pleased to see him present, not only because of his great technical knowledge, but also for the charm of his personality. He hoped he did not think him presuming when he said all these things to him, but he assured Dr. Ripper they did appreciate all he had done for them.

Prof. W. RIPPER, C.H., D.Eng., D.Sc., M.Inst.C.E., Dean of the Faculty of Engineering, replying, said he was sure he was made of stone if he did not feel some embarrassment in replying to the very gracious and kindly speech of Mr. Wood. He had attributed a great deal of merit to the University and to the staff of the University, but he (Dr. Ripper) felt that whatever they had done was only what they were placed there for. Their business was to encourage and to help scientific efforts in every way possible, and when the staff of the University did not do that it was time it was swept out. The Society was only thanking them for what was just their common business. Nevertheless, it was a great joy to know that any services they might have been able to render were appreciated in such a way.

He thought the glass industry was one which particularly reflected the influences and effects of the war. For example, they had



learned very early indeed the extreme importance of the application of scientific knowledge to all industries, and none felt it more so than did the glass industry. He did not know of any industry that had responded more splendidly to that demand. He did not think there was any Society with a finer record—which was very largely due to their own President—of response to that obvious demand of the times for the application of science to the industry. The way in which they produced their JOURNAL and the quality of the contents of that JOURNAL, all did the Society very great credit indeed; and they at the University did not omit to take notice of the splendid work that was being done. It fully repaid him and his colleagues for anything they might have done and they felt that some of the glory of the Society's work was reflected on the University. As a University, they had really taken a very keen interest in all Dr. Turner's efforts, and as far as he knew the University, they might be sure that there would be no falling off of that keenness of interest. He thought these Societies not only got members together to discuss the scientific aspects of their industry, but helped them to follow what was happening up and down the country and to lead in turn to other developments.

He noticed that to-day they had some papers on organisation, administration, and subjects of that kind. The war had taught them the extreme importance of the organisation of their industries, although when the war was over they also discovered it was possible to have too much of a good thing.

It must not be forgotten, however, that good organisation was an enormously important thing, and was becoming more and more so, as also the necessity for training in organisation, and the necessity for comparing notes one with another and of learning what was the best system.

Besides organisation, there was another thing which they could not help noticing in their industries to-day, namely, the tremendously increased attention to the human side of it. There was a growing recognition of the human factor as between labour and capital, as between manufacturer and manufacturer, as between trade society and trade society; in all these ways they were learning the necessity of realising what was the value of the human side as distinguished from merely the scientific side or the financial side. The tendency was, he thought, instead of cut-throat competition, that had done so much to spoil some of their industries, to substitute a certain degree of co-operation, by the comparing of notes, and by mutually helping one another, whether in scientific development or in improved organisation. Such methods tended to develop the general well-being of the industry, and if they were learning to

have regard for the general universal well-being of the industry, they might be sure that this was going to be productive of enormous effects. It was only by mutually helping one another, like members of a family, that our country could attempt to compete with other countries, and societies like the Glass Society were the means through which these helpful suggestions could be made. Every officer of this Society from the President downwards who did anything to bind the Society together, to increase the interest that was felt among the members for the general work of the Society, was doing greater things than he knew.

On the PRESIDENT'S motion it was resolved that there be sent to Mr. Connolly (General Treasurer to the Society) a cordial message of sympathy with him in the death of his wife.

The PRESIDENT reported that two Vice-Presidents of the Society, Dr. C. J. Peddle and Mr. W. J. Rees, had recently undergone operations for appendicitis. Happily both were progressing satisfactorily.

It was resolved—

That Rule 18 be amended (by the addition of the words in italics) so as to read—

“The Annual Subscription shall be as follows :—

- (a) Collective Members shall pay £3/3/0 per annum;
- (b) Ordinary Members shall pay £1/10/0 per annum;
- (c) Student Members shall pay 2/6 per annum; *provided that in the case of Ordinary Members, the subscription for manual, clerical, and junior technical workers in the industry shall, subject to regulations to be made from time to time by the Council, be £1/1/0.*”

The Meeting then proceeded to the election of Officers for the year 1923–24.

The PRESIDENT intimated that Mr. F. Graves Clark had been compelled on account of ill-health to resign his position as Honorary Secretary, and that Mr. S. English, M.Sc. had been nominated in his place.

For Ordinary Members of Council, six persons were nominated for five vacancies and a ballot took place. Messrs. A. Cousen and D. Robertson acted as scrutineers.

The following lists contain the names (1) of Officers whose term of office expired, and (2) of Members who were elected in accordance with the Rules of the Society to fill the vacancies.

(1)

*President.*

(2)

Prof. W. E. S. TURNER, O.B.E.,  
D.Sc., M.Sc., F.Inst.P.

Prof. W. E. S. TURNER, O.B.E.,  
D.Sc., M.Sc., F.Inst.P.

*Vice-Presidents.*

W. BUTLER.	E. A. COAD-PRYOR, B.A.
Prof. W. G. FEARNSIDES, M.A., F.G.S.	W. J. GARDNER.
J. FORSTER, O.B.E.	
Major W. L. FOSTER, C.B.E., D.S.O.	

*Ordinary Members of Council.*

E. A. COAD-PRYOR, B.A.	F. F. S. BRYSON, M.B.E., M.A., B.Sc., F.Inst.P.
W. J. GARDNER.	VIOLET DIMBLEBY, B.Sc.
J. KAYE, M.A., B.Sc., F.I.C.	Major G. V. EVERS.
Col. T. W. SIMPSON.	Col. S. C. HALSE, C.M.G.
F. B. TOWERS.	TH. TEISEN, B.Sc., C.E.

*Treasurers.*

JOSEPH CONNOLLY (General).	JOSEPH CONNOLLY (General).
WM. M. CLARK, Ph.B. (American).	WM. M. CLARK, Ph.B. (American).

*Secretary.*

F. GRAVES CLARK.	S. ENGLISH, M.Sc., A.I.C.
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*Auditors.*

EDWARD MEIGH, M.B.E., M.Sc.	EDWARD MEIGH, M.B.E., M.Sc.
DENNIS WOOD, M.B.E., F.S.A.A.	DENNIS WOOD, M.B.E., F.S.A.A.

On the motion of Mr. FRANK WOOD, seconded by Mr. J. H. STEELE, a vote of thanks was accorded to the retiring Officers of the Society for their services during the past year.

The SECRETARY reported that the Council, after careful consideration, had decided to postpone the proposed visit to Paris.

The PRESIDENT directed attention to—

- (a) The Roll of Members.
- (b) The Suggestion Book.
- (c) The "Directory for the British Glass Industry."

The SECRETARY read a letter from the Institute of Physics, London, inviting members of the Society to be present at a lecture to be given by Dr. J. W. Mellor on May 9th, the subject being "The Application of Physics to the Ceramic Industry."

PROF. W. E. S. TURNER'S Presidential address was taken as read. His subject was "The Year in Review in the World of Glass-making."

A General Discussion then took place on "Works Organisation."

The subject was opened by Mr. W. W. WARREN, A.M.I.C.E., A.M.I.E.E., who gave a *résumé* (with additions) of the paper he had already read at the Newcastle meeting on February 21st, 1923, on "Organising for Production from Pot Furnaces." To the discussion that followed there contributed the President, Messrs. W. Butterworth, G. Simpson, F. F. S. Bryson, J. R. Clarke, E. D. J. Robertson, R. Hemingway, and F. G. Clark. Mr. Warren replied.

Mr. T. C. MOORSHEAD presented the case for Tank-furnace works in a paper entitled "Tank-furnace Works Organisation." To the discussion on this paper there contributed the President, Col. S. C. Halse, Messrs. J. H. Steele, F. F. S. Bryson, and E. D. J. Robertson. Mr. Moorshead replied.

Prior to the meeting, a party of thirty-two members and their friends had lunch together at the King's Head Hotel, Sheffield. A further opportunity for social intercourse was afforded after the meeting, when tea was available for members.

The following were elected members :—

(a) *Collective Member.*

Messrs. Pure Limespar Products, Ltd., 14, Dale Street, Liverpool.

(b) *Ordinary Members.*

- |  |   |
|--|---|
| 1. Milton Asquith.                           | <i>Glass Manufacturer,</i> Messrs. Redfearn Brothers, Ltd., Old Mill Glass Works, Barnsley.   |
| 2. Alfred Earl Badger, B.S.                  | <i>Physicist,</i> Glass Technology Department, Messrs. General Electric Co., Nela Park, Cleveland, Ohio, U.S.A.                         |
| 3. Wilhelm Hodecker.                         | Messrs. Glasfabrik Sophienhütte, Richard Bock, G.m.b.H., Ilmenau i. Thüringen.  |
| 4. James Joseph Moran.                       | <i>Assistant Chemist,</i> Messrs. Kimble Glass Co., Vineland, N.J., U.S.A.  |
| 5. Arthur E. Saunders.                       | <i>Manager,</i> Messrs. Dominion Glass Co., Ltd., 388, Carlaw Avenue, Toronto, Canada.  |
| 6. Frederick S. Thompson, A.B.,<br>Che. Eng. | 1133, East 152nd Street, Cleveland, Ohio, U.S.A.  |
| 7. Horace Wooldridge.                        | <i>Lamp and Glassware Manufacturer,</i> Messrs. Leeds Flint Glass Co., Ltd., Aire Bank Works, South Accommodation Road, Hunslet, Leeds. |