

- Associate members over the age of 33 years may apply to the committee of the institution for enrolment as full members.
7. That in the opinion of this conference it is desirable that the constitution shall provide for the merging of the whole of the present societies into a single institution, of which the present societies will become sections, and it is the intention of the conference that existing societies should, as far as possible, preserve their present individual entity, and that Federal control should be generally restricted to Federal matters.

Two other resolutions were passed, but these were of no importance to the matter immediately under discussion.

THE FORMATION OF A PROVISIONAL COUNCIL.

As a clear indication of how these were received by the Societies, one need only state that when the Provisional Council, referred to in resolution 4, was called together on the appointed date, not only were those associations which sent delegates to the Conference again represented, but also the two whose delegates were not present at the Conference, and, furthermore, in the meantime Tasmania had formed an institute and had appointed a Melbourne delegate to represent them on the Provisional Council. When, therefore, the Council met at the Royal Society's House in Sydney on the 15th and 16th May, there was present a gathering completely representative of the Engineering Associations of Australia. The names of those present, and the societies represented, are given on the list previously referred to.

Your Association was again honored by the election of your President as Chairman.

As the Provisional Council had come together to draft a constitution for the proposed institution, I felt it incumbent upon me as Chairman of the Melbourne Conference

and convener of the Council's meeting, to draw up a suggested draft for the Council's consideration. In this I had the very helpful advice and criticism of most of the Sydney representatives. One point I would here emphasise, and that is the general inclination manifested at the Melbourne Conference towards amalgamation rather than federation, and for very many reasons I personally am of the strongest opinion that the former course is the most desirable. It must be remembered that at this stage it was impossible for the Provisional Council to consider every detail of the constitution. This would have taken far more time than could be afforded by the representatives, but what was necessary, and aimed at, was that the Council should lay down the important principles to be included in the Constitution, and leave the verbiage and consequential alterations and revision to a smaller body, which could more deliberately clothe an approved framework. What form the smaller body should take was quite undecided, but, realising the impracticability of embracing thereon representatives from Associations distant one from another, and also partly, perhaps, because the Chairman of the Council resided in Sydney, Victorian delegates proposed that the Sydney members of the Conference should form an Executive Committee to carry out the work of revision. This suggestion was adopted without dissent, the committee consisting of Messrs. J. J. C. Bradfield and J. Tivey, of the Sydney University Engineering Society, Messrs. W. Poole and F. Danvers Power of the Mining Institute, T. H. Kirkpatrick of the Local Government Engineers, G. A. Julius of the Electrical Association of Australia, and J. Vicars and myself of your own Association. The committee contained representatives of the three federated institutes, one of the University societies, and one of the associations composed of members of all branches of the profession. Actually 1,800 of the 2,800 members in the societies were

represented. The committee met frequently, and completed in July the draft constitution. I would like to place on record at this stage the very enthusiastic and effective assistance rendered to the committee by your Treasurer, Mr. Thompson, who, in the absence of Mr. McNamara, had also acted as Hon. Secretary to the Provisional Council.

The Executive Committee, realising that it had no power to include in the Constitution important details which cropped up in their discussion, but which were essential to the Constitution, came to the conclusion that it was most desirable that the draft should be submitted to the Councils of the various Associations, and that these, with the advice of their representatives on the Provisional Council, should consider the proposed draft and submit their comments and recommendations to the Executive Committee, which would send on for ballot any proposed alteration of importance to the other members of the Provisional Council before the final draft was completed ready for submission to the Associations for approval. The replies of the Councils of the various Associations have now been received, together with their comments and suggestions, and these are now being collated by the Executive Committee, and, in the course of a few days, it is hoped that, with the approval of the remaining members of the Provisional Council, the final draft will be placed in the hands of the members of the various Associations for their consideration.

As the matter is one of prime importance, arrangements have been made for every member to receive a copy of the draft. The question of acceptance of the constitution must come before two special meetings of this Association, but as members other than councillors have not yet had an opportunity of perusing the draft, I do not propose to refer to-night to many of the less important details thereof, but to address myself more particularly to the important features and the urgent reasons, as they appear to me, for carrying to a successful issue this movement towards unity.

AMALGAMATION AS IT WOULD AFFECT NATIONAL ORGANISATION.

Gentlemen, if we were setting out to do something of an entirely original nature, one would expect that there would be some who would falter at such a big step, for have we not been very largely indeed a nation of individuals, but the cruel events of the past four years have surely dissipated once and for all the possibility of our remaining deaf to the urgent call for re-organisation. And what does this mean for us other than that we must awaken to the greater possibilities for national service by the scientific societies and develop the mighty force that engineering is capable of presenting if we can but melt away many of the tradition-bound ideas that stand in the way of progress. Let it be realised at once that what we are contemplating is but another example of that factor which is rapidly becoming an essential one to progress in every phase of national, professional or industrial existence—unity! It should be unnecessary to emphasise the fact that stratification or the lack of unity in any national matter spells “inefficiency,” if not “absolute stagnation.”

I believe that, with properly conceived objectives, co-operation of the Engineering Associations will mean for the engineers of Australia a new birth. We surely should constitute one of the very foremost groups of the Commonwealth, but we cannot become such a group without efficient co-operation, and the most effective co-operative work cannot be properly set in motion and governed except by a thoroughly representative and strongly constituted body.

CO-OPERATION ELSEWHERE.

In America, where, even before the war, the principal sectional societies were so strong as to be really effective in carrying out their objects, permanent co-operation of the societies has been considered vitally necessary, and

adopted, with the result that already some 35,000 engineers of high standing are tied together for the consideration of all matters of general interest to the profession. In that other country which is notorious for many objectionable things, but also for its efficiency in organisation, and which fact has been further remarkably demonstrated by the war, we learn that the "Union of Technical Scientific Societies" has been formed by the combination of 13 separate societies, and perhaps 40,000 to 50,000 German engineers have thus been united "to establish a balance between science and practice, and to lead to more collaboration of the several branches of the science." In Canada, for very many years past the Canadian Society of Civil Engineers, embracing every branch of the profession, has been most successful, and the Dominion is in the happy position of having in existence what we are striving for, and other much greater nations are thinking of, one great society representative of the engineers of the country; an ideal state they may well glory in, and not twenty or so small institutions such as would have grown up in like fashion to Australia had a broad view of the situation not been taken long ago. It is interesting to note that only this year the Canadian Society has altered its title to the Engineering Institute of Canada, and has revised its rules so as to even more effectively break down any tendency there might be for the engineers of Canada to forget their unity of purpose. In Great Britain the formation of the "Common Joint Board of Scientific Societies" is not likely to be without the important effect of future permanent existence of such a body, and there are many prominent engineers in Great Britain now advocating strongly the value of co-ordinated effort as opposed to a continuation of the present lack of unity or stratification.

A BRITISH INSTITUTION.

The day may come when even a greater degree of co-ordination may come about, for the idea of Empire has so permeated the thoughts of many men that it is not im-

possible a development may be the establishment of a British Institution of Engineers, but in which case the principle would be co-ordination or co-operation, and not amalgamation, for I cannot imagine the need of in any way destroying the independence of the Australian Institution. But let me get back to the fact I wish to impress upon you, viz., that in amalgamating the various societies of the Commonwealth into one strong, dignified institution we would only be doing what Canada has already successfully done.

WHAT DOES AN ASSOCIATION STAND TO LOSE?

The thought may perhaps come to some: "What does our Association stand to lose by throwing in its lot with a joint institution?" I would say emphatically that it is our duty to look at this matter in a broadminded, far-seeing manner, and if we do so, then I would add that we stand to lose nothing of real value. There may be, probably there are, societies that can definitely see that, by amalgamation, they would lose the immediate value of certain things resulting from their organisation of many years, but even so I would contend that a stage has been reached when such a body is entitled to say, not what it would *rather* do, but what it *must* do for the common good of the country. Our independent titles and incorporation may go, but can any member of an existing Association in Australia really believe it to be of more value to him and his fellow members to retain an exclusive title for a body some hundreds strong as against a title carrying with it the weight, the prestige and the influence of a Continent-wide professional group some thousands strong?

THE CARDINAL FACTS TO BE BORNE IN MIND.

Each one of us should carry indelibly fixed in his mind these cardinal facts: First and foremost, that we are "Engineers," and secondly that our community of interests is the "Commonwealth." If we would do this we would the

more readily adjust our ideas to the broad, national aspects of the question before us, and which would ultimately utterly displace the limited vision from which we have for so long suffered.

It has been suggested that a joint institution would interfere with those local interests and activities which only a local body can attend to. There is no good reason for such an objection, for the existing associations would simply carry on as branches of the Institution, and would, as hitherto, watch over and carry out that local intensive cultivation necessary to success in large areas. The branches would simply do the work they are doing now as separate societies, and the work would be better done because the branches would be helped by the automatic transmission of information and items of interest from one branch to another, which will be readily effected by an organisation on national lines. One of the greatest hindrances at present existing in engineering circles to the development of an engineering fraternity is that even where two or more societies exist in the one city, they know little or nothing of one another's doings, for there is no means of automatically and regularly bringing the members together. If machinery is not created to bring about a better state of affairs, and the Societies have to wait as at present for a special order of business, then the present state of incohesion will deepen rather than disappear.

PERSONAL PRIVILEGES AND ADVANTAGES.

With amalgamation, the personal privileges and advantages of members of associating societies will not only be maintained, but they will be increased. I say this advisedly, even remembering especially that some who are now full members of associating societies will become associate members in the new institution, for there can be no doubt whatever that the latter state will be immeasurably superior. One has only to ask himself the question

whether, being a full member of any one of the Australian institutions carries with it the same status as associate membership of one of the great British institutions, and he will find there can be but a reply in the negative. Then, when it is stated that the framers of the proposed constitution have adopted as a principle the idea that the new institution shall take its place alongside the best of its kind elsewhere in the world, it will, I believe, be accepted by the great majority that there can be no cause for reasonable objection to reclassification when such carries with it no real loss of status. Indeed, here is one of the most vital features of the whole scheme. By the adoption of high qualifications we will raise the level of membership to such an unprecedented height as has hitherto been impossible; by retaining low qualifications we will have the level remain in a position that will never carry with it the necessary and appropriate significance indicative of real strength. There can be no question whatever that in most of the Australian associations the qualifications for the higher classes of membership are too low. I would readily acknowledge there have been very good reasons, but at the same time I would say that these reasons no longer exist. We have not far to seek for an example, for although I am happy to say that at the present time it is as difficult to obtain full membership in our Association as in any other in Australia, it is not many years since the minimum age required for full membership was but twenty-one, and no one will suggest that an engineer has at this age had sufficient opportunity to have obtained the necessary experience to qualify him as thoroughly fit to practice his profession. We must always bear in mind that in constructive work, such as most of us are concerned in, it is almost invariably the case that human life depends upon our efficiency, and I know of no profession in which mistakes more quickly mar a man's career. We take no exception to this condition of affairs, although we may rightly take exception to the lack

of acknowledgment of the fact by those who depend upon us for their almost every want. To those who would suggest that the sacrifice of a higher classification is an objectionable feature of the proposed constitution, I would refer them to the great armies of the world now fighting for freedom, and in which efficiency was obtainable only by placing the cause before all personal considerations, and yet, in that world example, has any capable man lost prestige?

NEW MEMBERS AND EXAMINATION.

As to new members, the principle of examination for all classes other than that of full membership is proposed. For full membership, independent responsibility in charge of important work for a reasonably long term of years is a necessary qualification, in addition to which good training and general standing in the profession are called for. In the case of the Associate Membership class, it is proposed to exempt applicants from examination if proof of independent responsibility for a lesser term and good training is procured. In the Junior class, exemption from examination would be allowed if the applicant had passed the students' examination and obtained a responsible position for a certain term. Students must pass an examination if they have not already passed one considered equivalent thereto.

By no other means than by examination or by works can a man's qualifications be properly judged, and one of the principal aims of the institution must be to render membership of such undoubted value that an engineer's qualifications or standing in and out of the profession will be definitely indicated by his classification in the Institution. Let us, therefore, provide machinery for self examination so as to clear away all doubt in the public mind as to our ability. If we wish to gain greater public respect and a more definite place in the community, we can only hope

to obtain such by demanding recognition for those who are thoroughly qualified to practice the profession. If we fail to organise in such a way as to protect ourselves against the continuation of a wrong estimate we will deserve what we get.

I would remind you that, when this Association, in conjunction with the Electrical Association, approached the Public Service Board with the request that corporate membership in the Association should be held as sufficient qualification to exempt members from examination for elevation to the higher grades of the service, we were told that, in the absence of any indication that our qualifications called for an examination of our members, exemption could not be made, and although I am convinced that we clearly satisfied the Commissioners that corporate membership in the two Associations carried with it sufficient qualifications, nevertheless we could not obtain the Commissioner's assent.

THE AIM OF HIGH QUALIFICATIONS.

Let us develop a deeper consciousness of the great achievements engineers have to their credit, but temper our ambition for greater attainments still by a true sense of humility—not the humility born of weakness, but of infinite strength. Our aim should be to establish an institution to which it will be distinctly an honour to belong, one to which every qualified member of the profession will desire to belong, and which will provide him with sufficient status to render membership in any other institution unnecessary. It may take a little time, but if our work is well done now it should be but a few years before every Australian engineer is brought to a realisation of the fact that his rightful place is, first of all, in an Australian institution, but it is necessary, to do so, that the Institution should be of such a nature that he will not feel it a loss to refrain from membership in institutions in other parts

of the world. We must so elevate the value of association with the new Institution that the very highest representatives of the profession will be glad to attach to their names letters signifying their membership therein. I have no doubt whatever that a broad view of this question will be taken and every help rendered by those fine old British Institutions to which it has been necessary for many Australian members to belong in the past in order to establish or register their standing in the public mind and to keep properly in touch with scientific developments.

Let us aim high, for surely no profession is more ennobling than ours. As someone has truly said: "Constructive work is the nearest approach to creation possible to a created being." The sooner we aim at perfection the quicker we will approach it, and no factor has greater potentialities for success in the movement under discussion than that of membership qualifications. It will be the section above all others in the constitution which our friends in other countries will carefully scrutinise to see if we have grown beyond the developmental stage and become a full-fledged engineering institution of high standing.

PROVISION OF EFFECTIVE BRANCH WORK.

The constitution would provide sufficient flexibility to enable every activity of the branches forming the institution to continue unabated and uninterrupted in matters of internal government, reinforced and energised rather than weakened or restrained. It is a time for the jettisoning of personal feelings if necessary, but I feel confident that this Association will take a generous and broadminded view and that none will be more ready to sink its identity if this is necessary to strengthen the whole. To obtain unity of purpose we must seek out the interests that are common to all, and positively and rigorously exclude all others. No association is justified in adopting the nar-

row attitude that it cannot see that it has anything to gain by amalgamation. If there is such a body, and I doubt it, then the only attitude it can rightly adopt is that even at some individual sacrifice it should be prepared to join for the sake of strengthening the profession and helping the industrial development of the country in the most efficient way possible.

There may be in some associations a fear as to how some of those older members will fare who have, with energy and enthusiasm, contributed largely towards the position the societies find themselves in to-day. I think it will be found that on perusal of the lists of office-bearers, that in most cases those members are men who have not only stood out for their work in their societies, but have also been successful in their profession. In such circumstances they would become full members, and in any case it is inconceivable that any council would fail to consider exceptional cases generously, and no fair-minded member would object.

REASONS FOR EXISTING LACK OF CO-OPERATION.

One of the very greatest hindrances to proper co-operation at the present day is the aloofness of the various branches of the profession, not that this is the result of a desire, but because of the lack of opportunity to be otherwise. We should have more consideration for each other, less inclination to condemn, and a greater desire to help one another. But at the present time this is a difficulty, because, even in the large cities where several societies exist, we have no regular opportunities for meeting to discuss our problems, and, in doing so, be brought to a realisation of how many of us have interests in common. If, gentlemen, we were all members of the one Institution, we would have what every other profession has, but what we sadly miss—a common ground. The proposed constitution provides that every meeting of a branch would be open to