

*Wednesday,  
23rd March, 1910*

**ABSTRACT OF THE PROCEEDINGS**

**OF THE**

*Council of the Governor General of India,*

**LAWS AND REGULATIONS**

**Vol. XLVIII**

**April 1909 - March 1910**

**ABSTRACT OF PROCEEDING**  
**OF**  
**THE COUNCIL OF THE GOVERNOR GENERAL OF INDIA**

**ASSEMBLED FOR THE PURPOSE OF MAKING**

**LAWS AND REGULATIONS,**

**April 1909 - March 1910**

**VOLUME XLVIII**



**Published by Authority of the Governor General.**



---

**CALCUTTA :**  
**OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.**  
**1910**

*Proceedings of the Council of the Governor General of India, assembled for the purpose of making Laws and Regulations under the provisions of the Indian Councils Acts, 1861 to 1909 (24 & 25 Vict., c. 67, 55 & 56 Vict., c. 14, and 9 Edw. VII, c. 4).*

The Council met at Government House on Wednesday, the 23rd March 1910.

PRESENT :

His Excellency THE EARL OF MINTO, P.C., G.C.M.G., G.M.S.I., G.M.I.E.,  
Viceroy and Governor General of India, *presiding*,  
and 55 Members, of whom 50 were Additional Members.

QUESTIONS AND ANSWERS.

The Hon'ble MR. SUBBA RAO asked :—

"I. (a) Will the Government be pleased to state the number of months spent each year by the Government of India and the different Provincial Governments at hill stations, and the amount of additional expenditure incurred annually by the several Governments by removing their head-quarters to such hill stations ?

"(b) Will the Government be pleased to consider the advisability of shortening their stay at the hill stations ?"

The Hon'ble SIR HARVEY ADAMSON replied :—

" Statements showing the number of months spent at hill stations during each of the last three years by the Government of India and by the provincial Governments, and the additional expenditure involved during the same period in the moving of the various head-quarters to and from the hills, are laid upon the table.\*

" The Government of India do not propose to open the question of shortening their own or the Local Governments' stay at hill stations."

The Hon'ble MR. SUBBA RAO : " May I, with your Lordship's permission, ask, with reference to the statements placed on the table, whether the Government of India will be pleased to state why the expenditure in Bengal is nearly  $2\frac{1}{2}$  times as large as that in Madras, though the Government of Bengal stays on the hills for a shorter period than the Government of Madras ?"

---

\* *Vide* Appendix B.

[*Sir Harvey Adamson ; Mr. Subba Rao.*] [23RD MARCH 1910.]

The Hon'ble SIR HARVEY ADAMSON :—"I am afraid that I cannot answer that question without notice."

The Hon'ble MR. SUBBA RAO : "According to the statement nearly 7 months is put down as the period spent by the Government of Bombay on the hills. Does that period include the time spent in Poona, and is Poona considered to be a hill station?"

The Hon'ble SIR HARVEY ADAMSON : "We simply sent by telegram the substance of the Hon'ble Member's question to the Government of Bombay, and the statement contains their reply. I am unable without further notice to give any explanation on the subject."

The Hon'ble MR. N. SUBBA RAO asked :—

"II. Will the Government be pleased to state—

- (a) whether the Executive Branch of the Provincial Service is now filled up partly by promotion from the Subordinate Service and partly by competition, open or limited, as recommended by the Public Service Commission of 1886-87;
- (b) whether in any or all of the Provinces the system of recruitment by competition is replaced by that of nomination;
- (c) whether it has issued any instructions sanctioning the abolition of competition in all or any of the Provinces, and, if so, whether the Government will be pleased to place the same on the table?"

The Hon'ble SIR HARVEY ADAMSON replied :—

"(a) & (b).—The Executive branch of the Provincial Service is filled up partly by promotion of officers from the subordinate service and partly by selection of persons possessing prescribed educational qualifications who are not already in Government service. The only Province in which any form of competitive examination prevails is the Punjab, where, out of the total number of probationers annually recruited, two are appointed by competitive examination among nominated candidates.

(c) The Government of India have issued a Resolution directing that special competitions for entry into Government service should, as a general rule, be dispensed with. The Resolution was published in the Supplement to the *Gazette of India* dated the 12th March 1904.



[23RD MARCH 1910.] [*Raja V. Virabhadra of Kurupam; Sir T. R. Wynne; Mr. Miller.*]

The Hon'ble RAJA V. VIRABHADRA OF KURUPAM asked :—

I. "(a) Will the Government be pleased to state the obstacles in the way of the progressive construction of the Vizianagram-Raipur line from Parvatipur northwards ?

"(b) Will the Government be pleased to take early steps towards completing the line ?"

The Hon'ble Sir T. R. WYNNE replied :—

(a) The only obstacle in the way is the question of being able to provide the necessary funds.

(b) The claim of the line to a place in the programme of Railway Capital Expenditure for 1911-12 will receive careful consideration when the programme is under preparation."

The Hon'ble RAJA V. VIRABHADRA OF KURUPAM asked :—

"II. (a) As regards the Vizagapatam Harbour Scheme, will the Government be pleased to state the stage the question has now reached, and what steps, if any, have been taken with respect to the application made by the Madras Government to the Right Hon'ble the Secretary of State for the services of an expert ?

(b) Will the Government be pleased also to state whether the contemplated scheme is likely to receive early consideration at its hands, and whether any estimate has actually been drawn up of its probable cost, and, if so, from what sources and to what extent Government proposes to meet it ?"

The Hon'ble MR. MILLER replied :—

"(a) The Secretary of State was asked in September 1908 to obtain the best professional advice available in England, and the present state of the case is that the preliminary report of the experts, who were consulted in the matter, has recently been received and is under the consideration of the Government of Madras.

"(b) The further proposals of the Madras Government which are awaited will receive consideration as soon as received. No estimate has been drawn up :

[*Mr. Miller; Mr. Chitnavis; Sir Guy Fleetwood* [23RD MARCH 1910.]  
*Wilson.*]

the local Engineers assumed that the cost would be about 110 lakhs, but the experts consulted by the Secretary of State are of opinion that the cost will probably be largely in excess of this sum. The question of the sources from which the cost is to be met has not yet been considered."

The Hon'ble MR. CHITNAVIS asked :—

"I. (a) In reply to my question in this Council on 29th March 1908, the Hon'ble Mr. Miller said that in 1906 the Government of India had placed before Local Governments a scheme for making a complete cattle survey of India with a view to the improvement of the stock.

"(b) Has this inquiry been made by the Local Governments, and with what results? If not, will the Government of India again invite the attention of Local Governments to the subject in view of its great importance to the agriculture of the country?"

The Hon'ble MR. MILLER replied :—

"Owing to lack of funds or staff or both, it has been found impossible in most provinces to proceed with the scheme for a complete cattle survey recommended by the Government of India in 1906, though the principle of the proposal has generally been accepted. Similar difficulties still exist, and it is doubtful whether anything would be gained by again pressing the proposal in its original form on Local Governments at this time, but the Government of India are inclined to think that partial surveys of specific tracts where the conditions are or were in the past favourable to cattle-breeding might give valuable results, while at the same time preparing the way for future action on a more extended scale. They have accordingly asked the Inspector General, Civil Veterinary Department, to consider, in the light of the information obtained during his tours, whether any definite recommendations could usefully be made to any Local Government for a limited survey of this description, and whether any other steps should be taken to collect information likely to be of use as a basis for a systematic survey at a later date. On receipt of that officer's reply they will again consider the question of addressing Local Governments."

#### BUDGET FOR 1910-11.

The Hon'ble SIR GUY FLEETWOOD WILSON said :—"I rise to present to the Council the Budget of the Government of India for 1910-1911. What I .

[23RD MARCH 1910.] [Sir Guy Fleetwood Wilson.]

laid before the Council on the 25th February was the Financial Statement, which the rules define as our preliminary financial estimates for the ensuing year. What I now submit is the Budget proper. It consists of our estimates in their final form, as revised in the light of our latest information and the discussions which have taken place on the preliminary estimates in this Council. Hon'ble Members will find before them the usual statements, with a short note indicating where the figures differ, and why they differ, from those in the preliminary estimates. The full explanatory memorandum, which was appended to the Financial Statement, will in due course be brought into exact statistical agreement with the figures of the Budget : but this will take a little time, and it will be reprinted in its final form separately.

"I do not propose to occupy the time of the Council by any lengthy dissertation on the figures of the Budget. In no essential point do they differ from those which have already been discussed with a fullness and ability which make further explanations on my part superfluous. The alterations which have been made in the Financial Statement are few and unimportant ; they raise no question of principle ; and all that I need do today is to refer to them in the briefest possible manner.

"In our revised estimate for the current year, we have made a few corrections which have the effect of raising the expected surplus by £20,000. Our latest returns of Customs revenue indicate an improvement of about £44,000 over the figure which I took in February, partly as the result of the new duties and partly owing to a sharp revival in piece-good imports. A saving of £67,000 is expected in our Political expenditure, as His Majesty the Amir seems unlikely to draw before the 31st March on the subsidy placed to his credit to the extent we provided for. On the other hand, a part of the Military lapses will be utilized in replenishing Army stores and the refunds of advance Opium revenue will probably be about £80,000 heavier than we expected. There are a few smaller changes with which I need not trouble the Council.

"In future indeed I think I shall probably dispense with any further corrections of the current year's estimates after the presentation of the Financial Statement. The interest in the figures has become by this date purely statistical. There is no marked advantage in bringing them up to date, and there may be some danger of confusion. With the Budget estimates for the ensuing year the position is of course quite different. The character of the season, the movements of trade, the action of Local Governments and many other factors are of importance, up to the very last moment, as guides to the probable revenue of the year ; and we have in addition of course to incorporate any changes in the figures

which may follow the discussions in this Council or, as regards 'divided' heads, in the Legislative Councils of the different provinces.

"The net effect of the changes which have thus taken place in our estimate for 1910-1911 is an improvement of £130,000: so that I now take our Budget surplus at £376,000. It is still a narrow margin to work upon; and nobody will be happier than I shall be if my Hon'ble friends who have been criticizing me for caution prove to be correct in their anticipations. The main reason for the improvement which I have assumed is the steady revival in business, the excellent harvest reports from all quarters, and the heavy remittances from abroad for trade purposes. I have on all these considerations decided to raise our preliminary estimate of net railway receipts by £100,000; of Salt revenue by £30,000; of Customs by £20,000 (chiefly under piece-goods); and of Excise (Imperial share) by £23,000. On the other hand I have reduced the estimated receipts by £7,000 in consequence of the modifications which the increased duties underwent when passing through Council. A reserve provision of £20,000 has been made, chiefly in connection with political and frontier charges; and £23,000 has been inserted for an unexpected payment to the South Indian Railway Company, of which the Secretary of State has just advised us by telegram. The other changes are of comparatively small importance and are nearly all under Provincial heads of account.

"Turning now to Ways and Means, I have no changes to record in Capital expenditure, and none of any moment in receipts on capital account. But the heavy trade remittances of the last few weeks have greatly strengthened the Secretary of State's balances, and the Budget provision of Council drawings for next year has been reduced to £15½ millions, subject of course to all the usual reservations. The large drafts upon us are being partly met from our Treasury balances, which will in consequence fall somewhat below 18 crores on the 1st of April next, or about £600,000 less than was assumed in the Financial Statement. The Secretary of State however has also remitted £750,000 through our Currency chest, and he will probably employ some part of the proceeds of his drawings in adding to the Gold Standard Reserve, while we shall meet the drafts in India from the 6 crores silver nucleus of that reserve.

"With this brief description, I leave the Budget of 1910-1911 in the hands of Hon'ble Members. There will be no discussion on it today, but on the subsequent date contemplated by the rules—which I understand Your Lordship intends to fix for next Tuesday—there will be an opportunity for such remarks as Hon'ble Members wish to offer, without moving resolutions or dividing the Council."

[23RD MARCH 1910.] [*Mr. Carlyle; Maharajadhiraja of Burdwan;  
Sir Harvey Adamson.*]

## GLANDERS AND FARCY LAW AMENDMENT BILL.

The Hon'ble MR. CARLYLE moved that the Bill to amend the law relating to Glanders and Farcy be taken into consideration.

The Hon'ble the MAHARAJADHIRAJA OF BURDWAN said:—"My Lord, I have the permission of the Hon'ble the mover of the Bill to bring to the notice of the Government of India a matter relating to the Glanders and Farcy Act. I do not intend to criticise the amendment Bill: for there is nothing in it to criticise. But I only wish to draw the attention of the Government of India to the fact that, when horses that are suspected of having glanders are tested by the mallein test, great precautions should be taken to see that these tests are made carefully. I beg to point out to the Government that last year I had a very bad outbreak of glanders in my stables. The authorities of the Bengal Government took the matter in hand and those animals that had developed glanders without a doubt had to be destroyed; but there were a large number of animals which were suspected of glanders, and the authorities at my request tested them very carefully, in fact permitted the mallein test to be allowed three times on each animal, with the result that the majority of these animals were saved. The reason why I draw the attention of the Government of India to this is that out of those animals that were saved, some had been condemned to be destroyed at first, and it was because this careful test was applied, that these animals were saved from the jaws of death. I have already mentioned the fact to the Hon'ble Mr. Carlyle, and I just mention it before the Council."

The motion was put and agreed to.

The Hon'ble MR. CARLYLE moved that the Bill be passed. He said:—"With reference to the remarks of the Hon'ble the Maharaja of Burdwan, the Government recognise the great importance of taking every precaution before animals are condemned, and they will draw the attention of Local Governments to his remarks in the matter."

The motion was put and agreed to.

## PRISONS (AMENDMENT) BILL.

The Hon'ble SIR HARVEY ADAMSON moved that the Bill to amend the Prisons Act, 1894, be taken into consideration.

The motion was put and agreed to.

The Hon'ble SIR HARVEY ADAMSON moved that the Bill be passed.

The motion was put and agreed to.

## PATENTS AND DESIGNS BILL.

The Hon'ble MR. ROBERTSON : " My Lord, I move for leave to introduce a Bill to amend the Inventions and Designs Act (V of 1888). The Act of 1888 was based in all material respects on the previous Act of 1859, from which it did not substantially differ except in the inclusion of provision for the registration of designs. The Act was passed five years after the English Statute of 1883, but in view of the fact that the volume of patent work in India was small, it was not at that time considered desirable to adopt in its entirety the procedure which the English Statute prescribed. Circumstances have since changed. The industrial development which has been a noticeable feature of the past few years in India has brought about a marked increase in the work of the Patent Office. The number of applications annually received is rising rapidly, as may be gathered from the fact that the receipts from fees have nearly doubled in ten years. At the same time attention has from time to time been drawn to a number of points in which the procedure under the existing Act is antiquated and cumbrous, and it is considered desirable to remove these defects and follow the example of most other British possessions by bringing the practice in this country into conformity, as far as circumstances permit, with that followed in the United Kingdom. The Bill which is now to be introduced has therefore been drafted so as to follow the English Statute of 1907 as closely as possible, except in so far as material variations are necessitated by the different conditions prevailing in India.

" The Statement of Objects and Reasons and the Notes on Clauses explain fully the changes which it is proposed to make. Many of these changes are in matters of detail connected with the remodelling of the Act, and call for no special mention. The points of importance to which I need refer are therefore comparatively few. What remarks I have to make I would preface by enunciating the general principle that in any enactment for the protection of inventions and designs, two cardinal points must be kept in view. These are the encouragement of the inventor and the protection of the public. The first of these requires that the method of obtaining patent rights should be made as simple as possible, the number of intermediate steps which have to be taken before a patent is granted should be reduced to a minimum, and at the same time the protection granted should be adequate. The second point is perhaps even more important. It is necessary to see that protection is not given where it is not due, and that the rights and abilities of other inventors and of the public are not infringed.

" If I briefly explain to Hon'ble Members the details of the procedure under the present law, I think they will agree that in both these respects the

[23RD MARCH 1910.]

[*Mr. Robertson.*]

existing practice is defective. A person seeking to take out a patent has first to apply to the Governor General in Council for leave to file a specification of his invention. In his application he must describe with reasonable precision and detail the nature of his invention and of the particular novelty which he claims for it. The application is examined to see if it is formally in order, and the practice has been that it is then exposed to public inspection in the Patent Office in Calcutta for ten days. After this, the application is more closely examined for formalities, and to a limited extent for novelty. If it is found to be in order and if the invention appears to be in reality novel, leave to file a specification of the invention is granted. No objection can be taken by any member of the public to the acquirement of an exclusive privilege, once such leave has been given. But the exclusive privilege does not accrue until the date the specification has been filed.

"Now I think it will be obvious that this procedure fails in two respects as regards the first point to which I have drawn attention, namely, the encouragement of the inventor. In the first place, there is considerable disadvantage in having to file two documents, the application and the specification. I have said that the application must under the law include a description of the invention, and the tendency of the Patent Office has been to demand a full description, and as a consequence to insist that the final specification should be practically identical, even in words, with the description given in the application. Inventors are thus put to the trouble of preparing two separate documents in which the invention has to be described, and the Patent Office to the trouble of comparing them. The inventor may be harassed on account of unimportant variations, while the Patent Office may find it difficult to decide whether a variation is important or not.

"In the second place—and this is more important from the point of view of the inventor's interests—the exclusive privilege of using the invention does not accrue until the final specification is filed, so that between the dates of filing the first application and of filing the final specification, the invention is published without any provisional protection being given. This tends to discouragement of invention and is an obvious defect in the existing law.

"Now to turn to the interests of the public, it is clear enough that the mere fact that a copy of an application, which may indeed imperfectly describe the invention, is exposed for ten days on a table in the Patent Office in Calcutta, does not give the public sufficient opportunity for objecting to the grant of an exclusive privilege. Leave to file a specification may be given at any time after

these ten days, and no member of the public can then bring forward any objection. The limited opportunity for preferring objections operates particularly hardly in the case of a person who is subsequently proceeded against by the patentee for infringement of his patent rights, and who wishes to plead that the invention was not new. But to this I shall refer presently when dealing with section 29 of the Act.

"The procedure prescribed by the new Bill is designed to remedy these defects. It will not now be necessary to file two separate documents explaining an invention. The application will be accompanied by a specification defining precisely the nature of the invention. If defective, the specification will be returned for amendment, but up to the date on which it is either accepted or refused, the whole of the proceedings will be confidential and no publication can take place. As soon as the specification is accepted provisional protection will be granted, and the specification will then be printed and published for a period of three months during which objections to the grant of a patent may be lodged. At the end of three months, if there is no opposition, or if the objections are over-ruled, the patent will be sealed. I think that Hon'ble Members will concede that this procedure not only affords the inventor better protection than he at present enjoys, but secures to the public adequate opportunities for examining and objecting to the application.

"I only wish to refer specifically to one or two other points in connection with the Bill. One which I have already incidentally mentioned has reference to the novelty of inventions, in which the existing Act does not adequately protect the interests of the public. I refer to clause (4) of section 29 of the present Act, which provides that when a patentee sues any person in a District Court for infringing his exclusive privilege of making, selling or using an invention, the defendant is not, except in certain circumstances, entitled to plead that the invention was not new. This has all along been felt to be a defect in the existing law. We cannot provide for full enquiry into the novelty of every invention before the grant of a patent. Enquiry into novelty, which is prescribed in the English Statute, is of necessity much more thorough in England than it can be in India, where the number of specifications filed affords too small a basis of search. Such investigations as are now made into novelty before the exclusive privilege accrues will of course be continued, and clause 5 of the Bill includes a power of objection to inventions which *prima facie* are not novel. But the novelty of an invention cannot be guaranteed, and it seems therefore desirable that lack of novelty should be a valid ground of defence in an ordinary infringement suit. We have provided for this in the second part of clause 28 of the Bill.



[23RD MARCH 1910.]

[Mr. Robertson.]

"We have not, looking to conditions in India, thought it advisable to go as far as the English Statute in insisting that a patent shall be revoked if the invention is not worked in the country. But we have amplified the provision for obtaining a license to work under the patent when it can be proved that the reasonable requirements of the public with reference to any patented invention have not been satisfied.

"Another point which may be mentioned is perhaps more of sentimental than of real importance. The existing Act provides only for the issue of a certificate that a specification has been filed and certain fees have been paid. The Bill provides for the grant of a patent bearing a seal. I believe that in almost every other country having a patent law, formal sealed certificates or Letters Patent are issued, and there seems to be no reason why we should not follow the universal practice. It will be more satisfactory to patentees to have tangible proof of their title in the nature of a grant, and it is believed that a formal patent will be more suitable for commercial purposes than the existing certificate.

"I do not propose to say anything on the Designs portion of the Bill. While this portion has been recast and assimilated to the English form, no important changes have been introduced except that, as in England, protection may be extended from 5 to 15 years.

"Finally, as regards the administration of the law, a Patent Office is formally constituted, so that most of the powers previously exercised by the Governor General in Council are delegated to a Controller of Patents and Designs, who will, as in the United Kingdom, be properly accessible to the inventor and the public. The ultimate authority of the Governor General in Council and of the Courts is at the same time provided for.

"The Bill, as originally framed, was circulated to Local Governments, Chambers of Commerce, Patent Agents and others, and their opinions showed that it was received with favour and that the proposed procedure is considered to be a great improvement on that obtaining at present. Some criticisms on points of minor importance have been offered, and after full consideration the draft Bill as circulated has been amended so as to incorporate such of these points as seem to be worthy of attention. It is this amended Bill which I now seek leave to introduce. I do not think it will be considered that the Bill is of a contentious nature in any respect, but it will be desirable to circulate it again

[*Mr. Robertson.*]

[23RD MARCH 1910.]

in its present revised form for a final expression of opinion before submission to a Select Committee."

- The motion was put and agreed to.

The Hon'ble MR. ROBERTSON introduced the Bill.

The Hon'ble MR. ROBERTSON moved that the Bill, together with the Statement of Objects and Reasons relating thereto, be published in English in the Gazette of India and in the local official Gazettes in English and such other languages as the Local Governments think fit.

The motion was put and agreed to.

#### INDIAN EMIGRATION (AMENDMENT) BILL.

The Hon'ble MR. ROBERTSON: "I beg to move for leave to introduce a Bill to amend the Indian Emigration Act, 1908. At the meeting of this Council held on the 25th February last, when a discussion took place on the position of British Indians in Natal, the Hon'ble Mr. Maxwell mentioned that the Government of India hoped to be able shortly to introduce a Bill for the purpose of enabling the Governor General in Council to prohibit emigration to any country in which he is dissatisfied with the treatment of British Indian subjects of His Majesty. I now beg leave, my Lord, to introduce the Bill to which Mr. Maxwell referred.

"The existing law governing the emigration of persons under an agreement to labour for hire in countries beyond the limits of India is contained in the Indian Emigration Act (XVII of 1908). Section 4 of this Act declares emigration to certain specified countries to be lawful and enables the Governor General in Council to add to the list of such countries. By section 5 the Governor General in Council can prohibit emigration to a country to which it has been declared to be lawful but only on certain specified grounds. Such are the prevalence of epidemic disease in the country, excessive mortality among the emigrants, inadequate protection of the labourers or non-enforcement of their agreements, or the omission to comply with requests made by the Government of India for information regarding the emigrants. In all these cases it is only the disabilities of indentured Indians that are taken into account, before an order of prohibition can be made. Once their indentures have expired, their subsequent condition and treatment do not, under the law as it stands, enable the Government of India to interfere with a view to preventing further

[23RD MARCH 1910.] [Mr. Robertson; Mr. Gokhale; Rao Bahadur R. N. Mudholkar.]

emigration from taking place. It has now been decided that the power to prohibit emigration should be extended to cases where the Governor General in Council is dissatisfied with the treatment of free Indians. And in order to cover this ground for prohibition it is proposed to re-enact section 5 of the Act by the Bill which I am now introducing, so as to make it possible for the Governor General in Council to prohibit emigration for any reason which he may consider sufficient. The provisions of the existing Act which require certain specific grounds to exist before such action is taken will disappear, and the question of prohibition will be left to the discretion of the Governor General in Council. I need hardly add that the power which it is proposed to take will not be lightly exercised. Emigration will not be closed without full discussion of the circumstances of the case with the country concerned, such as we have recently had with Natal, the position in regard to which was stated in the declaration made by Government on the Hon'ble Mr. Gokhale's resolution on the 25th of February."

The Hon'ble MR. GOKHALE said:—"My Lord, the Council has as yet had no opportunity of seeing the Bill; but we have heard the description just now given by the Hon'ble Mr. Robertson of its purpose and its contents, and I hasten to congratulate the Government on the promptitude with which they have taken steps to give effect to the resolution which was accepted by this Council less than a month ago. I am sure the country will feel deeply grateful to Your Lordship's Government for introducing this Bill. It will have a most excellent effect on public feeling, and I am confident that it will strengthen Your Lordship's hands in securing better treatment for British Indians in the Colonies of South Africa."

The motion was put and agreed to.

The Hon'ble MR. ROBERTSON introduced the Bill.

The Hon'ble MR. ROBERTSON moved that the Bill, together with the Statement of Objects and Reasons relating thereto, be published in English in the Gazette of India and in the local official Gazettes in English and such other languages as the Local Governments think fit.

The motion was put and agreed to.

#### POLYTECHNIC COLLEGE.

The Hon'ble RAO BAHADUR R. N. MUDHOLKAR moved the following Resolution:—

"That this Council recommends to the Governor General in Council that the Government of India do take early steps to establish a Polytechnic College, for giving instruction

in the higher branches of mechanical engineering, electrical engineering, marine engineering, railway engineering, textile manufacture, mining and metallurgy and the different departments of industrial chemistry; and that a Committee of qualified officials and non-officials, European and Indian, be appointed to frame and lay before the Government by the end of August next a scheme suitable for the requirements of the country and capable of being carried out in the immediate future."

He said:—"My Lord, this is, I believe, the first time that the question of technological instruction comes before this Council for consideration and treatment. Hon'ble Members of this assembly have at times while speaking on the budget referred to the necessity of greater expenditure on industrial education. But this is the first occasion when the Council will have to deliberate upon it and to determine how it is to be dealt with. I would, therefore, crave their attention to the facts and considerations I wish to lay before them.

"Though the importance, I would say the urgent need, of developing the material resources of India and of establishing therein the industries, which are capable of being profitably carried on there, is now admitted on all hands, and there is also amongst persons, who have devoted any thought to it, a general agreement that that development cannot be secured without combining instruction in the scientific principles applicable to those industries with manipulative practice, the policy to be followed, the institutions to be established, the methods to be adopted require still to be laid down with greater definiteness of aim and fixity of purpose. This is quite intelligible. It is not many years since the Government and the people have recognised the intimate connection between systematic technical education and the progress of arts and industries under modern conditions. The difficulties incidental to the carrying out of new ideas have in India been further aggravated by her peculiar position.

"In the great educational despatch of 1854, which is aptly called 'the educational charter of India,' there is only a passing reference to it. All that the great man, who is believed to have drawn up that memorable document, says is :

'Our attention should now be directed to a consideration, if possible, still more important, and one which has hitherto, we are bound to admit, been too much neglected, namely, how useful and practical knowledge suited to every station in life may be best conveyed to the great mass of the people who are utterly incapable of obtaining any education worthy of the name by their own unaided effort; and we desire to see the active measures of Government more especially directed for the future to this object, for the attainment of which we are ready to sanction a considerable increase of expenditure.'

[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

"When, soon after this, Colleges and Universities were established, while law, medicine and civil engineering and to some extent art received attention, industries and science as applied to industries escaped notice. Some thirty years later also, when the Education Commission investigated the educational problems of the country, it made only a general kind of recommendation for the development of the modern side of our educational system and suggested the starting of industrial schools. The action taken on these recommendations was insignificant and not satisfactory even so far as it went. The subject was in 1888 taken up by Lord Dufferin, at whose instance Mr. A. P. MacDonnell (now Lord MacDonnell) prepared an elaborate memorandum, setting forth the history, the actual condition and the lines of future improvements of this branch of education. The result of a survey of affairs then existing was stated in that able document in these terms:—

'The so-called industrial schools, modelled upon no considered plan, never rise above mere workshops for the production of inferior articles at extravagant cost. For all purposes of practical training they are useless; and it is no exaggeration to say that of the 45 industrial schools which now exist in India hardly one serves any true educational purpose. If, therefore, anything effective is to be done in the way of industrial training in industrial schools, we must begin anew and construct a scheme of industrial education.'

"Proceeding to consider the question upon which principle and by what adaptation of means to ends can such a system be constructed, Mr. MacDonnell laid it down 'that technical instruction must not be considered as something separate and apart from ordinary general education. On the contrary,' he urged, 'it should be regarded as a development of such education. The scheme of general education should, therefore, be so arranged as without any break of continuity to lead up to the instruction which we call technical.' And the defects of the present educational system from this point of view was pointed out in these terms:—

'If this be the true principle on which to proceed, it is manifest that nowhere in India has our educational system given to that principle the prominence which it deserves. Leading, as it does, to University Examinations and University Degrees alone, our educational system has always concentrated attention on literary subjects and literary training. But as Technology is the study of the practical application of Science, a system of education which has for its aim the acquisition of literary knowledge only, can never be a satisfactory introduction to technical instruction. As Science is the foundation of every branch of Technical instruction, the principles of Science ought to underlie the education of those whose aim in life is the practice of the industrial arts.' He concluded by pointing out that 'in this matter of technical instruction, the Government must pioneer the way as it has pioneered the way in almost every enterprise which has changed the aspect of

Indian life. If progress is to be made at once, the Government must on fit opportunity and with due regard to local circumstances establish in every division or district a technical school or technical department of a school to which the instruction imparted in the modern side of the middle or high school will furnish a fitting introduction.' 'Furthermore these Industrial Schools must be linked to a central institution which should be the highest embodiment of instruction in the particular art or industry with which the school is concerned. This central institution must not only direct and control the teachings of the schools scattered throughout the province, but inspire them with new ideas and furnish them with good designs.'

"The Government of India in their Resolution which they issued admitted that 'hitherto little progress of a substantial character had been made in promoting technical education' and that 'the subject is of such extreme importance and the insignificance of what has been attempted in India is so conspicuous, that the Governor General in Council is deeply impressed with the necessity for action, in whatever way may be practicable and sound.' They spoke of the 'industrial occupation for a population rapidly out-growing the means of support supplied by a too conservative system of agriculture, and of the need for scientific methods to develop the material resources of India and to improve its agriculture, its products and manufactures so that they may better hold their place in the markets of the world where competition is carried on with an intensity of purpose which has been compared to the conditions of warfare.' Having directed that such Provincial Government should cause a survey to be made of the industries of the territories within its jurisdiction, the Government of India suggested that 'each Government and Administration should form a committee of educational experts and professional men who should make suggestions from time to time for the auxiliary supply of appropriate means of technical education: for such modification of the State system of public instruction as may aid and encourage industries and industrial employment up to the full measure of such requirement at each provincial centre as may be found to exist; and when the circumstances are opportune, for the establishment of a Technical Institute for the enlargement of the Provincial School of Art and Design and for the large co-operation of the University in the promotion of the object in view.'

"I have quoted rather largely from the memorandum and the Resolution of Government because they represent not only the high-water-mark of thought reached twenty-two years ago, but also because the principles embodied in them are as true today as then, and the main ones have yet to be carried out. Indeed at times it seemed that the lines laid down would be departed from and there is thus the greater necessity to emphasise them.

[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

"My Lord, along with capital there is nothing more essential for securing the due expansion of our industries than systematised instruction in the physical, mechanical and chemical sciences as applied to industries. In a speech delivered by His Royal Highness the Prince of Wales some six years ago on his return from a tour to the colonies, he exhorted the British nation to 'wake up' to the exigencies of its present situation, and to brace itself for the keen struggle of competition with the other advanced nations in the field of industrialism, by a proper system of national education. England still occupies a pre-eminent position amongst the progressive nations of the world as a manufacturing and exporting country: she is still one of the richest countries – if not the richest country. In the preparation of textile fabrics and machinery, she continues to lead in the van. But because her supremacy is threatened and other nations who only a generation ago were far behind her, are now coming up close to her, her leaders are urging her to quicken her pace and to strengthen and qualify herself for effecting this object. If such admonition, if this waking up, is found necessary for England, how much more imperative is it in the case of India? With all her vast natural resources, her advantages of climate, soil and situation, a sober, thrifty and industrious population, India is one of the poorest countries in the world. The country, whose finely woven fabrics used to go by ship-loads to Europe, is now dependent upon others for the supply of the greater part of the cloth which is needed by her own children for their every-day life. From an exporting and manufacturing nation we have become an importing and agricultural one. Possessing the raw materials of manufacture, instead of being able to prepare the requisite finished articles ourselves, we send out these raw materials to other countries and depend upon them to give to them the shape which would fit them for our use. It is a fact admitted by all well-informed persons that the present poverty of the Indian people is in the main due to the decline of her manufactures and the decadence of her old industrial system. The report of the first Famine Commission of 1880 explicitly points out that the phenomenon of ever-recurring famines is due to the disappearance of the industries which maintained in former times a considerable portion of the population and to over four-fifths of them being thrown entirely on land. The escape of the country from this deplorable condition depends upon the revival and rehabilitation of that varied industrial system, which enabled her in former times, in spite of foreign invasions, internal unrest and political upheavals, not only to supply all the wants of her children, to give them 'home made' all the things which minister to the comforts and conveniences of civilised life, but to send enormous quantities abroad and acquire riches thereby. The industrial question in India, my Lord, is a question of life and death. Not only

[Rao Bahadur R. N. Mudholkar.] [23RD MARCH 1910.]

the progress, but the very existence, of the nation depends upon the establishment of a diversity of occupations which will remove the pressure on the land and enable a substantial portion of the population to earn their livelihood otherwise than by precarious agriculture.

"Is it feasible to remedy the present state of things and to establish and develop industries in India, and if so, what are the methods to be followed? Guidance is afforded by the action of other countries similarly situated and hope is held out by the success they have achieved. The continental countries of Europe were at the close of the Napoleonic wars in a very low state, with their resources exhausted, their population diminished, their manufactures dead or decayed. England was the only country the manufacture and trade of which were in a flourishing condition. But England jealously guarded her knowledge. To facilitate the introduction of the improved methods and appliances on which the supremacy of the English industry rested, these countries established a carefully worked out and elaborated system of national education—general and scientific, and by raising to a high level the general knowledge of the peoples and their scientific acquirements, they not only succeeded in achieving their emancipation, but have carried their technical efficiency so high as to compete with England on terms of equality in neutral markets.

"The case of America is even more remarkable. Probably nothing would be more convincing to the ordinary mind than the achievements of Japan. An almost purely agricultural country only fifty years ago, she is now one of the most active and powerful in the field of industrialism; and this position she has attained by the establishment of a most carefully thought out system of National education.

"The Commission appointed in regard to technical education said:—

'Half a century ago, when the countries of continental Europe began to construct railways and to erect modern mills and mechanical workshops, they found themselves face to face with full-grown industrial organisation in England which was almost a sealed book to those who could obtain access to its factories. To meet this state of things these countries established technical schools and sent engineers and men of science to England to prepare themselves for becoming teachers of technology in those schools.'

"Technical High Schools now exist in nearly every continental State, and are the recognised channel for the technical instruction of those who are intended to become the technical directors of industrial establishments. Many of the technical chemists have, however, been and are being trained in the German Universities. The Commissioners believed that the success which has attended the foundation of extensive manufacturing establishments, engineering shops and other work on



[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

the continent, could not have been achieved to its full extent in the face of many retarding influences, had it not been for the system of high technical instruction in these schools, for the facilities for carrying on original scientific investigation, and for the general appreciation of the value of that instruction and of original researches which is felt in those countries. All these schools have been created and are maintained almost entirely at the expense of the several States, the fees of the students being so low as to constitute only a very small proportion of the total income. The buildings are palatial, the laboratories and museums are costly and extensive, and the staff of professors is so numerous as to admit of the sub-division of the subjects taught. The Commissioners were greatly impressed with the general intelligence and technical knowledge of the masters and managers of industrial establishments on the continent. They have found that these persons, as a rule, possess a sound knowledge of the sciences upon which their industry depends. They are familiar with every new scientific discovery of importance, and appreciate its applicability to their special industry. They adopt not only the inventions and improvements made in their own country, but also those of the world at large, thanks to their knowledge of foreign languages, and of the conditions of manufacture prevalent elsewhere.

"The report of the Commission which under the initiative of Mr. Mosely visited America with the object of finding out how far the phenomenal development of American industry can be attributed to education—general and technical—reveals several most instructive facts. They state that the most flourishing mechanical and electrical establishments seek after the services of graduates. In fact, the demand for scientific graduates exceeds the supply. It would be well to bear in mind, as the Commissioners point out, that in America there are one hundred and ten thousand graduates in every million of the population. The faith of the Americans in education as the true basis and qualification for all useful pursuits and occupations is so intense as to partake almost of religious fervour.

"My Lord, I would not have mentioned all these facts at the length I have had not the views advanced at times during the discussions which have taken place, during the last 25 years, shown that the opinion is held in certain quarters that the case of India is different from that of the countries of the West or of Japan and that the methods which proved successful there are unsuited to the requirements of this country. The principles laid down by the Resolution of the Government of India of January 1888 were in certain important respects hardly carried out. The Quinquennial Educational Report of 1902 points out that the system of industrial schools has been wanting in definiteness, both of methods and object, and its

[Rao Bahadur R. N. Mudholkar.] [23RD MARCH 1910.]

effects on technical training and industrial development have been small. His Honour Sir John Hewett, in his speech at the Naini Tal Conference of 1907, said :—

‘There is probably no subject on which more has been written or said, while less has been accomplished, and though the discussions have travelled far and wide and been extended to nearly a quarter of a century, they have produced little tangible results in this province (the United Provinces of Agra and Oudh).’

“It is not insinuated for a moment that nothing has been done since Lord Dufferin’s Resolution was issued 22 years ago and that the country has been standing still all these years. Through the enlightened patriotism and generous munificence of some private citizens and the self-sacrificing zeal of several others, there have arisen a not inconsiderable number of technical institutes and industrial schools in the Bombay Presidency, in Madras, Bengal and the Central Provinces. Government have in addition to giving liberal help to most of these institutions widened the scope of the four great Government Engineering Colleges by opening the Departments of Mechanical Engineering and Electrical Engineering in them and at Sibpur by providing a mining class. In some Native States also action has been taken thanks to their enlightened rulers. All these institutions are serving a most useful purpose, and they have, individually and conjointly, immensely helped industrial progress. But it must be remembered that except in the Bombay Presidency till recently very little was done. In regard to these institutions it must be frankly stated that the technological education available in the highest of them falls under the class of Secondary Education. In the Departments which it has taken up, especially in Mechanical Engineering and Textile Manufacture, the Victoria Jubilee Technical Institute of Bombay stands first in the country. But the instruction there goes just a little above Secondary Technical Education.

“There is, however, nowhere yet a technical Institute which, in the language of Lord MacDonnell, is the highest embodiment of instruction in the particular arts or industry which it professes to teach. There is still to come into existence, what was so strongly recommended by him, a Central Institution for each Province directing and controlling the teachings of the schools scattered throughout the Province, inspiring them with new ideas and furnishing them with good designs.

“I shall not deal here with the Provincial institutions which aptly come in the Second Resolution I shall have to lay before this Council. Confining myself to the Central or all India Institute suggested by me, I would try to show in the briefest manner possible its scope and necessity.

“I would, in the first place, point out that the kind of College I advocate is intended to supply a want which is already felt; secondly, that the supply of

[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

this demand is urgently needed for the present and future well-being of the country and cannot be ignored without injuring a highly beneficial movement; and thirdly, that it is a want which is not met by any of the existing Institutions and does not involve any reduplication of machinery or departure from the policy accepted by Government.

"The Institution proposed is for giving instruction in the higher branches of mechanical engineering, including machine construction, electrical engineering, marine engineering, railway engineering, textile manufacture, mining and metallurgy and the different departments of industrial chemistry.

"Keeping aside for a moment the Indian Institute of Science at Bangalore, there are, in one or more of the existing institutions, facilities afforded for instruction in mechanical engineering, electrical engineering, textile manufacture, textile chemistry and mining. The existing courses of instructions are, when measured by the standards of the advanced countries, of the nature of secondary education. They do not come up to the standard of proper technical collegiate education. The men turned out possess the qualifications of foremen, assistant engineers, assistant managers of departments. Owing to want of better qualified indigenous persons and the exorbitant cost of importing suitable men from abroad, these men are entrusted with the work of managers of departments and of engineers in charge of big factories. But the owners feel almost every day the need of men of higher type, and the men themselves are conscious of the necessity of instruction in advanced courses of theory and practice combined. I say nothing of the men who have risen from the ranks, who do their work without the knowledge of the principles on which it is founded and who proceed by the mere rule of the thumb. They were well enough when things were going on smoothly, but with the advance of applied science and improvement of machinery, producing keen competition, the difficulties of the Indian manufacturers and factory owners are increasing. There is thus here a demand for higher knowledge and resourcefulness which is not met by the existing institutions. Large concerns with a capital of 20 lakhs and 30 lakhs get one or two qualified men from abroad for general management and departmental direction or for scientific work. But the smaller concerns of 5 lakhs or 10 lakhs cannot afford to employ such a highly paid agency, and the work has all to be done by men who, though good so far as their education goes, do not come up to those trained in Europe or America as they have not had the benefit of an advanced course.

"And this is in regard to existing courses. But there are departments for instructions in which there are no facilities afforded by our public institutions. There

[*Rao Bahadur R. N. Mudholkar.*] [23RD MARCH 1910.]

are railway engineering, marine engineering, and construction, hardware, cutlery and metal manufacture; mining chemistry, technological chemistry as applicable to the preparation of sugar, of oil, paints, varnishes, etc., to the treatment of fats, to tanning and dyeing, ceramics, porcelain and pottery, preparation of essences and essential oils, glass manufacture and a host of other things, for training in which there are no schools or institutes. There should be at least one institution in the country where thorough instruction is given in these branches. This is certainly not beyond our actual needs. There are the cotton mills, the jute mills, the cotton and jute presses, and mills and factories of all kinds, the mines, the railways with a mileage already exceeding 30,000, where competent men are wanted and where they have already, or are bound to have, considerable scope. In addition to these established industries and departments there are the industries just coming into existence or soon likely to be created. The healthy progress of those in existence and the establishment of new ones is dependent upon the grasp of principles and expert knowledge possessed by managers and supervisors and their assistants in the engine-room, the factory or the workshop. The scholarships awarded by the State cannot meet this demand. A first class practical college in the country and subsidiary colleges in the provinces are urgently wanted. The progress of industries in other countries was directly due to or stimulated by the high class institutions, which they proposed.

"A first class Technological College in each province providing instruction in all the various departments and branches of technology will, I fear, be considered at present as beyond the pale of practical politics. But the time has, I submit, my Lord, long since arrived when there should be for India at least one first class fully equipped college of technology comprising within its scope the different departments of industrial technical knowledge demanded by the circumstances of the country.

"The Indian Institute of Science at Bangalore cannot according to its constitution and object supply the purposes of the college pleaded for. It will be devoted to post-graduate studies and research, particularly in science. It will be in no sense a trade school and will not deal with what may be called the minor manipulative processes of particular industries. The immense importance of research and investigation is not denied and the necessity of such an institution as the Indian Institute of Science is not questioned. All that is pointed out is that it will not take the place of a College of Technology in which the practical and commercial aspects of an industry have to be as much kept in view as the thorough grounding in principles. The Tata Institute will crown the edifice of our system of scientific education.

[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

The proposed college will occupy a lower story intermediate between that Institute and the existing Technical Institutions.

“Further, it has to be remembered that the Bangalore Institute will confine its scope to only some of the departments which the suggested Polytechnic College will take up; and there will be no overlapping of work in this wise also.

“As regards ways and means I frankly admit that a Polytechnic College worth the name will require not less than a crore of rupees for capital outlay and from 8 to 10 lakhs a year for recurring expenditure. But, my Lord, when Manchester spent on one school £300,000 or Rs. 45 lakhs for initial expenditure and spends every year 6 lakhs and Charlottenburg spent 75 lakhs on initial expenditure and spends annually 10½ lakhs, is one crore too much for the Indian Empire? London has some 24 institutions ranking as Polytechnics or Technological Colleges. England has about 360 Technical and Art Schools and Colleges. The total number for the United Kingdom is about 620. If the institute is located in a place like Bombay, where during these 18 months 22½ lakhs have been placed at the disposal of His Excellency Sir George Clarke for scientific and industrial education by public-spirited and princely donors like Sir Jacob Sassoon, Sir Cowasji Jehangir, Sirdar Chinubhai Madhov Lal and Sir Currimbhai Ebrahim, and where the highest commercial and industrial activity prevails, and a well organized scheme is drawn up in consultation with His Excellency, the demand on the revenues of the Government of India might be appreciably lessened. But without taking these private donations into account, the importance of the matter requires that money must be found for it. The state of our finances will as the year proceeds be found to be more satisfactory than the Hon'ble the Financial Member has calculated upon; in fact during the last few weeks there has been an improvement, as the Hon'ble Finance Member has just stated, and along with primary education and sanitation, the advancement of technical and industrial education, should have the first charge upon the increase in the revenue. But if at the end of this year it is found that in spite of additional taxes imposed the other day there is no increase in the revenue; and on investigation it is found that no economy is possible, I for one am prepared for the imposition of taxes, devoted solely to the purpose of industrial education. My Lord, four years ago Your Excellency, in a highly sympathetic speech emphasised the necessity of technical education in the country in these words:—

‘Technical instruction in other countries is growing apace—competition has forced it upon us. We must not lag behind. The success of modern industries and the preservation of indigenous industries is becoming every day more and more dependent upon scientific and technical knowledge, and if the resources of India are to be developed by the people

[*Rao Bahadur R. N. Mudholkar ; Sir Harvey Adamson.*] [23RD MARCH 1910.]

of India, such development must depend largely upon local enterprise, upon the investment of Indian money and upon a recognition of the absolute necessity of expert training.'

"In His Excellency the Governor of Bombay and His Honour the Lieutenant-Governor of the United Provinces, we have most whole-hearted supporters of scientific and industrial education. What this proposition asks for is to give effect to the principles laid down by the Government of India 22 years ago. The time for action has come, and the country expects that Your Excellency's Government will advance the cause of scientific and technical education by providing the means for the acquisition of that higher knowledge on which the development of industries depends.

"My Lord, I hope and trust that the Government of India will accept my resolution and appoint a committee of qualified persons, official and non-official, European and Indian, to frame a suitable scheme for an all-India Polytechnic College providing for instruction in the departments specified in the resolution, and to submit their report by the end of August, so that Your Excellency may be in a position to deal with it before the expiry of the term of your office.

"My Lord, the year 1910 is already associated with the inauguration of the enlarged and reformed Councils. I pray that it may further be associated with the establishment of technical collegiate instruction, so that the name of the great author of the great political reform may become still more endeared to the present generation and to posterity by the inauguration of an equally great industrial and educational reform."

The Hon'ble SIR HARVEY ADAMSON said:—"My Lord, the proposal of the Hon'ble Member is that the Government of India should without delay establish a polytechnic college for giving instruction in the various branches of technical education detailed in the Hon'ble Member's resolution. Provision for technical education is being made by the different provinces with as much rapidity as funds permit and the new schemes which have been launched during the last few years are very numerous. Most of them are the result of Conferences which have been held in the larger provinces to examine the local needs carefully and to recommend, with a due attention to the actual requirements of the industries of the provinces, the particular measures which the local circumstances called for. It would be impossible within the time at my disposal to enter into detail as to these schemes, but I will briefly enumerate the leading features of each province.

[23RD MARCH 1910.] [Sir Harvey Adamson.]

" In *Madras* a department of industries is being formed. The Director has been already appointed; and it is proposed to appoint experts in—

- (1) dyeing,
- (2) weaving,
- (3) leather.

These will inquire into the industries as now carried on and will organise schools at appropriate centres. The proposals are before the Secretary of State. They are the outcome of careful and detailed inquiry at a conference held in Ootacamund.

" In *Bombay*—

- (1) the Poona College of Science,
- (2) the Victoria Jubilee Technical Institute, and
- (3) the School of Art,

have all been developed and improved. New technical schools are being started. Thus improvement is being effected in textiles, technical chemistry, pottery, cotton-spinning, mechanical engineering, electrical engineering, and other branches. These have been approved by the Secretary of State and are at work.

" In *Bengal* a Superintendent of Industries has been appointed.

" A school for the improvement of handloom weaving has been established at Serampore and is working successfully. A mining class has been established at Sibpur and is doing well. Instruction in mining is also being given in the mining country.

" In the *United Provinces* proposals have been sent to the Secretary of State for—

- a Director of Industrial inquiries and education; to this sanction has just been received,
- a professor of mechanical engineering at Rurki;
- the appointment of an instructor in cotton-spinning and machinery at Rurki;

[Sir Harvey Adamson.] [23RD MARCH 1910.]

the appointment of a cotton expert for an experimental weaving school in Benares ;

• the establishment of a school of design at Lucknow.

These are parts of a scheme which the Secretary of State has expressed readiness to approve.

"Other parts of the scheme are being at present held over by the Local Government, viz., appointments at Rurki for hydraulic engineering and geology. The remainder of the scheme, viz., the Technological Institute at Cawnpore, is being considered in the light of the criticisms of the Secretary of State.

"In *Eastern Bengal and Assam* a scheme has been submitted by the Local Government for—

the appointment of a Director of Industries who will control technical and industrial education ;

a system of demonstration factories, one for handloom weaving in cotton, another for silk, a third for bleaching, dyeing, printing and finishing cotton goods, and a fourth to demonstrate the application of power to processes such as oil-pressing, cotton-ginning, and rice-milling ;

students would be received and trained in these factories ;

a school of design is also proposed, and a laboratory ;

the school of engineering is to be improved, especially in respect of mechanical engineering.

The Government of India have invited the Local Government to state how much of this scheme they are now able to execute with the funds at their disposal.

In the *Central Provinces* an elementary school of handicrafts has been sanctioned at Nagpur.

"A technical school has been opened at Amraoti called the Victoria Technical Institute, which teaches mechanical engineering (up to a moderate standard only) to train men to work in the cotton-gins and presses of Berar.

"Proposals are also under consideration for improving the teaching of engineering in the province and moving it to Nagpur.



[23RD MARCH 1910.] [Sir Harvey Adamson.]

"It will be observed that these schemes make provision for the improved teaching of most of the subjects mentioned in the Hon'ble Member's resolution, and I will not take up the time of the Council by describing the provision which is already made for mechanical and electrical engineering in the older established Engineering Colleges. As the Council are aware, the Indian Institute of Science is now progressing and will make provision for the teaching of applied science in some directions on a scale and a standard not hitherto attempted in this country. For the Government of India to undertake to start a polytechnic in which the instruction thus given locally would be reduplicated would indeed be an extravagance. If, however, it were proposed that the instruction given in the provincial institutes should be carried higher by means of a central institution so that students would pass from the provincial institutions to the central institution and would obtain a higher course of instruction in the subjects which they have already studied in their own provinces, the reply to such a proposal is that the institutions to be established in the provinces will give instruction of as advanced a character as most students at the present time are expected to ask for. The standard of the instruction has been, or, is being, adjusted to the actual needs of the students who are to receive it. If there are students here and there who desire a higher standard of instruction than the general average of their class the natural method for meeting their requirements will be to permit them to push their studies further at the provincial institutions. In this way the standard of the institutions in the provinces will gradually rise according to the qualifications and capacities of the students; but if we were to attempt to skim the cream of the provincial institutions and collect the best students in some central polytechnic, we should depress the standard of the provincial institutions, should incur enormous expense, and should probably not, for the present at any rate, obtain more than a sprinkling of students possessing a really advanced knowledge of applied science.

"But it is possible that something may be done in the direction which the Hon'ble Member proposes though it is not quite what he has advocated. We may possibly find that some of the many promising technical institutions which are now setting to work all over this country, may develop specialties of their own which will distinguish them from others belonging to the same general class. Some may excel in one branch and some in another; and it may perhaps be more economical in such cases to let each institution develop its specialty to the full and to attract students from other parts of India. This question has been raised by the Secretary of State in his despatch upon the proposed Technological Institute at Cawnpore. 'Considering how scanty', he writes, 'is the equipment in India for scientific research, it is obviously undesirable that there should be any

[Sir Harvey Adamson.] [23RD MARCH 1910.]

avoidable duplication of scientific work. Dr. Morris Travers may be able to show that he proposes to undertake the study of some of the problems which the Cawnpore Institute is intended to deal with; in that case the more modest scheme which I have suggested will prove sufficient for the United Provinces. I do not overlook the fact that Bangalore is at a great distance from Northern India; but problems of industry are, I am disposed to think, much the same in most parts of the country, and scientific discoveries are of course of even wider application. Lord Morley therefore suggests that we should 'discuss the possibility of so co-ordinating and dividing the work of research and teaching for industrial purposes as to insure that the funds which Local Governments are able to devote to this object shall be utilized to the best possible purpose in the interests of the country as a whole.' The suggestion which the Secretary of State has here made is now under consideration. It will be observed that the point to the discussion of which the Secretary of State invites our attention is not the establishment of such a centralized institute as proposed in the Hon'ble Member's resolution but the co-ordination of the various efforts made locally.

"I do not exclude the possibility of a superstructure such as the Hon'ble Member desires being at some future time added to the fabric of technical education in this country. It is at any rate possible that some branches of research will be left unattempted by Local Governments or that they may best be attempted by the Government of India. The Indian Institute of Science which is to be established at Bangalore is one in which all Local Governments and also the Government of India are interested, and it is possible that similar concentration may be found desirable in other parts of the field. I do not exclude the possibility of it, but I am not prepared to commit the Government of India today to the assertion that the need has already arisen or that it will take the form which is defined in the Hon'ble Member's resolution. The institutions in the provinces are some of them in their initial stages; some have not yet been sanctioned by the Secretary of State. When they are at work the Government of India will listen with attentive ear to any representations which may be made by the Local Governments, or may be based on the actual working of the provincial institutions, as to the need of progressing further in the direction suggested by the resolution. But it is, in our opinion, premature to decide now which, if any, of the industries cannot properly be left to the provincial institutions to study up to the most advanced standard, or to assert the principle of a centralized polytechnic. A committee would at the present stage be of no assistance to us in determining those questions which can only be solved by experience and by the advice of the men who will be actually engaged in the new institutions that are now springing up.

"I regret therefore that I am unable to accept the resolution."

[23RD MARCH 1910.] [Mr. Mahomed Ali Jinnah.]

The Hon'ble MR. MAHOMED ALI JINNAH said :—" My Lord, I do not wish to take up the time of the Council with the various virtues of technical education or the excellent effect it has on different countries. I think in these days it might be assumed, and safely assumed, that technical education in every country is an excellent thing. Secondly, I think, my Lord, that it might also be assumed that it is the function of the State to help the technical education of the country. It has been recognized over and over again that the State is something more than a mere agency for keeping peace, and the doctrine of *laissez faire*, the policy of let alone, has been given up long ago ; and therefore I also take it and I do not think I need dilate on that point—members in this Council take it for granted that it is the business of the State to help the education of the country, general or technical. That being so, the third point, which is really the most important point, is what has been done up to the present moment in the direction of technical education ? Is it sufficient, or is it not, and if not, how much further we should go ? Well, my Lord, I have had the opportunity of reading a very excellent review of the progress of education in India during the years 1902-07. It is a review which was given by the Hon'ble Mr. Orange, the Director of Public Instruction, and I have gone through it, particularly the part which refers to technical education. Mr. Orange begins in his review by admitting this, that there are at present in India no technical institutes of the higher kind. Now, my Lord, referring to the progress of other countries, and particularly I wish to take Japan for my purpose for comparison ; India has shown the poorest result up to now. Technical education in Japan was started not long ago, earnestly, although its history goes back to 1874 (its origin), but it was of no practical or real consequence till about 10 or 12 years ago. In the course of 10 or 12 years the progress that Japan has made is enormous, whereas we also in India, as far as I can see from the review of the Hon'ble Mr. Orange, I mean, the Government of India here also, brought their attention to bear upon technical education seriously about 10 or 12 years ago ; and comparing the two, my Lord, it seems that, on the one hand, while Japan has made progress by leaps and bounds, in India the result we have produced, if I may say so, is a very poor result indeed, looking at the review of the Hon'ble Mr. Orange. Now, my Lord, as to what we have done in India during the 12 years, the net result as summed up by Mr. Orange in his report, comes to this. ' Statistics show the number of technical and industrial schools existing at the end of the quinquennium 1902 to 1907 to be only 147 with 6,820 pupils as compared with 84 schools with 4,977 pupils at the beginning of the period.' Therefore in the course of five years we have hardly doubled the number of our schools, and our pupils have only gone from 4,000 to 6,000 odd. That is an increase of 2,000. Now, my Lord, looking at the progress that Japan has made,

we find that in their report, which also is a five years' report from 1902 to 1906, the number of schools, the total number of schools, my Lord, in 1902 were 843 in Japan, and in 1906 they went up to 4,518. Then the number of pupils in 1902, the total number of pupils, was 57,000, and it went up in 1906 to 217,000 odd; my Lord, looking at the question of the amount spent in India, after all, my Lord, the result is always in proportion to or comparative with the expenditure. That if we do not spend more money, we cannot get better results. The whole amount that is spent in India, which I also find in the review of the Hon'ble Mr. Orange, is not more than five lakhs and odd for the whole country, for all the schools in the country. Well, my Lord, that is shortly the position of India as compared with Japan, and I believe that if other statistics of the world are looked into, members of this Council will find that India stands a very bad comparison indeed with all other civilized countries. That being so, my Lord, the question is whether our Government should not seriously and earnestly undertake this branch of education. My Lord, to my mind, I venture to submit, that a most important cause, of a great deal of the unrest is due to economic causes. Many of our industries have gone; they cannot stand the competition of coal, iron and machine and a large number of our people, my Lord, have to fall back upon whatever they can get to do. There is not room enough in the agricultural fields for the people of India. Therefore it is very necessary, for that reason alone, that the Government of India should pay earnest attention to this proposal and help to revive the arts, industry and manufacture and commerce of the country. I know that it has always been said to be a question of finance. The Government are always anxious to help the cause of education, but for want of funds they cannot do it. My only answer is that it is a question which has been so often discussed recently that I really do not wish to go into the details of finance; but surely, my Lord, with the genius of the Finance Member and with the resources that Government have at their disposal, in this case in the cause of technical education, surely some means and ways can be devised by which we can at least get a substantial sum to make a serious start in this direction. I must say, my Lord, that the answer of Sir Harvey Adamson was satisfactory. It does show that the Government are actively thinking over this question. It does show, from what light he has thrown on it in his speech before the Council, that the Government are in actual communication with the Secretary of State for India, and although the Hon'ble Member says he cannot accept this resolution, still it is quite clear that the mind of the Government is quite seriously exercised on the subject. I for one support this resolution substantially. In this Council we can only bring resolutions to indicate a direction; we cannot possibly bring or frame schemes, financial or otherwise. It is entirely for the expert to evolve methods of helping

[23RD MARCH 1910.] [Mr. Mahomed Ali Jinnah; Mr. N. Subba Rao.]

this question, and the only intention of this resolution, so far as I understand it, is this. We feel strongly that technical education has not been attended to as it should be, and we earnestly pray that the Government and this Council should pay their serious attention to it for reasons I have stated. There are many other that I have not the time to state. The 15 minutes time allowed does not permit me to go into the question fully, and therefore with these few remarks I support the purport of the resolution."

The Hon'ble MR. N. SUBBA RAO said:—"My Lord, I hope the Hon'ble Sir Harvey Adamson will not think me ungrateful if I rise to point out that enough has not been done in the cause of technical education, and that there is no definite and systematic policy on the part of the Government in spreading technical education throughout the country.

"Mr. Booker T. Washington, whose educational enterprise is embodied in the Tuskegee Normal and Industrial Institute, Alabama, once said, 'the world may pity a crying, whining race; it seldom respects it.' We feel the truth of this statement and press this question strongly on the attention of the Government, because we realize that the present condition of technical education is so low that earnest efforts must be put forth to make India at least self-contained and supply the minimum wants of her people. Recently, about three years ago, Sir Henry Craik, writing to the *Scotsman*, said:—"In many cases I am obliged to confess that such technical education as I saw was a miserable mockery."

"My Lord, there is an awakening throughout the country to the need of technical education. Young men are anxious to learn arts and industries and do what they can to revive dying industries and start new ones. The Hon'ble Mr. Butler in the excellent minute which he drew up for the Government of the United Provinces has borne testimony to the fact that 'many educated capitalists would start some machine-using concern at once, if they could have one of their relations or dependents trained to manage it or even to control it.' Now, my Lord, where are the institutions in this country which train young men to be managers of factories, which will enable them to start new concerns, and which will encourage capitalists to entrust them with the management of such concerns? The fact that scholarships are given by the Government or private bodies to some students to go to other countries cannot be taken into account, because these scholarships are limited and the persons who could take advantage of them are few and far between. They can never take the place of institutions in the country itself which would enable large numbers

[Mr. N. Subba Rao.] [23RD MARCH 1910.]

of young men to take advantage of them and qualify themselves for industrial and commercial pursuits.

“There is a very grave problem at present facing us, and that is the large number of young men who leave school and who are left adrift without any occupation whatsoever. Though they are anxious to qualify themselves for some industrial pursuits, they find no facilities in this country. Further, there is an increasing number of young men who fail in the University examinations and who do not know what to do with themselves. The recent failures in the Matriculation examination of the Madras University have excited attention in all educational circles; only about 11.5 per cent. were passed by the Madras University out of 7,508 candidates that went up for the examination. The problem, my Lord, is a serious one and it has to be taken into consideration and combated with all the resources and wisdom which the Government can command. I submit that adequate facilities must be provided for giving technical education in all its branches in the country itself.

“When we turn to the present economic condition of the country, the situation may be summed up in the words of Sir Guilford Molesworth:—

“India in poverty! Midas starving amidst heaps of gold does not afford a greater paradox; yet we have India, Midas-like, starving in the midst of untold wealth.”

“This is a graphic and true picture of India's fallen state. Her large mineral and vegetable products are exported to foreign countries and reimported as manufactured articles. The Hon'ble Sir Harvey Adamson stated that the Madras Government had put forward a scheme for giving instruction in two or three industries. Are these all the industries in the Madras Presidency? I submit that the scheme sketched out by the Hon'ble Member does not touch the fringe of the question. These isolated efforts do not go to effectively advance technical education in the country. What we require is a large and systematic programme of work.

“In 1882 the Education Commission recommended that there should be a bifurcation of studies in secondary schools; one literary, leading to the University; the other modern, designed to fit young men for industrial and non-literary pursuits. The recommendation, I am sorry to say, is more honoured in the breach than in the observance. I venture to submit that the trend of education has continued to be mainly literary. And yet we are found fault of with because our tastes are literary and our young men do not take to industrial or commercial pursuits. Whose fault is it? Is it the fault of our young men or of the system of education

[23RD MARCH 1910.] [Mr. N. Subba Rao; Pandit Madan Mohan Malaviya.]

adopted in our schools that their bent of mind is literary? I submit that the education in our schools should be such as will develop the aptitude of our young men for non-literary pursuits, so that when they leave school they may easily take up technical studies. As Mr. Anthony, now Lord, MacDonnell, pointed out, 'the scheme of general education should be so arranged as, without any breach of continuity, to lead up to the instruction which we call technical.'

"My Lord, we are not ungrateful to Your Lordship for the keen interest Your Lordship has been taking in the cause of technical education and for the efforts recently made by Your Excellency's Government in that direction. The Hon'ble Mr. Mudholkar has drawn the attention of the Council to the weighty words that have fallen from Your Excellency. In this connection I beg to quote the words of the German Emperor :

'I consider it to be one of my most important duties as sovereign of the country to further the dissemination and intent study of the technical sciences, and to work for an increase in the number of technical Universities. We do not owe the great development of German technics to accidental discoveries and felicitous ideas, but to the serious work and systematic instruction that rest on the firm basis of science given at our Universities.'

"My Lord, the Government of India in its resolution of 1888 has rightly taken upon itself the duty of imparting technical instruction in this country. I submit that this duty has not been well performed during these twenty years, that the steps taken have been halting, that there has been no definite programme of work and no systematic policy, that the whole thing has been going on in an haphazard way, and that sufficient advance has not been made in the spread of technical education to meet the requirements of the country. I hope Your Excellency's Government will place itself at the head of the popular movement in favour of technical education and meet the aspirations of the public in this direction."

The Hon'ble PANDIT MADAN MOHAN MALAVIYA said:—"I beg to support the resolution moved by the Hon'ble Mr. Mudholkar. My Lord, I have heard with the respect that is due to any speech which comes from a Member of Government to what has fallen from the Hon'ble Sir Harvey Adamson, but I feel sorry to think that the response he has made to the proposal before the Council has not been at all adequate to the requirements of the situation. My Lord, we feel thankful for the steps the various Provincial Governments are taking in the matter of technical education. We are also thankful for the hopes that are being held out of more being done in the future. But on behalf of the people whom it is my privilege to represent here, I deem it my duty to invite the attention of

Government to the great, the urgent necessity of much more being done than has yet been attempted, or is going to be attempted from what has been stated in the speech made by the Hon'ble Member. The position we are in has been very well described by several previous speakers, and I do not wish to take up more time than is necessary; but I invite the attention of the Council to a few facts which bear upon the question before us.

"Before the time when the Crown took over the administration of this country a great deal of foreign manufactures had begun to come into this country; but it was small in quantity compared to what has been pouring in since the Crown took up the administration. The result has been that machine-made products have largely replaced local or indigenous manufactures, and thousands of families who have thus lost their trade have been thrown back on the soil, and a larger and larger population depends now on agriculture for its subsistence. We have had more frequent famines, and famines of greater rigour, than used to occur before 1858. The attention of Government was drawn to this fact after the terrible famines of 1877-78, and a Commission was appointed to enquire into the causes of the famines, and to recommend remedies therefor. That Commission reported that 'at the root of much of the poverty of the people and the risks to which they are exposed in seasons of scarcity, lies the unfortunate circumstance that agriculture forms almost the sole occupation of the mass of the people, and that no remedy for present evils can be complete which does not include the introduction of a diversity of occupations through which the surplus population may be drawn from agricultural pursuits and led to earn the means of subsistence in manufactures and some such employments.' It recommended that while irrigation must be looked to as one means for affording relief, the promotion of industrial pursuits must be regarded as the other. From 1878 to 1910 is a long distance, but unfortunately Government did not see their way to giving that attention to the question of technical education and to the diverting of the population from agricultural pursuits to manufacturing industries as the situation demanded. Speaking in 1906, at the Industrial Conference at Naini Tal, Sir John Hewett pointed out that 'the question of technical and industrial education has been before the public for over twenty years. There is probably no subject on which more has been written or said, while less has been accomplished.' Sir John Strachey had said that the Government could not control the uncertainty of the seasons. Sir John Hewett pointed out that though the Government could not regulate the sunshine and shower, it could do a great deal with regard to the disposal of the products of the earth. It could open new avenues of employment, and by promoting diversity of



[23RD MARCH 1910.] [*Pandit Madan Mohan Malaviya.*]

pursuits spread prosperity over the land. But, my Lord, very little has yet been done in this direction, and the result is, that while other countries have during the same period of fifty years vastly improved their position, India continues today to be a mainly agricultural country. Her national income is the lowest among all civilised countries. America boasts an income twenty times larger than India. So also England and Germany. During the last fifty years or so many high officials of Government have expressed their sympathy with the people of this country in their poverty. The fact has been deplored over and over again. Even in this Council during the last few days more than one Hon'ble Member of Government has expressed regret that the people are very poor. Among the many steps that may be taken to reduce the poverty of the people and to raise their national income, none promises to be more fruitful than the promotion of technical and industrial education. That is what the history of other nations teaches us. I will not speak of America, which has grown into an amazon of wealth by promoting general, technical and industrial education. I will take the case of Germany. About 70 years ago she found she occupied a very low position as a manufacturing country, and she began to feel jealous of the industrial supremacy of England. There prevailed at that time among the youth in Germany a desire for Government employment very much similar to what prevails here at present. Manual labour and industrial pursuits were despised. The Germans set about to find a remedy for this state of affairs. The remedy was found in spreading technical education. Says the report from which I am quoting :

'Several writers complain with indignation of the low esteem in which industrial pursuits were held. All crowded to the service of the State. Professor Finech asserts that "every State official considers it his bounden duty to make all his sons follow in his steps even if he had a dozen; thus many a one is lost to industry but not gained for science".'

"However, they did not despair and their chief remedy was education. They soon found out that among the weapons which are irresistible in this economic warfare, the spread of knowledge holds the first place, and all outlay for this purpose is a good investment, which *must* be remunerative. Money, as a rule, follows knowledge and avoids ignorance and stubborn stupidity.

"In the course of a few decades Germany vastly improved her position as a manufacturing country, and at the Exhibition of 1870 she found that she had attained a position of which she might well be proud. But she could yet not beat England in the excellence of her manufactures. German Ambassadors reported that their manufactures suffered in comparison with the manufactures of England, and German Ministers set about improving industrial education still further. The result has been that Germany has become a formidable rival to

[*Pandit Madan Mohan Malaviya.*] [23RD MARCH 1910.]

England, and England has had to wake up in order to maintain her position. During the last twenty years a great endeavour has been made by English statesmen and English merchants to improve their position by increasing facilities for imparting scientific and technical education, lest they should be beaten by Germany. England has improved her position. During the last twenty years a great deal of progress has been achieved and ample provision made for technical education. But unfortunately no similar provision has been made in India, and therefore no similar progress has been possible here. Let us take the case of another country, Japan, to which so many speakers have referred; and it is only natural that they should refer more to that country than to other countries. About thirty years ago Japan probably was worse off than we are today. She was mainly an agricultural country as India still is today. It was in 1873 that she started a system of technical education by establishing what is now the Engineering College at Tokio. This was followed by the establishment in 1881 of the Higher Technological School at Tokio, and by Elementary and Secondary Industrial Schools all over the land. The result was that in 1898 the Minister of Japan could write in his report that 'Industry is now passing from a limited scale of development to a more organised system on a large scale.' And thus in the course of twenty years or a little more Japan converted itself from a largely agricultural country into a great commercial and industrial country which has been increasing its manufactures day by day. In 1890 the agricultural exports of Japan, including raw silk, formed a little over 51 per cent. of her total exports. In 1902 they had fallen to 37·8 per cent., whilst her industrial exports had risen from 18 to 38 per cent. . . .

"My Lord, if Germany has become the great manufacturing country that she now is in the course of a few decades, and if Japan has in two decades so vastly improved her manufactures, the question arises, why should India not be able to do the same? India is certainly not inferior to those countries in natural advantages. Evidently all that is needed is that her children should be equipped with the same kind of scientific, technical and industrial education and industrial training which the people of Germany and Japan have received to be able to convert the raw products of the country into manufactured articles. With several other peoples, the fostering of national industries may only be a means of augmenting the abundance of wealth they already possess. With us in India it is necessary to rescue vast numbers of people from abject poverty and starvation. Among all the civilised countries perhaps nowhere do the conditions that exist make such a terrible appeal to Government, in favour of opening new avenues of employment for the people, for introducing a diversity

[23RD MARCH 1910.] [*Pandit Mudan Mohan Malaviya.*]

of pursuits, by introducing a sound system of technical education, than in this country. Not all the eloquence which can be commanded by any Member of this Council, not all the eloquence which can be called into play by any man here, or elsewhere, can appeal so forcefully as the deaths which are caused by famine, or the starvation and suffering which have often to be endured by the people because they are so miserably poor. It is the misfortune of the country that those appeals have not led to more earnest and systematic efforts being made both by the public and the Government to introduce a system of technical education co-extensive with the needs of the country. Is the position to be changed? Or are we to continue to export raw products and lose crores and crores in value upon them? Are we to continue to export these products to other countries, to have them manufactured and sent back to our country for us to buy them at a heavy price? We are exporting large quantities of raw cotton, hides, raw wool, and seeds, all of which might be locally done up, which would give employment to the people and add to their wealth. Even in the matter of imports we are being beaten day by day. Take the case of sugar. Last year over ten crores worth of sugar was imported into this country. Sugar has, for ages, been one of our principal national industries. Yet Germany by improving her industrial education produced beet sugar and gave a deadly shock to Indian sugar. Now, my Lord, our sugar industry is in a bad way, and stands the risk of being annihilated in the course of a few years. Our indigo trade has been ruined by the competition of the artificial indigo produced by Germany. Look at other imports, such as hardware. Even the trade in brass and copper utensils which were produced in this country has suffered by the competition of the foreign industry. The result is that more and more utensils are coming in because they are cheaper, and they are cheaper because they are produced by machinery. Where, my Lord, is all this to end? How much longer is this country, where the vast bulk of the people are so miserably poor as they are, which is frequently exposed to famine, where vast numbers of the people are so poor that they must at the first touch of scarcity seek the protection of the State or perish by starvation; a country which is rich in natural resources; a country where the people are skilful and industrious; a country which is being governed by one of the most enlightened services in the world; governed by men familiar with the economic conditions of this country and of other countries, and familiar also with the educational conditions of other countries,—how long is this country to continue in its present state of poverty and helplessness? When shall it begin to adequately utilise its own resources, to manufacture its own raw products, and to develop its national wealth? There can be, I submit, my Lord, but one answer,

[Pandit Madan Mohan Malaviya; Mr. Gokhale.] [23RD MARCH 1910.]

and that is that only so long as it does not develop a system of scientific industrial and technical education such as has been worked up by Germany and Japan and other countries. The money that will be required is a trifle in comparison with the immense benefits that will arise from such a system. The magnificent results that are sure to follow fully justify large schemes being undertaken. Japan did not content itself with beginning with small institutions. My Hon'ble friend Mr. Butler has, in his able minute to which reference has already been made, clearly shown that a central institution is the first need of the country. That view has been endorsed by Sir John Hewett, and by the Industrial Conference which met at Naini Tal. The resolution does nothing more than ask Government to establish one such institution.

"In view of what other countries have been doing; in view of the sorrow and suffering which the people have had to undergo by reason of an extensive system of technical education not being provided; in view of the great possibility that lies before us of developing national wealth and thereby promoting prosperity and contentment among the people, statesmanship and humanity itself demand—that the Government should rouse itself to a proper appreciation of the great importance of this problem of industrial education, and should find means for introducing and working up a system of education which would be adequate to the requirements of the situation and would bring in a new era of prosperity into the land."

The Hon'ble Mr. GOKHALE said :—I do not wish to occupy the attention of Council for more than a very few minutes, but I would like to point out with reference to what has fallen from Sir Harvey Adamson that there are three principles which seem now to be fairly well accepted in regard to technical education by modern nations. The first is that technical education in countries where industrial skill is not hereditary has got to be spread from top to bottom. That is the first principle now accepted by most modern countries. I have before me a volume on the state of education in Russia. It is a volume of absorbing interest; and it gives us the conclusions to which the Russian Government come after careful enquiry into this matter, and those conclusions coincide with the practice of other modern countries. The first principle then is that technical education has to be spread from the top to the bottom, from the highest school of Technology in some centre and from that to the intermediate schools and from there to the lowest schools. This is where industrial skill is not hereditary.

[23RD MARCH 1910] [Mr. Gokhale; Lieutenant Malik Umar Hyat Khan.]

"The second principle is the great value of co-ordination. There have no doubt been stray isolated efforts by different provinces and that may be all right because these provinces did what was possible with the means at their disposal; but the duty of the Central Government is to attempt co-ordination from time to time; that is, if they don't start properly with a co-ordinated scheme.

"The third principle recognised is that no great advance can be made in technical education unless there is a wide diffusion of general education.

"The first two principles lie behind the resolution moved by the Hon'ble Mr. Mudholkar. I am sure my Hon'ble friend had these two principles in view, the first, to begin at the top in order that real technical education may spread in this country, and the second, that there should be co-ordination, so that there should not be any duplication of efforts in the different provinces.

"Therefore, my Lord, the mere fact that the Government are contemplating a number of things in different Provinces is not a sufficient answer; but if the Government will see their way to direct an enquiry in general terms as to how technical education may be furthered in this country, I think that will to some extent meet the requirements of the situation. I do not think the Hon'ble Mr. Mudholkar will then insist upon his specific proposals. The Council may be aware that the Secretary of State for India in withholding his sanction to the proposed Institute of Technology in the United Provinces himself suggested that further enquiry should be made. If therefore a Committee is appointed for this purpose, I shall be satisfied."

The Hon'ble LIEUTENANT MALIK UMAR HYAT KHAN said:—"My Lord, the present motion of my Hon'ble Colleague is one of the series of resolutions which are meant to put the Government into an awkward position. When we know that funds are not available to carry them immediately into practice, we cannot expect that such motions will be carried. The only purpose which these resolutions can serve is that they may lead to show that the Indian patriots are trying very hard and taking lots of pains to help the cause of their countrymen, while Government does not attend to them, and treats their suggestion with neglect."

[*Pandit Madan Mohan Malaviya; the President; [23RD MARCH 1910.]*  
*Lieutenant Malik Umar Hyat Khan.*]

The Hon'ble PANDIT MADAN MOHAN MALAVIYA (interrupting): "Is the Hon'ble Member in order in making the remarks he has just made?"

His Excellency THE PRESIDENT said that he did not hear anything objectionable.

The Hon'ble LIEUTENANT MALIK UMAR HYAT KHAN, continuing, said:—  
 "On the other hand, if we examine the situation closely, we come to the conclusion that no legitimate and reasonable request of ours has ever been carelessly thrown away or disregarded. To such suggestions which it is impossible to adopt the Government cannot agree. It will not, I think, be too much to say that this is perhaps one of the fancy resolutions which may be meant to be withdrawn at the end. This much can safely be said, however, that the instruction for higher branches of technical education which the resolution proposes to give will be far more useful and will suit this situation much better than the ordinary education which we at present impart in Indian schools and colleges, and which is turning lots of our young men away from their ancestral occupations, and at the same time does not provide any field of employment for them. As regards the agricultural classes, our educated youths either get lofty views and high ideas, and thus cannot go back to their forefather's professions, or very often become physically unfit or unable to carry on labour and hard work. The businessmen and traders cannot find sufficient money to start work on a large and improved scale, and the old small business cannot suit their tastes and meet their requirements, and according to a famous Urdu verse (*na idhar ke rahe na odhar ke rahe*) they are useful nowhere. The present resolution may to some extent relieve this tension. The old system of ordinary education which was introduced long ago in order to serve as a medium between the rulers and the ruled, to help the work of administration, to get clerks and other officials, has not since been changed; and if technical education be given to the people, it will open a new field for employment and will at the same time enrich the resources of the country. I think technical education should receive our first and foremost consideration, and it should be given a trial before any other other big scheme for ordinary education can be carried into execution, which in my opinion may offer the seditionists a new material to work upon, and poison the raw mind of the half-educated Indian students which we are doing something towards in this Council. The higher branches of technical education recommended by my Hon'ble friend have hitherto been neglected, and I quite sympathise with the suggestion that something should be done in this direction whenever convenient. But I am afraid the resolution

[23RD MARCH 1910.] [*Lieutenant Malik Umar Hyat Khan ; Mr. Madge.*]

is such as our financial position will not admit of its taking up at once. Therefore the resolution as it stands I think is extremely difficult, if not impossible, to be adopted immediately, and on such a big scale as recommended by the Hon'ble mover. But I strongly support the general idea."

The Hon'ble MR. MADGE said :—My Lord, is it absolutely impossible to reconcile the attitude taken up by the Hon'ble Member for the Home Department with the attitude taken up by the mover of the resolution ? I have no sympathy whatever with any condemnation of the Government for not having its eyes and ears open to the needs of the people. Having regard to the financial condition of the country, I am quite sure the Home Department is doing all it can possibly do for the people of the country. Is it inconceivable, however, that if daylight was let in from outside into official investigations that some facts and conditions may be brought to the knowledge of the Government ?

"I will only refer to two points in this connection to illustrate what I mean. I have heard it said, my Lord, on the one side, that the Engineering Institutions of this country do not produce the type of talent that is needed for certain appointments in this country. I have heard it said, on the other side—and there is official testimony in abundance to prove it—that in the past and even in the present these institutions have produced capacity quite equal to the conduct of duty entrusted to particular departments.

"I do not pretend at all to raise any question as to the proportion which the Government may decide ought to be observed between appointments in the Imperial and Provincial Services, but where there is a conflict between two classes of high official opinion, as represented by certain facts, possibly fuller enquiry might let daylight into the actual facts.

"I will not say much on the other point. I see all round industrial occupations for the supervision of which men have to be brought from abroad. Now from an economic point of view these importations impose a handicap upon the captains of industry in this country which might be avoided if institutions existed in this country to develop the amount of ability that is needed to control the institutions. The capacity is of various qualities and various degrees, from the high class engineer who has to look after factories to the comparatively low class overseer who has to supervise less important work ; but under all these heads men are imported in large numbers, and I would respectfully submit for the consideration of the Home Government that a very decided handicap would be removed from many industries in India if institutions existed here which could produce the kind of oversight which is absolutely needed."

[Rao Bahadur R. N. Mudholkar.] [23RD MARCH 1910.]

The Hon'ble RAO BAHADUR R. N. MUDHOLKAR said :—" My Lord, at the outset I would beg to say that in moving this resolution I was not particular as to the form in which the matter should be taken up by the Government. My main contention—and that I believe is also what is shewn by the remarks I made when moving the resolution—is that there is in India absolutely no provision for what can be called collegiate technical education. I have quoted what the Royal Commission on Technical Education has said. I have referred to what has been the experience of Germany, Japan and other countries, namely, that unless there is scientific education of the highest kind and there are Polytechnic Colleges or similar institutions where instruction of a like nature is given—I mean of course in applied sciences—no country can make any progress in any industry. My friend the Hon'ble Mr. Butler has well said in that valuable note of his that in this case you have to begin at the top. My friend the Hon'ble Mr. Gokhale has repeated that remark. It is not an experiment that has to be made for the first time in this country, but it is the experience of many nations that unless you begin at the top no noteworthy result will follow. That is the principle I emphasized and I wanted to impress on the members of Council. Whether that higher kind of education is given in one building or in three or four buildings is not pertinent to my resolution. For instance, when the United Provinces scheme was developed, they called it one entire scheme for the development of technology, but the part dealing with the physical and mechanical side was to be located at Rurkee and the other part dealing with chemical industries was to be located at Cawnpore; so whether the thing is located in one building or in different buildings is not a point of importance at all. The point of importance, my Lord, is this. Scientific education of the highest kind is urgently needed, and that is non-existent in this country. I gratefully admit what has been done by the Government, and in spite of remarks of my Hon'ble friend the self-made Advocate General for the Government of India, I say that we have been all along anxious not to put the Government in a wrong box. What I have submitted before the Council today is what has been represented by a large body composed of the Hon'ble Member's countrymen and of whose existence possibly the Hon'ble Malik Sahib is ignorant. There is an important institution called the Indian Industrial Conference, in which high officers of Government and non-official Europeans and Indians take part, and one of the resolutions which that body has passed at every session held annually has been the establishment of a polytechnic institution for India. So it was not moved as a fancy resolution nor with a view of putting Government in the wrong box, nor was it done with the object of posing as a patriot before the public.

" However, the personal aspect of the resolution is of no importance; but what was said subsequently by the Malik Sahib has made compensation for his



[23RD MARCH 1910.] [Rao Bahadur R. N. Mudholkar.]

opening remarks. The thing of importance to me is this, as the Hon'ble Mr. Orange has admitted in his report, there is no institution where collegiate technical instruction is given. The institutions to which Sir Harvey Adamson referred to, namely, the Victoria Jubilee Technical Institute of Bombay, the College of Science of Puna, etc., were in existence when the report was written. Their curriculum has not been added to since then. I think we may well take the report issued by the Director General of the Government of India as a sufficient warrant for our saying that there does not exist in India any collegiate institute for instruction in higher technology. However, it is not only on a quotation from one report that I would base my plea. I take the facts as they are. I believe Your Lordship will find that there are persons actually carrying on large industries who have come across the type of men produced by these institutions and under whom these latter work. The products of the best technical institute in India can be called only second class or third class men. The reason is not far to seek. Their technical education begins when they enter these institutions. It is the highest kind of education that is wanted and for which there is no provision. I may be permitted, my Lord, to give an instance which is rather of a personal character, but it cannot be helped. We are making certain developments in an oil-mill at Akola and we could not get a single man in this country who could carry out our ideas, and we had to get a European to do it on a thousand pounds a year. Not only that, but we could not get a qualified assistant to work under him. It is an industry which requires special knowledge, and for that there are not even second class or third class men produced in this country. My Lord, the oil industry has got a great future before it. What is the provision existing in this country as regards the chemistry applicable to that important industry? Then in regard to the sugar industry, where is the institution where instruction in chemistry applied to that industry can be given?

"My Lord, it is with reference to actual facts, it is on account of the inconveniences which those who are engaged in these industries have felt, that this resolution has been moved. As I have said, there are our present institutions and they are capable of expansion, but if we go on trying to expand each of these institutions it will mean that additional expenditure will have to be incurred for every one of those institutions. Whether it is better that we should have one scheme in which provision is made for the highest kind of advanced courses, for the courses which come after the instruction available in the present institutions have been received, and whether these courses should be laid out for every college or whether there should be one complete scheme in which co-ordination and co-working is secured, I would leave that to Government to consider. If Government are prepared to establish chairs for those higher advanced courses in every one of the provincial colleges or institutions, I am not the man to

[*Rao Bahadur R. N. Mudholkar; Sir Harvey* [23RD MARCH 1910.]  
*Adamson.*]

say 'no' to it. It is only because I felt that it was not possible to make provision in every one of these provincial institutions that I suggested one institution or one scheme in which provision could be made for all the various branches of scientific knowledge instruction in which was in demand in this country.

"My Lord, a portion of the Hon'ble the Home Member's speech showed that he appreciated the importance of the highest kind of instruction as put forward by me. If that is so, then what I would ask Your Lordship and the members of Government is whether the time has not come when we should take action in this matter, and whether there has not been enough of discussion about it. If we are to take action, would not the most suitable way of dealing with this question be by the appointment of a Committee or a Commission?

"My Lord, the Hon'ble the Home Member referred to all the various things which have been done. As I said, I do not at all deny the importance of them. But most of these things refer to matters which belong to a lower plane of industrial work. They all relate to crafts schools and ordinary industrial education on which it is unnecessary for me to say anything. I have directed my resolution towards the establishment in this country of the highest kind of technological instruction. The Institute of Science at Bangalore, even when it is in full working order, as I was careful enough to point out,—and I go upon their printed prospectus—will be only an institute of research where all manipulative processes will be kept aside. What we want is an institution where theory and practice are combined and where the highest kind of instruction in both these two are given."

The Hon'ble SIR HARVEY ADAMSON: "My Lord, many of the speeches have been merely eulogies of technical education. No one doubts its advantages, but the question is whether a polytechnic is required, not whether technical education is desirable. It has been said that there has not been much progress in technical education during the past thirty or forty years. Well, I quite admit that if we take the progress we have made, and spread it over thirty or forty years, it does not amount to much on the average. But I do say that during the last two or three years we have made great progress, and we are making great progress now, and I think that the statement of what is being done in the various provinces that I made in my first speech amply demonstrates this. The Hon'ble Mr. Gokhale has said that technical education has to be spread from the top to the bottom. He said this as justifying the proposal of starting a highly scientific college such as is proposed by the Hon'ble the mover of this Resolution. Now I am perfectly well aware that this is a phrase commonly used in speaking of technical education, but it only means in reality that we should start with really

[23RD MARCH 1910.] [Sir Harvey Adamson.]

efficient institutions, and in that sense our provincial institutions are starting from the top. The difference between those who desire to establish a great polytechnic and myself is that whereas I regard the proposals put forward by the Local Governments as projects of great utility and importance, they would start by assuming that these proposals will not meet the case. I desire to see these proposals put into execution and developed by their own authors to the highest pitch to which they can be brought; they would, on the other hand, by a hasty inquiry ascertain the course of their future development, and would then supersede Local Governments in their direction and control. Technical education in India is still but a babe in arms. We have planted down our modest institutions in the various provinces. They cannot be expected to provide a high standard of technical education at first. They must feel their way and grow in their environments. Gradually the best of them may be hoped to specialize and attain higher proficiency, each in its own direction. As it specializes it will attract students from other parts of India. As it continues to specialise its educational standard will improve, till at last we may hope to find half a dozen centres established in different parts of India each of which will be regarded as the Mecca of its own particular ology. The Hon'ble Members who support this resolution would commence with a college which would provide technical education of the highest standard for the whole of India. They would create a University before they had created the schools to feed it. Whence would they get the students to fill it? For many years to come this polytechnic would be no better than the schools established in the provinces. It would have to fill itself with mere beginners as it would be unable to obtain students who had before entering it any previous experience in technical education. Open such a college now, in the present condition of technical instruction in India, and it would be a white elephant, an empty building, costing much and yielding nothing. It is of course impossible at present to predict with certainty that these provincial institutions will develop on the lines that I have stated. If they do not themselves develop into institutions of high efficiency, they will at least create the demand and provide the material for something higher than they can give themselves. Then will be the time to seek for something more advanced and possibly to create such a polytechnic college as the Hon'ble Member contemplates. I have as strong a desire as any one to expand technical education in India. As one Hon'ble Member has said, much of the so-called Indian unrest is due to economic causes. We provide education, and when it is attained there is not sufficient career for the educated. They rush to the Bar and to Government service, and when these occupations are filled many are left behind and from them comes the discontent. Nothing could be more desirable than to secure fresh opportunities for employ-

[Sir Harvey Adamson.] [23RD MARCH 1910]

ment, and technical education would open a wide field. But like everything else that is worth having, the path is narrow and the way is long and there is no short cut to success.

"We hope at the institutions that are projected to supply the actual demand that now exists in industry for technically trained Indians; and we hope also thereby to find the way to new openings for the application of science to the industries of this country. In this we must proceed gradually and must recognise that to begin by providing highly scientific institutions which we could not hope to fully utilize, would be a waste of energy and a waste of money of which there is too little available. For these reasons, while at one with the Hon'ble Member in desiring the expansion of technical education, I regret that I must oppose the resolution."

The Council divided:—

*Ayes—17.*

The Hon'ble Pandit Madan Mohan Malaviya.  
 The Hon'ble Mr. Abdul Majid.  
 The Hon'ble Raja Partab Bahadur Singh of Partabgarh.  
 The Hon'ble Zulfikar Ali Khan.  
 The Hon'ble Maharajadhiraja Bahadur of Burdwan.  
 The Hon'ble Mr. Sachchidananda Sinha.  
 The Hon'ble Nawab Saiyid Muhammad Sahib Bahadur.  
 The Hon'ble M. R. Ry. Nyapathy Subba Rao.  
 The Hon'ble Raja Vairicherla Vairabhadra of Kurupam.  
 The Hon'ble Mr. G. K. Gokhale.  
 The Hon'ble Kanwar Sir Ranbir Singh.  
 The Hon'ble Rao Bahadur R. N. Mudholkar.  
 The Hon'ble Mr. M. B. Dadabhoy.  
 The Hon'ble Mr. G. M. Chitnavis.

*Noes—35.*

His Excellency the Commander-in-Chief.  
 The Hon'ble Mr. J. O. Miller.,  
 The Hon'ble Sir Guy Fleetwood Wilson.  
 The Hon'ble Sir Harvey Adamson.  
 The Hon'ble Major General R. I. Scallan.  
 The Hon'ble Mr. R. W. Carlyle.  
 The Hon'ble Mr. L. M. Jacob.  
 The Hon'ble Mr. B. Robertson.  
 The Hon'ble Mr. J. S. Meaton.  
 The Hon'ble Mr. J. B. Brunyate.  
 The Hon'ble Sir H. A. Stuart.  
 The Hon'ble Mr. S. H. Butler.  
 The Hon'ble Lieutenant Malik Umar Hyat Khan.  
 The Hon'ble Sirdar Partab Singh.  
 The Hon'ble Mr. M. W. Fenton.  
 The Hon'ble Mr. F. A. Slacke.  
 The Hon'ble Mr. C. H. Kesteven.  
 The Hon'ble Mr. C. G. Todhunter.  
 The Hon'ble Surgeon General C. P. Lukis.

[23RD MARCH 1910.] [Rao Bahadur R. N. Mudholkar.]

*Ayes—17.*

The Hon'ble Mr. A. K. Ghuznavi.  
 The Hon'ble Raja Pramada Nath Ray  
 of Dighapatia.  
 The Hon'ble Mr. Mahomed Ali Jinnah.

*Noes.—35.*

The Hon'ble Mr. H. W. Orange.  
 The Hon'ble Mr. J. M. Macpherson.  
 The Hon'ble Mr. J. Andrew.  
 The Hon'ble Mr. H. O. Quin.  
 The Hon'ble Mr. F. Rawson.  
 The Hon'ble Mr. W. C. Madge.  
 The Hon'ble Mr. C. W. N. Graham.  
 The Hon'ble Mr. F. A. Th. Phillips.  
 The Hon'ble Mr. F. C. Gates.  
 The Hon'ble Maung Bah Too.  
 The Hon'ble Mr. P. C. Lyon.  
 The Hon'ble Mr. C. Stewart-Wilson.  
 The Hon'ble Mr. F. E. Dempster.  
 The Hon'ble Sir T. R. Wynne.  
 The Hon'ble Mr. G. H. B. Kenrick.  
 The Hon'ble Colonel F. B. Longe.

So the resolution was rejected.

The Hon'ble RAO BAHADUR R. N. MUDHOLKAR : " My Lord, the second resolution that I wish to move before this Council is this :—

' That this Council recommends to the Governor General in Council that the necessity of sanctioning the establishment of a College of Technology at Cawnpore, as proposed by the Government of the United Provinces, and the provision of similar colleges in the other Provinces suitable to their needs, either by the development of existing institutions, if any, or by the establishment of new ones, be urged on the Secretary of State.'

" My Lord, I trust that this resolution at any rate will commend itself to the Hon'ble the Home Member and other members of Government. It is a resolution which deals, or the major part of which at any rate deals, with a matter which not very long ago was accepted by the Government of India. In regard to my first resolution the Hon'ble the Home Member said that the Government of India and the Local Governments were anxious to develop provincial colleges and provincial institutions. Now this resolution deals with provincial institutions and in the first part of it deals with a specific provincial institution in regard to which there was a unique combination, a unique unanimity between the European and Indian non-official persons and also between Government officials and between non-officials. It was after the conference held at Naini Tal that His Honour the Lieutenant-Governor submitted his

scheme for the sanction and approval of the Government of India. In that scheme it was proposed that there should be a College of Technology for the United Provinces, the mechanical and physical sections of which should be located at Rurki and the Chemical section located at Cawnpore. Originally the idea was to have the whole thing kept in one place, but it was deemed advisable to divide it. The scheme of having a Technological College at Cawnpore in which instruction of a high character was to be given in regard to certain departments was strongly supported by the Lieutenant-Governor of the United Provinces, His Honour Sir John Hewett, than whom there is no one who is in greater touch with commerce and who has got an exceptional knowledge of the needs of his province. The Government of India accepted these proposals and the scheme went up to the Secretary of State. The scheme contained various other features dealing with the minor industries. The minor industries portion of the scheme was accepted by the Secretary of State. In regard to the expansion of the Rurki College there was a blessing conferred upon it. But with regard to the important measures advocated about the chemical industries, the Secretary of State withheld his sanction and the matter was sent back and is now lying in a state of suspended animation.

"My Lord, it was with great surprise, with great pain, that industrialists in this country heard of this. I can quite understand what the feelings of those who take interest in this matter in the United Provinces must have been. My Lord, about the need of such a college nothing need be said when we find that specialists were agreed about it, that men who knew Indian life were agreed about it, that probably the most experienced administrator, in this respect was in favour of it; and yet we find the Secretary of State withholding his sanction saying that he was not quite satisfied whether there was any demand for the manufacture of alkalis and acids. My Lord, that scheme did not deal with that debatable question only. There were other matters in regard to which there could be absolutely no doubt. There was the question about the industrial sciences as applicable to the sugar industry: there was the question of the great tanning industry: there was the question of dyeing (both textiles and other things). All these things are laid aside and we are surprised to see that advantage is taken of the opening afforded by that one debatable question and the whole thing is kept in suspended animation.

"My Lord, whatever might be said by some persons who are disposed to find fault with the educated community, we must persist in pressing our views upon the Government, even at the risk of being considered as intent on placing the Government in the wrong box. In this matter, at any rate, we cannot be accused of

[23RD MARCH 1910.] [*Rao Bahadur R. N. Mudholkar.*]

doing so, because what I ask this Council to do is again to ask Your Lordship's Government to refer the matter back to the Secretary of State and to point out to him the very strong feeling which is entertained in regard to this matter. The Hon'ble Mr. Butler in his note has mentioned that when he went to collect funds for a medical college, people asked him 'why not start a technical institution.' His Honour the Lieutenant-Governor also makes the same observation. Wherever you go you find that the educated classes, who at one time were considered to be intent on having nothing but a purely literary education, are now most anxious for developing the industries of the country and for bringing about the establishment of technical education suitable for that purpose. These are not mere lip protests, as persons who know us can state that we work heart and soul for it: we also make heavy pecuniary sacrifices for that purpose. And therefore it is a matter of very great pain to us that when a provincial committee draws up a scheme which affords facilities for higher technical knowledge and proposes an institution which is suited for the establishment of the industries advocated in that scheme, the Secretary of State, or rather his advisers, point out that there are faults in the scheme and therefore refer the matter back again to the Government of India. My Lord, is there ever a beginning to be made? Are we to make any start whatsoever in giving real technical education to the people or are they to be fed upon hope? I beg Your Lordship's pardon for saying so, because if anything could have strengthened our position it was this, that men with local experience, officers who had grown almost grey in the province, the head of the Local Government, all supported it, the Government of India supported it, and yet people living away at a distance of six thousand miles found fault with this scheme. Is it possible to produce a perfect system and is this question of technical education to be kept pending till a faultless, a flawless scheme is produced?

"My Lord, you will pardon me if I speak strongly on the matter, because I feel strongly on it. My Lord, it is true that economic causes are to no slight extent at the bottom of the present unrest. If this unrest is to be put down let no cause whatsoever be given for saying that even in matters on which the Government and the people are agreed it is not possible to obtain real execution of any scheme. This is what has taken place in regard to the United Provinces scheme: this is also what can be said in regard to the other provinces. And my first suggestion to the Council is unanimously to pass a resolution pressing upon the Secretary of State that the provision for higher technical instruction asked for in this scheme framed by the Lieutenant-Governor of the United Provinces is absolutely needed. And we have to go further. There are other provinces in which provincial institutions have yet to come into existence. Let provincial institutions be established in those provinces.

[*Rao Bahadur R. N. Mudholkar ; Sir Harvey Adamson.*] [23RD MARCH 1910.]

" My Lord, those who have seen the Western Presidency, those who have seen the Central Provinces, those who have seen Madras, know what a stronghold industrialism has obtained over the middle classes, and even the higher classes there. There is a general fervour, and it is, I venture to say, the duty of Government to take advantage of this fervour and to satisfy this fervour. My Lord, I do not wish to say anything further, only this, that in those provinces where there are institutions, but those institutions do not come up to a certain standard, they should be brought up to that standard. What I ask for is exactly what the Government of India laid down in 1888, namely, that in each province there should be an institution which should be an embodiment of the highest instruction in those branches of arts and industries which it undertakes. Such kinds of institutions are required according to the needs of each province and such institutions I pray that the Government of India will see their way to establish in every province."

The Hon'ble SIR HARVEY ADAMSON: " My Lord, the resolution recommends that the Government of India should urge upon the Secretary of State the necessity of sanctioning the establishment of a College of Technology at Cawnpore and the provision of similar colleges in other provinces. The second of these propositions implies that institutions similar to that proposed for Cawnpore are required for other provinces. As I have explained in speaking upon the first resolution moved by the Hon'ble Member today, the other provinces have all considered their needs and made proposals which they regard as likely to meet those needs, and I do not think that this Council would be well advised to disregard the protracted labours of the Local Governments and their advisers in searching out what was best for them and to prescribe an institution upon the Cawnpore model for each. If, however, the resolution is intended not to prescribe a uniform model for all provinces, but merely to recommend the Government of India to press upon the Secretary of State such developments of technical education as are best fitted to the circumstances of each province, then this is exactly the course which we have pursued, and I have already in speaking on the first resolution explained the leading features of the proposals which have been made for each province.

" I leave, therefore, that part of the resolution and turn to the other part which asks the Government of India to urge upon the Secretary of State the necessity of sanctioning the establishment of the proposed College at Cawnpore. The papers relating to this proposal have been made public and I have already stated how the matter stands; but I will now do so a little more fully. In August 1907 a strong Committee met at Naini Tal and drew up a series of resolutions.



[23RD MARCH 1910.] [Sir Harvey Adamson.]

for a scheme of technical and industrial education in the United Provinces, and a week later the Lieutenant-Governor submitted his scheme to the Government of India. The Institute of Chemical Technology at Cawnpore formed a part of the scheme. The Lieutenant-Governor was advised that there could be no real industrial progress unless technological chemists got to work locally on the problems of the local industries. The four branches of applied chemistry requiring special research and treatment were found to be—

- (1) sugar,
- (2) leather,
- (3) acid and alkaline manufacture,
- (4) dyeing, bleaching, printing, colouring and finishing of manufactured goods, and paper-making.

It was for research, experiment and instruction in the scientific problems underlying these subjects that the Institute of Technology at Cawnpore was proposed; the head of the institute, who was also to be Director of Industrial Inquiries and Education, was to deal with applied chemistry and acids and alkalis, and first rate chemists were to be obtained who had specialised in sugar, leather, and the group of processes which include bleaching and dyeing. There was also to be a Chemical Engineering Department. There were to be four laboratories each to be built for half a lakh and to be equipped at a cost of another half lakh. Lecture rooms, museum, library, workshops, residences for professors, hostel for students, and the cost of the site and the necessary plant was to bring the total initial cost of the building up to eight lakhs of rupees. The personnel was to consist of the Director, the three chemists, the chemical engineer, four assistant chemists, and these, with their establishments, were estimated to cost Rs. 1,15,000 per annum. The remainder of the maintenance expenses including studentships and scholarships were to bring the total amount of the cost of the Institute up to Rs. 2,61,400. Students were not expected to be numerous and it was proposed that the ordinary, though not the indispensable, qualification for entrance should be the B. Sc. degree of the Allahabad University; and it was recommended that 15 scholarships of Rs. 50 a month tenable for three years, and 6 studentships of Rs. 100 a month, also tenable for three years, should be offered annually, and the Lieutenant-Governor offered to reserve ten places in the Institute for the inhabitants of other provinces as he was advised that there would be a desire in all parts of India to go to study at an Institute such as was proposed in Cawnpore. When this scheme came to the Government of India it was evident that owing to the failure of the rains the financial position of the province would prevent the possibility of proceeding with it immediately. In December 1908 the Government of India recommended it to the

[*Sir Harvey Adamson; the President.*] [23RD MARCH 1910.]

Secretary of State and asked for his general approval in order that the whole scheme, of which this Institute of Technology formed a part, might be introduced gradually when the financial position in the province would permit. The Secretary of State on the 30th July 1909 signified his general approval in respect of the remainder of the scheme; but made the remarks which I have already quoted upon the proposed Technological College at Cawnpore, in which he deprecated any avoidable duplication of scientific work in India and requested that the scheme might be examined in connection with what was proposed at the Institute of Science at Bangalore and elsewhere. He also suggested that it might be possible in the interval, while these deliberations were proceeding, to provide technological training by adding certain chairs to the Agricultural College at Cawnpore. The decision of the Secretary of State was communicated to the Lieutenant-Governor, who has without loss of time availed himself of the general sanction to the remainder of the scheme and submitted proposals for such parts as he is now able to carry out to the extent which I have already mentioned. The Government of India have not at present learnt the views of the Lieutenant-Governor upon the criticisms and suggestions made by the Secretary of State with respect to the Cawnpore College of Technology. The College of Agriculture at Cawnpore, in which the Secretary of State suggested that a provisional beginning might be made, has not yet been completed but is in process of erection. The Institute of Science at Bangalore is in an earlier stage still, and it is not possible yet to speak authoritatively as to the precise scope of the scientific work which will be there carried out, out applied chemistry will form an important part of the work of that institute. This being so, the Government of India are not, as at present advised, prepared to press the Secretary of State for immediate sanction nor to ask him to withdraw his request for further consideration of the points which he has indicated. It appears to the Government of India that the proper course will be for them to set in motion the necessary enquiries by which these points may be fully discussed.

"The account which I have here given of the present position of the project for the College of Technology at Cawnpore will, I hope, be sufficient to show the Council and also the Hon'ble Member who has moved the resolution, that it would not be advisable to proceed in the manner proposed by the resolution, and I am obliged to recommend the Council not to pass it."

His Excellency THE PRESIDENT: "Gentlemen, I think the resolution has been sufficiently discussed. Some of the chief points in it are much interlarded with those in the first resolution, and it appears to me that Sir Harvey

[23RD MARCH 1910.] [*The President; Mr. Mudholkar.*]

Adamson has answered them very clearly. The second resolution also involves provincial considerations and provincial opinions, of which we are not yet in full possession, and I think the Hon'ble Sir Harvey Adamson has given an equally satisfactory reply to the second resolution as to the first. I therefore do not think it advisable that the matter should be further discussed at present, and I propose to put the resolution."

The Hon'ble MR. MUDHOLKAR :—" In view of what the Hon'ble Sir Harvey Adamson has said, and because the matter is under consideration, I shall not press the resolution."

His Excellency THE PRESIDENT :—" The resolution is withdrawn."

### BUDGET.

His Excellency THE PRESIDENT :—" It may be convenient for Hon'ble Members to let them know that, in respect of the general discussion of the Budget which commences on the 29th, I propose to limit the time allowed to speakers to twenty minutes. I think Hon'ble Members will fully agree with me that very ample time has been allowed already for a discussion of the details of the Budget and that there is no necessity for very lengthy speeches. Of course the limitation will only apply to members generally and not to the Hon'ble the Finance Member or to what I may call members in charge, that is to say, Hon'ble Members who are replying to departmental points which may be raised. I am anxious to let Hon'ble Members know my decision, because I think it is very likely that it may save them trouble in composing lengthy speeches which there may not be time at their disposal to deliver."

The Council adjourned to Tuesday, the 29th March 1910.

J. M. MACPHERSON,  
*Secretary to the Government of India,*  
*Legislative Department.*

CALCUTTA;  
*The 6th April, 1910.*