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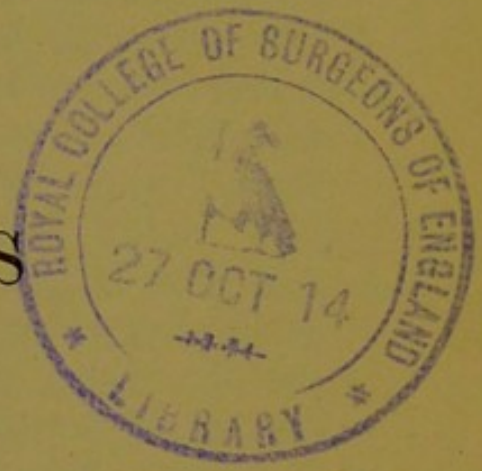

ADDRESS

DELIVERED AT

THE ANNUAL MEETING OF MEMBERS,

10th JANUARY, 1876,

BY

J. THACKRAY BUNCE, Esq.

SENIOR VICE-PRESIDENT.

BIRMINGHAM:
THE "JOURNAL" PRINTING OFFICES, NEW STREET.

1876.

ADDRESS.

The Annual Meeting of the members of the Birmingham and Midland Institute was held on the 10th of January, in the Lecture Theatre of the Institute. Mr. J. Thackray Bunce (the senior Vice-President) presided; and there were also present, Mr. A. J. Elkington (vice-president), Mr. Arthur Ryland, Alderman Avery (treasurer), Mr. J. H. Chamberlain (hon. secretary), the Rev. A. R. Vardy, Councillor Kenrick, Councillor Barker, Messrs. Follett Osler, F.R.S., Lawley Parker, G. S. Mathews, J. B. Gausby, T. Kekewich, J. H. Stone, J. Taylor, J. Pratt, A. E. Everitt, J. Bragg, F. H. Henshaw, T. Martineau, J. Dabbs, S. H. Baker, J. Brooks, R. Hipkiss, W. H. Cox, F. Hathaway, J. Udall, G. E. Reading, W. Buncher, C. Taafe, C. J. Woodward, F. Schnadhorst, G. Basnett, F. Giles, M. Myers, W. Glydon, Dr. Hinds, and others.

The annual report was taken as read. A report from the auditors was presented, in which they expressed their great satisfaction with the accurate manner in which the financial accounts of the Institute were kept by the secretary, Mr. E. Smith.

The SENIOR VICE-PRESIDENT, in moving the adoption of the report, said: It is twenty-three years ago, this very day, since the Birmingham and Midland Institute took formal shape; and it has occurred to me that it would be neither unprofitable nor uninteresting to go back to our beginning, to see what was then proposed to be done, and to compare it with what has been accomplished. Few persons—even amongst those best acquainted with the Institute—would be able, without the help of such an enquiry, to realise the progress that has been made. In one respect, however, there are few materials upon which a comparison could be founded. We are now accustomed to a full and healthy tide of educational life in Birmingham. Wherever we look there are classes in connection with our elementary schools in which science and art are taught; and there are, both in our Institute and outside it, classes designed to enable those who have left school still to carry on their education, so as to reach—if inclination, capacity, and oppor-

tunity permit—the highest scientific instruction attainable in the kingdom—for there is now a clear and unbroken road from the humblest schools to the Whitworth scholarships: the direct means by which the artisan student may enter into the great world of science, and compete for the honours it has to bestow. This road is open to all. Those who choose to pursue it may find abundant help at every stage: to achieve success they need only natural aptitude, steady application, high courage, resolute will, and that desire to acquire and to apply knowledge for its own sake, which is alike the noblest and the purest form of ambition. Twenty-three years ago the road was unmade, the opportunities were wanting, the means had no existence. Birmingham was then a great town so far as industrial population and material wealth were concerned; it possessed sufficient means of education for the children of the middle class; but for the development of higher intellectual life there was very scanty provision; while for the special instruction of artisans interested in the staple trades of the town, there was no provision whatever. At a period long preceding that of which I speak, the town had enjoyed a brilliant reputation. We are reminded of the glories of that day by the twin statues of Priestley and of Watt, now erected in close proximity to this building; and with these names we inseparably associate those of Boulton, of Withering, of Darwin, of Galton, of Keir, and of Murdock, and the rest of the noble company who assembled at the meetings of the Lunar Society, or who gathered under the hospitable roof of Mr. Galton at Great Barr, or who were connected with the famous factory at Soho. But these men and their day had passed, leaving few traces upon the institutions of the town. Priestley, indeed, had bequeathed to us the noble library in Union Street, which he helped to found; and from the labours of some of the others had proceeded the Philosophical Institution in Cannon Street. But the first of these had but a sluggish existence, as the exclusive property of a few shareholders of the middle class; and the second, ill-adapted to the wants of a growing population, had fallen into a state of decay which was the precursor of approaching death. Those of you

who remember it will recall the sense of melancholy inspired by its museum empty of visitors, its laboratory with but an occasional tenant, its reading room in which a young man was very seldom to be found. The period generally seemed, indeed, to be one of intellectual decadence, so far as this could be gauged by the vigour or the success of public effort. The endeavours made to provide for the instruction of the artisan class had failed. The Mechanics Institution, which did most admirable work for a time, was dead. The Polytechnic Institution, which succeeded it, conducted only a small number of literary classes, and was dying for want of support. The general outlook was very sombre, and the prospect most discouraging. The worst feature of all was that the artisans themselves felt little desire for instruction, for the reason that they were unprepared to take advantage of it. In the earliest records in the Institute Minute Book there is one entry that, even at this distance of time, it is most painful to read. It is a communication from a Society of Artisans—the relic, I believe, of the Mechanics' Institute—who were trying to improve themselves in science and literature. They were asked for an opinion as to the use which their class would be likely to make of a scientific institution, and their answer was that it would probably be of little value, because the artisans generally were deficient in even the elementary instruction which would enable them to appreciate and to employ the means of higher culture. This was the time chosen for the foundation of the Midland Institute. On the suggestion of our friend and colleague Mr. Arthur Ryland—who is entitled to be regarded as the founder of the Institute—a private meeting was held in the committee room of the Town Hall, on the 10th of June, 1852, to consider the proposal, and a small committee was appointed to prepare a scheme. The report of this committee was presented at a meeting held in the Philosophical Institution, on the 10th of January, 1853; and I will now read the original plan of the Institute, as it stands recorded in our first Minute Book:—

"We consider it (so ran the report) desirable to combine a general Scientific and Literary Association with an Industrial

Institute. In the first branch we recommend that general scientific and literary information should be supplied by lectures and museums, as a means of promoting science, and in particular those sciences, with their practical applications, which are connected with the manufactures of the town and district. With respect to the Fine Arts, we beg to call attention to the importance of establishing a public gallery of paintings and sculpture; and although we are aware that to effect this will require an expenditure beyond our means at present, we recommend that an appropriate room be provided where works of art presented to the town may be placed, and thus we should lay the foundation of an important and valnable collection.

"In the second branch we recommend that scientific and industrial instruction be provided for the operative classes, in such departments of knowledge as are not accessible to them by any other means.

"The Institution should contain the following departments:

"Lectures in the different branches of science, literature, and the arts, to be regularly delivered at stated times. These lectures to be open to all the members of both branches of the Institution.

"Classes for instruction in mathematics and natural philosophy, including under the second head mechanics, astronomy, optics, chemistry, electricity, meteorology, mineralogy, geology, and physical geography, and their practical applications.

"A laboratory in connection with the chemical class.

"A museum, to be divided into three departments—the first department to be principally devoted to geology and mineralogy, their economic applications, and such parts of natural history as illustrate these sciences. This department also to include those animal and vegetable productions which are used as raw materials in manufactures. The second department to be devoted to manufactures. It is proposed to illustrate the progress of manufactures, particularly those of the district, by specimens of articles in their different stages of make, and specimens of finished articles of different dates

and countries. The third department to include models and specimens of machinery, tools, furnaces, &c., and all such instrumental means as are used for the production of manufactures.

"Mining Records: A record of the mining operations of the district, with plans and geological sections, in connection with the national mining records of the Government School of Mines.

"Libraries: First, a scientific reference library and reading room, for the use of the members of the General Branch; second, a general lending library.

"Two news rooms: one for the general, and the other for the industrial branch.

"A meeting room to be provided, in which the members of the General Branch may meet periodically for the reading of papers, and discussion of subjects of scientific interest.

"A hall of Fine Arts, to form a convenient repository for the reception of donations of paintings and sculpture."

We have in this sketch the plan of the Institute as it was designed by its founders; and comparing it with what has been done, you will see that in all its essential features the original design has been realised—though not entirely by means of the Institute itself. It is not my purpose to record the history of the Institute—that is a much larger work than can be attempted in the compass of this address—but I may say, briefly, that the plan as above stated was adopted; that a large committee was appointed to raise the necessary funds; that the Institute was incorporated by Act of Parliament; that the Corporation, with wise liberality, gave a site for the buildings; that the late Prince Consort visited the town in 1855, to lay the foundation stone; that the new building was opened in 1858, and that from this period the educational work of the Institute has exhibited a steady and of late years rapid and most encouraging progress. I have already said that the original design has been substantially carried out. As was originally intended, the Institute is divided into two departments—general and industrial. In the former we have regular courses of lectures by men of eminence in literature, science,

and art; and we have a reading room and news room. We have also a museum, by transfer from the old Philosophical Institution, but one, I regret to say, which is most inadequate to the requirements of the town. It contains a collection of specimens in geology and mineralogy, and in some departments of natural history, but the industrial character which it was intended to bear has not been impressed upon it; for it contains neither models of machinery and tools, nor mining records; nor does it include examples of raw products or of finished manufacture. I confess that to me this is a personal cause of regret, for my very first essay in published composition —written, I am sorry to say, over thirty years ago—was a series of letters urging the establishment of an industrial museum of arts and manufactures in Birmingham. Such a museum still remains to be formed, though the Corporation, in its Art Gallery, has made some endeavour to provide it, and may ultimately, I hope, in the new gallery which is about to be commenced, be able to find sufficient space for a fair collection of industrial examples. Another contemplated branch of the Institute work has been most thoroughly performed by the Corporation—by the establishment of public libraries, accessible to all classes of the population, and suited to the requirements of all, from those who read merely for amusement, to those who, as earnest students, desire to make themselves masters of special departments of literature. These libraries, indeed, in their amplitude, their completeness, their freedom, and the wise selection of their contents, are worthy of being counted amongst the chief glories of Birmingham—for no town has better—and although they were founded and are maintained by public rates, the Institute may claim a direct share in their foundation, for the great central libraries are built upon land which the Institute Council gave back to the Corporation for that purpose. There is yet another feature in the original plan of the Institute which has been fulfilled by the Corporation—the provision of a public gallery for the free exhibition of works of art. Even here we have also our share in the work—for many of the pictures contained in the gallery were given or bequeathed to the Institute, and are lent by it

to the town. One branch of the general department, as embraced in the original plan, remains to be noticed—the holding of meetings for the reading of papers on scientific and general subjects. For a time this was carried out, but it fell through; but of late years it has been practically revived by the establishment of the Archæological Section and the foundation of the Institute Scientific Society, both of which are doing good and honourable work; while the Natural History and Microscopical Society may also be claimed as having originated with the Institute. Thus, then, the project of the general department has been substantially realised—we have lectures, museum, libraries, news room, art gallery, and meetings for the reading and discussion of papers. To these—thanks to the bold policy and untiring labours of our honorary secretary, Mr. John Henry Chamberlain, who may well be regarded as our second founder—we have added the most popular feature of the Institution, the annual conversazioni for members and students, upon which a distinctly scientific and educational character is always impressed, and which, in conjunction with the higher class of lectures (due to the same initiative) have trebled the number of our members, and have greatly increased our funds. I will not weary you with figures, but to show the progress of the general department, I may venture upon the comparison of two or three years. The first member—the very first—was entered in 1854, in the person of our late esteemed colleague M. Achille Albites, now commemorated by a scholarship founded by his old pupils and friends. In the next year, 1855, we had 195 members and an income of £310. In 1864—after ten years' work—we had only 660 members, and an income of less than £1,000. a year. In 1869, three years after the establishment of the conversazione and the improvement in the lectures to which I have already referred, we had 1,077 members—that is, guinea subscribers—278 lecture ticket holders, and an income of £1,720.; and this year, thanks to a steady perseverance in the same spirited policy, we have 1,688 members, 593 lecture ticket holders, and an income in the general department of £2,810., including the balance brought over from last year. We have also the

highest number of students we have ever had. In 1855 there were only 85 students in the classes; in 1875 there are 2,447. In 1855 our total income from all sources, subscriptions and class fees, was £310.; in 1875, our total income was £4,034., of which nearly £1,000. was contributed by the general department towards the expenses of the industrial department. It is this industrial department which constitutes our great glory—for it is our teaching department; and it is here that the plans of the founders of the Institute have been not only fulfilled, but exceeded to a degree beyond their conception, and crowned with a measure of success above even their hopes. In the scheme adopted twenty-three years ago, science classes, with a directly practical application, were alone contemplated. The work of teaching began on a very modest scale. In 1855 there were only three classes—in physics, chemistry, and physiology—and these, as we have seen, included no more than 85 students. In 1856 there were eleven classes: that in physiology was discontinued, but there were added others in arithmetic, algebra, geometry, Latin, French, English history, English literature, language and thought, and logic; and these eleven included 421 students. Twenty-one years later, in our programme for 1876 our classes mount up to sixty-six—just six times the eleven which existed in 1856; and our students are nearly six times as numerous as they were then. I do not know the exact number of teachers employed 1856, but there were probably not more than five, whereas we now have thirty-six teachers in the Institute and in the branch classes conducted in connection with it. By the aid of these teachers we make provision for all who care to avail themselves of the means of culture. The classes may be grouped in four divisions. In the first division, at higher fees for the term, we have seven morning classes for ladies, in Latin, French, German, English literature, and physiology. In the second division, the fees also payable by the term, we have nineteen classes—two in practical chemistry, two each in Greek, Latin, French, and German; and one each in applied mechanics, practical geometry, algebra, geometry and trigonometry and mensuration, writing, Italian, Spanish, English grammar and composition, English

language and literature, and English history. In the third division, we have a great series of classes in which the charge is only one penny a lesson, the purpose being to place the institution within the reach of the humblest of our great population. This division includes instruction in animal physiology, physical geography, geology, inorganic chemistry (both elementary and advanced), acoustics, light and heat, magnetism and electricity, elementary and advanced arithmetic, elementary singing, and last in order, though by no means last in rank, the laws of health. This particular class we owe to the munificence of an anonymous donor, who placed at the disposal of the Council a sum of £2,500., in order to enable them to engage the services of a highly-qualified lecturer, and to give prizes and scholarships of solid value, the latter being especially designed for school teachers who engage to give to their own pupils lessons in the science which they have learned in the Institute class. This action of the founder was stimulated by the eloquent appeal made by Canon Kingsley, when, as our President, he enforced the importance of sanitary teaching, in the brilliant address he delivered at the opening of the session of 1874. So highly did he think of the result of this appeal, that Mrs. Kingsley, writing lately to Mr. Ryland, of her husband, says that the foundation of this endowment was "one of the happiest episodes in his hard-worked, and often sad and anxious life." *

* The letter of Mrs. Kingsley, which is of peculiar interest under the circumstances, is as follows : "Byfleet, Weybridge, Surrey, December 17, 1875. My dear sir,—In looking over my dear husband's correspondence, I find yours dated October 19th, 1872, about the noble offer of £2,500 for the establishment of the Health Lectures. Have you by any chance preserved Mr. Kingsley's answer, and could you lend it to me to copy, and give me any facts about the plan and its carrying out? I am collecting his letters, and have been urged (in the intervals of attacks of dangerous illness) to connect the letters by a slight memoir, and as that lecture at Birmingham and its dear results were one of the happiest episodes in his hard-worked, and often sad and anxious life, I wish especially to mention it. It is one of the circumstances of our life to which I look back with utter satisfaction and comfort. It would have been worth while to *live* and to die for him to have done that *one stroke* of work, to which your friend so nobly responded. Please help me to do the subject justice, and believe me, most truly yours, FANNY E. KINGSLEY.—Arthur Ryland, Esq."

There is yet the fourth division of our classes, which, in some respects, is the most important of all. Besides the work actually done within the walls of the Institute, we have established classes in five of the Board schools in Birmingham, and in one at Harborne, where we teach various branches of science and elementary singing; and we have also, at Messrs. Tangye's works, a class for machine construction and mechanical drawing. These classes we hope by degrees to extend to all the Board schools—thus linking together the elementary and the higher culture, and preparing a large and increasing body of students from whom we may draw supplies for the Institute itself, and many of whom may ultimately pass into the lecture rooms of that noble foundation, Sir Josiah Mason's Scientific College, the future home of which is now being erected in close neighbourhood to our own building. It is not enough, however, to offer the means of culture; we have also to encourage the students, and to test the quality of their work. The former of these purposes is achieved by giving certificates and prizes by the Council of the Institute, by the offer of special prizes for excellence in particular subjects, and by entering students in competition for the certificates and prizes of the Society of Arts and the Government Department of Science and Art, and for the Whitworth scholarships. These rewards are of substantial value. Take those offered in the Institute itself. In the Laws of Health class we have two prizes of £10. each, and two teachers' exhibitions of £20. each, tenable for two years. For students in mechanics and chemistry alternately we have the Evans prize of £20.; in physics and geology alternately we have the Avery prize of £10 10s.; with two prizes of £5. 5s. each for the branch classes; in mathematics we have the Short prize of £10. 10s.; in French, the Albites prizes of £10. 10s. and £5. 5s. respectively. We have also the Smith Memorial scholarships tenable at the Institute; the Stone prize of £5. 5s. in geology; the two prizes of the Central Literary Association of £5. 5s. each for English literature and English history; and a prize of £6. 6s., given by a former student, for proficiency in chemistry and metallurgy. I have the pleasure of announcing

that to these soon will be added a Priestley scholarship of considerable value, to be given by the Priestley Memorial Committee. These are distinctions and emoluments peculiar to the Institute. Beyond them lies another important series of scholarships and prizes attainable by Institute candidates, in connection with the Government Department of Science and Art, and the Whitworth scholarships, by means of which competent students may carry their scientific education to the highest point. We have the satisfaction of knowing that our students do succeed in obtaining these and other external distinctions. We number amongst them Whitworth scholars; exhibitioners at King's College, London; at the Royal School of Mines; at the Royal College of Science, in Dublin; at Trinity College, Cambridge. We qualify students for the examinations of the University of London; we regularly send others to the chemical laboratory at South Kensington, and we train teachers for science classes in the Institute itself. Thirteen of our present teachers were Institute students, amongst them being Mr. Woodward, our most valued colleague, who, under the modest name of a science teacher, does the work of a staff of professors, and who, as the result of Institute training, distinguished himself by being one of the first to take the high degree of B.Sc. at the University of London. We have also supplied many science teachers for similar classes in Birmingham and in other towns; and we send a continuous stream of students into the manufactories as analysts, chemists, and in various other capacities, for which their scientific training within our walls especially qualifies them. These general indications of results will serve to show the quality of the work done in the Institute classes. But there is another and more direct proof the mention of which should not be omitted. The students are closely tested by examination, both by our own examiners and by those of independent bodies; and we honestly tell the public not only when they succeed but also when and in what proportion, and in what subjects, they fail. That they do succeed, and in an increasing degree, is evident from a return now lying before me. The year 1861 was the first year in which the examinations now

in force were all available. In that year 122 students obtained prizes or certificates, and of these 33 were given after examination by the Government Department of Science and Art and the Society of Arts. In 1869 the total number of prizes and certificates was 342, of which 112 were given by the Government Department and the Society of Arts. In 1875 the total number had risen to 488, and of these 266 were derived from the Department of Science and Art and the Society of Arts. No better proof could be adduced of the quality alike of our students and of their work. I have now endeavoured—I hope not entirely without success—to put before you the condition of the town as regards scientific teaching at the time when the Institute was founded, the aims of the Institute itself, and the measure in which these have been realised. But only those who are directly engaged in the work of the Institute, and have long been intimate with it, can justly estimate the value and the results of our teaching, or the influence which it has exercised upon the intellectual and material progress of Birmingham. Between the two periods—this present 10th of January, and the same date twenty-three years ago—there is no possible comparison. Then there were no lectures, or classes, or examinations; no centre of literary and scientific culture; no means by which the younger members of the middle or artisan class could carry to a higher point the instruction received at school. We have now more than two thousand persons, mainly of the middle class, who participate in the advantages of the general department of the Institute; we have nearly two thousand five hundred students in our classes, and there are about a thousand more in science classes in various parts of the town; and under the direction of the Corporation we have a perfect system of free libraries, a free exhibition of works of art permanently open, and the nucleus of an industrial collection. Directly or indirectly, all this is due to the formation, the development, and the influence of the Birmingham and Midland Institute—for it is the Institute which has created and guided the desire for this wider popular culture; it is the Institute which has provided the means; it is the Institute which has levelled all distinctions

of class, and by continuous effort and wise policy has knit together in an unbroken bond the elementary instruction of our schools and the highest scientific and literary culture; and, finally, it is the men who have been intimately associated with the Institute, who encouraged by their successes within these walls, have also been foremost in all other efforts for the diffusion of knowledge, and the creation of those corporate and sectional institutions which ensure to Birmingham the material advantages of widely-spread means of education, and confer upon it an honourable rank amongst the national centres of vigorous and well-directed intellectual life. When the history of the town comes to be adequately written, the labours of the Institute and the effect it has produced, will form an important chapter in the record. But though so much has been done, much more remains to be accomplished. We have yet to reorganise our building, so as to fit it for the increased and increasing demands of the members and students. The report for 1875 shows that in these respects the Institute now stands higher than in any previous year of its existence, and this unprecedented success could be readily pushed further if we had more space, a more commodious theatre, better and more numerous class rooms, and other appliances which are necessary to the prosperity of such an institution. In fact, as you know, provision has been made for the reorganisation here indicated. The extension fund, so liberally contributed, has enabled us to buy the land, and there is a balance in hand with which to begin the building. The report tells us that a final arrangement has been made between your Council and the Corporation, as regards the division and occupation of the site occupied respectively by the Institute and the Free Libraries, and that, consequently, there now exists no obstacle to the commencement of our new theatre early in the Spring. We may, indeed, begind the work of extension, but we have not money enough to finish it. Another effort will, therefore, have to be made to augment the building fund. The Council feel that they have a right to look to the active co-operation of the members in this matter. They feel, too, that they have a right to ask for contributions from all who value the

provision of literary and scientific teaching for all classes of the community, at rates of charge so moderate as to place those advantages within the reach of the poorest. To put it on the lowest ground, there is no branch of staple manufactures in Birmingham which has not benefited largely and directly by the teaching in the Institute classes; and those who have gained in material wealth may fairly be asked to give something of their gains in return for the assistance they have received. To put it upon a higher ground, the Institute has, in an incalculable degree, quickened and deepened the current of intellectual life in the town; and those who can estimate the value of brighter intelligence, purer taste, a keener thirst for knowledge, and the development of a capacity to enjoy and apply it, may justly feel it their duty to recognise, by substantial help, the labours of the institution which has mainly brought about these great results. It is in the hope of evoking this sense of duty, and of stimulating liberality, that I have recalled the promise of the Institute and its fulfilment—that I have shown what was proposed twenty-three years ago by those who, to meet a great necessity, shaped the Institute plan, and what has been done by themselves and their successors to give effect to the original design, and to add to it new features called for by the advancing requirements of the town. And now, with congratulation on the past, and hope for the future, with an apology for having detained you so long, and with thanks for the patience with which you have heard me, I bring these remarks to a conclusion by moving the adoption and approval of the report of the Council. (Applause.)

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