

MINUTES OF PROCEEDINGS.

20TH DECEMBER, 1888.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected :—

MEMBERS :

R. L. MESTAYER

G. A. HARRIS.

ELECTION OF LIBRARIAN AND SECRETARY.—The President announced that the Council had elected Mr. L. Hargrave to act as Librarian, and Mr. W. E. H. Nicholle as Secretary for the ensuing year.

PRESIDENT'S ADDRESS.—The President then delivered his Inaugural Address, which dealt with many matters of great importance to the colony. At its close Mr. Shellshear proposed a vote of thanks to the President, which was heartily accorded by the meeting.

DISCUSSION ON MR. J. B. HENSON'S PAPER ON "THE WESTERN SUBURBS SEWERAGE SCHEME."—The President called on Mr. Fischer, the mover of the adjournment, to open the discussion. Mr. Fischer stated that he agreed with the principal part of the statements contained in the Paper, and that his object in moving the adjournment of the Meeting was to give Mr. Stayton an opportunity of being present.

A letter was read from Mr. Stayton, stating his inability to be present on account of other engagements.

The discussion was then proceeded with by Messrs. G. Fischer, Cruickshank, Shellshear and Poole, also by Mr. C. Cowdery and Dr. Asburton-Thompson, visitors.

Mr. Henson replied to the various points raised at some length, after which the meeting terminated.

10TH JANUARY, 1889.

MR. A. D. NELSON, PRESIDENT, in the Chair.

PAPER.—Mr. W. Shellshear read a paper entitled, "The Modern Tendency of Railway Practice," which was discussed by Messrs. Norman Selfe, W. S. Wells, W. Cruickshank and the President.

PAPER.—Mr. J. B. Henson read a paper on the "Hawkesbury-Nepean Alluvial Deposits and Irrigation." At its close, the hour being late, Mr. Norman Selfe moved, seconded by Mr. W. S. Wells, "that the discussion be adjourned to the next meeting," which resolution, on being put to the meeting, was carried.

The meeting then terminated.

14TH FEBRUARY, 1889.

MR. A. D. NELSON, PRESIDENT, in the Chair.

DR. FLORANCE'S METHOD OF COATING IRON AND STEEL WITH COPPER.—A letter from Dr. Florance was read at the President's request, stating that he would be pleased to read a paper on a patent process for coating metals at some future meeting.

DISCUSSION ON MR. J. B. HENSON'S PAPER ON "THE HAWKESBURY-NEPEAN ALLUVIAL DEPOSITS AND IRRIGATION."—The President called on Mr. Norman Selfe, the mover of the adjournment, to open the discussion, followed by Mr. Auldjo. Mr. Henson having replied, the proceedings terminated.

14TH MARCH, 1889.

MR. A. D. NELSON, PRESIDENT, in the Chair.

The following candidate was balloted for and duly elected :—

MEMBER:

F. M. DRAKE.

PAPER.—"Coating Iron and Steel with Copper," by Dr. Florance.—The President announced that Dr. Florance had intended being present, but that day he, the President, had

received a telegram stating that professional duties would prevent him from attending. The President called on Mr. R. Pollock to read the paper, which was followed by a discussion, in which Messrs. Cruickshank, Shellshear, Fitzmaurice, Dickinson and Dr. Storer took part.

The proceedings then terminated.

11TH APRIL, 1889.

MR. A. D. NELSON, PRESIDENT, in the Chair.

RANKINE MEMORIAL.—The President called on the Secretary to read a letter which had been received from the Institution of Engineers and Shipbuilders of Scotland to the effect that the Society had recently adopted a motion to take the initiative in raising a memorial to the late Professor M'Quorn Rankine, and asking if this Association would support the movement. The President stated that the Council had discussed this letter, and thought it of so much importance that they had decided to bring the matter before the General Meeting for consideration. Mr. S. Briggs moved, seconded by Mr. H. G. Sands, "That the letter be left unreservedly in the hands of the Council to deal with." On the resolution being put to the meeting, it was carried unanimously.

MOTION.—Reduction of number of General Meetings constituting the Annual Session of the Association. Mr. W. D. Cruickshank, past President, moved the following resolution, "That in the opinion of this meeting it is desirable, in future, to reduce the number of General Meetings, constituting the Session of this Association from twelve (12) to nine (9), and that during the months of December, January, and February no General Monthly Meetings be held, such alteration to take effect at the end of this Session." The mover explained his reasons for moving the resolution, and felt assured it would commend itself to the members, many of whom had for some time past been advocating this step.

Mr. Shellshear seconded the resolution, as by this means more time would be available for the preparation of papers.

Mr. G. Fischer moved as an amendment, "That the number of meetings be reduced to eight (8), and that the meetings in November, December, January, and February be abolished." He stated that his reason for so doing was to give the incoming President more time to prepare his Annual Address, and also that four months were necessary for the Editor to complete and issue the Proceedings of the year in the Annual Volume.

Mr. W. S. Wells seconded the amendment, which was then put to the meeting and carried.

PRESENTATION TO THE ASSOCIATION.—The President announced that Mr. Lawrence Hargrave had presented the Association with a volume of photographs entitled "The Evolution of the Flying Machine." On the motion of Mr. Fischer, seconded by Mr. Briggs, a vote of thanks to Mr. Hargrave for his present was carried by acclamation.

PAPER.—"Sanitary Improvements."—A paper on this subject was read by Mr. E. W. Cracknell, which was discussed by Messrs. Cruickshank, Fischer, Henson, Briggs, Shellshear, and Mestayer.

The proceedings then terminated.

16TH MAY, 1889.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

PRESENTATION OF BOOKS.—The President announced that the Council had received five volumes of Mr. Goodeve's works on "Engineering Matters," which had been presented by the author, through the secretary of the Colonial Sugar Refining Co., to the Association. Also that Mr. J. H. Maiden had presented the Association with a copy of his work on "Australian Timbers."

Votes of thanks were passed to the donors for their valuable presents.

PAPER.—"Notes on some New South Wales Timbers," by Mr. J. H. Maiden.—The President introduced Mr. Maiden, a hon. member, to the meeting, who then proceeded to read his paper, which contained a large and valuable amount of information. At its close, after some remarks from the President, Mr. Henson

moved that the discussion be adjourned until the next meeting as there was another paper to be read that evening. The motion on being put to the meeting was agreed to. Professor Warren then moved, seconded by Mr. Henson, that a vote of thanks be given to Mr. Maiden for his valuable paper, which was carried by acclamation. Mr. Maiden, in acknowledging the vote of thanks, stated that he would be pleased to attend the next meeting for the discussion on his paper.

PAPER.—“Don’s Patent Smoke Consumer and Fuel Economiser,” by Mr. G. A. Key.—The President called on Mr. Key to read his paper. At its close, the hour being late, Mr. Cruickshank moved, seconded by Mr. Wilson, that the discussion be adjourned until the next meeting, as the members were to be afforded an opportunity of seeing the apparatus in operation on the following Saturday, after which they would be in a better position to discuss the matter.

The meeting then terminated.

13TH JUNE, 1889.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

The following candidate was balloted for and duly elected:—

MEMBER:

T. W. HUTCHINSON.

DISCUSSION ON MR. MAIDEN’S PAPER ON “SOME NEW SOUTH WALES TIMBERS.”—The President announced that Professor Warren, the mover of the adjournment, had kindly offered to read a paper to supplement the one read by Mr. Maiden, and he then called on Professor Warren to read his paper. At its close Mr. J. B. Henson, the seconder of the adjournment, opened the discussion, followed by Messrs. Trevor Jones, W. G. Wilson, W. S. Wells, H. Kidd, W. Cruickshank, W. Shellshear and the President.

Mr. Maiden and Professor Warren having made some brief remarks in explanation and reply to the discussion, a vote of

thanks to those gentlemen for their valuable papers was carried by acclamation.

DISCUSSION ON MR. G. A. KEY'S PAPER ON "DON'S PATENT SMOKE CONSUMER AND FUEL ECONOMISER."—The President stated that it had been intended to discuss this paper that evening, but as the hour was late he wished to have an expression of opinion as to the desirability of postponing it for a week, as he had ascertained that Mr. Key would still be in Sydney, and be able to attend the meeting.

Mr. W. D. Cruickshank then moved, seconded by Mr. Wilson, "that the discussion be adjourned for a week." The resolution on being put to the meeting was carried.

The meeting then terminated.

20TH JUNE, 1889.

SPECIAL MEETING.

MR. A. D. NELSON, PRESIDENT, in the Chair.

"MODEL OF FLYING MACHINE," by Mr. L. Hargrave.—The President called on Mr. Hargrave to explain the model, which that gentleman did, stating that it was a screw-propelled machine, with a compressed air receiver of eighteen cubic feet capacity, weighing twenty-nine ounces, and a three cylinder single acting engine, weighing seven and a half ounces, estimated to propel the machine 115 yards. After various expressions of approval of the exhibit from those present, a hearty vote of thanks was accorded Mr. Hargrave for his kindness.

DISCUSSION ON MR. G. A. KEY'S PAPER ON "DON'S PATENT SMOKE CONSUMER AND FUEL ECONOMISER."—The President, after a few well-chosen remarks, called on Mr. W. D. Cruickshank, the mover of the adjournment, to open the discussion, in which Messrs. Wilson, Briggs, R. Sands, R. Pollock, Norman Selfe, Trevor Jones, G. Fischer, W. H. German, Dr. Storer and the President also joined, all of whom spoke favourably of the apparatus. Mr. Key then briefly replied to the various

points raised in the discussion, after which Mr. Briggs moved, seconded by Mr. Hargrave, "that Mr. Key be accorded a vote of thanks for his interesting paper." The resolution was carried by acclamation. Mr. Key being about to leave Sydney for England in connection with this matter, the opportunity was taken of wishing him *bon voyage*.

The meeting then terminated.

18TH JULY, 1889.

MR. A. D. NELSON, PRESIDENT, in the Chair.

The following candidate was balloted for and duly elected :—

MEMBER:

R. SINCLAIR.

COMMUNICATIONS FROM THE COUNCIL.—The President stated that Mr. G. Fischer had resigned his position as Hon. Secretary and Editor on account of the pressure of business matters, and that the Council had appointed Mr. H. V. Ahrbecker to fill the position. Also that the Council had received and accepted the resignation of Mr. R. W. Finlayson as a member of the Council, he being unable on account of business engagements to attend the Council meetings.

The Council being unwilling to lose Mr. G. Fischer's valuable services altogether, had appointed him to fill the vacancy in the Council caused by Mr. Finlayson's resignation, which appointment he had accepted.

A letter to the President, from Mr. Brazenall, of Mittagong, intimating that on a certain date mentioned it was intended to make castings direct from the native ore, and extending a general invitation to any members interested to be present on the occasion.

PAPER.—"Flour Mill Machinery," by Mr. A. D. Nelson.—The President called on Mr. R. Pollock, Vice-President, to occupy the chair, and then proceeded to read his paper on "Flour Mill Machinery." The branch of the subject treated by the author

being older types of machines; in concluding, he promised at an early date to read another paper descriptive of the most modern appliances used for this purpose. At the close of the reading of the paper, Mr. Davis opened the discussion, followed by Messrs. W. D. Cruickshank, Trevor Jones, Dickinson, Stone and Henson. After which Mr. Nelson replied to the points raised in the discussion, and described some of the details of the machinery. On the motion of Mr. G. Fischer, seconded by Mr. Stone, a vote of thanks to Mr. Nelson for his interesting paper was carried by acclamation.

PAPERS PROMISED.—The President, on resuming the chair, announced he had been promised papers for future meetings by Dr. Storer and Mr. H. Davies; also one on "Water Gas," by a gentleman who would shortly become a member.

The meeting then terminated.

8TH AUGUST, 1889.

MR. R. POLLOCK, VICE-PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

MEMBERS:

L. B. BLACKWELL

W. A. NELSON

STUDENT:

A. A. COX.

DEATH OF MR. JOHN FYFE, FIRST PRESIDENT OF THE ENGINEERING ASSOCIATION.—The Vice-President, before entering upon the business of the meeting, said he wished to call the attention of members to the recent loss this Association had sustained by the death of Mr. John Fyfe, senr., whose mortal remains were placed beneath the sod this afternoon. He passed away at the ripe old age of eighty six years. He was the first President of this Association nearly twenty years ago, at which time he was in the front rank of his profession; latterly, owing

to increasing years and bad health, he was unable to attend our meetings, but his sympathies and kindly feelings were always with this society. He was respected and loved by all who knew him, and he, the speaker, felt assured he was in accord with the feelings of the members in offering our affectionate sympathy to his widow and the other members of his family in their bereavement, and in placing on record our high appreciation of his character and ability as a tribute to his respected memory. Messrs. W. G. Wilson and W. D. Cruickshank, in suitable terms, added their testimony in support of the Vice-President's remarks. Mr. W. Shellshear suggested that the life and professional career of the late Mr. Fyfe should be written and published in the Annual Volume of Proceedings, which course was agreed to by the meeting.

PAPER.—“On a Simple Method of Extracting Gold and Silver from Pyrites by a New Wet Process,” by Dr. John Storer.—The Vice President then called on Dr. Storer to read his paper; at its close an animated discussion took place, opened by Mr. W. Cruickshank, followed by Messrs. Henson, Wilson, Shellshear and some of the visitors. Dr. Storer, in reply to some questions asked in the course of the discussion, explained the details of the process. After which Mr. Cruickshank, seconded by Mr. Shellshear, proposed a vote of thanks to Dr. Storer for his interesting paper, which was carried by acclamation.

SPECIAL MEETING.—The Vice-President announced that a Special Meeting would be held on the following Thursday for the purpose of hearing Mr. Rock's paper on “Water Gas.”

The meeting then terminated.

15TH AUGUST, 1889.

SPECIAL MEETING.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

PAPER.—“Water Gas,” by Mr. J. W. Rock.—The President called on Mr. Rock to read his paper. At its close an animated

discussion ensued, in which the following members joined:— Messrs. Pollock, Henson, Cruickshank, Laing, Morland, Dickinson, also Dr. Morris, Mr. Politzer, and other visitors. Mr. Rock having replied to the various points raised in the discussion, Mr. Fischer moved, and Mr. Cruickshank seconded, a vote of thanks to Mr. Rock, which was unanimously carried.

The meeting then terminated.

12TH SEPTEMBER, 1889.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

APPOINTMENT OF AUDITORS.—On the motion of Mr. Ahrbecker, seconded by Mr. Fizmaurice, Messrs. Dickinson and Elder were appointed to audit the Books, Accounts, &c. of the Association, and submit a Balance Sheet at the Annual General Meeting in October.

EXCURSION TO THE PATENT ASPHALTUM COMPANY'S WORKS.—The President announced that through the courtesy of the Directors of the Patent Asphaltum Works, the Council had been enabled to arrange an excursion to their works at Greenwich, to take place on Saturday afternoon, the 14th inst., and he hoped to see a good attendance.

PAPER.—“Operations of Power Companies and Power Transmission by Compressed Air,” by Mr. Norman Selfe.—The President then called on Mr. Selfe to read his paper. The hour being late, Mr. Shellshear moved, and Mr. Fischer seconded, the adjournment of the discussion for a fortnight. This course was unanimously agreed to.

Mr. Cruickshank, in suitable terms, moved a vote of thanks to Mr. Selfe for his valuable paper, which was seconded by Mr. Henson, and carried by acclamation. Mr. Selfe having responded, the meeting adjourned.

26TH SEPTEMBER, 1889.

SPECIAL MEETING.

Mr. A. D. NELSON, PRESIDENT, in the Chair.

The President announced that he had to leave for the country that evening, and Mr. Pollock, the Vice-President, not being present he would call on Mr. Cruickshank to take the chair.

DISCUSSION ON MR. NORMAN SELFE'S PAPER "ON THE OPERATIONS OF POWER COMPANIES AND POWER TRANSMISSION BY COMPRESSED AIR."—Mr. Shellshear, the mover of the adjournment, not being present Mr. Fischer, the seconder of the motion, opened the discussion, followed by Messrs. Diamond, Fitzmaurice, and the Chairman, also by Messrs. Swinbourne and Houghton, visitors.

Mr. Selfe replied to the various criticisms made.

The Chairman then conveyed the thanks of the meeting to Mr. Selfe for his interesting paper.

The meeting then terminated.
