

1928.



THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

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Pursuant to Statute
By Command
In return to Order

PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS.

W. M.
Clerk of the Senate.

H. H. May,
1928.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE PROPOSED ERECTION OF

POSTAL WORKSHOPS

AT

SOUTH MELBOURNE, VICTORIA.

By Authority:

M. J. GREEN, GOVERNMENT PRINTER, CANBERRA.

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

(Fifth Committee.)

GEORGE HUGH MACKAY, Esq., M.P., Chairman.

Senate.

Senator John Barnes.
Senator Patrick Joseph Lynch.*
Senator Herbert James Mockford Payno.†
Senator Matthew Reid.

House of Representatives.

Malcolm Duncan Cameron, Esq., M.P.‡
Robert Cook, Esq., M.P.
The Honorable Henry Gregory, M.P.†
Andrew William Lacey, Esq., M.P.
David Charles McGrath, Esq., M.P.
Alfred Charles Seabrook, Esq., M.P.

* Resigned 30th June, 1926.

† Appointed 1st July, 1926.

‡ Resigned 2nd March, 1927.

§ Appointed 24th March, 1927.

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- 10 PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—POSTAL WORKSHOPS AT SOUTH MELBOURNE.—Mr. Hill (Minister for Works and Railways) moved, pursuant to notice, That, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-21*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report, viz. :—South Melbourne (Victoria)—Erection of Postal Workshops.
Mr. Hill having laid on the Table, plans, &c., in connexion with the proposed work—
Question—put and passed.

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ERECTION OF POSTAL WORKSHOPS. SOUTH MELBOURNE.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, to which the House of Representatives referred for investigation and report the question of the Erection of Postal Workshops at South Melbourne, Victoria, has the honour to report as follows :—

INTRODUCTORY.

1. On 16th August, 1923, the Parliamentary Standing Committee on Public Works submitted to Parliament a Report on a proposal to erect as an extension of the General Post Office, Spencer-street, Melbourne, a six-story building in which would be accommodated for some years the various sections of the postal, telegraph and telephone workshops.

2. While agreeing with the proposal, the Committee pointed out that it was apparent from investigations made that the suggestion to house workshops in the proposed building could be regarded only as a temporary expedient, as the evidence showed that within about three years of their establishment there it would be necessary to remove them to provide accommodation for the rapidly increasing business of the Parcels Section.

3. Later the Postmaster-General's Department abandoned the idea, and in March, 1926, a fresh proposal was referred to the Committee aiming at the erection of the necessary building on certain State-owned property in Power and Moore streets, South Melbourne, which the Commonwealth intended to lease from the State for an extended period.

4. Negotiations were opened up with the State Government to obtain a 30 years' lease of the area which the Commonwealth was occupying as a storage yard at a rental of £600 per annum. The State Government agreed to grant a 30 years' lease, but stipulated that for the first five years the rental should be £205 per annum, advancing to £1,009 per annum at the end of 10 years, £1,234 per annum in 15 years, £1,398 in 20 years, and £1,562 in 30 years. As the Department could not contemplate paying such a high rental for a workshop site the idea of using the area was not proceeded with, and a suggestion was made to utilize certain Commonwealth property in Sturt-street, South Melbourne, for the purpose.

5. Owing to the time occupied in negotiations with the State, and the necessity of re-drawing plans of the building to suit the new site, the Postmaster-General's Department was not in a position to lay its case before the Committee until late in November, 1927.

PRESENT PROPOSAL.

6. The proposal now under consideration aims at the erection, on certain Commonwealth land abutting on Sturt, Grant and Dodds streets, South Melbourne, of a building sufficient to accommodate the various sections of the telegraph and telephone workshops for a period of ten years.

REASONS FOR THE PROPOSAL.

7. It is represented that the present workshop accommodation is unsuitable and inadequate. The two main workshops are at present situated in widely-separated parts of the city, the telephone workshops being in Spencer-street adjoining the General Post Office and the telegraph workshops at Jolimont, over a mile away. It is claimed that this separation of the workshops is an inefficient and uneconomical arrangement; moreover the accommodation at Spencer-street is required for an extension of the General Post Office, and the site at Jolimont, which is on park lands, was made available by the State for Repatriation purposes on the distinct understanding that it would be vacated at the earliest opportunity.

DESCRIPTION OF BUILDING.

8. The building proposed is of two stories having a frontage of 221 ft. 6 in. to Grant-street and 201 feet to Dodds-street. It will be 80 feet wide and will provide a total floor space of 61,650 square feet.

9. The ground floor will be left as free as possible of obstruction; only two rows of stanchions 27 feet apart being introduced to support the upper floor. The upper floor will be spanned the full 80 feet with steel roof trusses without any obstruction whatever.

10. The walls of the ground floor will be 15 feet high and those of the upper floor 11 feet, but this floor will have an open roof rising in the centre to 31 feet. It is proposed that the foundations shall be of reinforced concrete, the skeleton of the building of rolled-steel construction and the walls of reinforced concrete six inches thick.

11. The construction of the ground floor is to be of reinforced concrete and that of the first floor of hardwood joists and flooring. The windows will be steel sashes with the glazing of rolled-plate glass reinforced with wire netting, and the roof is to be of Australian-made corrugated fibrolite sheets.

12. It is intended to make provision on the ground floor for iron working, coach building, a motor lorry and repair shop, a cycle building and repair shop, a carpenters' and joiners' shop, and a paint shop. The bulk of the space on the upper floor will be devoted to telephone and telegraph workshops with smaller rooms partitioned off for administrative staffs such as those of the engineer-in-charge and the costing clerks. In addition, there will be rooms for clock repairers, locksmiths, cord repairers, and coil winders.

13. Access to the building for the employees will be through two entrances, one at each end of the structure. They will communicate with the upper floor by means of concrete stairs. These staircases will give access to the locker rooms, 26 feet by 18 feet, on the ground and first floors as well as to two locker rooms on the mezzanine floor half-way up the staircase, and to six sets of lavatories.

An entrance and staircase for the use of the staff and the public will also be placed at the angle of Dodds and Grant streets.

ESTIMATED COST.

14. The estimated cost of the proposal as submitted to the Committee is set down at:—

Building complete with drainage, sewerage and electric light, but not including electric power	£54,000
Electric goods lift	2,500
Installation of fire-sprinkler system	3,500
Total	£60,000

and the time fixed for completion two years from the date of approval.

COMMITTEE'S INVESTIGATIONS.

15. The Committee visited Melbourne, inspected the workshops now in use, the State-owned property in Power-street, and the site suggested for the new building, and took evidence from the officials of the Postmaster-General's Department and the Department of Works and Railways concerned with the proposal.

WORK CARRIED OUT.

16. It was ascertained that the telephone workshops at Spencer-street are doing maintenance work for the telephone exchanges, including the preparation of switchboards for subscribers' services in the city and the country. In addition there are carpenters' shops in which maintenance and joinery work generally is undertaken, as well as the manufacture of various articles for departmental requirements. There is also a painters' shop in which is carried out painting and polishing work involved in the manufacture of office furniture. Engineering work is also done at Spencer-street, as well as sign-writing on letter pillars.

17. The Jolimont shop, where the work for the telegraph department is carried out, consists mainly of a machine shop which provides for the manufacture of small parts required in maintenance work, and certain work which is not undertaken in the telephone workshops. This shop also does a certain amount of manufacturing for departmental requirements in competition with outside firms.

18. It was stated in evidence that at present about 370 permanent men are employed in the workshops, and, in addition, there is always a varying number of temporary employees, which at present totals about 200.

EXISTING WORKSHOPS.

19. The existing telephone workshop at Spencer-street is a two-story bluestone building formerly used as a hide and skin store, and is totally unsuitable for a modern workshop. Complaints have been made that the rooms are uncomfortably hot in summer; that the lighting and ventilation are bad; and that when the north wind prevails, dust and cinders are blown into the building from the City Council's refuse destructor near-by to such an extent as to interfere with certain of the work and necessitate the covering up of the more delicate equipment to avoid damage.

20. The building at Jolimont is a two-story timber structure erected during war-time for the requirements of the Repatriation Department and leased by the Postmaster-General's Department at a rental of £448 per annum. It is situated on park lands made available by the City Council on a very definite understanding that as soon as the war was over it would be removed.

The accommodation provided in this building is unsuitable for workshop purposes and inadequate; while the fact that it is over a mile away from the telephone workshops is not conducive to efficiency or economy.

Under these circumstances the Committee is unanimously of opinion that steps should be taken to provide more suitable premises at the earliest convenient opportunity.

SITE.

21. Having failed to obtain a satisfactory lease of the State-owned property in Power and Moore streets, South Melbourne, originally suggested, it is now intended to utilize portion of the Commonwealth land in South Melbourne at present used by the Postmaster-General's Department for the storage of cable, and for transport and workshop activities. This land has a frontage of approximately 462 feet to Start-street, 347 feet to Grant-street, and 298 feet to Dodds-street, of which the proposed building would occupy 221 feet 6 inches to Grant-street and 201 feet to Dodds-street, by a depth of 80 feet, giving ample space for workshop activities for the next ten years. It was ascertained that by the erection of suitable extensions, space could be found for normal requirements for 25 years.

22. It was stated in evidence that the site is suitably located from the point of view of the Department and as it is near a main rail system and on a tram route is convenient of access by employees.

23. During the course of the Committee's investigations it was ascertained that portion of the suggested site was at one time swamp land, and that water is likely to be encountered at a depth of 3 or 4 feet below the surface. Inquiries made, however, elicited the information that the Department has already successfully erected a two-story brick structure on the area, and the Committee is satisfied that, provided the necessary precautions are taken in the matter of the foundations the area will prove suitable building land for a structure of the nature contemplated.

BUILDING.

24. From the investigations made, the Committee is satisfied that the building has been designed with due regard to economy and will satisfactorily fulfil the requirements of the Postmaster-General's Department.

GOODS ELEVATOR.

25. Included in the estimated cost of this building is an item of £2,500 for the provision of an electrically-driven goods elevator. It was ascertained in evidence that it is intended that this elevator should travel a distance of 12 feet, between the ground-floor platform and the first floor. It will be approximately 8 feet square with a height of 10 feet and will be capable of lifting a load of one ton.

Inquiries were made as to the best type of elevator for the work proposed and it was stated that consideration had been given to three different types, namely, (a) wholly electrical, (b) hydraulically operated from the City Council's hydraulic supply mains; and (c) hydraulically operated from a self-contained pumping plant within the building.

Evidence was given that the cost of installation of the wholly-electrical elevator would be high, the overhead machine room would interfere to some extent with the lighting of the surrounding floor and the height the lift would have to travel did not make for economical running.

The proposal for an elevator hydraulically operated from the City Council's hydraulic supply mains would necessitate an extension of the existing pipe for a distance of about a quarter of a mile; it would not be entirely satisfactory and would not be economical.

A separate installation would mean the provision of an electrically-driven pump directly connected to a hydraulic ram sunk in the floor, and is said to present features of economy in installation and running that make it desirable.

The evidence showed that types (a) and (b) would cost approximately £2,000 each and involve running and maintenance charges of about £300 per annum, while type (c) would prove equally satisfactory and could be installed for about £700, and might be expected to cost £150 per annum. Under these circumstances the Committee unanimously agreed to recommend that this type be provided.

FIRE PREVENTION.

26. Considerable thought was given by the Committee to the question of the best method of coping with a possible outbreak of fire in this building. It was ascertained that an adequate water supply is available from pillar hydrants connected with the six-inch main in the streets facing the workshops, and the nearest fire-brigade station is a little over a mile away.

In view of this and the fact that electrical apparatus is liable to damage by water the postal officials contended that the fire risk was considerable and could be met by the installation of a thermostatic fire alarm system designed to give warning to the fire brigade in case of need. On the other hand it was admitted that a fire has occurred in the existing workshops and the Works Department officials, relying on the advice of the Commonwealth fire consultant, strongly urged the installation of a sprinkler system which would not only notify the fire brigade in the event of an outbreak of fire but help to keep it in check until the arrival of the brigade.

27. In the case of the Postal Workshops at Sydenham, New South Wales, recently reported upon, the Committee in view of the type of structure proposed refrained from recommending the expense of installing anything more than extinguishers at various points in the building; but in this instance, owing to the nature of the site, the building proposed is of lighter construction and the first floor is to be of timber, consequently it is thought that greater precautions should be taken.

Inquiries made elicited the information that a satisfactory system could be installed at a cost of approximately £2,250, or £1,250 lower than the original estimate.

28. After giving the matter careful consideration the Committee unanimously decided that, in view of the value of the contents of the building and the dislocation of business and public convenience that would be caused in the event of extensive damage by fire, added to the fact that in the absence of fire-fighting facilities greater expense would be essential in providing a building of more fireproof construction, it would be in the interests of safety and true economy if a complete fire-sprinkler system were installed, and recommends accordingly.

SUMMARY OF RECOMMENDATIONS.

29. Briefly summarized the recommendations of the Committee are :—

- (a) That in the interests of economy and efficiency steps should be taken to provide more suitable premises for telephone and telegraph workshops at the earliest convenient opportunity;
- (b) That the building has been designed in conformity with the requirements of the Postmaster-General's Department and will prove suitable for the purpose for which it is intended;
- (c) That the site is conveniently situated from the point of view of the Department and the employees, and, provided necessary precautions are taken in the matter of foundations, should prove suitable building land for a structure of the nature contemplated;
- (d) That in place of a wholly electrical goods elevator, an elevator be installed hydraulically operated from a self-contained pumping plant within the building;
- (e) That a complete fire-sprinkler system be installed.

SAVINGS EFFECTED BY THE COMMITTEE.

30. If the above recommendations be carried out the resultant savings may be expected to be :—

(i) On the goods elevator	..	..	..	£1,800
(ii) On the sprinkler system	..	..	..	1,250
Total	..	..	..	£3,050

thus reducing the original estimate from £60,000 to approximately £56,950.

G. H. Mackay
G. H. MACKAY,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Parliament House, Canberra,
21st March, 1928.

MINUTES OF EVIDENCE.

(Taken at Melbourne.)
TUESDAY, 22nd. NOVEMBER, 1927.

Present:

Senator BARNES in the chair;

Senator Payne	Mr. Cook
Senator Reid	Mr. Lacey
Mr. M. Cameron	Mr. McGrath.

John Murray Crawford, Chief Engineer, Postmaster-General's Department, Melbourne, sworn and examined.

1. To Senator Barnes.—The proposal into which the committee is now inquiring is to erect at South Melbourne a building to accommodate the various sections of the telegraph and telephone workshops. The proposed site is Commonwealth property abutting on Sturt, Grant and Dods streets, South Melbourne. It is proposed that the building shall be capable of meeting requirements for approximately ten years after the date of erection. The present accommodation is inadequate and unsuitable. The two main workshops are at present situated in widely separated parts of the city, the telephone workshops being in Spencer-street adjoining the General Post Office and the telegraph workshops at Jolimont over a mile away. This separation of the workshops is an inefficient and uneconomical arrangement. Moreover, the Jolimont workshops must very shortly be given up, and the site revert to an open space for recreation purposes. The present accommodation at the Spencer-street General Post Office is also required for other purposes. The proposed site in Sturt-street, South Melbourne, is at present used by the Postmaster-General's Department for the storage of cable, transport and workshop activities. The site has a frontage of approximately 402 feet to Sturt-street, 347 feet to Grant-street, 293 feet to Dods-street. The proposed building is a simply designed concrete structure of two floors providing a working space of approximately 53,000 square feet, and will provide better accommodation than the existing workshop buildings which were not designed for the purposes for which they are now being used. An approximate estimate of the cost is £56,500. Sufficient ground space is available to enable an extension of the workshop to be made when needed and the proposed building is designed to permit of such extensions being added when necessary. The various sections comprising the workshops are as follows:—Telephone, telegraph, carpenters and joiners, painters and polishers, installation staff, motor car, cycle and lorry, and coach building. The number of permanent men employed is approximately 360. An additional 200 men are employed in a temporary capacity. The number of telephone stations in Victoria in September, 1927, was 141,335, and this number is rapidly increasing; about 17,400 are being added yearly and the repair and renovation work will in consequence increase in direct ratio to the number maintained. The approximate financial aspect of erecting workshops on Commonwealth property at Sturt-street, South Melbourne,

in lieu of proceeding with the original proposal to erect workshops alongside the General Post Office, Melbourne, is as follows:—

CAPITAL COSTS.

CAPITAL COST OF PROPOSED SEVEN-FLOOR BUILDING IN SPENCER-STREET.

Estimated cost of building ..	£ 66,500
Proportionate value of land on which building would be erected ..	5,372
Total	71,872

CAPITAL COST OF PROPOSED TWO-FLOOR WORKSHOP ON DEPARTMENTAL LAND AT STURT-STREET.

Estimated cost of building ..	£ 56,500
Proportionate value of land ..	1,120
Cost of moving in and disturbance at Sturt-street	2,000
Total	59,620

ANNUAL CHARGES.

PROPOSED SEVEN-FLOOR BUILDING, SPENCER-STREET.

Interest on £71,872 at 5 per cent. ..	£ 3,594
Maintenance of building, 1 per cent. on £66,500	665
General Administration on labour cost of maintenance of building ..	160
Depreciation of building, 2 per cent. on £66,500	1,330
Water rates	193
Lighting	100
Loss of time due to shops on separate floors	500
Engineering and General Administration 50 per cent on £500 ..	250
Two lift attendants at £380	560
General Administration 30 per cent. on £560	168
Cost of operating two lifts	100
Total	7,620

PROPOSED TWO-FLOOR WORKSHOP, STURT-STREET.

Interest on £59,620 at 5 per cent. ..	£ 2,981
Maintenance of building, 1 per cent. on £56,500	565
General administration on labour cost of maintenance of building ..	136
Depreciation of building 2 per cent. on £56,500	1,130
Water Rates	164
Lighting	70
One lift attendant at £280	280
General administration, 30 per cent. on £280	84
Cost of operating one lift	50
Additional transport charges from main store at General Post Office to proposed workshops	250
Total	5,710

The Sturt-street project would be cheaper in annual charges to the extent of £1,910 per annum. The rental of the existing telegraph workshops at Jolimont is £448 per annum. This amount would be saved under either scheme. The question of the type of fire protection for the building has not been finally determined and the estimated cost has not, therefore, been included in the financial statement. If a sprinkler arrangement is put in the cost is £3,500 with annual charges estimated at approximately £270 per annum, but having regard to the class of work to be done and the comparatively small fire risk incurred it is considered likely that an automatic thermostat alarm system costing approximately £450 to install and approximately £80 in annual charges will meet our requirements. The distance from the workshops to the nearest fire brigade station is 1880 yards and the protection offered by a thermostat system if considered adequate will be much the more economical arrangement.

The estimated cost of a building in Spencer-street would be £66,500, and the approximate working space would be 40,714 square feet. It was due mainly to the fact that the land and building would involve a considerable expense proposition that the department was induced to decide in favour of the South Melbourne site as against the Spencer-street site. At present the telegraph workshops are situated at Jolimont near the Treasury Gardens, and telephone repair and other work is undertaken at a building in Spencer-street adjacent to the General Post Office, which was originally used as a wool store. Some of the work, including blacksmithing and conebuilding, is already being carried out on the Sturt-street site. At present the buildings in which our work is carried on are separated by a distance of at least a mile; but if approval is given to the scheme to erect workshops at South Melbourne, the operations will be concentrated, and conducted under the one control. It would be a cheaper and more economical arrangement, particularly as the department's manufacturing activities have to compete with outside firms whose equipment, accommodation, and internal arrangements are quite up to date. The proposed work is regarded as urgent. It is true that a similar proposal was referred to the committee in 1923, and that since then nothing has been done. When the present secretary of the department assumed office, consideration was given to the advisability of accommodating the manufacturing section in a building such as that available at Spencer-street. I was requested to look into the matter. I had not been associated with the proposal prior to that time as the work had been largely dealt with by my predecessor. I therefore started *de novo* to consider the situation, and it was found that it would be very desirable to establish workshops at South Melbourne rather than to continue with the Spencer-street proposal. Another important factor which entered into the matter was the possibility of the site in Spencer-street being required at no distant date for postal activities as there was a suggestion of an extension of the present post office in that thoroughfare. Already it has been found that the activities of the General Post Office have increased to such an extent that additional space is needed. Had permanent workshops been established in Spencer-street any expansion on the western side would have been impracticable and the department would have been in a somewhat difficult position. Under the proposed arrangements the extension of the Spencer-street building will be a comparatively simple matter. At present about 370 permanent men are employed in the workshops and in addition there is always a varying number of temporary employees which at present total about 200. We do not anticipate that the staff will be largely increased unless, of course, there is

some unforeseen development such as the department engaging in the manufacture of certain articles which at present is undertaken by outside contractors. There was also the proposal to establish works in Power-street, South Melbourne, on a site somewhat similar to the Sturt-street site except that the former is somewhat rectangular and the latter more or less irregular in shape. The foundations are about the same in both places as the sites are on reclaimed land. The Power-street proposition was, however, not proceeded with as the land belongs to the State Government for which up to the end of last year we were paying a rental of £600 per annum. From the first of this year this was to be increased to £740 and when we approached the State Government it said that it would give us a 30 years' lease of the land; but at considerably increased rentals. For the first five years the annual rental was to be £905 which would advance to £1,069 at the end of ten years, to £1,234 in fifteen years, to £1,398 in twenty years, and £1,562 in 30 years. The department could not contemplate paying such a high rental for a workshops site, and as we owned the Sturt-street land we came to the conclusion that it was a better proposition to build there notwithstanding the fact that the shape was not quite as convenient for building purposes as the Power-street site. The average increase in the workshops staff over a period of ten years, has been approximately 78 per cent. The proportionate value of the land at Sturt-street is £11,120, at which price it was acquired by the department; but of course, its value to-day would be very much higher. Under this proposal, provision has been made for an extension of the workshops when necessary. Under the present scheme we shall have approximately 50,000 square feet of working space. The approximate book value of the whole block would be £4,400, which is the price paid for the land about twenty years ago. The proposed workshops should meet our requirements for at least ten years. If it should be necessary to make extensions in less than ten years, provision has been made for such a contingency. The site is very convenient so far as the staff is concerned. It is near the main railway system and as trams pass it, it would be difficult to find a more convenient site. If the work is proceeded with I believe more employees will benefit than will be adversely affected because both the Spencer-street and Flinders-street stations are no distance from the site. There is not a great deal of material carried between the postal stores and the workshops. We have provided a sum of £250 to cover additional transport charges. The site is about three quarters of a mile from the postal stores; but when the Spencer-street bridge is constructed it will be a distinct improvement. I regard the site as in every way suitable for our requirements. Its area is considerably larger than we need at the moment. There is room for expansion over the whole of the site at present taken up by the garage which occupies the northern side of the block. On the south-eastern side there is room for expanding to the extent of approximately 20,000 sq. ft. Should we need more room later, we can extend along Sturt-street which will provide us with about another 40,000 sq. ft. There is therefore ample room for more than doubling the area without interfering with the central portion of the block. Approximately one-fourth of the area will be occupied by the building proposed to be constructed. The plans have been prepared by the Works and Railways Department whose officers have been in close association with us, as they were in connexion with the proposed workshops at Sydenham. As to the advantages to be derived I may say that in the first place the work will be done under much better conditions than at present. For instance the light is very poor in each section of the workshops, whereas in the new building conditions will

be ideal from that viewpoint. The sanitation in the buildings at present in use is not the best; but in the new building it will be modern and convenient. When one considers that we have to compete with outside contractors, who are not loaded as we are with the present disadvantages under which we are working, it will be seen that when these are removed we will have a great advantage. Generally speaking, when better working conditions are provided work of a higher class is produced. From the financial viewpoint I may say that on a conservative basis the saving to be effected in annual charges will be in the vicinity of £2000 a year. In making a comparison between the annual charges we may take the Spencer-street figures as reasonably applicable to the present conditions; but I would not say that they apply *in toto*. When the present Spencer-street building is vacated it will probably be demolished and preparations will, I presume, be made to extend the present Spencer-street structure. I understand that the building which we at present are using at Jolimont will be demolished when it is vacated. That building was erected by the Repatriation Department on a very defective underpinning (but as soon as the war was over it would be removed). It is on park lands and our occupation has prevented its demolition. When we secured the use of it it was on the definite understanding that we would vacate it at the earliest opportunity. That has been impracticable until new workshops are erected. When we vacate it the land will revert to the Crown for the use of the people. I have been assured that although water is likely to be encountered in taking out the foundations at the Sturt-street site, there is not likely to be any difficulty in that regard. I understand the foundations which the Works and Railways Department will put down will be quite adequate for our purpose. Similar precautions to those taken in connexion with the brick building which has been standing on the property for some years and in which the motor workshops are now housed, will be observed. As the members of the committee are aware, this structure does not show any signs of sinking or cracking. Mr. Murdoch assures me that there is no likelihood of any difficulties arising in connexion with the foundations. That is one of the reasons why the capital cost of the building per square foot seems higher than that to be erected at Sydenham. Although there is a rather greater floor space provided at Sydenham, the cost is somewhat lower. The irregular shape of the Sturt-street site also adds slightly to the cost.

2. *To Senator Reid.*—A seven-story structure such as was proposed at Spencer-street would not be as convenient as a two-story building such as is contemplated at South Melbourne. Obviously if we had to transport men and materials over seven floors the difficulties would be much greater, and the cost heavier. That is the position with which we are faced in Pier-street, Sydney, where the building consists of six floors which makes the transport difficult and supervision less effective and consequently more costly. I could not say how long it will be before the department requires the site at Spencer-street, but I understand that additional space will be required almost immediately. The proposed structure at South Melbourne would take from ten to twelve months to complete from the time a commencement is made with the work. Pending the authorization of the new workshops we shall be able to carry on in our present buildings. During the last ten years our work has expanded to the extent of 78 to 80 per cent, but during the last four years it has increased to the extent of about 50 per cent, which rate is likely to be continued. It is proposed to construct only a two-story building at Sturt-street owing

to the nature of the foundation; but by taking special precautions, provision could be made for a three-story building. There is, however, little likelihood of such a structure being necessary. The only likelihood of fire occurring would be in the carpenters' shop and the joinery shop; but even in those departments the risk is not great, particularly when the men are at work. They are skilled tradesmen who are not likely to be careless as are youths employed in some branches of our work. Moreover, fire extinguishers will be provided in sufficient numbers to almost immediately check any outbreak which should occur. I think that the provision to be made, which will include the use of thermostat fire alarms, will be adequate. Fire points will be placed from ten to twelve feet apart and fire appliances will be available wherever required. Thermostat fire appliances would give the alarm to the fire brigade which could reach the spot in about three minutes. The danger of a fire spreading is not very great, and even if such were the case and damage amounting to £200 or £400 were done, it would be less than the cost of paying interest and maintenance on an expensive equipment. In these circumstances, a sprinkler equipment would not be justified. I do not say that the officers of the Works and Railways Department hold the same views regarding fire appliances. I believe they are inclined to favour a sprinkler system. There are not many men working in shops where the fire risk is likely to be great. In answer to your inquiry as to the proportion of telephones in the country as compared with the city, I may say that in Victoria in the last ten years, the growth in the metropolitan area has been from 25,055 lines to 50,404, and in country areas from 23,058 to 40,654. For this period the increase in the metropolitan area has been 129 per cent, and in country areas, 236 per cent. The figures I have quoted refer to lines and not to stations. The number of lines refers to the number of separate subscribers connected with the exchange from which extensions are made to what are known as stations. The Myer Emporium in Melbourne for instance may have twenty lines but 200 stations.

3. *To Senator Payne.*—As I have mentioned, the saving to be effected in annual charges, if the shops are transferred to South Melbourne, would approximate £2000 a year owing to the greater conveniences provided, and the facilities for doing the work more expeditiously. The estimated saving in annual charges is between the proposed Sturt-street proposal and a Spencer-street shop. The present shops are inconvenient and uneconomical and modern requirements necessitate an alteration. Although the estimated cost of the proposed building in Spencer-street was £66,500 in 1922, I do not think its cost to-day would be much greater because at that time prices had reached a high level. I have used the figure taken at that time, but I could not say whether it would, to-day, be a little more or a little less. The cost per square foot of the proposed building is higher than the rate per square foot for a similar building at Sydenham, because of the special circumstances I have mentioned. When an estimate of the price was received, I immediately queried it with the Works and Railways Department as the buildings are of precisely the same type with the exception that the one at Sydenham is two storied at each end, with a single story over the centre. The explanation given was in the first place that the foundations would be more costly than at Sydenham. The first floor will also be somewhat heavier than that in the Sydenham building. The foundations of the building will be of reinforced concrete.

4. *To Mr. Cook.*—It would be difficult for the department to obtain a more suitable site for a building such as we require. I produce for the information of

the committee, a plan showing the site of the proposed workshops, the tram and train routes, and generally, the means of transport to and from the shops. The rental at present paid at Jolimont is £443 a year. The proposed expenditure is justified as the time has arrived when we should provide proper accommodation for our workshops, the operations of which are extending. I do not know of any one having said that the land at Sturt-street is unsuitable for building purposes, but in this regard I am guided by the experts who consider it quite suitable for the purpose. A two-story building has been in use on that land for the last fifteen years, and it does not show any sign of cracking. Special care was taken in sinking for the foundations of the structure already on the site and the same care will be taken in erecting this building if the work is authorized.

5. *To Mr. Lacey.*—The Power-street site is the property of the State Government. I could not say why that site was not mentioned during the negotiations in 1922; but I believe that after consideration it was considered at that time that Spencer-street was the best proposition. I was not associated with the negotiations at that time. Consideration was given to the possibilities of erecting shops at Power-street; but the disadvantages associated with the proposal lead to the conclusion that for economic reasons, Sturt-street was preferable. The Power-street site would be acceptable but for the huge increase in the rental asked by the State Government. I do not think that the circumstances were the same in 1922 as they are to-day. We were hopeful of getting better terms from the State Government, but instead of the rent being reduced, it was increased. If the workshops are established at Sturt-street our operations will be centralized. The civic authorities could, if necessary, compel us to vacate the site we are at present occupying at Jolimont. In occupying it for the long period we have, we may be charged with a breach of faith. We cannot stay on indefinitely at Jolimont. Although provision is being made for ten years' expansion in our operations at Sturt-street there is sufficient land available to provide for expansion for at least 25 years. I do not know of any disadvantages whatever in connexion with the site which the committee have under consideration.

6. *To Mr. McGrath.*—I am aware that the proposal to erect new shops originated in 1922; but for various reasons, some of which I have mentioned, it was not proceeded with. As I have explained, the question of the most economic way of carrying on the departments workshop activities was considered when the present director of postal services took office. It was considered worthy of further attention which was given and which showed that we could build to greater advantage at South Melbourne than at Spencer-street. There was no intention whatever when the previous proposal was under consideration to conceal the Sturt-street site from the committee. The Sturt-street site has been occupied by the department for some time as a depot for cables, and for the manufacture of cable terminals as well as for undertaking certain re-conditioning work. Some of the work now being done at Sturt-street will be continued, and the balance may be undertaken at some of the suburban depots. I have never heard of a flood affecting the South Melbourne site. There are approximately 400 employees at the Sydenham workshops, and, including temporary hands, about 600 in Melbourne. We undertake certain branches of coach-building work here, which is not done at Sydenham. In New South Wales, the motor car workshops are established at Chippendale, whilst in Melbourne they are on the same site as the proposed workshops.

7. *To Mr. M. Cameron.*—It is proposed to combine the whole of the activities in this department and to carry

out manufacturing repairs and renovations in the one shop. In such centres as Ballarat and Bendigo, mechanics' head-quarters are established, where work which can be economically carried out is undertaken. The policy of the department is to do work locally when it is economical to do so. Certain minor repairs are done at country workshops, but any equipment which has to be dismantled, re-manuelled, re-polished, re-oxidized, or re-silvered, is sent to Melbourne. It is more economical to do that than to have an extensive workshop for undertaking such work in a country centre. Additional transport charges have been estimated at £250. We have no basis upon which to work as hitherto the work has been carried on at Spencer-street. There will be a certain offset against the storage because a little is taken from Sturt-street to Spencer-street. Most of the material and equipment brought by rail would come from Spencer-street. Some would come from Port Melbourne and from the docks. Most of the material comes from the store in reasonably small packages.

The witness withdrew.

Henry George Allen Sansom, Engineer in Charge, Postal Workshops, Melbourne, sworn and examined.

8. *To Senator Barnes.*—I have held my present position for three and a quarter years. The telephone workshops at present situated in Spencer-street, Melbourne, are doing maintenance work for the telephone exchanges in the metropolitan area and country centres, which work includes the preparation of switchboards for subscribers' services in the city and in the country. In addition, there are carpenters' shops in which maintenance and joinery work generally is undertaken, as well as the manufacture of various articles for departmental requirements. There is also a painters' shop in which painting and polishing work involved in the manufacture of office furniture is undertaken. Engineering work is also done at Spencer-street, as well as signwriting on letter pillars. The Jolimont shops, where the work for the telegraph department is undertaken, consists mainly of a machine shop which provides for the manufacture of small parts required in maintenance work and certain work which is not undertaken in the telephone workshops. This shop also does a certain amount of manufacturing in competition with outside firms. The telephone workshop at Spencer-street covers 14,074 square feet. The carpenters' shop consists of 7,000 square feet and the painters' shop about 2,200 square feet, making a total of about 24,000 square feet. The telegraph workshops at Jolimont comprise about 7,200 square feet. The South Melbourne motor and cycle shop comprises 7,280 feet on two floors, whilst the coachbuilders' shop occupies 1,600 square feet, the blacksmiths' shop 1,750 square feet, and the saddlers' shop 375 square feet, or over 11,000 square feet in all. In the telephone shop 352 men are employed, some of whom are away from the workshop for a part of the time. The number actually employed in the telephone shop would average about 200. The numbers employed in the different departments are:—Telephone shop 200, carpenters' shop 50, painters' shop 28, telegraph workshop 70, South Melbourne 48, or about 402 in continuous employment. The number permanently employed in 1916 was 290, as against 356 in 1920, or an increase of 156 over ten years, which is equivalent to 75 per cent. The carpenters' shop is at present over-crowded, and recently the work in this department was three months in arrears because a sufficiently large number of men could not be accommodated. I advised the Superintendent of Stores that some of the work should be sent out. The telephone workshop is not always over-crowded

as a good deal of the work undertaken by that department is done away from the shop. The accommodation provided, however, is too small for our work, which is on the increase. The telegraph shop is also over-crowded particularly in the iron section, and as its activities increase we shall have to obtain more room. The machines are already fairly close together. The space at the motor garage workshop is also inadequate, and a good deal of the repair work has to be undertaken in the street. The Jolimont workshops were established in April or May, 1924, before I occupied my present position. At that time it had been decided not to erect shops in Spencer-street, and it was a case of finding some place which the department could occupy until new shops were built. It will be of great advantage to concentrate all our activities under one roof. Our present disabilities include the over-crowded state of some of the workshops and the distance at which some of them are separated which prevents effective supervision. With the shops separated as they are, a certain amount of extra supervisory work is involved which can be dispensed with if our operations are concentrated in the one building. The overhead costs of one shop would be less than they are in the present circumstances where the supervisory staff is divided over three sets of shops. I am satisfied that under the proposed new arrangement the work can be more efficiently and economically conducted. The heaviest machines we are at present using are two press tools at the telegraph workshop, which are used for pressing out small sheet metal parts. These machines, which are used on the ground floor, and which will be placed in a similar position in the proposed new shops, weigh about 15 cwt. The height of the ceiling in the upper floor would be 11 feet, and in the lower floor 15 feet. Our largest pulley is 3 feet. On the ground floor we have to allow for the upper half of the pulley being clear of the ceiling. The height of the ceilings, as shown on the plan, is sufficient for our purposes. A good many of the machines, however, have individual motor drives and consequently for them no shafting is necessary. We have conferred with the officials of the Department of Works and Railways in making provision for the height of the ceilings, but the thickness of the walls and the depth of the foundations is a matter for the architect to decide. For the information of the committee, I produce a drawing of the upper floor of the workshop, showing that from the eastern angles of the proposed structure, an unbroken view can be obtained over the whole of the floor space. It will also be seen that from a similar angle on the ground floor, a plan of which I produce, the same effect can be obtained. There are to be no dividing walls, with the exception of a wall 7 feet high, which is to separate the department in which the cord winding is to be carried on by girls. It is not proposed to purchase additional plant other than that which would be required in the ordinary course of our work. Probably one or two small additions will be made, which in any case I would be asking for in order to render the shops more efficient. Our present plant is all in good serviceable condition, and it is not likely that any of it will be scrapped. A number of complaints have been made concerning the Spencer-street and Jolimont buildings. In wet weather the conditions on the upper floor at Spencer-street building are particularly bad, as during the summer months I have seen men working in only their trousers and singlets and perspiring very freely. In these circumstances it is difficult for them to do the work as efficiently as they would under more favorable conditions. When I heard that bugs and other such vermin had fallen from the rafters on to the men working in the cord-repairing shops, I got in touch with the Government Entomologist in an endeavour to free the building of these undesirable pests.

9. *To Mr. M. Cameron.*—At present, junior mechanics and youths are temporarily employed on cord repairing work in the room where the conditions are bad. The joinery work consists of the manufacture of cable boxes, departmental furniture, switchboards and general repair work for post offices as well as many other minor works. Quite a lot of work other than telephone work is undertaken. We do practically all of our maintenance work ourselves; but in some of the manufacturing work we compete with outsiders. For the automatic exchanges at Ascot and Carlton we purchased the main frames, on which the cables are arranged, at an average of £55 a bay landed in Melbourne. The department went into the matter and for the last four automatic exchanges to be installed—those at Canterbury and South Melbourne, which are to be out over shortly, and Northcote and Elsternwick which are to follow—we constructed the frames in the shop, equipped them with the necessary apparatus and erected them in position for £37 a bay. When we tender for work against outside manufacturers we are always put on the same basis as outside firms, and if the price of an outside manufacturer is lower than our own we do not get the work. We are operating on a commercial basis. Should we undertake the work, the controller of stores keeps us up to specifications and we are treated in exactly the same way as outside contractors. The controller of stores supervises the work of outside tenderers.

10. *To Mr. McGrath.*—The telephone work is increasing at the rate of 8 per cent, as against 2 per cent. for telegraph work which to some extent is spasmodic. Lately we have had a good deal to do for the telegraph section owing to a cut over to the new telegraph office; but the volume of work involved in that instance was exceptional. Normally I should say that the telegraph branch of the work increases to the extent of only 3 per cent. annually. We have never undertaken the manufacture of telephones. During the war period we manufactured certain equipment for switchboards owing to the difficulty of obtaining our requirements overseas. Certain manufacturing work in connexion with telephones is being undertaken in Sydney; but at present the cost of importing switchboards is so much less than that for which we can manufacture them that we do not undertake the work. The overseas firms are so well established that it is difficult to compete with them. For instance, the Stirling Telephone Company or the Standard Telephones and Cables Company manufacture for Great Britain, for continental countries and various British possessions in such large quantities that we cannot possibly hope to compete with them. We can do any work in Melbourne which is at present being undertaken in the Sydney shop. I do not know exactly what is being done in Sydney, and although it may be said that they are manufacturing switchboards, I believe they are only operating standard type P.B.X. switch boards for trunk line working and use in country exchanges. Judging by the volume of work which we do not undertake, I should say the department is depending to a large extent upon outside manufacturers.

11. *To Senator Payne.*—The space we are at present occupying is too restricted for the economical working of the department. I am of the opinion that 53,000 square feet, which is to be made available in the proposed building will be ample to meet our requirements for the next eight or ten years. When the three iron shops are concentrated on the one site, we shall not require the same amount of space in the aggregate as they are now occupying. With an area of 3,224 feet under ideal conditions, we shall be able to do better work

than we can do with 4,800 square feet in our present circumstances, where economical working is impracticable. We have to rely upon a temporary staff for coping with extra work. The tenders we have submitted, with the exception of the first, when I put in for an iron work job costing £65,000, have been favorably considered. In that instance the department hesitated in giving such a big job to our shop before they had been properly tried out. We do not experience any difficulty in obtaining suitable supplies of skilled labour, because the Public Service Board generally has a fair number of men on its books who can be relied upon to render efficient service. Many of the men who register with the Public Service Board are in employment at the time they register; but desire to obtain employment in our shops not because the conditions are easier, but because they prefer the class of work they are to undertake.

12. To Senator Reid.—The motor repair shop is overcrowded, due to want of floor space. The iron section of the telegraph shop is also somewhat overcrowded, and more space is required in the painters' shop. At present we have only one saddler who undertakes harness repairs and other leather work for the department. If new shops are constructed, a spot welding machine will be required, but that would be needed in any case. Additional modern machinery will be installed as it is required. For the work we undertake, buildings in accordance with the plans prepared can be considered quite up to date. Recently additional appliances have been installed for economically handling Ford motor cars in our motor repair shops. The superintendent of mails on one occasion directed my attention to the congested state of the basement in which the mail bags were stored at the General Post Office, when they were stacked to the height of the ceiling. If the shops were removed, I presume the space which would be made available would be utilized for providing additional accommodation for handling of mail matter.

13. To Senator Rayne.—Although it was said in 1923 that improved facilities were imperative, we have managed to carry on notwithstanding expansion in the carpenters' shop, by removing the timber racks which were occupying a lot of space and placing them in a shed which was filled with rubbish. The additional space thus made available provided room for six more benches. We also accommodated the iron section of the telephone shop on another floor, which gave us another 700 feet, and occupied the space thus vacated for extensions to the assembling portion of the telephone shop. The old telegraph shops in Elizabeth-street consisted of about 3000 square feet, and when they were transferred to Jolimont 8,000 square feet were made available. A portion of the workshop which had been used as a luncheon room was also made available. At Sturt-street a part of the cable shed has been used to extend the coach-builders' shop.

14. To Senator Barnes.—All the telephones to be sent on to a job come from the stores into the telephone shop for assembling and testing before being despatched. The switchboards come from the stores and after being equipped are sent back for despatch from the stores department. We keep sufficient stocks in the carpenters' shop to last for only about ten days. We carry a fair quantity of material in the engineers' store at the telegraph workshop.

(Taken at Canberra.)

THURSDAY, 24th NOVEMBER, 1927.

Present:

Mr. MACKAY, Chairman;

Senator Payne
Senator Reid
Mr. Cameron
Mr. Cook

Mr. Lacey
Mr. McGrath
Mr. Senbrook

Reginald Nyren Partington, State Engineer for Victoria, Postmaster-General's Department, sworn and examined.

15. To the Chairman.—I am aware of the references to this committee of the proposal to establish postal workshops at South Melbourne. In 1923 there was a proposal to accommodate the workshops in an extension of the buildings at Spencer-street. I know that that proposal was deferred, but I cannot say for what reason because I was not in the State of Victoria at the time. We suffered considerably from lack of accommodation and were able to take over from the Repatriation Department some buildings at Jolimont for the use of one side of our activities, and we re-arranged certain classes of our work in other buildings. We have cramped our outfit by separating various sections of the staff, but we have been able to continue, although under difficulties. In 1916 we employed 200 men; last year we employed 356 men, and at present we have a staff of 402. New workshops are necessary to alleviate the congestion and also to improve the conditions under which the men have to work. We shall also be able to concentrate our activities. At present the main manufacturing work is carried out at Jolimont workshops. The repair and assembling work is done in the building at the back of the Spencer-street Post Office, and we have a garage and workshop at Sturt-street. It is essential that we should concentrate our activities. Each of the shops has an iron shed for smithy work and hot and cold iron work. We have three of these places, whereas we would have only one iron shop in the new building. The premises at Jolimont belong to the Works and Railways Department, and I understand that we pay a rental for them. The land belongs to the Melbourne City Council. I understand that when we vacate the premises, they are to be dismantled and re-erected at Canberra. I do not think that the premises are required immediately for any particular purpose, but I understand that they will be removed so soon as we vacate them. I do not think that we shall be ejected. Of course, if we were, other premises would have to be found, and that would be a difficult proposition. The new workshops are urgently required. Many sites have been inspected during the last two or three years. We advertised in the newspapers for suitable sites, and I myself looked at many. Generally they were not suitable from the point of view of site. The site at Power-street was suggested. It was considered to be suitable. I made some preliminary inquiries respecting that site thinking that we might be able to obtain it under long lease and under reasonable terms. I reported to the chief office and the negotiations were continued. I understand that the terms were not favorable and we then concentrated our attention on the Sturt-street site, which is about 200 or 300 yards from the Power-street site. Sturt-street site had always been considered as an alternative site. It was a sort of second string to our bow. There will be no difficulty in respect of securing suitable foundations. Mr. Murdoch had tests made at Power-street and the site was found to be suitable for a two-story building. I understand that similar tests were made in respect of Sturt-street. On

the land at Sturt-street we have our garage and workshops. We store cable there. There are also some galvanized iron sheds, one being a smithy and iron shop, and the other a shop for re-conditioning and testing cable. There is also a coach-builders' shop. The Sturt-street site comprises about two acres, and that would be suitable for all our purposes. For the last two or three years we have been pressing for new workshops. Little or no inconvenience will be caused to the employees owing to the change in location of the workshops. In fact, I think that the Sturt-street site would be welcomed by them. No representations have been made by the men respecting the unsuitability of the site. The present proposal would meet requirements for approximately ten years. There is sufficient land available to extend the workshops to meet our requirements for the next 25 years. It is proposed to erect a two-story building. Of course, if space were no object, a single-story building would be preferable. The supervision of one as against the other would make no material difference. It would be possible to have a single-story structure at Sturt-street, but it would not be desirable because we want space in the yard for storage purposes. At Power-street we did not want space for that purpose. We obtain our material from the postal stores, but it is not a very big item inasmuch as our garage is next door, and there is frequent running between the Spencer-street office and Sturt-street. The distance from Sturt-street to Spencer-street office is about a mile, but when the Spencer-street bridge is built, the distance may be shorter. No considerable disability is experienced, because there is always some empty running, and we can fill the vehicles at Spencer-street. I considered the lay out of the building with our workshop engineer. It is a good layout. The garage at Sturt-street is of wood and iron, and under the present proposal we are not interfering with it at all. There is also a garage workshop at Sturt-street, which is a two-story brick building. The other buildings are constructed of galvanized iron. I do not think that there is likely to be any trouble from surface water, because we have had no evidence of it with the existing brick building which has been erected for many years.

16. To Senator Reid.—When the new building is erected, there will be a foreman on each floor, and the engineer will supervise the whole building periodically. The supervision of a two-story building would not entail much additional time as compared with the supervision of a one-story building. There is no doubt that the working of the department over widely scattered areas means inefficiency and waste, but I could not calculate the loss in money. We draw our material from the superintendent of stores at Spencer-street. We obtain no supplies from railway yards or wharves, and that of course necessitates double handling of material. There will be no alteration in the arrangement when the new workshops are constructed.

17. To Mr. Cook.—At present we employ 402 men in the workshops. When the new workshops are constructed it will not be necessary to employ additional hands. At present our working space is congested, and we must have a better layout. We have two kinds of work, some manufacturing, and repairs, such as running repairs to telephones and telegraph apparatus. If space were available at Sturt-street, I would prefer a single-story building, but under present conditions I advocate a two-story building, because space is required there for the storage of cable. A single-story building was considered, but the Works Director and the Chief Electrical Engineer of the Postmaster-General's Department agreed that a two-story building would be the most suitable for Sturt-street. We tender with outside firms for the manufacture of articles

required by the Postmaster-General's Department, and on many occasions we have been successful. In one case we tendered for iron work for telephone exchanges, which is a big frame to which the cables in the street are attached. Our workshops made those men more cheaply than they could have been made outside. It would be most undesirable to postpone the building of the new workshops because we cannot get the best work out of our men under the present cramped conditions.

18. To Mr. McGrath.—We still have a lease of the Power-street site, but it is very likely that in the near future we shall relinquish it. Power-street is a depot for poles and cross arms. Those articles are required more for the outer suburbs, and we are considering the establishment of two or three small pole depots in the suburbs, so as to save haulage. The rental of the Power-street site has increased in the last two or three years from £200 to £300 per annum, and it is likely to be considerably more.

19. To Mr. Lacey.—The building at Jolimont was built during war time, but not for our requirements. We took it over from the Repatriation Department, on the understanding that it would be vacated as soon as possible, so that the land might revert to park land. I understand that Mr. Murdoch, the Chief Architect, has received some communication from the civil authorities in that respect. It is very desirable that we should vacate those premises, which to-day are an eyesore. A two-story building at Sturt-street would give us ample space for the storage of material required by the workshops. There is a considerable quantity of material lying about the Sturt-street yard, but under the new arrangement that would need to be stacked properly. Eventually, the poles and cross arms at Power-street will be stored at suburban sites. We have been negotiating for such a site at Spotswood. No poles or cross arms would be stored at Power-street.

20. To Senator Payne.—The increase in the number of hands in the workshops from 356 in 1926 to 402 is not the normal rate of increase. It is due to the considerable business that we have had in certain lines during the past twelve months. The staff of painters and carpenters fluctuates a good deal. During the last ten years the number of telephones installed in Victoria has increased considerably. In 1913 the number was 33,737; in 1922 it was 81,179; and at September of this year, 141,535. Obviously any increase in plant increases the repair work. We have now little additional space compared with what we had in 1922. The space that we are asking for will meet our requirements for a long time. We tender for work when we are in a position to manufacture. The bulk of the requirements of the Postmaster-General's Department is manufactured outside. We have no difficulty in securing additional labour. Apart from tendering for work we have ample work to keep the whole of our staff employed. We employ a certain number of temporary men, and when work is slack they have to go. The same position obtains in all workshops. About 50 per cent. of our 402 employees would be temporary men.

21. To Mr. M. Cameron.—In 1916 I was with the Central Office, and was not holding my present position. The accommodation then for the 200 men employed in the workshops was most unsuitable. Although additional space has since been made available, it is still unsuitable. Our workshop conditions are very trying, and it is most unfair to ask men to work permanently under hot and stuffy conditions. When the question of workshop facilities was inquired into in 1916 there was no difference of opinion among the responsible officers, as far as I know. At that time

it was desired to keep the Sturt-street site for the purpose for which it was then being used. The situation is satisfactory for workshops. The proposed depot at Spotswood would be for the storage of poles and cross-arms. Of course, the Power-street site would be surrendered. Our present method of obtaining material from the stores department at Spencer-street is the best arrangement, especially for book-keeping purposes. We draw periodically large quantities from the stores and place them in separate storage for our workshops. It means double handling, but I cannot see how that can be avoided. The present proposal will not entail any alteration of our arrangements except to increase the distance from the stores to the workshops. It frequently happens that discharged temporary men are re-employed at a later period, but in many cases we never see them again.

(Taken at Canberra.)

MONDAY, 25th NOVEMBER, 1937.

Present:

Mr. MAOKAY, Chairman;

Senator Payne
Senator Reid

Mr. M. Cameron
Mr. Seabrook.

Morgan Bruce Harry, Chief Inspector, Postal Services, Melbourne, sworn and examined.

22. To the Chairman.—I am aware that a proposal to establish postal workshops at South Melbourne has been referred to the committee for consideration. I have not been consulted in connection with the design of the building, for it is purely and simply an engineering work and the investigation was confined to the Chief Electrical Engineer and his officers. That is the usual course. I have a fair general knowledge of the postal department, and I know that its work is expanding considerably. I have certain figures which I shall quote. They may have no direct bearing on the proposal to remove the workshops, but they have a direct bearing upon the use to which the buildings the workshops now occupy shall be put. I remember giving evidence before the committee in 1923, when it was investigating a proposal to extend the General Post Office in order to provide adequate workshop accommodation there. After the committee had recommended that that work should be done, a departmental workshops committee was appointed to go into the matter. Although I have not seen a copy of its report, I understand that it was to the effect that it would not be economical to proceed with the project, but would be more desirable to erect the workshops on some other convenient site. There were

some difficulties in connection with the height of ceilings, which were not easily overcome. The room for some of the machinery would need to be very high. Consequently, it was decided to postpone the work. You remind me that in 1923 I estimated that in the following five years 16,250 extra feet of space would be required for postal purposes at the General Post Office. That estimate has been fairly well borne out. We have just completed the transfer of a portion of the mail branch activities to the new telegraph building in Little Bourke-street, the first floor of which is being used to handle mail matter for city delivery. That has left some vacant room at the General Post Office, and will provide accommodation for the immediate future. Mechanical mail handling appliances have been installed in the Little Bourke-street building and they occupy the first floor. We are at present considering the question of accommodation at the General Post Office, but the matter has not reached a stage which would justify me in making any definite statement. Undoubtedly more room will be necessary to enable us to handle the growing business. It is proposed that mechanical mail handling appliances shall be installed there. At present the building is being used in the following way.—The mail branch occupies the basement for parcels work; the ground floor is used by the inland mail section, and the first floor as the foreign and interstate despatch section. Until last week the city delivery business was also handled on that floor. The second floor is used as offices, and the third and fourth floors are also used for administration purposes. Three floors will be necessary for the mechanical mail-handling appliances. The proposal that has been made is that either the basement or the second floor shall be given over for the purposes of installing the mechanical handling appliances. We have not yet made up our minds which proposal is likely to be more satisfactory. Whichever section is removed, we shall need to find accommodation for it somewhere else. If the parcels section should be removed, it is desirable that it should be accommodated near the mail branch. A building for that purpose would not need to be anything like as large as the proposed workshops which were to have been built adjacent to the General Post Office at a cost of something like £26,500. It might be possible for us to alter the bluestone building suitably and inexpensively for the use of the parcel business. But as I have said, the investigation has not reached a stage at which I could express a definite opinion on the matter. What is quite evident, however, is that we shall be obliged, apart altogether from the installation of the mechanical appliances, to find additional space for the mail branch. I said that I had certain figures which showed the extent to which the business of the department has grown in the last few years. Perhaps if I put in the table giving the details, it would be better for the committee than if I described the development. The table is as follows:—

STATEMENT SHOWING THE DEVELOPMENT IN POSTAL TRAFFIC AT THE G.P.O., MELBOURNE, DURING THE LAST FIVE YEARS.
Note.—These figures do not include mail matter conveyed in mails at the G.P.O. for onward transmission to other offices.

	Letters.		Newspapers.		Packets.		Registered Articles.		Parcels.		Mails.	
	Posted.	Received for Delivery.	Posted.	Received.	Posted.	Received.	Posted.	Received.	Posted.	Received.	Posted.	Received.
1922-23	86,737,479	52,468,400	23,208,729	2,325,075	7,673,157	1,571,004	473,232	516,125	953,129	379,769	217,306	286,829
1923-24	92,255,847	56,791,245	25,121,889	2,541,219	7,968,257	1,704,743	472,580	512,127	931,210	394,107	238,978	277,689
1924-25	102,211,517	60,091,265	27,523,319	2,808,254	8,345,888	2,014,028	450,010	561,140	1,114,400	451,608	250,210	292,734
1925-26	107,441,500	60,406,700	28,661,100	2,954,490	9,336,450	2,214,909	448,234	600,904	1,090,000	465,595	285,000	325,112
1926-27	117,109,586	61,018,700	29,358,190	3,194,300	9,931,010	2,506,470	485,399	670,025	1,176,808	490,053	297,203	340,142
Increase in five years	28 per cent.	16 per cent.	19 per cent.	34 per cent.	29 per cent.	59 per cent.	3 per cent.	24 per cent.	24 per cent.	29 per cent.	36 per cent.	5 per cent.
Increase in each year (last installed)	24 per cent.		26 per cent.		22 per cent.		14 per cent.		25 per cent.		5 per cent.	

To reference to the figures relating to mails despatched and received, I should point out that a mail may consist of only one bag or of 50 bags. The percentage increase in the number of mails would, therefore, not be the same as the increase in the number of postal articles. A mail which, this year, might be handled in one bag, might in a year or so require half a dozen or more bags. I have not the figures for the preceding five years. We were then just emerging from the war years and the figures are not reliable for the purposes of comparison. It may be said with practical certainty that the increase in the next five years will be maintained, if not increased. It is very likely to be increased. If a building of seven stories were constructed on the site adjacent to the General Post Office to harmonize with that building, it would probably leave more than half the space available in it for purposes other than those of the postal department. The building it was proposed to erect there was intended to occupy a frontage of 53 feet, which would have left 100 feet of the site still available for future buildings. It is questionable whether an extension of the General Post Office building would be necessary. If the present bluestone building was found to be suitable for our purposes, we would occupy it and would not move for the construction of the new building, but I am not yet able to give a definite opinion as to whether it is suitable. I think the proposal previously was that a new building should be constructed on the site adjacent to the General Post Office to be occupied as workshops until such time as it should be required for other activities of the department, when the workshops would be provided for elsewhere. Sooner or later it would be necessary to proceed with a proposal of the kind now before the committee. The brick and bluestone buildings are the property of the Commonwealth, and occupy a valuable site. It is difficult for me to say whether the present buildings would be suitable for use by us for mail purposes. It would be possible to form a better opinion when the machinery is removed. From all accounts the buildings are not at all suitable for workshop purposes. I understand the employees have made complaints in regard to the inconvenience and discomfort that they have to suffer through working there, although the complaints have not been made to me personally. I have not been through the Jolimont workshops, but I have an idea of the nature of them. I cannot recollect the conditions of tenure of those premises. I know the site for the proposed new building in Sturt-street, and I consider that it is in every way suitable for the purpose. I do not think that the employees would raise any objection to being removed to a building there. It is only about half a mile from the Flinders-street station, and it cannot be more than a mile or a mile and a quarter from the General Post Office. It hardly comes within my province to say whether it is a suitable site for the storing of material, though I do not think that any great expense would be incurred in storing it there. From the point of view of working costs and convenience, I should think it would be desirable to have the workshops not too far distant from the General Post Office, otherwise certain expenses would be incurred in transportation, &c. In that respect if the proposed building is erected in Sturt-street, the lay-out of the building is purely a matter for the electrical engineer. The matter comes within my province mainly in so far as correspondence about it passes through my branch to the Works and Railways Department.

23. To Senator Payne.—I think it is obvious that for the purposes of the workshop, a building of one or two stories is much to be preferred to a building of

four, five or six stories. It should lead to economy and efficiency. Supervision is an important factor in work of this description, and it would be easier to supervise the work in a single or double story building than in a higher one.

24. To Mr. M. Cameron.—The Chief Electrical Engineer and officers connected with electrical work would consult with the Works and Railways Department's architects in planning a building such as that which it is now proposed to erect. I have not been consulted as to the layout; but, looking at the plans, I should think it would be convenient for the purpose for which it was intended, and it should be suitable from a supervision standpoint. I should think it goes without saying that in planning a building of this description, consideration should be given to possible expansion.

25. To Mr. Seabrook.—We have not yet made a close study to determine whether the present brick and bluestone buildings adjacent to the General Post Office are suitable for use for postal purposes. If they are suitable generally, it should not be necessary to spend much money on them to equip the interior reasonably well. Of course if a new building is necessary, heavy expenditure will be involved. There is a garage and a motor workshop on the site of the proposed new building, and a certain amount of material is stored there. Some material is stored at the present workshops. Occasionally an odd mail table might be made at the workshops, but equipment of that description is usually obtained from outside. I believe that the proposed new building provides for fifteen years' expansion, and that is not unreasonable.

26. To Senator Reid.—The Mail Branch has been cramped for room until the last few days. As I have already said, we have just moved the city delivery section up to the premises in Little Bourke-street and that has left us a good deal of space available in Spencer-street. If mechanical mail handling appliances are installed at Spencer-street, three floors will have to be set apart for them, which would mean that either the parcels section or the space at present given to office room would have to be adapted for the installation of the machinery. The bluestone building may, I think, be reasonably suitable, with certain alterations, for the parcels business, but I do not think that the brick building would be of much use to us. It is necessary in handling parcels to have a large room available. If the parcels section is transferred, or if any of the mail branch goes over into any of the space which is at present being used for workshops, we shall have to use the present yard there as an additional outlet for mail vehicles and parking area. I have not heard that the stores building is too small for the purpose. It would never do to install mechanical machinery to meet merely the present needs. We should have to look to the future to justify any move of that kind.

27. To the Chairman.—The position looks down to that, that owing to the increase in the volume of postal matter at the General Post Office, more room will be required there, and it is necessary that more provision should be made for postal workshops. The removal of the city delivery section has met the immediate needs of the General Post Office, but other accommodation will be necessary within the next two or three years.

28. To Mr. M. Cameron.—I have not yet been supplied with the figures for this year's overseas Christmas mail. We got through very well this year. On account of the publicity that the matter was given, quite a lot of mail matter came to hand in time to be sent by an earlier boat. I am able to say that the figures this year will show a considerable increase upon those of last year.

The witness withdrew.

Otto August Junck, Mechanician, Telephone Workshops, Postal Department, Melbourne, sworn and examined.

29. *To the Chairman.*—I have occupied my present position for the last fifteen years. I am familiar with the conditions which exist in the Spencer-street workshops and, to a less degree, with those which exist at the Jolimont workshops. Generally speaking, two classes of work are performed by the staff at Spencer-street. They do repairs and a certain amount of manufacturing work. They do what reconditioning is required, and also manufacture any special switchboards and other equipment which is not obtainable in the ordinary way from overseas. There are many special switchboards and other apparatus, such as carrier wave and rural automatic switchboards now being made. We also make any special piece of apparatus that is required in connexion with the services. The number of men engaged in the shops is from 220 to 240 inside, and about 220 outside. This is what we call the mobile staff. The outside men would be engaged in such work as is now going on at Elsternwick and Northcote exchanges, and they were engaged on the new automatic exchanges at South Melbourne and Croybury. The men who go from the workshops to subscribers' houses and offices and work for an hour or an hour and a half, would be connected with the inside staff. The maximum number of men would be 400, although I suppose the greatest number who would ever be there would be from 320 to 350. Seventy-five per cent. of the men would be permanent and 25 per cent. temporary. The principal disabilities of the Spencer-street workshops are: they become insufferably hot in the summer; the ventilation is bad; when north winds prevail dust and cinders are blown into the building from the City Council's refuse destructor nearly to such an extent that the whole place becomes covered with dust and cinders; and the building is infested, to some extent, with vermin and rats. At one time it was used as a hide and skin store and the walls were covered with grease. Notwithstanding that the place was thoroughly cleaned before we occupied it in 1914, there was a disagreeable odour perceptible in it for years afterwards. In fact, it is only in the last six or seven years that the smell has not been so distinctly noticeable. I would not say that the place is unhealthy, but it is certainly disagreeable. I always kept rat traps on hand, and at times the City Council's rat trappers visited the place and clean it up. I do not think that the rats are attracted by the leavings from the men's lunches, for they are regularly cleaned up. The lighting of the building is bad. Except on bright sunny days it is necessary to have the electric light switched on, and during winter months artificial light is needed all the time. I do not think that a great deal of money was spent to equip the building for a workshop. The old floors were ripped out and jarrah floors were put in, but the amount of money involved in reconditioning was not great. I cannot speak with authority as to the Jolimont building. I have visited it on a number of occasions, but have never been there for a sufficiently long time to study the conditions there. I have seen the plans for the proposed new building, and, so far as my section is concerned, the accommodation would suit me admirably. It would show a wonderful improvement on what we have now. I cannot speak with special knowledge as to the provision made for the blacksmiths and carpenters. They do not come under my supervision at present, though ultimately they will do so. For I shall be in complete charge of the new building if it is constructed. I have no criticism to offer about the layout of the place. The Stuart-street site is not so central as the one which we now occupy; but it is within a mile of the present building, and the transport facilities to it are good. I do not think that the men complain about having to

go there to work. It will not involve them in any very great additional expense. There was at one time a proposal to build workshops at Spotswood. I was instrumental in making an inquiry to ascertain the effect that the removal of the plant to that suburb would have upon the staff. I found that not more than 10 per cent. of the men lived on that line. The balance of them lived on the eastern, southern and northern lines. Flinders-street station would be a central point for the majority of our men. The proposed building would be sufficiently large to enable us to concentrate the whole of our workshop activities there. If we could do that we should increase our efficiency. The working conditions of the staff are extremely unpleasant in the summer in the present building. In fact most of the men nearly strip to do their work. We have found a number of bugs in the building, but we have almost got rid of them. I should not like to say that a reduction in staff could be effected by removal to the proposed new premises; but that might possibly occur. Special protection is necessary against fire. Our fire risk in the present building is heavy. We have a large number of carpenters working underneath us and wherever there are chips and shavings there is a danger of fire. There was a fire in the workshops about three years ago. I was called in by telephone on Sunday morning, and found that small holes had been burnt through the floor in the north-west corner of the building between the carpenters' floor and ours. That is the only fire that I have known to occur. We have taken what precautions we could against such outbreaks, by providing hoses, sprayers, and so on. We have a watchman patrolling the building externally every hour. Sprinklers are not of much use to us, because they are likely to do considerable damage to our electrical apparatus if they should be turned on. In fact they would probably do more damage than the fire would do. What we aim at in connexion with all our electrical apparatus and telephone equipment is dryness. I would approve of a large number of buckets of sand being distributed throughout the building for extinguishing fires, for sand would smother a fire and yet not damage the equipment, for it could be blown out. We would occupy the first floor in the new building. The ground floor would be occupied by carpenters and blacksmiths. Sprinklers might not do much damage to their equipment, but I wish to make it quite clear that I should offer strong objection to the introduction of a thermostatic sprinkler system, for if by any means the cartridges broke and the water began to sprinkle over the circuit, it is possible that thousands of pounds damage might be done to our equipment. At times we have had £7,000 worth of electrical apparatus stored in our workshops, and it would be disastrous if water should get into it. At present we have a shipment of switchboards made by the Standard Cable and Telephone Co. in our shops for repair. They are under rejection by the post office. We have been trying to dry them out. I do not know how the moisture got into them. It might have been due to bad packing, or to sweating; but they are certainly under the normal standard of insulation which we require. The strange thing is that they are still fluctuating. On a warm day the electrical resistance might rise to 800,000 ohms, but the following day it might fall. It is rising and falling all the time. I suggest that a good hose service should be installed in the new building, for with a hose there is some possibility of directing the water, and I would certainly have plenty of sand available. It is more effective for smothering fire than water. Its value was brought under my notice in 1907 at the Sydney telephone exchange, and I have been a firm advocate of it ever since. If water gets into a piano, or anything of that kind, it is liable to do far more damage than sand, for sand can be blown out. I cannot say positively how the fire occurred in

our present workshop. It may have been caused by the fusing of two wires, or one of the motors used for coil winding may inadvertently have been left running. I patrolled the workshops before they were locked up on the Saturday afternoon, and I did not notice anything amiss. It is possible that an apron may have been thrown over the motor. If the wires fused, the power had to go somewhere, and it would probably burn through. The fire was just under one of the small motors. There is no suspicion that the outbreak was caused by a smouldering cigarette butt or anything of that kind. Even if the engineers were to recommend the installation of sprinklers, I should be against it. I think I would be in a better position than they are to advise on that point, for they might overlook the fact that we frequently have a large quantity of electrical equipment in our shops which would be seriously damaged by water in case the sprinklers should operate at any time. It is quite likely that in our new premises we might have as much as £10,000 worth of electrical apparatus at a given time, and sprinklers could easily damage 50 per cent. of it in a little while. I do not know what policy the department adopts in regard to the employment of night watchmen, but if I were placed in charge of the proposed new building, I should certainly recommend that fire alarms should be installed externally and internally, and that a watchman should patrol the place periodically and have access to all parts of it. I do not think there would be any very great risk of fire in a building of this class, but such risk is there is should be guarded against.

30. *To Mr. M. Cameron.*—There is nothing very inflammable amongst the material that we use. It is principally metal and wood. Our wires are usually enamelled or insulated with silk and cotton, and then steeped in kerosene. There may be some little risk in the kerosene. The floor is swept twice daily, before the men start in the morning and during the lunch hour. The shops are empty at noon daily, and labourers are put on to thoroughly clean the floor. The rubbish on it would be principally wrappings of one kind and another. Whenever an extra large quantity of rubbish is on the floor I direct it to be placed in the bin. Of the 25 per cent. of temporary men engaged by the department, some have been in its employ for about two years. It is an advantage to have a number of temporary hands employed, for they can be put off when work is slack. It is difficult for us to obtain men with the required knowledge for our department. I understand that at present the Public Service Inspector's Office in Melbourne has only six or eight men who are suitable for our purposes, who could be called upon at a moment's notice.

31. *To Mr. Seabrook.*—I have already explained that the men on what I call the mobile staff are engaged principally at suburban exchanges where installations are being made. When a very large number of men are in the workshops at one time, it is not uncommon for us to have three men working in the place that one should be occupying. We were put into the present building temporarily in 1914. For some years before that we had very inadequate accommodation at Elizabeth-street. It is possible that in the event of the new building being erected, the mail branch will occupy the space that we are at present using. It is absolutely necessary for us to get new quarters. The ground floor of the proposed new building will be of concrete, and as the superstructure is to be of concrete, I should think the first floor would be of the same material. In the case of a fire occurring I do not think that the fire brigade should at once pour water into the building, for this will contain valuable electrical equipment. Chemical fire extinguishers could be used, and I have

known fire brigades to use them. There is not very great danger of fire in a concrete building, and if the Fire Brigades Board were notified of the nature of the building and its contents, they would be quite agreeable to use their chemical engine in fighting any fire that might occur within it. If a fire had occurred in our present workshop recently, and water had been poured into it, the Commercial Travellers' Association and the Hotel Alexandria would not have been able to get their switchboards, for they would have been badly damaged. I should certainly be ready to take a matter of this kind up with the fire brigade chief in Melbourne, who is a personal friend of mine. The timber and certain other equipment that we use is at present stored immediately at the back of my office, between the stores building and our workshops. It is stacked there to dry. It is proposed that material of that kind shall be stacked at the new premises. We shall centralise all our stores there, for that would save transport charges. I do not think that the transport charges should be as high for getting material to the new building as they are for getting it to our present quarters, for my headquarters should be closer to the timber merchants and to the wharves. Our work is increasing all the time, and I think that on this account our staff is likely to increase rather than decrease.

32. *To Senator Reid.*—There is always the possibility of fire in buildings where electrical current is used, for wires are likely to fuse at times; but generally the damage is not very great. The fittings are usually damaged more than the building itself. It is very difficult for me to suggest where wires may fuse if this building is erected, for I do not know where our benches and other fittings may be placed. Wires are always in steel conduits. They have been known to fuse, however, through rats gnawing through the coverings. If that occurs an arc may result, especially if the wires are carrying a high voltage. Sprinklers operate automatically when the temperature reaches a certain point. I cannot conceive of the temperature rising to the necessary heat in our workshops. Sprinklers have been known to operate under unusual conditions, and have done a great deal of harm. The fire I have already mentioned is the only one that has occurred in our workshops to my knowledge. Our glue pots are heated over open fireplaces on the ground floor, but great care is always used in respect of the fire there. We have had a certain amount of trouble from the smoke which has blown our way from the railway yards, for there is practically no shelter on the west side of Spencer-street; but our greatest trouble is unquestionably the grime and cinders which get in from the refuse destructor chimney stack when a north wind prevails. If the ventilation is properly arranged in the new building, we should not have the same difficulty that we have to-day. If we found any difficulty in respect of dust and cinders at South Melbourne, we could arrange to have specially delicate work done in a room enclosed with glass partitions. It is not possible for us to do that at present, for we have not the accommodation available. The actual number of permanent men in the workshop who never do outside work is about 100. We aim at giving our men an all-round knowledge, so that at any time they may take up any class of work that we do, but we have a certain number of disabled soldiers and some men doing work that requires particular supervision, and they are not put on outside jobs.

33. *To Senator Payne.*—I have some knowledge of electric thermostat fire alarm systems. I know the May-Otway system. It is so arranged that every 20 feet over the ceiling space there would be a cartridge

with a low melting point on which a wire would fuse when the temperature rose to a certain heat. That would connect with a circuit, and would bring the alarm into operation. The Monbulk cable scheme, which is not very largely used, consists of a fusible cable which is spread over large rooms—such as those in warehouses. Every evening the cable is paid out, and if a fire occurs it burns through at the low floor heat and so gives the alarm. Sprinklers can be adjusted so as to operate at a temperature of about 90 degrees. The operation of the sprinkler system would be much more rapid than that of the alarm system. In large hardware establishments the sprinkler system would be very effective and I should have no objection to it; but it would not be suitable, in my opinion, where the goods stored would be liable to serious damage if water saturated them. As an illustration of the difficulties with which we have to contend at present, let me mention the making of an automatic switchboard for Mount Eliza. I have had to cover it with tarpaulins, and at times the men have had to work under the tarpaulins so that the equipment would not be damaged by dust and cinders. It has been the custom for the department in the last eighteen months to put in a price for various electrical telephone jobs when tenders have been called for such work. For instance, we tendered for the supply of motor generators, and we are just completing an order that we were successful in obtaining. So far our acceptance of this work has not caused any noteworthy increase in our staff. We do not always succeed in securing the work that we seek in this way, but we have obtained several jobs. I have found that it is remarkable how the regularity of our operations may be maintained by taking in jobs of this kind. They seem to fit in when our own work has been slack. We always make adequate allowance for overhead costs when we put in a price for such jobs. During the last three years we have been repairing and reconditioning from 20,000 to 21,000 telephone parts annually; and for the last year, ended June 30th, we manufactured nearly 1,200 switchboards. If we had a better workshop I think we could obtain a good deal more work by putting in a price against outside competitors.

34. To Mr. M. Cameron.—Our material is usually obtained from the department stores, which obtain it from the timber merchants. That double handling is necessary in the interests of correct book-keeping. We keep the timber in our stores for twelve months to dry it out thoroughly. It is possible that in the near future we may be called upon to make a much larger number of small automatic telephone exchanges. If we have temporary labour in the department, we can meet periods of rush work without serious disorganization.

35. To Senator Payne.—When putting in a price for departmental work against outside competitors, I always take care to protect the department against loss. If I did not do so my costing system would soon find me out, and a good deal of shuffling of the figures would be necessary. I do not believe in that kind of thing. Some establishments have better equipment than we have in certain classes of work. About eighteen months ago some ironwork was required for telephone poles. We put in a price which we thought would be sure to bring the work to us, but we found that Messrs. William McPherson and Co., who have an exceptionally fine plant at Burnley, beat us badly.

(Taken at Melbourne.)

SATURDAY, 10th MARCH, 1928.

Present:

Mr. MACKAY, Chairman;

Senator Payne	Mr. Cook
Senator Reid	Mr. Laacy
Mr. M. Cameron	Mr. McGrath.

Thomas Hill, Chief Engineer, Department of Works and Railways, sworn and examined.

36. To the Chairman.—I am aware of the proposal to erect postal workshops at South Melbourne, and am acquainted with the site, which at one time was swamp land. When I was Director of Works for Victoria, we erected on this particular site a two-storey brick building for carpenters' shops. It is adjacent to the old bed of the river. The good material is about 20 feet below the surface, the remainder being silt to within a few feet of the surface. Filling to a depth of 3 or 4 feet has been placed upon it. That was done a good many years ago. It has become well compacted, and within reasonable limits, if the upper filling strata is not disturbed, it is capable of carrying reasonable loads. Test shafts were put down recently to a depth of from 3 to 6 feet. From the information which we then gained, and the knowledge which we had previously, we consider that on the surface, or slightly below it, the ground will carry a weight of 15 cwt. to the square foot. The lower floor of the proposed building will be of concrete, and will rest on the surface. Therefore, any loads on that floor will be distributed over the surface and we shall have to carry only the loads of the outside walls and the first floor. As the first floor will be built on stanchions it would appear as though the foundations will not present any difficulty. Taking the first floor as being loaded with a live load of 100 lb. to the square foot—which is a reasonable factory load—the maximum load we would carry on any of those stanchions would be only about 70 tons, which at 15 cwt. to the square foot, would mean either a 10 x 10 platform of reinforced concrete or four or six piles, 30 feet long, down to the solid strata. It is really a question of which would be the cheaper of the two; but neither would be costly. You can absolutely rely on special precautions being taken in putting down the foundations. They will cost very little more than would be the case in an ordinary locality, and will probably represent only a few per cent. of the total cost of the building. If all other factors are favorable—such as accessibility for workmen from trams or trains, and situation from a postal point of view—there is nothing to prevent a building of this class being erected on the site. As it is Commonwealth property, the cost of acquiring a site, which otherwise would have to be incurred, is saved. I returned to Australia recently from a visit to the United States of America, where I carefully noted the latest ideas in building construction. I found that they are dealing with foundations exactly as we are, with either piles or concrete slabs. I also investigated the use of the sprinkler apparatus as a protection against fire. In the erection of any building the sprinkler apparatus is installed as a part of the building, just as is the electrical service or the ordinary water service. High-class concrete buildings in the heart of New York and Chicago, which have the finest fire-resisting properties and carry very little goods, have the little sprinkler rose in the ceiling. I used to wonder if they had not carried it to excess. The goods they were protecting, as well as being inflammable, were spaced well apart in glass cases. The sprinkler installation is regarded as an essential

in any modern building there. I understand that one witness who gave evidence for the Postal Department opposed the sprinkler on the ground that the water discharged would cause damage. These sprinkler heads discharge at the rate of about 15 gallons a minute. The melting of the sprinkler head causes the water to run. That sets in motion a propeller, which causes an alarm to ring at the fire station. The brigade would be on the scene in three minutes if there should be an outbreak in this building; therefore the extent of the damage by water would be that caused by 45 gallons. If sprinklers were not installed, the damage by fire in the same time would be very much greater. We have been sprinkling all sorts of buildings for many years, and we have not had a case of damage by the inadvertent discharge of water. One or two cases are recorded, in which the mains entering the building burst; but we have no record of any damage caused by a sprinkler having gone off inadvertently. On the other hand we have to our credit the putting out of fires in stores within five minutes by the use of the sprinkler. In a big store in Sydney an employee lit a gas ring to boil his billy. It was connected to the iron pipe on the wall with rubber tubing. That tubing was taken under chairs and tables to a distance of 30 feet from the wall. The man went away to attend to something else. The first intimation he had that there was anything wrong was when the fire brigade entered the building to extinguish the fire. The wind had blown the jet back on to the rubber tubing, which melted, and the flame had gone steadily backwards until it set fire to the furniture. The heat caused the sprinkler to operate. It was fortunate the fire was put out, because it was adjacent to a lot of highly inflammable material. I was there half an hour afterwards, and the only trace of it was a little dampness on the floor and a few injured fittings. Other things, the amount of the destruction might have been in the region of £10,000 or £20,000. Unless for a special reason, such as to prevent burglary, we do not now employ watchmen. The installation of the sprinkler is both more economical and more reliable. A thermostatic fire alarm consists of a bar of metal so placed upon the ceiling that it expands when brought into contact with heat, makes an electrical contact, and gives an alarm at the fire brigade. That happens when the temperature is approximately 160 degrees Fahr. At that temperature also the alloy around the sprinkler head would melt. We have tested thermostats and regard them as a secondary precaution. They are apt to get out of order. Moisture or little particles of dust may collect on the contacts and, though the metal may expand, the electrical contact cannot be made. An instance of the failure of that system is provided by the Lincoln Woollen Mills, which had a fire a little while ago. Had they been protected by sprinklers that fire would have been held in check until the brigade arrived. The thermostat does not give any help other than by raising the alarm. If that does not go off the fire may burn until it makes itself visible to any one outside the building; whereas the sprinkler immediately causes a spray of water to play on the fire, thus keeping it in check until help arrives. Any spread of the blaze causes the next rose to dissolve and add its quota of water. Generally the location of the roses is such that each has a range of 100 square feet of surface. From what I have seen of postal workshops I consider that the fire risk in them is considerable. The disruption to postal or telephone services by the damaging of a number of switchboards must be very considerable. You must take into account not only the value of the equipment, but also the stoppage of business. In a building like this it is difficult to avoid having a large number of sprinkler heads, on account of the arrangement of the beams and

stanchions. If we were to adhere to the rules of the fire underwriters it would be necessary to have 1,020 heads on the two floors, one to every 58 square feet. Since my return, however, I have been in consultation with Mr. H. B. Lee, our Commonwealth fire consultant, with the idea of extending the system and reducing its cost. It can be very greatly reduced without impairing its efficiency or economy of operation. By halving the number of sprinkler heads I could save immediately £800. The size of the pipes, also, I think is excessive. The figure £3,500 for sprinkler installation given in the Minister's reference to Parliament includes a storage tank of 10,000 gallons, with a steel tower approximately 65 feet high, together with the necessary pipes, valves, and other gear. I hope to reduce that amount to something in the vicinity of £2,000 or £2,250 by reducing the size of some of the pipes. The rules provide for a 6-inch main. That is not necessary to supply water to a 4-inch sprinkler. A 3-inch main would do quite as well. Knowing the character of the building and the work which is to be done in it, I would not dream of having anything except sprinkler protection. The water supply will be obtained through pillar hydrants from 6-inch mains in the streets facing the workshops. The pressure should be good, except in very hot weather, when it might drop for a time. Under the sprinkler system it would not be necessary to rely on that supply, as they would have their own tank. The cost of upkeep of the sprinkler system is very little indeed—nothing like £270 a year. It consists of a small payment for inspection every three months—£1 10s. or £3, according to the locality. The maintenance of the thermostatic alarm system is much more costly. The sprinkler system could be extended at any future date so as to include extensions of buildings. The cost would be very slight, because it would not be necessary to duplicate the tank and other appliances. It is proposed to install a goods lift to travel between the ground floor platform and the first floor, a distance of 12 feet. It will be capable of lifting a load of 1 ton. The cage will be approximately 8 feet square, with a height of 10 feet. Consideration has been given to three different types, viz., all electrically operated, hydraulically operated from the City Council hydraulic supply mains, and hydraulically operated from a self-contained pumping plant within the building. The first is not recommended. The cost of installation would be high, the overhead machine room would interfere to some extent with the lighting of the surrounding floor, and the height to which the lift would have to travel does not make for economical running. In other respects also it would be unsuitable for electrical operation. The second proposal would necessitate the extension of the existing pipe in 2 inch for a quarter of a mile at a cost of £1,000. The service would not be entirely satisfactory, and it would be uneconomical. A separate installation would mean the provision of an electrically-driven pump working at a pressure of about 80 lb. to the square inch directly connected to a hydraulic ram sunk in the floor of the building. Quite a number of those have been installed, and are working satisfactorily and economically. You are able to take advantage of cheap electrical current, and you use the same water over and over again. This type presents features of economy in both installation and running that make it desirable. The cost would be £2,000 for types Nos. 1 and 2, and £700 for type No. 3. The cost of running, on the basis of four movements every hour, including interest, depreciation, maintenance, and cost of current, would be £300 per annum for Nos. 1 and 2, and about £150 for No. 3. The electrical supply would be obtained from the mains of the Melbourne Electric Supply Company, in Grant-street. For the

low-pressure apparatus 20 points would be installed; and to meet lighting requirements 220 points, 175 of which would have special arc-shaped reflectors such as are used in all modern workshops. The whole of the installation would be in conformity with the most recent rules and regulations, and would cost in the region of £1,500, made up of main switchboard, £250; distribution boards, £100; feeder cables and conduits, £50; 30 power points, £80; 220 light points £400; 175 special reflectors, £350; and supervision, design, and contingencies, £240. Lighting would probably be charged under tariff A at the rate of 53d. per unit for the first 500 units per month, and 34d. per unit for every unit over that number. Power would probably be charged under tariff C at the following rates:—For all consumption as ascertained between the usual monthly meter readings up to and including 500 kilowatt hours, 24d. per kilowatt hour; for the next 500 kilowatt hours, 24d. per kilowatt hour; for the next 4,000 kilowatt hours, 14d. per kilowatt hour; for the next 15,000 kilowatt hours, 0.9d. per kilowatt hour; for all further consumption, 0.8d. per kilowatt hour. The sewerage of the building is a simple matter; it will be discharged into the main sewers of the Board of Works in the adjacent street.

37. To Senator Payne.—A saving of £200 could be effected by reducing the number of sprinkler heads. The total cost might be brought down to £2,250 by reducing the size of valves and mains throughout the building. No objection could be raised by the local authority. I have the support of Mr. H. B. Lee in this matter. A hydraulic lift would probably be more satisfactory than one which was electrically operated. The hydraulic lift in the Sydney Customs House is far more reliable than the electrical, and the maintenance is lower. In this case, however, there is a rise of only 12 feet. It would be an easy matter to sink a run into the ground and carry the cage on it.

38. To Senator Reid.—The site has a clay bottom, which would hold piles if it were found necessary to drive them. The tops of the piles would be sawn off level. We should then have a reinforced concrete slab connecting the heads of the piles together, the whole making a reinforced platform about 2 feet thick. That would be a foundation for the stanchions in the building. The loads on the foundation walls would not be as great as on those stanchions; they would have to carry only half the span between the wall and the stanchion, whereas the stanchion would have weight exerted on it from both sides. The piles would probably be driven in 4-foot centres. No provision has been made for an additional story. There is plenty of land available to carry out an extension of the same class of building. That would be preferable. It would not be advisable to install a sprinkler system except on a definite basis which embraced the whole of the building. The floor on which the electrical equipment is housed could not be left unprotected. They might at any time alter their arrangements, and inflammable material might be housed in that portion of the building. There is far more danger to be apprehended from fire than from water. I have heard of only one case of a sprinkler alarm being given when there was not a fire, and it was due to the bursting of a pipe. We vary the alloy that encloses the sprinkler head. If more than ordinary heat is likely to be encountered, the alloy is made to withstand 200 degrees Fahr. False alarms sometimes occur, but they are so rare that the brigade does not mind. They really act as a test of the efficiency of the installation. I do not mean that the sprinkler itself goes off. Even if it

should, the brigade would arrive on the scene so quickly that no damage would be caused. With all due deference to the postal people, I do not think they have sufficient experience to give an opinion upon this matter. Mr. Junck in his evidence said that the sprinklers have to be turned on. They have not; they have to be turned off. I have studied the whole matter for years, and have installed the system in Commonwealth properties worth many millions of pounds. I hold very strongly the opinion that this system is the only efficient safeguard. There is considerable danger from fire even in a building such as this (Temple Court), although it has reinforced concrete floors, walls, and ceilings. If a lighted cigarette were thrown into a waste-paper basket and the furniture became ignited, the fire would quickly spread into other portions of the building. The wages of a watchman would amount to more than the interest on the capital outlay of a sprinkler installation, and he would not be nearly so reliable. It is not likely that the lift will be required to carry a load greater than a ton, but provision has been made for cat-heads over the openings of the other doorways to meet cases where heavier weights may have to be hoisted.

39. To Mr. Cook.—Thermostats are not absolutely reliable, but the sprinkler system is. The melting of the sprinkler head releases a spray of water. The difference in cost between the two is £1,500. The proposed building is to have concrete walls, fibrolite roof, steel principals, and a reinforced concrete ground floor. The foundations can be made quite satisfactory without much expense. The work will be done by contract. I would not be prepared to recommend the construction of a building of much greater height on this site. A much heavier class of building would be necessary if it were to have another two floors. I consider the site to be a very good one. There is no other Commonwealth land available anywhere near the city so suitable.

40. To Mr. Lacey.—The rules allow of each sprinkler head covering a floor space of 100 square feet. There would be no risk in adding 16 square feet to that area. At the present stage we would not be justified in incurring expenditure on a full examination of the foundations. Our knowledge of them is sufficient to convince us that they are all right.

41. To Mr. M. Cameron.—There is a two-storied carpenter's shop on the site at the present time. It was built over 20 years ago, and has not cracked. It is hardly as heavy a building as this will be, nor has it such a wide span. The foundations are on 3 ft. 6 in. jarrah planks laid two ways. When they were laid we had no knowledge of reinforced concrete. We would not use them now. The electrically-operated hydraulic lift is the type that I favour, and I believe it will be installed. I am absolutely satisfied that it will be satisfactory.

42. To the Chairman.—No water lies on this land; it has been filled in to a depth of about 3 ft. 6 in. It is absolutely healthy for workmen. Adjacent portions were covered with old boiler plates and other refuse of the rolling mills, but have compacted very well. You would not know it had been a swamp. I have been acquainted with it for over 20 years, and have never heard any objection raised to it. It is free from storm water. The Commonwealth has been in occupation of it for about 30 years.

(Taken at Melbourne.)

TUESDAY, 13TH MARCH, 1922.

Present:

Mr. MACRAE, Chairman;

Senator Payne Mr. Cook

Senator Reid Mr. Lacey

Mr. M. Cameron Mr. McGrath.

John Smith Murdoch, Director-General of Works, sworn and examined.

43. To the Chairman.—I am responsible for the plans of the proposed postal workshops, South Melbourne. The scheme now under consideration is not that which was placed before Parliament by the Minister for Works. That was in respect of a building on State-owned land in Grant, Moore, and MacGowan streets, South Melbourne. Before this committee began to investigate that particular scheme certain negotiations were commenced with the State Government concerning the tenure of the land, and consideration of the matter was deferred for the time. Because of the difficulty of obtaining a suitable tenure of the State land, the Postmaster-General's Department considered the possibility of providing a different building on Commonwealth-owned land in Sturt and Dadds streets. The new building scheme which was then evolved is now before the committee. It is more comprehensive than the original scheme, and on account of the difference in the site takes an altogether different form. For example, the estimated cost of the original scheme was about £40,000, and provided for a working space of 50,000 square feet, whereas in the scheme now before you the estimated cost, inclusive of engineering services, is about £60,000, and will provide for an approximate gross floor area of 61,650 super. feet. In addition to that floor area the scheme is capable of expansion to a gross floor capacity of 125,950 super. feet; but it is unlikely that extensions other than those embraced by the first portion of the scheme that is being investigated by you will be required for many years. The site was automatically transferred to the Commonwealth at the inauguration of Federation, in accord with the provisions of the Constitution. Up till now the property has been used for stabling, motor garage, cable testing, storage of cables, and a number of other purposes. There are a number of different varieties of structure upon it, some being of brick, others of wood, and still others of galvanized iron. While they are not particularly useful to the building scheme now in contemplation, they will not need to be removed, because it is proposed that the first section of the new building shall be placed upon the site in such a way that they will not be interfered with. The site has a frontage of 463 feet to Sturt-street, 346 ft. 9 in. to Grant-street, 297 ft. 8 in. to Dadds-street, and 297 feet to the neighbouring property, and its total area is about 2½ acres. From a building point of view it is satisfactory, and with respect to its capacity to bear building loads it is superior to the site for which the first scheme was planned. Being an important site from the point of view of the future requirements of the Postmaster-General's Department, any scheme for building upon it should be approached with a view to providing a structure that could be developed in a convenient and natural way so as to obtain a maximum amount of floor space. The committee has inspected both sites, and is acquainted with the shape of this one and the buildings already erected upon it. It became apparent that, if the most were to be made of it, it would be advisable to erect a two-storied building with, as far as possible, open working floors. With that object in view, it was decided to adopt a width of 80 feet; for,

the building being of two stories, light from the ground floor could not be obtained from above, and therefore would have to be obtained from the side walls. With a width of 80 feet, light must penetrate for a distance of 40 feet from each side. That is an adequate, a usual, and a good working width to adopt. With this side lighting, it will be necessary for the exterior walls to provide the largest possible window area. Such provision is a feature in modern workshops. The ground floor will be left as free as possible of obstruction; only two rows of stanchions, about 27 feet apart, are to be introduced to support the upper floor. The latter, if it is intended, will be spanned the full 80 feet with steel roof trusses, without any obstruction whatever. The walls of the lower floor will have a height of 15 feet, and those of the upper floor 11 feet. I have already said that the gross area of the two floors, together with two small mezzanine floors that are to be introduced for locker and lavatory purposes, will total about 61,650 super. feet. The suitability of the site for building purposes has been investigated. It was ascertained that at some period the land was filled in to a depth of about 3 ft. 6 in. Below that filling the natural silt appears. The excavation was dry to a depth of about 3 feet, and started to make water at a depth of about 4 ft. 3 in. The department is of the opinion that the foundation is safe for a building load of 15 cwt. to the square foot, and the shallower foundation is kept the better it will be. Additional information regarding the bearing capacity of the site was obtained from a study of a heavy two-storied brick building which was erected on it some 30 years ago. That building shows no signs of subsidence, cracking, and its dead load has been calculated at about 15 cwt. to the square foot.

44. To Mr. McGrath.—With the proposed building we shall have to make the foundation deeper and sufficient area to distribute the weight that the load will be not greater than 15 cwt. to the square foot.

45. To the Chairman.—This heavy brick building that is already erected is set on redgum planks, not concrete foundations. We propose to adopt modern methods of construction, and shall therefore have reinforced concrete foundations. So that the load upon the foundations may be as light as possible, it is proposed that the skeleton of the building shall be of rolled steel construction, and the walling of concrete about 6 inches thick, though the walls will have little weight in themselves, because they will be pierced over practically their whole area with window openings. It is proposed that the construction of the ground floor shall be of reinforced concrete, and that the first floor of hardwood joists. Although possibly they present a greater fire risk than a concrete floor having regard to the lower cost the department is of the opinion that that construction is advisable and quite safe enough, with the adoption of some means of fire prevention. Even had it been proposed to make the first floor of concrete, protection from fire in some form would still have been essential. It is proposed to cover the roof with Australian-made corrugated fibrolite sheets. The committee is familiar with that construction, because it has been adopted in certain other works of the department, notably the aircraft depot at Laverton. It will make a cooler roof than iron, and the condensation which would take place on the inner surface of iron will be avoided. Thus an inner lining will not be necessary. Fibrolite is waterproof, and just as fireproof as galvanized iron. It is made in exactly the same form as the iron sheets and erected in the same way. Depending upon the means of fire protection which may be adopted will be the question whether the ground floor should be protected with any form of ceiling. The department's estimate

has been arrived at on the basis of the adoption of the sprinkler system. If that system is installed a ceiling will not be required for the ground floor; but should the automatic thermostatic system be adopted it will probably be advisable to provide a ceiling for that floor. A ceiling of corrugated galvanised iron would cost about £900. To construct the first floor in concrete would add probably £10,000 to the cost. I can see no justification for it. Certain varieties of Australian hardwoods are so fire-resisting, that a great deal of dependence can be placed upon them.

46. *To Senator Payne.*—If the first floor were constructed in concrete the area of the foundations would have to be increased, and a greater number of stanchions would be required in the ground floor, which would mean more obstruction. The freer from obstruction we keep the ground floor the better.

47. *To the Chairman.*—It is proposed that the window frames shall be of steel, and the glazing of rolled plate reinforced with wire-netting for fire prevention purposes. The officials of the Postmaster-General's Department have studied the purposes to which the floor space is to be applied, and have been in consultation with the Department of Works and Railways. It is intended to make provision on the ground floor for an iron-working shop, a coachbuilding shop, a motor lorry and repair shop, a cycle building and repair shop, a carpenters' and joiners' shop, and a paint shop. I do not think it is the intention to introduce anything in the nature of libraries, or at least not to any great extent, the idea being to have a large open workshop. There will be no danger of the paints being affected by dust from the adjoining carpenter's shop. The dust and other disabilities that are encountered in old shops will be avoided. The bulk of the floor space on the upper floor will be devoted to telephone and telegraph workshops, with smaller rooms partitioned off for administrative staffs, such as those of the engineer in charge and the costing clerks. In addition, there will be rooms for clock repairers, locksmiths, cord repairers, and coil winders. On this floor also there will be luncheon rooms for male and female staffs. Access to the building for the workmen will be through two entrances, one at each end of the structure. They will communicate with the upper floor by means of concrete stairs. Those staircases will give access to the locker rooms on the ground and first floors, the dimensions of which are 20 by 18 feet, as well as to locker rooms on the mezzanine floors half way up the staircases. Similarly, access will be given by each staircase to six sets of lavatories, three on the ground floor and three on the first floor. An additional lavatory for female use is to be introduced in association with a staff entrance and staircase placed at the angle of Dodds and Grant streets. This staff entrance will be used by the public who do business with the workshops, because obviously it would be undesirable for them to be allowed to use the entrances provided for the workmen. There is an entrance at each end of the building, and in the middle at the corner of Dodds and Grant streets. Communication between the floors will be provided also by a lift. In addition to the entrances for workmen, staff, and public, doors for goods and materials will be provided, one each in Grant and Dodds streets, and four facing the courtyard. The courtyard entrances will have cat-heads for hoisting heavy goods to the upper floor. The courtyard will be an important adjunct to the building, as large quantities of material will have to be stored there. In the lay-out of the building and the provision for future extension, care has been taken to see that an ample courtyard will be left when all building development has taken place. The area of the courtyard will be about 70,000 super. feet. The estimated cost of the

building complete with drainage, sewerage, and electric light, but not including electric power, is £54,000. Other items of expenditure are—an electric goods elevator to serve two floors, £2,500; and the installation of a sprinkler system for that portion which is to be immediately erected, £3,500. These items bring the total estimated cost to £60,000. After approval has been given to the preparation of complete drawings, two years will be occupied in making the building ready for occupation. The urgency of the work has been obvious for many years. This is the third occasion on which a scheme to provide postal workshops for Melbourne has been before the committee. On the first occasion it was proposed to erect a building in Spencer street, alongside the General Post Office. The postal workshops at the present time are in two locations. Both premises are altogether inadequate, and were never intended to be used for this purpose. Doubtless a good deal of effort is being wasted thereby. The suitability of the building now planned cannot be doubted. It provides for the maximum amount of well-lighted and well-ventilated floor space. No difficulties are to be apprehended in regard to either sewerage or water supply. Only light machines will be housed in the building. I take it the machines they have in use at the present time will be transferred there. The Chief Electrical Engineer is of the opinion that an automatic thermostatic fire alarm would meet all requirements, for the reasons that the fire brigade is distant only a mile or so from the site, and that it is not proposed to store in the building large quantities of inflammable material. The Department of Works and Railways supports the opinion of its consultant, Mr. Lee, that the sprinkler system is a better agency for coping with fire risks. My own opinion is that additional security is obtained from the sprinkler system. On the other hand, it is admitted that such a system might cause some damage by water. I assume that the Postmaster-General's Department would have the building watched both night and day. There is a caretaker's cottage on the site, but probably it will have to be removed as the permanent workshop building is extended. A thermostatic alarm would not cost more than £500, and its maintenance would be less than that of the sprinkler system. If it were proposed to store large quantities of valuable and inflammable material in the building, I should have no hesitation in advocating the installation of the sprinkler. Generally speaking, sprinklers are quite effective, but there is always the liability to damage by water. The fire brigade would unhesitatingly advocate the sprinkler. The committee, however, cannot treat lightly the opinion of Mr. Junck, who knows more than any other person what is likely to be stored in the building. I should be inclined to give effect to his desires. Sprinklers would operate only when they were set going by the application of heat, and also would spray only the area within the reach of the jets. A great deal of damage by water can hardly be contemplated. A watchman who was doing his duty properly would turn off the sprinkler immediately he noticed that it was working. If he should happen to be away from the premises, a period of not longer than about five minutes would elapse before the fire brigade would arrive and turn it off.

48. *To Senator Reid.*—I am quite satisfied that the foundations will be all right. They will be as near as possible to the surface, and will be spread out. It is not proposed to make provision for any air space. We shall take care to see that they will not be affected by dampness. Light for the building will be obtained through the roof and windows. It is advisable to make that provision in the roof, because the walls on the upper floor will be only about 11 feet high. The whole of the roof will be open; therefore in the middle of the

floor there will be a height of 31 feet. I do not think that we would be warranted in incurring extra expenditure on a concrete floor. My experience of the behaviour of hardwood floors in a fire has convinced me that they are almost as good as concrete. The sprinkler would be better than the thermostat, but, on the other hand, it is liable to cause damage to articles on the floor. If it is decided not to install the sprinkler, I suggest that the underside joists should be lined with corrugated iron. I should like to see the shop in operation before deciding whether it would be a good thing to have the sprinkler system installed. The thermostatic alarm could be utilized in the meantime.

49. *To the Chairman.*—The sprinkler is not to be installed in the postal workshops at Sydenham, New South Wales. The installation of that system would not remove the necessity to employ watchmen.

50. *To Mr. M. Cameron.*—Redgum or bluegum could be used in this building. Stringybark is not so suitable because of its fibrous nature. Before embark-

ing upon the work of designing buildings such as this we obtain from the postal authorities information in relation to the purposes to which they are to be applied. We then study the site and decide what class of building is most suitable. A little difference of opinion may arise between the two departments in regard to the method to be adopted for fire prevention, but the main physical features of the building are the outcome of a complete understanding between us. It would not be more costly to install the sprinkler system at a later date.

51. *To the Chairman.*—The building will not require any artificial lighting in the day time.

52. *To Senator Payne.*—More damage might be caused by the water used by the fire brigade to extinguish a fire than by that discharged from the sprinklers. Myrtle is a good flooring wood, and can be obtained, but it would probably be dearer than jarrah. In my opinion, jarrah is the best wood for this job. From the point of view of closeness of grain I admit that myrtle cannot be surpassed.