GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

READ—the following paper :—

From the Secretary to the Government of India, Military Department, to the Secretary to the Government of Madras, Public Works Department, dated Simla, the 30th August 1894, No. 2552 M.W.

In reply to your letter No. 854 W., dated the 30th March 1894, I am directed to forward a copy of the correspondence noted in the margin, and to state, for the information of His Excellency the Governor in Council, that the Government of India approve of the remission of the arrears of rent, up to the 31st March 1894, of the Government building in the fort at Tellicherry occupied as an armoury by the Malabar Volunteer Rifles, and sanction a rent of Rs. 7 per mensem being charged for the building with effect from the 1st April 1894, on the condition that, if further expenditure is incurred on improvements, the rent will be raised accordingly.

To Government of Madras, Military Department, No. 1374 M.W., dated 15th May 1894.
From Government of Madras, Military Department, No. 4272, dated 10th July 1894.

2. With reference to the last portion of paragraph 2 of your letter No. 6 W., dated the 2nd January 1894, relative to the debit of Rs. 410 spent on the building in question in 1892–93, I am to observe that the sum now outstanding in Miscellaneous Advances may, under the orders of His Excellency the Governor in Council, be debited to the Military Works grant.

ENCLOSURES.

Copy of a letter from the Secretary to the Government of India, Military Department, to the Secretary to the Government of Madras, Military Department, No. 1374 M.W., dated 15th May 1894.

I am directed to forward the correspondence noted in the margin, relative to the rent of the Government building in the fort at Tellicherry occupied as an armoury by the Malabar Volunteer Rifles.

From Government of Madras, Public Works Department, No. 6 W., dated 2nd January 1894.
To Government of Madras, Public Works Department, No. 249 M.W., dated 20th January 1894.
From Government of Madras, Public Works Department, No. 854 W., dated 20th March 1894.

2. The building is reported to have been occupied by the Malabar Volunteer Rifles rent-free since February 1886, and it is now proposed to charge the corps a rent of Rs. 3-13-4 per mensem, as assessed by the local Public Works Department from 1st April 1893, the date on which the first intimation was given by the Executive Engineer that rent would have to be paid.

3. With reference thereto, I am to state, for the information of His Excellency the Governor in Council, that the capital value of the building calculated in accordance with Public Works Department Code rules, should be Rs. 1,145 as shown in the margin; and that the rent on this sum according to Public Works Department Code, Volume I., Chapter XI., paragraph 28-I., would be calculated as under—

	Rs.
Value of building	550
Cost of site	100
Cost of improvements	450
Establishment at 10 per cent. on additional cost ..	45
Total ..	1,145

	Rs.
4 per cent. interest	46
3 per cent. repairs	34
10 per cent. on repairs outlay for establishment and tools and plant.	3
Total, per annum ...	83

or Rs. $\frac{83}{12}$ = Rs. 7 per mensem, I am to request that, under His Excellency's orders, it may be ascertained whether the corps are in a position to pay this rent.

4. I am to add that the Government of India are willing to remit arrears of rent up to 31st March 1894.

Copy of a letter from the Secretary to the Government of Madras, Military Department, to the Secretary to the Government of India, Military Department, No. 4272, dated 10th July 1894.

I am directed to return the correspondence forwarded with your letter No. 1374 M.W., dated 15th May 1894, and to state, in reply, for the information of the Government of India, that the Malabar Volunteer Rifle corps is willing to pay rent at the rate of Rs. 7 per mensem with effect from the 1st April 1894, for the building in the Tellicherry fort occupied as an armoury.

ORDER—dated 17th September 1894, No. 2342 W., Public Works.

Communicated to the officers concerned, for information and guidance.

(True Extract.)

Under Secy. to Govt., P.W.D.

To the Superintending Engineer, IV. Circle.
„ Examiner, Public Works Accounts.
„ Military Department.

Exd. T. K. Narayana Aiyangar.
Spare Copies

[*For General Distribution.*]

Circular No. 6.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH-WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE PORT STORE-KEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Simla, the 20th August 1894.

Report from the Admiralty on various Beltings which have been tried at Chatham Dockyard.

Copy of the following is forwarded for information.

W. S. S. BISSET, Lieut.-Col., R.E.,
Offg. Director General of Railways.

No. S. 5095, dated 1st June 1894.

From—The Director General of Stores, India Office, London,
To—The Director General of Railways.

I have the honour to forward herewith, for your information, a copy of a report which has been received from the Admiralty on various Beltings which have been tried at Chatham Dockyard.

G. C. Press, Simla.—No. 684 P. W. D.—31-8-94.—680.

The grip of these belts on the pulleys is better than that of leather belts, as proved by the fact that the hair belts under trial are doing the work that required wider leather belts. They can also be used in the open, and retain their grip in all weathers, whereas a wet leather belt slips considerably. Further, uniform motion and steady working is better maintained by their use.

As a long belt can be made with only one joint, as against several required in leather belts, fewer repairs are required.

Considering these as comparative trials, the Lancashire belting appears to be the best.

For the other two kinds, a belt was made up of two pieces, one of Reddaway and one of Rossendale belting, and used to drive a large circular saw. The difference in the wear is very little indeed, but, if anything, is in favour of the Reddaway belt.

There is very little to choose between any of these beltings and leather belts, as far as price is concerned, *for the same width of belt*, but as a hair belt for the same work, is narrower than a leather belt, the advantage is on the side of the hair belts, approximately to the extent of 15 to 20 per cent.

The prices of 4″ and 6″ belting are per foot :—

Lancashire.		Rossendale.		Reddaway.		Leather belts double (per rate book).	
s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
4″—1	5½	1	6	1	6	1	6
6″—2	5	2	6	2	6	2	4½

Submitted that the trial of these beltings be now closed, and that it is not necessary or desirable at present to add any of them to the authorized list of stores, but that permission may be given to demand such quantities as may appear desirable for open non-shifting belting or for other special cases.

The Secretaries to the Governments of Madras, Bombay, Bengal, North Western Provinces and Oudh, and the Punjab, Public Works Department.
The Secretaries to the Chief Commissioners of the Central Provinces, Burma, Assam, and Coorg, Public Works Department.
The Secretary to the Resident at Hyderabad, Public Works Department.
The Secretary to the Resident in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General for Central India, Rajputna, and Baluchistan, Public Works Department.
The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director General of Military Works.
The Chief Engineer, Kashmir.
The Consulting Engineer for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, Central Division, and Assam.

Copy also forwarded to the local Governments and Administrations and to the officers noted on the margin for information.

W. S. S. BISSET, *Lieut.-Col., R.E.,*
Offg. Director-General of Railways.

Documents accompanying.
Nil.

No: 2345 W. dt 18 September 1894
Communicated to offices of the P.W. Department.
(RR) C.H.B.B.
D.W.

G. C. Press, Simla.—No. 684 P. W. D.—31-8-94.—680.

To the Ch. E. for P.
" C.E. for Kyo
" S.E.
" C.A.D. for P.
" Sufw P.P.

CHATHAM YARD.

15th July 1893, No. 1608.

Report on the following Beltings under trial at this yard—

Lancashire Belting.

Reddaway Camel Hair Belting.

Rossendale Patent Edge Camel Hair Belting.

13th July 1893.

The above mentioned beltings have been under trial at this Yard from 8 to 12 months at the following places:—

1. ROSSENDALE BELTING.

(a) **To work new Foundry Rattler.**—This is fitted as an open non-shifting belt, and has worked satisfactorily.

(b) **To work planing Machine in Chief Engineer's Fitting Shop.**—This worked as a shifting belt on fast and loose pulleys, the striking gear was found to rub away the edges rapidly; after a time it was removed, and used to drive a small circular saw for cutting off metal runners in the foundry. It was here worked as an open non-shifting belt and has since worked satisfactorily.

(c) **To work a large lathe at No. 8 Machine shop.**

(d) **To work a large shaping Machine at No. 8 Machine Shop.**—These are non-shifting belts, and have worked satisfactorily.

The patent fasteners received for trial with this belting are found to be very unsatisfactory, and the frequent breaking of these articles is so inconvenient that their use has been discontinued with the trial belts, the joints being now made either by tapping or by leather butts.

2. REDDAWAY BELTING.

(a) **To drive a circular saw at Joiners Shop, Lower Yard.**—This belt connected two shafts at right angles, striking gear being fitted for shifting belt from fast to loose pulley and *vice versâ*.

Leather belts had always given trouble at this place and lasted but a short time, and the Reddaway belt was no better, lasting only 4 months.

(b) **To drive centrifugal pump at Boiler Shop Engine House.**—This is fitted as an open non-shifting belt and is working satisfactorily.

(c) **To work a planing Machine in the Chief Engineer's Fitting Shop.**—This belt works a fast and loose pulley, and the shifting fork has considerably frayed the edges of the belt.

3. LANCASHIRE BELTING.

(a) **To drive a blowing fan at No. 1 Smithery.**—This is a crossed non-shifting strap, and was fitted here for trial as the leather belts ordinarily used were constantly giving trouble. This belt, however, has been running for 8 months and is in very good condition. So far it is a great improvement on the leather belts.

(b) **To drive a circular saw at Joiner's shop, Lower Yard.**—This is a shifting belt, and is working satisfactorily.

(c) **To work a traveller at No. 7 slip.**—This belt has been worked over fast and loose pulleys, with fork striking gear, and has been exposed to the weather.

Leather belts were often troublesome here, on account of slipping when wet.

With the exception of a little fraying at the edges, this belt has worked satisfactorily.

All these beltings shew the same characteristics, *viz.*, that while quite as suitable as leather belting under all circumstances, when used as open non-shifting straps, they are not so suited for crossed belts, on account of the fraying of the edges.

[*For General Distribution.*]

Circular No. 6.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH-WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE PORT STORE-KEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Simla, the 20th August 1894.

Report from the Admiralty on various Beltings which have been tried at Chatham Dockyard.

Copy of the following is forwarded for information.

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Offg. Director General of Railways.

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G. C. Press, Simla.—No. 684 P. W. D.—24-8-94.—40.

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P. W. CURRENT No. 6800

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The Secretaries to the Chief Commissioners of the Central Provinces, Burma, Assam, and Coorg, Public Works Department.
The Secretary to the Resident at Hyderabad, Public Works Department.
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The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, Central Division, and Assam.

Copy also forwarded to the local Governments and Administrations, and to the officers noted on the margin for information.

J. M. Bisset

Lieut.-Col., R.E.,
Officiating Director-General of Railways.

Documents accompanying.
Nil.

G. C. Press, Simla.—No. 684 P. W. D.—24-8-94.—150.

To
The Secretary to the Government of Madras
Public Works Department

[*For General Distribution.*]

Circular No. 6.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH-WESTERN RAILWAY.
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THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
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The Secretary to the Resident at Hyderabad, Public Works Department.
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The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director General of Military Works.
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Copy also forwarded to the local Governments and Administrations and to the officers noted on the margin for information.

W. S. S. BISSET, *Lieut.-Col., R.E.,*
Offg. Director-General of Railways.

No: 2345 S dy 18 September 1894.

Communicated to offices of the P.W.Department
(Sd) C.H.B.B.
D.W.

Documents accompanying.
Nil.

G. C. Press, Simla.—No. 684 P. W. D.—31-8-94.—680.

To Ch. E for I.
C.E. for Kyp
S.E.S.
C.A. & Sot.
Sofar P.C.

Print

Copy of a letter from the Secy: to the Government of India, Military Departt, to the Secy: to the Government of Madras, Military Department, No. 1574 M.W. dated 15th May 1894.

I am directed to forward the correspondence noted in the margin, relative to the rent of the Government building in the Fort at Tellichery occupied as an armoury by the Malabar Volunteer Rifles.

From Government of Madras Public Works Dept No 67 W 82nd Jany 94
To — do — Public Works Department No 249 M.W. 20th Jany 1894
From — do — Public Works Department No 854 W 820/3/94

2 The building is reported to have been occupied by the Malabar Volunteer Rifles rent free since February 1886, and it is now proposed to charge the corps a rent of Rs 3-13-4 per mensem, as assessed by the local Public Works Department from 1st April 1893, the date on which the first intimation was given by the Executive Engr

that

that rent would have to be paid.

3 With reference thereto, I am to state, for the information of His Excellency the Governor in Council, that the capital value of the building calculated in accordance with Public Works Department Code rules should be Rs 1,148 as shown in the margin and that the rent on this sum according to Public Works Department Code Volume I, Chapter XI paragraph 28 I would be calculated as under

	Rs
Value of building	550
Cost of site	100
Cost of improvements	450
Establishment at 10 o/o on all each	45
Total	1145

	Rs
4 o/o interest	46
3 o/o repairs	34
10 o/o on repairs outlay for establt and tools and plant	3
Total Rs	83 per mensem

or Rs $\frac{83}{12}$ = Rs 7 per mensem, I am to request that, under His Excellency's orders it may be ascertained whether the corps are in a position to pay this rent.

4 I am to add, that the Government of India are willing to remit arrears of rent up to 31st March 1894.

Copy of a letter from the Secretary to the Government of Madras, Military Department, to the Secretary to the Government of India Military Department No 4272 & 10th July 1894.

I am directed to return the correspondence forwarded with your letter No. 1374 mw. dated 15th May 1894, and to state, in reply, for the information of the Government of India that the Malabar Volunteer Rifle Corps, is willing to pay rent at the rate of Rs 7 per mensem with effect from the 1st April 1894, for the building in the Tellicherry Fort, occupied as an armoury.

(True copies)

E Blenkinsop
Supdtg Military Departt.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated September, 17th.

Recd. *Encl.*

G.O., 17th Sept. 1894, No. 2342 W.

SEPTEMBER.

Government building in the fort at Tellicherry occupied as an armoury by the Malabar Volunteer Rifles

Letter from the Government of India, approving of the remission of the arrears of rent, up to the 31st March 1894, of the —, and sanctioning a rent of Rs. 7 per mensem being charged for the building with effect from 1st April 1894 on certain condition, communicated to the officers concerned.

Government of Madras.

1894

P. W DEPARTMENT.

CURRENT No. 6800

DISPOSAL.

No. 2345 W dated 18 September 1894

B I
Sept 94

From

The Director General
of Railways

ENCLOS.

No. Cir No: 6 505 C
Dated 20.8.94
Received 10.9.94

SUBJECT.

Beltingo: Submitting copy of report from the Admiralty on various —— which have been tried at Chatham Dockyard.

Communicated to officers of the P.W. Dept

Circ 12/6/94

DESPATCHED
18 SEP. 94

2 copies to Secy

Ch Engr for Circ 25 c
Ch Engr
Exec Engr Rpr
Subs Engr
Ex to Supt
Sof W.P.D.

INDEXED.
1/10

D.C.C
19/9

29—2,000—6-2-94.

O.L.S. 348
R 14/9

Government of Madras.

1894

P. W DEPARTMENT.

CURRENT No. 6800

From

The Director General
of Railways

ENCLOS.

~~No.~~ Cir No: 6 5 0 s/c

Dated 20.8.94

Received 10.9.94

SUBJECT.

Beltingo: Submitting copy of report from the Admiralty on various — which have been tried at Chatham Dockyard.

DISPOSAL.

No. 2345 dated 18th September 1894

B. I. Railway

Communicated to Officers of the P.W. Dept

Circl 12/94

DESPATCHED
18 SEP. 94

2 Copies Documents

Ch. Engr. & Secy. Rly. Bd.
Chief Engr.
Exam. for Rlys.
Engr. in Chief
Supdg. Engrs.
Engr. Officer
Exam. for Ports
Engr. Officer
Sec. to P.W.D.

INDEXED.

D.C.C. 19/9

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As a long belt can be made with only one joint, as against several required in leather belts, fewer repairs are required.

Considering these as comparative trials, the Lancashire belting appears to be the best.

For the other two kinds, a belt was made up of two pieces, one of Reddaway and one of Rossendale belting, and used to drive a large circular saw. The difference in the wear is very little indeed, but, if anything, is in favour of the Reddaway belt.

There is very little to choose between any of these beltings and leather belts, as far as price is concerned, *for the same width of belt*, but as a hair belt for the same work, is narrower than a leather belt, the advantage is on the side of the hair belts, approximately to the extent of 15 to 20 per cent.

The prices of 4″ and 6″ belting are per foot :—

Lancashire.		Rossendale.		Reddaway.		Leather belts double (per rate book).	
s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
4″—1	5½	1	6	1	6	1	6
6″—2	5	2	6	2	6	2	4½

Submitted that the trial of these beltings be now closed, and that it is not necessary or desirable at present to add any of them to the authorized list of stores, but that permission may be given to demand such quantities as may appear desirable for open non-shifting belting or for other special cases.

The Secretaries to the Governments of Madras, Bombay, Bengal, North Western Provinces and Oudh, and the Punjab, Public Works Department.
The Secretaries to the Chief Commissioners of the Central Provinces, Burma, Assam, and Coorg, Public Works Department.
The Secretary to the Resident at Hyderabad, Public Works Department.
The Secretary to the Resident in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General for Central India, Rajputna, and Baluchistan, Public Works Department.
The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director General of Military Works.
The Chief Engineer, Kashmir.
The Consulting Engineer for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, Central Division, and Assam.

Copy also forwarded to the local Governments and Administrations and to the officers noted on the margin for information.

W. S. S. BISSET, *Lieut.-Col., R.E.,*
Offg. Director-General of Railways.

Documents accompanying.
Nil.

No: 2345 W. dy 18 September 1894
Communicated to officers of the P.W. Department.
(LR) C.H.B.B.
D.W.

G. C. Press, Simla.—No. 684 P. W. D.—31-8-94.—680.

To The Ch. E. for P
" CE for Rys
" SE S
" CE Port
" Supt W PP

[*For General Distribution.*]

Circular No. 6.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH-WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE PORT STORE-KEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Simla, the 20th August 1894.

Report from the Admiralty on various Beltings which have been tried at Chatham Dockyard.

Copy of the following is forwarded for information.

W. S. S. BISSET, Lieut.-Col., R.E.,
Offg. Director General of Railways.

No. S. 5095, dated 1st June 1894.

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CHATHAM YARD.

15th July 1893, No. 1608.

Report on the following Beltings under trial at this yard—

Lancashire Belting.

Reddaway Camel Hair Belting.

Rossendale Patent Edge Camel Hair Belting.

13th July 1893.

The above mentioned beltings have been under trial at this Yard from 8 to 12 months at the following places:—

1. ROSSENDALE BELTING.

(a) **To work new Foundry Rattler.**—This is fitted as an open non-shifting belt, and has worked satisfactorily.

(b) **To work planing Machine in Chief Engineer's Fitting Shop.**—This worked as a shifting belt on fast and loose pulleys, the striking gear was found to rub away the edges rapidly; after a time it was removed, and used to drive a small circular saw for cutting off metal runners in the foundry. It was here worked as an open non-shifting belt and has since worked satisfactorily.

(c) **To work a large lathe at No. 8 Machine shop.**

(d) **To work a large shaping Machine at No. 8 Machine Shop.**—These are non-shifting belts, and have worked satisfactorily.

The patent fasteners received for trial with this belting are found to be very unsatisfactory, and the frequent breaking of these articles is so inconvenient that their use has been discontinued with the trial belts, the joints being now made either by tapping or by leather butts.

2. REDDAWAY BELTING.

(a) **To drive a circular saw at Joiners Shop, Lower Yard.**—This belt connected two shafts at right angles, striking gear being fitted for shifting belt from fast to loose pulley and *vice versa*.

Leather belts had always given trouble at this place and lasted but a short time, and the Reddaway belt was no better, lasting only 4 months.

(b) **To drive centrifugal pump at Boiler Shop Engine House.**—This is fitted as an open non-shifting belt and is working satisfactorily.

(c) **To work a planing Machine in the Chief Engineer's Fitting Shop.**—This belt works a fast and loose pulley, and the shifting fork has considerably frayed the edges of the belt.

3. LANCASHIRE BELTING.

(a) **To drive a blowing fan at No. 1 Smithery.**—This is a crossed non-shifting strap, and was fitted here for trial as the leather belts ordinarily used were constantly giving trouble. This belt, however, has been running for 8 months and is in very good condition. So far it is a great improvement on the leather belts.

(b) **To drive a circular saw at Joiner's shop, Lower Yard.**—This is a shifting belt, and is working satisfactorily.

(c) **To work a traveller at No. 7 slip.**—This belt has been worked over fast and loose pulleys, with fork striking gear, and has been exposed to the weather.

Leather belts were often troublesome here, on account of slipping when wet.

With the exception of a little fraying at the edges, this belt has worked satisfactorily.

All these beltings shew the same characteristics, *viz.*, that while quite as suitable as leather belting under all circumstances, when used as open non-shifting straps, they are not so suited for crossed belts, on account of the fraying of the edges.

P. W. CURRENT No. 6800

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Lieut.-Col., R.E.,
Officiating Director-General of Railways.

Documents accompanying.
Nil.

G. C. Press, Simla.—No. 684 P. W. D.—24-8-94.—150.

To
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D.W.

Documents accompanying.
Nil.

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To Ch. E. for I.
C.E. for Rly
S.E.S.
C.A. & Sort
So far P.P.