

Public Works (1890) Department.

RAILWAY BRANCH.

G.O., No. 696 Ry.

DATED 20th May

[Despatch Abstract.]

Rate list Class E. Rolling stock for 1884.—

Circular from the Govt of India forwarding,
Communicated to the Consulting Engineer
for Railways.

82. Mrs. 743 R of 10. 9. 88
B 696 R of 20 May/90

THE DIRECTOR GENERAL
OF RAILWAYS,

Circular No. 20.

Dated Simla, the 27th March 1890.

Received 6-5-90.

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w for 10

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No 696 R of 20th May/90-

RATE LIST FOR CLASS E, STATE RAILWAY
STORES.

"Rolling Stock" for 1887.

[*General Distribution.*]

Circular No. 20.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE DIRECTOR, NORTH WESTERN RAILWAY.

THE MANAGER, OUDH AND ROHILKHAND RAILWAY.

THE SUPERINTENDENT, WAY AND WORKS, CHAMAN EXTENSION.

THE ENGINEER-IN-CHIEF, MOGULSARAI-HOWRAH RAILWAY.

THE PORT STOREKEEPER, STATE RAILWAY SURVEY DEPARTMENT, CALCUTTA.

Rate List for Class E, State Railway Stores—"Rolling Stock"
for 1887.

Simla, the 27th March 1890.

SIR,

In continuation of my Circular No. 8 of the 31st July 1888, I have the honour to forward herewith for information and guidance a printed statement showing the actual rates, *free on board*, in England for Rolling Stock, (State Railway Stores, "E class") contracted for by the Stores Department of the India Office during 1887.

I have the honour to be,

SIR,

Your most obedient servant,

E. H. STONE,

for Director General of Railways.

Documents accompanying.

Rate List, "Class E," Rolling Stock, for
1887.

The Secretaries to the Governments of Madras, Bombay, Bengal, the 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 Secretaries to the Residents, Hyderabad and Mysore, Public Works Department.

The Secretaries to the Agents to the Governor General, Rajputana, Central India, and Baluchistan, Public Works Department.

The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.

The Director General of Telegraphs.

The Inspector General of Military Works.

The Accountant General, Public Works Department.

The Comptroller General.

The Accountant General, Bengal.

The Consulting Engineers for Railways, Madras and Bombay.

The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.

The Agent and General Manager, Assam Railways and Trading Company, Limited.

Copy forwarded to
the Local Govern-
ments, Administra-
tions and Officers
noted in the margin,
for information.

J. B. Herbert

for Director General of Railways.

How 2/4/90

To
The joint Secretary to the Government of Madras,
(Railway Branch) Public Works Department.

5/4/90
Transferred

Rev. Secy
4268/90

Enclosure to Director General of Railways' Circular No. 20 of 1890.

RATE LIST.

CLASS E.

ROLLING-STOCK.

1887.

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CLASS E.
ROLLING STOCK.
a.—LOCOMOTIVES.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES.

FOR 5' 6" GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FEES ON BOARD.				REMARKS.
			Amount.			Unit.	
			£	s.	d.		
390	Engines (Locomotive).	Of the A1t system, of about 54 tons service weight, able to haul 135 tons of train load up gradients of 1 in 20 and round curves of 600' radius, with a velocity of 61 miles to the hour	3,175	0	0	Each.	
513		Tank, eight wheels coupled	2,325	0	0	"	
		GENERAL DIMENSIONS AS FOLLOWS :—					
		Cylinders, 18" X 26"	...	...	...	...	...
		Diameter of wheels (all coupled), 4' 0"	...	...	...	...	...
		Wheel base, 14' 3"	...	...	...	...	...
		Working steam pressure, 160 lbs. per square inch	...	...	...	...	...
		Heating surface tubes, 1,100 square ft.	...	...	...	...	...
		" " fire-box, 107 "	...	...	...	...	...
		Grate area 22 "	...	...	...	...	...
		Total weight in working order, 58 tons	...	...	...	...	...
		Capacity of tanks, 1,500 gallons	...	...	...	...	...
		Length of tubes, 12' 7" between plates, fire-box to be 4' 9" wide	...	...	...	...	...
		Bearing springs to be under axle boxes	...	...	...	...	...

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVE—*contd.*
 FOR 5' 6" GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
E1140	Engines (Locomotive)— <i>contd.</i>	GENERAL DIMENSIONS— <i>contd.</i> :— Boiler to be fitted with two steam domes Top of fire-box to be inclined and front end of tubes to be lowered Boiler shell and barrel plates and copper fire-box plates to be $\frac{3}{16}$ " thick Leading and trailing axle boxes to have $\frac{3}{4}$ " side play either way Steam, hand and chatelier brakes to be provided Complete, with tender, class H, Dubs & Company <i>Engines.</i> Diameter of cylinder, 16" Length of stroke, 24" Diameter of coupled wheels, 5' 0" Diameter of bogie wheels, 2' 9" Total wheel base, 19' 3" Working steam pressure per square inch, 140 lbs. Heating surface, external tubes, 885.5 sq. ft.	£	s.	d.	
			1,810*	0	0	* Engine ... £ 4 0 Tender ... 1,456 0 0 TOTAL ... 354 0 0 1,810 0 0

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*contd.*
 FOR 5' 6" GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
E1140— <i>contd.</i>	Engines (Locomotive)— <i>contd.</i>	Heating surface fire-box, 83.5 sq. ft. Grate surface, 14½ sq. ft. <i>Tenders.</i> Number of wheels, six Wheel base, 11' Diameter of wheels, 3' 7" Capacity of tank, 1,700 gallons	£	s.	d.	
			73	10	0	Each.
1132.	Axles.	Driving ... Leading ... Trailing ...	13	0	0	"
1138	Axle boxes...	Bogie wiper, for Locomotives, H. B. class	11	0	0	"
1142	Bars slide ...	With slide blocks, slide brackets, cross heads, and all bolts, complete	3	14	4	Each.
	Blocks ...	For expansion links	34	10	0	Set.
			1	0	0	Each.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.
 FOR 5' 6" GAUGE RAILWAYS.
 Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
E1142	Cocks.	Cylinder } For Kitson & Company's engines ... Tallow }	£	s.	d.	Each.	
			0	12	6	"	
E1141	Coupling rods	Coupling rods for Sharp Stewart & Company's engines ...	33	10	0	½ Set.	
E1143	Cylinders...	Complete with covers, glands, bolts and nuts for Messrs. Kitson & Company's engines	69	0	0	Pair.	
E1138	Glasses, spectacle.	White, circular— 13½" X ⅜" thick... 13½" X ⅜" " 15" X ⅜" " 16½" X ⅜" "					
185	Indicator speed.	For designing and supplying special gearing for locomotive speed indicator ordered on Contract E-719, dated 7th February 1884 ... For packing of ditto ... ,, additional carriage ...	15	0	0		
			2	0	0		
			0	15	9		

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.
 FOR 5' 6" GAUGE RAILWAYS.
 Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
E1141	Injectors.	No. 10 M. M. Gresham's self-starting, for Messrs. Sharp Stewart and Company's engines	£	s.	d.	Each.	
E1138		With cones, H. class— Right hand ... Left "	14	0	0		
		With cones, H. B. class— Right hand ... Left "	7	14	2	"	
E1142		Expansion ... Blocks for expansion ... Hangers for "	2	15	0	Each.	
	Links.	For Messrs. Kitson and Company's engines	0	7	6	"	
			1	0	0	"	
E1138	Lubricators	Roseve's ... Furnace's ...	1	0	10	Each.	
			0	14	10	"	

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.

For 5' 6" GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.		Unit.	
			£	s.	d.	
E1153	Tyres ...	Steel driving	3	14	4	Each.
		" leading				
		Wheels, driving	15	5	0	Pair.
		" leading	15	5	0	"
132		" trailing	11	0	0	"
		For Messrs. Kitson's engines				
E1142	Valves ...	Slide with bridges, for Messrs. Kitson & Company's engines	4	15	0	Each.
132	Wheels and axles.	Complete with tyres for tender, for Messrs. Kitson & Company's engines	87	0	0	Set.
1141	"	Cranked, driving, for Messrs. Sharp Stewart & Company's engines	139	0	0	Pair.
E1142	Wheels ...	Driving, and steel axle cranked, for Messrs. Kitson & Company's engines	70	0	0	Set.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.

For METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.		Unit.	
			£	s.	d.	
80	Engines (Locomotive).	Complete, with tender and all lamps, Class F	1,070*	0	0	* Engine Tender
		General Dimensions of Engines:—				
		Diameter of cylinder, 14"				
		Length of stroke, 20"				
		Diameter of wheels, 3' 6½"				
		Wheel base, 11'				
		Working steam pressure, per square inch, 140 lbs.				
		Heating surface, external tubes, 590 sq. ft.				
		" " fire-box, 59 sq. ft.				
		Grate surface, 12 sq. ft.				
		Tenders.				
		Number of wheels, six				
		Wheel base, 7' 10½"				
		Diameter of wheels, 2' 1½"				
		Capacity of tank, 1,000 gallons				
		For duplicates for above, vide Appendix...				
						Total
						£ 885 18s 10d
						£ 1,070

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	DETAILS.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
427	Engines (Locomotive)—contd.	For adding wrought-iron stays to leading end and counterbalance weights at the trailing end of each of the engines included in Contract No. 80 (above) ...	£ 10	0	0	Per engine.
481		F Class, complete with tender ...	1,060*	0	0	Each.
		GENERAL DIMENSIONS AS FOLLOWS:—				
		Engine.				
		Diameter of cylinder, 14" ...				
		Length of stroke, 20" ...				
		Diameter of wheels, 2' 6½" ...				
		Wheel base, 11' ...				
		Working steam pressure per square inch, 140 lbs. ...				
		Heating surface, external tubes, 590 sq. ft. ...				
		Ditto ditto fire-box, 59 sq. ft. ...				
		Grate surface, 12 sq. ft. ...				
	Tender.	Number of wheels, six ...				
		Wheel base, 7' 10½" ...				
			£	s.	d.	
			10	0	0	
			1,060*	0	0	
						* Engine Tender
						£ 880
						180

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
481	Engines (Locomotive)—contd.	Diameter of wheels, 2' 13" ...	£	s.	d.	
E1163		Capacity of tank, 1,200 gallons ...	745	0	0	Each.
		Tank, 2' 6" gauge outside cylinder type, carried on four coupled wheels, and Major English's patent two wheeled trailing bogie. Specially designed for running on roughly laid lines and sharp curves. The coupled wheels have also a special arrangement of compensating spring gear ...				3 sets Tracings £ 15.
		GENERAL DIMENSIONS.				
		Cylinders, diameter 8¼", stroke 12" ...				
		Coupled wheels, diameter 22" ...				
		Coupled wheel base, 4' 0" ...				
		Total wheel base, 8' 10" ...				
		Heating surface in fire-box ...				
		" " in tubes ...				
		Grate area, 4'4 square feet ...				
		Tank capacity, 200 gallons ...				
		Coal bunker capacity, 15 cubic feet				
		Weight in working order, 10½ tons				

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*contd.*
 FOR METRE GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
			£	s.	d.		
E1163	(Engines Locomotive)— <i>contd.</i>	Duplicates for above (<i>vide</i> Appendix B)	65	0	0	Lot.	
E1157	Axles ...	Wrought-iron, driving { " " leading { " " trailing { Rough turned	3	3	5	Each.	
E1163	Bars fire ...	For Locomotives 2' 6" gauge by Fowler and Company	1	5	0	Set.	
388	Bars Slide	For F class engines, built by the Vulcan Foundry Company	2	1	8	Each.	
387		For A class engines, built by Hawthorn and Company	6	0	0	"	
398		For O class engines, built by Neilson and Company	2	0	6	"	
333	Boiler barrel	Ready rivetted, excluding dome, junction with smoke and fire-box (not to be drilled; this will be done locally); necessary rivets to be supplied for ends of barrel. For F class engines, makers Dubs and Company	35	0	0	Each.	
387	Brake gear {	Hand, complete, for A class engines by Hawthorn and Company	32	13	6	Set.	
398		Hand, complete, for tender O class engine by Neilson and Company	21	5	0	"	

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*contd.*
 FOR METRE GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
388	Brake Gear.	Steam, for F class engines by the Vulcan Foundry Company as under:— Brake cylinder with piston head and packing ring, gland, neck ring, escape valve	£ 4	s. 5	d. 0	Each.
		Cross beam, connection to brake piston rod, with socket piece and nut	1	12	6	"
		Springs for brake, 1' 0 1/4" long	0	1	8	"
		Steam, for O class engines by Neilson & Company, as under:— 1 Brake cylinder with piston head and packing ring, gland, neck ring, escape valve	23	12	6	Lot.
388	Brackets ...	1 Cross beam				
		1 " centre rod with four nuts and one joint pin				
	Engines (Locomotive)—Spare parts of—could.	1 " connection to brake piston rod with socket piece and nut				
		2 springs for brake 1' 0 1/4" long				
		4 Brake hangers				
		1 Set of brake pins				
388	Brackets ...	Buffer Tender (E class) } Vulcan Foundry Company	0	11	8	Each.
		" " (F ") }	0	13	2	"
288	Brasses ...	Little end	0	7	7 1/2	Each.
		Connecting rod } For engine by Manning, Wardle and Company	0	14	3	"
		Big end	1	0	4 1/2	"

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*contd.*

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
387	Coupling rods.	Complete for A class engines by Hawthorn and Company ...	£ 8	s. 12	d. 9	Each.
504	Crank arms ...	Driving, crucible cast steel forging, complete with washers and pins, to be machined all over, ready to drive on to axle, to fit engines class A by Dubs and Company ...	4	10	0	Each.
E1162	Crank arms	Steel, for driving wheels } For Dubs and Company's engines, to be rough machined " trailing " } all over and bored.	8	0	0	Each.
			8	0	0	"
398	Eccentric rods.	2 fore gear } For O class engines by Neilson and Company 2 back gear }	5	15	6	Lot.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*contd.*

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
387	Eccentric sheaves and rods.	2 sheaves } 2 rods, fore gear } For A class engines by Hawthorn and Company 2 " back " }	34	0	0	Lot.
398	Eccentric sheaves.	For O class engines, built by Neilson & Company ...	1	10	3	Each.
388		For E class engines, built by the Vulcan Foundry Company ...	1	11	8	"
288		For engines, built by Manning, Wardle & Company, of Leeds ...	1	6	8	"
288	Eccentric straps.	For engine No. 686, built by Manning, Wardle & Company, of Leeds ...	2	6	8	Pair.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.
FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
464	Gauge Steam	To show 200 lbs. Steel tube, to show 200 lbs. ordinary dial Bonadon steam gauge with a $\frac{1}{8}$ " screw, 16 threads to the inch and $\frac{1}{4}$ " long, the face of the dial to be about $\frac{1}{4}$ "	£ 1	s. 3	d. 9	Each.	
398	Hangers Spring.	4 front 4 hind 2 centre For O class engines, built by Neilson and Company	1	5	0	"	
388		8 front 8 hind 8 centre For F class engines by Vulcan Foundry Company	21	10	6	Lot.	
387		11 For F class engines by Vulcan Foundry Company	11	15	0	Lot.	
388	Horn check clips.	Leading Driving Trailing For A class engines by Hawthorne and Company 2 leading 2 driving 2 trailing For E class engines, built by the Vulcan Foundry Company	5	2	6	Set.	
			2	5	0	Lot.	

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—contd.
FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
398	Horn check clips.	Leading Driving Trailing For O class engines, built by Neilson and Company	£ 3	s. 6	d. 0	Set.	
"		4 front 4 hind 4 centre For E class Engines	1	12	0	"	
888	Horn plate clips.	4 front 4 hind 4 centre For F class engines	2	7	6	Lot.	
263	Injector	Gifford, outsidal $2\frac{3}{16}$ " length, 15" from bottom flange to top	2	5	0	"	
387		Copper, for smoke-box of A class engines by Hawthorne & Company	6	5	0	Each.	
"	Pipes Steam	" main for inside of boiler, for A class engines by Hawthorne & Company	6	0	0	Each.	
388		" min, for inside of boiler, for E class engines by the Vulcan Foundry Com- pany	3	0	0	Set.	
			2	10	0	"	

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*concl.*
 FOR METRE GAUGE RAILWAY.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FEE ON BOARD.			REMARKS.
			Amount.	Unit.		
388	Engines (Locomotive)—Spare Parts of— <i>concl.</i>	Buffer volute for E class engines by Vulcan Foundry Company	£ 0	d. 16	3	Each.
"		" " " " " "	0	16	3	"
"		Draw bar for E " " " "	2	14	9	"
"		" " " " " "	3	0	7½	"
388		" " " " " "	0	16	2	"
288		Steel laminated, for engines by Manning Wardle & Company	3	17	10	Pair.
288	Engines (Locomotive)—Spare Parts of— <i>concl.</i>	Salter's, outside, 2 ½"	1	5	0	Each.
464		Salter's, to be of the ordinary commercial type, 1 ½" diameter and 9' long in spring drawn	0	10	8	Each.
250	Tubes	Boiler (Locomotive), brass, external diameter 11" and 6' 3" long, 11 B. W. G. for W. B. Dick & Company's C class engines. Estimated weight of 100 tubes = 1400 lbs.	0	0	5½	lb.
415	Tubes, boiler brass: Ferrules for—	Locomotive boiler tubes to be made from solid drawn steel tubes of best quality; each ferrule must have a taper of 1 in 16 when finished and be 1 ½" long	0	0	3	Each.

For Kanna Dharla Railway (2' 6" gauge.)

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD a.—LOCOMOTIVES—*concl.*
 FOR METRE GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FEE ON BOARD.			REMARKS.
			Amount.	Unit.		
391	Tyres	Crucible, steel, tender and trailing, for E and F class engines, 1' 8 ¾" inside diameter	£ 1	s. 3	0	Each.
388	Valves	Brake, steam, complete with 2 unions, for F class engines, by the Vulcan Foundry Company	5	4	7	"
398		Brake, steam, complete with two unions, for O class engines, by Neilson & Company	4	19	8	"
398	Valve, buckle	Complete with cross head and cotter, for O class engines, built by the Neilson & Company	2	15	0	Each.
388	"	" " " " " " for E " built by Vulcan Foundry Company	2	16	3	"
388	Valve, spindle, intermediate.	Complete, for E class engine, built by the Vulcan Foundry Company	4	0	0	Each.
288	Valve, spindle, glands	For engine, built by Messrs. Manning, Wardle & Company, Leeds	0	16	0	Each.
288	Wheel centres.	Driving and leading, with crucible steel tyres only, 3 pairs driving and 3 pairs leading. For engines by Manning, Wardle & Company, Leeds	15	18	8	Pair.

CLASS E.
ROLLING-STOCK.

b.—COACHING AND GOODS STOCK.

(1) Complete Vehicles.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b*.—COACHING AND GOODS STOCK—(1) COMPLETE VEHICLES.

FOR 5' 6" GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE OF BOARD.			REMARKS.
			Amount.	Unit.		
338	Brakevan	Underframe and body iron-work, roofing, lavatory and metallic fittings, trimmings, window glass and panel pins	£ 112	s. 5	d. 0	Set.
235	Wagons, covered goods.	Underframes and body steel and ironwork for covered goods wagons complete	84	4	0	Set.
E1163	Ditto	Special type 20 feet long (complete ironwork for)	63	5	0	Set.
435	Cranes	Travelling or accident. The cranes are to be carried on a wrought-iron truck, and suited to lift and stow a weight of 10 tons at a maximum radius of 16 feet from centre of the pillar to the centre of the chain and a maximum height at work of 14' 5" from platform of truck with a loose link motion for lowering the jib	475	0	0	Each.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(1) COMPLETE VEHICLES—*concl.*

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
			£	s.	d.		
138	Brake vans	Underframe and body iron work, lavatory and metallic fittings, trimmings, window-glass for —	52	15	0	Set.	
138		Underframe, underframe and body iron work, lavatory and metallic fittings, trimmings and window-glass for —	79	0	0	"	
"		Underframe, underframe and body steel and ironwork, lavatory and metallic fittings, trimmings and window-glass for (1st and 2nd class,) — with end doors	130	0	0	"	
"	Carriages, composite.	Underframe, underframe and body steel and ironwork, lavatory and metallic fittings, trimmings and window-glass, with end doors for —	131	0	0	"	
"	Carriages, 1st class.	Underframe, underframe and body steel and ironwork, lavatory and metallic fittings, trimmings and window-glass for a second class — with end doors	130	0	0	"	
"	Carriages, 2nd class.	Underframe, underframe and body steel ironwork, trimmings and window-glass for a — without lavatory or metallic fittings	80	0	0	"	
"		Underframe, underframe and body ironwork, metallic fittings and trimmings for — with end doors	56	0	0	"	
310	Carriages, 3rd class.	Underframe, underframe and body iron and steel work, roofing, metallic fittings, trimmings and window glass for —	56	2	0	"	
198	Horse box ...	Underframe and body ironwork, metallic fittings and trimmings for a —	96	0	0	Set.	
198	Post Office carriage.	Underframe, underframe and body iron work, lavatory and metallic fittings, trimmings and window-glass for —	137	0	0	Set.	

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(1) COMPLETE VEHICLES—*concl.*

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.		Unit.	
			£	s.		
214	Wagons. Ballast.	Underframe, underframe and body steel and ironwork for —	33	16	0	Set.
138	Covered goods. Wagon Stock.	Underframe and body steel and ironwork for covered goods wagons 14 feet long, com- plete	36	8	0	Set.
503		Underframe, underframe and body steel and ironwork for — 14 feet long	51	18	2	"
397		Underframe and bogie trucks, underframe and bogie truck and body ironwork for — 25 ft. long	99	2	6	"
395		Underframe and bogie trucks, underframe bogie trucks and body ironwork for — 25 feet long, complete	93	13	6	"
396		Underframe and bogie trucks, underframe bogie truck and body ironwork for one cover- ed goods bogie wagon, 25 feet long, complete	95	17	3	"
214	Cattle Truck	Underframe, underframe and body steel and ironwork for one high-sided wagon, with roof, to be used as —	38	0	0	Set.
214	Timber Truck	Underframe, underframe and body steel and ironwork for —	35	10	0	Set.
17	Cranes Accident	To lift five tons	330	0	0	Each.
"		To lift 10 tons	455	0	0	"

CLASS E.
ROLLING STOCK.

b.—COACHING AND GOODS STOCK.

(2) Ironwork.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b.*—COACHING AND GOODS STOCK—(2) IRON WORK.
 FOR 5' 6" GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FARE ON BOARD.			REMARKS.
			Amount.	Unit.		
E1174	Axle boxes	Complete with gun metal bearings, leather washers and wrought-iron shields and set screws	£ 0	d. 3	Each.	
E1147		With brasses B type				
		" C "				
		" D "	0	14	"	
		" E "				
		" F "				
303		Complete with gun metal bearings, leather washers and wrought-iron shields and set screws	0	15	"	
23		Complete with gun metal bearings, leather washers and wrought-iron shields and set screws. I. S. R. Standard	0	14	"	
E1137	Axle Guards	With bristles and bolts	0	11	"	
E1150	Bogie centres	Cast steel, sets of two castings each	3	7	Set.	
E1137	Brake gear	Complete to drawing E380	12	10	"	
E1173	Chains	Safety with eyebolts and washers	0	12	Each.	

CLASS OF STORES. E.—TOOLS AND STORES, SUB-HEAD *b*.—COACHING AND GOODS STOCK—(2) IRON WORK—*contd.*
 FOR 5' 6" GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FEES ON BOARD.			REMARKS.
			Amount.	Unit.		
1157	Cutters, split	No. 1	£ 0	d. 2 2 1	Dozen.	
"		" 2	0	2 5 1	"	
"		" 3	0	1 5 1	"	
"		" 4	0	1 1 1	"	
"		" 5	0	0 8	"	
"		" 6	0	0 3 1	"	
1173	Draw bar hooks	With washers, &c., complete	1	6	Each.	
1137	Guides, spindle	For buffer, D type	0	10	Each.	
E1150	Links	Swing, with bottom plates, bars, &c.	2	5	Each.	
1137	Iron sheets	Corrugated, galvanized, curved 10' 6" x 2' 6" x 8" pitch x 1" deep. 1 1/2 lbs per square foot	13	2	Ton.	
		" " roofing 8' 6", radius, 11' 6", long x 3" pitch x 1" deep No. 18	14	2	"	
		B. W. G.				

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b*.—COACHING AND GOODS STOCK—(2) IRON WORK—*contd.*
 FOR 5' 6" GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FEES ON BOARD.			REMARKS.
			Amount.	Unit.		
306	Bearing, complete, for wagons	" " " "	1	8	2	Each.
35		wagon with ten plates, with scroll iron pins, &c., complete, stand- ard pattern	0	17	10	"
66		Bearing, with clips for wagon stock, 10 plates, with scroll iron pins, &c., complete	0	17	10	"
314		" with clips for wagon stock	0	8	7	"
E1145		" complete for wagons	0	13	6	"
E1172		" for wagons	0	18	0	"
312	Springs	Buffer, recoil, Timmis'	0	4	9	"
"		" Timmis'	0	19	3	"
E1145		Elliptical, complete	1	17	6	Group.
E1136		Timmis' Patent, unequal section—				
"	B	" " "	0	8	3	Each.
"	B2	" " "	0	9	0	"
"	C	" " "	0	13	0	"

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b.*—COACHING AND GOODS STOCK—(2) IRON WORK—*contd.*

FOR 5' 6" GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
E1136		Timmis patent unequal section—	£	s.	d.	Each.	
		C2	0	14	0	"	
		F	0	4	6	"	
		G	0	15	0	"	
		G2	0	16	6	"	
		H	0	12	6	"	
		H2	0	14	0	"	
		I	0	15	0	"	
		J	0	15	0	"	
		Triple coil, nest	0	10	0	Nest.	
E1145		Volute $9\frac{1}{2}" \times 6\frac{1}{2}" \times 2\frac{1}{2}"$ hole	0	4	9	Each.	
"		Volute	0	6	0	"	
308		Volute, buffer	0	4	6	"	
E1172		" draw	0	5	0	"	

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b.*—COACHING AND GOODS STOCK—(2) IRON WORK—*contd.*

FOR 5' 6" GAUGE RAILWAY.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
491	Tyres	Steel, 3' 2" inside rolled diameter	£	s.	d.	Each.	
			12	2	6	Pair.	
E 1175		For carriages and wagons	12	0	6	"	
E 1143		Ditto	12	2	6	"	
307		Ditto	0	9	9	"	
125		For mining wagons, cast steel	0	12	6	"	
E 1146		" " "	6	12	8	Set.	
E 1156		For Platelayer's light inspection trolleys, to be ground on tread					

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(2) IRON WORK—contd.

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
E 1167	Axles	Steel, for carriages and wagons	£ 1 2 6	Each.		
340	Axle boxes	Complete, with gun metal bearings, washers and wrought-iron shields and set screws	0 8 0	Each.		
341		" " " " " " " "	0 10 0	"		
507		" " " " " " " "	0 10 6	"		
340		" " " " " " " " journals, 6 $\frac{3}{8}$ " $\times$ 2 $\frac{3}{4}$ "	0 8 0	"		
341		" " " " " " " " 7" $\times$ 3"	0 10 0	"		
103	Buffers	Coupling (Jones' flexible) complete, with screw coupling, 1 volute spring, 2 spring sockets.	3 15 6	"		
446		Flexible, and screw couplings for wagons, complete, with steel springs	8 13 5	"		
		Hook, with one volute spring and 2 spring sockets, for Jones' flexible couplings	2 4 3	"		
103	Hooks	Coupling, standard pattern, for Jones' flexible couplings	0 7 11	"		
E 1165	Iron corrugated	Galvanized, for roof 6' $\times$ 2' 2" $\times$ 24" B. W. G. }	11 10 0	Ton.		
		" 7' $\times$ 2' 2" $\times$ 24" " }				

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(2) IRON WORK—contd.

FOR METRE GAUGE RAILWAYS.

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.			REMARKS.
			Amount.	Unit.		
305	Spirals carriage and wagon.	Bearing, carriage, tension	£ 0 17 8	Each.		
"		" " " " " " " "	0 18 9	"		
"		" " " " " " " "	0 17 0	"		
508		" laminated, 7 plates	1 0 3	"		
508		" carriage, laminated 6 plates	1 0 3	"		
305		" for Brake vans	0 18 9	"		
314		" for wagons with clips	0 8 8	"		
E 1189		" laminated	0 9 4	"		
508		" " " " " " " "	0 6 6	"		
305		" " " " " " " "	0 6 8	"		
"	Buffer volute	" " " " " " " "	0 6 3	"		
404		" " " " " " " "	0 8 2	"		
508		" " " " " " " "	0 5 3	"		
446		" " " " " " " " steel	0 7 0	"		
E 1161		Buffer, Spiral, steel, 'Tinnis', 16 $\frac{1}{2}$ " $\times$ 7 $\frac{1}{2}$ " $\times$ 1 $\frac{1}{2}$ "	0 9 0	"		

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b*.—COACHING AND GOODS STOCK—(2) IRON WORK—*concl'd*.
 FOR METRE GAUGE RAILWAYS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				Unit.	REMARKS.
			Amount.					
			£	s.	d.			
155	Tyres	Carriage, steel 9½" wide	1	7	7	Each.	Without flange, in the rough.	
E1164		Wagon "	0	14	10	"		
172	Underframe iron, complete sets.	For third class carriage, 13 feet long, with screw buffer at one end, and buffer with hook riveted in at the other.	36	7	10	Set.		
"		For covered goods wagon, 18 feet long, with buffers, pin, chain and vice handle attachment at one end, and buffer with hook riveted in at the other.	32	11	8	"		
404		For covered goods wagons, 18 feet long, complete with horn guards, and brake gear ...	32	13	0			
E1161	Wheels with axles	Wheels, for carriages and wagons with keys	1	17	6	Each.	Without axles.	
319		Wheels and axles, for carriages and wagons 2' 0½" diameter	4	15	0	Pair.		
514		" " 2' 0½" "	5	16	0	"	Flangeless tyres.	
"		" " " "	5	16	0	"		
320		" " " Journals 6½" X 2½"	4	13	6	"		
337	"	fitted complete wrought-iron bodies and bosses with steel tyres	5	0	0	"	For Bogie wagons, 25 feet long.	

CLASS E.
 ROLLING-STOCK.
b.—COACHING AND GOODS STOCK.
 (3) Metallic and other Fittings.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(3) METALLIC AND
OTHER FITTINGS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	Rate—Per lb. or Board.			Unit.	Remark.
			Amount.	£	s.	d.	
1137	Gauze Glasses, looking...	Iron, wove, plain, 3' wide x 1" mesh. 18" x 18" x 1" in teak wood frames.	0	0	0	2	Sq. ft.
E1159			0	0	17	3	Each.
308	Glass window plate.	Neutral tint 18 1/2" x 18 1/2" x 1/16"	0	6	10 1/2	Each.	For carriage stock.
"		" 18" x 14 1/2" x 1/16"	0	5	5	"	
309		White 24" x 19" x 1/16"	0	6	0 1/2	"	
E1158		" 21" x 21" x 1/16"	0	4	3 1/2	"	
"		" 21" x 18 1/2" x 1/16"	0	3	10 1/2	"	
"		" 21" x 4" x 1/16"	0	0	9 1/2	"	
309		" 19" x 19" x 1/16"	0	3	9 1/2	"	
"		" 18 1/2" x 18 1/2" x 1/16"	0	3	9 1/2	"	
1153		" 18 1/2" x 18 1/2" x 1/16"	0	3	6	"	
309		" 18 1/2" x 17 1/2" x 1/16"	0	3	6 1/2	"	
1153		" 16" x 15" x 1/16"	0	2	4	"	

ROLLING-STOCK.

(4) India Rubber Fittings.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(3) METALLIC AND OTHER FITTINGS—*concl.*

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
1137	Handles	Brass, with lock caps and plates, complete	£	s.	d.	Each.	
		Carriage door, malleable cast iron	0	4	0	"	
		Type, door, with staples	0	1	4	"	
			0	3	4½	"	
	Hinges	Wrought-iron sunshade	0	0	3½	Each.	
		Carriage door	0	2	11	"	
	Hooks	or lat pegs, malleable cast iron	0	0	3½	Each.	
	Lifts	Brass top for venetians	0	0	5	Each.	
		Finger	0	1	9	Dozen.	
	Locks	Iron, private, with plates for carriage doors	0	0	4	Each.	
		With handles and plates for lavatory doors, gun metal	0	4	3	"	

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CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(3) METALLIC AND OTHER FITTINGS—*concl.*

Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
1173	Plates	Brass fence for windows	£	s.	d.	Dozen.	
		" angle	0	1	1	"	
		" keyhole	0	1	1	"	
		" lap	0	2	4½	Foot.	
	Studs	For glass frame straps	0	0	4	Dozen.	

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CLASS E.
ROLLING-STOCK.

1.-COACHING AND GOODS STOCK.

(5) Trimmings.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD *b.*—COACHING AND GOODS STOCK--(5) TRIMMINGS.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—PER UNIT ON BOARD.				Unit.	REMARKS.
			£	s.	d.	Amount.		
G1873	Buttons	Repp, figured $\frac{1}{2}$ "	0	1	1		Gross.	
433		"	0	1	4 $\frac{1}{2}$		"	
G1873		" plain $\frac{1}{2}$ "	0	1	1		"	
323		"	0	0	1		Dozen.	
1875	Cloth	Baize, dark green, 72" wide	0	5	11		Yard.	(Pattern oak, geometrical.)
44		Floor 8 feet wide, in lengths of 25 yards each	0	10	0		"	
"		" green 8' 6" wide, in lengths of 8 yards each	0	0	3 $\frac{1}{2}$		Sq. ft.	
G1873		Repp, figured, 5 $\frac{1}{2}$ " wide	0	3	7		Yard.	
433		" figured or " York Ferry," 5 $\frac{1}{2}$ " wide	0	3	8 $\frac{1}{2}$		"	
323		" " or " York Ferry "	0	2	11		"	
E1171	Hides	Buffalo for cushions, maroon color, hand buffed to average 56 square feet each	2	12	5			Lion brand.

CLASS OF STORES. E.—ROLLING STOCK, SUB-HEAD b.—COACHING AND GOODS STOCK—(5) TRIMMINGS—contd.
Contracted for in 1887.

Contract Number.	Articles.	Details.	RATE—FREE ON BOARD.				REMARKS.
			Amount.			Unit.	
323		Scamling for trimming	£ 0	s. 0	d. 1½	Yard.	
433	Lace	"	0	0	1½	"	
01873	"	"	0	0	3½	"	
"	"	Pasting	0	0	4	"	
2	Netting	Green silk cord, 2 feet wide, in lengths of 25 yards each	0	2	8	"	
E1135	Springs	Spiral coppered, for cushions 61" x 1" thick	0	5	0	Per cent.	
		" copperized " 6" x 1½"	0	0	1½	Each.	

CLASS E.
 ROLLING-STOCK.
 APPENDICES.

Appendix A.

Price of duplicates for metre gauge engine and tender class F, supplied on Contract No. 80 of 1887.

DESCRIPTION.	Total delivered in the store depôt per cent.			REMARKS.
	£	s.	d.	
ENGINE.				
1 Set of wheels and axles	105	10	0	
2 Sets of tyres	30	5	0	
1 Set of axle boxes	36	10	0	
2 Sets of bearing springs, complete	35	10	0	
1 Set of connecting rods, &c., complete	14	10	0	
1 „ bearings for ditto	4	10	0	
1 „ coupling rods, complete	15	0	0	
1 „ bearings for ditto	3	3	0	
1 „ slide bars, &c.	20	10	0	
1 „ cylinders, &c.	54	10	0	
1 „ piston rods and slide valves	8	0	0	
10 Sets of piston packing rings (cast iron)	5	0	0	
1 Set of valve gear	40	0	0	
1 „ buffers and draw gear for both ends of engine	9	0	0	
2 Injectors and pipes	9	0	0	
4 Sets of spare cones for injectors...	6	0	0	
2 Boiler clack boxes	7	10	0	
2 Sets of cocks and fittings	39	10	0	
1 Whistle	1	18	0	
4 Wash-out plugs, sealings and caps	2	10	0	
1 Regulator stuffing box and gland	0	7	0	
2 Springs for safety valves	2	10	0	
2 Steam pressure gauges	73	0	0	
1 Set of Boiler tubes and ferrules	27	10	0	
10 Sets of fire bars and 2 sets of bearers	8	0	0	
5 gross of gauge glasses	2	0	0	
20 Spectacle glasses	30	0	0	
3 Sets of lamps	18	10	0	
1 Set of steam brake gear, complete, with shaft levers, screw, &c.				
TENDER.				
1 Set of wheels and axles	33	10	0	
2 Sets of tyres	18	10	0	
1 Set of axle boxes and bearings	12	0	0	
1 „ of feed pipe apparatus, ball and socket pipes and feed valves	15	15	0	
1 „ of brake apparatus, complete, with shaft, screw, &c.	20	0	0	
2 Sets of buffers and draw gear, with springs	21	10	0	
2 „ of bearing springs	13	0	0	

Appendix B.

Duplicate wearing parts for the engines supplied on Contract No. 1163 of 1887—£65.

-
- 4 Driving wheels with steel tyres.
 - 4 Cast steel bogie wheels (or steel tyres).
 - 2 Sets of bearing springs throughout.
 - 2 Complete sets of brasses for leading, driving and bogie axle boxes.
 - 2 Complete sets of bushes for connecting and coupling rods.
 - 2 Front cylinder covers, with glands and studs.
 - 2 Back cylinder covers.
 - 2 Pistons complete, with rings and springs.
 - 8 Brass piston rings.
 - 4 Gun metal slide valves.
 - 12 Boiler tubes and 24 ferrules.
 - 8 Fusible plugs.
 - 12 Water gauge glasses and 24 I. R. washers for do.
 - 2 Sets of cross head sleepers.
 - 8 Radius dies.
 - 8 Brake blocks.
 - 6 Sets of firebars.
-