Govt. of {1895} Madras.

PUBLIC.

Issued

Recd. *Encl.*

P.W. 10 S.C. 6629/95

G.O., 16th August 1895, No. 688.

B.P. 2245 W.R. 9-9-95

AUGUST.

Recorded with reference to G.O. No. 590 W.R. 12-3-95

(Sd) G.P.

Vellore Fort.

Communicating to the Lieutenant-General Commanding the Forces letter from the Government of India confirming the sanction accorded by this Government to the transfer of the — and the military buildings at that station to the charge of the Public Works Department.

S.E. IV Circle

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

Read—the following paper:—

From Major-General Sir E. H. H. COLLEN, K.C.I.E., Secretary to the Government of India, Military Department, to the Chief Secretary to the Government of Madras, dated Simla, the 2nd August 1895, No. 1987-M.W.

In reply to your letter, No. 514, dated 22nd June 1895, I am directed to state, for the information of His Excellency the Governor in Council, that the Government of India confirm the sanction accorded by the Government of Madras in their General Order, No. 1135, Military, dated 28th February 1895, to the transfer of the Vellore Fort and the military buildings at that station to the charge of the Public Works Department for purposes of maintenance.

Copy to—
The Lieutenant-General Commanding the Forces, Madras.
The Director-General, Military Works.

Order—dated 16th August 1895, No. 688, Public.

Communicated to the Lieutenant-General Commanding the Forces, with reference to G.O., dated 22nd June 1895, No. 513, Public.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Lieutenant-General Commanding the Forces, Madras.
" Public Works Department,
" Revenue Department,
" Local and Municipal Department,
with reference to G.O., dated 28th February 1895, No. 1135, Military.

Exd. A. Raitt.

Govt. of {1895} Madras.

PUBLIC.

Issued

Recd. *Encl.*

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Chief Secretary.

To the Lieutenant-General Commanding the Forces, Madras.
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„ Revenue Department, } 28th February 1895,
„ Local and Municipal Department, } No. 1135, Military.

Exd. A. Raitt.

Govt. of {1895} Madras.

EDUCATIONAL.

Issued

Recd. *Encl.*

G.O., 7th August 1895, No. 670.

No. 2246 W/95 9th September 1895

Communicated to officers of the P.W. Department in continuation of G.O. No. 2308 W of 12th September 1894.

(True Extract)

(sd) J. P.
W

AUGUST.

Exemption from the Examination Rules.

Accepting the proposal of the Board of Revenue that Heads of Departments be empowered to sanction the — for three months of unpassed men appointed to acting as well as sub. *pro tem.* posts carrying a salary of Rs. 15 *per mensem*; and cancelling paragraph 2 of G.O., dated 11th July 1895, No. 575.

To

The Chief Engineer for Irrigation.
.. Supdg Engineers
.. Superintendent of works Periyar Project
.. Consulting Architect to Govt
.. Examiner P. W. Accts.

P. W. Department.
Proceedings of the Madras Govt.
Read the following

7TH AUGUST 1895, No. 670, EDUCATIONAL.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—again G.O., dated 11th July 1895, No. 575, Educational.

ABSTRACT—(Paragraph 2).—Stating that clause 3, article 3 of the Public Service Notification applies to *acting* appointments only, and that therefore the Collector had no power to sanction exemption from the examination rules for the first three months of an individual filling a sub. *pro tem.* appointment.

READ—also the following Proceedings of the Board of Revenue (Land Revenue), dated 26th July 1895, Mis. No. 3739 :—

Read—Proceedings of the Madras Government, Educational Department, dated 11th July 1895, No. 575.

Resolution—dated 26th July 1895, Mis. No. 3739.

Before communicating the Government Order to Collectors, the Board begs to point out that the Public Service Notification referred to does not define acting appointments. Under article 110 of the Civil Service Regulations, the status of an officer appointed sub. *pro tem.* is that of an acting officer, and a sub. *pro tem.* incumbent is therefore often described as "acting." In the present case too, the acting incumbent drew only Rs. 15, which is not in excess of the maximum allowed in the Public Service Notification, article 3, clause 3.

2. As the present ruling will increase the number of references to Government, and will be difficult to enforce on account of the fact that the expressions sub. *pro tem.* and *acting* are used synonymously, the Board recommends that the word "acting" in the Public Service Notification may also be considered to include "sub. *pro tem.*" appointments.

(True Extract.)

(Signed) L. M. WYNCH,
Secretary.

To the Chief Secretary to Government, Educational Department.

ORDER—dated 7th August 1895, No. 670, Educational.

The Government accepts the Board's proposal, and clause 3 of article 3 of the Public Service Notification will be treated to cover the case of sub. *pro tem.* appointments also.

2. Paragraph 2 of G.O., dated 11th July 1895, No. 575, Educational, will accordingly be considered as cancelled.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Board of Revenue (Land Revenue).
„ all Departments of the Secretariat.
„ all other Heads of Departments.

Exd. Shaik Karim.

P. W. CURRENT No. 6714

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, and Assam, Public Works Department.
The Secretaries to the Residents at Hyderabad and in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General, Rajputana and 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 Director General of Military Works.
The Chief Engineer, Kashmir.
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 Assam.

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605. e
Rubi (605.c)

Lucy Lieut.-Col., R.E., Dtd: 3.9.95
Offg. Director General of Railways.

To THE Secretary to the Government of Madras, Public Works Department

No. 2248 W/1 10 Sep: 1895

Communicated to officers of the P.W. Dept. Offices of the Board &c.

L. E. for Irrn.
Supdg. Engrs. copies 5-55
Ex. to Contr.
Sec. to B.P.
Exec. P.W. Offrs.

G. C. Press, Simla.—No. 408. P. W. D.—12-8-95.—942.

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[*For General Distribution.*]

Circular No. 10.

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 STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, KOTRI-ROHRI RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE ENGINEER-IN-CHIEF, BEZWADA-MADRAS RAILWAY.
THE ENGINEER-IN-CHIEF, ASSAM-BURMA CONNECTION RAILWAY SURVEY.
THE EXECUTIVE ENGINEER, KALKA-SIMLA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

Simla, the 6th August 1895.

SIR,

I have the honour to forward, for information and guidance, a printed statement showing the actual English rates, *free on board* in England, for Class C—State railway stores, "Workshop Machinery and Heavy Tools," contracted for by the Stores Department of the India Office during 1894.

2. A table giving the average rates of sea-freight for Class C stores imported from England to the several ports in India for State railways of both gauges during 1894 is prefixed to the Rate List.

3. In order to arrive at the total cost of Class C stores landed in India, an insurance charge of* one-half per cent. on the *free on board* cost, *plus* entire sea freight, should be added in addition to other incidental charges and exchange, which latter should be calculated at the official rate for the year.

I have the honour to be,

SIR,

Your most obedient Servant,

T. GRACEY, Lieut.-Colonel, R.E.,
Offg. Director General of Railways.

Documents accompanying.

1. Statement showing the average rates per ton for entire sea-freight on Class C stores imported from England to the several ports during 1894.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

* For State Railway Stores and Irrigation Works only classed as Imperial. Stores for Provincial and Local funds, and for railways constructed by Native States are charged one per cent. as heretofore.

The Secretaries to the Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab, Public Works Department.
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To

THE

G. C. Press, Simla.—No. 408. P. W. D.—12-8-95.—942.

[*For General Distribution.*]

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THE DIRECTOR GENERAL OF RAILWAYS,

TO

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THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
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THE MANAGER, EAST COAST STATE RAILWAY.
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Enclosure to Director General of Railways' Circular No. 10 of 1895.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1894.

G. C. Press, Simla.—No. 408 P. W. D.—13-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1894.

Class of stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and heavy Tools ...	*... ...	16 3	*... ...	23 6†	*... ...	*No material for class C stores was shipped to these ports during 1894. †60 shillings for steam hammer.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS.

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
30/380 31-1-94	Anvils ...	Smiths, steel faced, each weighing 3 cwt.	0 3 0 0	Each	2 16 0	Each	Eastern Bengal...	The faces of the anvils to be steeled for a depth of not less than ¼″.
37/137 9-8-94		Smith's, pike and arch, 1 cwt., London pattern.	0 1 0 0	,,	1 0 0	,,	Oudh and Rohilkhand.	
30/142 12-1-94	Bellows ...	Smith's, 30″, with nozzle 20 inches long, complete.	...	...	6 19 6	Each	Frontier Railway reserve.	
40/24 5-11-94	Boilers ...	4′ 6″ diameter 9 feet long, locomotive type, multitubular, semi-portable, to work at a steam pressure of 120 lbs. per square inch, with all fittings, &c., complete, but without steam piping upported by a *c. i.* water tank under the fire box and by a *c. i.* stand under the smoke box.	...	...	488 0 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
34/68 10-5-94	Forge Crane ...	Suitable for use with steam hammer and fagotting furnace, and arranged to hoist, lower, revolve and traverse a test load of 2¼ tons at a radius of jib of 15 feet and at a height of 13 feet 6 inches from the ground level to the top of the jib.	5 4 2 13	Each	145 0 0	Each	Eastern Bengal.	
34/68 10-5-94	Furnace ...	Fagotting, with hearth 5 feet long, by 3 feet 9 inches wide inside, and 2 feet 3 inches high, sliding doors 2 feet wide, and 1 foot 6 inches high, worked with shaft and pulleys provided at each side for hearth: suitable for 30 cwt. steam hammer, with chimney, ironwork, fire bricks, fire clay, &c., &c., complete.	15 16 0 22	,,	355 0 0	Each.	Eastern Bengal.	
30/178 16-1-94	Gauges	Vacuum, round dial, 6″, for shop vertical engine.	...	...	1 1 0	Each	Eastern Bengal.	
37/14 2-8-94	Grindstones	Best Ayrshire, coarse grit, 60″ × 8″ ...	...	...	3 7 6	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
	Grindstones—*contd.*	Best Newcastle post No. 3—						
33/418 30-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 7 9	Each	Burma.	
33/127 12-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 5 0	,,	East Coast.	
37/214 17-8-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 19 0	,,	Jorhat.	
36/158 13-7-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 16 0	,,	Burma.	
30/209 18-1-94		48″ diameter, 6″ thick, 3¼″ hole ...	...	...	2 1 0	,,	Eastern Bengal.	
33/127 12-4-94		48″ diameter, 4″ thick, 2½″ hole ...	...	...	2 2 0	,,	East Coast.	
33/127 12-4-94		36″ diameter, 3″ thick, 2½″ hole ...	...	...	0 17 6	,,		
37/214 17-8-94		30″ diameter, 8″ thick, with 2½″ hole ...	...	...	0 16 0	,,	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
		Yorkshire coarse grit—						
37/48 2-8-94	Grindstones—*concld.*	66″ diameter, 10″ thick, 2½″ hole ...	...	...	6 0 0	Each	North Western.	
		Yorkshire, fine blue grit—						
37/11 2-8-94		42″ diameter, 5″ thick, complete with trough.	...	...	8 14 6	„	Mu Valley.	
30/230 19-1-94		24″ diameter, 4″ thick, 1½″ hole ...	...	...	0 5 6	„	Eastern Bengal.	
34/204 25-5-94	Grindstone dressers	Cutters, cone, steel, of latest shape ...	...	...	1 10 0	Doz.	Burma.	Triers, improved patent.
36/196 16-7-94		Complete with spanner, handle, 2 cutters and one liner, required for stone, 8″ wide, to fit trough of grindstone.	...	...	7 10 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
33/7 3-4-94	Hammers, steam ...	With double standards and double acting, with all the necessary blocks, bed-plates, &c., complete, 30 cwt.	29 0 0 0	Each	420 0 0	Each	Eastern Bengal.	
		Spare parts of—						
35/173 14-6-94		Piston and rod for—	...	...	39 2 6	„	North Western.	
38/347 26-9-94		Tup for 5 cwt. steam hammer, same as supplied on Contract No. 978 of 1888, hole to be left ¼″ small in diameter.	0 1 3 0	Each	8 10 0	„	Burma.	
38/377 26-9-94		Tup for 10 cwt. steam hammer ...	0 1 1 0	„	12 12 0	„	Burma.	
41/153 20-12-94	Lathes, power, self-acting.	Double stud, turning, 6″ height of centres, cast iron planed bed 8 feet long with two carriages and slide rests, two loose head-stocks arranged for sliding taper. Self-acting feed motion, each end independent of the other. Sets of change wheels. Double over-head driving apparatus.	...	...	158 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
31/345 23-2-94	Lathes, power, self-acting—*concld.*	Wheel, 2′ 6″ centre (metre gauge), adapted to turn without torsional strain of axle, a pair of wheels varying from 2 feet to 2 feet 6 inches diameter on their own axle or to bore two tyres, or to boss or bore two wheels, or to boss or bore a wheel on one face, and to bore a tyre on the other at the same time. The lathe is provided with treble geared headstocks, spindles of Siemens Martin's steel, two saddles moveable longitudinally on bed, and drum, 3 feet diameter, and 18″ wide on the rim. Complete in every respect with spare tools.	9 11 3 0	Each	400 0 0	Each	Eastern Bengal.	
34/66 10-5-94		Wheel, turning, and adapted to turn, without torsional strain of axle; a pair of wheels (5′ 6″ gauge), 3 feet 9¼ inches diameter, over the flanges, on an axle, 8 feet 1¼ inches long. The lathe is used for one size of wheel only and no tyre or wheel bossing or boring arrangements are required.	17 16 3 0	„	420 0 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
40/199 20-11-94	Lathe ...	Treadle, 6″ centre, and capable of taking in work up to 3 feet long between the centres. The fast headstock is to be single geared and made to accurately fit the opening in the bed. The loose headstock is to slide in and fit the opening in the bed which is to be planed perfectly true with the outside *V's*. The bed is to be fitted with a compound slide rest and saddle suitable for being travesrsed along it by means of a rack, pinion and handle. The lathe is to be complete in every respect.	1 3 2 0	Each	66 0 0	Each	Mu Valley.	
31/14 1-2-94	Lubricators ...	Needle No. 1 round, 2 oz.	...	...	0 3 0	Doz.	Eastern.	
		„ glass, Nos. 1 and 3 round (Lieuvain's patent.)	...	...	0 3 0			
		„ „ Nos. 2 and 4 flat (Lieuvain's patent.)	...	...		„		
37/161 10-8-94	.....	„ „ Nos. 1, 2 and 3 (Lieuvain's patent.)	...	...	0 2 5	„	North-Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines.		Tons cwt. qr. lbs.		£ s. d.			
41/114 — 14-12-94	*Circular moulding and shaping, double spindle.*	Apparatus, housing, for— ...	0 7 2 0	Each	23 13 6	Each	Burma.	
31/419 — 28-2-4	Drilling ...	Stows' patent flexible shaft, with round about transfers to drill holes in steel (out of the solid) up to 1¼″ diameter.	0 4 1 7	Each	34 0 0	Each	Burma.	
41/139 — 15-12-94		For both hand and steam power, to drill holes (out of the solid) up to 1″ diameter with a traverse of one inch in 90 revolutions.	...	...	20 14 0	„	North Western.	Includes a set of spare drills and packing.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Grinding ...	Discs, emery, for— 22″ × 3″ centre hole, 10″ diameter ...	...	...	4 17 0	Each	Eastern Bengal.	
		8″ × 1½″ „ 1½″ „ ...	...	...	0 7 6	„		
		20″ × 2½″ „ 6″ „ ...	...	...	3 12 0	„		
		Wheels, emery, for— 20″ × 2½″ centre hole, 6″ diameter ...	...	...	3 12 0	„		
		20″ × 2½″ „ 6½″ „ ...	...	...	3 10 0	„		
		8″ × 1″ „ 1½″ „ ...	...	...	0 5 0	„		
35/280 — 22-6-94	Grinding, twist drill	*Spare discs for—* Discs, emery, 8½″ × 1¼″, with hole in centre, ⅞″ diameter, for—	...	...	0 10 6	Each	Burma.	
36/221 — 18-7-94	Grinding, tool, emery	Spare discs, 36″ diameter × 3⅜″ thick × 24″ hole, for—	.....	...	21 13 4	Each	North Western...	To suit, Thomson Stern's machine No. 3.
33/172 — 13-4-94	Grinding, universal	Emery, with 2 spare emery wheels, each 24 inches diameter, one 3 inches and the other 2 inches thick.	2 19 2 0	Each	63 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
37/92 — 8-8-94	Lapping and grinding combined, self-acting.	Specially designed for truing up holes in case hardened motion work, grinding straight or radial expansion links and blocks, slide bars, axle boxes, slide blocks for the same, and general work.	3 8 0 0	Each	255 0 0	Each	Oudh and Rohilkhand.	
30/312 — 26-1-94	Magnetising ...	For separating iron and steel filings and boring's from brass. Capable of being worked by hand or steam power, and furnished with fast and loose pulleys. Capacity, 2 cwts. per hour.	1 2 0 0	Each	13 10 0	Each	Eastern Bengal.	
36/312 — 26-7-94	Metal, sawing ...	Bryants (or Bryant's portable rail saw), with 2 saws, required for sawing the ends of steel rails when relaying points and crossings.	0 7 0 0	Each	41 5 0	Each	North Western.	
37/172 — 10-8-94	Mill roller ...	(Patent) for grinding paint (steam power) with dust cover, stirrer and shoot, size of roller 14″ × 4½″ size No. 1.	0 16 0 0	Each	21 0 0	Each	Oudh and Rohilkhand.	
37/158 — 10-8-94	Milling ...	Horizontal spindle for connecting rods and general work.	.....	Each	615 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
35/51 — 7-6-94	Milling, universal	Double geared, and suitable for plain or circular milling, cutting grooves in taps, rimers, twist drills, and milling cutters, having straight or spiral grooves, and also for cutting spur, bevel worm, and scroll wheels, &c.	2 18 0 0	Each	301 0 0	Each	Eastern Bengal	Similar to that supplied under contract No. 2571, dated 8th July 1889, but without the spare transverse slide fitted with universal headstock, &c.
41/272 — 29-12-94	Moulding ...	Suitable for moulding carriage and wagon axle boxes.	0 12 1 26	Each	19 0 0	Each	North Western.	
38/350 — 26-9-94	Planing ...	Suitable for planing the valve faces of inside cylinders in their places, and adapted to work by hand and also by power, and furnished with all necessary brackets, &c., for securing it in position and with 12 assorted steel tools, handles, spanners, &c., also adapted for steam chests.	0 14 1 0	Each	95 0 0	Each	Eastern Bengal	Similar to that supplied under Contract No. 318 C. of 1884.
41/152 — 20-12-94	Roll flattening and straightening.	Suitable for flattening, straightening, and taking buckles out of panel plates from 13 B. W. G. up to ¼″ thick, and 4 feet 6 inches wide. Complete in every respect and fitted with fast and loose pulleys, all necessary belt shifting gear, 160 feet of leather belting and six laces, oil can., spanners, foundation bolts, &c.	3 15 2 0	Each	126 0 0	Each	North Western.	

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Saw sharpening...	Wheels, emery, for—						
		12″ × ¼″ „ 1″ diameter ...	...	...	0 3 0	Each	Eastern Bengal.	
		12″ × ½″ „ 1″ „ ...	...	...	0 6 0	„		
		12″ × ¾″ „ 1″ „ ...	...	...	0 9 0	„		
33/96 — 10-4-94	Screwing ...	"Seller's patent," suitable for screwing bolts and tapping nuts from ½″ to 1½″ diameter, both inclusive by once passing through the dies. Complete in every respect and supplied with one complete set of machine taps and dies and one set of master taps, made to Whitworth's standard sizes, rising as follows:—½″, ⅝″, ¾″, ⅞″, 1″ 1⅛″, 1¼″, 1⅜″ and 1½″ consisting of 9 machine taps, 9 sets of dies and 9 master taps, &c., &c., and countershafts, brackets, belting, &c.	1 9 0 0	Each	110 0 0	Each	East Coast.	

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
34/185 — 24-5-94	Screwing, tapping and tube cutting.	Suitable for screwing and cutting off *w. i.* gas pipes from ½ inch to 2½ inches bore inclusive, and for tapping the sockets for the same sizes of pipes, to the standard gas thread. The machine is arranged so that it can be driven by hand and by power and is supplied with a complete set of dies for cutting the threads of pipes of the following sizes, *viz.*:—½″, ⅝″, ¾″, 1″, 1¼″, 1½″, 1¾″, 2″, 2¼″ and 2½″ bore and a set of taps for tapping the sockets for the sizes of pipes specified. The machine is complete in all its details, with countershaft for bolting to wall and belting, &c.	1 2 2 0	Each	157 15 0	Each	East Coast ...	Including tools.
37/159 — 10-8-94	Shaping ...	10″ stroke, complete with countershafting and all necessary tools for shaping, horizontal, vertical, angular, and curvilinear work.	2 13 3 0	Each	145 0 0	Each	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
36/42 5-7-94	Spring plate, forging	With tools, complete, comprising one pair shear blades for cutting plates to length, one punch and die for punching centre hole, one punch and die for oblong hole, one punch and die forming nibs, and one pair of curved shear blades for rounding ends of spring plates.	4 10 0 0	Each	207 10 0	Each.	Burma.	
40/282 27-11-94	Trimmer, (Fox's patent).	Spare parts of—Knives for size No. 4 A.	...	...	1 1 0	Pair	Burma ...	*To suit the machines supplied under Contract No. 24—211 dated 15th July 1893.*
32/257 16-3-94	Turning, universal	For turning locomotive piston rings, with tool holders and tools fitted to them, complete for turning and finishing piston rings.	3 19 0 0	Each	214 10 0	Each	Eastern Bengal.	
32/269 17-3-94	Tube cutting ...	Suitable for cutting brass and steel tubes from $1\frac{1}{4}$″ up to $2\frac{3}{4}$″ outside diameter; and arranged so that it can be driven either by hand or power. The machine is complete in every respect and is supplied with 6 spare cutters.	0 5 2 0	Each	25 0 0	Each	Mu Valley.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*concld.*		Tons cwt. qr. lbs.		£ s. d.			
37/139 9-8-94	Wire, stitching and binding.	For steam power, for thick work. The machine is fitted for steam power and furnished with interchangeable tables and guides for the diffirent sizes of blocks. The machine to be of No. 4 construction and capable of stitching from 2 sheets to the full capacity.	0 2 1 17	Each	28 10 0	Each	North Western.	
30/179 16-1-94	Wood planing ...	Cutters or blades for —	...	...	0 12 0	Each	Eastern Bengal ...	As supplied on Contract No. $\frac{2}{2}\frac{3}{7}\frac{1}{0}$, dated 18th August 1891.
32/274 17-3-94	Saw, circular ...	36″ diameter, suitable for cutting hot iron or steel, round or square bars and angles up to 6″ × 6″ × 1″	3 4 0 0	Each	157 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
39/325 29-10-94	Shafting, steel ...	Length, 25 feet, 4½″ diameter (3 lengths)	...	...	140 0 0	Total	Burma.	
		„ 28 feet, 3½″ „ 6 „						
		„ 28 feet, 3″ „ 6 „						
		„ 23 ft. 10 in., 3″ „ 3 „						
		Split pulley, 4 feet 3 inches diameter, bore 4½″, and 2 feet wide on face.	...	...	11 0 0	Each		
		Couplings for shaft (independent grip)—						
39/277 25-10-94		Bore 4½″, outside diameter 11,″ length 1′ 6″, No. 3.	...	...	4 0 0	„	Do.	
		Bore 3½″, outside diameter 9¼″, „ 1½″, No. 5.	...	...	2 5 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
		Couplings for shaft (independent grip)-*contd.*						
		Bore 3½″, and 3″, outside diameter, 9¼″, length 1′ 2″, (for junction of 2 shafts), No. 3.	...	...	2 5 0	Each		
39/277 25-10-94	Shafting, steel—*concld.*	Bore 3″, outside diameter 8″, length 1′ 6″	...	...	1 13 0	„	Burma.	
		Plummer block, cast iron, adjustable swivelling.						
		Bore 4½″, length 1′ 6″, No. 9	...	...	3 6 6	„		
		„ 3½″ „ 1′ 2″ „ 18	...	...	1 18 0	„		
		„ 3″ „ 1′ 0″ „ 26	...	...	1 6 0	„		
33/389 28-4-94.	Trough, grindstone	Complete and fitted with fast and loose pulley and slide rest with spindle, for grindstone, 4 feet diameter × 8″ with 3″ diameter hole in centre.	0 7 3 6	Each	7 19 3	Each	East Coast.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*concld.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
37/215 — 17-8-95	Tubes, boiler ...	Iron, 9′ 7″ long × 3″ external diameter	...	...	0 4 8	Each	Oudh and Rohilkhand.	For stationary engine.
		„ 9′ 7″ „ × 3¼″ „ „	...	...	0 5 0	„		
		Iron, stay, 9′ 7″ long × 3″ external diameter, ¼″ thick, screwed 6″ one end and 3″ the other end, 11 threads per inch, fitted with 4 nuts, each ¾″ thick.	...	...	0 12 3	„		
33/95 — 10-4-94	Water, ejector ...	Or steam trap, 6′ 0″ length, ¾″ gas thread	...	...	3 0 0	Each	Burma.	
	Water, separator ...	4″ without steam trap	...	...	2 15 0	„		

G. C. Press, Simla.—No. 408 P. W. D.—14-8-95.—942.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
39/277 25-10-94	Shafting, steel—*concld.*	Couplings for shaft (independent grip)—*contd.*						
		Bore 3½″, and 3″, outside diameter, 9¼″, length 1′ 2″, (for junction of 2 shafts), No. 3.	...	...	2 5 0	Each	Burma.	
		Bore 3″, outside diameter 8″, length 1′ 6″	...	...	1 13 0	,,		
		Plummer block, cast iron, adjustable swivelling.						
		Bore 4½″, length 1′ 6″, No. 9	...	...	3 6 6	,,		
		,, 3⅛″ ,, 1′ 2″ ,, 18	...	...	1 18 0	,,		
		,, 3″ ,, 1′ 0″ ,, 26	...	...	1 6 0	,,		
33/389 28-4-94.	Trough, grindstone	Complete and fitted with fast and loose pulley and slide rest with spindle, for grindstone, 4 feet diameter × 8″ with 3″ diameter hole in centre.	0 7 3 6	Each	7 19 3	Each	East Coast.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*concld.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
37/215 — 17-8-95	Tubes, boiler ...	Iron, 9′ 7″ long × 3″ external diameter	...	...	0 4 8	Each	Oudh and Rohilkhand.	For stationary engine.
		,, 9′ 7″ ,, × 3¼″ ,, ,,	...	...	0 5 0	,,		
		Iron, stay, 9′ 7″ long × 3″ external diameter, ½″ thick, screwed 6″ one end and 3″ the other end, 11 threads per inch, fitted with 4 nuts, each ¾″ thick.	...	...	0 12 3	,,		
33/95 — 10-4-94	Water, ejector ...	Or steam trap, 6′ 0″ length, ¾″ gas thread	...	...	3 0 0	Each	Burma.	
	Water, separator ...	4″ without steam trap	...	...	2 15 0	,,		

G. C. Press, Simla.—No. 408 P. W. D.—14-8-95.—942.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
39/325 29-10-94	Shafting, steel ...	Length, 25 feet, 4½″ diameter (3 lengths) „ 28 feet, 3½″ „ 6 „ „ 28 feet, 3″ „ 6 „ „ 23 ft. 10 in., 3″ „ 3 „	...	...	140 0 0	Total	Burma.	
		Split pulley, 4 feet 3 inches diameter, bore 4½″, and 2 feet wide on face.	...	...	11 0 0	Each		
39/277 25-10-94		Couplings for shaft (independent grip)— Bore 4½″, outside diameter 11,″ length 1′ 6″, No. 3.	...	...	4 0 0	„	Do.	
		Bore 3½″, outside diameter 9¼″, „ 1½″, No. 5.	...	...	2 5 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
34/185 24-5-94	Screwing, tapping and tube cutting.	Suitable for screwing and cutting off *w. i.* gas pipes from ½ inch to 2½ inches bore inclusive, and for tapping the sockets for the same sizes of pipes, to the standard gas thread. The machine is arranged so that it can be driven by hand and by power and is supplied with a complete set of dies for cutting the threads of pipes of the following sizes, *viz.*:—½″, ⅝″, ¾″, 1″, 1¼″, 1½″, 1¾″, 2″, 2¼″ and 2½″ bore and a set of taps for tapping the sockets for the sizes of pipes specified. The machine is complete in all its details, with countershaft for bolting to wall and belting, &c.	1 2 2 0	Each	157 15 0	Each	East Coast ...	Including tools.
37/159 10-8-94	Shaping ...	10″ stroke, complete with countershafting and all necessary tools for shaping, horizontal, vertical, angular, and curvilinear work.	2 13 3 0	Each	145 0 0	Each	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
36/42 5-7-94	Spring plate, forging	With tools, complete, comprising one pair shear blades for cutting plates to length, one punch and die for punching centre hole, one punch and die for oblong hole, one punch and die forming nibs, and one pair of curved shear blades for rounding ends of spring plates.	4 10 0 0	Each	207 10 0	Each.	Burma.	
40/282 27-11-94	Trimmer, (Fox's patent).	Spare parts of—Knives for size No. 4 A.	...	...	1 1 0	Pair	Burma ...	*To suit the machines supplied under Contract No. 24–211 dated 15th July 1893.*
32/257 16-3-94	Turning, universal	For turning locomotive piston rings, with tool holders and tools fitted to them, complete for turning and finishing piston rings.	3 19 0 0	Each	214 10 0	Each	Eastern Bengal.	
32/269 17-3-94	Tube cutting ...	Suitable for cutting brass and steel tubes from 1¼″ up to 2¾″ outside diameter; and arranged so that it can be driven either by hand or power. The machine is complete in every respect and is supplied with 6 spare cutters.	0 5 2 0	Each	25 0 0	Each	Mu Valley.	

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*concld.*		Tons cwt. qr. lbs.		£ s. d.			
37/139 9-8-94	Wire, stitching and binding.	For steam power, for thick work. The machine is fitted for steam power and furnished with interchangeable tables and guides for the diffirent sizes of blocks. The machine to be of No. 4 construction and capable of stitching from 2 sheets to the full capacity.	0 2 1 17	Each	28 10 0	Each	North Western.	
30/179 16-1-94	Wood planing ...	Cutters or blades for —	...	...	0 12 0	Each	Eastern Bengal ...	As supplied on Contract No. $\frac{1}{2}\frac{1}{7}\frac{1}{0}$, dated 18th August 1891.
32/274 17-3-94	Saw, circular ...	36″ diameter, suitable for cutting hot iron or steel, round or square bars and angles up to 6″ × 6″ × 1″	3 4 0 0	Each	157 0 0	Each	Eastern Bengal.	

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
		Length, 25 feet, 4½″ diameter (3 lengths)						
		„ 28 feet, 3½″ „ 6 „						
		„ 28 feet, 3″ „ 6 „	...	...	140 0 0	Total	Burma.	
		„ 23 ft. 10 in., 3″ „ 3 „						
39/325 29-10-94	Shafting, steel ...	Split pulley, 4 feet 3 inchs diameter, bore 4½″, and 2 feet wide on face.	...	...	11 0 0	Each		
		Couplings for shaft (independent grip)—						
39/277 25-10-94		Bore 4½″, outside diameter 11,″ length 1′ 6″, No. 3.	...	...	4 0 0	„	Do.	
		Bore 3½″, outside diameter 9¼″, „ 1½″, No. 5.	...	...	2 5 0	„		

Enclosure to Director General of Railways' Circular No. 10 of 1895.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS FOR 1894.

G. C. Press, Simla.—No. 408 P. W. D.—13-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1894.

Class of stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and heavy Tools ...	*... ...	16 3	*... ...	23 6†	*... ...	*No material for class C stores was shipped to these ports during 1894. †60 shillings for steam hammer.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS.

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
30/380 31-1-94	Anvils ...	Smiths, steel faced, each weighing 3 cwt.	0 3 0 0	Each	2 16 0	Each	Eastern Bengal...	The faces of the anvils to be steeled for a depth of not less than 1″.
37/137 9-8-94		Smith's, pike and arch, 1 cwt., London pattern.	0 1 0 0	,,	1 0 0	,,	Oudh and Rohilkhand.	
30/142 12-1-94	Bellows ...	Smith's, 30″, with nozzle 20 inches long, complete.	...	...	6 19 6	Each	Frontier Railway reserve.	
40/24 5-11-94	Boilers ...	4′ 6″ diameter 9 feet long, locomotive type, multitubular, semi-portable, to work at a steam pressure of 120 lbs. per square inch, with all fittings, &c., complete, but without steam piping upported by a *c. i.* water tank under the fire box and by a *c. i.* stand under the smoke box.	...	...	488 0 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
34/68 10-5-94	Forge Crane ...	Suitable for use with steam hammer and fagotting furnace, and arranged to hoist, lower, revolve and traverse a test load of 2½ tons at a radius of jib of 15 feet and at a height of 13 feet 6 inches from the ground level to the top of the jib.	5 4 2 13	Each	145 0 0.	Each	Eastern Bengal.	
34/68 10-5-94	Furnace ...	Fagotting, with hearth 5 feet long, by 3 feet 9 inches wide inside, and 2 feet 3 inches high, sliding doors 2 feet wide, and 1 foot 6 inches high, worked with shaft and pulleys provided at each side for hearth: suitable for 30 cwt. steam hammer, with chimney, ironwork, fire bricks, fire clay, &c., &c., complete.	15 16 0 22	„	355 0 0	Each.	Eastern Bengal.	
30/178 16-1-94	Gauges	Vacuum, round dial, 6″, for shop vertical engine.	...	...	1 1 0	Each	Eastern Bengal.	
37/14 2-8-94	Grindstones	Best Ayrshire, coarse grit, 60″ × 8″ ...	...	...	3 7 6	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
		Best Newcastle post No. 3—						
33/418 30-4-94	Grindstones—*contd.*	48″ diameter, 8″ thick, 3″ hole ...	...	...	2 7 9	Each	Burma.	
33/127 12-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 5 0	„	East Coast.	
37/214 17-8-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 19 0	„	Jorhat.	
36/158 13-7-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 16 0	„	Burma.	
30/209 18-1-94		48″ diameter, 6″ thick, 3¼″ hole ...	...	...	2 1 0	„	Eastern Bengal.	
33/127 12-4-94		48″ diameter, 4″ thick, 2½″ hole ...	...	...	2 2 0	„	East Coast.	
33/127 12-4-94		36″ diameter, 3″ thick, 2½″ hole ...	...	...	0 17 6	„	East Coast.	
37/214 17-8-94		30″ diameter, 8″ thick, with 2½″ hole ...	...	...	0 16 0	„	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
		Yorkshire coarse grit—						
37/48 — 2-8-94	Grindstones—*concld.*	*66″ diameter, 10″ thick, 2½″ hole* ...	...	...	6 0 0	Each	North Western.	
		Yorkshire, fine blue grit—						
37/11 — 2-8-94		42″ diameter, 5″ thick, complete with trough.	...	...	8 14 6	„	Mu Valley.	
30/230 — 19-1-94		24″ diameter, 4″ thick, 1½″ hole ...	...	...	0 5 6	„	Eastern Bengal.	
34/204 — 25-5-94	Grindstone dressers	Cutters, cone, steel, of latest shape ...	...	...	1 10 0	Doz.	Burma.	Triers, improved patent.
36/196 — 16-7-94		Complete with spanner, handle, 2 cutters and one liner, required for stone, 8″ wide, to fit trough of grindstone.	...	...	7 10 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
33/7 — 3-4-94	Hammers, steam ...	With double standards and double acting, with all the necessary blocks, bed-plates, &c., complete, 30 cwt.	29 0 0 0	Each	420 0 0	Each	Eastern Bengal.	
		Spare parts of—						
35/173 — 14-6-94		Piston and rod for—	...	...	39 2 6	„	North Western.	
38/347 — 26-9-94		Tup for 5 cwt. steam hammer, same as supplied on Contract No. 978 of 1888, hole to be left ¼″ small in diameter.	0 1 3 0	Each	8 10 0	„	Burma.	
38/377 — 26-9-94		Tup for 10 cwt. steam hammer ...	0 1 1 0	„	12 12 0	„	Burma.	
41/153 — 20-12-94	Lathes, power, self-acting.	Double stud, turning, 6″ height of centres, cast iron planed bed 8 feet long with two carriages and slide rests, two loose head-stocks arranged for sliding taper. Self-acting feed motion, each end independent of the other. Sets of change wheels. Double over-head driving apparatus.	...	...	158 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
31/345 23-2-94	Lathes, power, self-acting—*concld.*	Wheel, 2′ 6″ centre (metré gauge), adapted to turn without torsional strain of axle, a pair of wheels varying from 2 feet to 2 feet 6 inches diameter on their own axle or to bore two tyres, or to boss or bore two wheels, or to boss or bore a wheel on one face, and to bore a tyre on the other at the same time. The lathe is provided with treble geared headstocks, spindles of Siemens Martin's steel, two saddles moveable longitudinally on bed, and drum, 3 feet diameter, and 18″ wide on the rim. Complete in every respect with spare tools.	9 11 3 0	Each	400 0 0	Each	Eastern Bengal.	
34/66 10-5-94		Wheel, turning, and adapted to turn, without torsional strain of axle; a pair of wheels (5′ 6″ gauge), 3 feet 9¼ inches diameter, over the flanges, on an axle, 8 feet 1¼ inches long. The lathe is used for one size of wheel only and no tyre or wheel bossing or boring arrangements are required.	17 16 3 0	„	420 0 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
40/199 20-11-94	Lathe ...	Treadle, 6″ centre, and capable of taking in work up to 3 feet long between the centres. The fast headstock is to be single geared and made to accurately fit the opening in the bed. The loose headstock is to slide in and fit the opening in the bed which is to be planed perfectly true with the outside *V's*. The bed is to be fitted with a compound slide rest and saddle suitable for being travesrsed along it by means of a rack, pinion and handle. The lathe is to be complete in every respect.	1 3 2 0	Each	66 0 0	Each	Mu Valley.	
31/14 1-2-94	Lubricators ...	Needle No. 1 round, 2 oz.	...	...	0 3 0	Doz.	Eastern.	
		„ glass, Nos. 1 and 3 round (Lieuvain's patent.—)	...	...	0 3 0			
		„ „ Nos. 2 and 4 flat (Lieuvain's patent.—)	...	...		„		
37/161 10-8-94	.....	„ „ Nos. 1, 2 and 3 (Lieuvain's patent.—)	...	...	0 2 5	„	North-Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines.		Tons cwt. qr. lbs.		£ s. d.			
41/114 — 14-12-94	Circular moulding and shaping, double spindle.	Apparatus, housing, for— ...	0 7 2 0	Each	23 13 6	Each	Burma.	
31/419 — 28-2-4	Drilling ...	Stows' patent flexible shaft, with round about transfers to drill holes in steel (out of the solid) up to 1¼" diameter.	0 4 1 7	Each	34 0 0	Each	Burma.	
41/139 — 15-12-94	Drilling ...	For both hand and steam power, to drill holes (out of the solid) up to 1" diameter with a traverse of one inch in 90 revolutions.	...	...	20 14 0	„	North Western.	Includes a set of spare drills and packing.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Grinding ...	Discs, emery, for— 22" × 3" centre hole, 10" diameter ...	...	...	4 17 0	Each	Eastern Bengal.	
		8" × 1½" „ 1½" „ ...	...	...	0 7 6	„		
		20" × 2½" „ 6" „ ...	...	...	3 12 0	„		
		Wheels, emery, for— 20" × 2½" centre hole, 6" diameter ...	...	...	3 12 0	„		
		20" × 2½" „ 6½" „ ...	...	...	3 10 0	„		
		8" × 1" „ 1½" „ ...	...	...	0 5 0	„		
35/280 — 22-6-94	Grinding, twist drill	*Spare discs for—* Discs, emery, 8½" × 1¼", with hole in centre, ⅞" diameter, for—	...	...	0 10 6	Each	Burma.	
36/221 — 18-7-94	Grinding, tool, emery	Spare discs, 36" diameter × 3⅜" thick × 24" hole, for—	.....	...	21 13 4	Each	North Western...	To suit, Thomson Stern's machine No. 3.
33/172 — 13-4-94	Grinding, universal	Emery, with 2 spare emery wheels, each 24 inches diameter, one 3 inches and the other 2 inches thick.	2 19 2 0	Each	63 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons. cwt. qr. lbs.		£ *s.* *d.*			
37/92 — 8-8-94	Lapping and grinding combined, self-acting.	Specially designed for truing up holes in case hardened motion work, grinding straight or radial expansion links and blocks, slide bars, axle boxes, slide blocks for the same, and general work.	3 8 0 0	Each	255 0 0	Each	Oudh and Rohilkhand.	
30/312 — 26-1-94	Magnetising ...	For separating iron and steel filings and borings from brass. Capable of being worked by hand or steam power, and furnished with fast and loose pulleys. Capacity, 2 cwts. per hour.	1 2 0 0	Each	13 10 0	Each	Eastern Bengal.	
36/312 — 26-7-94	Metal, sawing ...	Bryants (or Bryant's portable rail saw), with 2 saws, required for sawing the ends of steel rails when relaying points and crossings.	0 7 0 0	Each	41 5 0	Each	North Western.	
37/172 — 10-8-94	Mill roller ...	(Patent) for grinding paint (steam power) with dust cover, stirrer and shoot, size of roller 14″ × 4½,″ size No. 1.	0 16 0 0	Each	21 0 0	Each	Oudh and Rohilkhand.	
37/158 — 10-8-94	Milling ...	Horizontal spindle for connecting rods and general work.	.....	Each	615 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
35/51 — 7-6-94	Milling, universal	Double geared, and suitable for plain or circular milling, cutting grooves in taps, rimers, twist drills, and milling cutters, having straight or spiral grooves, and also for cutting spur, bevel worm, and scroll wheels, &c.	2 18 0 0	Each	301 0 0	Each	Eastern Bengal	Similar to that supplied under contract No. 2571, dated 8th July 1889, but without the spare transverse slide fitted with universal headstock, &c.
41/272 — 29-12-94	Moulding ...	Suitable for moulding carriage and wagon - axle boxes.	0 12 1 26	Each	19 0 0	Each	North Western.	
38/350 — 26-9-94	Planing ...	Suitable for planing the valve faces of inside cylinders in their places, and adapted to work by hand and also by power, and furnished with all necessary brackets, &c., for securing it in position and with 12 assorted steel tools, handles, spanners, &c., also adapted for steam chests.	0 14 1 0	Each	95 0 0	Each	Eastern Bengal	Similar to that supplied under Contract No. 318 C. of 1884.
41/152 — 20-12-94	Roll flattening and straightening.	Suitable for flattening, straightening, and taking buckles out of panel plates from 13 B. W. G. up to ¼″ thick, and 4 feet 6 inches wide. Complete in every respect and fitted with fast and loose pulleys, all necessary belt shifting gear, 160 feet of leather belting and six laces, oil can., spanners, foundation bolts, &c.	3 15 2 0	Each	126 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Saw sharpening...	Wheels, emery, for—						
		12″ × ¼″ „ 1″ diameter ...	...	...	0 3 0	Each	Eastern Bengal.	
		12″ × ½″ „ 1″ „ ...	...	...	0 6 0	„		
		12″ × ¾″ „ 1″ „ ...	...	...	0 9 0	„		
33/96 — 10-4-94	Screwing ...	"Seller's patent," suitable for screwing bolts and tapping nuts from ½″ to 1½″ diameter, both inclusive by once passing through the dies. Complete in every respect and supplied with one complete set of machine taps and dies and one set of master taps, made to Whitworth's standard sizes, rising as follows:—½″, ⅝″, ¾″, ⅞″, 1″ 1⅛″, 1¼″, 1⅜″ and 1½″ consisting of 9 machine taps, 9 sets of dies and 9 master taps, &c., &c., and countershafts, brackets, belting, &c.	1 9 0 0	Each	110 0 0	Each	East Coast.	

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[*For General Distribution.*]

Circular No. 10.

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 STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, KOTRI-ROHRI RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE ENGINEER-IN-CHIEF, BEZWADA-MADRAS RAILWAY.
THE ENGINEER-IN-CHIEF, ASSAM-BURMA CONNECTION RAILWAY SURVEY.
THE EXECUTIVE ENGINEER, KALKA-SIMLA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

Simla, the 6th August 1895.

SIR,

I have the honour to forward, for information and guidance, a printed statement showing the actual English rates, *free on board* in England, for Class C—State railway stores, "Workshop Machinery and Heavy Tools," contracted for by the Stores Department of the India Office during 1894.

2. A table giving the average rates of sea-freight for Class C stores imported from England to the several ports in India for State railways of both gauges during 1894 is prefixed to the Rate List.

3. In order to arrive at the total cost of Class C stores landed in India, an insurance charge of* one-half per cent. on the *free on board* cost, *plus* entire sea freight, should be added in addition to other incidental charges and exchange, which latter should be calculated at the official rate for the year.

I have the honour to be,

SIR,

Your most obedient Servant,

T. GRACEY, Lieut.-Colonel, R.E.,
Offg. Director General of Railways.

Documents accompanying.

1. Statement showing the average rates per ton for entire sea-freight on Class C stores imported from England to the several ports during 1894.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

* For State Railway St...es and Irrigation Works only classed as Imperial. Stores for Provincial and Local funds, and for railways constructed by Native States are charged one per cent. as heretofore.

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, and Assam, Public Works Department.
The Secretaries to the Residents at Hyderabad and in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General, Rajputana and 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 Director General of Military Works.
The Chief Engineer, Kashmir.
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 Assam.

Copy forwarded to the Local Governments and Administrations and to the Officers noted in the margin for information, with the intimation that all Railway Administrations have been supplied with copies direct.

T. GRACEY, Lieut.-Col., R.E.,

Offg. Director General of Railways.

To

THE

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Sw 67 ce/95

G. C. Press, Simla.—No. 408. P. W. D.—12-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1894.

G. C. Press, Simla.—No. 408 P. W. D.—13-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1894.

Class of stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and heavy Tools ...	*... ...	16 3	*... ...	23 6†	*... ...	*No material for class C stores was shipped to these ports during 1894. † 60 shillings for steam hammer.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS.

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
30/380 31-1-94	Anvils ...	Smiths, steel faced, each weighing 3 cwt.	0 3 0 0	Each	2 16 0	Each	Eastern Bengal...	The faces of the anvils to be steeled for a depth of not less than ¼″.
37/137 9-8-94		Smith's, pike and arch, 1 cwt., London pattern.	0 1 0 0	,,	1 0 0	,,	Oudh and Rohilkhand.	
30/142 12-1-94	Bellows ...	Smith's, 30″, with nozzle 20 inches long, complete.	...	...	6 19 6	Each	Frontier Railway reserve.	
40/24 5-11-94	Boilers ...	4′ 6″ diameter 9 feet long, locomotive type, multitubular, semi-portable, to work at a steam pressure of 120 lbs. per square inch, with all fittings, &c., complete, but without steam piping upported by a *c. i.* water tank under the fire box and by a *c. i.* stand under the smoke box.	...	...	488 0 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
34/68 10-5-94	Forge Crane ...	Suitable for use with steam hammer and fagotting furnace, and arranged to hoist, lower, revolve and traverse a test load of 2½ tons at a radius of jib of 15 feet and at a height of 13 feet 6 inches from the ground level to the top of the jib.	5 4 2 13	Each	145 0 0	Each	Eastern Bengal.	
34/68 10-5-94	Furnace ...	Fagotting, with hearth 5 feet long, by 3 feet 9 inches wide inside, and 2 feet 3 inches high, sliding doors 2 feet wide, and 1 foot 6 inches high, worked with shaft and pulleys provided at each side for hearth: suitable for 30 cwt. steam hammer, with chimney, ironwork, fire bricks, fire clay, &c., &c., complete.	15 16 0 22	,,	355 0 0	Each.	Eastern Bengal.	
30/178 16-1-94	Gauges	Vacuum, round dial, 6″, for shop vertical engine.	...	...	1 1 0	Each	Eastern Bengal.	
37/14 2-8-94	Grindstones	Best Ayrshire, coarse grit, 60″ × 8″ ...	...	...	3 7 6	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
		Best Newcastle post No. 3—						
33/418 30-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 7 9	Each	Burma.	
33/127 12-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 5 0	,,	East Coast.	
37/214 17-8-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 19 0	,,	Jorhat.	
36/158 13-7-94	Grindstones—*contd.*	48″ diameter, 8″ thick, 3″ hole ...	...	...	1 16 0	,,	Burma.	
30/209 18-1-94		48″ diameter, 6″ thick, 3¼″ hole ...	...	...	2 1 0	,,	Eastern Bengal.	
33/127 12-4-94		48″ diameter, 4″ thick, 2½″ hole ...	...	...	2 2 0	,,	East Coast.	
33/127 12-4-94		36″ diameter, 3″ thick, 2½″ hole ...	...	...	0 17 6	,,		
37/214 17-8-94		30″ diameter, 8″ thick, with 2½″ hole ...	...	...	0 16 0	,,	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ *s.* *d.*			
		Yorkshire coarse grit—						
37/48 — 2-8-94	Grindstones—*concld.*	66″ diameter, 10″ thick, 2½″ hole ...	...	...	6 0 0	Each	North Western.	
		Yorkshire, fine blue grit—						
37/11 — 2-8-94		42″ diameter, 5″ thick, complete with trough.	...	...	8 14 6	„	Mu Valley.	
30/230 — 19-1-94		24″ diameter, 4″ thick, 1½″ hole ...	...	...	0 5 6	„	Eastern Bengal.	
34/204 — 25-5-94	Grindstone dressers	Cutters, cone, steel, of latest shape ...	...	...	1 10 0	Doz.	Burma.	Triers, improved patent.
36/196 — 16-7-94		Complete with spanner, handle, 2 cutters and one liner, required for stone, 8″ wide, to fit trough of grindstone.	...	...	7 10 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ *s.* *d.*			
33/7 — 3-4-94	Hammers, steam ...	With double standards and double acting, with all the necessary blocks, bed-plates, &c., complete, 30 cwt.	29 0 0 0	Each	420 0 0	Each	Eastern Bengal.	
		Spare parts of—						
35/173 — 14-6-94		Piston and rod for—	...	...	39 2 6	„	North Western.	
38/347 — 26-9-94		Tup for 5 cwt. steam hammer, same as supplied on Contract No. 978 of 1888, hole to be left ¼″ small in diameter.	0 1 3 0	Each	8 10 0	„	Burma.	
38/377 — 26-9-94		Tup for 10 cwt. steam hammer ...	0 1 1 0	„	12 12 0	„	Burma.	
41/153 — 20-12-94	Lathes, power, self-acting.	Double stud, turning, 6″ height of centres, cast iron planed bed 8 feet long with two carriages and slide rests, two loose head-stocks arranged for sliding taper. Self-acting feed motion, each end independent of the other. Sets of change wheels. Double over-head driving apparatus.	...	...	158 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
31/345 23-2-94	Lathes, power, self-acting—*coneld.*	Wheel, 2′ 6″ *centre (metre gauge)*, adapted to turn without torsional strain of axle, a pair of wheels varying from 2 feet to 2 feet 6 inches diameter on their own axle or to bore two tyres, or to boss or bore two wheels, or to boss or bore a wheel on one face, and to bore a tyre on the other at the same time. The lathe is provided with treble geared headstocks, spindles of Siemens Martin's steel, two saddles moveable longitudinally on bed, and drum, 3 feet diameter, and 18″ wide on the rim. Complete in every respect with spare tools.	9 11 3 0	Each	400 0 0	Each	Eastern Bengal.	
34/66 10-5-94		Wheel, turning, and adapted to turn, without torsional strain of axle; a pair of wheels (5′ 6″ gauge), 3 feet 9¼ inches diameter, over the flanges, on an axle, 8 feet 1¼ inches long. The lathe is used for one size of wheel only and no tyre or wheel bossing or boring arrangements are required.	17 16 3 0	„	420 0 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
40/199 20-11-94	Lathe ...	Treadle, 6″ centre, and capable of taking in work up to 3 feet long between the centres. The fast headstock is to be single geared and made to accurately fit the opening in the bed. The loose headstock is to slide in and fit the opening in the bed which is to be planed perfectly true with the outside *V's*. The bed is to be fitted with a compound slide rest and saddle suitable for being travesrsed along it by means of a rack, pinion and handle. The lathe is to be complete in every respect.	1 3 2 0	Each	66 0 0	Each	Mu Valley.	
31/14 1-2-94	Lubricators ...	Needle No. 1 round, 2 oz.	...	...	0 3 0	Doz.	Eastern.	
		„ glass, Nos. 1 and 3 round (Lienvain's patent.)	...	...	0 3 0			
		„ „ Nos. 2 and 4 flat (Lienvain's patent.)	...	...		„		
37/161 10-8-94	.....	„ „ Nos. 1, 2 and 3 (Lienvain's patent.)	...	...	0 2 5	„	North-Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines.		Tons cwt. qr. lbs.		£ s. d.			
41/114 — 14-12-94	Circular moulding and shaping, double spindle.	Apparatus, housing, for— ...	0 7 2 0	Each	23 13 6	Each	Burma.	
31/419 — 28-2-4	Drilling ...	Stows' patent flexible shaft, with round about transfers to drill holes in steel (out of the solid) up to 1¼″ diameter.	0 4 1 7	Each	34 0 0	Each	Burma.	
41/139 — 15-12-94	Drilling ...	For both hand and steam power, to drill holes (out of the solid) up to 1″ diameter with a traverse of one inch in 90 revolutions.	...	...	20 14 0	„	North Western.	Includes a set of spare drills and packing.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Grinding ...	Discs, emery, for— 22″ × 3″ centre hole, 10″ diameter ...	...	...	4 17 0	Each	Eastern Bengal.	
		8″ × 1½″ „ 1½″ „ ...	...	...	0 7 6	„		
		20″ × 2½″ „ 6″ „ ...	...	...	3 12 0	„		
		Wheels, emery, for— 20″ × 2½″ centre hole, 6″ diameter ...	...	...	3 12 0	„		
		20″ × 2½″ „ 6½″ „ ...	...	...	3 10 0	„		
		8″ × 1″ „ 1½″ „ ...	...	...	0 5 0	„		
35/280 — 22-6-94	Grinding, twist drill	*Spare discs for—* Discs, emery, 8½″ × 1¼″, with hole in centre, ⅞″ diameter, for—	...	...	0 10 6	Each	Burma.	
36/221 — 18-7-94	Grinding, tool, emery	Spare discs, 36″ diameter × 3⅜″ thick × 24″ hole, for—	.....	...	21 13 4	Each	North Western...	To suit, Thomson Stern's machine No. 3.
33/172 — 13-4-94	Grinding, universal	Emery, with 2 spare emery wheels, each 24 inches diameter, one 3 inches and the other 2 inches thick.	2 19 2 0	Each	63 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on Board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
37/92 — 8-8-94	Lapping and grinding combined, self-acting.	Specially designed for truing up holes in case hardened motion work, grinding straight or radial expansion links and blocks, slide bars, axle boxes, slide blocks for the same, and general work.	3 8 0 0	Each	255 0 0	Each	Oudh and Rohilkhand.	
30/312 — 26-1-94	Magnetising ...	For separating iron and steel filings and borings from brass. Capable of being worked by hand or steam power, and furnished with fast and loose pulleys. Capacity, 2 cwts. per hour.	1 2 0 0	Each	13 10 0	Each	Eastern Bengal.	
36/312 — 26-7-94	Metal, sawing ...	Bryants (or Bryant's portable rail saw), with 2 saws, required for sawing the ends of steel rails when relaying points and crossings.	0 7 0 0	Each	41 5 0	Each	North Western.	
37/172 — 10-8-94	Mill roller ...	(Patent) for grinding paint (steam power) with dust cover, stirrer and shoot, size of roller 14″ × 4½,″ size No. 1.	0 16 0 0	Each	21 0 0	Each	Oudh and Rohilkhand.	
37/158 — 10-8-94	Milling ...	Horizontal spindle for connecting rods and general work.	.....	Each	615 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on Board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
35/51 — 7-6-94	Milling, universal	Double geared, and suitable for plain or circular milling, cutting grooves in taps, rimers, twist drills, and milling cutters, having straight or spiral grooves, and also for cutting spur, bevel worm, and scroll wheels, &c.	2 18 0 0	Each	301 0 0	Each	Eastern Bengal	Similar to that supplied under contract No. 2571, dated 8th July 1889, but without the spare transverse slide fitted with universal headstock, &c.
41/272 — 29-12-94	Moulding ...	Suitable for moulding carriage and wagon axle boxes.	0 12 1 26	Each	19 0 0	Each	North Western.	
38/350* — 26-9-94	Planing ...	Suitable for planing the valve faces of inside cylinders in their places, and adapted to work by hand and also by power, and furnished with all necessary brackets, &c., for securing it in position and with 12 assorted steel tools, handles, spanners, &c., also adapted for steam chests.	0 14 1 0	Each	95 0 0	Each	Eastern Bengal	Similar to that supplied under Contract No.318 C. of 1884.
41/152 — 20-12-94	Roll flattening and straightening.	Suitable for flattening, straightening, and taking buckles out of panel plates from 13 B. W. G. up to ¼″ thick, and 4 feet 6 inches wide. Complete in every respect and fitted with fast and loose pulleys, all necessary belt shifting gear, 160 feet of leather belting and six laces, oil can., spanners, foundation bolts, &c.	3 15 2 0	Each	126 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Saw sharpening...	Wheels, emery, for—						
		12″ × ¼″ „ 1″ diameter ...	...	...	0 3 0	Each	Eastern Bengal.	
		12″ × ½″ „ 1″ „ ...	...	...	0 6 0	„		
		12″ × ¾″ „ 1″ „ ...	...	...	0 9 0	„		
33/96 — 10-4-94	Screwing ...	"Seller's patent," suitable for screwing bolts and tapping nuts from ½″ to 1½″ diameter, both inclusive by once passing through the dies. Complete in every respect and supplied with one complete set of machine taps and dies and one set of master taps, made to Whitworth's standard sizes, rising as follows:—½″, ⅝″, ¾″, ⅞″, 1″ 1⅛″, 1¼″, 1⅜″ and 1½″ consisting of 9 machine taps, 9 sets of dies and 9 master taps, &c., &c., and countershafts, brackets, belting, &c.	1 9 0 0	Each	110 0 0	Each	East Coast.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
34/185 — 24-5-94	Screwing, tapping and tube cutting.	Suitable for screwing and cutting off *w. i.* gas pipes from ½ inch to 2½ inches bore inclusive, and for tapping the sockets for the same sizes of pipes, to the standard gas thread. The machine is arranged so that it can be driven by hand and by power and is supplied with a complete set of dies for cutting the threads of pipes of the following sizes, *viz.* :—½″, ⅝″, ¾″, 1″, 1¼″, 1½″, 1¾″, 2″, 2¼″ and 2½″ bore and a set of taps for tapping the sockets for the sizes of pipes specified. The machine is complete in all its details, with countershaft for bolting to wall and belting, &c.	1 2 2 0	Each	157 15 0	Each	East Coast ...	Including tools.
37/159 — 10-8-94	Shaping ...	10″ stroke, complete with countershafting and all necessary tools for shaping, horizontal, vertical, angular, and curvilinear work.	2 13 3 0	Each	145 0 0	Each	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
36/42 — 5-7-94	Spring plate, forging	With tools, complete, comprising one pair shear blades for cutting plates to length, one punch and die for punching centre hole, one punch and die for oblong hole, one punch and die forming nibs, and one pair of curved shear blades for rounding ends of spring plates.	4 10 0 0	Each	207 10 0	Each.	Burma.	
40/282 — 27-11-94	Trimmer, (Fox's patent).	Spare parts of—Knives for size No. 4 A.	...	...	1 1 0	Pair	Burma ...	*To suit the machines supplied under Contract No. 24–211 dated 15th July 1893.*
32/257 — 16-3-94	Turning, universal	For turning locomotive piston rings, with tool holders and tools fitted to them, complete for turning and finishing piston rings.	3 19 0 0	Each	214 10 0	Each	Eastern Bengal.	
32/269 — 17-3-94	Tube cutting ...	Suitable for cutting brass and steel tubes from 1¼″ up to 2¾″ outside diameter; and arranged so that it can be driven either by hand or power. The machine is complete in every respect and is supplied with 6 spare cutters.	0 5 2 0	Each	25 0 0	Each	Mu Valley.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*concld.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
37/139 — 9-8-94	Wire, stitching and binding.	For steam power, for thick work. The machine is fitted for steam power and furnished with interchangeable tables and guides for the diffirent sizes of blocks. The machine to be of No. 4 construction and capable of stitching from 2 sheets to the full capacity.	0 2 1 17	Each	28 10 0	Each	North Western.	
30/179 — 16-1-94	Wood planing ...	Cutters or blades for—	...	...	0 12 0	Each	Eastern Bengal ...	As supplied on Contract No. $\frac{3}{1}\frac{1}{0}$, dated 18th August 1891.
32/274 — 17-3-94	Saw, circular ...	36″ diameter, suitable for cutting hot iron or steel, round or square bars and angles up to 6″ × 6″ × 1″	3 4 0 0	Each	157 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
39/325 29-10-94	Shafting, steel ...	Length, 25 feet, 4½″ diameter (3 lengths)						
		„ 28 feet, 3½″ „ 6 „	...	...	140 0 0	Total	Burma.	
		„ 28 feet, 3″ „ 6 „						
		„ 23 ft. 10 in., 3″ „ 3 „						
		Split pulley, 4 feet 3 inchs diameter, bore 4½″, and 2 feet wide on face.	...	...	11 0 0	Each		
		Couplings for shaft (independent grip)—						
39/277 25-10-94		Bore 4½″, outside diameter 11,″ length 1′ 6″, No. 3.	...	...	4 0 0	„	Do.	
		Bore 3½″, outside diameter 9¼″, „ 1½″, No. 5.	...	...	2 5 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons cwt. qr. lbs.		£ s. d.			
		Couplings for shaft (independent grip)-*contd.*						
		Bore 3½″, and 3″, outside diameter, 9¼″, length 1′ 2″, (for junction of 2 shafts), No. 3.	...	...	2 5 0	Each		
39/277 25-10-94	Shafting, steel—*contd.*	Bore 3″, outside diameter 8″, length 1′ 6″	...	...	1 13 0	„	Burma.	
		Plummer block, cast iron, adjustable swivelling.						
		Bore 4½″, length 1′ 6″, No. 9	...	...	3 6 6	„		
		„ 3½″ „ 1′ 2″ „ 18	...	...	1 18 0	„		
		„ 3″ „ 1′ 0″ „ 26		...	1 6 0	„		
33/389 28-4-94.	Trough, grindstone	Complete and fitted with fast and loose pulley and slide rest with spindle, for grindstone, 4 feet diameter × 8″ with 3″ diameter hole in centre.	0 7 3 6	Each	7 19 3	Each	East Coast.	

[*For General Distribution.*]

Circular No. 10.

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 STATE RAILWAY.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN STATE RAILWAY.
THE ENGINEER-IN-CHIEF, KOTRI-ROHRI RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY AND GRADIENT IMPROVEMENT WORKS, NORTH WESTERN RAILWAY.
THE ENGINEER-IN-CHIEF, BEZWADA-MADRAS RAILWAY.
THE ENGINEER-IN-CHIEF, ASSAM-BURMA CONNECTION RAILWAY SURVEY.
THE EXECUTIVE ENGINEER, KALKA-SIMLA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

Simla, the 6th August 1895.

SIR,

I have the honour to forward, for information and guidance, a printed statement showing the actual English rates, *free on board* in England, for Class C—State railway stores, "Workshop Machinery and Heavy Tools," contracted for by the Stores Department of the India Office during 1894.

2. A table giving the average rates of sea-freight for Class C stores imported from England to the several ports in India for State railways of both gauges during 1894 is prefixed to the Rate List.

3. In order to arrive at the total cost of Class C stores landed in India, an insurance charge of* one-half per cent. on the *free on board* cost, *plus* entire sea freight, should be added in addition to other incidental charges and exchange, which latter should be calculated at the official rate for the year.

I have the honour to be,

SIR,

Your most obedient Servant,

T. GRACEY, Lieut.-Colonel, R.E.,
Offg. Director General of Railways.

Documents accompanying.

1. Statement showing the average rates per ton for entire sea-freight on Class C stores imported from England to the several ports during 1894.
2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1894.

* For State Railway Stores and Irrigation Works only classed as Imperial. Stores for Provincial and Local funds, and for railways constructed by Native States are charged one per cent. as heretofore.

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, and Assam, Public Works Department.
The Secretaries to the Residents at Hyderabad and in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General, Rajputana and 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 Director General of Military Works.
The Chief Engineer, Kashmir.
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 Assam.

Copy forwarded to the Local Governments and Administrations and to the Officers noted in the margin for information, with the intimation that all Railway Administrations have been supplied with copies direct.

T. GRACEY, Lieut.-Col., R.E.,

Offg. Director General of Railways.

To

THE

No 2248 W/ 10th Sept 1895

Communicated to officers of the P.W. Dept

(2) JP W.

Ch. E. for Irrign
Supdg. Engrs
C. A. to Govt
S. of W. P. P.
Fyr. P W accts

G. C. Press, Simla.—No. 408. P. W. D.—12-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS FOR 1894.

G. C. Press, Simla.—No. 408 P. W. D.—13-8-95.—942.

Enclosure to Director General of Railways' Circular No. 10 of 1895.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1894.

Class of stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and heavy Tools ...	*... ...	16 3	*... ...	23 6†	*... ...	*No material for class C stores was shipped to these ports during 1894. †60 shillings for steam hammer.

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS.

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
30/380 31-1-94	Anvils ...	Smiths, steel faced, each weighing 3 cwt.	0 3 0 0	Each	2 16 0	Each	Eastern Bengal...	The faces of the anvils to be steeled for a depth of not less than ¼″.
37/137 9-8-94		Smith's, pike and arch, 1 cwt., London pattern.	0 1 0 0	,,	1 0 0	,,	Oudh and Rohilkhand.	
30/142 12-1-94	Bellows ...	Smith's, 30″, with nozzle 20 inches long, complete.	...	...	6 19 6	Each	Frontier Railway reserve.	
40/24 5-11-94	Boilers ...	4′ 6″ diameter 9 feet long, locomotive type, multitubular, semi-portable, to work at a steam pressure of 120 lbs. per square inch, with all fittings, &c., complete, but without steam piping upported by a *c. i.* water tank under the fire box and by a *c. i.* stand under the smoke box.	...	...	488 0 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
34/68 10-5-94	Forge Crane ...	Suitable for use with steam hammer and fagotting furnace, and arranged to hoist, lower, revolve and traverse a test load of 2½ tons at a radius of jib of 15 feet and at a height of 13 feet 6 inches from the ground level to the top of the jib.	5 4 2 13	Each	145 0 0	Each	Eastern Bengal.	
34/68 10-5-94	Furnace ...	Fagotting, with hearth 5 feet long, by 3 feet 9 inches wide inside, and 2 feet 3 inches high, sliding doors 2 feet wide, and 1 foot 6 inches high, worked with shaft and pulleys provided at each side for hearth: suitable for 30 cwt. steam hammer, with chimney, ironwork, fire bricks, fire clay, &c., &c., complete.	15 16 0 22	,,	355 0 0	Each.	Eastern Bengal.	
30/178 16-1-94	Gauges	Vacuum, round dial, 6″, for shop vertical engine.	...	...	1 1 0	Each	Eastern Bengal.	
37/14 2-8-94	Grindstones	Best Ayrshire, coarse grit, 60″ × 8″ ...	...	...	3 7 6	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
		Best Newcastle post No. 3—	Tons cwt. qr. lbs.		£ s. d.			
33/418 30-4-94	Grindstones—*contd.*	48″ diameter, 8″ thick, 3″ hole ...	...	...	2 7 9	Each	Burma.	
33/127 12-4-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	2 5 0	,,	East Coast.	
37/214 17-8-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 19 0	,,	Jorhat.	
36/158 13-7-94		48″ diameter, 8″ thick, 3″ hole ...	...	...	1 16 0	,,	Burma.	
30/209 18-1-94		48″ diameter, 6″ thick, 3¼″ hole ...	...	...	2 1 0	,,	Eastern Bengal.	
33/127 12-4-94		48″ diameter, 4″ thick, 2½″ hole ...	...	...	2 2 0	,,	East Coast.	
33/127 12-4-94		36″ diameter, 3″ thick, 2½″ hole ...	...	...	0 17 6	,,		
37/214 17-8-94		30″ diameter, 8″ thick, with 2½″ hole ...	...	...	0 16 0	,,	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
37/48 2-8-94	Grindstones—*concld.*	Yorkshire coarse grit—						
		66″ diameter, 10″ thick, 2½″ hole ...	...	...	6 0 0	Each	North Western.	
		Yorkshire, fine blue grit—						
37/11 2-8-94		42″ diameter, 5″ thick, complete with trough.	...	...	8 14 6	„	Mu Valley.	
30/230 19-1-94		24″ diameter, 4″ thick, 1½″ hole ...	...	...	0 5 6	„	Eastern Bengal.	
34/204 25-5-94	Grindstone dressers	Cutters, cone, steel, of latest shape ...	...	...	1 10 0	Doz.	Burma.	Triers, improved patent.
36/196 16-7-94		Complete with spanner, handle, 2 cutters and one liner, required for stone, 8″ wide, to fit trough of grindstone.	...	...	7 10 0	Each	Burma.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
33/7 3-4-94		With double standards and double acting, with all the necessary blocks, bed-plates, &c., complete, 30 cwt.	29 0 0 0	Each	420 0 0	Each	Eastern Bengal.	
		Spare parts of—						
35/173 14-6-94	Hammers, steam ...	Piston and rod for—	...	...	39 2 6	„	North Western.	
38/347 26-9-94		Tup for 5 cwt. steam hammer, same as supplied on Contract No. 978 of 1888, hole to be left ¼″ small in diameter.	0 1 3 0	Each	8 10 0	„	Burma.	
38/377 26-9-94		Tup for 10 cwt. steam hammer ...	0 1 1 0	„	12 12 0	„	Burma.	
41/153 20-12-94	Lathes, power, self-acting.	Double stud, turning, 6″ height of centres, cast iron planed bed 8 feet long with two carriages and slide rests, two loose head-stocks arranged for sliding taper. Self-acting feed motion, each end independent of the other. Sets of change wheels. Double over-head driving apparatus.	...	...	158 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
31/345 23-2-94	Lathes, power, self-acting—*concld.*	Wheel, 2′ 6″ centre (metre gauge), adapted to turn without torsional strain of axle, a pair of wheels varying from 2 feet to 2 feet 6 inches diameter on their own axle or to bore two tyres, or to boss or bore two wheels, or to boss or bore a wheel on one face, and to bore a tyre on the other at the same time. The lathe is provided with treble geared headstocks, spindles of Siemens Martin's steel, two saddles moveable longitudinally on bed, and drum, 3 feet diameter, and 18″ wide on the rim. Complete in every respect with spare tools.	9 11 3 0	Each	400 0 0	Each	Eastern Bengal.	
34/66 10-5-94		Wheel, turning, and adapted to turn, without torsional strain of axle; a pair of wheels (5′ 6″ gauge), 3 feet 9¼ inches diameter, over the flanges, on an axle, 8 feet 1¼ inches long. The lathe is used for one size of wheel only and no tyre or wheel bossing or boring arrangements are required.	17 16 3 0	„	420 0 0	„		

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
40/199 20-11-94	Lathe ...	Treadle, 6″ centre, and capable of taking in work up to 3 feet long between the centres. The fast headstock is to be single geared and made to accurately fit the opening in the bed. The loose headstock is to slide in and fit the opening in the bed which is to be planed perfectly true with the outside *V's*. The bed is to be fitted with a compound slide rest and saddle suitable for being travesrsed along it by means of a rack, pinion and handle. The lathe is to be complete in every respect.	1 3 2 0	Each	66 0 0	Each	Mu Valley.	
31/14 1-2-94	Lubricators ...	Needle No. 1 round, 2 oz.	...	...	0 3 0	Doz.	Eastern.	
		„ glass, Nos. 1 and 3 round (Lieuvain's patent.—)	...	...	0 3 0			
		„ „ Nos. 2 and 4 flat (Lieuvain's patent.—)	...	...		„		
37/161 10-8-94	.....	„ „ Nos. 1, 2 and 3 (Lieuvain's patent.—)	...	...	0 2 5	„	North-Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines.		Tons cwt. qr. lbs.		£ s. d.			
41/114 — 14-12-94	*Circular moulding and shaping, double spindle.*	Apparatus, housing, for— ...	0 7 2 0	Each	23 13 6	Each	Burma.	
31/419 — 28-2-4	Drilling ...	Stows' patent flexible shaft, with round about transfers to drill holes in steel (out of the solid) up to 1¼″ diameter.	0 4 1 7	Each	34 0 0	Each	Burma.	
41/139 — 15-12-94		For both hand and steam power, to drill holes (out of the solid) up to 1″ diameter with a traverse of one inch in 90 revolutions.	...	...	20 14 0	„	North Western.	Includes a set of spare drills and packing.

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Grinding ...	Discs, emery, for—						
		22″ × 3″ centre hole, 10″ diameter ...	...	...	4 17 0	Each	Eastern Bengal.	
		8″ × 1½″ „ 1½″ „ ...	...	...	0 7 6	„		
		20″ × 2½″ „ 6″ „ ...	...	...	3 12 0	„		
		Wheels, emery, for—						
		20″ × 2½″ centre hole, 6″ diameter ...	...	...	3 12 0	„		
		20″ × 2½″ „ 6½″ „ ...	...	...	3 10 0	„		
		8″ × 1″ „ 1½″ „ ...	...	...	0 5 0	„		
35/280 — 22-6-94	Grinding, twist drill	*Spare discs for—* Discs, emery, 8½″ × 1¼″, with hole in centre, ⅞″ diameter, for—	...	...	0 10 6	Each	Burma.	
36/221 — 18-7-94	Grinding, tool, emery	Spare discs, 36″ diameter × 3⅜″ thick × 24″ hole, for—	.....	...	21 13 4	Each	North Western...	To suit, Thomson Stern's machine No. 3.
33/172 — 13-4-94	Grinding, universal	Emery, with 2 spare emery wheels, each 24 inches diameter, one 3 inches and the other 2 inches thick.	2 19 2 0	Each	63 0 0	Each	Eastern Bengal.	

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on Board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
37/92 — 8-8-94	Lapping and grinding combined, self-acting.	Specially designed for truing up holes in case hardened motion work, grinding straight or radial expansion links and blocks, slide bars, axle boxes, slide blocks for the same, and general work.	3 8 0 0	Each	255 0 0	Each	Oudh and Rohilkhand.	
30/312 — 26-1-94	Magnetising ...	For separating iron and steel filings and borings from brass. Capable of being worked by hand or steam power, and furnished with fast and loose pulleys. Capacity, 2 cwts. per hour.	1 2 0 0	Each	13 10 0	Each	Eastern Bengal.	
36/312 — 26-7-94	Metal, sawing ...	Bryants (or Bryant's portable rail saw), with 2 saws, required for sawing the ends of steel rails when relaying points and crossings.	0 7 0 0	Each	41 5 0	Each	North Western.	
37/172 — 10-8-94	Mill roller ...	(Patent) for grinding paint (steam power) with dust cover, stirrer and shoot, size of roller 14″ × 4¼,″ size No. 1.	0 16 0 0	Each	21 0 0	Each	Oudh and Rohilkhand.	
37/158 — 10-8-94	Milling ...	Horizontal spindle for connecting rods and general work.	.....	Each	615 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on Board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
	Machines—*contd.*		Tons cwt. qr. lbs.		£ *s.* *d.*			
35/51 — 7-6-94	Milling, universal	Double geared, and suitable for plain or circular milling, cutting grooves in taps, rimers, twist drills, and milling cutters, having straight or spiral grooves, and also for cutting spur, bevel worm, and scroll wheels, &c.	2 18 0 0	Each	301 0 0	Each	Eastern Bengal	Similar to that supplied under contract No. 2571, dated 8th July 1889, but without the spare transverse slide fitted with universal headstock, &c.
41/272 — 29-12-94	Moulding ...	Suitable for moulding carriage and wagon axle boxes.	0 12 1 26	Each	19 0 0	Each	North Western.	
38/350 — 26-9-94	Planing ...	Suitable for planing the valve faces of inside cylinders in their places, and adapted to work by hand and also by power, and furnished with all necessary brackets, &c., for securing it in position and with 12 assorted steel tools, handles, spanners, &c., also adapted for steam chests.	0 14 1 0	Each	95 0 0	Each	Eastern Bengal	Similar to that supplied under Contract No. 318 C. of 1884.
41/152 — 20-12-94	Roll flattening and straightening.	Suitable for flattening, straightening, and taking buckles out of panel plates from 13 B. W. G. up to ¼″ thick, and 4 feet 6 inches wide. Complete in every respect and fitted with fast and loose pulleys, all necessary belt shifting gear, 160 feet of leather belting and six laces, oil can., spanners, foundation bolts, &c.	3 15 2 0	Each	126 0 0	Each	North Western.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
30/313 — 26-1-94	Saw sharpening...	Wheels, emery, for— 12″ × ¼″ „ 1″ diameter ...	...	...	0 3 0	Each	Eastern Bengal.	
		12″ × ½″ „ 1″ „ ...	...	...	0 6 0	„		
		12″ × ¾″ „ 1″ „ ...	...	...	0 9 0	„		
33/96 — 10-4-94	Screwing ...	"Seller's patent," suitable for screwing bolts and tapping nuts from ½″ to 1½″ diameter, both inclusive by once passing through the dies. Complete in every respect and supplied with one complete set of machine taps and dies and one set of master taps, made to Whitworth's standard sizes, rising as follows:—½″, ⅝″, ¾″, ⅞″, 1″ 1⅛″, 1¼″, 1⅜″ and 1½″ consisting of 9 machine taps, 9 sets of dies and 9 master taps, &c., &c., and countershafts, brackets, belting, &c.	1 9 0 0	Each	110 0 0	Each	East Coast.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
34/185 — 24-5-94	Screwing, tapping and tube cutting.	Suitable for screwing and cutting off *w. i.* gas pipes from ½ inch to 2½ inches bore inclusive, and for tapping the sockets for the same sizes of pipes, to the standard gas thread. The machine is arranged so that it can be driven by hand and by power and is supplied with a complete set of dies for cutting the threads of pipes of the following sizes, *viz.*:—½″, ⅝″, ¾″, 1″, 1¼″, 1½″, 1¾″, 2″, 2¼″ and 2½″ bore and a set of taps for tapping the sockets for the sizes of pipes specified. The machine is complete in all its details, with countershaft for bolting to wall and belting, &c.	1 2 2 0	Each	157 15 0	Each	East Coast ...	Including tools.
37/159 — 10-8-94	Shaping ...	10″ stroke, complete with countershafting and all necessary tools for shaping, horizontal, vertical, angular, and curvilinear work.	2 13 3 0	Each	145 0 0	Each	Jorhat.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*contd.*		Tons cwt. qr. lbs.		£ s. d.			
36/42 5-7-94	Spring plate, forging	*With tools, complete, comprising one pair shear blades for cutting plates to length,* one punch and die for punching centre hole, one punch and die for oblong hole, one punch and die forming nibs, and one pair of curved shear blades for rounding ends of spring plates.	4 10 0 0	Each	207 10 0	Each.	Burma.	
40/282 27-11-94	Trimmer, (Fox's patent).	Spare parts of—Knives for size No. 4 A.	...	...	1 1 0	Pair	Burma ...	*To suit the machines supplied under Contract No. 24–211 dated 15th July 1893.*
32/257 16-3-94	Turning, universal	For turning locomotive piston rings, with tool holders and tools fitted to them, complete for turning and finishing piston rings.	3 19 0 0	Each	214 10 0	Each	Eastern Bengal.	
32/269 17-3-94	Tube cutting ...	Suitable for cutting brass and steel tubes from $1\frac{1}{4}$″ up to $2\frac{3}{4}$″ outside diameter; and arranged so that it can be driven either by hand or power. The machine is complete in every respect and is supplied with 6 spare cutters.	0 5 2 0	Each	25 0 0	Each	Mu Valley.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machines—*concld.*		Tons cwt. qr. lbs.		£ s. d.			
37/139 9-8-94	Wire, stitching and binding.	For steam power, for thick work. The machine is fitted for steam power and furnished with interchangeable tables and guides for the diffirent sizes of blocks. The machine to be of No. 4 construction and capable of stitching from 2 sheets to the full capacity.	0 2 1 17	Each	28 10 0	Each	North Western.	
30/179 16-1-94	Wood planing ...	Cutters or blades for—	...	...	0 12 0	Each	Eastern Bengal ...	As supplied on Contract No. $\frac{71}{2170}$, dated 18th August 1891.
32/274 17-3-94	Saw, circular ...	36″ diameter, suitable for cutting hot iron or steel, round or square bars and angles up to 6″ × 6″ × 1″	3 4 0 0	Each	157 0 0	Each	Eastern Bengal.	

CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
39/325 29-10-94	Shafting, steel ...	Length, 25 feet, 4½″ diameter (3 lengths) „ 28 feet, 3½″ „ 6 „ „ 28 feet, 3″ „ 6 „ „ 23 ft. 10 in., 3″ „ 3 „	...	...	140 0 0	Total	Burma.	
		Split pulley, 4 feet 3 inches diameter, bore 4½″, and 2 feet wide on face.	...	...	11 0 0	Each		
39/277 25-10-94		Couplings for shaft (independent grip)— Bore 4½″, outside diameter 11,″ length 1′ 6″, No. 3.	...	...	4 0 0	„	Do.	
		Bore 3½″, outside diameter 9¼″, „ 1½″, No. 5.	...	...	2 5 0	„		

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
39/277 25-10-94	Shafting, steel—*concld.*	Couplings for shaft (independent grip)—*contd.* Bore 3½″, and 3″, outside diameter, 9¼″, length 1′ 2″, (for junction of 2 shafts), No. 3.	...	...	2 5 0	Each	Burma.	
		Bore 3″, outside diameter 8″, length 1′ 6″	...	...	1 13 0	„		
		Plummer block, cast iron, adjustable swivelling. Bore 4½″, length 1′ 6″, No. 9	...	...	3 6 6	„		
		„ 3½″ „ 1′ 2″ „ 18	...	...	1 18 0	„		
		„ 3″ „ 1′ 0″ „ 26	...	...	1 6 0	„		
33/389 28-4-94.	Trough, grindstone	Complete and fitted with fast and loose pulley and slide rest with spindle, for grindstone, 4 feet diameter × 8″ with 3″ diameter hole in centre.	0 7 3 6	Each	7 19 3	Each	East Coast.	

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CLASS OF STORES C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*concld.*

Contracted for in 1894.

Contract number and date.	Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
			Weight.	Unit.	Amount.	Unit.		
			Tons cwt. qr. lbs.		£ s. d.			
37/215 17-8-95	Tubes, boiler ...	Iron, 9′ 7″ long × 3″ external diameter	...	...	0 4 8	Each	Oudh and Rohilkhand.	For stationary engine.
		,, 9′ 7″ ,, × 3¼″ ,, ,,	...	...	0 5 0	,,		
		Iron, stay, 9′ 7″ long × 3″ external diameter, ¼″ thick, screwed 6″ one end and 3″ the other end, 11 threads per inch, fitted with 4 nuts, each ¾″ thick.	...	...	0 12 3	,,		
33/95 10-4-94	Water, ejector ...	Or steam trap, 6′ 0″ length, ¾″ gas thread	...	...	3 0 0	Each	Burma.	
	Water, separator ...	4″ without steam trap	...	...	2 15 0	,,		

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