| No. | Year. | Initials of Referencer. | Date returned. | Initials of attender. |
|---|---|---|---|---|
| 18/12 | | | | |
| 18/3/13 | P.W. 814/13 | | | |

Please see Telephone
D/18/3/13

16-10-22 | P.W. 5111/22

MADRAS RECORD OFFICE.
Block No. W

Paper taken out of the Records from the charge of the Referencer, 191 Rack No. Range.

Dept. P.W.D. Revenue Board No. 21889 dated 19

Date taken out. | For what purpose. | Date returned. | Initials of attender.

[R.O. 10 10,000-19-5-11.]

[Ref. 4 5,000—29-9-08.]

P. W. CURRENT No. 7537

2

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, Public Works Department.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.

Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

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

To The Secretary to the Government of Madras
Public Works Department

595 C
Recd. 23-7-12
595 C & S 1
Encls. 1

No. 2109 W. dated 29th July 1912.

Communicated to offices of the Madras for information.

25.7.12

Ch. S. for Brs.
Supdt. Engr.
C.A.O. Conf.
S. Asst. P. Projects
Gun Boats
Old 56-7
M 25-7
T.C. 29/7

[ *General Distribution.* ]

Circular No. 7.

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, BURMA STATE RAILWAY.
THE SUPERINTENDENT OF WORKS, HYDERABAD-UMARKOT RAILWAY.
THE ENGINEER-IN-CHIEF, MU VALLEY RAILWAY.
THE ENGINEER-IN-CHIEF, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KISTNA BRIDGE.
THE ENGINEER-IN-CHIEF, ASSAM-BENGAL RAILWAY, NORTHERN SECTION.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN RAILWAY.
THE ENGINEER-IN-CHIEF, GOONA-BINA RAILWAY.
THE ENGINEER-IN-CHIEF, UJAIN-BHOPAL RAILWAY.
THE ENGINEER-IN-CHIEF, BENGAL DOOARS RAILWAY.
THE ENGINEER-IN-CHIEF, KASHMIR RAILWAY.
THE ENGINEER-IN-CHIEF, FRONTIER RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, SIMLA-KALKA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

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**Rate List for Class C—Workshop Machinery and Heavy Tools, for 1891.**

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Simla, the 28th June 1892.

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 1891.

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 1891 is prefixed to the Rate List.

I have the honour to be,

SIR,

Your most obedient Servant,

R. A. SARGEAUNT, Lieut.-Col., R.E.,
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 1891.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1891.

FROM

THE DIRECTOR GENERAL
OF RAILWAYS,

TO

Circular No. 7.

Dated Simla, the 28th June 1892.

Received

**Indian State Railways.**

Rate List, Class C—"Workshop Machinery and Heavy Tools" for 1891.

G. C. Press, Simla.—No. 1509 P. W. D.—5-7-92.—800.

P.W. 21/75 37/92

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

*Contracted for in 1891.*

| 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. | | | |
| 1/214 14-8-91 | Machines, Saw-sharpening. | *Spare discs or Emery wheels, for—* | | | | | | |
| | | 12″ diar. × ¼″ thickness × 1″, centre hole | ... | ... | 0 3 3 | Each | Eastern Bengal State Railway. | Less 10 % |
| | | 12″ × ⅜″ × 1″ ,, ,, ... | ... | ... | 0 4 9 | ,, | | |
| | | 12″ × ⅝″ × ¾″ ,, ,, ... | ... | ... | 0 7 10 | ,, | | |
| | | 12″ × ⅞″ × ¾″ ,, ,, ... | ... | ... | 0 11 0 | ,, | | |
| 4391 4-2-91 | Pumps, hydraulic. | For testing boilers, with copper pipe and connections complete. | ... | ... | 46 5 0 | Each | Mu Valley Railway. | |

| Contract number and date. | | Articles. | Details. | Approximate gross weight | | Rate—Free on board. | | For what Railway. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Weight. | Unit. | Amount. | Unit. | | |
| 4701 | 14-5-91 | Machine, bolt, nut and rivet-making. | Horsfall's patent, suitable for making iron or steel bolts, nuts and rivets. The machine is complete in every respect, and is to be supplied with a double set of tools for making bolts, nuts and rivets which are to be interchangeable. The machine is also to be supplied with a double set of breaking blocks and six spare knives. | ... | ... | 485 0 0 | Each | East Coast Railway, Kistna Bridge. | |
| | | Machines, emery, grinding. | *Spare discs for—* | | | | | | |
| 2/403 | 28-9-91 | | 12″ diar. × ½″ thick × ¾″, centre hole | ... | ... | 0 6 3 | Each | Oudh and Rohilkhand Railway. | Less 10 % |
| 5/54 | 3-12-91 | | 12″ ,, × ½″ ,, × ¾″ ,, ,, ... | ... | ... | 0 6 8 | ,, | Burma State Railway. | |
| 2/403 | 28-9-91 | | 12″ ,, × ⅜″ ,, × ¾″ ,, ,, ... | ... | ... | 0 4 9 | ,, | Oudh and Rohilkhand Railway. | |
| 5/54 | 3-12-91 | | 12″ ,, × ⅜″ ,, × ¾″ ,, ,, ... | ... | ... | 0 5 2 | ,, | Burma State Railway. | |
| 1/270 | 18-8-91 | Machines, planing, wood. | *Spare parts of—* Cutters or blades, for ... ... | ... | ... | 0 12 0 | Each | Eastern Bengal State Railway. | |

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

*Contracted for in 1891.*

| 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. | | | |
| 4/210 | *contd.* | Lathes, Power, self-acting—*contd.* | 16½″ wide over the V's and 11″ deep, and is to be supported on three cast iron standards, 6″ wide and 34″ across the base and of sufficient height so that the distance from the ground line to the centre of the lathe is about 3′ 6″. The guide screw is to be 2⅜″ diameter and is to be used for screw-cutting only. It is to be carried at each end by brackets, and at intervals between by bearers. Each lathe is to be complete in every respect, and is to be supplied with a complete set of change wheels for cutting screws from 1 to 20 threads per inch, and other accessories for tools required for working the lathe. | | | | | | |
| 4494 | 13-3-91 | Lubricators. | Needle, No. 1, round 2 oz. ... ... | ... | ... | 0 3 0 | Doz. | Eastern Bengal State Railway. | |
| 3/7 | 1-10-91 | | ,, ,, 1 ,, ,, ... ... | | | | | | |
| | | | ,, ,, 2 ,, ,, ... ... | ... | ... | 0 3 0 | ,, | North Western Railway. | |

| 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. | | | |
| 4912 | 9-7-91 | Lathes, power, self-acting. | Copying, suitable for shaping oval or irregular surfaces, such as pick handles, spokes, &c. The countershaft to be carried on pedastals fixed to the framing of the machine.<br><br>*Note.*—The lathe to be of sufficient capacity to take 4 feet 6 inches between the centres, and also suitable for cutting each way of the traverse. The lathe to be complete in every respect, and to be supplied with the necessary belt-shifting gear and internal belting, 2 sets of best steel cutters, 2 iron model spokes, 1 set of wrought iron case hardened black finished spanners, 1 Kaye's seamless syphon oil can, and bolts, nuts and washer plates for fixing the machine to a foundation 4 feet deep. | 1 10 0 0 | Each | 83 15 0 | Each | Warora Colliery. | |
| | | | Screw-cutting and surfacing, 9″ centre, to take 8 feet between the centres. | ... | ... | 217 10 0 | Each | Eastern Bengal State Railway. | |
| 4/210 | 18-11-91 | | Screw-cutting and surfacing, 9″ centre, to take 8 feet between the centre and fitted with a screw-chasing apparatus. | ... | ... | 241 0 0 | „ | | |
| | | | *Particulars of above Lathes.*<br><br>The fast headstock is to have a base of about 28″ long and 11¾″ wide, and is to be double geared. The loose headstock is to have a base 13½″ long and 10″ wide, sliding in and fitting an opening in the bed; planed perfectly with the outside V's. The bed is to be of sufficient length to take in 8 feet between the centres, | | | | | | |

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

*Contracted for in 1891.*

| 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. | | | |
| 4686 | 7-5-91 | Grindstones. | Best New Castle, post, No. 3 – 48″ × 8″, without trough. | ... | ... | 2 19 0 | Each | Burma State Railway. | Centre hole 3″ square. |
| 4/45 | 30-11-91 | | Best New Castle, post, No. 3 – 48″ × 8″, without trough. | ... | ... | 3 0 3 | „ | Ditto. | Ditto ditto. |
| 1/339 | 22-8-91 | | Best New Castle, post, No. 4 – 48″ × 6″, without trough. | ... | ... | 2 9 0 | „ | Eastern Bengal State Railway. | Ditto 3¼″ square. |
| „ | „ | | Best New Castle, post, No. 4 – 54″ × 14″, without trough. | ... | ... | 4 18 0 | „ | Ditto. | |
| 4/345 | 30-11-91 | | Best New Castle, post, No. 4 – 60″ × 8″, without trough. | ... | ... | 5 7 0 | „ | Burma State Railway. | |
| 4911 | 8-7-91 | | Yorkshire, blue, medium grit, 24″ × 5″, complete with cast iron trough, wrought iron crank handle and spindles with brass bearings. | ... | ... | 2 0 0 | „ | Mu Valley Railway. | |
| 4691 | 7-5-91 | Indicators | Speed, Stroudley's, with piping, pulleys and belting. For one "F" and one "O" class engine and one for saloon inspection carriage. | ... | ... | 12 0 0 | Each | Burma State Railway. | |

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

*Contracted for in 1891.*

| 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. | | | |
| 4326 | 27 1 91 | Crucibles—*contd.* | „ 40 ... ... ... | ... | ... | 0 10 0 | „ | Warora Colliery. | |
| „ | „ | | „ 50 ... ... ... | ... | ... | 0 12 6 | „ | | |
| „ | „ | | „ 60 ... .. ... | ... | ... | 0 15 0 | „ | | |
| „ | „ | | „ 80 ... ... ... | ... | .. | 1 0 0 | „ | | |
| 4976 | 31-7-91 | | „ 60 ... ... ... | ... | ... | 0 15 0 | „ | Burma State Railway. | |
| 1/359 | 22-8-91 | Forges. | Portable, 24″ diameter and 2′ 6″ high, with blowers fixed to back of forge. | ... | ... | 9 15 0 | Each | Mu Valley Railway. | |
| 3/117 | 10-10-91 | | Portable, with rectangular hearth plate, 2′ 7″ long × 1′ 10″ broad and fitted with Alldays patent Direct acting Roots blower on the back of the forge. | ... | ... | 14 19 6 | „ | Oudh & Rohilkhand Railway. | |
| 4637 | 20-4-91 | Gauges. | Pressure, hydraulic, Bailey's patent with bell, No. 4 size, for pressure of 1 ton per square inch ... ... | ... | ... | 7 7 0 | Each | Burma State Railway. | |

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

*Contracted for in 1891.*

| 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. | | | |
| 3/70 | 6-10-91 | Bellows | Smith's, 24″ to have a patent screw pipe fitted with nozzle 27″ long. | 0 1 1 20 | Each | 3 2 6 | Each | North Western Railway. | |
| | | | Smiths, 36″ to have a patent screw pipe fitted with nozzle 14″ long. | 0 2 0 17 | „ | 8 19 6 | „ | | |
| 4840 | 25-6-91 | Cranes | Overhead, travelling, complete, to lift 20 tons through a height of 10 ft., the crane is to run on a rail pathway, the centres of the wheels running on the pathway being 26 ft. 6 inches. | ... | ... | 500 0 0 | Each | Mu Valley Railway. | Cancelled, subsequently at the request of the Burma authorities. |
| | | Crucibles. | Plumbago, Morgans Salamander— | | | | | | |
| 1/65 | 5-8-91 | | No. 20 ... ... ... | ... | ... | 0 5 0 | Each | Eastern Bengal State Railway. | |
| „ | „ | | „ 40 ... ... ... | ... | ... | 0 10 0 | „ | | |
| „ | „ | | „ 60 ... ... ... | ... | ... | 0 15 0 | „ | | |

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

*Contracted for in 1891.*

| 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. | | | |
| 4902 | 6-7-91 | Anvils. | Blacksmiths, 2 cwt. ... ... | 0 2 0 0 | Each | 2 3 0 | Each | Mu Valley Railway. | |
| 1/295 | 19-8-91 | | ,, 3 ,, ... ... | 0 3 0 0 | ,, | 3 3 0 | ,, | Burma State Railway. | |
| 2/193 | 15-9-91 | | ,, 3 ,, ... ... | 0 3 0 0 | ,, | 3 3 0 | ,, | Ditto. | |
| 1/257 | 17-8-91 | | ,, 7 ,, ... ... | 0 7 0 0 | ,, | 7 15 0 | ,, | Eastern Bengal State Railway. | |
| ,, | ,, | | ,, 7 ,, square both ends ... | 0 7 0 0 | ,, | 7 15 0 | ,, | | |
| 4902 | 6-7-91 | | Swage blocks, 15″ × 15″ × 5″ ... | 0 2 0 7 | ,, | 0 16 6 | ,, | Mu Valley Railway. | |
| ,, | ,, | | Stands, for swage blocks ... ... | 0 1 3 17 | ,, | 0 16 0 | ,, | | |
| 4680 | 4-5-91 | Bedstone | For edge runners (oil mill), best Derbyshire grit, as used for seed crushing ... | 3 15 0 0 | Each | 25 0 0 | Each | North-Western Railway. | |

Enclosure to Director General of Railways' Circular No. 7 of 1892.

*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 1891.*

| Class of stores. | Port of Bombay. | Port of Calcutta. | Port of Kurrachee. | Port of Rangoon. | Remarks. |
|---|---|---|---|---|---|
| | *s.* *d.* | *s.* *d.* | *s.* *d.* | *s.* *d.* | |
| C—Workshop Machinery and Heavy Tools ... | *20 0 | 22 6 | 15 0 | 28 4 | * Rate for 1889. No Workshop Machinery was imported during 1891. |

Enclosure to Director General of Railways' Circular No. 7 of 1892.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1891.

Enclosure to Director General of Railways' Circular No. 7 of 1892.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1891.

G. C. Press, Simla.—No. 1509 P. W. D.—8-7-92.—£03.



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, Public Works Department.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.

Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

R. A. SARGEAUNT, Lieut.-Col., R.E.,
Director General of Railways.

No 2109. W. dy 29 July 1892
Communicated to officers of the P.W.D for information.
Dy J. P
W

Ch. Engr for Irrign
Supdg: Engrs.
C. a. to Govt.
5 Gr W. P. Projects.
Exr P. W. Accts.

Enclosure to Director General of Railways' Circular No. 7 of 1892.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

## FOR 1891.

G. C. Press, Simla.—No. 1509 P. W. D.—8·7·92.—100.

FROM

THE DIRECTOR GENERAL
OF RAILWAYS,

To

Circular No. 7.

Dated Simla, the 28th June 1892.

Received

**Indian State Railways.**

Rate List, Class C—"Workshop Machinery and Heavy Tools" for 1891.

G. C. Press, Simla.—No. 1509 P. W. D.—5·7·92.—800.

[ *General Distribution.* ]

Circular No. 7.

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, BURMA STATE RAILWAY.
THE SUPERINTENDENT OF WORKS, HYDERABAD-UMARKOT RAILWAY.
THE ENGINEER-IN-CHIEF, MU VALLEY RAILWAY.
THE ENGINEER-IN-CHIEF, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KISTNA BRIDGE.
THE ENGINEER-IN-CHIEF, ASSAM-BENGAL RAILWAY, NORTHERN SECTION.
THE ENGINEER-IN-CHIEF, MUSHKAF-BOLAN RAILWAY.
THE ENGINEER-IN-CHIEF, GOONA-BINA RAILWAY.
THE ENGINEER-IN-CHIEF, UJAIN-BHOPAL RAILWAY.
THE ENGINEER-IN-CHIEF, BENGAL DOOARS RAILWAY.
THE ENGINEER-IN-CHIEF, KASHMIR RAILWAY.
THE ENGINEER-IN-CHIEF, FRONTIER RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, SIMLA-KALKA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

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**Rate List for Class C—Workshop Machinery and Heavy Tools, for 1891.**

---

Simla, the 28th June 1892.

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 1891.

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 1891 is prefixed to the Rate List.

I have the honour to be,

SIR,

Your most obedient Servant,

R. A. SARGEAUNT, Lieut.-Col., R.E.,
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 1891.
2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1891.

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, Public Works Department.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.

Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

R. A. SARGEAUNT, Lieut.-Col., R.E.,
Director General of Railways.

No. 2109 W. dated 29 July 1892

Communicated to officials of the P.W.D. for information.

Sept 8. P
W

Ch. Engr for Irrign
Engrs: Eastern.
C. A. to Govt.
S. of W. P. Present.
Exam P.W. Accts.



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4701 | 14-5-91 | Machine, bolt, nut and rivet-making. | Horsfall's patent, suitable for making iron or steel bolts, nuts and rivets. The machine is complete in every respect, and is to be supplied with a double set of tools for making bolts, nuts and rivets which are to be interchangeable. The machine is also to be supplied with a double set of breaking blocks and six spare knives. | ... | ... | 485 0 0 | Each | East Coast Railway, Kistna Bridge. | | |
| | | Machines, emery, grinding. | *Spare discs for—* | | | | | | | |
| 2/403 | 28-9-91 | | 12″ diar. × ½″ thick × ¾″, centre hole | ... | ... | 0 6 3 | Each | Oudh and Rohilkhand Railway. | Less 10 % | |
| 5/54 | 3-12-91 | | 12″ ,, × ½″ ,, × ¾″ ,, ,, ... | ... | ... | 0 6 8 | ,, | Burma State Railway. | | |
| 2/403 | 28-9-91 | | 12″ ,, × ⅝″ ,, × ¾″ ,, ,, ... | ... | ... | 0 4 9 | ,, | Oudh and Rohilkhand Railway. | | |
| 5/54 | 3-12-91 | | 12″ ,, × ⅝″ ,, × ¾″ ,, ,, ... | ... | ... | 0 5 2 | ,, | Burma State Railway. | | |
| | | Machines, planing, wood. | *Spare parts of—* | | | | | | | |
| 1/270 | 18-8-91 | | Cutters or blades, for ... ... | ... | ... | 0 12 0 | Each | Eastern Bengal State Railway. | | |

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

*Contracted for in 1891.*

| 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. | | | |
| | | *Spare discs or Emery wheels, for—* | | | | | | |
| 1/214 14-8-91 | Machines, Saw-sharpening. | 12″ diar. × ¼″ thickness × 1″, centre hole | ... | ... | 0 3 3 | Each | Eastern Bengal State Railway. | Less 10 % |
| | | 12″ × ⅜″ × 1″ ,, ,, ... | ... | ... | 0 4 9 | ,, | | |
| | | 12″ × ⅝″ × ¾″ ,, ,, ... | ... | ... | 0 7 10 | ,, | | |
| | | 12″ × ⅞″ × ¾″ ,, ,, ... | ... | ... | 0 11 0 | ,, | | |
| 4391 4-2-91 | Pumps, hydraulic. | For testing boilers, with copper pipe and connections complete. | ... | ... | 46 5 0 | Each | Mu Valley Railway. | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4326 | 27-1-91 | Crucibles—*contd.* | „ 40 ... ... ... | ... | ... | 0 10 0 | „ | Warora Colliery. |
| „ | „ | | „ 50 ... ... ... | ... | ... | 0 12 6 | „ | |
| „ | „ | | „ 60 ... .. ... | ... | ... | 0 15 0 | „ | |
| „ | „ | | „ 80 ... ... ... | ... | ... | 1 0 0 | „ | |
| 4976 | 31-7-91 | | „ 60 ... ... ... | ... | ... | 0 15 0 | „ | Burma State Railway. |
| 1/359 | 22-8-91 | Forges. | Portable, 24″ diameter and 2′ 6″ high, with blowers fixed to back of forge. | ... | ... | 9 15 0 | Each | Mu Valley Railway. |
| 3/117 | 10-10-91 | | Portable, with rectangular hearth plate, 2′ 7″ long × 1′ 10″ broad and fitted with Alldays patent Direct acting Roots blower on the back of the forge. | ... | ... | 14 19 6 | „ | Oudh & Rohilkhand Railway. |
| 4637 | 20-4-91 | Gauges. | Pressure, hydraulic, Bailey's patent with bell, No. 4 size, for pressure of 1 ton per square inch ... ... | ... | ... | 7 7 0 | Each | Burma State Railway. |

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

*Contracted for in 1891.*

| 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. | | | |
| 4686 | 7-5-91 | Grindstones. | Best New Castle, post, No. 3 – 48″ × 8″, without trough. | ... | ... | 2 19 0 | Each | Burma State Railway. | Centre hole 3″ square. |
| 4/45 | 30-11-91 | | Best New Castle, post, No. 3 – 48″ × 8″, without trough. | ... | ... | 3 0 3 | ,, | Ditto. | Ditto ditto. |
| 1/339 | 22-8-91 | | Best New Castle, post, No. 4 – 48″ × 6″, without trough. | ... | ... | 2 9 0 | ,, | Eastern Bengal State Railway. | Ditto 3¼″ square. |
| ,, | ,, | | Best New Castle, post, No. 4 – 54″ × 14″, without trough. | ... | ... | 4 18 0 | ,, | Ditto. | |
| 4/345 | 30-11-91 | | Best New Castle, post, No. 4 – 60″ × 8″, without trough. | ... | ... | 5 7 0 | ,, | Burma State Railway. | |
| 4911 | 8-7-91 | | Yorkshire, blue, medium grit, 24″ × 5″, complete with cast iron trough, wrought iron crank handle and spindles with brass bearings. | ... | ... | 2 0 0 | ,, | Mu Valley Railway. | |
| 4691 | 7-5-91 | Indicators | Speed, Stroudley's, with piping, pulleys and belting. For one "F" and one "O" class engine and one for saloon inspection carriage. | ... | ... | 12 0 0 | Each | Burma State Railway. | |
| 4912 | 9-7-91 | Lathes, power, self-acting. | Copying, suitable for shaping oval or irregular surfaces, such as pick handles, spokes, &c. The countershaft to be carried on pedastals fixed to the framing of the machine.<br><br>*Note.*—The lathe to be of sufficient capacity to take 4 feet 6 inches between the centres, and also suitable for cutting each way of the traverse. The lathe to be complete in every respect, and to be supplied with the necessary belt-shifting gear and internal belting, 2 sets of best steel cutters, 2 iron model spokes, 1 set of wrought iron case hardened black finished spanners, 1 Kaye's seamless syphon oil can, and bolts, nuts and washer plates for fixing the machine to a foundation 4 feet deep. | 1 10 0 0 | Each | 83 15 0 | Each | Warora Colliery. | |
| 4/210 | 18-11-91 | | Screw-cutting and surfacing, 9″ centre, to take 8 feet between the centres.<br><br>Screw-cutting and surfacing, 9″ centre, to take 8 feet between the centre and fitted with a screw-chasing apparatus.<br><br>*Particulars of above Lathes.*<br><br>The fast headstock is to have a base of about 28″ long and 11¾″ wide, and is to be double geared. The loose headstock is to have a base 13½″ long and 10″ wide, sliding in and fitting an opening in the bed; planed perfectly with the outside V's. The bed is to be of sufficient length to take in 8 feet between the centres, | ...<br><br>... | ...<br><br>... | 217 10 0<br><br>241 0 0 | Each<br><br>,, | Eastern Bengal State Railway. | |

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

*Contracted for in 1891.*

| 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. | | | |
| 4/210 *contd.* | Lathes, Power, self-acting—*concld.* | 16½″ wide over the V's and 11″ deep, and is to be supported on three cast iron standards, 6″ wide and 34″ across the base and of sufficient height so that the distance from the ground line to the centre of the lathe is about 5′ 6″. The guide screw is to be 2⅜″ diameter and is to be used for screw-cutting only. It is to be carried at each end by brackets, and at intervals between by bearers. Each lathe is to be complete in every respect, and is to be supplied with a complete set of change wheels for cutting screws from 1 to 20 threads per inch, and other accessories for tools required for working the lathe. | | | | | | |
| 4494 | 13-3-91 | Lubricators. Needle, No. 1, round 2 oz. ... ... | ... | ... | 0 3 0 | Doz. | Eastern Bengal State Railway. | |
| 3/7 | 1-10-91 | „ „ 1 „ „ ... ... | ... | ... | 0 3 0 | „ | North Western Railway. | |
| | | „ „ 2 „ „ ... ... | | | | | | |

FROM

THE DIRECTOR GENERAL
OF RAILWAYS,

To

Circular No. 17.

Dated Simla, the 3rd August 1891.

Received

INDIAN STATE RAILWAYS.

Rate List, Class C—"Workshop Machinery and Heavy Tools" for 1890.

C. C. Press, Simla.—No. 495 P. W. D.—13-8-91—1,100.

[*General Distribution.*]

Circular No. 17.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE SUPERINTENDENT OF WORKS, CHAMAN EXTENSION.
THE SUPERINTENDENT OF WORKS, HYDERABAD-UMERKOT RAILWAY.
THE ENGINEER-IN-CHIEF, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KISTNA BRIDGE.
THE ENGINEER-IN-CHIEF, MU VALLEY RAILWAY.
THE ENGINEER-IN-CHIEF, MOGHAL SARAI-HOWRAH RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, MOGHAL SARAI-DALTONGUNGE SECTION OF THE MOGHAL SARAI-HOWRAH RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, FRONTIER RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, KASHMIR RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, ZHOB VALLEY RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, JEYPORE-CHUMBAL RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, GOONA-BINA RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, UJJAIN-BHOPAL RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

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**Rate List for Class C—Workshop Machinery and Heavy Tools for 1890.**

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Simla, the 3rd August 1891.

SIR,

I have 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 1890.

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 1890-91 is prefixed to the Rate List.

I have the honour to be,

SIR,

Your most obedient servant,

R. A. SARGEAUNT, Lieut.-Col., 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 at the several Ports during 1890-91.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1890.

The Secretaries to the Governments of Madras, 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, Hyderabad and 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 Accountant General, Public Works Department.
The Comptroller General.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.
The Agent and General Manager, Assam Railways and Trading Company, Limited.

Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

R. A. SARGEAUNT, Lieut.-Col., R.E.,
Offg. Director General of Railways.

The Secretaries to the Governments of Madras, 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, Hyderabad and 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 Accountant General, Public Works Department.
The Comptroller General.
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The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.
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Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

R. A. SARGEAUNT, Lieut.-Col., R.E.,
Offg. Director General of Railways.

Enclosure to Director General of Railways' Circular No. 17 of 1891.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1890.

G. C. Press, Simla.—No. 495 P. W. D.—14-8-91.—1,100.

Enclosure to Director General of Railways' Circular No. 17 of 1891.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1890.

## Enclosure to Director General of Railways' Circular No. 17 of 1891.

*Statement showing the average rates per ton for entire sea-freight on C Class stores sent out from England to the several ports in India for State Railways of both gauges during 1890-91.*

| Class of stores. | Port of Bombay. | Port of Calcutta. | Port of Kurrachee. | Port of Rangoon. | Remarks. |
|---|---|---|---|---|---|
| | *s.* *d.* | *s.* *d.* | *s.* *d.* | *s.* *d.* | |
| C—Workshop Machinery and Heavy Tools ... ... | *20 0 | 22 6 | 15 0 | 28 4 | * Rate for 1889. No Workshop Machinery imported in Bombay during 1890-91. |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3389 | 27-3-90 | Anvils. | Blacksmith's, medium size, 6″ broad across the face, weighing 5 cwt. | 0 | 5 | 0 | 0 | Each | 5 | 15 | 0 | Each. | |
| | | | Smith's, 2 cwt., each ... ... ... .. | 0 | 2 | 0 | 0 | ,, | 2 | 1 | 0 | ,, | |
| 4024 | 24-10-90 | | Swage block, 15″ × 15″ × 5″ ... ... ... ... | 0 | 2 | 0 | 7 | ,, | 1 | 16 | 0 | ,, | |
| ,, | ,, | | Stands for ,, ... ... ... ... | 0 | 1 | 3 | 17 | ,, | | | | | |
| ,, | ,, | Bellows. | Smith's, 36″ ... ... ... ... ... | 0 | 0 | 1 | 14 | Each | 8 | 7 | 6 | Each. | |
| 4008 | 23-10-90 | | ,, 36″ ... ... ... ... ... | 0 | 0 | 1 | 14 | ,, | 8 | 16 | 0 | ,, | |
| 3939 | 15-10-90 | | ,, 24″ ... ... ... ... ... | 0 | 0 | 2 | 1 | ,, | 3 | 1 | 0 | ,, | |
| ,, | ,, | Blowers. | Root's patent, required for 8 fires ... ... ... | ... | ... | ... | ... | ... | 52 | 17 | 6 | Each. | |
| 4055 | 30-10-90 | Crucibles—Plumbago. | Morgan's, Salamander brand— | | | | | | | | | | |
| | | | No. 10 or 20 lbs. .. .. ... ... | ... | ... | ... | ... | ... | 0 | 2 | 6 | Each. | |
| 3978 | 21-10-90 | | ,, 20 or 40 ,, ... ... ... ... | ... | ... | ... | ... | ... | 0 | 5 | 0 | ,, | |
| ,, | ,, | | ,, 25 or 50 ,, ... ... ... ... | ... | ... | ... | ... | .. | 0 | 6 | 3 | ,, | |
| 3945 | 15-10-90 | | | | | | | | | | | | |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Description. Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Crucibles—Plumbago—*concld.* | Morgan's, Salamander brand—*concld.* | | | | | | | | | | |
| 3978 | 21-10-90 | | No. 30 or 60 lbs. ... ... ... ... | ... | ... | ... | ... | ... | 0 | 7 | 6 | Each. | |
| 3945 | 15-10-90 | | „ 40 or 80 „ ... ... ... ... | ... | ... | ... | ... | ... | 0 | 10 | 0 | „ | |
| „ | „ | | „ 50 or 100 „ ... ... ... ... | ... | ... | ... | ... | ... | 0 | 12 | 6 | „ | |
| 3978 | 21-10-90 | | „ 60 or 120 „ ... ... ... ... | ... | ... | ... | ... | ... | 0 | 15 | 0 | „ | |
| 3945 | 15-10-90 | | „ 100 or 200 „ ... ... ... ... | ... | ... | ... | ... | ... | 1 | 5 | 0 | „ | |
| 3244 | 14-2-90 | Diamond Holder ... | Plain, with rough diamond firmly set, for turning emery wheels ... | ... | ... | ... | ... | ... | 2 | 5 | 0 | Each. | |
| 4056 | 30-10-90 | Engines, fire. | Hose, delivery, canvas, unlined, 2½″ internal diameter, in lengths of 100 feet, fitted with couplings, 2″ waterway; for :— ... | ... | .. | .. | ... | ... | 9 | 2 | 4 | Each. | |
| 4067 | 31-10-90 | | Hand, complete, to draw water either by its own cistern or by suction .. | .. | ... | ... | ... | ... | 127 | 10 | 0 | „ | |
| 3233 | 10-2-90 | Forges ... | Vulcan, portable, with hearth plates 23 inches diameter, each forge to be fitted with a Root's blower ... ... ... | ... | .. | ... | ... | ... | 8 | 8 | 3 | Each. | |
| 3463 | 15-5-90 | Grindstones. | Yorkshire, spare stone, 2′ diameter × 4″ thick, and 1½″ diameter hole in centre ... ... ... ... ... ... | ... | ... | ... | ... | ... | 0 | 10 | 0 | Each. | |
| 4015 | 23-10-90 | | 24″ diameter, mounted in a cast-iron trough, fitted with fast and loose pulleys, compound slide rest with index and pointer, &c. ... | ... | ... | ... | ... | ... | 32 | 10 | 0 | „ | |

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

*Contracted for in 1890.*

| Contract Number and date. | | Description. Articles. | Description. Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Grindstones—*concld.* | | | | | | | | | | | |
| 4060 | 31-10-90 | | Yorkshire, 48″ × 8″, 3″ square hole ... ... ... | ... | ... | ... | ... | ... | 1 | 15 | 0 | Each. | |
| | | | 66″ × 10″, 2½″ „ ... ... ... | ... | ... | .. | ... | ... | 4 | 10 | 0 | „ | |
| | | | 72″ × 10″, 3″ „ ... ... ... | ... | ... | ... | ... | ... | 6 | 0 | 0 | „ | |
| 4061 | 31-10-90 | | Yorkshire, 66″ × 10″, 2½″ „ best Derby coarse grit ... | ... | ... | ... | ... | ... | 7 | 4 | 6 | „ | Suitable for file grinding. |
| 3460 | 15-5-90 | Hearths. | Coppersmith's, brazing, circular, with water tuyere to be made of cast-iron, and to have a flange 10″ diameter × ¾″ thick cast on it, suitable for connection to a blast pipe ... ... ... | ... | ... | ... | .. | ... | 9 | 17 | 6 | Each. | |
| „ | „ | | Smith's, circular, small (Allday's) ... ... ... | ... | ... | ... | ... | ... | 27 | 15 | 0 | „ | |
| 3744 | 28-7-90 | Indicators, Steam. | Richard's springs for :—(for taking diagrams) scale ⅓ for 150 lbs. boiler pressure— | | | | | | | | | | |
| | | | „ „ „ ⅕ „ 175 „ | ... | ... | ... | ... | ... | 0 | 7 | 0 | Each. | |
| | | | „ „ „ 1/10 „ 125 „ | | | | | | | | | | |
| | | | „ „ „ 1/12 „ 100 „ | | | | | | | | | | |
| | | | Springs, paper cylinder, for :— ... ... ... | ... | ... | ... | ... | ... | 0 | 1 | 0 | „ | |
| | | | Paper metallic, cut into 360 diagram sheets, for— ... ... | ... | ... | ... | ... | ... | 0 | 3 | 0 | Quire. | |
| | | | Scales box-wood; for measuring diagrams No. 8, 9 and 10 for— ... | ... | ... | ... | ... | ... | 0 | 0 | 9 | Each. | |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lathes, Power, Self-acting. | *Headstocks and fittings for—* | | | | | | | | | | |
| 3408 | 12-4-90 | | 7″ centre, for heading pointing and chasing on one bed, with three main shaft drums. | 4 | 14 | 2 | 0 | Each. | 386 | 0 | 0 | Each. | Similar to those supplied on contract C. 387 of 1885, to Eastern Bengal State Railway. |
| 3376 | 22-3-90 | | 2′ 10″ centre, double geared, with one universal 4 jaw chuck, 20″ diameter. 2 compound slide rests and saddles ... ... ... 2 countershafts with brackets, &c., &c., complete, and 2 drums for main shaft ... ... ... ... | 3 | 14 | 0 | 0 | Total | 276 | 0 | 0 | Total. | |
| 3773 | 15-8-90 | | Saddle and compound slide rest for existing 18″ centre lathe, suitable for turning two journals of an axle at the same time. | 1 | 6 | 1 | 0 | Each. | 90 | 0 | 0 | Each. | |
| 3619 | 28-6-90 | | Gap, 6″ centre screw cutting and surfacing, to take 8′ between the centres. The bed is of sufficient length to admit 8 feet between the centres, and is to be fitted with a gap made to admit work up to 24″ diameter and 6″ wide. The lathe is complete in every respect, including a complete set of tools ... ... | 1 | 3 | 3 | 1 | ,, | 74 | 0 | 0 | ,, | |
| 3619 | 28-6-90 | | Screw cutting and surfacing, 6″ centre. To take 2 feet 9 inches between the centres. The fast headstock is 19″ long and 8″ wide and double geared. The bed is of sufficient length to take in 2 feet 9 inches between the centres, 12″ wide over the V's and 8″ deep, and is supported on three strong C. I. standards 4½″ wide and 30″ across the base. The guide screw is 1¾″ diameter. The lathe is complete in every respect with tools ... | 1 | 3 | 3 | 1 | ,, | 85 | 5 | 0 | ,, | |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lathes, Power, Self-acting.—*contd.* | | | | | | | | | | | |
| 3619 | 28-6-90 | | Screw cutting and surfacing 8″ centre. The fast head stock is 26″ long 10½″ wide and is double geared. The bed is of sufficient length to take in 5′ 9″ between the centres, 15″ wide over the V's and 10″ deep, and is supported on three strong C. I. standards 6″ wide and 33″ across the base. The guide screw is 2⅜″ diameter. The lathe is complete in every respect and supplied with the necessary tools ... ... ... ... | ... | ... | ... | ... | ... | 111 | 10 | 8 | Each. | |
| 3621 | 28-6-90 | | Turret, 6″ centre, with 5 feet bed, specially designed for turning, chasing and finishing iron and brass work. The fast headstock has a base of 19″ long and 8″ wide and is double geared. The bed is of sufficient length to take 5 feet between the centres and is not less than 9″ wide over the V's and 8″ deep, and is supported on two strong cast-iron standards. The lathe is complete in every respect, and is supplied with additional parts ... | 1 | 3 | 0 | 0 | Each. | 181 | 0 | 0 | ,, | Cooper's patent. |
| 3773 | 15-8-90 | | Turning and boring wheel centres and tyres, specially adapted for turning, boring and facing wheel centres, or boring tyres from 2 feet to 3 feet 9 inches diameter over the flange, for all sizes of tyres within the above range. The lathe is complete in every respect, and is supplied with a countershaft; with brackets, &c., complete, and a main shaft drum of the type usually supplied to the Indian State Railways suitable for driving the lathe from a main shaft, one suitable spanner or ratchet lever for traversing saddle; two right hand and two left hand tools of steel 2¼ inches by 2 inches by 20 inches long is also provided ... ... | 7 | 10 | 0 | 0 | ,, | 410 | 0 | 0 | ,, | |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3335 | 12-3-90 | Lathes, Power, Self-acting—*contd.* | 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 2 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. The lathe is complete in every respect with spare tools ... ... ... ... | 10 | 12 | 2 | 0 | Each. | 430 | 0 | 0 | Each. | |
| 3538 | 5-6-90 | Lubricators, Needle. | Round, No. 5 ... ... ... ... ... | ... | ... | ... | ... | ... | 0 | 2 | 6 | Doz. | |
| ,, | ,, | | ,, ,, 6 ... ... ... ... ... | ... | ... | ... | ... | ... | | | | | |
| ,, | ,, | | ,, ,, 8 ... ... ... ... ... | ... | ... | ... | ... | ... | | | | | |
| ,, | ,, | | Flat, No. 4 ... ... ... ... ... | ... | ... | ... | ... | ... | 0 | 2 | 6 | ,, | |
| ,, | ,, | | ,, ,, 7 ... ... ... ... ... | ... | ... | ... | ... | ... | | | | | |
| 3938 | 15-10-90 | | Lieuvain's, Nos. 1, 2 and 3 ... ... ... ... | ... | ... | ... | ... | ... | 0 | 3 | 0 | ,, | |
| 3398 | 31-3-90 | Machines, Boring, Cylinder. | Suitable for boring out Cylinders, 2 feet 6¼ inches long in the barrel, and 15, 16 and 17 inches internal diameter respectively. Each boring head is supplied with a set of steel cutters, the 15-inch heads are to have 5 cutters, the 16-inch six, and the 17-inch seven cutters each ... ... ... ... | 0 | 1 | 13 | 0 | Each. | 122 | 0 | 0 | Each. | |



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

*Contracted for in 1890.*

| Contract Number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3620 | 28-6-90 | Machines, Boring, Cylinder—*concld.* | Portable, for reboring locomotive cylinders in their places, 10 inches to 20 inches diameter and 30 inches long. Each machine is complete in every respect, and is supplied with 4 boring heads, each with 2 sets of steel cutters suitable for cylinders, 10″, 11″, 12″, 13″, 14″, 16″, 18″ and 20″ diameter ... ... ... ... | 1 | 2 | 0 | 0 | Each. | 65 | 0 | 0 | Each. | |
| 3621 | 28-6-90 | Machines, Copper, Stay rolling and Centering. | Suitable for rolling and centering copper stays up to 1¼″ diameter and 9 inches long, for locomtive boilers. The machine is complete in every respect, and is supplied with six spare combined drill and fluted countersunks to form the centre in the ends of the stays ... | ... | ... | ... | ... | ... | 130 | 0 | 0 | Each. | |
| 3419 | 26-4-90 | Machines, Crank-pin, Turning. | Portable, for turning crank pins up to 9½″ long, arranged for outside cranks, and with a packing piece which can be removed when the crank pins are fixed in the wheel. Included are 2 sets of the following accessories, 1 filleting tool right hand, 1 filleting tool right and left hand, 1 turning tool, straight ... ... | 0 | 6 | 2 | 0 | Each. | 48 | 10 | 0 | Each. | |
| 4126 | 7-11-90 | | Do. 8 inches long do. do. ... | ... | ... | ... | ... | ... | 54 | 0 | 0 | ,, | |
| 3421 | 29-4-90 | Machine, Drilling, Bench. | Double geared, suitable for being driven by hand and power, and capable of drilling holes out of the solid up to 1½ inches diameter and 9 inches deep, with a traverse of one inch in 90 revolutions. The machine is of sufficient capacity to admit work on the table up to 26″ diameter. The machine is complete in every respect, and is supplied with a complete set of 12 twist drills and sockets from ⅛ of an inch to 1½ inch, rising by inch ... ... ... | ... | ... | ... | ... | ... | 61 | 0 | 0 | Each. | |

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

*Contracted for in 1890*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3619 | 28-6-90 | Machine, Drilling, Vertical. | Double geared, and suitable for drilling holes out of the solid up to 2 inches diameter and 12 inches deep, with a traverse of one inch in 90 revolutions and boring holes up to 8 inches diameter at a distance of 2 feet from the edge of work, 1 foot 3 inches deep on the table. The distance from the upper face of the base plate to the end of the drill spindle is 4′ 8″. The machine is complete in every respect and is supplied with 2 steel boring bars, one 2 feet long and 2 inches diameter, and one about 5′ 6″ long and 2¼ inches diameter, the bars to have four cutter "holes in each and a cutter fitted to each hole, one set of 14″ Morse" twist drills and sockets from ⅜″ to 2 inches rising by ⅛″ ... ... | ... | ... | ... | ... | ... | 98 | 7 | 2 | Each. | |
| | | Machines, Emery, Grinding, of sorts. | Spare discs for— | | | | | | | | | | |
| 3244 | 14-2-90 | | 24″ diameter × 3″ thick × 8″ hole ... ... | 0 | 1 | 1 | 4 | Each. | 6 | 17 | 0 | Each. | |
| 3863 | 29-9-90 | | 12″ „ × ¼″ „ × ¾″ „ ... ... | ... | ... | ... | ... | ... | 0 | 3 | 2 | „ | |
| 3639 | 1-7-90 | | 12″ „ × ⅜″ „ × ¾″ „ ... ... | ... | ... | ... | ... | ... | 0 | 5 | 8 | „ | |
| | | | 12″ „ × ½″ „ × ¾″ „ ... ... | ... | ... | ... | ... | ... | 0 | 6 | 9 | „ | |
| | | | 12″ „ × 2″ „ × ¾″ „ ... ... | ... | ... | ... | ... | ... | 0 | 18 | 0 | „ | |
| | | | 12″ „ × 2″ „ × 3″ „ ... ... | ... | ... | ... | ... | ... | 0 | 18 | 0 | „ | |
| | | | 36″ „ × 3″ „ × 2½″ „ ... ... | ... | ... | ... | ... | ... | 6 | 15 | 0 | „ | |
| 3244 | 14-2-90 | Machines, Grinding and Slide Bar, Emery. | Spare discs for— | | | | | | | | | | |
| | | | 14″ diameter × 2″ thick and 3¼″ hole ... ... | 0 | 0 | 1 | 7 | Each. | 1 | 15 | 6 | Each. | |

8

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

*Contracted for in 1890.*

| Contract Number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3244 | 14-2-90 | Machines, Grinding, Tool, Emery. | Spare discs for— | | | | | | | | | | |
| | | | 8½″ diameter × 1¼″ thick and ⅛″ hole ... ... | 0 | 0 | 0 | 9 | Each. | 0 | 10 | 2 | Each. | |
| | | | 14″ „ × 2″ „ „ 2¼″ „ ... ... | 0 | 0 | 1 | 7 | „ | 1 | 15 | 6 | „ | |
| | | | 14″ „ × 1⅛″ „ „ 4″ „ ... ... | 0 | 0 | 1 | 4 | „ | 1 | 12 | 6 | „ | |
| 3942 | 15-10-90 | Machine, Grinding, Twist drill, Emery. | Suitable for grinding twist drills from $\frac{3}{16}$″ to 2″ diameter, advancing by 32nd, and from $\frac{2}{16}$″ to 2″, advancing by $\frac{1}{16}$″, with six spare emery discs ... ... ... ... ... | 2 | 15 | 2 | 0 | Each. | 63 | 16 | 0 | Each. | |
| | | | Note.—Each machine is supplied with a countershaft with brackets suitable for fixing to a wall; 100 feet of best leather belting, and six laces of approved quality and width, one set of wrought iron case hardened black finished spanners, one Kaye's seamless syphon oil can of approved size, and bolts, nuts and washer plates for fixing each machine to a foundation of 4 feet deep. | | | | | | | | | | |
| 3244 | 14-2-90 | | Spare discs for— | | | | | | | | | | |
| | | | 8½″ diameter × 1¼″ thick and $1\frac{5}{16}$″ hole ... ... | 0 | 0 | 0 | 9 | „ | 0 | 10 | 2 | „ | |
| 3419 | 26-4-90 | Machine Key, Grooving, Portable. | For cutting keyways in axles or shafts in their places, the machine is complete in every respect, and is supplied with one set of drills of the following sizes, *viz.*, ¼″, $\frac{5}{16}$″, ⅜″, $\frac{7}{16}$″, ½″, $\frac{9}{16}$″, $\frac{5}{8}$″, $\frac{11}{16}$″, ¾″, $\frac{13}{16}$″, $\frac{7}{8}$″, $1\frac{1}{16}$″, and 1″ diameter ... ... ... ... | 0 | 2 | 3 | 0 | Each. | 36 | 0 | 0 | Each. | |

6

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3567 | 12-6-90 | Machines, Magnetting. | For separating iron and steel filings from brass or copper. To be driven by hand or power, as may be required, and of suitable size for cleaning 10 cwts. of metal borings per day of 8 hours ... | 0 | 5 | 3 | 12 | Each. | 21 | 0 | 0 | Each. | |
| 3631 | 28-6-90 | Machines, Milling. | Single, suitable for shaping brass nuts and other boiler mountings. The machine is complete in every respect, and is supplied with a swivel vice for fixing irregular work, two nut mandrils and 2 dozen assorted hardened and finished steel cutters ... ... | ... | ... | ... | ... | ... | 149 | 0 | 0 | Each. | |
| „ | „ | | Treble, suitable for shaping nuts and other articles having any number of sites, and also for general brass finishers' work. The machine is complete in every respect, and is supplied with two nut mandrils and 2 dozen assorted hardened and finished steel cutters ... | ... | ... | ... | ... | ... | 88 | 10 | 0 | „ | |
| 3977 | 21-10-90 | Machines, Paint Mixing. | No. 2, fitted both for hand and steam power with fast and loose pulleys and fly wheel ... ... ... ... | ... | ... | ... | ... | ... | 7 | 2 | 0 | Each. | |
| 3618 | 18-6-90 | Machines, Planing, Plate-edge. | Adapted to plane the edges of plates up to 13 feet 6 inches long at one stroke, and to plane the edges of plates of any length by moving the same on the table. The machine is complete in every respect and is supplied with 12 assorted tools of steel, 2 inches square and 18 inches long ... ... ... ... | 12 | 17 | 2 | 0 | Each. | 260 | 0 | 0 | Each. | |



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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4004 | 23-10-90 | Machines, Punching and Shearing and Angle Cutting. | Capable of punching 1 inch holes through 1 inch steel plate, and shearing 1 inch steel plates, 19 inches from the edge of the plates, and cutting angle bars 6" × 6" × ¾" thick to any required length. The machine is complete in every respect and is supplied with 2 sets of knives for the shears, two sets for the angle shears, two sets of steel punches and dies for rivets, 100 ft. best leather belting, and six laces of approved quality, one set of wrought iron case hardened black finished spanners, and one Kaye's seamless syphon oil can of approved size, and bolts and nuts and washer plates for fixing each machine to a foundation of 4' deep ... | ... | ... | ... | ... | ... | 248 | 0 | 0 | Each. | |
| 3891 | 8-10-90 | Machine, Sawing, Cold. | Suitable for cutting 75lb. Vignoles section steel rails. The machine is fitted with a drilling arrangement, and six spare drills, and with a compound slide rest made for fixing to a light trolly to be made in India ... ... ... ... ... | ... | ... | ... | ... | ... | 46 | 15 | 0 | Each. | |
| 3618 | 28-6-90 | Machines, Saw, Circular. | Suitable for cutting cold iron or steel up to 6 inches, round or square, or angle, or channel sections, and similar work, the saw is 26 inches in diameter and arranged so that it can be changed easily and quickly. The machine is complete in every respect, and is supplied with a saw sharpening apparatus suitable for fixing to the machine, so that the saw can be sharpened without removal from the spindle, six spare emery wheels and six spare saws, *viz.*, two 16", two 21" and two 26" diameter ... ... ... | 3 | 13 | 0 | 17 | Each. | 156 | 0 | 0 | Each. | |

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

*Contracted for in 1890.*

| Contract Number and date. | | Description. Articles. | Description. Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3891 | 8-10-91 | Machines, Saw-sharpening, Cold. | Suitable for sharpening saws of sawing machine, and is arranged so that the teeth can be ground from both sides front and back of each tooth. The machine is supplied with 4 spare discs. ... | ... | ... | ... | ... | .. | 5 | 15 | 0 | Each. | |
| 3942 | 15-10-90 | Machines, Saw-sharpening, Emery. | For sharpening circular timber saws up to 36″ diameter. The machine is to be provided with 3 discs, each 12″ diameter and ¼″ thick, and three discs, each 12″ diamater and ⅝″ thick, made of the best consolidated emery and turned up true on the spindle ...<br>NOTE.—Each machine to be supplied with 100 feet of best leather belting and six laces of approved quality and width; one set of wrought-iron case hardened black finished spanners; one Kaye's seamless syphon oil can of approved size, and bolts, nuts and washer plates for fixing each machine to a foundation 4 feet deep. | 0 | 0 | 0 | 28 | Each. | 45 | 10 | 0 | Each. | |
| 3432 | 6-5-90 | Machines, Screwing, (Brown's patent). | Single gear, to screw and tap from ¼″ to 1″ (Brown's patent) ...<br>The machine to be supplied with one complete set of taps and dies and one set of master taps made to Whitworth's standard size. | 2 | 15 | 2 | 0 | Each. | 97 | 0 | 0 | Each. | Including tracings and photographs. |
| 3419 | 26-4-90 | Machines, Screwing (Seller's patent). | For screwing nuts and tapping bolts, from ¼″ to 1½″ diameter. The machine is complete in every respect. Included are the following accessories, see below ... ... ... ... | 1 | 3 | 0 | 0 | Each. | ... | ... | ... | ... | |



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

*Contracted for in 1890.*

| Contract Number and date. | | Description. Articles. | Description. Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3419 (*contd.*) | | Machines, Screwing (Seller's patent)—*contd.* | 1 set of machine taps, ¼″ to 1½″, rising by ⅛″ ... ...<br>1 „ discs „ „ ... ... ...<br>1 „ master taps „ „ ... ... ...<br>1 „ conical Rhymers to suit master taps ... ...<br>1 „ tap and nut holder (Seller's patent) ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| 3825 | 11-9-90 | Machines, Screwing, Power. (Brown's patent.) | Double geared and suitable for screwing bolts and tapping nuts, from ¼″ to 1½″ inclusive by once passing through the discs. The machine is complete in every respect, and is supplied with one set of taps and dies consisting of 8 taps and 8 sets of dies, one set master taps, one set of cone and one set of parallel rimers for the dies, one guide plate bushes, one set of tap holders, one set nut holders, one screw driver and one tommy bar ... ... | ... | ... | ... | ... | ... | 111 | 10 | 0 | Each. | |
| 3684 | 7-7-90 | Machines, Sewing ... | Pearson's patent, A 1, wax thread, for coach and carriage builders, with stand, fittings and spare parts, complete, for driving by foot power ... ... ... ... ... | 0 | 10 | 0 | 0 | Each. | 13 | 10 | 0 | Each. | |
| 3438 | 8-5-91 | Machines, Shaping ... | 12″ stroke, 8 feet bed, self-acting in all movements, for shaping horizontal, vertical, angular and curvilinear work ... ...<br>Each machine is complete in every respect, and provided with two parallel vices, 2 squaring head stocks, two right angle tool holders, and 12 cutters. | 6 | 3 | 0 | 0 | Each. | 287 | 12 | 6 | Each. | 3 sets tracings £ 6 0 0<br>6 photos 0 18 0 |

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3619 | 2-6-90 | Machines, Shaping—*concld.* | 12″ vertical stroke. The bed is 4′ 3″ long, 37 inches high, 22 inches across the V's, self-acting in all movements f ı sha longitudinal, vertical, angular, and curvilinear motions ... ... | ... | ... | ... | ... | ... | 134 | 4 | 0 | Each. | |
| | | | Each machine is complete in every respect and provided with 2 parallel vices, 2 conical mandrils of sizes with spare cones, two headstocks with centres and dividing plate, 1 doz. right hand, 1 doz. left hand, and 1 doz. plain cutting tools of steel, 2 steel tool holders, right and left; with spanners and 6 cutters for each. | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| 3417 | 22-4-90 | Machines, Tin, working | For punching holes of $\frac{1}{8}$ to 1 inch diameter in a 20 B. W. G. plate, with complete set of steel punches and dies, 15″ gap ... ... | ... | 2 | 2 | 20 | Each. | 12 | 10 | 0 | Each. | |
| 3430 | 6-5-90 | Pumps, Boiler-testing, Hydraulic. | Portable, double acting, for testing boilers of locomotive and steam ships, with copper pipes and connections complete ... ... | ... | ... | ... | ... | ... | 54 | 15 | 0 | Each. | |
| | | | The pump to have a stroke of 6 inches, and is supplied with a Bourdon's pressure gauge up to 600 lbs. per square inch. | | | | | | | | | | |
| 3407 | 11-4-90 | Pyrometers. | No. 7. A, for testing temperature in blast furnaces, &c., with maximum pointer. | 0 | 1 | 0 | 11 | Total. | 7 | 0 | 0 | Each. | |
| | | | No. 8. for testing temperature in flues, dial 7″, stem 4 feet, to register up to 1,500° Fahrenheit. | | | | | | 4 | 12 | 0 | ,, | |

14

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

*Contracted for in 1890.*

| Contract number and date. | | Description. Articles. | Details. | Approximate gross weight. Weight. Tons. | cwt. | qr. | lbs. | Unit. | Rate—Free on board. Amount. £ | s. | d. | Unit. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1887 | 29-1-89 | Weighing Machine (Enhardt's patent). | Locomotive, with double dial for weighing from 16 to 35 cwt. and from 35 cwt. to 7¼ tons ... ... ... ... | ... | ... | ... | ... | ... | 141 | 0 | 0 | Set of 6. | |
| 3244 | 14-2-98 | Wheels, Emery. | Wheels, emery— | | | | | | | | | | |
| | | | 8½″ × 1¼″ × ½″ ... ... ... ... | ... | ... | ... | ... | ... | 0 | 9 | 2 | Each. | |
| | | | 14″ × 1½″ × 4″ ... ... ... ... | ... | ... | ... | ... | ... | 1 | 9 | 3 | ,, | |
| 3484 | 20-5-90 | | Spare for 10″ emery grinder ... ... ... ... | ... | ... | ... | ... | ... | 1 | 12 | 6 | ,, | |
| | | | ,, 15″ ,, ... ... ... ... | ... | ... | ... | ... | ... | 1 | 6 | 6 | ,, | |
| | | | ,, 20″ ,, 3″ thick and diameter of hole 10″ ... | ... | ... | ... | ... | ... | 4 | 1 | 4 | ,, | |

15

Enclosure to Director General of Railways' Circular No. 7 of 1892.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

## FOR 1891.

G. C. Press, Simla.—No. 1509 P. W. D.—8-7-92.—800.

Enclosure to Director General of Railways' Circular No. 7 of 1892.

# RATE LIST.

## CLASS C.

## WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1891.

Enclosure to Director General of Railways' Circular No. 7 of 1892.

*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 1891.*

| Class of stores. | Port of Bombay. | Port of Calcutta. | Port of Kurrachee. | Port of Rangoon. | Remarks. |
|---|---|---|---|---|---|
| | s. d. | s. d. | s. d. | s. d. | |
| C—Workshop Machinery and Heavy Tools ... | *20 0 | 22 6 | 15 0 | 28 4 | * Rate for 1889. No Workshop Machinery was imported during 1891. |

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

*Contracted for in 1891.*

| 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. | | | |
| 4902 | 6-7-91 | Anvils. | Blacksmiths, 2 cwt. ... ... | 0 2 0 0 | Each | 2 3 0 | Each | Mu Valley Railway. | |
| $\frac{1}{295}$ | 19-8-91 | | „ 3 „ ... ... | 0 3 0 0 | „ | 3 3 0 | „ | Burma State Railway. | |
| $\frac{2}{193}$ | 15-9-91 | | „ 3 „ ... ... | 0 3 0 0 | „ | 3 3 0 | „ | Ditto. | |
| $\frac{1}{257}$ | 17-8-91 | | „ 7 „ ... ... | 0 7 0 0 | „ | 7 15 0 | „ | Eastern Bengal State Railway. | |
| „ | „ | | „ 7 „ square both ends ... | 0 7 0 0 | „ | 7 15 0 | „ | | |
| 4902 | 6-7-91 | | Swage blocks, 15″ × 15″ × 5″ ... | 0 2 0 7 | „ | 0 16 6 | „ | Mu Valley Railway. | |
| „ | „ | | Stands, for swage blocks ... ... | 0 1 3 17 | „ | 0 16 0 | „ | | |
| 4680 | 4-5-91 | Bedstone | For edge runners (oil mill), best Derbyshire grit, as used for seed crushing ... | 3 15 0 0 | Each | 25 0 0 | Each | North-Western Railway. | |

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

*Contracted for in 1891.*

| 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. | | | |
| 3/70 | 6-10-91 | Bellows | Smiths, 24″ to have a patent screw pipe fitted with nozzle 27″ long. | 0 1 1 20 | Each | 3 2 6 | Each | North Western Railway. | |
| | | | Smiths, 36″ to have a patent screw pipe fitted with nozzle 14″ long. | 0 2 0 17 | ,, | 8 19 6 | ,, | | |
| 4840 | 25-6-91 | Cranes | Overhead, travelling, complete, to lift 20 tons through a height of 10 ft., the crane is to run on a rail pathway, the centres of the wheels running on the pathway being 26 ft. 6 inches. | ... | ... | 500 0 0 | Each | Mu Valley Railway. | Cancelled, subsequently at the request of the Burma authorities. |
| | | Crucibles. | Plumbago, Morgans Salamander— | | | | | | |
| 1/95 | 5-8-91 | | No. 20 ... ... ... | ... | ... | 0 5 0 | Each | Eastern Bengal State Railway. | |
| ,, | ,, | | ,, 40 ... ... ... | ... | ... | 0 10 0 | ,, | | |
| ,, | ,, | | ,, 60 ... ... ... | ... | ... | 0 15 0 | ,, | | |