

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <i>107</i>	Press Mis.
Dated <i>10/11/20</i>	18

Not to be folded or roughly handled

Port Saint George, Public Works Consultation of 8th September 1857.

No. 20. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 16th July 1857, No. 2052.

SIR,

In Extract Minutes Consultation No. 1330, dated 2nd August 1856, on the subject of the several description of tools in use with the Public Works Department, I was directed to give information on the following points:

- 1st. As to the comparative merit of English tools, tools made up in the Arsenals, and tools purchased in the country.
- 2nd. As to their comparative cost, and
- 3rd. As to their comparative degree of favor among laborers of the D. P. W.
- 4th. To furnish patterns of the tools best suited for the purposes of the Department, and
- 5th. To furnish a Memorandum of the probable numbers of Pickaxes and Matmoties, that may be required for annual consumption in the Department.

2. The order of Government was circulated to the Officers of the Department with Extract from Proceedings No. 5715, dated 13th August 1856, and the following is a summary of the only replies from which very useful information is to be gathered.

3.

Nellore District.

Letter No. 836, dated 20th August 1856.

- I. The only good Mamotie in this District, is the large long bladed one used by the Wudders; the pattern is not a useful one for general purposes, being too heavy for ordinary coolies.
- II. Advocates the introduction of the small sized Mamoties, and Pickaxes recently made up for the Sappers and Miners at Mercara, the Natives appreciated these tools, and were always eager bidders at the periodical sales of those which were condemned as unserviceable. That marked Arsenal No. 14, in the Military Board's Statement, and priced at Rupees 1-0-9, appears to be of the pattern alluded to.

4.

Kurnool District.

Letter No. 230, dated 5th September 1856.

- I. Advocates the introduction of Arsenal tools as compared with country made ones, and observes that the coolies can do far more work with them.
- II. On Trunk road No. 12. Arsenal tools were used, and all the earth work was done by task without any objection on the part of the coolies, whereas on another work where tools of country make were supplied, the coolies refused to perform the task, remarking at the same time, that if they had proper tools they would do it.

5.

Chingleput District.

Letter No. 995, dated 18th September 1856.

- I. Considers the Europe Mamoties too heavy, but if made of about 7 lbs. in weight, and edged with steel like those in use with the Sappers and Miners, thinks it would be found to be the best kind of tool for all purposes.

6.

Malabar District.

Letter No. 730, dated 1st October 1856.

- I. Of all the Mamoties specified in the Military Board's list, that made up by Colonel Outley appears the best fitted for use in the repair, and formation of roads.
- II. The ordinary description of Mamotie used on Trunk road No. 5, is a Malabar tool called "kykote" manufactured at, and near Paulghaut; it weighs 3 lbs. and is found to answer well in both hard, and soft soil.
- III. Mamoties weighing 9 lbs. are very well made at Paulghaut after an English pattern, and cost Rupees 1-12.

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7.

South Arcot District.

Letter No 187, dated 10th October 1856.

I. The Mamoties weighing 9 lb. received from the Arsenal are very efficient tools, and not objected to by coolies who have got accustomed to them. At the same time if the weight did not exceed 7 lbs. they would be more generally useful.

II. It would be well to have 2 or 3 different patterns both as to size and weight, and the angle of the helve, to suit different soils and situations.

III. The Pickaxes weighing 9 lbs. received from the Arsenals are preferred to those procured in the bazaars.

8.

Tinnevelly District.

Letter No. 675, dated 6th October 1856.

I. There are six descriptions of Mamoties in use in this District.

	Length of blade.	Breadth of blade.	Price.	Weight.
			Rs. A. P.	
1 Europe.....	1 foot.....	9' 7"	1 12 11	10 lbs.
2 Do.	10 feet.....	9 7	„ 12 0	5 „
3 Country.....	13 „	9½ 7	2 7 1	10 „
4 Do.	10 „	9 7	1 6 11	5 „
5 Do.	8 „	7 6	„ 7 0	3 „ 1 oz.
6 Do.	8 „	8 0	„ 8 0	3 „ 1 „

Of the above Nos. 1 and 3 are considered too heavy, and unwieldy, for general purposes.

II. No. 2 which is only 5 lbs. in weight appears to be a handy tool, although its shape is somewhat defective. It would probably last 2 or 3 times as long as the Mamotie in common use.

III. Nos. 4 and 5 are altogether inferior articles.

IV. No. 6 is in general use in the Northern parts of Tinnevelly, and is a small but useful description of Mamotie. It is manufactured at Rajahpollam in the Streevellypothoor Talook, a locality celebrated for the superior quality of its iron ware productions. This instrument is far more durable than the common Tinnevelly Mamoties, and lasts on an average about 6 months.

V. The best Pickaxes are the Europe weighing 10 lbs. which last as long again as those of country manufacture.

VI. The 5 lbs. pick is too slight for general purposes, soon wears down, and not unfrequently snaps off near the eye.

9.

Superintending Engineer, Presidency Division.

Letter No. 857, dated 23rd October 1856.

I. States that the Lascars of his Department prefer the Pickaxes and Mamoties from the Vellore Arsenal, sent by the Military Board, as being light, and well adapted from their shape, for their particular work. The rest of the people employed in his Department are chiefly Wudders, who always use their own Mamoties, and prefer them to any other kind.

10.

Madura District.

Letter No. 318, dated 30th October 1856.

I. The Mamoties in use in this District are :

1st. The English Mamotie procured from the Arsenal at Trichinopoly, weighing about 10 lbs. Size 1 foot long 9' 7" broad, price Rupees 1-12-11.

2nd. A Mamotie manufactured at Madura of nearly the same pattern as the former, but weighing only 5 lbs. and costing about Rupee 1.

3rd. The common village Mamotie varying in weight from 5 to 3 lbs. and costing from 10 to 6 Annas.

II. The 1st is condemned as useless from its extreme weight.

III. The Mamotie recommended is one made after the Arsenal pattern of about 10" long, 8' 6½" broad, and weighing about 5 lbs.

IV. The Arsenal Crow Bar is very superior to the country one, and is used in preference by the stone Wudders.

V. The Europe Pickaxe supplied from the Arsenal is also preferred by the stone Wudders, but the handles are not sufficiently strong, the 5 lbs. Pickaxe is too slight.

VI. The small hand axes issued from the Arsenal are very good, but the coolies prefer their own axe of about 1 foot in length, of an uniform breadth of 2½", and thickness at the eye of 1", which gradually diminishes to the edge.

VII. The Hammers supplied from the Arsenal for breaking small stones, are very good.

VIII. The common Native bricklayer's Trowel is approved of.

11.

Salem District

Letter No. 446, dated 5th December 1856.

I. States that the superiority of English "wrought iron" tools over all others ("Arsenal" or "country" made) appears to be generally allowed, but large numbers of English made "cast iron" tools are inferior to the worst descriptions of country made articles, and are more expensive.

II. Has had no experience in Arsenal made tools, but gives sketches of some of those made in the country.

A is the Mamotie in common use, weighs 6 lbs. and costs 14 annas. A better description of this Mamotie is made at Ahtoor, weighs 6½ lbs. and costs 1 Rupee.

B is an improved pattern made by Mr. Causaber in the Railway workshop at Salem, and is preferred by the Wudders, though the common coolies object to its great weight, 10 lbs.

III. The peculiarity of Mr. Causaber's Mamotie is that it has a swell down the centre, which increases its strength, and capacity for holding earth.

IV. The common country Pickaxe (a) made at Ahtoor, weighs 9½ lbs. and costs Rupees 1-6-0.

V. An improved and much more serviceable pattern (b) has been made in the Railway workshop (weight 10½ lbs.) this Pickaxe is tipped with steel at both ends but its cost is not given.

VI. The best Ahtoor Pickaxes, steel tipped, weigh about 10 lbs. and cost Rupees 2-12.

VII. The common country made Crow Bar is 3' 6" long, weighs 14 lbs. and costs Rupees 1-6 but is a very inferior tool. The best Ahtoor made is 4' 6" long, and costs Rupees 4.

VIII. A much better Crow Bar is used on the Railway made of English bar iron 1½" diameter, 3' 7" long, and weighing 21 lbs.

IX. The common country made Bill Hook is good enough for general use, and is preferred by the coolies to any of the English make.

X. The country made Hatchet (a) in common use, is a very inferior article an improved pattern (b), far more servicable, and very little heavier, has been made for the Railway coolies who however prefer their own.

XI. A sketch is given of an American Hatchet which is shorter, and broader in the blade than the English.

XII. English made tools, and those made of the English patterns, are generally objected to on account of their great weight. Some English Pickaxes were tried in the District, and it was found that the coolies could do little more than lift and drop them again. The Convicts in the Salem Jail, who are not allowed a choice, have used the English tools with great success.

12.

Ganjam District.

Letter No. 36, dated 9th January 1857.

I. States that there can be no doubt of the superiority of tools manufactured in Europe, as well as their durability over those manufactured in the country, whether in Arsenals, or villages.

II. At the Dowlaishweram workshops, tools of superior workmanship, cheaper, and as durable as those supplied from Arsenals are turned out.

III. Village manufacture although not equal in description of work to either Europe or Arsenal, is preferred by the Natives, who will not use the Arsenal tools.

IV. When made to order village tools are by no means inferior in regard either to workmanship or strength, and are very much cheaper than Arsenal tools.

13. From the information given, which it must be observed is in most instances very incomplete, and from my own experience, and that of my associates in the Central Office, I have arrived at the following conclusions.

I. That the superiority of workmanship is in favor, 1st of English made, and 2nd of Arsenal made tools. The tools manufactured in the country, unless made to order, being of a very inferior description.

II. That in consequence of the cheapness of labor, tools may be made up more economically in this country than in England, the only thing wanting to ensure their being serviceable, being good patterns of workmanship; with the view of securing that advantage, I took the opportunity of entering in my last annual Indent on the Court of Directors, a certain number of tools of each description for distribution in the District.

III. That the natives from their known prejudice in favor of their own customs generally, give preference to their own tools, the principal objection to those manufactured in England, and in the Arsenals in this country, being that of their greater weight.

The articles marked are not recommended.

14. The accompanying drawings (with specifications) of the tools best suited for the purposes of the Department are forwarded for consideration, and should they meet with approval, pattern tools might be made up from them in the Arsenal.

15. The Statement marked B, exhibits the probable numbers of Pickaxes and Mamoties likely to be required for annual consumption in the Department.

No. 21.

ORDER THEREON, No. 1677; dated 4th September 1857.

The above letter from the Chief Engineer furnishes an abstract of the replies obtained by him from different Engineer Officers, regarding the comparative cost of, and preference given by Native workmen to, the different tools in use among them, whether manufactured in Europe, in the Arsenals of this country, or by private native artizans; the information having been called for in an Extract from the Minutes of Consultation in the Military Department, dated the 10th June 1856 No. 1408. From the various statements made by these Officers, it would appear that although superiority of workmanship is shown in the English implements, it is on the whole preferable to make the tools in the Arsenals of this country, both on the score of economy, and in order that the peculiar shape and fashion to which each division of the country is accustomed and prefers, may be attended to.

2. The Chief Engineer's letter and enclosures will be communicated to the Military Department, with reference to the Extract Minutes Consultation in that Department quoted above.

(Signed) H. FORBES,

Acting Secretary to Government.

Central Office of P. Works

Fort Saint-George,
16 July 1857.

N. 2052

From,

The Chief Engineer.

To,

The Secretary to Government P. W. D.

Public

Tools

For,

In Exp. Indent Cons. N. 1330, dated 2nd August 1856, on the subject of the several descriptions of tools in use

Enc: viz:

one set of drawings of superior tools

one set of tools

one set of tools

the original letter

with the Public Works Department, I was directed to give

information on the following points:

1st. As to the comparative merits of English tools, tools made up in the Arsenals and tools purchased in the country.

2nd. As to their comparative cost.

3rd. As to their comparative degree of favor among laborers of the P. W. D.

4th. To furnish patterns of the tools best suited for the purposes of the Department.

5th. To furnish a Memorandum of the probable numbers of pickaxes and Mamoties, that may be required for annual consumption in the Department.

2

The order of Government was circulated to the Officers of the Department with Exp. from Proceedings N. 5715, dated 13th August 1856, and the following is a summary of the only replies from which very useful information is to be gathered.

Nellore District.

- I The only good Mamote in this District is the large long-bladed one used by the Wudders; the pattern is not a very good one for general purposes, being too heavy for ordinary coolies.
- II Advocates the introduction of the small sided Mamotes & Pickaxes recently made up for the Sappers and Miners. At Kerevara the Natives appreciated these tools and were always eager bidders at the periodical sales of these which were condemned as unserviceable. That marked Arsenal No. 1 in the Military Board's statement and priced at Rs. 1-0-9, appears to be of the pattern alluded to.

Kurnool District.

- I Advocates the introduction of Arsenal tools as compared with Country made ones, and observes that the coolies can do better work with them.
- II On Trunk Road No. 12. Arsenal tools were used and all the earth work was done by task without any objection on the part of the Coolies, whereas on another work where tools of Country make were supplied, the Coolies refused to perform the task, remarking at the same time, that if they had proper tools they would do it.

Chingleput District.

- I Consider the Europe Mamotes too heavy, but if made of about 7 lbs in weight, and edged with steel like those in use with the Sappers & Miners, thinks it would be found to be the best kind of tool for all purposes.

Mr. J. J. S. dated 17 Oct 1866.

Malabar District.

- I Of all the Mamotes specified in the Military Board's List, that made up by Colonel Ottley appears the best fitted for use, in the repair and formation of Roads.
- II The ordinary description of Mamote used on Trunk Road No. 1 is a Malabar tool, called "Kykote" manufactured at, and near Poulghaut, it weighs 5 lbs, and is found to answer well, in both hard and soft soil.
- III Mamotes weighing 9 lbs are very well made at Poulghaut after an English pattern, and cost Rupees 1-12-0.

Mr. J. J. S. dated 17 Oct 1866.

South Arcot District.

- I The Mamotes weighing 9 lbs received from the Arsenal are very efficient tools, and not objected to by coolies who have got accustomed to them. At the same time if the weight did not exceed 7 lbs they would be more generally useful.
- II It would be well to have 2 or 3 different patterns both as to size and weight and the angle of the bevel, to suit different soils and situations.
- III The Pickaxes weighing 9 lbs received from the Arsenal are preferred to those procured in the Bazaar.

Mr. J. J. S. dated 17 Oct 1866.

Tinnevely District.

- I There are six descriptions of Mamotes in use in this District.
- | | Length of blade | Breadth of blade | Grades | Weight |
|-----------|-----------------|------------------|---------|-------------------|
| 1 Europe | 1 foot | 9" 7" | 1-12-11 | 10 lbs |
| 2 Do | 10" | 9-7 | 1-12 | 5 " |
| 3 Country | 13 | 9-7 | 2-7-1 | 10 " |
| 4 Do | 10 | 9-7 | 1-6-11 | 5 " |
| 5 Do | 8 | 7-6 | 7 | 3-7 ^{oz} |
| 6 Do | 8 | 8 | 8 | 3-1 |

Of the above Nos. 1 & 3 are considered too heavy, & unwieldy for general purposes.

I stated that the superiority of English "wrought iron" tools over all others ("arsenal" or "country" made) appears to be generally allowed, but large numbers of English made "cast iron"

"Cast iron" tools are inferior to the worst descriptions of Country made Articles, and are more expensive.

II Has had no experience in Arsenal made tools, but just sketches of some of those made in the Country.

a is the Mamote in common use, weighs 6^{lbs} 10^{oz}, and costs 1 Rupee. A better description of this Mamote is made at Ahtoor, weighs 6^{lbs} 10^{oz}, and costs 1 Rupee.

b is an improved pattern made by Mr. Bawale in the Railway workshop at Salem, and is preferred by the Waddlers, tho the common Coolies object to its great weight, 10^{lbs}.

III The peculiarity of Mr. Bawale's Mamote is that it has a steel down the centre, which increases its strength, and capacity for holding earth.

IV The common Country Pickaxe (a) made at Ahtoor, weighs 9^{lbs} 10^{oz}, and costs Rs. 1-6.

V An improved, and much more serviceable pattern (b) has been made in the Railway workshop, weight 10^{lbs} 10^{oz}, this Pickaxe is tipped with steel at both ends but its cost is not given.

VI The best Ahtoor Pickaxes, steel tipped, weigh about 10^{lbs}, and cost Rs. 2-12.

VII The common Country made Crow bar is 3' 5" long, weighs 14^{lbs}, and costs Rupees 1-6, but is a very inferior tool. The best Ahtoor made is 4' 6" long and costs Rs. 1-6.

VIII A much better crow bar is used on the Railway, made of English bar iron 1 1/2" diameter, 3' 7" long, and weighing 21^{lbs}.

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X The Country made hatchet (a) in common use, is a very inferior article, an improved pattern (b), far more serviceable and very little heavier, has been made for the Railway Coolies who however prefer their own.

XI A sketch is given of an American hatchet, which is shorter and broader in the blade than the English.

XII English made tools, and those made of the English patterns, are generally objected to on account of their great weight. Some English Pickaxes were tried in the District, and it was found that the Coolies could do little more than lift and drop them again. The Convicts in the Salem Jail, who are not allowed a choice, have used the English tools with great success.

Mar 1861/19 Jan 1867

12

Ganjam District.

I States that there can be no doubt of the superiority of tools manufactured in Europe, as well as their durability over those manufactured in the Country, whether in Arsenals, or Villages.

II At the Doulaisweram workshops, tools of superior work-

manship, cheaper, and as durable as those supplied

from Arsenals are turned out.

III Village manufactures, altho' not equal in description of work to either Europe or Arsenal, is preferred by the Natives who will not use the Arsenal tools.

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From the information given, which it must be observed is in most instances very incomplete, and from my own experience, and that of my associates in the

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I That the superiority of workmanship is, in favor of English made, and 2^d of Arsenal made tools. The tools manufactured in the Country, unless made to order, being of a very inferior description.

II That in consequence of the cheapness of labor tools may be made up more economically in this Country than in England, the only thing wanting to ensure their being serviceable, being good patterns of workmanship; with the view of securing that advantage, I took the opportunity of entering in my last annual Endent on the Court of Directors, a certain number of tools of each description

for distribution in the Districts.

III That the Natives from their known prejudice in favor of their own customs generally, give preference to their own tools the principal objection to those manufactured in England, and in the Arsenal, in this Country, being that of their greater weight.

The accompanying drawings with specifications

The articles marked of the tools best suited for the purposes of the Department are forwarded for consideration, and should they meet with

approval, patterns tools might be made up from them in the Arsenal.

The statement marked B, exhibits the probable number of Pickaxes and Hammies likely to be required for annual consumption in the Department.

I have the honor to be,

Sir,

Your most Obedt Servt.

W. L. L. Colonel

Chief Engineer

Central Office of P. W.

Fort Saint George.

16th July 1857.

W. L. L. Chief Engineer
The Secretary to Government
P. W. D.

W. L. L. Chief Engineer

Public Works Dept.

No 1677

Extract from the Minutes of Consultation
Under date the 1st of August 1857.

Read the following
letter from the
Chief Engineer.

Here enters 16th July 1857
No 2052

A
J.F.

The above letter
from the Chief Engineer
furnishes an abstract
of the replies obtained
by him from different
Engineer Officers, re-
garding the compara-
tive cost of, and pre-
ference given by
Native workmen to,
the

1. Sunday 1/8. 1857.

Public Works

Chief Engineer

in the Consultation

1857

20th 16

Received 18th July 1857

No 2052

13 Enclosures

15th 1857. 4th July 1857

Forwarded the information

Collected for in the Consultation

No 1300 dated 22nd August 1857

on the subject of the comparative

cost of, and preference given by

the Native workmen to,

No 20

1857. 1857.

Public Works

Chief Engineer

in the Consultation

1857

20th 16

Received 18th July 1857

No 2052

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15th 1857. 4th July 1857

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Public Works

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1857. 1857.

Public Works

Chief Engineer

in the Consultation

1857

20th 16

Received 18th July 1857

No 2052

13 Enclosures

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the score of economy,
and in order that the
peculiar shape and
fashion to which
each division of the
Country is accustomed
and prefers, may be
attended to.

The Chief En-
gineers' letter and
enclosures will be
communicated to
the Military De-
partment, with
reference to the
Extract Minutes Con-
sultation in that
Department quoted
above. R &

9 Copies to the Chief Eng. Dis^y 5

3 - a Chief Eng^r
with Copy of the letter & 13 Encl^s.

Received of Mr. J. H. P. 1857
the sum of 8th of September

1857

Received of Mr. J. H. P. 1857
the sum of 8th of September

Received of Mr. J. H. P. 1857
the sum of 8th of September
from different sources of
income, regarding the sum
of the respective amounts
of the different sources of
income, given by me
there with them, to the
different schools in order
among them.

1857

25 Augth 1857