977

*Proceedings of the Madras Government, Revenue Department, 12th September 1873.*

No. 88. Read the following Proceedings of the Board of Revenue, dated 31st July 1873, No. 1,450 :—

Read the following letters :—

From B. HORSBRUGH, Esq., Acting Collector of Madras, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 12th June 1873, No. 147.

I HAVE the honour to request that the Board will be good enough to let me know the number of cubic inches which the dram and gallon measures in use in the Town Abkári Department ought to contain.

2. In paragraph 2 of the enclosed Order of Government, No. 776, of 29th May 1860, Public Department, the Government remark that the dram of the Town Abkári is a special measure used for the regulation of the sales of liquor under the Madras Abkári system. This special measure contains (according to paragraph 5 of Mr. Cunliffe's letter, recorded in the above Order) of fluid measure 3 ounces, 9 drams, and 17 grains Avoirdupois, or 6·24091 cubic inches as per enclosed memorandum of calculation.

3. The dram being thus settled, the next thing to be ascertained is whether forty of these drams are declared by any order of Government to make one Abkári gallon. No order of Government is forthcoming on this subject; but the Deputy Collector reports that for the past many years a common gallon, that is, the gallon measure in use in the Abkári Department, has been held to contain forty drams. The Superintendent of Public Works Stores, to whom the standard dram and gallon measures in the Deputy Collector's office were forwarded for the purpose of being tested, states* that "the dram measure is correct, and contains 3 ounces, 9 drams, and 17 grains of distilled water; but the gallon measure holds only thirty-eight times the contents of the dram." He added that, as it was doubtful whether the gallon measure could be hammered to make it sufficiently large to hold forty times the contents of the dram, he would recommend that a new gallon measure be made instead of the one forwarded.

* Letter to Deputy Collector, No. 891, of 5th August 1872.

4. A new measure was accordingly made by the Superintendent; but, before bringing it into use, I thought it proper to go thoroughly into the question of the proper capacity of an Abkári gallon, as it appeared to me that the new gallon measure was in excess of the old wine gallon measure (adopted by the Town Abkári Act, No. XIX. of 1852, *vide* Sections 5 and 6) by three drams, and requested the Deputy Collector to place himself in communication with the Superintendent on the subject.

5. The above result was arrived at by the following method of calculation.

6. The Imperial gallon contains 9 pounds, 15 ounces, 12 drams, and 8 grains of fluid measure, or 277·274 cubic inches (*vide* copy of Assay Master's letter to Collector of Sea Customs, No. 75, of 2nd September 1867, enclosed); the dram contains 3 ounces, 9 drams, and 17 grains, or 6·24091 cubic inches as per memorandum referred to in paragraph 2 of this letter. The Imperial gallon is, therefore, equal to 44½ drams, as stated in the above letter by the Assay Master. The old wine gallon, which according to Act XIX. of 1852 should be the Abkári gallon

is 833, or five-sixths of the Imperial gallon (Chamber's Commercial Tables, page 256, edition of 1860) and is, therefore, thirty-seven drams only.

From Deputy Collector to Superintendent No. 408, of 30th May 1873.
From Superintendent to Deputy Collector, No. 413, of 2nd June 1873.

7. The Superintendent's reply confirms the correctness of this calculation, and I enclose copies of the correspondence on the subject.

8. The question is of importance and requires early settlement. If the above calculation appears to the Board unobjectionable, the minimum prices for a dram entered in the retail licenses of the arrack shopkeepers would require to be raised as the present rates are calculated on the supposition that the dram is a fortieth part of a gallon.

9. If, however, the dram should continue a fortieth of the gallon—a very convenient ratio for calculating fractional parts—either its capacity should be reduced to 5·775 cubic inches, being a fortieth of 231 cubic inches, or the Abkári gallon should be enlarged to contain 249·6364 cubic inches, being forty times 6·24091 cubic inches.

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Enclosure No. 1.—Letter from Acting Assay Master to Collector of Sea Customs, dated 2nd September 1867, No. 75.

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Enclosure No. 2.—G. O., dated 29th May 1866, No. 776.

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Enclosure No. 3.—Memorandum of Calculation.

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Enclosure No. 4.—Letter from Deputy Collector to General Superintendent of Public Works Stores, dated 30th May 1873, No. 408.

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Enclosure No. 5.—Letter from Superintendent of Public Works Stores, to Deputy Collector, dated 2nd June 1873, No. 413.

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From J. HUNTER-BLAIR, Esq., Collector of Madras, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 5th July 1873, No. 157.

With reference to the Board's Official Memorandum, No. 864, of the 18th ultimo, I have the honour to forward the dram and gallon measures noted in the margin now in use in the Abkári Department.

1 measure containing about 4 gallons.
1 do. do. 1 do.
1 do. do. ½ do.
1 do. do. ¼ do.
1 do. do. ⅛ do.
1 do. do. 1 dram.
1 dram made by the Superintendent of Public
— Works Stores containing 3 ounces, 9
7 drams, and 17 grains of fluid measure when filled to the neck (not brim) and thirty-seven of which goes to the gallon.

Note.—Their measures are worn out, for which reason the Deputy Collector requires new ones to be made immediately.

* Abkári gallon or old wine gallon of 231 cubic inches.

2. I beg to observe, with reference to paragraph 9 of Mr. Horsbrugh's letter, No. 147, of 12th ultimo, that the introduction of any change in the capacity of the gallon measure during the current fasli would be almost impracticable, as the settlement with the shopkeepers for the fasli has been already concluded in common gallons.*



3. The capacity of the dram measure, however, requires immediate altera-
n, for so long as it contains 6·24091 cubic inches it is ₁ th, and not $\frac{1}{40}$th, of
common gallon containing 231 cubic inches. The dram must, therefore, be
uced to 5·775 cubic inches, and for this an order of Government is necessary,
by G. O., No. 776, of 29th May 1860, Public Department, the dram measure in
, which contains 6·24091 cubic inches, is directed to be continued.

4. After the expiry of the current fasli I am decidedly of opinion that the
of the common gallon should be abolished and the Imperial gallon, which is
use in every other department of Government, both in the Presidency town
l in the Mofussil, substituted. The Imperial gallon contains 277·274 cubic
hes. It should be divided into forty-eight drams of 5·776 cubic inches, which
ld be only one-thousandth part of a cubic inch larger than the dram proposed
paragraph 3. Forty-eight drams to the gallon will also be a most convenient
nber for calculating fractional parts.

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Enclosures Nos 1 to 7.—Specimens of Measures.

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All the Madras Town Abkári accounts of issue and consumption are kept
allons and drams and assume that forty drams make a gallon.

2. The gallon is defined by the Act (XIX. of 1852) to be the gallon of the
wine measure, which unquestionably contains 231 cubic inches.

3. In Extract Minutes of Consultation, dated 29th May 1860, No. 776, it is
gnized that the dram contains " of fluid measure 3 ounces, 9 drams, and 17 grains
irdupois " or 6·24091 cubic inches. It follows that the gallon contains $\frac{231}{6\cdot24091}$
37·0138 drams. Hence there are only thirty-seven of these drams in a gallon
gh all transactions assume that there are forty.

4. The issuing price of Colombo Arrack is Rupees 4 a gallon and that
uttai Rupees 3-2-0, and the shopkeepers ordinarily take it by gallons. They
required by their agreements to sell it at a minimum (which is always the
al rate) of Annas 1-9 a dram of Colombo Arrack and Annas 1-5 a dram
uttai, and the quantities bought by consumers are generally taken in drams.
ce if the shopkeepers sold by honest measure they would gain only 9 Pies
allon on Colombo Arrack and Annas 2-5 on Puttai. Obviously they could
have conducted their trade on these terms and it follows that they must have
short measure.

5. It is probable, therefore, that little or no change to the disadvantage of
umers will be made if the dram is defined as containing $\frac{231}{40}$ or 5·775 cubic
es instead of 6·24091. It appears that the measures in use are worn out and
drams must be made at once. The Board accordingly resolve to request
rnment to authorize the use of drams containing 5·775 cubic inches.

6. The Collector proposes to introduce an Imperial gallon with forty-eight
s instead of the common gallon with its forty drams next fasli. The Board are
tful on this point. They do not see what practical advantage is gained by
ng the gallon used in the Town Abkári the same as that used in the Sea
oms Office, in the Commissariat Department, in the Excise Clauses of the

Experimental Abkári Contracts, and in the Minimum Price Regulations of the Mofussil Abkári. On the other hand, it will cause a second change in measures within a year and interrupt the continuity of accounts and correspondence. The Collector will be good enough to report his views fully.

No. 89. ORDER THEREON, 12th September 1873, No. 977.

| Separate Revenue, No. 5. |
|---|
| *Abkári.* |

THE Governor in Council is of opinion that it will be sufficient for all practical purposes if the dram of the Madras Town Abkári be defined to contain 5·776 cubic inches. A dram of this capacity will be $\frac{1}{48}$th of the Imperial gallon, and will thus render feasible the adoption of the Imperial gallon in all Abkári transactions, should it be considered desirable to do so hereafter.

2. The wine gallon now in use in the Town Abkári will contain 40 of these drams, less $\frac{42}{1000}$ of a cubic inch; but this infinitesimal deficiency is of no moment when it is borne in mind that this gallon now contains only 37 of the drams which have been in use from time immemorial.

3. Under these circumstances, the Governor in Council is pleased to declare that the dram to be used in all Abkári transactions in the Town of Madras shall, in future, be of a capacity of 5·776 cubic inches instead of 6·24,091 cubic inches, as determined in the order of Government, dated 29th May 1860, No. 776, Public Department.

(True Extract.)

(Signed) R. A. DALYELL,
*Acting Secretary to Government.*

To the Board of Revenue.
,, the Public Department.

Sep. Rev. 5
Fiscal

Pro: Board of Revenue
Drams contg. 5.775 cubic inches
to be used in Sale of Arrack in Madras
} 31 Jul 873. No 1450
No 977. 12 Septr. 73

The Govt in Council is of opinion that it will be sufficient for all practical purposes if the dram of the Madras Town Abkary be defined to contain 5.776 cubic inches, A dram of this capacity will be $\frac{1}{48}$ of the Imperial Gallon, and will thus render feasible the adoption of the Imperial

Cubic ins
Impl. Gallon
277·274 ÷ 48 = 5·776 5416

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gallon in all Abkary
transactions, should
be considered desirable
it do so hereafter.

The ~~drams will be~~
wine gallon now in use
in the Town Abkary will
contain 40 of these drams
less $\frac{40}{1000}$ of a cubic inch,
but this infinitesimal
deficiency is of no moment
when it is borne in mind
that this ~~gallon~~ now contains
only 37 of the drams
which have been in

Gov Wine Gallon
231 ÷ 5·776 = 40 − ·040 $\left(\frac{40}{1000}\right)$

use from time immemorial.

Under these circumstances
the G. in C. is pleased
to declare that the drams
to be used in all Abkary
transactions in the Town
of Madras shall in future be of
a capacity of 5·776 cubic
inches, instead of 6·24095
cubic inches, as determined
in the order of Govt dated
29 May 1860 No 776 Pub. Dep.

To B. of Rev. 5 Exds
Pub Copy

Dep 227

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Draw of 5-7/5 cubic inch
Gun vessel in Sale of arms
to Madras.

c. 5 Sept. 73 R 12 Sept. 73