0/y. 3.000—5-3-04.

# Revenue (1898) Department.

MISCELLANEOUS SERIES.

G.O., No. 2039

DATED 9th May 1898.

---

[Despatch Abstract.]

Navigation Rules.

Communicating to the Board of Revenue G.O. (P.W.D) accepting the amendments in the draft Navigation Rules and notifications published with G.O. No. 162 I dy 15th February 1897, proposed by the Chief Engineer for Irrigation, stating that the amended rules and notification will have effect from 15th May 1898 and directing their publication in the Fort Saint George Gazette and Gazettes of the districts concerned.

## BACK PAPERS.

| G.O. | No. | Department. | Date. | G.O. | No. | Department. | Date. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## FURTHER PAPERS.

| G.O. | No. | Department. | Date. | G.O. | No. | Department. | Date. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Revenue 1898 Department

IRRIGATION.
ACCOUNT.

# Government {1898} of Madras.

## PUBLIC WORKS.

Recd. 6 May } 1898.
Regd. 6 "

Enclosures

Spare copies

RECEIVED 10 MAY 98 DEPARTMENT

**G.O., No. 319 I., 18th April 1898.**

G.O. Irrig. No. 2039 dt. 9th May 1898
Communicated to the Board of Revenue.

APRIL.

To the B. of Revenue (R. & R.), (I & R).

Navigation Rules

Accepting the amendments in the draft — and notifications published with G.O., No. 162 I., dated 15th February 1897, proposed by the Chief Engineer for Irrigation, stating that the amended rules and notification will have effect from 15th May 1898, and directing their publication in the *Fort St. George Gazette* and Gazettes of the districts concerned.

GOVERNMENT OF MADRAS.

## PUBLIC WORKS DEPARTMENT.

**Irrigation.**
**Account.**

Read—the following papers:—

Proceedings of the Madras Government, No. 162 I., dated 15th February 1897.
Petitions from Gódávari Boat owners and others detailing objections to the draft rules.
From the Superintending Engineer, I Circle, dated 13th June 1897, No. 641 G.D.
" " " I " " 18th " " " C./168.
Office-note from Joint Secretary to Government, Railway Branch, with enclosure from Manager, East Coast Railway, and Traffic Superintendent, East Coast Railway, dated 23rd June 1897, No. 604 D.
From Superintending Enginer, II Circle, dated 29th June 1897, No. 115 B. C.
From the Chairman, Chamber of Commerce, Madras, dated 3rd August 1897, No. ——.
" " " " Cocanada, " 7th " " " ——.
From the President, District Board, Gódávari, dated 19th June 1897, No. 937.
From the Chairman, Native Chamber of Commerce, Cocanada, dated 1st August 1897, No. ——.

No. 134 I.

*Note by the Chief Engineer for Irrigation.*

The revision of the Navigation rules was undertaken for two distinct reasons, the first being that the Government of India had pointed out, in reviewing the Administration reports of 1889–90 and 1890–91, that the navigation accounts showed a deficit year after year and expressed a desire that the revenue should be increased so as to cover expenses; and the second, the complaint of the officers of the East Coast Railway that canal traffic was unduly favoured and the railway subjected to unfair competition.

* Appendix I. Diagram of ton mileage.
" II. Diagram of tonnage of goods.
" III. Abstract of particular classes of goods.
" IV. Traffic receipts and classes excluding interest.

2. Before discussing the proposed rules and the objections which have been raised to them, it may be of advantage to consider in what light navigation works are regarded in other countries where the State owns or is interested in both railways and canals.

Report of the Fifth International Congress on Inland Navigation in France (1892).

The following is the principle on which charges for navigation are by a constitutional law regulated in the German Empire:—

"On all artificial waterways, no taxes shall be collected except for the utilization of special fixtures intended to facilitate traffic. These taxes, as also those collected for navigation upon artificial waterways which are State property, shall in no case exceed the expenses necessary for the maintenance and ordinary repairs of the fixtures".

Following this principle, the Government maintained about 7,000 miles of navigable waterway at an average annual expense for the ten years 1881—90 of about 12 million marks for ordinary maintenance and spent 13½ million marks in important repairs and improvements while the receipts came to only 2 millions.



In the Netherlands, most of the navigable waterways belong to the provinces or communes. The charges on State waterways were 2,18,000 florins and expenditure 12,78,000 at the date of the report and the Minister of Finance had brought in a bill for the suppression of tolls on highways and on canals belonging to the State.

In 1880, France abolished tolls on all the canals belonging to the State, nearly 8,000 miles in length, with the result that traffic rose from 2,174 millions of Kilometric tons in 1881 to 3,216 millions in 1891. In 1890, the traffic amounted to over 27 per cent. of that carried by the railways which had a length of 20,800 miles. As in Germany, in addition to the large sums spent on maintenance, there has been very large expenditure in improving the canals.

In other European countries, the waterways are almost entirely navigable rivers and the method of dealing with them presents little of interest in connection with the subject under discussion.

In the United States, the canals are nearly all free but cannot, except in a few instances, compete with railways, railway freights being so low in that country. In all the most advanced countries, the tendency is to treat canals as roads, freeing them from all charges except remuneration for services actually rendered, and looking for a return in the general increase of prosperity of the country which the canals serve. They are considered rather as complements than rivals to railways, each kind of transport being specially suitable for certain kinds of traffic. In no progressive country is any direct profit on navigation sought nor is there anywhere, as far as known, any charge made for the navigation of unimproved natural waterways.

3. In the memorandum printed with G.O., No. 562 W., dated 20th February 1883, Colonel Hasted, then Chief Engineer for Irrigation, sketched the history of the navigation charges on the Gódávari, Kistna and Buckingham canals up to that year. In his recommendations to Government he laid it down as a principle that all that should be looked for is that the navigation receipts should cover the cost of maintenance excluding interest and in revising the rules he introduced the great reforms of issuing a single license for all the canals and reducing the toll stations to the number required for issuing short term licenses. His recommendations were approved by Government although they involved a large temporary loss of revenue. The result has been most marked, the traffic has grown from 27½ million ton-miles in 1884–85 to 55 millions in 1895–96 and the receipts from Rs. 1,47,079 to Rs. 2,35,573, an increase of 100 per cent. on the traffic and of 60 per cent. on the receipts in eleven years. The receipts and charges (excluding interest) have been gradually approximating. In 1894–95, there was a profit of Rs. 2,517; in 1895–96 a deficit of Rs. 9,358 owing to an order from the Government of India that the value of licenses for Government floating plant should not be credited to navigation. This order which has caused a decrease of nearly Rs. 11,000 in credits to navigation is apparently based on the idea that the Government boats are used only in the interest of navigation, whereas they are used chiefly for irrigation work. The accompanying diagram shows at a glance the growth of the traffic and revenue. It will be observed that the opening of the East Coast Railway in 1893 checked at once the growth of the Gódávari traffic, but has otherwise made very little impression on it. The Kistna traffic, a great part of which is through traffic, and that of the Buckingham canal, continued to show a fairly steady increase up to 1895–96 but in 1896–97 the ton-mileage of the Kistna fell a third and of the Buckingham canal a fifth.

4. In reply to the Secretary of State's Despatch, No. 3 P.W., dated 10th May 1888, in which attention had been drawn to the unremunerative character of the canals, the Madras Government forwarded a note by the Chief Engineer for Irrigation explaining how the charges were calculated, and observed that "the navigable canals of this Presidency designed as they have been as lines of communication, and as famine protective works cannot be expected to pay directly any more than roads. Indirectly they add greatly to the revenue and this is especially the case as regards the Gódávari and Kistna canals". In truth the cost of making the delta canals navigable has been paid for over and over again, as it is owing to the navigation that cultivation has extended so rapidly. The navigable canals are the chief highways of the two deltas and without them there would be no cheap and ready access to markets.

It is only a couple of years ago that Government was enabled to increase the land assessment by some 11 lakhs owing to the growth of prosperity which the navigation has been one of the chief means of creating. It is not clear whether the Government of India desires that navigation should be charged with interest on cost of works in the deltas. In Colonel Hasted's memorandum above referred to, it is stated that the rule had been laid down that the receipts should not only cover the working expenses of navigation but also interest on the cost of works constructed solely in the interests of navigation. It was contemplated that, as the canals approached completion, the maintenance charges would become lighter and the receipts would increase until they were sufficient to cover all charges, but when the Gódávari completion estimates were submitted to the Government of India, all that was claimed for navigation receipts was that they should cover maintenance and nothing more than this was aimed at when the tariff of 1883 was fixed. In the Chief Engineer's note which accompanied the Despatch of 6th August 1888 to the Secretary of State, interest was, however, noted as one of the charges and the detailed accounts annually submitted to the Madras Government include interest but the figures given in the Administration reports which are forwarded to the Government of India exclude it. It is very necessary that there should be some definite settlement of this question. If interest be excluded, the receipts and charges for the three connected systems already nearly balance and only a slight enhancement of charges is required to cover loss through the competition of the railway. It is strongly recommended that the revenue be limited to the cost of maintenance including such minor improvements as are usually charged to revenue. In fact it is very doubtful whether in the face of the railway competition anything more can be aimed at without doing great injury to the traffic. It would be a public misfortune if a flourishing industry, of which Madras has so few, were destroyed or even seriously injured by high charges. If it is to be supplanted by another industry, this should be allowed to take place in accordance with the usual law of progress and without violent dislocation of trade.

5. The published draft rules had, for their main object, the prevention of competition with the railway on the direct line of canal between Madras and Cocanada, but it has not been brought to the notice of Government or apparently realized by any of the persons interested, that the scope of the rules was also greatly enlarged by including all the natural waterways between the Pálár and Cocanada. The rules are not intelligible unless read with the Canal and Ferry Act which uses such terms as canal, &c., in a special and non-conventional sense. The word "canal" in rule 4, which prescribes the vessels to be licensed, does not mean a canal in the ordinary sense, but all the waters in the lines of navigation included in the comprehensive definitions of rule I. In the rules as now corrected, it is intended to be made clear that no charge will be made for the use of natural waterways.

6. The mode in which the draft rules proposed to make the canals "feeders not rivals to the railway" or, in other words, make traffic on canals parallel to the railway impracticable except for short distances was by making the Vasista-Gódávari and Kistna dividing lines of systems and requiring a separate license for each system. The proposals express a complete re-action from the liberal and enlightened policy adopted in 1883 with such splendid results and are even more injurious than the old system in that they would hinder communication between the different parts of each delta even on lines of traffic which are nowhere near the railway.

7. A serious question of principle is involved, namely whether a Government owning two means of transport can, consistently with sound policy and justice to its subjects, practically forbid the use of one in order that the other may pay better, or rather be made to appear to pay better by comparison. There are good reasons for believing that serious and harassing interference with the trade of the canals would injure the growth not merely of the canal but of the railway traffic. The railway would get a large share of existing traffic instead of a somewhat smaller proportion of the vast traffic of the future which the railway and canals working together for the benefit of trade are capable of creating. The canal traffic should be nourished, not destroyed. It is to the interest of the whole country to have a numerous and efficient fleet ever ready to transport grain from the great food-growing deltas to convenient points for distribution by rail.



8. In England the Railway Companies were allowed to get control of many of the canals with a result which, now that England's industrial supremacy is threatened by foreign competition, is felt to be a national misfortune. The East Coast Railway officers wish to adopt the same system here, but as their extreme demands have not been supported by any of the Consulting Engineers, it may be sufficient to consider the modified proposal to tax only the through traffic between the two stations, Bezwada and Cocanada, and make the tax sufficient to prevent the boats carrying for much less than $4\frac{1}{2}$ pies per ton-mile, the rate which would enable the railway to pay its working expenses and interest on capital, if there were a good volume of traffic. Putting aside other reasons against this proposal, it seems impossible to distinguish through from local traffic without an inquisitorial examination of the contents and destination of boats leaving Bezwada and Cocanada, and any tax on through traffic could be very easily evaded by consigning to intermediate ports.

9. Is there after all any reason for the repeated assertion that the railway cannot get a fair amount of traffic owing to the through traffic on the canals? It is doubtful whether those who make such assertions are aware of all the difficulties under which the canal traffic is carried on. In the Gódávari which is the most favoured district there is sufficient water for only nine to ten months and in the Kistna for seven to eight months of the year, and during the navigation season there is frequent delay in crossing the rivers if they are in high flood. In the Buckingham canal, the river-crossings frequently silt up to such an extent that traffic is impeded, and it is always stopped where the rivers happen to be in flood, until the floods subside, as there are no steamers to tow boats across. The boats are for the most part owned and worked by men of small means who earn a hard livelihood. The assertions about the profitableness of their business have never been proved. It is probable that they earn more than ordinary coolies, but they are entitled to some return on their capital in addition to the wages of their labour. The rates for boat transport vary with season and distance and as nearly as can be ascertained range between 3 and 6 pies per ton per mile, of which the present license fees and wharf charges take $\frac{1}{2}$ to $\frac{3}{4}$ pie for boats in regular employment. That there is not much margin for reduction of freights is shown by the success of the railway in the war of rates which it carried on up to a year ago. The Ellore canal is the only one on which the bulk of the traffic was through traffic, and is therefore the only one on which the transfer of through traffic to the railway can be gauged. The following was the traffic on the Ellore canal in the year the railway was opened and in subsequent years:—

| | TONS. |
|---|---|
| 1893–94 ... ... ... ... ... ... ... ... | 170,620 |
| 1894–95 ... ... ... ... ... ... ... ... | 141,198 |
| 1895–96 ... ... ... ... ... ... ... ... | 88,119 |
| 1896–97 ... ... ... ... ... ... ... ... | 87,039 |

The railway traffic between Bezwada and Cocanada in 1896 was 72,000 tons, which is nearly the amount by which the canal traffic fell off. The railway was at the time charging $2\frac{3}{4}$ pies per ton per mile, but was handicapped by the breakage of bulk and delay and exposure of goods at the Gódávari crossing. Nevertheless practically all the salt, cotton and oil-seeds which constituted the more valuable part of the canal traffic went to the railway, and there seems no reason to doubt that the railway can largely increase its rates and still keep the valuable traffic when the Gódávari bridge is completed or other arrangements made to take loaded waggons across the river. The experience of other countries all goes to show that since the great improvements of recent times in permanent way and rolling-stock, railways running in competition with canals get nearly all the more valuable traffic leaving the canals to carry goods of much bulk or little value, trade in which is affected by a very slight difference in freight. This is the case in France, where over 2,000 miles of railway run parallel to the canals. In the United States, where railway freights are very low, 2,400 miles of canals have had to be abandoned, and the continuance of the use of other canals seems to depend on the possibility of constant increase in the size of vessels used. In many instances it is found that canals and railways working side by side mutually benefit one another. Germany supplies a striking instance of this.

The canalization of the Main from Frankfurt to Mayence was completed in 1886, the river traffic being then 150,000 tons and the rail traffic 930,000 tons. Five years later, the river traffic had increased to 700,000 and the rail traffic to 1,400,000 tons. The undersigned can find no reason for expecting that the railway, with all the advantages of expedition, cleanliness and responsibility for safe delivery which it can offer to traders should in the least fear the canal competition, and strongly recommends that all idea of differential canal charges should be rejected, not only because he thinks such charges would be impolitic and opposed to the best interests of the State, but because they cannot be shown to be of more than temporary advantage to the railway in the interests of which their imposition was contemplated.

Journal of the Society of Arts, 12th Nov. 1897.

10. The following table shows the present tariff, that proposed in the draft notification and that now proposed on the three principal navigation systems:—

| Nature of vessel. | Present rates. | | Proposed in draft notification. | | Now proposed. | |
|---|---|---|---|---|---|---|
| | Annual. | Six weeks. | Annual. | Six weeks. | General license, annual. | Six weeks. |
| | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. |
| Steamers per ton— | | | | | | |
| 1 line .. .. .. .. | 5 0 0 | 1 0 0 | 10 0 0 | 2 0 0 | 15 0 0 | 3 0 0 |
| 2 lines .. .. .. .. | | | 15 0 0 | 2 0 0 | | |
| 3 lines .. .. .. .. | | | 20 0 0 | 3 0 0 | | |
| Cargo boats— | | | | | | |
| 1 line .. .. .. .. | 2 8 0 | 0 8 0 | 2 8 0 | 1 0 0 | .. | .. |
| 2 lines .. .. .. .. | | | 6 0 0 | 1 0 0 | .. | .. |
| 3 lines .. .. .. .. | | | 10 0 0 | 1 8 0 | .. | .. |
| Open cargo boats .. .. | .. | .. | .. | .. | 3 0 0 | 0 10 0 |
| Passenger boats, 1st class— | | | | | | |
| 1 line .. .. .. .. | 5 0 0 | 0 8 0 | 5 0 0 | 1 4 0 | 6 0 0 | 1 4 0 |
| 2 lines .. .. .. .. | | | 9 0 0 | 1 8 0 | | |
| 3 lines .. .. .. .. | | | 14 0 0 | 2 0 0 | | |
| Passenger boats, 2nd class— | | | | | | |
| 1 line .. .. .. .. | 3 0 0 | 0 8 0 | 3 0 0 | 1 0 0 | .. | .. |
| 2 lines .. .. .. .. | | | 7 0 0 | 1 0 0 | .. | .. |
| 3 lines .. .. .. .. | | | 12 0 0 | 1 8 0 | .. | .. |
| Decked cargo boats and passenger boats, 2nd class .. .. | .. | .. | .. | .. | 4 0 0 | 0 13 0 |
| Rafts of timber 100 square feet— | | (1 month.) | | | | |
| 1 line .. .. .. .. | .. | 0 8 0 | .. | 1 8 0 | .. | 1 0 0 |
| 2 lines .. .. .. .. | .. | 0 8 0 | | | | |
| 3 lines .. .. .. .. | .. | 0 8 0 | | | | |
| Rafts of bamboos— | | | | | | |
| 1 line .. .. .. .. | .. | 0 4 0 | .. | 1 0 0 | .. | 0 8 0 |
| 2 lines .. .. .. .. | .. | 0 4 0 | | | | |
| 3 lines .. .. .. .. | .. | 0 4 0 | | | | |

This is a tariff for revenue to satisfy the objection of the Government of India that the navigation is being worked at a loss. The amount of additional revenue required to cover the present deficit and the further falling off which will occur when the Madras-Bezwada line is opened is of course purely conjectural. The rates entered are such as it is thought traffic will bear without sensible injury. The rates for annual licenses are increased 20 to 33 per cent. and for six-weeks licenses 20 to 150 per cent., the reason for the great variation in the latter case being that in the 1883 tariff a uniform rate of 8 annas was imposed in lieu of two tolls irrespective of the class of vessels. The six-weeks rates now proposed are roughly one-fifth of the annual rates. The rates for steamers are trebled. The canals are generally not deep enough for steam traffic, and steamers unless very small and worked at a low speed do much injury to the banks. It is decidedly a bad time to increase rates at all, but the increase cannot be avoided if the receipts and charges are to be made to balance.

11. With regard to the minor navigation systems, the rates for the Dumagudiem canal are largely increased in accordance with the recommendations contained in the papers printed with G.O., No. 192 I., dated 21st February 1896. The charges on the Védaranniyam canal were raised from 8 annas to 1 Rupee per ton of boat in G.O., No. 233 I., dated 16th April 1890, and bring in a revenue of about Rs. 1,000 against



an expenditure of about Rs. 4,000. The District Board pays half the deficit. There is scarcely any traffic except in salt. The question of keeping up the navigation works on the Kurnool-Cuddapah canal has lately been before Government, which has decided that they should be maintained. There are 17 Government vessels on the canal and I think about six private vessels which carry about 2,000 tons of goods in a year. There are no license fees. The Chilka Lake canal traffic is something small. No returns are available. There is no charge for navigation. It seems somewhat absurd to apply this elaborate system of rules and tariff to navigation lines where there is now almost no traffic and what little there is needs encouragement, and in the case of the Dumagudiem and Védáranniyam canals to prescribe rates for passenger boats which have no existence. If Government does not object, the following alterations not referred to in previous notes will be made: (1) in the rules and notification strike out all reference to the Kurnool-Cuddapah and Chilka Lake canals; (2) in the notification strike out the same canals from the list of fees and enter a uniform charge of Rupee one and Annas three for boats of all classes on the Dumagudiem and Védáraniyam canals. This is double what is now paid at Dumagudiem and is the same rate as sanctioned for the Védáranniyam canal so lately as 1890.

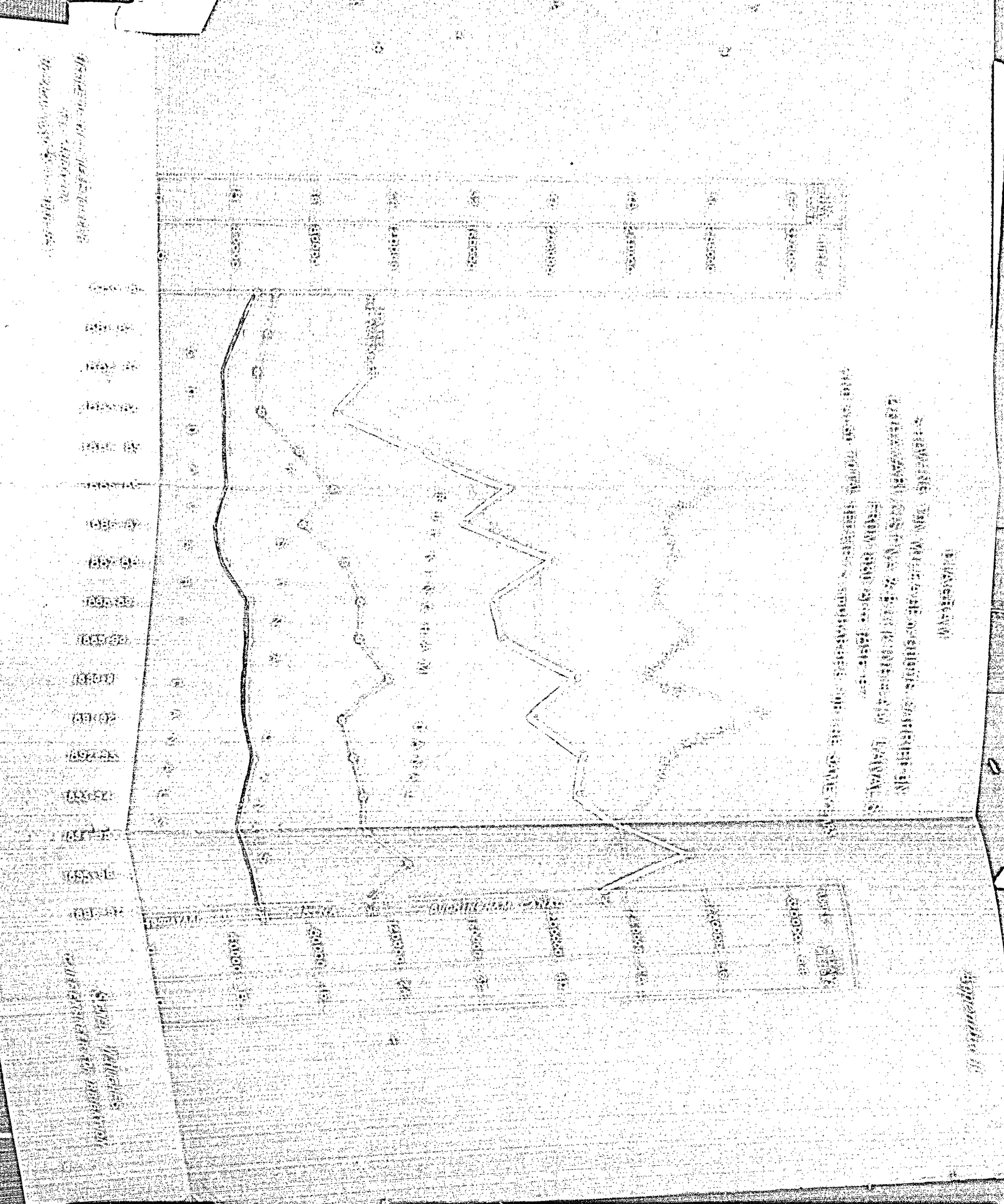
12. It is brought to the notice of Government that the fees for registration proposed in the notification are double the present fees. There seems no objection to this.

13. The chief alterations proposed in the draft rules are referred to above, and the only other which need be specially referred to is the exemption from charges for navigation of ferry vessels belonging to the District Boards when these use the canals merely to proceed to their destination.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

13th April 1898.

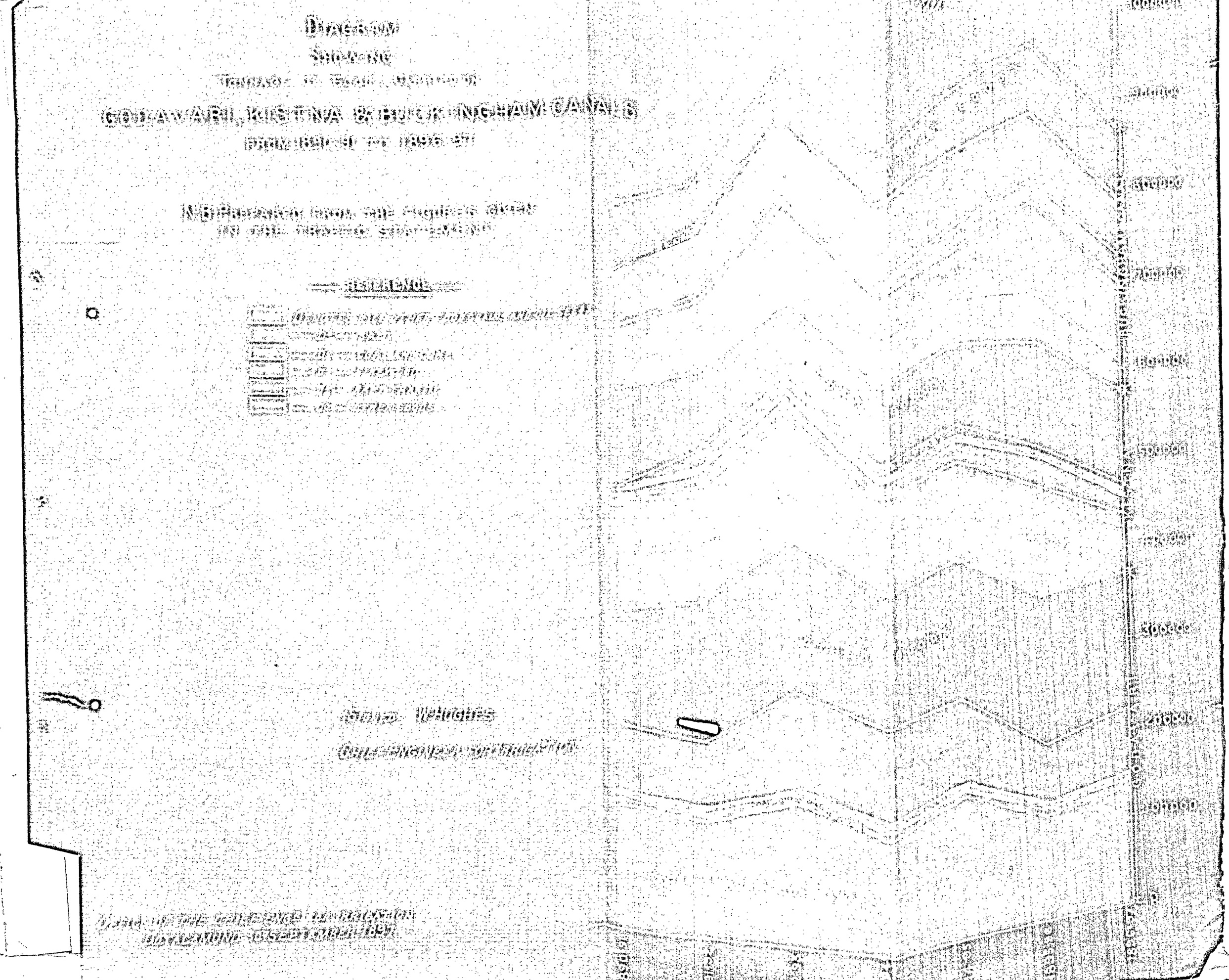
To the Joint Secretary to Government,
Public Works Department,
Irrigation Branch.



DIAGRAM

SHOWING

(GODAVARI, KISTNA & BUCKINGHAM CANALS)



# APPENDIX III.

ABSTRACT of particular classes of goods.

| Nature of cargo. | Up traffic. | | | | Down traffic. | | | | Total tonnage both ways. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1893–94. | 1894–95. | 1895–96. | 1896–97. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. | TONS. |
| *Gódávari Canals.* | | | | | | | | | | | | |
| 4. and 5. Paddy, rice and other food-grains | 47,524 | 65,475 | 39,984 | 52,146 | 36,575 | 48,775 | 40,356 | 45,669 | 84,099 | 1,14,250 | 80,340 | 97,815 |
| 10. Oil-seeds | 21,648 | 17,800 | 13,439 | 10,242 | 22,626 | 23,608 | 16,859 | 23,599 | 44,274 | 41,408 | 30,298 | 33,841 |
| 11. Provisions | 4,108 | 6,774 | 9,860 | 9,311 | 5,997 | 5,994 | 4,750 | 5,655 | 10,105 | 12,768 | 14,610 | 14,966 |
| 12. Salt | 5,366 | 4,594 | 5,266 | 9,493 | 1,603 | 1,732 | 1,852 | 2,217 | 6,969 | 6,326 | 7,118 | 11,710 |
| 14. Sugar | 3,536 | 4,217 | 4,721 | 2,704 | 14,247 | 15,169 | 14,639 | 6,223 | 17,783 | 19,386 | 19,360 | 8,927 |
| 15. Tobacco | 2,121 | 1,581 | 3,343 | 2,020 | 2,618 | 2,219 | 3,677 | 7,710 | 4,739 | 3,800 | 7,020 | 9,730 |
| 17. Miscellaneous goods | 8,118 | 8,565 | 8,913 | 12,597 | 5,967 | 6,090 | 7,126 | 10,740 | 14,085 | 14,655 | 16,039 | 23,337 |
| 18. Timber | 597 | 322 | 732 | 666 | 12,044 | 3,570 | 2,933 | 3,283 | 12,641 | 3,892 | 3,665 | 3,949 |
| 21. Coal and Coke | 3,136 | 228 | 13 | 7 | 1,850 | 603 | 426 | 93 | 4,986 | 831 | 439 | 100 |
| *Kistna Canals.* | | | | | | | | | | | | |
| 4. and 5. Paddy, rice and other food-grains | 40,852 | 36,347 | 44,804 | 17,569 | 33,331 | 41,838 | 42,419 | 26,672 | 74,183 | 78,185 | 87,223 | 44,241 |
| 10. Oil-seeds | 473 | 242 | 539 | 597 | 19,321 | 15,076 | 18,963 | 8,627 | 19,794 | 15,318 | 19,502 | 9,224 |
| 11. Provisions | 7,320 | 6,119 | 5,979 | 5,273 | 3,936 | 3,643 | 4,973 | 4,517 | 11,256 | 9,762 | 10,952 | 9,790 |
| 12. Salt | 11,066 | 13,955 | 15,529 | 13,025 | 1,676 | 2,375 | 1,994 | 1,415 | 12,742 | 16,330 | 17,523 | 14,440 |
| 14. Sugar | 2,500 | 2,632 | 1,568 | 1,060 | 561 | 633 | 738 | 494 | 3,061 | 3,265 | 2,306 | 1,554 |
| 15. Tobacco | 513 | 398 | 586 | 299 | 1,608 | 1,900 | 3,531 | 1,766 | 2,121 | 2,298 | 4,117 | 2,065 |
| 17. Miscellaneous goods | 4,401 | 2,965 | 4,596 | 5,240 | 4,516 | 4,095 | 5,229 | 5,222 | 8,917 | 7,060 | 9,825 | 10,562 |
| 18. Timber | 3,108 | 2,546 | 2,647 | 2,913 | 2,022 | 1,659 | 1,754 | 3,055 | 5,130 | 4,205 | 4,401 | 5,968 |
| 21. Coal and Coke | 2,579 | 1,107 | 894 | 1,362 | 15,145 | 22,912 | 33,423 | 22,175 | 17,724 | 24,019 | 34,317 | 23,537 |
| *Buckingham Canal.* | | | | | | | | | | | | |
| 4. and 5. Paddy, rice and other food-grains | 51,288 | 53,075 | 55,535 | 31,082 | 1,576 | 242 | 225 | 431 | 52,864 | 53,317 | 55,760 | 31,513 |
| 10. Oil-seeds | 2,547 | 484 | 3,190 | 3,205 | .. | 4 | .. | 5 | 2,547 | 488 | 3,190 | 3,210 |
| 11. Provisions | 9,710 | 18,837 | 13,864 | 12,672 | 1,086 | 808 | 1,557 | 2,572 | 10,796 | 14,645 | 15,421 | 15,244 |
| 12. Salt | 45,459 | 51,795 | 98,341 | 89,127 | .. | .. | 6 | 2 | 45,459 | 51,795 | 98,347 | 89,129 |
| 14. Sugar | 417 | 470 | 339 | 449 | 71 | 49 | 126 | 120 | 488 | 519 | 465 | 569 |
| 15. Tobacco | 72 | 87 | 96 | 63 | 3 | 5 | 28 | 4 | 75 | 92 | 124 | 77 |
| 17. Miscellaneous goods | 4,736 | 7,425 | 7,767 | 5,735 | 5,077 | 5,376 | 5,416 | 7,991 | 9,813 | 12,801 | 13,183 | 13,726 |
| 18. Timber | 31 | 43 | 135 | 479 | 1,334 | 1,458 | 2,754 | 2,236 | 1,365 | 1,501 | 2,889 | 2,715 |
| 21. Coal and Coke | 14,120 | 26,245 | 26,847 | 33,325 | .. | .. | 11 | 17 | 14,120 | 26,245 | 26,858 | 33,342 |

## APPENDIX III—*cont.*

Abstract of particular classes of goods—*cont.*

| Nature of cargo. | Ton mileage. | | | | Distance of carriage. | | | | Number of passengers. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1893–94. | 1894–95. | 1895–96. | 1896–97. |
| | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| *Gódávari Canals.* | | | | | | | | | | | | |
| 4. & 5. Paddy, rice and other food-grains | .. | .. | 2,199,621 | 2,540,834 | .. | .. | 27 | 26 | | | | |
| 10. Oil-seeds | .. | .. | 853,319 | 975,128 | .. | .. | 28 | 30 | | | | |
| 11. Provisions | .. | .. | 365,110 | 463,239 | .. | .. | 25 | 31 | | | | |
| 12. Salt | .. | .. | 193,076 | 391,284 | .. | .. | 27 | 33 | | | | |
| 14. Sugar | .. | .. | 474,614 | 172,902 | .. | .. | 24 | 19 | 287,548 | 2,56,612 | 2,41,150 | 2,28,112 |
| 15. Tobacco | .. | .. | 201,487 | 231,150 | .. | .. | 28 | 24 | | | | |
| 17. Miscellaneous goods | .. | .. | 429,208 | 582,957 | .. | .. | 27 | 25 | | | | |
| 18. Timber | .. | .. | 123,821 | 145,905 | .. | .. | 34 | 37 | | | | |
| 21. Coal and coke | .. | .. | 9,766 | 1,478 | .. | .. | 22 | 15 | | | | |
| *Kistna Canals.* | | | | | | | | | | | | |
| 4. & 5. Paddy, rice and other food-grains | .. | .. | 3,855,615 | 4,345,589 | 5,330,316 | 2,622,921 | 52 | 55 | 61 | 59 | | |
| 10. Oil-seeds | .. | .. | 806,252 | 545,551 | 722,614 | 319,075 | 40 | 35 | 37 | 35 | | |
| 11. Provisions | .. | .. | 482,086 | 425,801 | 579,006 | 504,024 | 43 | 43 | 53 | 51 | | |
| 12. Salt | .. | .. | 706,711 | 973,143 | 1,114,000 | 959,349 | 56 | 59 | 64 | 66 | | |
| 14. Sugar | .. | .. | 143,359 | 136,743 | 95,621 | 59,745 | 47 | 42 | 41 | 38 | 129,928 | 1,17,337 | 1,23,212 | 97,143 |
| 15. Tobacco | .. | .. | 90,623 | 99,662 | 143,923 | 89,902 | 42 | 43 | 35 | 44 | | | | |
| 17. Miscellaneous goods | .. | .. | 409,920 | 383,718 | 586,883 | 556,456 | 46 | 54 | 60 | 52 | | | | |
| 18. Timber | .. | .. | 224,948 | 195,377 | 205,417 | 301,318 | 44 | 46 | 47 | 50 | | | | |
| 21. Coal and coke | .. | .. | 1,294,014 | 1934,713 | 2,724,738 | 1,863,733 | 73 | 80 | 79 | 79 | | | | |
| *Buckingham Canal.* | | | | | | | | | | | | |
| 4. and 5. Paddy, rice and other food-grains | .. | .. | 8,558,008 | 8,383,065 | 8,401,039 | 4,178,318 | 162 | 157 | 150 | 133 | | | | |
| 10. Oil-seeds | .. | .. | 488,932 | 80,557 | 603,170 | 609,683 | 192 | 165 | 189 | 190 | | | | |
| 11. Provisions | .. | .. | 1,350,951 | 2,072,424 | 2,210,936 | 2,058,568 | 125 | 142 | 143 | 135 | | | | |
| 12. Salt | .. | .. | 756,534 | 879,227 | 1,563,348 | 1,383,057 | 14 | 17 | 15 | 16 | | | | |
| 14. Sugar | .. | .. | 39,187 | 48,912 | 49,376 | 50,717 | 80 | 94 | 106 | 89 | 68,839 | 93,825 | 1,01,262 | 78,492 |
| 15. Tobacco | .. | .. | 13,885 | 16,243 | 20,431 | 12,654 | 185 | 176 | 165 | 165 | | | | |
| 17. Miscellaneous goods | .. | .. | 1,678,944 | 1,712,550 | 1,594,211 | 1,144,448 | 171 | 134 | 121 | 83 | | | | |
| 18. Timber | .. | .. | 146,659 | 165,017 | 321,235 | 339,982 | 108 | 110 | 111 | 125 | | | | |
| 21. Coal and coke | .. | .. | 2,733,340 | 5,116,468 | 5,226,452 | 6,516,825 | 194 | 195 | 195 | 196 | | | | |



## APPENDIX IV.

STATEMENT of Traffic Receipts and Charges on navigable canals—Results without interest on Capital.

| Year. | Gódávari canals. | | | | Kistna canals. | | | | Buckingham canal. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Charges excluding interest. | Receipts. | Difference. | Remarks. | Charges excluding interest. | Receipts. | Difference. | Remarks. | Charges excluding interest. | Receipts. | Difference. | Remarks. |
| | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. | |
| 1884–85 .. .. | 84,986 | 80,731 | —4,255 | | 61,819 | 19,160 | — 42,659 | | 99,077 | 47,188 | — 51,889 | Under Public Works Code, Volume II, Chapter III, paragraph 348, interest is *not* charged on the Buckingham canal which is classed under "43. Minor Works and Navigation—Provincial." |
| 1885–86 .. .. | 78,407 | 78,852 | 445 | | 67,079 | 23,331 | — 43,748 | | 1,34,454 | 54,593 | — 79,861 | |
| 1886–87 .. .. | 66,892 | 86,893 | 20,001 | | 78,284 | 24,045 | — 54,239 | | 1,12,901 | 60,949 | — 51,952 | |
| 1887–88 .. .. | 70,435 | 1,01,390 | 30,955 | | 58,246 | 30,283 | — 27,963 | | 1,38,468 | 69,140 | — 69,328 | |
| 1888–89 .. .. | 74,788 | 93,271 | 18,483 | | 52,829 | 31,691 | — 21,138 | | 1,27,659 | 72,214 | — 55,445 | |
| 1889–90 .. .. | 67,557 | 94,253 | 26,696 | | 58,837 | 28,643 | — 30,194 | | 1,51,919 | 75,747 | — 76,172 | |
| 1890–91 .. .. | 74,524 | 96,600 | 22,076 | | 61,656 | 32,925 | — 28,731 | | 1,17,696 | 88,012 | — 29,684 | |
| 1891–92 .. .. | 72,943 | 96,287 | 23,344 | | 70,327 | 34,246 | — 36,081 | | 1,72,868 | 98,269 | — 74,599 | |
| 1892–93 .. .. | 87,905 | 1,02,122 | 14,217 | | 65,011 | 37,116 | — 27,895 | | 1,18,347 | 99,757 | — 18,590 | |
| 1893–94 .. .. | 71,008 | 1,01,660 | 30,652 | | 68,284 | 34,634 | — 33,650 | | 1,24,493 | 1,08,291 | — 16,202 | |
| 1894–95 .. .. | 81,261 | 1,03,626 | 22,365 | | 64,961 | 37,222 | — 27,739 | | 1,01,536 | 1,09,427 | 7,891 | |
| 1895–96 .. .. | 77,270 | 90,468 | 13,198 | | 71,638 | 36,731 | — 34,907 | | 96,023 | 1,08,374 | 12,351 | |

*Note.*—(1) The figures showing "charges" and "receipts" of the Gódávari and Kistna canals have been taken from the Proceedings of Madras Government passing orders on the annual statements of Navigation receipts and charges for those canals.

(2) The figures showing "charges" and "receipts" of the Buckingham canal represent the total charges and the total receipts entered in the "statements of Financial results" of the canal printed in the annual Irrigation Administration report.

*Charges for Gódávari and Kistna.*

(1) Lock establishment.
(2) Lock and weir repairs.
(3) Navigation buildings.
(4) Tow path maintenance.
(5) Dredging.
(6) Miscellaneous.
(7) Share, canal maintenance.

*Charges for Buckingham canal.*

(1) Extensions and improvements.
(2) Maintenance and repairs.
(3) Establishment.
(4) Tools and plant.
(5) Indirect charges { Capitalised abatement of land revenue. / Leave & pension allowances.

*Receipts for Gódávari include*

License and tolls, Government and private.
Rents on canal berms.
Profit on boat office.

*Receipts for Kistna include.*

License and tolls on Government and private boats.

*Receipts for Buckingham canal include*

License and toll-fees.
Wharfage-fees.
Sundries.

# NAVIGATION RULES UNDER ACT II OF 1890.


*I.—General.*

| | PARA. |
|---|---|
| Declaration of rules and date of enforcement | 1 |
| Exemption of Government canal vessels from paying license fees, &c. | 2 |
| Officers and their powers | 3 |

*II.—Licenses.*

| | |
|---|---|
| Vessels to be licensed | 4 |
| Conditions and rates of fees | 5 |
| Counterpart of licenses | 6 |
| Transfer of license for one year | 7 |
| Licenses for one year | 8 |
| Renewal of six weeks' licenses | 9 |
| Conversion of a six weeks' license | 10 |
| Gross tonnage | 11 |
| What to be deemed the tonnage of a vessel | 12 |
| Registered tonnage | 13 |
| Enlarged or altered vessels | 14 |
| Number of passengers licensed to carry | 15 |
| Licenses for passenger boats | 16 |
| Provision in case of loss of license | 17 |
| Rafts | 18 |

*III.—Registration.*

| | |
|---|---|
| Registration of vessels | 19 |
| Place of registration | 20 |
| Registering officer and register | 21 |
| Transfer of ownership and register | 22 |
| Procedure when certificate is lost | 23 |
| Exemption from payment of fees for registration | 24 |

*IV.—Wharves.*

| | |
|---|---|
| Wharves | 25 |
| Wharf limits | 26 |
| Wharves which may be declared hereafter | 27 |
| Regulation of traffic at wharves | 28 |
| Wharf clearance ticket | 29 |
| Demurrage fee on vessels | 30 |
| Do. on goods | 31 |
| Additional wharfage fee for test weighing or test measurement | 32 |

*V.—Navigation Rules.*

| | |
|---|---|
| Dimensions of vessels and rafts | 33 |
| Free board | 34 |
| Passenger boats may carry cargo on certain conditions | 35 |
| Care and management of vessels | 36 |
| Lights | 37 |
| Speed of steamers | 38 |
| The passing of vessels | 39 |
| Sails when to be lowered | 40 |
| Inspection of vessels other than steamers | 41 |
| Inspection of steamers | 42 |
| Production of license and stoppage of vessels | 43 |
| Limit of Canal officers' powers | 44 |
| Pass for vessels under suspension to proceed to their destination | 45 |
| Punishment of owners of rafts | 46 |
| Marks and figures to be painted on vessels | 47 |
| Circulation of rules | 48 |
| Mooring of vessels | 49 |
| Place and time of repairs of vessels | 50 |
| Sea-going vessels | 51 |




## NOTIFICATION.

### I.—GENERAL.

Under the provisions of section 16, Madras Act II of 1890 (An Act to make better provision for the establishment of Canals and public Ferries in the Presidency of Madras and for the management thereof), His Excellency the Governor in Council is pleased to declare that, in supersession of the existing rules regarding navigation on canals, the following rules shall, on and after 15th May 1898, be in force on the lines * of navigation defined in the margin or which may hereafter, by notification, be brought under the provisions of the said Act.

* The Dumagudiem canal, Gódávari district.
The Gódávari canals, consisting of the artificial navigable channels and such portions of the natural waterways as are necessary for navigation between them in the Gódávari district, south and east of Rajahmundry.
The Kistna canals, consisting of the artificial navigable channels and such portions of the natural waterways as are necessary for navigation between them in the Kistna district.
The Buckingham canal, consisting of the artificial reaches of the canal and such portions of the rivers, backwaters and estuaries connected with it as are necessary for navigation between the reaches in the Nellore, Chingleput and South Arcot districts and Madras town.
The Védáranniyam canal in the Tanjore district.

2. *Exemption of Government canal vessels from paying license fees, &c.*—All Government vessels belonging to the Public Works Department shall be exempted from paying license or registration fees or tolls.

3. *Officers and their powers*—The management of canals for navigation is vested in the Executive Engineers of the divisions of the Public Works Department in which the canals are situated, subject to the supervision of the Superintending Engineer of the circle concerned and the control of the Chief Engineer for Irrigation. Executive Engineers are, in respect to the canals in their charge, authorized to exercise the powers described in section 7 of the Act and to delegate, in writing, all or any of those powers to any officer or subordinate working under them. These officers or subordinates are referred to in these rules as "Canal officers."

### II—LICENSES.

4. *Vessels to be licensed.*—All vessels using any of the artificial canals shall be licensed except those registered under rule 19 or exempted under rule 2 or rule 24.

5. *Conditions and rates of fees.*—On application by the owner of a vessel or his agent, either in person or by letter, for permission to navigate any particular line or connected lines of navigation, and on payment of the fees prescribed in the notification published under section 6 of the Act, the Executive Engineer of the division concerned, or any other Canal officer duly authorized by him, shall grant a license for such navigation in Form A attached to these rules either for one year or for six weeks as the owner of the vessel or his agent may elect, subject to a condition that claims for compensation in consequence of the closure of all or any of the canals for repairs, insufficiency of water or any other impediment to navigation shall not be recognized. The applicant shall furnish all the information necessary for the due filling in of the license. Boats which have not been previously licensed must be taken to a licensing station for measurement.

6. *Counterpart of licenses.*—Every Canal officer empowered to grant licenses shall retain the counterpart of every license granted by him and shall be responsible that it corresponds to the license of which it is a counterpart. When an alteration is made in the license, a corresponding alteration shall be made in the counterpart thereof.

7. *Transfer of license for one year.*—If the ownership of a vessel licensed for one year is changed during the year for which the vessel is licensed the officer who granted the license may, upon the application of the original owner and the transferee, alter the license by substituting the name of the latter for that of the former. But a license granted for one vessel shall not be transferred to another vessel.

8. *Licenses for one year.*—Every license for one year shall remain in force until the 31st March following the date of issue, unless it is cancelled or suspended as hereinafter provided.

9. *Renewal of six weeks' licenses.*—A license granted for six weeks may be renewed from time to time for further periods of six weeks. Such renewals shall be endorsed upon the license.

10. *Conversion of a six weeks' license.*—If a license granted for six weeks has not been renewed more than once, it may be converted into a license for the year in which it was issued upon receipt of the difference of fee payable for a six weeks' license and for a license for one year.

11. *Gross tonnage.*—The gross tonnage of a vessel shall be ascertained by multiplying its length, breadth and depth in feet and inches and dividing the product by fifty. The length shall be measured at half the midship depth in a straight line from the inside of the outerplanking at the side of the stem to the inside of the outerplanking at the side of the stern post and shall be hereinafter called the length for tonnage. The breadth for tonnage shall be one-sixth of the sum of five widths taken at equal distances along and right angles to the above length for tonnage measured from the rib on one side to the planking on the other side. If the vessel has a fixed internal planking or "ceiling," the said five widths shall be measured from the inner side of such ceiling on one side to the inner side thereof on the other side.

The depth of all vessels shall be measured in a vertical line at the centre of the length for tonnage. If a vessel is decked, the measurement for depth shall be from the under side of the deck planking or, in case of a break, below a line stretched in continuation of such deck planking. If the vessel is an open one or a "Rahadari" (transit) boat the measurement for depth shall be from an athwartship line extended from the upper edge of the upper strake on both sides of the vessel. If the vessel has a fixed ceiling (inner planking) the measurement for depth shall be to the inner side of such ceiling. If a vessel has no fixed ceiling the measurement for depth shall be to the inner side of the outer bottom plank.

12. *What to be deemed the tonnage of a vessel.*—Whenever the tonnage of any vessel has been ascertained, the same shall henceforth be deemed to be the tonnage thereof, unless any alteration is made in the form or capacity of such vessel or unless it is discovered that the tonnage thereof has been erroneously computed; and in either of such cases, such vessel shall be remeasured and her tonnage determined according to the rule hereinbefore contained in that behalf.

13. *Registered tonnage.*—The net or registered tonnage upon which fees are leviable shall be the gross tonnage less one-third for steamers and less fifteen per cent. for other vessels. Any fraction of a ton above half shall be taken as one ton and other fractions shall be rejected.

14. *Enlarged or altered vessels.*—A vessel that has been enlarged or so structurally altered as to affect the conditions upon which the license was obtained shall not ply until it has been remeasured and a fresh license has been obtained. Such remeasurement and application for a new license shall be made at the station at which the original license was obtained. The applicant for such fresh license shall deliver up the old license to the licensing officer, and pay the difference between the fee paid by him and the fee leviable upon the new registered tonnage.

15. *Number of passengers licensed to carry.*—No vessel licensed to carry passengers shall carry a greater number of passengers than in the proportion of one adult or two children for every 7½ square feet of covered space, which shall be calculated by multiplying the length in feet over all covered space, by the mean of the three widths taken at equal distances. The Executive Engineer of the division, or any other Canal officer duly authorized by him, may, during festivals, on application by the owner of any vessel or his agent, increase temporarily the limit of the number of passengers to be carried, so long as the safety of the public is not endangered thereby.

16. *Licenses for passenger boats.*—Licenses for passenger boats shall be either "first class" or "second class." The holder of a "first class" license may carry passengers of such caste or castes as he pleases. The holder of a "second class" license shall carry all passengers without distinction of caste.

17. *Provision in case of loss of license.*—If the original license be lost, a duplicate shall be issued by the officer who granted the license on payment of the fee prescribed in the notification published under section 6 of the Act. If the loss occurred during the absence of the vessel from the station at which it was licensed, the loss shall be reported to the nearest Canal officer who shall thereupon issue a pass in Form B attached to these rules. Such pass should hold good until the arrival of the vessel at the station at which the license was issued. Immediately upon such arrival, the owner or his agent shall deliver up the said pass and pay the prescribed fee for a duplicate license.

18. *Rafts.*—The owners or persons in charge of rafts using any of the canals shall pay the fees prescribed in the notification published under section 6 of the Act and take out licenses in Form C attached to these rules, and these licenses shall be in force for six weeks from the date of issue.

## III.—REGISTRATION.

19. *Registration of vessels.*—Vessels intended for the personal use of the owners and not employed in carrying goods, animals or passengers for purposes of trade nor used for towing vessels carrying goods, animals or passengers for purposes of trade shall be registered. Certificates of registration shall, on payment of the fees prescribed in the notification published under section 6 of the Act, be issued in Form D attached to these rules and shall be for a period of either one year or six weeks as the owner of the vessel may elect. The certificates shall entitle the holders to use the lines of navigation therein mentioned and no other. The Executive Engineer of the division in which the port of registry of any vessel is situated, or any Canal officer duly authorized by him in that behalf, shall determine to which class of boats herein before mentioned such vessel belongs. Vessels registered under this rule shall be subject to the same rules and regulations as those for which licenses are taken out so far as they are applicable.

20. *Place of Registration.*—A vessel may be registered at any one of the licensing stations. The station at which a vessel is registered shall be its port of registry or the port to which she belongs.

21. *Registering officer and register.*—The Executive Engineer of the division in which the port of registry of a vessel is situate or any Canal officer duly authorized by him in that behalf shall be responsible that the certificate of registration and its counterpart are duly filled in and that the counterpart is carefully preserved and altered when required so as to correspond to the certificate to which it refers.



22. *Transfer of ownership and register.*—When the ownership of a vessel registered for one year is transferred during such period, the registration and certificate shall be altered at the request of the original owner and the transferee, by the substitution of the name of the latter for that of the former.

23. *Procedure when certificate is lost.*—If a certificate of registration is lost, the registering officer at the port of registry shall grant a duplicate of such certificate upon the receipt of the fees prescribed in the notification published under section 6 of the Act.

24. *Exemption from payment of fees for registration.*—No fee shall be levied for the registration of boats used solely for fishing on the Buckingham canal; nor on sea-going boats and boats carrying firewood on the Masulipatam canal, in the Kistna delta between the Tidal lock and the Petta basin and in the Gódávari river; but all such boats shall be registered and certificates of registration in Form E attached to these rules shall be issued for them. Ferry vessels belonging to a District Board proceeding to their destination and not plying for traffic shall be allowed to pass through the canals free of charge on written permit from the Executive Engineer.

## IV.—WHARVES.

25. *Wharves.*—A wharfage fee at the rate prescribed in the notification published under section 6 of the Act shall be paid by the owner of every vessel which loads or discharges cargo or ships or lands passengers at any of the wharves fixed under section 6 of the Act. The word "cargo" shall include empty bags, baskets, boxes, casks and other receptacles in which cargo is usually carried.

The wharf rules shall not apply to salt factories and salt channels already under the control of the Salt Department except the landing place at the salt depôt at Madras. No private wharves or landing stages shall in future be constructed in connection with lines of navigation without the previous sanction of Government.

26. *Wharf limits.*—No vessel shall load or unload on any part of a canal or channel within one mile on either side of a wharf, except by special permission in writing of the officer in charge of the division and on payment of the prescribed wharfage fees. Goods shall not be stacked on canal lands without special permission in writing from the Canal officer.

27. *Wharves which may be declared hereafter.*—Wharfage fees at the above rates shall also be levied at any wharf, which may hereafter be constructed, from the date on which it may be declared, by notification in the *Fort St. George Gazette* and in the Gazette of the district concerned, to be available for loading and unloading cargo and shipping and landing passengers.

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice-board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

29. *Wharf-clearance ticket.*—Every person in charge of a vessel on which wharfage fee is leviable shall obtain from the wharf superintendent a wharf-clearance ticket in Form F attached to these rules, and such ticket shall be delivered up at the next wharf or licensing station the vessel may enter. Vessels shall leave wharves on the same day on which clearance tickets are delivered.

30. *Demurrage fee on vessels.*—In addition to the wharfage fee leviable thereon, the owner of every vessel which remains at a wharf for more than seven days reckoned from the date on which the vessel is placed in position to load or unload freely shall pay a demurrage fee at the rates prescribed in the notification published under section 6 of the Act. Provided that no demurrage fee shall be charged for any days during which the vessel is not allowed to lie at the wharf.

31. *Demurrage fee on goods.*—The consignee of goods landed at the wharf of discharge shall remove his goods from such wharf within seven days from the date on which such goods are landed; and if the said goods be not removed within such time, the consignee shall pay a demurrage fee at the rate prescribed in the notification published under section 6 of the Act. The said goods shall not be removed until the said fee is paid.

32. *Additional wharfage fee for test weighing or test measurement.*—Consignees of goods using the places reserved at wharves for test measuring or test weighing goods shall pay the additional wharfage fee prescribed for the purpose in the notification published under section 6 of the Act, and shall not allow the goods to remain at the reserved places longer than necessary for taking such test measurement or test weight.

## V.—NAVIGATION RULES.

33. *Dimensions of vessels and rafts.*—No vessel exceeding 90 feet in length and 13 feet in width shall navigate the canals, except those built before the 31st December 1880 for which a special license may be granted by the Canal officer.

In the portion of the Buckingham canal known as the Junction canal in the town of Madras and south of it, the fixed fittings of vessels, such as the roofs of boats, steps of masts, funnel sockets, &c., and cargo piled on vessels shall not be higher than 6½ feet above water level, and piled cargo or roofs or fixed fittings shall not exceed 12 feet in width.

No raft exceeding 90 feet in length, 12 feet in breadth, or drawing more than 2 feet of water, shall be allowed on any of the canals. Nothing shall be allowed to project beyond the side of any vessel or raft.

34. *Free board.*—No vessel carrying cargo shall be navigated in the canals unless it has a free board of at least 9 inches; and no vessel carrying passengers shall be so navigated unless it has a free board of at least 12 inches. The free board shall be measured from the water's edge to the top of the gunwale when the vessel has no deck and to the upper side of the plank of the deck when the vessel has a deck.

35. *Passenger boats may carry cargo on certain conditions.*—A boat licensed to carry passengers may also carry cargo, every 10 cubic feet of cargo being considered as equivalent to one passenger; but the total of the number of passengers so calculated and the passengers actually carried shall not exceed the number of passengers which the boat is licensed to carry. No such vessel shall carry cargo on the roof or side of the vessel, nor any cargo such as fish, manure, bones, skins or other articles which, in the opinion of the Canal officer, is offensive or dangerous.

36. *Care and management of vessels.*—No vessel shall be navigated without one person at least, on board, competent to steer and manage her and acquainted with the rules regulating the navigation of the canals. No vessel shall lie or be left without a person on board capable of taking care of her.

37. *Lights.*—Vessels using any of the canals shall between sunset and sunrise exhibit the following lights:—

| Vessels. | When moving. | When moored. |
|---|---|---|
| Steamers ... ... ... | One clear white light on the upper deck.<br>One bull's eye bright red light 8″ diameter on the port or left side.<br>One bull's eye bright green light 8″ diameter on the star board or right side. | One clear white light at not less than 4 feet above the water level and so placed that it shall be visible fore and aft. |
| All vessels not propelled by steam. | One clear white light at the fore end fixed not less than 4 feet above the water level.<br>One clear white light in the general cabin or inside. | Do. do. |
| Rafts ... ... ... ... | One clear white light at each end. | One clear white light at each outer corner. |

The two bull's eye lights shall be so placed and fitted that both may be visible only from a point directly ahead of the vessel and so as not to be obscured by any of the fittings, cargo or passengers. Subject to these provisions, the lights may be placed in the front or on the top of the cabin, at the sides of the vessel near the bow or on supports specially provided for the purpose.

38. *Speed of steamers.*—No steamer shall travel at a greater speed than 4 miles per hour and, between sunset and sunrise, the speed shall not exceed 3 miles per hour. Steamers shall reduce their speed to 3 miles an hour when they come within half a mile of a lock and shall then whistle to give notice of their approach to the lock establishment. Steamers shall be warped or poled into and out of locks and shall not use their propellors or paddle wheels until quite clear of the locks. Every steamer shall be furnished with an efficient steam whistle. Steamers shall reduce their speed to 3 miles an hour during the day and to 2 miles an hour between sunset and sunrise when passing round a bend in any canal and shall whistle when approaching such bend. Every vessel under steam shall stop and reverse whenever necessary. Steamers shall whistle when within 100 yards of any boat and reduce speed to 3 miles an hour.

39. *The passing of vessels.*—When two vessels meet on the Gódávari or Kistna canals, the vessel going with the current shall keep out of the way of the other vessel. In other canals, vessels going north shall keep out of the way of those going south. Vessels under sail shall keep out of the way of vessels which are being towed, and vessels under steam shall keep out of the way of all other vessels.



Every vessel overtaking another vessel shall keep out of the way of the vessel which is being overtaken. Where by these rules one of two vessels is required to keep out of the way the other shall keep her course. Every vessel under steam when passing a vessel which is being towed from the towing path on the offside thereof and every vessel not under steam, shall take the towing path side when meeting, or passing, or approaching to, or being overtaken by a vessel under steam. The steam whistle of every vessel under steam shall be sounded when such vessel is about to round and is rounding any turnings in the navigation as well as when such vessel is meeting, approaching, or overtaking any vessel.

40. *Sails when to be lowered.*—All vessels under sail shall lower their sails when passing through a masonry aqueduct, lock or flood gate.

41. *Inspection of vessels other than steamers.*—The Canal officer in charge of a licensing station shall, from time to time, inspect all licensed vessels at such station to see if they are maintained in a proper state of repair and cleanliness and if their gear is in good condition, and may suspend the licenses if the vessels are out of repair or unsafe or otherwise unfit for public use or for the carriage of goods as the case may be. So long as a license is suspended, the vessel to which it relates shall not ply on any of the canals.

42. *Inspection of steamers.*—All steamers shall be inspected by the Canal officer before they are licensed and once every six months thereafter to see that the vessels and their machinery are in good working order, that the boilers are provided with proper gauges and are safe and that the vessels are in charge of a competent crew. Certificates of inspection shall be issued in Form G appended to these rules. In the event of such deterioration of machinery and boilers as may, in the opinion of the inspecting officer, cause danger, the license of the vessel shall be cancelled or suspended.

43. *Production of license and stoppage of vessels.*—When required so to do by a Canal officer, every person in charge of a vessel shall stop the vessel and produce the license or certificate of registration as the case may be. Persons in charge of vessels carrying passengers or cargo or both and of vessels propelled by steam, shall assist Canal officers in their inspections and shall make a true statement of the number of passengers and the nature of the cargo on board.

44. *Limit of Canal officers' powers.*—A Canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

45. *Pass for vessels under suspension to proceed to their destination.*—When the license for a vessel carrying cargo or passengers or both is suspended, the officer by whom the license is suspended shall grant a pass in Form H attached to these rules permitting the vessel to proceed to its destination for the purpose of landing cargo and passengers or to a place where she can be repaired. Such passes shall be in duplicate of which one part shall be retained in the issuing office and the other part shall be delivered to the person in charge of the vessel. The fact and period of suspension shall be recorded by the Canal officer upon the license and upon the counterpart. but if the counterpart is not in his possession, he shall communicate the fact of suspension to the officer who issued the license. In the case of the suspension of a license because of the defective state of a vessel's hull, machinery or gear, the suspension shall continue until the owner obtains a certificate from an inspecting officer that the necessary repairs have been effected and that the vessel is again safe, sound and fit for the navigation of the canals. Such certificate shall be endorsed on the license immediately under the order of suspension which shall thereupon cease to have any effect. The order of suspension shall declare that it shall be in force unless and until such certificate is obtained. A copy of such certificate shall be served upon, and be filed by, the officer who suspended the license.

46. *Punishment of owners of rafts.*—Owners of rafts shall, in lieu of suspension, be punished by a fine of two rupees for each offence, until payment of which the raft shall not proceed. If the fine is not paid within ten days, the Canal officer concerned is empowered to cause the raft to be removed from the canal.

47. *Marks and figures to be painted on vessels.*—The owners of vessels other than rafts shall have the following figures and marks painted conspicuously on their vessels before using them on any of the canals and shall be responsible that those marks and figures are not defaced or obliterated:—

(1) The number of the license or certificate of registration and the initial or initials of the name or names of the canals which a vessel is licensed to navigate shall be painted on each bow.

(2) The tonnage of the vessel shall be similarly painted on each side of the sternpost above the load line.

(3) The number of passengers, which the vessel is licensed to carry, on the stern of each such vessel or on the after-part of the cabin with the letter P prefixed.

(4) The load line for a length of 3 feet amidships, on both sides.

The said numerals and letters shall be in English and shall be painted in white on a black ground or black on a white ground. Each numeral or letter shall be not less than 4 inches in length and of proportionate breadth.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.

49. *Mooring of vessels.*—No vessel shall moor within the limits prohibited by notice-boards at any lock or masonry work or on the tow-path side, if there be only one such path, or on the windward side of a canal, if there be two such paths, except when actually loading or unloading. Vessels when moored shall strike or lower masts and shall be made fast stem and stern to the bank in a single line. Rafts when moored shall be securely fastened at both ends to the canal bank and so as not to obstruct navigation.

50. *Place and time of repairs of vessels* —No vessel shall be repaired in any canal without the written permission of the Canal officer. The repairs shall be made at the place and during the time named in the written permission, and at no other place or time. The owner of the vessel shall remove from the canal all surplus materials used for such repairs within fifteen days after the repairs are completed. In the event of his failing to do so, such materials shall be removed by the Canal officer at the expense of the owner of the vessel and the license may be suspended until payment is made.

51. *Sea-going vessels.*—Sea-going vessels brought into rivers and backwaters for any purpose other than to ply for hire shall anchor or lay up outside the fair way of the canal traffic in such place and manner as the Canal officer shall direct.



FORM A. (*Vide* Rule 5.)

*License for vessels other than rafts.*

This license is granted to permit the vessel noted below to navigate the canal according to the rules passed under Act II of 1890:—

Number of license.
Owner's name.
Do. residence.
Description of vessel.
Place where vessel was built.
Year in which vessel was built.
Extreme dimensions. { Length, feet. Breadth, feet.
Measurement for { Length, feet. Breadth, feet. Depth, feet.
tonnage.
Contents, cubic feet.
Gross tonnage.
Deduction.
Registered tonnage.
Period of license.
Amount of license fee paid, Rs.
Number of passengers licensed to carry.
Class of license, 1st or 2nd class.
Place of Issue.
Date of Issue.

*Signature of Issuing Officer.*

*N.B.*—This license is to be shown on renewal.
2. Ten cubic feet of cargo is equivalent to one passenger.
3. The period of a six weeks' license includes the day of grant and of expiry.
4. *Vide* rules printed on the reverse.

| Renewal of license. | | Date of expiry of renewed license. | Signature of the officer who renews the license. |
|---|---|---|---|
| Place. | Date. | | |
| | | | |

*Record of suspension of license.*

| Period of suspension. | | Cause of suspension. | Place. | Date. | Signature of Canal officer ordering suspension. |
|---|---|---|---|---|---|
| From | To | | | | |
| | | | | | |

(*The above form to be printed on paper of foolscap size—annual licenses on white paper and six-week licenses on yellow paper.*)

6. *Counterpart of licenses.*—Every Canal officer empowered to grant licenses shall retain the counterpart of every license granted by him and shall be responsible that it corresponds to the license of which it is the counterpart. When an alteration is made in the license, a corresponding alteration shall be made in the counterpart thereof.

7. *Transfer of license for one year.*—If the ownership of a vessel licensed for one year is changed during the year for which the vessel is licensed, the officer who granted the license may, upon the application of the original owner and the transferee, alter the license by substituting the name of the latter for that of the former. But a license granted for one vessel shall not be transferred to another vessel.

8. *Licenses for one year.*—Every license for one year shall remain in force until the 31st March following the date of issue, unless it is cancelled or suspended as hereinafter provided.

28. *Regulation of traffic at wharves.*—The regulation of traffi at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice-board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

41. *Inspection of vessels other than steamers.*—The Canal officer in charge of a licensing station shall, from time to time, inspect all licensed vessels at such station to see if they are maintained in a proper state of repair and cleanliness and if their gear is in good condition, and may suspend the licenses if the vessels are out of repair or unsafe or otherwise unfit for public use or for the carriage of goods as the case may be. So long as a license is suspended, the vessel to which it relates shall not ply on any of the canals.

42. *Inspection of steamers.*—All steamers shall be inspected by the Canal officer before they are licensed and once every six months thereafter to see that the vessels and their machinery are in good working order, that the boilers are provided with proper gauges and are safe and that the vessels are in charge of a competent crew. Certificates of inspection shall be issued in Form G appended to these rules. In the event of such deterioration of machinery and boilers as may, in the opinion of the inspecting officer, cause danger, the license of the vessel shall be cancelled or suspended.

44. *Limit of Canal officers' powers.*—A canal officer may, on account of the infringement of any provision of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year ;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

48 *Circulation of rules* —A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.

50. *Place and time of repairs of vessels.*—No vessel shall be repaired in any canal without the written permission of the Canal officer. The repairs shall be made at the place and during the time named in the written permission, and at no other place or time. The owner of the vessel shall remove from the canal all surplus materials used for such repairs within fifteen days after the repairs are completed. In the event of his failing to do so, such materials shall be removed by the Canal officer at the expense of the owner of the vessel and the license may be suspended until payment is made.

6. *Counterpart of licenses* — Every Canal officer empowered to grant licenses shall retain the counterpart of every license granted by him and shall be responsible that it corresponds to the license of which it is the counterpart. When an alteration is made in the license, a corresponding alteration shall be made in the counterpart thereof.

7. *Transfer of license for one year.*—If the ownership of a vessel licensed for one year is changed during the year for which the vessel is licensed, the officer who granted the license may, upon the application of the original owner and the transferee, after the license by substituting the name of the latter for that of the former. But a license granted for one vessel shall not be transferred to another vessel.

8. *Licenses for one year.*—Every license for one year shall remain in force until the 31st March following the date of issue, unless it is cancelled or suspended as hereinafter provided.

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rule- framed in that behalf and approved by Government. Such rules shall be fixed to a notice-board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

41. *Inspection of vessels other than steamers.*—The Canal officer in charge of a licensing station shall, from time to time, inspect all licensed vessels at such station to see if they are maintained in a proper state of repair and cleanliness and if their gear is in good condition, and may suspend the licenses if the vessels are out of repair or unsafe or otherwise unfit for public use or for the carriage of goods as the case may be. So long as a license is suspended, the vessel to which it relates shall not ply on any of the canals.

42. *Inspection of steamers.*—All steamers shall be inspected by the Canal officer before they are licensed and once every six months thereafter to see that the vessels and their machinery are in good working order, that the boilers are provided with proper gauges and are safe and that the vessels are in charge of a competent crew. Certificates of inspection shall be issued in Form G appended to these rules. In the event of such deterioration of machinery and boilers as may, in the opinion of the inspecting officer, cause danger, the license of the vessel shall be cancelled or suspended.

44. *Limit of Canal officers' powers.*—A Canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for second offence in the same year,
sixty days for a third offence in the same year ;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession a copy of the navigation rules and navigations.

50. *Place and time of repairs of vessels.*—No vessel shall be repaired in any canal without the written permission of the Canal officer. The repairs shall be made at the place and during the time named in the written permission, and at no other place or time. The owner of the vessel shall remove from the canal all surplus materials used for such repairs within fifteen days after the repairs are completed. In the event of his failing to do so, such materials shall be removed by the Canal officer at the expense of the owner of the vessel and the license may be suspended until payment is made.



FORM B. (*Vide* Rule 17.)

*Pass for vessel for which the license has been lost.*

This pass is granted to permit the vessel noted below to navigate the canal without license, as it is reported that the license has been lost. The fee prescribed for issuing duplicate license has been paid :—

Number of vessel.

Description of vessel.

Place and date of license.

Name of owner.

Residence of owner.

Fees paid, Rs.

Date of Issue.

Place of Issue.

*Signature of Issuing Officer.*

(*The above form to be printed on green paper of ¼ foolscap size.*)

FORM B. (*Vide* Rule 17.)

*Pass for vessel for which the license has been lost.*

This pass is granted to permit the vessel noted below to navigate the canal without license, as it is reported that the license has been lost. The fee prescribed for issuing duplicate license has been paid :—

Number of vessel.

Description of vessel.

Place and date of license.

Name of owner.

Residence of owner.

Fees paid, Rs.

Date of Issue.

Place of Issue.

*Signature of Issuing Officer.*

(*The above form to be printed on green paper of ¼ foolscap size.*)

FORM C. (*Vide* Rule 18.)

*License for rafts.*

This license is granted to permit the raft noted below to navigate the canal according to the rules passed under Act II of 1890 :—

Number of license.
Description of raft.
Dimensions ... { Length, feet. / Breadth, feet.
Superficial area, square feet.
Number of units of 100 square feet or fraction thereof.
Amount of fees paid, Rs.
Date of expiration of the license.
Rates of fees per unit.

| | Timber or timber and bamboos. | | Bamboos. | |
|---|---|---|---|---|
| | RS. | A. | RS. | A. |
| Gódávari, Kistna and Buckingham canals .. | 1 | 0 | 0 | 8 |
| Dumagudiem or Védáranniyam canal ... | 0 | 4 | 0 | 2 |

Rafts not to exceed 90 feet in length, 12 feet in breadth and 2 feet draught.

Place of Issue.
Date of Issue.

*Signature of Issuing Officer.*

*N.B.*—This license is to be shown on renewal.

| Renewal. | | Date of expiry. | Signature of the officer who renews the license. |
|---|---|---|---|
| Place. | Date. | | |
| | | | |

(*The above form to be printed on white paper of ½ foolscap size.*)

FORM C. (*Vide* Rule 18.)

*License for rafts.*

This license is granted to permit the raft noted below to navigate the canal according to the rules passed under Act II of 1890 :—

Number of license.
Description of raft.
Dimensions ... { Length, feet. / Breadth, feet.
Superficial area, square feet.
Number of units of 100 square feet or fraction thereof.
Amount of fees paid, Rs.
Date of expiration of the license.
Rates of fees per unit.

| | Timber or timber and bamboos. | | Bamboos. | |
|---|---|---|---|---|
| | RS. | A. | RS. | A. |
| Gódávari, Kistna and Buckingham canals . | 1 | 0 | 0 | 8 |
| Dumagudiem or Védáranniyam canal ... | 0 | 4 | 0 | 2 |

Rafts not to exceed 90 feet in length, 12 feet in breadth and 2 feet draught.

Place of Issue.
Date of Issue.

*Signature of Issuing Officer.*

*N.B.*—This license is to be shown on renewal.

| Renewal. | | Date of expiry. | Signature of the officer who renews the license. |
|---|---|---|---|
| Place. | Date. | | |
| | | | |

(*The above form to be printed on white paper of ½ foolscap size.*)

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

44. *Limit of Canal officers' powers.*—A canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

46. *Punishment of owners of rafts.*—Owners of rafts shall, in lieu of suspension, be punished by a fine of two rupees for each offence, until payment of which the raft shall not proceed. If the fine is not paid within ten days, the canal officer concerned is empowered to cause the raft to be removed from the canal.

47. *Marks and figures to be painted on vessels.*—The owners of vessels other than rafts shall have the following figures and marks painted conspicuously on their vessels before using them on any of the canals and shall be responsible that those marks and figures are not defaced or obliterated :—

(1) The number of the license or certificate of registration and the initial or initials of the name or names of the canals which a vessel is licensed to navigate shall be painted on each bow.
(2) The tonnage of the vessel shall be similarly painted on each side of the sternpost above the load line.
(3) The number of passengers which the vessel is licensed to carry, on the stern of each such vessel or on the after-part of the cabin with the letter P prefixed.
(4) The load line for a length of 3 feet amidships, on both sides.

The said numerals and letters shall be in English and shall be painted in white on a black ground or black on a white ground. Each numeral or letter shall be not less than 4 inches in length and of proportionate breadth.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

44. *Limit of Canal officers' powers.*—A canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

46. *Punishment of owners of rafts.*—Owners of rafts shall, in lieu of suspension, be punished by a fine of two rupees for each offence, until payment of which the raft shall not proceed. If the fine is not paid within ten days, the canal officer concerned is empowered to cause the raft to be removed from the canal.

47. *Marks and figures to be painted on vessels.*—The owners of vessels other than rafts shall have the following figures and marks painted conspicuously on their vessels before using them on any of the canals and shall be responsible that those marks and figures are not defaced or obliterated :—

(1) The number of the license or certificate of registration and the initial or initials of the name or names of the canals which a vessel is licensed to navigate shall be painted on each bow.
(2) The tonnage of the vessel shall be similarly painted on each side of the sternpost above the load line.
(3) The number of passengers which the vessel is licensed to carry, on the stern of each such vessel or on the after-part of the cabin with the letter P prefixed.
(4) The load line for a length of 3 feet amidships, on both sides.

The said numerals and letters shall be in English and shall be painted in white on a black ground or black on a white ground. Each numeral or letter shall be not less than 4 inches in length and of proportionate breadth.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.



FORM D. (*Vide* Rule 19.)

*Certificate of Registration for vessels intended for personal use of the owners.*

The vessel noted below is registered in accordance with the rules passed under Act II of 1890 to use the canal, but not to carry goods, animals or passengers for purposes of trade :—

Number.
Name of owner.
Residence of owner.
Description of vessel.
Vessel built at
Year in which vessel was built.
Amount of fee paid, Rs.
Period of registration.
Date of expiration of the period of registration.
Place of Issue.
Date of Issue.

*Signature of Issuing Officer.*

*N.B.*—This certificate is to be shown on renewal.

| Renewal. | | Date of expiry. | Signature of the officer renewing the certificate. |
|---|---|---|---|
| Place. | Date. | | |
| | | | |

(*The above form to be printed on paper of ½ foolscap size—annual certificates on white paper and six-week certificates on yellow paper.*)

*Record of suspension of the Certificate of Registration.*

| Period of suspension. | | Cause of suspension. | Place. | Date. | Signature of the Canal officer ordering the suspension. |
|---|---|---|---|---|---|
| From | To | | | | |
| | | | | | |

FORM D. (*Vide* Rule 19.)

*Certificate of Registration for vessels intended for personal use of the owners.*

The vessel noted below is registered in accordance with the rules passed under Act II of 1890 to use the canal, but not to carry goods, animals or passengers for purposes of trade :—

Number.
Name of owner.
Residence of owner.
Description of vessel.
Vessel built at
Year in which vessel was built.
Amount of fee paid, Rs.
Period of registration.
Date of expiration of the period of registration.
Place of Issue.
Date of Issue.

*Signature of Issuing Officer.*

*N.B.*—This certificate is to be shown on renewal.

| Renewal. | | Date of expiry. | Signature of the officer renewing the certificate. |
|---|---|---|---|
| Place. | Date. | | |
| | | | |

(*The above form to be printed on paper of ½ foolscap size—annual certificates on white paper and six-week certificates on yellow paper.*)

*Record of suspension of the Certificate of Registration.*

| Period of suspension. | | Cause of suspenison. | Place. | Date. | Signature of the Canal officer ordering the suspension. |
|---|---|---|---|---|---|
| From | To | | | | |
| | | | | | |

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice-board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

41. *Inspection of vessels other than steamers.*—The Canal officer in charge of a licensing station shall, from time to time, inspect all licensed vessels at such station to see if they are maintained in a proper state of repair and cleanliness and if their gear is in good condition, and may suspend the licenses if the vessels are out of repair or unsafe or otherwise unfit for public use or for the carriage of goods as the case may be. So long as a license is suspended, the vessel to which it relates shall not ply on any of the canals.

42. *Inspection of steamers.*—All steamers shall be inspected by the Canal officer before they are licensed and once every six months thereafter to see that the vessels and their machinery are in good working order, that the boilers are provided with proper gauges and are safe and that the vessels are in charge of a competent crew. Certificates of inspection shall be issued in Form G appended to these rules. In the event of such deterioration of machinery and boilers as may, in the opinion of the inspecting officer, cause danger, the license of the vessel shall be cancelled or suspended.

44 *Limit of Canal officers' powers.*—A Canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.

49. *Mooring of vessels.*—No vessels shall moor within the limits prohibited by notice-boards at any lock or masonry work or on the tow-path side, if there be only one such path, or on the windward side of a canal, if there be two such paths, except when actually loading or unloading. Vessels when moored shall strike or lower masts and shall be made fast stem and stern to the bank in a single line. Rafts when moored shall be securely fastened at both ends to the canal bank and so as not to obstruct navigation.

50. *Place and time of repairs of vessels.*—No vessel shall be repaired in any canal without the written permission of the Canal officer. The repairs shall be made at the place and during the time named in the written permission, and at no other place or time. The owner of the vessel shall remove from the canal all surplus materials used for such repairs within fifteen days after the repairs are completed. In the event of his failing to do so, such materials shall be removed by the Canal officer at the expense of the owner of the vessel and the license may be suspended until payment is made.

28. *Regulation of traffic at wharves.*—The regulation of traffic at wharves shall be according to the rules framed in that behalf and approved by Government. Such rules shall be fixed to a notice-board in a conspicuous place at each end of the wharf and any infringement thereof shall be punished by suspension of the license of the vessel contravening the rule or rules for a period not exceeding three months.

41. *Inspection of vessels other than steamers.*—The Canal officer in charge of a licensing station shall, from time to time, inspect all licensed vessels at such station to see if they are maintained in a proper state of repair and cleanliness and if their gear is in good condition, and may suspend the licenses if the vessels are out of repair or unsafe or otherwise unfit for public use or for the carriage of goods as the case may be. So long as a license is suspended, the vessel to which it relates shall not ply on any of the canals.

42. *Inspection of steamers.*—All steamers shall be inspected by the Canal officer before they are licensed and once every six months thereafter to see that the vessels and their machinery are in good working order, that the boilers are provided with proper gauges and are safe and that the vessels are in charge of a competent crew. Certificates of inspection shall be issued in Form G appended to these rules. In the event of such deterioration of machinery and boilers as may, in the opinion of the inspecting officer, cause danger, the license of the vessel shall be cancelled or suspended.

44. *Limit of Canal officers' powers.*—A Canal officer may, on account of the infringement of any provisions of the Act or any of the rules and regulations passed under it, suspend the annual license of a vessel for not more than—

fifteen days for a first offence,
thirty days for a second offence in the same year,
sixty days for a third offence in the same year;

and for the unexpired portion of the license for a fourth offence in the same year. He may suspend the six weeks' license for not more than fifteen days for a first offence and for the unexpired portion of the license for a second offence in the same year.

48. *Circulation of rules.*—A copy of the navigation rules and regulations in English or in the vernacular shall, at the time of registration or taking out a license for every vessel other than a raft, be given to the owner or person in charge thereof, if he has not already got one, and his signature taken in the register of licenses in token that he has received, or has already in his possession, a copy of the navigation rules and regulations.

49. *Mooring of vessels.*—No vessels shall moor within the limits prohibited by notice-boards at any lock or masonry work or on the tow-path side, if there be only one such path, or on the windward side of a canal, if there be two such paths, except when actually loading or unloading. Vessels when moored shall strike or lower masts and shall be made fast stem and stern to the bank in a single line. Rafts when moored shall be securely fastened at both ends to the canal bank and so as not to obstruct navigation.

50. *Place and time of repairs of vessels.*—No vessel shall be repaired in any canal without the written permission of the Canal officer. The repairs shall be made at the place and during the time named in the written permission, and at no other place or time. The owner of the vessel shall remove from the canal all surplus materials used for such repairs within fifteen days after the repairs are completed. In the event of his failing to do so, such materials shall be removed by the Canal officer at the expense of the owner of the vessel and the license may be suspended until payment is made.

FORM E. (*Vide* Rule 24.)

*Certificate of Registration for vessels free of charge.*

The vessel noted below is registered in accordance with the rules passed under Act II of 1890 to use the canal without payment of any fee, but not to carry any goods, animals or passengers for purposes of trade:—

Number.

Name of owner.

Residence of owner.

Description of vessel.

Vessel built at

Year in which vessel was built.

Canals to be used.

Place of Issue.

Date of Issue.

*Signature of Issuing Officer.*

(*The above form to be printed on red paper of ¼ foolscap size.*)

FORM E. (*Vide* Rule 24.)

*Certificate of Registration for vessels free of charge.*

The vessel noted below is registered in accordance with the rules passed under Act II of 1890 to use the canal without payment of any fee, but not to carry any goods, animals or passengers for purposes of trade:—

Number.

Name of owner.

Residence of owner.

Description of vessel.

Vessel built at

Year in which vessel was built.

Canals to be used.

Place of Issue.

Date of Issue.

*Signature of Issuing Officer.*

(*The above form to be printed on red paper of ¼ foolscap size.*)

FORM F. (*Vide* Rule 29.)

| Original. No. | Duplicate. No. | Triplicate. No. |
|---|---|---|
| WHARF CLEARANCE TICKET. | WHARF CLEARANCE TICKET. | WHARF CLEARANCE TICKET. |
| Station. | Station. | Station. |
| Boat No. of Tons. | Boat No. of Tons. | Boat No. of Tons. |
| Description of Cargo. | Description of Cargo. | Description of Cargo. |
| Amount of wharfage fees received. RS. A. P. | Amount of wharfage fees received. RS. A. P. | Amount of wharfage fees received. RS. A. P. |
| DATE *Wharf Clerk.* | DATE *Wharf Clerk.* | DATE *Wharf Clerk.* |

(*The above form to be printed on white paper of ½ foolscap size.*)

## FORM G. (*Vide* Rule 42.)

*Inspection Certificate.*

The steam vessel bearing No. of has been inspected in accordance with paragraph 42 of the rules passed under Act II of 1890 and is passed for navigation on canal for a period of six months from this date subject to the conditions noted below :—

Station.

Date.

*Signature of Inspecting Officer.*

*N.B.*—This certificate must be carried on the steamer and produced when called for by a Canal officer.

(*The above form to be printed on white paper of ½ foolscap size.*)

## FORM H. (*Vide* Rule 45.)

*Pass for vessels, the licenses of which are suspended, to proceed to their destination or place of repair.*

This pass is granted to permit the vessel noted below to proceed to its destination or place of repair, its license having been suspended :—

Number of vessel.

Place and date of license.

Name of owner.

Residence of owner.

Period of suspension.

Number of rule infringed.

Place of destination.

Lock or wharf where suspension should take effect.

Place.

Date.

*Signature of Canal Officer.*

(*The above form to be printed on green paper of ½ foolscap size.*)

FORM H. (*Vide* Rule 45.)

*Pass for vessels, the licenses of which are suspended, to proceed to their destination or place of repair.*

This pass is granted to permit the vessel noted below to proceed to its destination or place of repair, its license having been suspended :—

Number of vessel.

Place and date of license.

Name of owner.

Residence of owner.

Period of suspension.

Number of rule infringed.

Place of destination.

Lock or wharf where suspension should take effect.

Place.

Date.

*Signature of Canal Officer.*

(*The above form to be printed on green paper of ½ foolscap size.*)

## NOTIFICATION.

Under section 6 of Madras Act II of 1890 (An Act to make better provision for the establishment of canals and public Ferries in the Presidency of Madras and for the management thereof), His Excellency the Governor in Council is pleased to declare that in supersession of the existing rates of fees, the following rates of fees for the licensing or registration of vessels for wharfage or demurrage on vessels or goods detained within the limits of the wharves shall, on and after 15th May 1898, be in force on the lines of navigation defined in the margin.

The Dumagudiem canal, Gódávari district.
The Gódávari canals consisting of the artificial navigable channels and such portions of the natural waterways as are necessary for navigation between them in the Gódávari district, south and east of Rajahmundry.
The Kistna canals consisting of the artificial navigable channels and such portions of the natural waterways as are necessary for navigation between them in the Kistna district.
The Buckingham canal consisting of the artificial reaches of the canal and such portions of the rivers, backwaters and estuaries connected with it as are necessary for navigation between the reaches, in the Nellore, Chingleput and South Arcot districts and Madras town.
The Védáranniyam canal in the Tanjore district.

### FEES FOR LICENSING.

*For the three lines of Navigation, the Gódávari, Kistna and Buckingham Canals.*

| | Annual. Rs. | A. | P. | Six weeks. Rs. | A. | P. |
|---|---|---|---|---|---|---|
| Steamers per ton of registered tonnage ... | 15 | 0 | 0 | 3 | 0 | 0 |
| Open cargo boats do. do. ... | 3 | 0 | 0 | 0 | 10 | 0 |
| Passenger boats, 1st class, do. ... | 6 | 0 | 0 | 1 | 4 | 0 |
| Passenger boats, 2nd class, and decked cargo boats, per ton of registered tonnage ... ... | 4 | 0 | 0 | 0 | 13 | 0 |
| Rafts of timber or of timber and bamboos per 100 square feet or fraction thereof ... ... | ... | | | 1 | 0 | 0 |
| Rafts of bamboos per 100 square feet or fraction thereof ... ... ... ... ... | ... | | | 0 | 8 | 0 |

*For either of the two lines of Navigation, the Dumagudiem and Védáranniyam Canals.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Boats per ton of registered tonnage ... ... | 1 | 0 | 0 | 0 | 3 | 0 |
| Rafts of timber or of timber and bamboos per 100 square feet or fraction thereof ... ... | ... | | | 0 | 4 | 0 |
| Rafts of bamboos ... ... ... | ... | | | 0 | 2 | 0 |
| Duplicate license for any line or lines of Navigation, if original license be lost ... | 2 | 0 | 0 | 0 | 4 | 0 |

### FEES FOR REGISTRATION.

*For the three lines of Navigation, the Gódávari, Kistna and Buckingham Canals.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Steamers, each ... ... ... ... ... | 60 | 0 | 0 | 12 | 0 | 0 |
| Private boats for owner's personal use, each ... | 24 | 0 | 0 | 4 | 8 | 0 |
| Pleasure boats, each ... ... ... | 2 | 0 | 0 | 0 | 6 | 0 |
| Duplicate certificate, if original be lost, each ... | 0 | 8 | 0 | 0 | 2 | 0 |

*For either of the two lines of Navigation, the Dumagudiem and Vedaranniyam Canals.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Steamers, each ... ... ... ... ... | 30 | 0 | 0 | 6 | 0 | 0 |
| Private boats for owner's personal use, each ... | 12 | 0 | 0 | 2 | 4 | 0 |
| Pleasure boats, each ... ... ... ... | 1 | 0 | 0 | 0 | 3 | 0 |
| Duplicate certificate, if original be lost, each ... | 0 | 4 | 0 | 0 | 1 | 0 |

### WHARFAGE FEES.

| | | | | | | |
|---|---|---|---|---|---|---|
| Every vessel which loads or discharges at any wharf per ton of registered tonnage ... ... ... ... ... | | | | 0 | 1 | 0 |
| Fees for using the places reserved at wharves for test-measuring or test-weighing goods per boat per diem ... | | | | 1 | 0 | 0 |

| DEMURRAGE FEES. | Six weeks. RS. A. P. |
|---|---|
| Vessels remaining at any of the wharves for more than seven days per ton of registered tonnage for every day or portion thereof ... ... ... ... ... .. ... | 0 1 0 |
| Goods remaining at any of the wharves for more than seven days per 100 square feet, or portion thereof, of space occupied by the goods per day ... ... ... ... | 0 1 0 |

2. Licenses and certificates of registration shall be issued at the following places:—

| Lines of navigation. | Places where annual licenses and certificates of registration shall be issued. | Places where six weeks' licenses and certificates of registration shall be issued. |
|---|---|---|
| The Dumagudiem canal ... ... | Dumagudiem ... ... | Dumagudiem lock. |
| The Gódávari canals ... ... | Dowlaishweram ... ... | Dowlaishweram do.<br>Bobberlanka do.<br>Vijeswaram do.<br>Ellore do.<br>All tidal locks. |
| The Kistna canals ... ... ... | Bezwada ... ... ... | Bezwada lock.<br>Seetanagaram do.<br>All tidal locks.<br>All wharves. |
| The Buckingham canal ... ... | Madras Boat basin ... | Madras boat basin.<br>All tidal locks.<br>All wharves. |
| The Védáranniyam canal ... ... | Negapatam ... ... | Negapatam. |

A list of the stations in each division shall be affixed to a notice board in a conspicuous place at each station in that division.

3. Wharfage and demurrage fees shall be levied at the following wharves:—

| | |
|---|---|
| The Kistna canals ... ... ... ... | Palakole.<br>Bezwada.<br>Pamarru.<br>Chintaguntapalem basin.<br>Ellore.<br>Seetanagaram.<br>Chebrole.<br>Santaravur.<br>Nandivelugu.<br>Tenali.<br>Tsandole.<br>Vellatur.<br>Romperu Lock. |
| The Buckingham canal ... ... ... | Kottapatnam.<br>Woollapolliem.<br>Iskapalli.<br>Mypaud.<br>Muthukur.<br>Madras Boat basin.<br>Madras Elephant Gate.<br>Madras Trevelyan wharf.<br>Chintadripett.<br>Barber's Bridge.<br>Mylapore.<br>Papanchavady. |



ORDER—No. 319 I., dated 18th April 1898.

The Government, after considering all the objections urged against the draft rules and notification published with G.O., No. 162 I., dated 15th February 1897, resolves to accept the amendments proposed by the Chief Engineer for Irrigation. The amended rules and notification will have effect from the 15th May 1898 and will be published in the *Fort St. George Gazette* and Gazettes of the districts concerned.

(True Extract.)

Under Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Consulting Engineer for Railways.
" Examiner, Public Works Accounts.
" Superintending Engineer, I Circle.
" " " II "
" " " III "
" " " V "
" "
" Revenue Department.
" Local and Municipal Department.
" Judicial Department.
" Legislative Department.
" Advocate-General.
" Superintendent, Government Press, with rules and notification.

Exd. A. F. Eccleston.

*When given for copying* _____
*When copied* _____
*When examined* _____ } 189 .
*When signed* _____

READ AGAIN G.O., No. DATED
189 , ,

CURRENT No.

ENCLOSURES TO C. No.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ORDER OF GOVERNMENT | .. | .. | .. | A | A | A | A | A | A | A |
| LETTER OF GOVERNMENT. | | | | | | | | | | |
| STATEMENT WITH DITTO. | | | | | | | | | | |
| PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL. | | | | | | | | | | |

*N. B.*—

A = Copy in full.
B = Not to be copied.
P = Copy abstract only.
Q = Copy heading only.