No. 196. Read the following Proceedings of the Board of Revenue, dated 27th August 1873, No. 1,671 :—

Read the following letter from J. HOPE, Esq., Acting Collector of Kurnool, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 18th July 1873, No. 212 :—

WITH reference to the Order of Government, dated 14th May 1873, No. 87, communicated with Board's Proceedings, No. 3,125, dated 21st idem, I have the honour to forward copy of a letter from the Deputy Collector on Special Duty explaining the cause of the delay in making over the lands required for reticulation channels at Karimaddula and other villages in the Nandial and Nandikotkur Taluqs. On the 22nd of last month I visited Karimaddula with Mr. Latham and found that a great portion of the land required had already been transferred to the Company in anticipation of the usual compensation being paid in due course. The reticulation is not carried on in the remaining villages at present.

2. The chief objection raised by the ryots appears to be not so much to giving up the land required as to the number of small channels that are being dug "in all possible directions," extending more than thirty-five miles in Karimaddula alone. In one of their Proceedings I believe that the Board expressed an opinion that these field-channels, or five-links channels, as Mr. Latham calls them, should be constructed as the necessity arises. In Karimaddula the people generally are unwilling to make use of the canal water, alleging that the soil, which consists principally of the regar series, is unsuited for wet cultivation.

3. Mr. Latham, however, contends that, as the Company are bound, under the contract, to deliver the water on the field, the requisite number of channels should be completed at once for all the villages commanded by the canal, or he thinks cultivation will suffer and "it would be beyond human power to prevent a famine should an absolute dearth occur." I think both these difficulties might be met if a sufficient number of the ten-links branch channels he proposes are constructed in each village, carried to different commanding points, from which the lands on either side may be easily reached. When these are completed the field-channels might be made without difficulty whenever applications are received, or, as I suggested to Mr. Latham, the Special Deputy Collector and an officer of the Company might go down the canal visiting each village two or three months before the cultivation season and ascertain by personal inquiry how much new land will be cultivated that season and whether any new channels are required. If they are the Deputy Collector can at once make over the land required, leaving the compensation to be settled afterwards, when the necessary measurements, etc., are taken. Irrigation is still in its infancy, and the people are yet slow to appreciate its advantages. Even in the first two sections, where the ryots have had the longest experience of the canal, there seems to be no indication of any great increase in the wet cultivation; there can, therefore, I submit, be no urgent necessity at present for constructing such a net-work of channels as is contemplated by Mr. Latham. They must remain, to a great extent, unused for several years to come, and the result will probably be that these little channels will be soon ploughed up or the rains will cause them to disappear.

4. Another point demanding consideration is the difficulty of controlling the water once it is let into the reticulation channels, and the Deputy Collector in his letter represents the ryots as being very apprehensive on this score. However, Mr. Latham seems to be confident as to his power of controlling the water, and, as he proposes to confine his experiment this year to Karimaddula and Peramatur, perhaps it will be well to await the results of the experiment.

5. I enclose copies of the correspondence that has passed between Mr. Latham and myself on this subject for the Board's information.

ENCLOSURE No. 1.

From A. RAMACHENDER ROW, Deputy Collector, to J. HOPE, Esq., Acting Collector of Kurnool, dated Nandial, 5th June 1873, No. 66.

ADVERTING to your endorsement, No. 127, dated the 27th ultimo, at the foot of Board's Proceedings, Miscellaneous No. 3,125, dated the 21st idem, communicating the Proceedings of Government in the Irrigation Department, No. 1,218, dated 29th April last, with the Order of Government thereon in the Revenue Department, No. 87, dated the 14th ultimo, I have the honour to submit the following report.

2. In the Proceedings above quoted the Government review the remarks of the Chief Engineer for Irrigation on a letter addressed to him by the Company's Chief Engineer, No. 13, dated the 19th March last, in which the difficulties and delays in the acquisition of lands for reticulation channels are adverted to, and the Government solicited to adopt measures for removing them.

3. The Government inquire whether arrangements cannot be made for facilitating the construction of field-channels by obtaining the concurrence of the villagers to their channels being executed as soon as they have been laid out and in anticipation of the regular acquisition of the land, the claims to compensation being adjusted as soon as possible.

4. In order to the clear exposition of the difficulties in the execution of these channels it is necessary for me to enter into some details as to the different kinds of the channels and of the feelings of the ryots in regard to each of them, for it is not simply the want of assurance of eventual payment of compensation by Government for lands taken up for these channels that operates against their speedy execution but considerations of greater importance influence their excavation, viz., the liabilities of the ryots to be charged with water-rates by the Company on the alleged ground that the water was taken for ordinary irrigation or floodings, in some cases surreptitiously, while in reality some of the ryots are unwilling to take the canal water either from stubbornness or prejudices, which time alone could eradicate, while others do not take them from sheer want of capital to raise a wet crop.

5. In his letter published in the Government Order under reference the Company's Chief Engineer has given the details as regards the plans and schedules sent by him to this office for reticulation channels in ten villages up to the date of his letter. Further plans for similar channels in seven villages have since been received. If the principle in regard to one set of plans is explained the same will hold good for the remainder. It will be seen from the table given by the Chief Engineer that the channels are classified into those of five-links, ten-links, and minor channels. The width of the last-named class vary, as shown in the margin.

15 Links.	40 Links.
25 do.	70 do.
30 do.	

6. The ryots raise no objection to the excavation of the channels of the two last-named classes, inasmuch as they pass through portions of the village and affect them only *as a body* and do not interfere with their *individual* interests. They object, however, to the five-link channels being made, as their excavation in their fields in all possible directions compels them to take water for their fields either for floodings or ordinary irrigation irrespective of their feelings or means, and where, as in some cases, they persistently refuse to take any water, notwithstanding its close proximity, a claim for flooding-rate or water-rate is very often set up by the Company's Overseers alleging that the leakage from the channel had the effect of rendering the dry crops more luxuriant and abundant, or that the coarse paddy (Mullavari or Elladapuvari), which for years had been raised by the falling rains, had been benefitted by it. The ryots ask, "Why don't you leave us to ourselves and give us water when we want? Let the water be led through our village, and whenever we want it we will ask you to cut the field-channels, or, if permitted, will cut them ourselves, and we will not ask you for any compensation for the land thus taken up." These field-channels refer to the five-link channels. The excavation of these channels, in anticipation of sanction, is productive of much confusion and trouble in the settlement

Proceedings of the Madras Government, Revenue Department, 22nd October 1873.

of claims of water-rates at the close of each year, and it was after a careful and patient discussion with the ryots and an inspection of the channels experimentally* made at Karimaddula that I communicated this opinion to the Company's Chief Engineer, and the matter has not been as yet finally settled by that gentleman. He has promised† to communicate with you on the subject.

* To Chief Engineer, No. 46, dated 7th April 1873.

† From Chief Engineer, No. 32, dated 14th April 1873, paragraph 5.

7. The novelty of the reticulation system, the dread on the part of the ryots of being rendered liable to water-rates, and their unwillingness in other instances to raise a wet crop, rendered my personal inspection of the village (Karimaddula), where these channels were excavated experimentally, a necessary preliminary step before a general permission could be awarded to the Company's officers for carrying out the work in the other villages. This view has been approved of by the Chief Engineer himself. He observes‡ thus: "I suggest that one village be tried before the breadth of land taken up is increased, after seeing which you will be well able to judge whether more be needed." This inspection was deferred to the 27th March last owing to my being engaged in the jummahbundy of the Nandial and Sirwell Taluqs and in the superintendence of the sanitary arrangements at the annual festivals at Mahanandy and Ahobalam. Besides this there was a long correspondence between myself and the Chief Engineer about the course that the reticulation channels should take with reference to the field boundaries. It was at first suggested that the field-stones be removed and placed at a certain fixed distance from the channel. To this, however, I objected on the ground that the accounts of the areas, as recorded by the Revenue Settlement Department, would have to be altered and a great confusion introduced in the entire system of accounts. Furthermore, the five and the ten-link channels were found on actual inspection in the experimental village§ to occupy a greater breadth of land than shown in the plans. This has been represented to the Chief Engineer with some suggestions, and his final decision has been again solicited. I beg to enclose copy of this portion of the correspondence as it will show some of the difficulties in settling this subject satisfactorily to all parties.

‡ From Chief Engineer, No. —, dated 25th February 1873.

§ Karimaddula.

1. To Chief Engineer, No. 46, dated 7th April 1873.
2. From ,, ,, 32, ,, 14th ,, ,,
3. To ,, ,, 65, ,, 3rd instant.

8. The foregoing will explain how the delay so much complained‖ of by the Chief Engineer has transpired. In paragraph 3 he observes thus: "In fact, it is now evident that no ryot of ordinary understanding will apply for water until a channel has been made to his field, and if he have a channel he is very likely to irrigate." I have shown in the preceding paragraphs that such, however, is not the feeling of the ryot; on the contrary, it is this very kind of channel that he is averse to consent to until he makes up his mind to take the water. The villagers of Karimaddula loudly objected to it, and did not yield until I personally explained to them the views of the Company.

‖ Paragraph 1.

9. As for the work to be given to the bankers alluded to by the Chief Engineer there is ample field for them. In the months noted in the margin I submitted the applications of twelve villages for new channels, and all these have been in time for the work being executed before the close of this dry weather and the commencement of the cultivation season. I have alluded to this subject verbally to the Chief Engineer when we were engaged in the settlement of the water-rates at Nandikotkur last month.

Paragraph 6.
July and August 1872.

10. It will be observed from the latter portion of my letter, No. 65, of the 3rd instant (copy of which forms part of the enclosures), that I have granted the required permission to excavate the non-objectionable channels (ten-link and minor channels), in anticipation of formal sanction, on the spirit of the instructions conveyed in your docket, No. 320, dated 8th April last. But where

private claims and interests are likely to be compromised by the grant of an indiscriminate permission to excavate the field-channels I have hesitated to take immediate action and solicited the reconsideration of the matter by the Chief Engineer.

(True Copy.)

(Signed) J. HOPE,
Acting Collector.

ENCLOSURE No. 2.

From J. HOPE, Esq., Acting Collector of Kurnool, to J. H. LATHAM, Esq., Chief Engineer of the Madras Irrigation and Canal Company, dated 3rd July 1873, No. 658.

WITH reference to the correspondence noted in the margin I have the honour to request you will be so good as to inform me what extent of land is likely to be irrigated this season in each of the ten villages where you propose making reticulation channels, and whether the excavation of the five-links (field) channels in all the villages except Karimaddula and Peramatur may not be advantageously postponed till the actual necessity arises, or, at least, till the result of the experiment in the two villages is known.

Nandial Deputy Collector's letters to you, Nos. 46 and 65, dated 7th April and 3rd May 1873.
Your letter to him, No. 32, dated 14th April 1873.
G. O., No. 87, dated 14th May 1873, communicated in Board's Proceedings, Miscellaneous No. 3,125, of the 21st May 1873.
My letter, No. 544, of the 7th June 1873, and your reply, dated 7th June, No. 33.
My letter, No. 586, of the 16th June 1873, and your reply, dated 17th June 1873, No. 31.

2. Considering the small extent of land irrigated during the past years it seems to me that all that is really required for the present is a sufficient number of the ten-links channels, as you call them, carried to different commanding points from which the lands on either side can be easily irrigated. When this is done I think the field-channels can be made without difficulty whenever fresh applications are received for irrigation. To effect this with the least possible delay the Deputy Collector and an officer of the Company might go down the canal and visit all the villages on the line two or three months before the cultivation season and ascertain by personal inquiry if new lands will be taken up for wet cultivation during the year and whether any field-channels will be required for them. If they are, permission might at once be given by the Deputy Collector to excavate them without delay. This course I consider would be better than making these channels all at once, even where not required, because they will probably be either ploughed up or the rain will cause them to disappear.

3. There is one other point on which I wish to have clear and definite information, viz., whether the Company can control their water once it is let into the reticulation channels. In your letter, No. 31, dated 17th June 1873, you stated that the object of these channels "is not to drench all fields but to avoid the possibility of the Company's water getting anywhere without human agency." But if it is intended "to bring a channel into contact with every field or nearly so" and thus construct more than thirty-five miles of channel in one single village, I do not see how you can practically prevent the water from overflowing unless you provide proper means for carrying off the surplus water and also employ a sufficient number of bankers and overseers to regulate the supply and distribution of water not only at the sluices but also at the more important branch channels. As the field-channels are intended to irrigate I do not understand how they can be constructed so as to carry the water "in all cases" "below the level of the ground;" but, even if they are, there is nothing to prevent them from overflowing during the rains, when the water in the channels will be greatly augmented by the drainage of the surrounding fields.

4. An early answer is solicited.

(True Copy.)

(Signed) J. HOPE,
Acting Collector.

Proceedings of the Madras Government, Revenue Department,
22nd October 1873.

ENCLOSURE No. 3.

From J. H. LATHAM, Esq., Chief Engineer and Manager of the Madras Irrigation and Canal Company, to J. HOPE, Esq., Acting Collector of Kurnool, dated Pagadyela, 5th July 1873, No. 39.

Reticulation.

YOUR No. 658 of 3rd instant.

I have the honour to inform you, in reply to your letter, that it will now occupy my staff fully to construct, in time to be of any use this season,

(1.) The complete reticulation of Karimaddula and Peramatur, to reach all survey numbers.

(2.) The channels of ten-link breadth of waterway (on the surface) carried to different commanding points from which the lands on either side can be irrigated easily, by "easily" meaning by five-link field-channels of not over one-quarter mile length in all villages.

(3.) The five-link field-channels necessary to supply demand made after application. In the construction of the above I hope to have your support, and I can but be satisfied on behalf of the canal if I be permitted to do all that I possess the means to do.

2. As to the likelihood of irrigation, I still believe that thousands of acres more would be taken up were the canal properly managed. When the mass of leading men in this country, after their opinions have been fairly asked and, as it were, the show of hands taken by the presiding body, impartially enough, have clearly and strongly expressed the opinion I hold—even Mr. Sim expressing it in a despatch to the Secretary of State quite recently—it seems to be no business of ours to question it *until it has been disproved by facts.* We cannot go before Government and ask them to reverse the opinion they gave, after full deliberation, to the Secretary of State and persisted in up to 1871, and to advocate giving in and relinquishing the completion of the water-supply on the ground that it is not likely to answer.

3. The men who first advocated the scheme, and especially the Collectors and Members of the Revenue Board, no doubt had their own notions of how to get the water a fair trial. In their hands and under their management it would, I am persuaded, have proved a success; and if they would have taken means now forbidden they would have done so in the conviction that they acted for the good of the ryots, and the ryots, I am persuaded, would have felt the benefit and (as happened elsewhere) almost deified their immediate benefactors, for such men knew what they were saying when they said that water would be a blessing to the country.

4. To turn to what has been done. For all our purposes an "occupier" is the man who finds the seed, selects what crop to sow, and pays the water-rate from the profits. Now, if a hedge were run round the plots of the several occupiers in most of these villages, I am persuaded that the number of hedgerows and smallness of the plots would be full as striking or more as in a village in Devonshire or Staffordshire in the neighbourhood of the village and omitting the outlying land, and I ask you whether you would consider it to be an efficient water-supply if, in a densely-ignorant and prejudiced village, a Company brought water in small ditches (in a very insecure state) to a few points on the rising grounds near the village. Would a single gardener alter his old habits, or a single farmer turn his dry land into wet? That some do so here shows that the villagers are keener for irrigation than they would be in England, as, of course, we should expect from the difference of climate; but it does not show that they have had an efficient supply, nor prove that had they water in easy reach they would not use it to an extent fifty fold of what they have yet done. If a family pay kist for a field it seems often the case that the individuals of that family are distinct occupiers so far as choice of culture and proprietorship in the profits goes, and if there be a general apathy to begin innovation, and a general rumour that refusal of water will cause a reduction of rate, and all Revenue subordinates, from Tahsildars inclusive downwards, discuss the high rate and the certainty of its being lowered if the canal came into Government hands, who can wonder that any and every individual goes on in his old habits and ploughs his land as his ancestors did, while the water-supply is distinct and seems precarious.

5. You will now see why it seems to me that the plan you propose in paragraph 2, of a visit to the village three months before the season, would not be sufficient. I shall be happy to arrange

for its trial next year. But few men (comparatively speaking) are so recklessly anxious for water as to pledge themselves to pay the rate until they see for sure the manner of their supply, nor will they let the dry sowing season pass idly until they are certain that water will be supplied to them certainly and without anxiety, labour, petty quarrels, or expense on their part. I think the 6-Rupee rate should ensure them this.

6. As to the control over supply. The usual practice is for the bankers to open each sluice so many hours a day and also to divert the water successively down the branches to each village, sitting there until, by signal or messenger, they learn that the cultivators have had enough. I know of no difficulty in the arrangement of this. It is what the villagers like (as at Yerraguntla, Sirwell, Wunnakundinny, etc.), and what they practice under their own tanks. The surplus water from each field the Company cannot control, and here the sad mistake of leaving the canal to be worked entirely without bye-laws is evident: *that* I must leave to you. If you picture a field-channel full of water to the ground-level, three feet broad, without banks or only with such as the cultivators have made for their field-beds, you will see that a heavy rain can produce no effect except to wash away these small banks, as it must do in every field with the banks between the beds. The rain cannot increase the flow of the full channel. If the field channels be empty it must be remembered they are on the ridge of the country. No drainage flows into them, and the rain that falls into them would have fallen had there been no channel there.

(True Copy.)

(Signed) J. HOPE,
Acting Collector.

SUBMITTED to Government with reference to G. O., dated 14th May 1873, No. 87, Revenue Department.

2. The Chief Engineer of the Irrigation Company wishes to make "ten-link" channels carried to commanding points from which the lands on either side can be irrigated easily and all the "five-link" channels necessary to supply any demand which may be made for water on account of any field before the applications for water are received, leaving the bargain for the land to be made afterwards.

3. The Board entirely concur with the Collector in thinking that in the face of the hesitation which the ryots show about taking water, and the distrust they evince about its management it would be unwise to make the "five-link" or field-channels until they have been applied for.

No. 197. ORDER THEREON, 22nd October 1873, No. 1,147.

Miscellaneous.

COMMUNICATED to the Public Works Department with reference to the order in that Department, under date 29th April 1873, No. 1,718.

2. The Governor in Council is of opinion that any expenditure on the "five link" or field-channels before water has been applied for by the holders of the fields would be injudicious and expose the Company to loss.

(True Extract.)

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

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

Exd. W. H. French.

Pro. Board of Revenue
Field-channels in connection with Irrigation Co's Canal in Kurnool &c

27 Aug. 73, No. 1671

No. 1147. 22 Oct. 73

C.d to the Public Works Dept with reference to the order in that Dept under date 29 Apl 73 No 1718.

The G.-in C. is of opinion that any expenditure on the "five link" or field channels before water has been applied for by the holders of the fields would be

Most respectfully

Construction of public
channels in connection with
Irrigation Co's Canal in Ky

10th Cent/73 12 16 Oct 42 16/10 K 22/4