Archives I - 10,006—16-8 77.

(1) Number of pages 106

10 (2) Date of repair 22-7-87

(3) Initials of the Referencer Lavan

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PWD DEPARTMENT.

G.O. No. / B.P. No.	795 W	Press. / Mis.
Dated	24. 3. 1884.	

38063/6

to be folded or roughly handled

47 - 6 = (41)

795/1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

READ—the following papers :—

From Colonel H. L. PRENDERGAST, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated Madras, 11th February 1884, No. 3907.

With reference to G.O., No. 3320 W., dated 21st November 1883, I have the honor to forward statements showing :—

(*a*) Articles belonging to the existing gas works which are required for the Chemical Examiner's Laboratory at the Medical College, in connection with the improvements now in progress.

(*b*) Articles of the existing gas works not required for any purpose, and buildings proposed to be demolished.

(*c*) Articles in store under the charge of the Superintendent of the Government Gas Works, and

(*d*) Articles in store under the charge of the Executive Engineer.

2. The hitherto sanctioned arrangement has been for the supply of gas to the Chemical Examiner's Laboratory, from the gas works in the Fort. But now that these works are to be no longer kept up, the articles entered in statement A can be used for the manufacture of gas in the Chemical Examiner's Laboratory. By the transfer of these articles, free of charge, the extra outlay consequent on the change of arrangements, is estimated at about Rs. 800 or within 5 per cent. of the sanctioned estimate, Rs. 22,900.

3. Of the articles entered in statements B, C, and D, the Executive Engineer proposes that all the iron articles be sold by public auction at Madras, and also the brass articles if a fair price can be obtained for them as old brass; if not, that they should be sent to the India Office for disposal, the auction sales to take place, after full notice being given, in the Lahore, Allahabad, Calcutta, Bombay and local newspapers, and to the Military Works Department at Simla.

4. It was explained in paragraph 35 of the report * of the committee on the superfluous stock of the Public Works Department, that Dr. Rogers considered it would be worth while to send the brass fittings to England if they were not to be kept. And in paragraph 36 the committee were of opinion that all should be cleared out by auction sale. I am still of the same opinion, and recommend that every thing be sold off.

* In G.O., No. 914 W., dated 4th April 1881.

5. The Executive Engineer has arranged with Dr. Rogers the modifications required at the Medical College, estimated at about Rs. 800 (paragraph 2 above) and I have authorized his removing such portions of the Fort gas works as are not required there, but which are to be used at the Medical College.

Enclosures.

STATEMENT A.

Government Gas Works—Fort St. George.

List of Stores, &c., belonging to the old Gas Works in the Fort required for work at the Medical College in addition to Chemical Laboratory.

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
1	Darlington works glass lantern.	1	..	..	..	1	Serviceable.
2	Spare oval glass for above ..	1	..	..	..	1	Do.
3	Gas lantern made of brass ..	1	..	..	..	1	Do.
4	Leaden tube $\frac{1}{2}$" dr. about ..	500 R. ft.	..	..	..	500 R. ft.	Do.
5	Do. $\frac{3}{4}$" dr.	57	..	..	..	57	Unserviceable.
6	Do. $\frac{3}{4}$" dr. with 10 sides lights about	30 R. ft.	..	..	..	30	Do.
7	Do. 1"	30	..	..	..	30	Do.
8	Do. 1" with a stop cock ..	3 R. ft.	..	..	..	3 R. ft.	Do.
9	Do. $1\frac{1}{4}$" do. ..	$2\frac{1}{2}$	..	..	..	$2\frac{1}{2}$	Do.
10	Laden flange with 4 holes ..	1	..	..	..	1	Do.
11	Photometer complete ..	1	..	..	..	1	Do.
12	Jets of the above	2	..	..	..	2	Do.
13	Wall brackets, bronze ..	12	..	..	..	1	Serviceable.
14	1" stop cock with flanges for the use of main pipes.	2	..	..	..	2	Do.
15	1" stop cock for service pipes ..	9	..	..	..	12	Do.
16	Brass screws for photometer ..	1	..	..	..	2	Do.
17	$1\frac{1}{2}$" brass unions for iron pipes.	15	..	..	..	9	Do.
18	1" do. iron and lead.	2	..	..	..	1	Do.
19	$1\frac{1}{4}$" do. do. ..	1	..	..	..	15	Do.
20	$1\frac{1}{4}$" and $1\frac{1}{2}$" do. ..	30	..	..	..	2	Do.
21	$\frac{1}{2}$" and $\frac{3}{4}$" for leaden tubes ..	25	..	..	..	1	Do.
22	$\frac{1}{2}$" brass tees for iron pipes* ..	34	..	..	..	30	Do.
23	$\frac{1}{2}$" do. for leaden tube ..	16	..	..	..	25	Do.
24	$\frac{3}{4}$" do. do. ..	26	..	..	..	34	Do.
25	Brass elbows	24	..	..	..	16	Do.
26	Argand burners for chimney ..	10	..	..	..	26	Do.
27	Do. do. shades ..	12	..	..	..	24	Do.
28	Brass gilt pendants of sorts ..	2	..	..	..	10	In fair order.
29	Jets of different sorts ..	9	..	..	..	12	Serviceable.
30	Double brackets	1	..	..	..	2	Do.
31	Single brackets with a shade holder.	1	..	..	..	9	Do.
32	Pack containing 42 jets ..	1	..	..	..	1	Do.
33	Do. 168 jets fish tail ..	1	..	..	..	1	Do.
34	Brass pumps	1	..	..	..	1	Do.
35	Furnace frames	2	..	..	..	1	Do.
36	Do. door	1	..	..	..	1	Do.
37	Ash-pan of the furnace ..	2	..	..	..	1	Do.
38	Trays for small lime purifier ..	6	..	..	..	2	Do.
39	Pickaxe	1	..	..	..	1	Do.
40	Tongs	2	..	..	..	2	Do.
41	Iron frames for the mouth-piece of retort.	2	..	..	..	6	Do.
42	Keys to turning valves ..	3	..	..	..	1	Do.
43	Cock turner for pendant ..	1	..	..	..	2	Do.
44	Canal coal about	63 tons.	..	..	..	2	Do.
45	Connection pipes	3	..	..	..	3	Do.
46	Tar cistern	1	..	..	..	1	Do.
47	Counterpoise iron weight for bells.	60	..	..	..	63 tons.	Do.
48	Mamooties	1	..	..	..	3	Unserviceable.
49	Crowbars	2	..	..	..	1	Do.
50	Iron rod about	5 ft.	..	..	..	60	Do.
51	Set of scales and weights ..	1	..	..	..	1	Serviceable.
52	Wheelbarrow	1	..	..	..	2	Do.
53	Stock, &c.	3	..	..	..	5 ft.	Do.
54	Large steel hammer	1	..	..	..	1	Do.
55	Tongs of sizes	4	..	..	..	1	Do.
56	Iron mortar and pestle ..	1	..	..	..	1	Do.
57	Small wooden ladder ..	2	..	..	..	3	In fair order.
58	Large do.	1	..	..	..	1	Serviceable.
59	Key for turning cocks of serviceable pipes.	1	..	..	..	1	Do.
60	Lightning conductor, copper band.	65 R. ft.	..	..	..	4	In fair order.
61	Stock and dies $\frac{1}{2}$" × $\frac{5}{8}$" set	1	..	..	..	1	Serviceable.
62	Do. $\frac{1}{2}$ × 1 ..	1	..	..	..	2	In fair order.
63	Pliers gas fitters	1	..	..	..	1	Do.
64	Pipe cutting large	1	..	$3\frac{1}{2}$	$\frac{1}{4}$	1	Do.
		2	..	..	..	65 R. ft.	
		1	..	..	..	1	Serviceable.
		1	..	..	..	1	Serviceable.
		2	..	..	..	2	Serviceable.
		1	..	..	..	1	Do.

List of Stores, &c., belonging to the old Gas Works in the Fort required for work, &c.—*cont.*

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
65	Cast steel yarning tools ..	1	..	..	..	1	Serviceable.
66	Drilling clips and drills ..	1	..	..	..	1	Do.
67	Spanners for cocks	3	..	..	..	3	Do.
68	Do. back nuts	3	..	..	..	3	Do.
69	Pipe tongs 2", $1\frac{3}{4}$, $1\frac{1}{2}$", $1\frac{1}{4}$", 1", $\frac{3}{4}$"	1	..	..	..	1	Do.
70	Hand hammers	2	..	..	..	2	Do.
71	Mouth-pieces	1	..	..	..	1	Do.
72	Do. covering plate ..	3	..	..	..	3	Do.
73	Socket pipes 9' long, 3" dr. ..	10	..	..	..	10	Do.
74	Do. do. 4" dr. ..	6	..	..	..	6	Do.
75	Do. bend 4" dr. ..	4	..	..	..	4	Do.
76	Do. pipes 6' long, $1\frac{1}{2}$" dr. ..	120	..	..	..	120	Do.
77	Lead tube 2"	12	..	..	..	12	Do.
78	Do. $1\frac{1}{2}$"	27	..	..	..	27	Do.
79	Do. 1"	68	..	..	..	68	Do.
80	Do. $\frac{3}{4}$"	24	..	..	..	24	Do.
81	Do. $\frac{1}{2}$"	240	..	..	..	240	Do.
82	Do. $\frac{3}{8}$"	120	..	..	..	120	Do.
83	Brass main cock $1\frac{1}{2}$"	12	..	..	..	12	Do.
84	Do. 1"	6	..	..	..	6	Do.
85	Do. $\frac{3}{4}$"	5	..	..	..	5	Do.
86	Do. $\frac{1}{2}$"	24	..	..	..	24	Do.
87	Do. $\frac{3}{8}$"	60	..	..	..	60	Do.
88	Do. $1\frac{1}{2}$"	2	..	..	..	2	Do.
89	Do. 1"	10	..	..	..	10	Do.
90	Union for iron and tin 2" ..	2	..	..	..	2	Do.
91	Do. do. 1" ..	10	..	..	..	10	Do.
92	Ceiling plate $\frac{1}{2}$"	24	..	..	..	24	Do.
93	Do. $\frac{3}{8}$"	24	..	..	..	24	Do.
94	Elbow cocks	60	..	..	..	60	Do.
95	Galleries $\frac{3}{8}$"	50	..	..	..	50	Do.
96	Elbow drop screws $\frac{3}{4}$" ..	24	..	..	..	*24	Do.
97	Do. do. $\frac{1}{2}$" ..	12	..	..	..	12	Do.
98	Brass lines for sockets ..	12	..	..	..	12	Do.
99	Lever lantern cock	24	..	..	..	24	Do.
100	Copper siphon pumper ..	2	..	..	..	2	Do.
101	Water-gauges with glass tubes.	4	..	..	..	4	Do.
102	$1\frac{1}{2}$" cock brass plug	4	..	..	..	4	Do.
103	Indian rubber bags for main ..	15	..	..	..	15	Do.
104	Double brackets, 2 lights ..	2	..	..	..	2	Do.
105	Clear glass globes 8"	12	..	..	..	12	Do.
106	Cut glass globe	12	..	..	..	12	Do.
107	Punkah top with wire gauze bottom.	36	..	..	..	36	Do.
108	Tube bends $1\frac{1}{2}$" dr.	24	..	..	..	24	Do.
109	Do. 1" dr.	14	..	..	..	14	Do.
110	Do. $\frac{1}{2}$" dr.	5	..	..	..	5	Do.
111	Tube pendants	24	..	..	..	24	Do.
112	Carrying bars for retorts ..	2	..	..	..	2	Do.
113	Charging scoops, small ..	1	..	..	..	1	Do.
114	Cast iron bend, $1\frac{1}{2}$"	1	..	..	..	1	Do.
115	Do. $1\frac{1}{4}$"	6	..	..	..	6	Do.
116	Lod's socket	6	..	..	..	6	Do.
117	Flange socket valve	12	..	..	..	12	Do.
118	Cast iron elbow connection bend, 1".	3	..	..	..	3	Do.
119	Cast iron elbow connection bend, 1 and 2.	3	..	..	..	3	Do.
120	Siphon traps of covers, all fire bricks.	10	..	..	..	10	Do.
121	Tees 1' T $\frac{3}{4}$, 1"	13	..	..	..	13	Do.
122	Do. $1\frac{1}{2}$" T $\frac{1}{2}$, $1\frac{1}{4}$"	1	..	..	..	1	Do.
123	Do. 1" T $\frac{1}{2}$, 1"	13	..	..	..	13	Do.
124	Do. $1\frac{1}{2}$"—1"—$1\frac{1}{4}$"	1	..	..	..	1	Do.
125	Do. $1\frac{1}{2}$—$\frac{3}{4}$—$1\frac{1}{4}$"	1	..	..	..	1	Do.
126	Do. $1\frac{1}{2}$ $\frac{3}{4}$ 1"	1	..	..	..	1	Do.
127	Do. $1\frac{1}{2}$—$\frac{1}{2}$—1"	1	..	..	..	1	Do.
128	Do. 2"—$\frac{1}{2}$"—1"	1	..	..	..	1	Do.
129	Do. 2"—1—1"	1	..	..	..	1	Do.
130	Elbow ⌐ 2"—2"	12	..	..	..	12	Do.
131	Do. ⌐ 1"—$\frac{3}{4}$"	12	..	..	..	12	Do.
132	Tees 1"—2"—1"	3	..	..	..	3	Do.
133	Do. 2"—2"—1"	3	..	..	..	3	Do.
134	Do. 2—$\frac{1}{2}$"—2"	3	..	..	..	3	Do.
135	Do. $\frac{3}{4}$" $\frac{3}{4}$"—$\frac{3}{4}$"	7	..	..	..	7	Do.
136	Crosses $\frac{1}{2}$" $\frac{1}{2}$" 1"	12	..	..	..	12	Do.
137	Diminishing couplings $2\frac{1}{4}$"—$1\frac{1}{4}$".	1	..	..	..	1	Do.
138	Do. $1\frac{1}{4}$"—1" ..	5	..	..	..	5	Do.
139	Couplings 1"	50	..	..	..	50	Do.

* 10 required in excess to the quantity remaining.

295/2

List of Stores, &c., belonging to the old Gas Works in the Fort required for work, &c.—*cont.*

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
140	Couplings ¾"	8	..	..	..	8	Serviceable.
141	Gas hooks	500	..	..	..	500	Do.
142	Wrought iron pipe 2" dr. ..	22	..	..	..	22	Do.
143	Do. 1½" dr.	300	..	..	..	300	Do.
144	Do. 1" dr.	500	..	..	..	500	Do.
145	Do. ¾" dr.	500	..	..	..	500	Do.
146	Do. ½" dr.	139½	..	..	..	139½	Do.
147	Do. ¼ dr.	100	..	..	..	100	Do.

STATEMENT B.

Government Gas Works—Fort St. George.

List of Stores and Buildings belonging to the old Gas Works in the Fort which are recommended to be sold, demolished, &c.

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	Building Materials and Fittings.						
1	Wrought iron gasometer, old ..	1	..	40′ dr.	18′	1	Completely out of repair and unserviceable in its present state.
2	Do.	2	..			2	Do.
3	Cast iron columns, old ..	6	16′	15′	10′	6	Do.
4	Wrought iron lattice stays, old.	6	21	..	..	6	Do.
5	Wrought iron chain stays, old, made out of ⅝" round iron.	6	20	..	..	120 R. ft.	Do.
6	Old gas valves	2	..	..	..	2	Do.
7	Counterpoise weights, sets, old.	6	..	..	..	6	Do.
8	Cast iron wheels for lifting chains, old.	6	1′ dr.	..	..	6	Do.
9	Wrought iron chain made out of ½" round iron, old.	..	120	..	..	120 R. ft.	Do.
10	Old teakwood frame ..	1	45′	12"	..	1	Partly sound.
11	Do. ..	1	16′	10"	6"	1	Do.
12	Do. posts ..	5	16′	10"	10"	5	Do.
13	Old cast iron wheels for lifting chains.	4	1′ dr.	..	..	4	In fair order.
14	Old cast iron wheels for brackets.	4	..	..	..	..	
15	Counterpoise weights, old, sets.	2	..	..	..	4	Do.
16	Workshop, office and stores brick in lime, wall tiled roof, square brick, floor three rooms.	..	45	29	..	4	Do.
17	Teak batten doors	3				2	Do.
18	Do. windows with wrought iron bars.	4	..	4	7	..	Would last for a number of years longer as they are; but when the building is demolished it is not known what they could be used for.
19	Teak venetians with wrought iron bars.	2	..	3¼	4½	3	Do.
20	Do. couples (25′ span) ..	10	..	3¼	4½	4	Do.
21	Do. reepers	..	1,600 R. ft.	..	..	2	Do.
22	Do. rafters	28	7′	..	..	10	Do.
23	Bressummer in four pieces ..	1	46′	2"	..	1,600 R. ft.	Do.
24	Eave board in three pieces ..	1	40	6"	4"	28	Do.
25	Metre room, wall bricks in lime, roof tiled, one room.	..	10½	6"	4"	1	Do.
26	Teak batten doors	1	..	10½	¾"	1	Do.
27	Teak batten windows with wrought iron bars.	3	..	3½	..	..	Do.
28	Reepers	..	..	2½	6¼	1	Do.
29	Palmyra rafters from 1′ to 4′ in length.	28	160 R. ft.	..	6¼	3	Do.
30	Lime purifiers room and coal store, wall brick in lime, roof tiled, two rooms.	..	..	..	..	160 R. ft.	Do.
31	Palmyra rafters	44	32	19	..	28	Serviceable.
32	Teakwood reepers	..	11′	..	..	..	Do.
33	Do. ridge pole ..	1	1,600 R. ft.	..	..	44	Do.
34	New gas retort-house, walls brick in lime, roof corrugated iron with iron trusses.	..	32	10"	..	1,600 R. ft.	Do.
			45	32	4½"	1	Do.
					..	..	Do.

795/3

List of Stores and Buildings belonging to the old Gas Works in the Fort which are recommended to be sold, demolished, &c.—*cont.*

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	Building Materials and Fittings —cont.						
35	Iron trusses, 19½ span ..	10	..	..	..	10	Serviceable.
36	Old gas retort-house, walls brick in lime, temporary roof corrugated iron sheets, iron rails, one room.	..	16	18	..	..	Do.
37	Iron rails, old	8	16	..	..	8	Do.
38	New gas chimney	..	..	..	60′	..	Do.
39	Copper rod terminal point ..	5 R. ft.	..	¾" dr.	..	5 R. ft.	Do.
40	Wrought iron bands	5	..	..	..	5	Do.
41	Gas Governor's house, walls brick in lime, roof tiled.	..	9	10	..	..	Do.
42	Teak batten door	1	3½	6′	..	1	Do.
43	Do. window	1	3½	4½	..	1	Do.
44	Palmyra rafters from 1′ to 4′ in length.	24	..	..	..	24	Do.
45	Teak reepers	160 R. ft.	..	..	..	160 R. ft.	Do.
46	E. I. Barracks gas lantern ..	..	..	..	..	..	Unserviceable as they cannot be used for any other purpose.
	Attached to Buildings and fixed in sheets in Fort St. George.						
47	Old cast iron single brackets ..	73	..	..	..	73	Old and rusty; but some of them may be used for the oil lamps proposed to be used in the Fort.
	Do. single lamp post ..	36	..	..	..	36	Do.
48	Do. double do. ..	1	..	..	..	1	Do.
49	Old gas meters	5	..	..	..	5	Unserviceable.
50	Do. chandeliers	2	..	..	..	2	Do.
51	*Fixed materials and materials that are now in use.*						
	Retort	1	..	..	..	1	Unserviceable.
52	Mouth-pieces	4	..	..	..	4	Serviceable.
53	Lids	3	..	..	..	3	Do.
54	Keys for the lids	2	..	..	..	2	Do.
55	Connection pipes	3	..	..	..	3	Do.
56	Bridge pipes	3	..	..	..	3	Unserviceable.
57	Hydraulic main	1	..	..	..	1	In fair order
58	Condenser, complete	1	..	..	..	1	Do.
59	Scrubber	1	..	..	..	1	Unserviceable.
60	Small lime purifier	1	..	..	..	1	Do.
61	Large do.	1	..	..	..	1	Do.
62	Brass stop cock 2′ dr. ..	2	..	..	..	2	In fair order.
63	Gas bells	2	..	..	..	2	Unserviceable.
64	Iron chains of above	2	..	..	..	120 R. ft.	Serviceable.
65	Wheels of the bells	120 R. ft.	..	..	..	4	In fair order.
66	Pulleys of do.	4	..	..	..	2	Serviceable.
67	Grinding stones of the bells ..	2	..	..	..	2	Do.
68	Coir ropes about	2	..	..	..	64 R. ft.	In fair order.
69	Outlet valves	64 R. ft.	..	..	..	2	Serviceable.
70	Siphons	2	..	..	..	2	Do.
71	Regulator	2	..	..	..	1	Do.
72	Pressure gauge	1	..	..	..	1	Do.
73	Iron rod	7 ft.	..	..	..	7 ft.	Do.
74	Scraper about	11 ft.	..	..	..	11	Do.
75	Rake	11	..	..	..	11	Do.
76	Coke cooler	5	..	..	..	5	Do.
77	Pokers	2	..	..	..	2	Do.
78	Iron scoop	2	..	..	..	1	Do.
79	Lantern	1	..	..	..	1	In fair order.
80	Iron key for turning stop cocks.	1	..	..	..	1	Do.
81	Bamboo ladders	1	..	..	..	3	Unserviceable.
82	Iron vice (large)	3	..	..	..	1	Serviceable.
83	Brass pump	1	..	..	..	1	In fair order.
84	Pincers or gas tongs ..	1	..	..	..	2	Do.
85	Spanners	2	..	..	..	4	Do.
86	File	4	..	..	..	1	Do.
87	Turner screw	1	..	..	..	1	Do.
88	Bellows	1	..	..	..	1	Do.
89	Torches	2	..	..	..	2	Do.
90	Keys for turning the cocks of pendants.	2	..	..	..	2	Do.
91	Brass sheet marked gas ..	1	..	..	..	1	Do.
92	Padlocks	3	..	..	..	3	Do.
93							

STATEMENT C.

GOVERNMENT GAS WORKS—FORT ST. GEORGE.

STORES belonging to the old Gas Works in the Fort in charge of the Superintendent, Government Gas Works, recommended to be sold by auction or otherwise.

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	Tools and Spare Materials.						
1	Common round shades	10	..	..	..	10	Serviceable.
2	Flowered do.	1	..	..	..	1	Do.
3	Frosted do.	38	..	..	..	38	Do.
4	Chamber shades, small ..	2	..	..	..	2	Do.
5	Frosted chamber shades ..	2	..	..	..	2	Do.
6	Glass chimneys, large and small.	29	..	..	..	29	Unserviceable.
7	Punkah or shade tops ..	6	..	..	..	6	Do.
8	Tin lanterns for oil lights ..	10	..	..	..	10	Do.
9	Twenty lights metre	1	..	..	..	1	Do.
10	Large old metre	1	..	..	..	1	Do.
11	Brass screws for the above metre	5	..	..	..	5	Do.
	Brass Materials.						
12	Wall brackets, bronzed ..	28	..	..	..	28	Serviceable.
13	1″ stop cocks for leaden pipes ..	3	..	..	..	3	Unserviceable.
14	Wall brackets with pieces of wrought iron pipe	6	..	..	..	6	Do.
15	Chimney holders	9	..	..	..	9	Serviceable.
16	Top lights of theatre room fixed in a plank	14	..	..	..	14	Serviceable.
17	Brass stop cocks ⅜″ with elbows.	17	..	..	..	2	Do.
18	1½ brass unions for iron pipes..	31	..	..	..	2	Do.
19	1½″ and ½″ brass unions for iron and lead	27	..	..	..	1	Do.
20	½″ and ¼″ brass union for leaden tubes	43	..	..	..	1	Do.
21	Brass elbows	16	..	..	..	2	Do.
22	Argand burners for chimneys..	22	..	..	..	19	Do.
23	Do. for shades ..	110	..	..	..	6	Do.
24	Brass galleries or shade holders.	1	..	..	..	10	In fair order.
25	Eight light star with jets attached	1	..	..	..	110	Serviceable.
26	Handsome bracket, bronze ..	8	..	..	..	1	Do.
27	Ceiling plates, small	4	..	..	..	1	Do.
28	Do. large	3	..	..	..	1	Do.
29	Brass pipes (all about 1½ feet)..	1	..	..	..	8	Do.
30	Iron pipe with a funnel and stop cock	1	..	..	..	4	Do.
31	Eight sided light	1	..	..	..	3	Do.
32	Light in the form of letter A ..	1	..	..	..	1	Do.
33	Do. do. V ..	1	..	..	..	1	Unserviceable.
34	One dealwood box containing the following articles ..	1	..	..	..	1	Do.
35	Large round shades	1	..	..	..	1	Do.
36	Small do.	2	..	..	..	1	Do.
37	Large shade covers	2	..	..	..	1	Do.
38	Small do.	2	..	..	..	1	Do.
39	Large shade holders	2	..	..	..	2	Do.
40	1″ brass stop cock	2	..	..	..	2	Serviceable.
41	Stop cock for iron and lead ..	1	..	..	..	2	Do.
42	Do. for leaden tube ..	1	..	..	..	2	Do.
43	Stop cock elbow, everything complete	1	..	..	..	2	Do.
44	Large brass ceiling plate ..	1	..	..	..	1	Do.
45	Small brass unions	1	..	..	..	1	Do.
46	Pack containing 5 crutches ..	2	..	..	..	1	Do.
47	One packed dealwood box containing some iron pipes ..	1	..	..	..	1	Do.
48	Pressure gauge	1	..	..	..	1	Do.
49	Brass pumps	1	..	..	..	2	Do.
50	Siphons, cast iron	2	..	..	..	1	Unserviceable.
	Iron Materials.						
51	Iron hooks for hanging lanterns.	6	..	..	..	1	Old.
52	Cross pendant	1	..	..	..	1	Serviceable.
53	1″ iron couplings	100	..	..	..	2	Do.
54	Caps	2	..	..	..		Do.
55	Elbows	7	..	..	..	6	Serviceable.
56	1″ iron Tees	23	..	..	..	1	Do.
			..	..	..	100	Do.
			..	..	..	2	Do.
			..	..	..	7	Do.
			..	..	..	23	Do.

795/4

Stores belonging to the old Gas Works in the Fort in charge of the Superintendent, Government Gas Works, &c.—*cont.*

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	Iron Materials—cont.						
57	Wrought iron pipe, 1″ dr. about.	60 R. ft.	..	..	..	60 R. ft.	Serviceable.
58	Siphon boxes	5	..	..	..	5	Do.
59	Collar of cast iron pipe, 4″ dr...	1	..	..	..	1	Do.
60	Lamp-posts of the reading room, wood	2	..	..	..	2	Unserviceable.
61	Lamp-posts of the reading room, wrought iron pipe	2	..	..	..	2	Do.
62	Long pendant, 7 feet each ..	4	..	..	..	4	Serviceable.
63	4″ pipes of 3 feet with a branch cast in it	3	..	..	..	3	Do.
64	Connection pipes (cast iron) 2″ dr.	2	..	..	..	2	Do.
65	Cast iron pipe 3″ dr.	3 R. ft.	..	..	..	3. R. ft.	Do.
66	Teakwood office table with one drawer	1	..	..	..	1	Do.
67	Chair	1	..	..	..	1	Unserviceable.
	Old and rotten materials.						
68	Frosted round shades ..	10	..	..	..	10	Unserviceable.
69	Brass sundries	3	..	..	..	3	Do.
70	1″ brass stop cocks	3	..	..	..	3	Do.
71	1″ brass cock plugs	5	..	..	..	5	Do.
72	Ceiling plates of sorts ..	23	..	..	..	23	Do.
73	Plugs of the stop cocks of pendants and side lights	25	..	..	..	25	Do.
74	Stop cocks of old pendants ..	18	..	..	..	18	Do.
75	Elbows	28	..	..	..	28	Do.
76	Side lights	8	..	..	..	8	Do.
77	⅜″ brass stop cocks	2	..	..	..	2	Do.
78	Locks	4	..	..	..	4	Do.
79	Hinges	3	..	..	..	3	Do.
80	Brass wheel	1	..	..	..	1	Do.
81	¾″ to ½″ stop cock	1	..	..	..	1	Do.
82	Copper measure with a stop cock	1	..	..	..	1	Do.
83	Chatty full of brass sundries ..	1	..	..	..	1	Do.
84	Pot full of jets	1	..	..	..	1	Do.
85	Iron frame and door	1	..	..	..	1	Do.
86	Old pendants	35	..	..	..	35	Do.
87	Outlet valves	2	..	..	..	2	Do.
88	Pulleys	2	..	..	..	2	Do.
89	Portable forge	1	..	..	..	1	Do.
90	Water gas retort	1	..	..	..	1	Do.
91	Furnace for melting lead ..	1	..	..	..	1	Do.
92	Hydraulic main of oil gas ..	1	..	..	..	1	Do.
93	Oil gas measures or retorts ..	2	..	..	..	2	Do.
94	Sides of the retort	4	..	..	..	4	Do.
95	Ash pans	6	..	..	..	6	Do.
96	Iron chains about	45 R. ft.	..	..	..	45 R. ft.	In fair order.
97	Wrought iron pipes, about ..	50 ,,	..	..	..	50 ,,	Unserviceable.
98	Iron rollers	4	..	..	..	4	Do.
99	4″ pipe 6 feet long	1	..	..	..	1	Do.
100	Round hammers	2	..	..	..	2	Do.
101	Keys of oil gas retort ..	6	..	..	..	6	Do.
102	Iron dies	11	..	..	..	11	Do.
103	Retorts, unserviceable ..	8	..	..	..	8	Do.
104	Tin cisterns of oil	2	..	..	..	2	Do.
105	Thick coir ropes about ..	60 R. ft.	..	..	..	60 R. ft.	Do.
106	Thick hemp ropes about ..	25 ,,	..	..	..	25 ,,	Do.
107	Several sundries of iron pipes, bolts, nuts, rods, &c., weighing about 3 or 4 maunds ..	MDS. 3½	..	..	..	MDS. 3½	Do.

STATEMENT D.

Government Gas Works—Fort St. George.

Stores belonging to old Gas Works in the Fort in charge of Executive Engineer, Presidency Division, Public Works Department, recommended to be sold by auction or otherwise.

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	In Executive Engineer, Presidency Division Stores.						
1	Stock and dies 1 × 1¼ set	1	..	..	..	1	Serviceable.
2	Do. 1½ × 2 ..	1	..	..	..	1	Do.
3	Do. ⅜ × ⅝ for brass works.	1	..	..	..	1	Do.
4	Rymers 2″, 1½″, 1″, ¼	..	..	..	..	..	..
5	Tube, large	1	..	..	..	1	Serviceable.
6	Pliers, gas fitters	1	..	..	..	1	Do.
7	Augers, worn	6	..	..	..	1	Do.
8	Spanners for cocks	4	..	..	..	..	..
9	Do. cock nuts	7	..	..	..	1	Do.
10	Plug	8	..	..	..	1	Do.
11	Hand hammers	7	..	..	..	4	Do.
12	Fire clay retorts	2	..	..	..	4	Do.
13	Cast iron oriel retorts long, 7′ each.	6	..	..	..	4	Do.
14	Do. at bottom ..	4	..	..	..	5	Do.
15	Mouth-covering plate ..	..	..	..	..	7	Do.
16	Do. do.	4	..	..	..	1	Do.
17	Three way-pipe box	10	..	..	..	6	Do.
18	Socket pipes, 9′ long 3″ dr. ..	13	..	..	..	4	Do.
19	Do. do. 4″ dr. ..	1	..	..	..	..	..
20	Do. bend 4″ dr. ..	16	..	..	..	4	Do.
21	Do. long 1½″ dr. ..	28	..	..	..	10	Do.
22	Socket pipe, 4′ long 1″ dr. ..	6	..	..	..	13	Do.
23	Iron chain, 22′ long	566	..	..	..	1	Do.
24	Hooks iron, different sizes ..	2,528	..	..	..	6	Do.
25	Iron handles	6	..	..	..	22	Do.
26	Do. jumper or Bill-knoles ..	24	..	..	..	2	Do.
27	Brass main cocks, 2″	3	..	..	..	446	Do.
28	Do. do. 1¼″ ..	1	..	..	..	2,528	Do.
29	Do. do. 1″	1	..	..	..	6	Do.
30	Do. do. ¾″	76	..	..	..	24	Do.
31	Do. do. ⅝″	18	..	..	..	3	Do.
32	Do. do. ½″	10	..	..	..	1	Do.
33	Do. do. ⅜″	109	..	..	..	1	Do.
34	Do. do. ¼″	534	..	..	..	64	Do.
35	Union for iron and tin, 1″ ..	10	..	..	..	12	Do.
36	Ceiling plate, ½″	15	..	..	..	5	Do.
37	Do. ⅜″	2	..	..	..	55	Do.
38	Elbow cocks	68	..	..	..	474	Do.
39	Galleries, ¾″	336	..	..	..	8	Do.
40	Galleries drop screws ¾″ ..	545	..	..	..	5	Do.
41	Do. do. ⅝″ ..	545	..	..	..	2	Do.
42	Elbow drop screws ½″ ..	328	..	..	..	44	Do.
43	Do. do. ⅜″ ..	110	..	..	..	312	Do.
44	Brass lines for socket ¼″ ..	2	..	..	..	485	Do.
45	Liver lantern cocks	83	..	..	..	475	Do.
46	1½″ brass cocks plug ..	21	..	..	..	328	Do.
47	1″ cock brass, small	145	..	..	..	110	Do.
48	Wet metre, 80 lights	7	..	..	..	2	Do.
49	Do. 10 do.	1	..	..	..	71	Do.
50	Bodies for 5 sets pendants ..	1	..	..	..	9	Do.
51	Drop for 16′ long do. ..	1	..	..	..	121	Do.
52	Bodies for 4 sets	2	..	..	..	3	Do.
53	Do. 3 do.	2	..	..	..	1	Do.
54	Double joints brackets ..	4	..	..	..	1	Do.
55	Bodies for pendants 6 set ..	2	..	..	..	1	Do.
56	Drop tubes, 2″	3	..	..	..	2	Do.
57	16′ long and bodies 2″ ..	4	..	..	..	2	Do.
58	27′ do. 2″ ..	2	..	..	..	4	Do.
59	16′ do. 2″ ..	3	..	..	..	2	Do.
60	7′ do. 3″ ..	1	..	..	..	3	Do.
61	13′ do. 4″ ..	2	..	..	..	4	Do.
62	Pan head rivets, ½″ × ¼″ ..	1	..	..	..	2	Do.
63	Snap head rivets	1	..	..	..	3	Do.
64	Side glass	3,074	..	..	..	1	Do.
65	Top glass	3,252	..	..	..	2	Do.
66	Bottom glass	1,102	..	..	..	1	Do.
67	Clear glass globes 8″	2,036	..	..	..	1	Do.
68	Cut glass globe	303	..	..	..	3,074	Do.
69	Large glass chimneys	1,859	..	..	..	3,252	Do.
70	Punkah top with wire gauze bottom. ..	449	..	..	..	1,102	Do.
		135	..	..	..	2,036	Do.
		300	..	..	..	303	Do.
						1847	Do.
						437	Do.
						135	Do.
						764	Do.

Stores belonging to old Gas Works in the Fort in charge of Executive Engineer, &c.—*cont.*

795/5

Item No.	Description of Articles.	No.	Dimensions. Length.	Breadth.	Depth.	Contents.	Serviceable or Unserviceable.
	In Executive Engineer, Presidency Division Stores—cont.						
71	Wrought iron pendants, ¾′ long ½″ dr.	70	..	..	..	70	Serviceable.
72	Tubes with couplings 1″ dr.	36	..	..	..	36	Do.
73	Do. do. 1½″ dr.	8	..	..	..	8	Do.
74	Do. do. 1½″ dr. 1½ long.	103	..	..	..	103	Do.
75	Tube with couplings 1½″ dr. ½ long.	30	..	..	..	30	Do.
76	Do. do. 1″ dr. ½ long.	5	..	..	..	5	Do.
77	Tubes with bend 1½″ dr. ..	67	..	..	..	43	Do.
78	Tubes for lamp tops 1¾″ long 3″ dr.	504	..	..	..	504	Do.
79	Do. do. pendants ..	485	..	..	..	461	Do.
80	Rods 6½ long ¾	2	..	..	..	2	Do.
81	Charging scoops for retorts ..	1	..	..	..	1	Do.
82	Cast iron 2′ long bend pipe ..	4	..	..	..	4	Do.
83	Cast iron 3′ long 1″ pipe fittings with plug.	28	..	..	..	28	Do.
84	Cast iron flange and spigot pipes 1½″ long.	6	..	..	..	6	Do.
85	Do. do. ¾″ dr. 1½ ..	1	..	..	..	1	Do.
86	3″ valves with handle ..	3	..	..	..	3	Do.
87	2″ do.	1	..	..	..	1	Do.
88	Pipe	1	..	..	..	1	Do.
89	Dung pipe	86	..	..	..	86	Do.
90	Lod's socket	47	..	..	..	41	Do.
91	Flange socket valve	14	..	..	..	2	Do.
92	12″ sheet siphon boxes ..	5	..	..	..	5	Do.
93	10″ do.	5	..	..	..	5	Do.
94	8″ do.	1	..	..	..	1	Do.
95	Serables sieves	11	..	..	..	11	Do.
96	Iron sieves oxide purifier ..	12	..	..	..	12	Do.
97	Cast iron elbow connection bend 1″.	47	..	..	..	44	Do.
98	Do. do. 1½″ ..	72	..	..	..	69	Do.
99	Siphon traps and covers ..	39	..	..	..	29	Do.
100	Elbow carriers for brackets ..	140	..	..	..	140	Do.
101	Lamp brackets	96	..	..	..	96	Do.
102	Flat brackets, bundles ..	36	..	..	..	36	Do.
103	Belly pipes each 3′ long with sockets at back ends and stopped for 1½ sieves and fitted with plug.	15	..	..	..	15	Do.
104	Fire bars	30	..	..	..	30	Do.
105	Cast iron 14″ lamp top ..	61	..	..	..	61	Do.
106	Do. do.	106	..	..	..	106	Do.
107	Shell castings for lamp ..	63	..	..	..	63	Do.
108	Fan top for lamp	123	..	..	..	123	Do.
109	Solder bottle for brackets ..	29	..	..	..	29	Do.
110	Bottom for lamp	141	..	..	..	141	Do.
111	Rods	51	..	..	..	51	Do.
112	Knobs	148	..	..	..	148	Do.
113	Wrought iron elbows ½ ..	98	..	..	..	98	Do.
114	Tees 1″ I ¾″ 1″	45	..	..	..	32	Do.
115	Do. 1¼″ T ½ — 1¼″	130	..	..	..	129	Do.
116	Do. 1″ T ½ 1″	66	..	..	..	53	Do.
117	Do. 1¼″ 1 1¼″	37	..	..	..	36	Do.
118	Do. 1½″ ¾″ 1¼″	21	..	..	..	20	Do.
119	Do. 1½″ ¾ 1″	9	..	..	..	8	Do.
120	Do. 1½″ ½ 1″	13	..	..	..	12	Do.
121	Do. 2″ ½ 1″	3	..	..	..	2	Do.
122	Do. 2″ 1″ 1″	5	..	..	..	4	Do.
123	Elbows ⌐ 2″ 2″	16	..	..	..	4	Do.
124	Do. ⌐ 1″ ¾″	27	..	..	..	15	Do.
125	Tees 1″ — 2″ 1″	53	..	..	..	50	Do.
126	Do. 2″ 2″ 1″	10	..	..	..	7	Do.
127	Do. 2″ ½″ 2″	30	..	..	..	27	Do.
128	Do. ¾″ ½″ ¾″	33	..	..	..	26	Do.
129	¾″ tubes with couple 5″ long ..	21	..	..	..	21	Do.
130	Crosses 1¼″	76	..	..	..	76	Do.
131	Couplings 1″	64	..	..	..	14	Do.
132	Wrought iron 2″ tube ring nuts.	12	..	..	..	12	Do.
133	Do. iron tube ¾″ to ¼″ dr.	29	..	..	..	29	Do.
134	Screw nails 6″ long	80	..	..	..	80	Do.
135	Bolts 6″ × ⅜″	6	..	..	..	6	Do.
136	Bends ¾″ × ⅜″	6	..	..	..	6	Do.
137	Gas hooks	2,470	..	..	..	1,970	Do.
138	Washers	642	..	..	..	642	Do.

Stores belonging to old Gas Works in the Fort in charge of Executive Engineer, &c.—*cont.*

Item No.	Description of Articles.	No.	Dimensions.			Contents.	Serviceable or Unserviceable.
			Length.	Breadth.	Depth.		
	In Executive Engineer, Presidency Division Stores—cont.						
139	Lamp washers, cast iron	53	..	..	..	53	Serviceable.
140	Screws $1\frac{1}{4}'' \times \frac{1}{2}''$	360	..	..	..	360	Do.
141	Roofing rivets, galvanized ..	756	..	..	..	756	Do.
142	Ring rivets	405	..	..	..	405	Do.
143	Snap heads rivets 1″ to $1\frac{1}{2}''$ ..	723	..	..	..	723	Do.
144	Do. $1\frac{1}{4}''$ to $\frac{1}{2}''$ ..	230	..	..	..	230	Do.
145	Do. $\frac{3}{4}''$ to $\frac{1}{4}''$ ..	929	..	..	..	929	Do.
146	Wrought iron pipe, $1\frac{1}{2}''$ dr. ..	473	..	..	..	173	Do.
147	Do. 1″ dr.	4,168	..	..	..	3,668	Do.
148	Do. $\frac{1}{2}''$ dr.	1,762	..	..	..	1,662	Do.
149	Do. $\frac{3}{4}''$ dr.	12,076	..	..	..	11,576	Do.
150	Boxes, large	2	..	..	..	2	Do.

31st January 1884. (Signed) W. H. BURTON, Lieut.-Col., R.E.,
Executive Engineer, Presidency Division.

From Brigadier-General R. C. STEWART, Quartermaster-General, to the Secretary to Government, Military Department, dated Fort St. George, 3rd March 1884, No. 1503.

In returning reference order, No. 771, dated 16th February 1884, with enclosures, I have the honor, by order, to state that His Excellency the Commander-in-Chief has no objection to the various proposals made by the Superintending Engineer, V Circle, in his letter, No. 3907, dated 11th February 1884, regarding the gas works, Fort St. George, provided nothing is done to interfere with the supply of gas to the barracks until after the 15th instant, by which date, arrangements for their being lit with kerosine oil will be completed.

No. 1075, Military.

Transferred with an expression of the concurrence of Government in the Military Department, and the previous papers returned to the Public Works Department.

(By Order.)

FORT ST. GEORGE, 4th March 1884. (Signed) A. R. KENNEY-HERBERT, Lieut.-Colonel,
Officiating Secretary to Government.

ORDER—dated 24th March 1884, No. 795 W., Public Works.

The proposals of the Superintending Engineer for disposal of the materials of the Fort St. George gas works, and for demolition of the buildings mentioned in statement B which accompanies the letter above recorded, are sanctioned. Care should, however, be taken, as suggested by His Excellency the Commander-in-Chief, that the supply of gas to the barracks is not interfered with until the arrangements for lighting by kerosine oil are in proper working order.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintending Engineer, V Circle.
„ Examiner, Public Works Accounts.
„ Military Department.
Exd. A. Aubert.
Spare Copies

795/6

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of {1884} Madras

PUBLIC WORKS.

Dated March, 24th.

Read.

En

G.O., 24th March 1884, No. 795 W

MARCH.

Gas Works, Fort St. George

The proposals for the disposal of materi
of the —, and the demolition of certa
buildings connected with it, sanctioned w
remarks.

795/7

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

26th March 1884, No. 1497.

Barrack Department.

Read the following paper:—

No. 277. *From T. K. ROGERS, Esq., M.B., F.R.C.S., Superintendent of the Government Gas Works, to Lieutenant-Colonel A. KENNEY-HERBERT, Officiating Secretary to Government, Military Department; dated Fort St. George, 18th March 1884, No. 70.*

I have the honor to state that I have this day been directed by the Executive Engineer, Presidency Division, to apply to you for instructions as to the dismissal of the men employed on the establishment of the fort gas works, and also for information as to the amount of compensation, if any, to be awarded to each man on the establishment.

2. A statement showing the service and salary of each man now on the establishment is appended.

3. Under instructions received this day from the Executive Engineer, application has been made to the Public Works department to take charge of the plant, &c., belonging to the gas works, and, after the Public Works department has taken over charge of the plant, stores, &c., the establishment can be immediately dismissed on receipt of the necessary authority.

Statement showing the service and salary of each man now on the establishment of the Government Gas Works.

Names.	Office.	Amount of Salary per Month.	Date of Entertainment.	Total Service up to 18th March 1884.
		Rs. a. P.		Y. M. D.
T. K. Rogers	Superintendent ...	100 0 0	26th July 1879 ...	4 7 22
M. Guláb Roy ...	Foreman	25 0 0	9th Sept. 1876 ...	7 6 10
M. Ragavooloo	Clerk	15 0 0	1st Dec. 1861 ...	22 3 18
Vadevaloo	Tinman	12 0 0	14th Sept. 1875 ...	8 6 5
Moonean ...	Lighter	6 0 0	1st Dec. 1861 ...	22 3 18
Qádir Sharíf	Fireman	8 0 0	15th Feb. 1865 ...	
Ragava Moodelly ...	Do.	8 0 0	1st May 1880 ...	3 10 19
Ruthnum	Do.	8 0 0	15th Jan. 1883 ...	1 2 4
Chowry	Do.	8 0 0	1st Sept. 1883 ...	0 6 18
Moonesawmy ...	Lighter	6 0 0	3rd April 1867 ...	16 11 16
	Do.	6 0 0	6th Oct. 1871 ...	12 5 13

No. 278. ORDER THEREON, 26th March 1884, No. 1497.

The Right Honorable the Governor in Council directs that the establishment of the fort gas works be discharged when the plant, &c., are taken over by the

Public Works department, under Proceedings of Government, No. 5797, dated 29th October 1883.

2. The Superintendent should apply to the Controller of Military Accounts for the information referred to in the latter portion of para. 1 of the foregoing letter.

(True Extract.)

(Signed) A. KENNEY-HERBERT, Lt.-Col.,
Offg. Secretary to Government.

To the Superintendent, Gas Works, Fort St. George.
" Controller of Military Accounts.
" Public Works Department.

Exd. C. E. Shunker.

795/8

P.W.D.

№ 909 W dt 3/4/84

Communicated to the Supdtg. Engr: V Circle.

(Signed) J.S.

Govt. of (1884) Madras.

MILITARY.

To

THE SUPERINTENDENT,
GAS WORKS, FORT ST. GEORGE,
&c., &c., &c.

Dated March, 26th.

Issued

Recd. *Encl.*

G.O., 26th March 1884, No. 1497.

№ 909 W dt 3/4/84

MARCH.
Nos. 277-278.

Vide B
3320 W dt 21-11-83
file in B.Sec 1796 of
26-5-84

Barrack Department.

Gas Works, Fort St. George.—Discharge of the establishment of the — from the date of transfer of the plant, &c., to the Public Works department, directed; and the Superintendent referred to the Controller of Military Accounts for information in regard to the compensation admissible to each man on the establishment.

S. E. V Circle.

With Order

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

795/9

4th April 1881, No. 914 W.

General.
Account.

Read the following papers:—

No. 22. From Lieutenant-Colonel H. L. PRENDERGAST, R.E., Superintending Engineer, First Circle, to the Chief Engineer, Public Works Department, dated Chepauk, 11th March 1881, No. 3,411.

WITH reference to G.O., No. 2,276 W., dated 1st October 1880, I have the honor to forward the Report of the Committee upon the superfluous stock in the Public Works Divisions.

2. The papers sent to me are returned, together with other documents that have been handed over for the Committee's consideration.

Report of the Committee appointed to investigate and report upon the Superfluous Stock in the hands of the Public Works Department, &c.

VIZAGAPATAM DIVISION, FIRST CIRCLE.—The value of articles on the stock register has already been reduced to Rs. 712, and out of this the value of asphalte is Rs. 593.

The Committee recommend that, as has been proposed by the Executive Engineer, the asphalte be charged at its book value to the Hill Jail works at Párvatipur. Upwards of 4 tons will be used there at a cost of Rs. 488, and there will remain in store a little over 1 ton to the book value of Rs. 105 to be charged to works hereafter as the supply may be used up.

2. In August last the Superintending Engineer directed the sale of articles of stock in the Ganjam District; these were small stores, metals, some wood and bamboos, painters' stores, and miscellaneous articles that had been lying by for some years and were useless, or not likely to be issued to works. The book value of the stock was Rs. 3,656-14-10, and the loss by auction sale has been Rs. 1,678-0-1. The various articles had been purchased on the stock account, not for any specific works; and the Committee recommend that the loss on the sale may be written off to Profit and Loss.

3. CUDDAPAH DIVISION.—In the Bellary District stock has been ordered to be sold to the value of Rs. 2,005-12-11; there remains only one item, Rs. 153-9-8, the value of fuze which is not wanted and is unsaleable at Bellary.

The Committee recommend that this fuze be sent to the Public Works Stores at Madras to be disposed of there.

4. In the former Anantapur Division there are wooden doors and windows that have been on hand for some time to the value of Rs. 2,621-4-4. The Superintending Engineer has kept these articles to see whether the Sub-Magistrate's Cutcherry at Bookapatnam will be sanctioned in the year 1881-82. Unless the stock can be transferred to this work, there is no prospect of the articles being turned to account; and the Committee recommend that, provided there is no entry in next year's budget for the Bookapatnam Cutcherry, the stock should be sold by auction.

5. In the Kurnool District stock to the value of Rs. 1,545-7-1 has been ordered to be sold; and the Committee recommend the further sale of wood-work prepared for a cutcherry to be built at Kurnool, as there is no likelihood of the articles being utilized for a long time to come. The book charges of these articles are Rs. 1,493-0-6, and there will remain only the sum of Rs. 151-8-5 on the stock register for the Kurnool District.

In the Cuddapah District there is no stock.

6. NELLORE DIVISION.—The value of stock in hand on the 30th September last was Rs. 3,567-13-6. The Executive Engineer has proposed to send to Madras some iron posts to be melted; they are called iron calingulah posts, and are valued at Rs. 807-7-3; but as calingulahs have been given up, the posts are of no use. There are graduated strips of papers meant to be pasted on levelling staves; these being obsolete, the Executive Engineer proposes to destroy them;

the book value is Rs. 6-4-9. There are two items, viz., glass tubes and steam gauges, Rs. 101-1-0, and leather belts, Rs. 45, which the Executive Engineer would transfer to another division, as there is no probability of their being used at Nellore.

The Committee recommend that these articles be sent down to the Public Works Stores at Madras for disposal excepting the useless paper scales.

The Superintending Engineer lately authorized the sale of articles entered as of the value of Rs. 2,263, but as yet those of the book value of Rs. 1,303 have been sold, leaving the sum of Rs. 960 to be cleared off. The value of stock will then become reduced to Rs. 1,648.

There are some tons of old and useless cast iron truck wheels at Nellore that have been charged to the Anicut works. Correspondence has been lately going on with a view to the Superintendent of the Workshop at Madras taking over the wheels as old iron.

7. The wood-work that has been sold in the Kurnool District was made up for a Taluk Cutcherry at Nandyâl; the building has not otherwise been begun, but an estimate will shortly be submitted for sanction. The Committee recommend that the loss by sale of the materials that were made up ten years ago be charged to this future estimate.

The materials for barracks at Bellary were ordered to be prepared on the stock account in G.Os., Nos. 2,261 and 2,274, of the 24th and 25th September 1872; but further barrack accommodation has not been required, and is not likely to be called for, and no estimate has been made.

The other wood-work at Anantapur and Kurnool was made up in anticipation of cutcherries being built, but the buildings have not been commenced, and there are no estimates framed for them.

The Committee therefore are of opinion that the loss by sale of these building materials and of the two useless items in the Nellore Division must be written off to Profit and Loss.

8. UPPER GODAVARI.—The Superintendent of Works sent with his letter, No. 2,120, of the 20th September 1880, three lists of articles of all kinds lying at Dumagudiem. Mr. Walch proposed to keep there a certain quantity of machinery and stores; to sell a portion on the spot; and to remove the rest to Dowlaishweram. Mr. Walch proposes—

(1.) To sell at Dumagudiem, or to keep for transfer to any Public Works Division that may make application, the machinery not required for the works at Dumagudiem; and to advertise the machinery for sale there, as it would not pay to send the machinery to Calcutta or elsewhere by sea.

(2.) To keep at Dumagudiem the survey and mathematical instruments that are wanted there; to send a few to Dowlaishweram and the rest to the Public Works Stores at Madras.

(3.) To sell at Dumagudiem two wooden flats that are in bad order; to keep the boats and punts that are wanted on the works; and to transfer one jolly boat to Dowlaishweram.

(4.) To keep at Dumagudiem one cart gun carriage; to sell the others; and to sell or transfer 200 tramway wheels.

(5.) To sell a portion of the timber at Dumagudiem; to keep there for use a small supply; and to remove the rest to the Dowlaishweram Workshop on the terms laid down in G.O., No. 3,153 W., of the 5th August 1878.

(6.) To sell nearly all the metals at Dumagudiem, keeping a reserve there, and sending a small supply to Dowlaishweram.

(7.) To keep a portion of the small stores and miscellaneous articles at Dumagudiem, and to sell the remainder there.

The Committee have referred to Mr. Walch for some further details of his intended distribution of the stores, and some slight modifications have been made. The result is shown in the enclosed abstract statement, which gives the number of items, with their value, to be kept and sold, in separate columns for Dumagudiem and Dowlaishweram.

The Committee recommend that the Government property be disposed of as shown in this abstract, whereby articles of the book value of Rs. 52,713 will be sold as surplus or not in good condition; articles valued at Rs. 18,408 will be kept; those to the value of Rs. 12,747 at Dumagudiem and of Rs. 5,661 transferred to Dowlaishweram. Of the stock, &c., kept in hand, there is machinery valued at Rs. 6,960 and timber valued at Rs. 5,790, so that the value of tools, floating stock, and other stores to be retained at Dumagudiem will be brought down to Rs. 4,405.

The Committee are of opinion that the loss of sale of machinery, floating stock, rolling stock, and London stores should be charged to Works; and that the Superintendent of Works should specify the estimates to which the charges of loss shall be debited after ascertaining, as far as possible, for which specific works the different articles were purchased. The loss on the other stores cannot be much; the small stores, timber, and miscellaneous articles were obtained for general purposes; and the Committee recommend that the loss by sale be written off to "Profit and Loss."

295/10

UPPER GODAVARI.

ABSTRACT of Lists of Articles at Dumagudiem and of the proposed distribution of them.

Description of Articles.	To be kept at Dumagudiem.		To be sold at Dumagudiem.		To be taken to Dowlaishweram: To be sold.		To be taken to Dowlaishweram: To be kept.		Remarks.
	Item Number.	Value.	Item Number.	Value.	Item Number.	Value.	Item Number.	Value.	
		RS. A. P.		RS. A. P.		RS. A. P.		RS. A. P.	
List No. 1.									
Small Stores	17	539 7 8	28	3,767 13 3	6	174 9 1	...	...	
Building Materials	1	160 3 11	...	...	...	...	...	...	
Timber	...	1,930 0 9	...	11,218 0 0	...	...	...	3,860 0 0	
Metals	...	500 0 0	*11	10,758 12 2	...	...	3	1,109 8 8	* The value of the 11 items is Rs. 11,258. The Superintendent of Works desires to retain metal to the value of Rs. 500 out of the above.
Miscellaneous	7	79 5 11	11	101 4 0	2	4,344 1 4	...	...	
List No. 2.									
Survey and Mathematical Instruments.	16	251 0 0	...	...	...	...	3	33 0 0	Fifteen other items are proposed to be sent to Madras, their value being Rs. 295.
Machinery	19	6,451 0 0	17	3,642 0 0	1	350 0 0	5	509 0 0	
Floating Stock	6	715 0 0	2	100 0 0	...	...	1	100 0 0	
Rolling Stock	1	400 0 0	4	1,416 0 0	...	...	...	...	
Tools	66	1,292 5 0	61	3,169 1 9	...	...	...	...	
Furniture	16	408 8 0	1	40 0 0	21	~~693 0 0~~ × 692-0-0	...	...	
London Stores	...	...	2	11,910 0 0	...	...	...	...	
List No. 3.									
Machinery	...	...	2	60 0 0	...	...	1	50 0 0	
Tools	3	14 0 0	5	54 0 0	4	53 0 0	...	...	
Rolling Stock	...	...	2	184 0 0	...	...	...	...	
Small Stores	...	...	10	471 0 0	...	...	...	...	
Furniture and Fittings ...	2	6 0 0	3	203 0 0	1	5 0 0	...	...	
Total ...	...	12,746 15 3	...	47,094 15 2	...	5,618 10 5	...	5,561 8 8	

	RS.	RS.	RS.
To be sold	...	52,713	...
To be kept	18,408	...	71,121
Value of instruments to be sent to Madras ...			295
Total ...			71,416

× note. G.O. No. 1350 W of 30 May/81 (C.No. 3160 of 81).

9. GODAVARI—IRRIGATION—FLOATING PLANT.—The Committee have examined the statement of floating plant to be maintained in the year 1881-82 as printed in G.O., No. 550 I., dated 26th August 1880.

"*Thistle*."—The machinery of this steamer is entered as old and worn; but the Superintendent of Works states that the machinery is repairable, and the boat useful; he recommends that she should not be sold.

"*Little Nell*." "*Fawn*."—These two steamers are to be advertised for sale by the Superintendent of Works.

No. 12 Iron Trap Punt is entered as sunk in a main canal. Enquiries having been made why an annual maintenance is proposed, and the duty shown to be that of conveying silt, it is explained that attempts will be made to raise the punt when the canal is closed with a view to her being brought into use again.

No. 97 Iron Flat is stated to be too unwieldy for general use; but it is explained that the flat is useful on particular occasions, and the Superintendent of Works thinks she ought to be kept.

Range Boat No. 5 has already been sold, and Range Boats Nos. 9 and 10 are to be sold shortly.

The rest of the floating plant is said not to be in excess of requirements or in unserviceable condition.

A list of the floating plant in the Godávari District is sent up annually to the Chief Engineer for Irrigation, in order that provision may be made in the budget; and the Committee have no further remarks to make on this head.

The cost of the *Fawn* has been charged to the Capital Account, Productive Public Works, of the Godávari Delta; the sale proceeds are therefore to be credited to receipts on that Capital Account.

The cost of the *Little Nell* has been charged to general plant of the Godávari Eastern Delta, and the sale proceeds are to be credited to the Revenue Account, Tools and Plant, Productive Public Works, Godávari Delta.

10. STEAMER "PRINCE."—The Steamer *Prince* was ordered to be sold by the Marine Department in G.O., Public Works Department, No. 587, of the 22nd February 1877. A sale has not been effected, and in G.O., Judicial Department, No. 1,396, of the 8th August 1879, a telegram is recorded directing the Collector of Cocanada to have the *Prince* taken over the anicut for use at Rajahmundry. On a question raised by the Accountant-General as to the incidence of charges connected with the *Prince*, it was laid down in G.O., Judicial Department, No. 2,742, of the 24th October 1879, that "the *Prince* is maintained from Port Funds," but all special additional charges, *i.e.*, not ordinary charges, are to be debited to the department on whose account they are incurred.

On the 2nd September 1880 the Master Attendant wrote to the Chief Secretary that the Marine Department has no need of the *Prince*; that the vessel has not been taken over for the use of the Marine Department; and that she is employed under the orders of the Public Works Department. The Superintendent of Works, Godávari, states in his letter, No. 1,997, of the 20th October 1880, that the *Prince* was handed over to the Master Attendant at Cocanada on the 21st December 1876, and that she was by the Marine Department placed at the disposal of the Military Department in 1879, the Public Works Department having nothing to do with her beyond carrying out some repairs and supplying some fuel at the request of the Military authorities.

The Committee believe that the *Prince* is no longer required at Rajahmundry by the Military Department; and as she was condemned nearly four years ago, the Committee recommend that she be sold at an early opportunity. Again, as the vessel was ordered to be sold by the Marine Department in February 1877, and her maintenance was made chargeable to Port Funds, the Committee are of opinion that the present charge and arrangements for sale should be in the hands of the Marine Department.

The *Prince* was originally charged to general plant, and the sale proceeds will be credited to the Revenue Account, Tools and Plant, Productive Public Works, Godávari Delta.

11. DOWLAISHWERAM WORKSHOP.—The Executive Engineer in charge of the Workshop considers that there is no stock in excess of requirements. The value of the stores in hand on the 31st October 1880 was—

	RS.	A.	P.
Stores	43,450	3	8
Timber	21,311	11	9
Manufactured Articles	4,742	5	3
Total ...	69,504	0	0

795/1

The average value of issues during the last three years has been—

	RS.
Stores	28,498
Timber	18,260
Manufactured Articles	11,527
Total ...	58,285

The Superintendent of Works also states that there is no unnecessary stock in hand. But the above figures show that while the manufactured articles have been brought down to less than a half year's issues, there are still stores to last for 18 months and timber for 14 months.

The Committee are of opinion that endeavours should be made to keep the value of stores in hand within Rs. 30,000.

12. GODAVARI WESTERN DIVISION.—The stock return shows only some building materials the value of which is less than Rs. 1,000.

13. GODAVARI EASTERN DIVISION.—The stock in hand on the 30th September 1880 consisted of—

	RS.	A.	P.
Materials at Dowlaishweram valued at	10,971	9	7
Stores at Dumagudiem	38,529	5	1
Stores kept at the Sappers' Cantonment	13,563	14	7
Total ...	63,064	13	3

The total amount standing in the Examiner's books to the debit of the division is Rs. 94,565-11-7, and the Executive Engineer explains that the difference of Rs. 31,500-14-4 is the amount of stock manufacture and carriage which has not been included in the stock register. The stores at Dumagudiem have been dealt with under the head of Upper Godávari, and deducting their value from the total debit, there remains the sum of Rs. 56,036-6-6 as the book value of the stock in hand. The stores in the Sappers' Cantonment consist chiefly of metals valued at upwards of Rs. 11,000, while the value of small stores is Rs. 2,185. The Committee consider that, whereas there are large stores in the Workshop close by, these items are not necessary, and that the manufactured articles of the value of Rs. 31,500 are much beyond the requirements. The issues in the past year have been to the value of Rs. 34,618, and while there appears to be the need of keeping in hand a considerable supply of stone and other materials at Dowlaishweram, the Committee think that the value of stock in hand ought to be brought down to Rs. 20,000. The large balance under the head of Manufactured Articles may be reduced by suspending further manufacture until the reserve limit is attained.

14. KISTNA WESTERN DIVISION.—There is no stock.

KISTNA EASTERN DIVISION.—The stores of the Kistna Workshop have recently been amalgamated with those of the Eastern Division. The Executive Engineer reports that the stock in hand on the 30th September 1880 was of the value of ... Rs. 58,695 0 0
And the value of manufactured articles is given as ... „ 19,940 0 0
Total ... Rs. 78,635 0 0

The Superintendent of Works has stated that he thinks there should be a maximum reserve of about Rs. 48,000 arrived at thus:—

	RS.
Small Stores	1,000
Building Materials	5,000
Timber	20,000
Metals	9,500
Miscellaneous	4,500
Manufacture in Workshop and Quarries and Kilns	8,000
Total ...	48,000

The average value of issues during two years is given by the Superintendent of Works as Rs. 5,046 per month, while the value of the balance of stock on the 1st October 1880 was Rs. 58,695, or nearly twelve months' supply. But while the stock balance in hand of some items is moderate, in others it is very high; thus there is a supply of small stores for eighteen months—

Timber	21·6
Metal	28·4
Painters' Stores	21·2

The Superintendent of Works proposes to retain stock articles to the value of Rs. 43,468, to be used up within the next eighteen months, and to dispose of articles to the value of Rs. 15,227. The Executive Engineer's list, dated the 24th December 1880, shows the proposed method of dealing with stock, viz., some items to be sold locally at Bezváda and other items to be sent either to Dowlaishweram or to Madras.

As there are already more stores than are wanted at Dowlaishweram, the Committee are of opinion that the superfluous stock at Bezváda should be sent to Madras to the Public Works Stores for disposal. The enclosed list shows that the book value of these stores is Rs. 13,488-10-7.

The same list shows various articles which may be sold at Bezváda, their book value being Rs. 1,738-14-10. These stores have all been purchased on the General Stock Account, and thus the loss by sale will have to be charged to Profit and Loss.

15. The Executive Engineer has furnished another list, enclosed, dated the 7th January 1881, of machinery and tools and plant that are not required in the division. The list contains twelve items that may be sold on the spot; twenty-two items that cannot be disposed of locally; and two items of wagons, of which a part can be kept and the rest should be sent away.

The Superintendent of Works recommends that the old cast iron articles should be sent to Dowlaishweram for the foundry. There are old machines, blocks, log wheels, &c., which will not be used where they are, and are not likely to be sold there.

A good deal in the way of superfluous machinery and plant is proposed to be offered for sale in the Godávari District; and the Committee think that it will be preferable to send the stores by canal to Madras, to be disposed of by the General Superintendent of Public Works Stores.

The items in this list have already been charged to Works, and the sale proceeds will be credited to the sources from which payment was originally made; if from Revenue, credit will be given to Tools and Plant; and if from Capital, to Receipts on Capital Account.

16. On the subject of the stock reserve the Superintendent of Works writes that, though the amount set down by him for timber is high, viz., Rs. 20,000, his reasons are that, as a rule, there are no local markets; that when required a year's supply would have to be bought at Cocanada or Coringa, and it might happen that the annual supply could not be got round before the closing of the canals in March. A good stock of large timber is required for heavy works, such as lock gates, and inconvenience will occur if the stock is kept too low.

Upon this explanation the Committee are of opinion that a liberal margin may be necessary in calculating the limit of the general reserve stock; but they still think that this should not be set down at a higher figure than Rs. 20,000.

List of Surplus Stock not required in the Kistna Eastern Delta.

To be sent to Public Works Stores.

			Book Value.		
			Rs.	A.	P.
Plumbago	lb.	979	195	14	6
Angle iron of sizes	,,	33,962	3,450	0	0
Crane bearings, cast iron	,,	797			
Flat bar iron	,,	21,613	1,447	0	5
Sheet iron	lb.	64,129	6,901	12	6
Crucibles, large	No.	100	70	11	3
Stoney's valve	,,	1	1,423	3	11
			13,488	10	7

To be sold at Bezváda.

Yapee wood	c.ft.	360	155	7	2
Railway old iron	...	...	189	0	1
Lead sheets	lb.	1,484	330	1	4
Sundry iron	,,	1,763	52	5	4
Copper, old	,,	60	22	3	4
Gun metal	,,	162	70	14	0
Three items of paint	,,	515	91	4	11
Oxide of lead and yellow clay	...	...	27	14	6
Wooden gates	...	...	4	13	10
Leather, Madras and Europe	...	...	404	7	3
Camp stools and canvas, do.	lb.	350	25	13	2
Small board	No.	18	0	7	9

Spurs	No.	2	4	10	7
Iron cot	,,	1	18	15	4
Copper plate	,,	1	13	7	1
Water tubs on wheels	,,	5	7	8	0
Venetian windows	,,	14	241	0	0
Bandy wheel	,,	1	23	0	0
Semi-circular windows	,,	3	36	0	0
Wooden leg	,,	1	6	3	6
Salvages	,,	17	11	6	4
Telegraph wire	,,	36	1	15	4
			1,738	14	10

795/12

List of Machinery and Tools and Plant no longer required in the Kistna Eastern Division.

Class.	Item No.	Names of Articles.	Balance.	Remarks.
Machinery.	42	Machine, stone-breaking	3	Cannot be sold or disposed of locally.
	50	Pump, portable, double	1	Do. do.
	...	Machine, brick-making, with pug mill.	1	Do. do.
	...	Machine, hulling, with under-shot water wheel and pieces.	1	Do. do.
	...	Air engine	1	This is believed to be an air engine, but it is not known why or when it came here, and it cannot be disposed of here.
Tools and Plant.	...	Axle with one wheel	1	Might be auctioned here.
	...	Do. with Calcutta wheels	109	These are flanged wheels for trucks.
	...	Do. Dowlaishweram with wheels	1	Do. do.
	...	Do. do. wheels	107	Do. do.
	...	Barrow wheels	12	Might be auctioned here.
	...	Bed keys	2	For screwing up wooden beds.
	...	Barrels, iron, empty	34	These are really old paint kegs, and should not appear in the tools return. They might be disposed of here or kept for sending out tar, &c.
	...	Bill crank for old wooden pump	1	Might be sold here.
	...	Brick moulds, brass, solid	5	Do.
	...	Do. do. bind	19	Do.
	...	Blocks, iron, quadruple, 12 inch	2	Could not be disposed of here.
	...	Do. do. 10 ,,	2	Do. do.
	...	Do. do. 9 ,,	2	Do. do.
	...	Cranks	2	Might be sold at Bezváda. Of old hand paddle boat.
	...	Calcutta wagon wheels	4	Cannot be disposed of here.
	...	Cog wheels of sorts	31	Do. do.
	...	Dog wheels	16	Cannot be disposed of here. Wrongly named; are really Pawl wheels
	...	Dog iron	23	
	...	Dressed Pegu teakwood logs	1	Might be sold here.
	...	Pinions for crane	32	Do.
	...	Pullies, crane	7	Do.
	...	Paddle wheel crank	1	Do.
	...	Wagons, complete	12	Five to be kept.
	...	Do. wheel, pairs	40	Cannot be disposed of here.
	...	Do. side tip, with fittings	16	Four to be kept.
	...	Wheels, large, for Dowlaishweram crane.	8	Do.
	...	Do. for crane	8	Do.
	...	Do. iron wagons, pairs	8	Do.
	...	Do. large, Calcutta, axle	1	Do.
	...	Wooden wheel, old	1	Do.
	...	Old boiler (not in lists)	1	Might be sold here being useless.

BEZVADA,
7th January 1881.

(Signed) J. D. GRANT,
Executive Engineer, Eastern Division.

17. COIMBATORE DIVISION.—The stock balance at the close of September 1880 was only Rs. 779-11-9, of which the Executive Engineer proposes to retain all except two items valued at Rs. 32-4-0. He reports all can be used; the Committee therefore propose to accept his proposals, and recommend that the small unserviceable balance should be met by increase of rates on the remaining items.

18. PRESIDENCY DIVISION.—The stock balance in this division on the 30th September 1880 amounted to Rs. 2,063, of which the Superintendent of Works proposes to sell about 900 rupees worth, consisting chiefly of made-up doors and windows. It is clearly impossible to adjust this loss by increase of rates on the remaining articles of stock. The doors and windows were obtained for works the accounts of which are not yet closed; the Committee therefore recommend that the loss incurred by the sale should be debited to those works, the excess over estimate being covered by supplemental sanction, if necessary.

There is an item of 446 granite stones at Madras valued at Rs. 213-11-4. These stones have been on hand for some time; they are of no real value, but were brought away from old native buildings. The Superintendent of the Government Museum would be glad to take them over free of cost, and he would make use of the stones as posts about the Museum grounds.

The Committee recommend that the Superintendent of Works may be authorised to hand over the stones to the Superintendent of the Museum.

19. CHINGLEPUT DIVISION.—The stock balance on the 30th September 1880 was Rs. 4,332, of which Rs. 1,414-7-9 stand against an equilibrium valve which is stated to be in position at the Red Hills.

In regard to the rest, the Executive Engineer proposes to sell iron valued at Rs. 41-8-0 and worth, according to his estimate, only Rs. 10. Some granite stone, the book value of which is Rs. 1,614, the Executive Engineer considers not really worth more than Rs. 325. There is also gunpowder valued at Rs. 241, which it is stated is not required in the division.

The Committee recommend the following adjustments:—

(1.) The equilibrium valve should be charged to the work to which it was issued and on which it stands.

(2.) The loss incurred by the sale of the iron and granite stones to be debited to Profit and Loss, as the accounts of the works for which they were obtained have long since been closed.

(3.) The powder should be transferred to the Ordnance Department for deposit and issue when wanted by other parties.

20. MADRAS HARBOUR WORKS.—The stock balance on the 30th September 1880 stood at Rs. 1,88,048-3-5. The statement submitted contains proposals regarding items the book value of which is only Rs. 16,130. No returns have been received from the Superintendent for two years, showing what stock and tools and plant he actually has on hand; and until these are furnished the question cannot be dealt with. The Committee are consequently unable to make any recommendations. The subject is of the less importance, as the Madras Harbour Works will cease to exist as a division in another year, and all accounts connected with them will be finally closed.

21. NORTH ARCOT.—In this division there is practically no stock, the only article, valued Rs. 64-14-0, on hand being a rope. An early opportunity should be taken to charge this off to the work on which it may be required, and if such is not likely to occur, it should be sent to the Public Works Stores for disposal.

22. PRESIDENCY STORES.—The balance on hand on the 30th September 1880 was valued at Rs. 4,04,236-10-6. The Superintendent has submitted a list of the stores in stock divided into four classes:—

A. Articles not likely to be used within 18 months.
B. Articles which he considers should be kept in stock.
C. Articles the outright sale of which is recommended.
D. Stores received from district officers which can be repaired and kept for issue when indented for.

In regard to Class A, the Superintendent estimates that the sale of these articles by auction, or by tender, would probably involve a loss of about Rs. 98,000. Judging by past demands from the Railway Companies and the public generally for similar stores, he considers that if the extra percentages as per margin at present charged to other than public departments were removed, and the stores for sale extensively advertised, purchasers would be found. As the outright sale of these stores will undoubtedly involve heavy loss, and they are of exceptionally good quality, the Committee are of opinion that, before the outright sale is ordered, the proposals of the Superintendent should be tried for some time,

Instruments 15 per cent.
Machinery 17 ,,
Tools and plant 20 per cent.
Stock 22 per cent.

not only for the stores enumerated in Class A, but for all those in stock, giving the Superintendent the additional discretion of reducing the book-rate in cases in which he may consider it necessary to ensure a sale, the loss being debited to "Profit and Loss."

23. The articles in Class C reported as quite unserviceable, and kept on the books without value, the Committee recommend should be sold by auction at an early date. The Committee also recommend that the Superintendent be ordered to submit a full report of the result of the experiment before the close of the official year 1881-82. It is further recommended that no further stores of any description should be purchased or indented for without estimates for the same being submitted and sanctioned under the rules applicable to Original Works.

24. CONSULTING ARCHITECT DIVISION.—On the 30th September 1880 the balance at debit of stock was Rs. 46,465-2-1, of which Rs. 42,743-7-11 is charged on account of manufacture and carriage. The difference between these two figures (Rs. 3,721-10-2) represents value of articles on hand, which the Consulting Architect states will be required for works in progress. The large sum of Rs. 42,743, however, is thus accounted for by the Consulting Architect:—

	RS.
Value of patent pottery kiln	26,454
Do. of sheds	5,388
Do. of land	3,589
Stock actually on ground	4,271
Do. issued but not charged	3,041
Total ...	42,743

It is reported that the actual debit to the kiln will be reduced at the end of the year to Rs. 24,000, but that the whole sum on account of the brickfield remaining unadjusted will come up to Rs. 33,000. The kiln was constructed in the year 1873, and had the proper procedure of charging a fair percentage to all outturn and crediting it to the brickfield been followed, this large sum would not have remained to be adjusted at this late period.

Mr. Chisholm states that with General Walker's concurrence in 1875 a sum of Rs. 20,000 was entered in the estimates for the Post Office and Telegraph Office as a fair sum to charge off in return for the benefit those buildings would derive from the kiln. From the accounts it appears that nothing has yet been charged.

Under these circumstances, the Committee consider that, as it would not repay the labor that would be necessary to go back upon the accounts of past years to enable the Consulting Architect to charge off the correct percentage rate to all the issues, it may, as a special case, be considered permissible to charge off the lump sum of Rs. 20,000 as originally proposed, the Consulting Architect being given to understand that he will be held personally responsible that he does not again allow such an accumulation of debits to arise without making the necessary adjustments month by month to the credit of his manufacture account.

25. WEST COAST.—The stock balance of the division on the 30th September 1880 was Rs. 13,656, of which Rs. 1,466 is for "manufacture and carriage." The Executive Engineer proposes to sell the lime kilns with sheds at Wellington and Ootacamund, and also stock to the value of about Rs. 2,300. The remainder to be retained, as being likely to be required for works within the next 18 months.

The kilns should before now have been written off the books by debit to the works for which they were originally constructed. The accounts of these have long since been closed, and as the Executive Engineer reports that the kilns are practically useless, the Committee recommend that if a purchaser can be found, they may be sold and the loss debited to Profit and Loss. In any case the kilns should be written off the stock accounts.

On the stock he proposes to sell the Executive Engineer estimates the loss will be about Rs. 1,050, which he proposes to distribute as follows:—

	RS.
I. By debit to Works	112
II. By debit to Works and Profit and Loss	362
III. By debit to Profit and Loss	582

As the articles enumerated under Classes I and II will be required for works, the Committee are of opinion that the whole value should be charged off to these works, provision being made in the estimates for the exceptionally high charges by entering slightly increased rates.

As it appears that the articles in Class III will not probably be required for works, the Committee recommend that they may be disposed of as the Executive Engineer proposes and the loss debited to Profit and Loss.

295/13

The articles as per margin the Executive Engineer considers may be useful to the Local Fund Boards; they should therefore be offered to them, the Executive Engineer being left discretionary power to accept a lower sum than the book value, should he consider it for the interest of Government.

	Book Value. Rs. A. P.
211½ Patent Fuze Coils	105 12 0
243 Do.	128 10 0
7 Iron Plates	88 8 11

26. The stock expenditure during the period from October 1879 to 30th September 1880 is shown to be Rs. 5,544, chiefly under "Building Materials" and "Miscellaneous."

Most of the articles under these heads can be obtained when necessary for works after they are sanctioned; the Committee therefore are of opinion that the limit for reserve stock should not be fixed at a higher sum than Rs. 2,000, as that limit should amply suffice to admit of any stock being kept which it is known cannot be obtained within a reasonable time, and which it is considered should be retained as being likely to be required for emergencies.

Every endeavour should be made to reduce the stock balance to this limit, and lower if possible.

27. PRESIDENCY PUBLIC WORKS WORKSHOPS.—The Superintendent submits a list of stock belonging to the Workshops, the total book value of which is Rs. 1,43,513. He proposes the transfer to the Public Works Stores of articles to the value of Rs. 1,00,851-6-4, with a view to their sale eventually, and to the immediate relief to the Workshops of the interest charges. Rs. 33,540 worth of stock he proposes to retain, and other articles valued at Rs. 9,121-0-1 he suggests should be sold by auction. Of the articles proposed for transfer to the Stores the Committee are of opinion that those as per margin should be sold and not retained, as being likely to realize more now than if kept for an indefinite period. The principle involved in the transfer of manufactured goods and other stores from the Workshops to the Public Works Stores should not, the Committee are of opinion, be as a rule permitted, inasmuch as it would tend to encourge over-manufacture of articles not immediately required in seasons when the shops are short of work, so as to keep them going and possibly make them appear to be profitable when the reverse is the case. As the object of the present proposals is, once for all, to endeavour to place the Workshops on a satisfactory footing by relieving them of all charges not properly belonging to them, the Committee recommend that the transfer of the remaining articles, valued at Rs. 96,734, to the Public Works Stores may, as a very special case, be sanctioned, the same steps being taken for their early disposal as have been recommended for the other Public Works Stores.

	Rs. A. P.
94 Wheel barrows valued at	1,598 0 0
11 Wall brackets	104 8 0
1 Tent	185 0 0
3 Trestle cots	90 0 0
5 Copying presses	236 4 0
7 Iron camp cots	132 3 9
Vulcanized Indian Rubber	1,881 0 9
Total ..	4,127 0 6

28. The articles proposed by the Superintendent to be retained, as being likely to be used within the next 18 months, consists chiefly of metals, fuel, tools, &c.; these retention may therefore be sanctioned, as may also, in the opinion of the Committee, the proposals in regard to the auction of stock valued at Rs. 9,121. No purchases of fresh stock should, however, be allowed, and materials required should be obtained on indent from the stores for specified jobs.

29. The Superintendent represents that the value at which the machinery stands on the books is considerably in excess of the real value, and gives a comparative statement showing the book value and that at which he estimates the present value of each machine, the totals being as per margin. The difference, Rs. 19,546, he wishes to be written off to Profit and Loss account.

	Rs.
Total book value	86,759
Superintendent's estimate	67,213
Difference	19,546

G.O., No. 668, dated 7th March 1871.

Depreciation of machinery has been, since the year 1870-71, charged off at 2 per cent. under the marginally-noted orders.

It appears to the Committee that this is too small a percentage to deduct, as it is improbable that the machines will be effectively used for the number of years represented by that small depreciation percentage. It is natural that those responsible for the Workshops should desire low depreciation charges, as thereby fewer calls are made upon the gross receipts before the net profit is brought out, and hence the revenue is made to appear as great as possible; but it appears an unsafe procedure to admit, for the real facts will eventually force attention and compel a large write off at some future date.

This has been in a measure proved by the past history of the Workshops, and it would appear that 5 per cent. would be a more reasonable percentage charge to fix for depreciation charges, including cost of repairs on account of machinery. Prior to the year 1870-71 the charge for depreciation was written off at 10 per cent. The accounts show that since 1872-73, besides the depreciation charges, heavy and increasing amounts have been spent for repairs, and these have

795/14

been debited to "General Charges," and do not appear against "Machinery." The table given below shows, year by year for the last ten years, the amounts which have been written off on account of depreciation and the charges for repairs to machinery. The amount of depreciation charges as they would have been at 5 per cent. and the value of work outturned by the Workshops are also entered for comparison. It further appears that the Workshops machinery was re-valued by Mr. Grainger in the year 1877-78, and the difference, viz., Rs. 26,574, between the then book value and the estimated value was written off. Reviewing the above facts, the results appear briefly to be as follows:—

—	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	Total.
Depreciation charge written off.	10 per cent. 6,011	10 per cent. 5,832	10 per cent. 5,269	2 per cent. 997	979	1,573	1,542	1,536	1,505	1,475	1,501	1,577	1,800	31,597
Repairing charges.	..	..	..	..	..	750	..	2,203	600	695	2,577	12,101	5,863	*24,789
Total, Depreciation and Repairing.	..	..	..	..	..	..	..	..	..	..	..	..	..	56,386
Depreciation as it would have been at 5 per cent.	3,005	2,716	2,635	2,492	2,447	3,933	3,854	3,845	3,763	3,688	3,752	3,943	4,500	44,573
Excess over 5 per cent.	..	..	..	..	..	..	..	..	..	..	..	..	..	11,813
Value of work outturned in Workshop.	..	..	..	94,815	1,11,195	1,35,650	1,80,585	2,08,645	2,32,326	4,44,308	5,73,476	2,58,200	2,16,876	..

* Does not include Item No. 2 of Profit and Loss account, materials on account of repairs to tools, machinery, shops and petty working charges.

	Rs.
Original cost of machinery	60,115
Additions since made	92,186
Add repairs to do.	24,789
(Debited to general charges instead of to Tools and Plant, see Table G.)	
Total cost of machinery ...	1,77,090
Depreciation charges written off	31,597
Amount written off on Mr. Grainger's report	26,574
Value sold	524
	58,695
Balance	1,18,395

Had the 5 per cent. depreciation charge ruled during the whole time, the deductions would have been as follows:—

	Rs.
Depreciation charges written off	44,573
Write off on Mr. Grainger's report	26,574
Less	5,659
Value sold	20,915
	524
	66,012

and the balance value of the machinery would have been Rs. 1,11,078 instead of Rs. 1,18,395; the Committee would therefore recommend the write off against Government of the difference, viz., Rs. 7,317, instead of Rs. 19,546 as suggested by the Superintendent of Workshops.

30. The Superintendent further proposes a reduction of the debit to Capital on account of "Block" by revaluation of the buildings, or by a larger share of the charge thereof being transferred to stores.

The workshops utilize the greater part of the buildings, hence the transfer to stores of a large proportion of the charge for them appears to the Committee inadmissible; and in regard to the revaluation it has to be borne in mind that the original arrangements were made, estimated for and carried out by Mr. Grainger, and that additions have since been made which should not have been the case if the premises were already too extensive; any relief therefore under this head cannot, the Committee think, be justly recommended.

31. In order to make the workshops pay it appears that more than a relief from charges on account of interest and depreciation is necessary, and is to be attained only by the most careful scrutiny of all the arrangements and check over unnecessary expenditure, more especially in connection with the general expenses consisting of general departmental supervision, office establishment, labor and material on general account, and repairs to machinery. The charges for general departmental supervision are as follow:—

1.—Moiety of pay and allowances of the General Superintendent.

2. Full pay and allowances of the Sub-Engineer.

The total of both amounting to Rs. 710 per mensem.

3. The additional establishment detailed below, of which particulars are given for the last ten years.

Statement showing the state of Departmental Supervision for ten years.

—	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	Remarks.
1 Smith Maistry.	40	40	40	40	40	40	50	50	35	45	
1 Do. ..	..	..	..	..	..	..	..	..	35	35	Superfluous.
1 Carpenters' Foreman.	..	..	A. 30	A. 30	RS. 1	..	60	60	80	80	
1 Do. Maistry.	Day 1	12	12	1	Month 30	30	35	35	35	35	
1 Turner Maistry.	30	30	30	30	35	35	40	40	40	40	
1 Do. do.	..	..	..	..	..	..	..	..	30	30	Superfluous
1 Filer Maistry	..	..	..	..	..	30	35	35	35	30	
1 Do. ..	..	..	..	..	..	..	..	..	30	30	Superfluous
Total, work turned out.	111,195	135,650	180,585	208,645	232,326	444,308	573,476	258,201	216,876		

From this table it will be seen that there has been a most marked increase in the cost of this portion of the establishment, especially during the last two years, which a comparison with the work outturned does not appear to justify. The numbers and rates of pay of some of the men employed during this latter period are greater than in the years 1876-77 and 1877-78, in which the outturn of work was more than double, and which, moreover, were famine years.

The additional men noted in the remark column of the table appear to the Committee superfluous; under "Office Establishment," besides the regularly sanctioned establishment, there is a contingent establishment of clerks, conocopilays, attenders, and boys appointed by the Superintendent. The particulars of this contingent establishment are given below for the last ten years, and it will be seen that here also there has been an increase in the numbers and rates of pay of this establishment during the last two years. The Committee consider that no establishment should be entertained except under the Public Works ordinary rules, and men otherwise engaged for special jobs should be debited to those jobs as work establishment and not to general charges. Looking at the figures given, nearly as much work was turned out in the year 1873-74 when there was no such contingent establishment; its continuance therefore appears to the Committee to be unnecessary.

Contingent Establishment.

—	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	Remarks.
					Day.				RS. A. P.	RS. A. P.	
Smith's Conocopilay.	..	..	..	..	0 5 0	0 7 0	0 10 0	0 10 0	15 0 0	15 0 0	
Filer and Turner	..	..	..	..	..	0 5 0	0 7 0	0 7 0	15 0 0	Day. 0 6 0	
do.											
Foundry do. ..	..	..	..	..	..	0 5 0	0 8 0	0 10 0	15 0 0	15 0 0	Unnecessary, the work being let on contract.
							RS.				
Carpenter do. ..	..	..	..	..	0 7 0	0 8 0	20 0 0	20 0 0	20 0 0	20 0 0	
One Clerk ..	..	..	..	..	..	..	15 0 0	15 0 0	25 0 0	25 0 0	
Do. ..	..	..	..	..	..	..	25 0 0	25 0 0	25 0 0	25 0 0	
Do. ..	..	..	..	15 0 0	15 0 0	15 0 0	15 0 0	15 0 0	17 8 0	17 8 0	
Do. ..	..	..	..	15 0 0	15 0 0	15 0 0	15 0 0	17 8 0	17 8 0	17 8 0	
Moochee ..	..	..	..	..	..	..	0 6 6	0 6 6	0 6 6	0 6 0	
Attenders, three, at 6 and 8 As.	..	..	..	..	..	..	3 0 0	3 0 0	3 0 0	3 0 0	Besides these there are also coolies attending to office work.
Boys, four, at 3 As.	..	..	..	..	..	..	..	..	4 0 0	4 0 0	

32. In addition to the above there are charges for labor and materials for general purposes, over which the Superintendent alone can exercise an efficient check; but the Committee consider that it should be distinctly understood that there should be no such charges to this head of items which can properly be charged to the jobs in hand. After jobs have been completed and debited with the charges for labor and materials, and a "percentage for general charges," there is an additional charge for "extra profit." This does not appear to the Committee a correct or politic charge, the object being to make the workshops pay, the charges should not be more than is necessary to attain this object. If the general percentage charge is insufficient, it should be increased instead of an entirely fresh charge being made under the name of "extra profit."

33. The balance at debit of raw materials and manufactured goods is charged with interest; it should therefore be kept as low as possible, and this the Committee consider can be attained by the workshops only manufacturing upon definite orders, and obtaining materials from the Public Works Stores on indent for each order as required: even if the measures above adverted to are sanctioned, the Committee are of opinion that the results will not show a profit, unless the general charges and the management of the shops receive the greatest attention. With this view they consider that more detailed information regarding the transactions from month to month is necessary. At present all that is reported monthly is the amounts received by the workshops and the amounts repaid by it to Government; of the intermediate transactions, on the proper management of which so much depends, nothing is known in the Examiner's Office or by Government.

Past experience shows that the following restrictions are necessary:—

I.—No work to be executed except upon regularly sanctioned estimates: with half the estimated amounts paid in advance when the work is ordered by private individuals or the general public.

II.—No additions or repairs to block or machinery to be undertaken except on estimates regularly sanctioned under Public Works Department original works rules, the Superintendent having the powers of an Executive Engineer within the limits as to total funds, to be fixed from year to year by Government. In the event of no funds being allotted, of course no sanctions could be given.

III.—No establishment other than work establishment to be entertained except under the usual Public Works Department establishment rules.

IV.—The purchases of stores or materials of any kind should not be permitted, but all such should be obtained from the Public Works Stores on indent, specifying the particular job for which they are wanted and to which the whole should be charged.

In order to afford the means of ensuring that these points receive attention, the accompanying schedules (marked A to F) should accompany the accounts.

As the journal and ledger are closed every month, there will be no difficulty in abstracting this information; and the remaining operations necessary to arrive at the general profit and loss account, which brings out the results of the transactions, can be effected in the Examiner's Office.

A.

Dr. Stock Account Current. Cr.

	Rs.		Rs.
To Balance	...	By Issue to Mechanical Department.	...
Value received from Public Works Stores	...	Do. Instrument do.	...
		Do. General do.	...
Value received from Commissariat Department	...	Do. Foundry do.	...
		Balance ...	...
Total ...	...	Total ...	...

B.

Dr. Account of Adjustment. Cr.

	Rs.		Rs.
To work done by arsenal	...	By debit to Mechanical Department.	...
		General charges	...
Total ...	...	Total ...	...

C.

Detail Statement of General Charges for the month of

Particulars.	Cash.	Stock.	Adjustment.	Remarks.
	Rs.	Rs.	Rs.	
General supervision	...	...	...	
Office establishment	...	...	...	
Engine Driver	...	...	...	
Fireman	...	...	...	
Coolies	...	...	...	
Coal	...	...	...	} For the engine in Mechanical Department.
Charcoal	...	...	...	
Other materials	...	...	...	
Work done by other Department.	...	...	...	
Total ...	...	...	...	

D.

Statement of Debits and Credits to the Items making up the Capital of the Workshop for the month of

Particulars.	Balance at the end of last Month.	Debits during the Month.	Total.	Credits during the Month.	Balance at the end of Month.	Remarks.
Block	...	...	...	...	...	
Machinery	...	...	...	...	...	
Raw materials	...	...	...	...	...	
Manufacture	...	...	...	...	...	
Mechanical Department ...	...	...	...	...	...	
Instrument do. ...	...	...	...	...	...	
Foundry	...	...	...	...	...	
Public Department	...	...	...	...	...	
Sales	...	...	...	...	...	
Cash	...	...	...	...	...	

795/16

E.

Statement of Percentages charged up to .

Department.	Amount.	Remarks.
	Rs.	
Mechanical Department	...	
Instrument do.	...	
Foundry	...	
Raw materials	...	

F.

Dr. Statement of surrender and demands up to the month of . Cr.

	Rs.		Rs.
To Cash paid into Treasury	...	By Letters of Credit	...
Adjustment by transfer	...	Stores received from Public Department	...
		Interest on Capital	...
		Leave and Pension allowances.	...
		Net Profit	...
		Decrease of Capital	...
Total ...	...	Total ...	...

34. BUCKINGHAM CANAL.—The Superintendent of Works was desired by the Government to reconsider his proposal to bring materials valued at Rs. 11,436 on the Stock Account, and he states in his letter to the Committee of the 4th December that the Government have sanctioned the retention of materials to the value of Rs. 9,375, the remainder to be disposed of by sale.

The Superintendent of Works has informed the Committee that he has six small boats and two spoil boats that are unfit for further use; that he has scientific instruments in excess of normal requirements but that are wanted at present by survey parties, and that there are surplus tools, viz., 1,279 pickaxes, 476 crowbars, 8,803 mamooties, and sundry other minor items, as also some furniture which are available for transfer or sale.

The Committee recommend that the eight unserviceable boats be sold off, and are of opinion that the Superintendent of Works should return the tools he does not require to the Public Works Stores for disposal and sell off the surplus furniture. The value of the boats has been already charged to the works, and the sale proceeds will be credited in the canal accounts; otherwise the Superintendent shows in his returns that he has no stock on hand.

35. GAS WORKS, FORT ST. GEORGE.—The Superintendent states that the greater part of the materials on his list,* dated the 4th March last, are required for the present gas works, but that there are a good many brass materials under the last head in the list that are old and useless; these are marked *c*.

* Enclosed.

There is also a large quantity of stores that have been in the charge of the Public Works Department, and of the articles entered in the other list,† dated the 28th October 1880, a few only marked *a* and *b* are wanted for the present gas works. The remaining large proportion of the stores is not likely to be used, unless the extension of the gas works be sanctioned, in which event all the articles marked *c* would be required.

† Enclosed.

Doctor Rogers considers that these latter stores marked *c* would be sold locally at a great loss, and he believes it would be worthwhile to send the brass fittings, &c., to England, if they are not to be kept. The Committee recommend that the Superintendent of the Gas Works be authorised to sell off the unserviceable articles marked *c* on his list of the 4th March 1880.

The whole of the gas works stores have been charged to the works and none are brought on to stock account.

36. The Committee are unable to judge whether the extension of the gas works is likely to be carried out, or if the stores marked *c* on the list of 28th October are to be considered as surplus and an incumbrance. These stores are kept by the Superintendent of Works, who says they do not in reality give him any trouble, as they are locked up in a separate store room.

While then there is no urgency in the matter, the Committee think that if the gas materials are not to be brought into use soon, it will hardly be expedient to send the brass and glass fittings, the tubes, pipes, &c., back to Europe, but that all should be cleared out by auction sale. The original list of gas stores shows that they were sent from the Tharrow Field Iron Works at Glasgow, and as the list is dated the 1st June 1869, there is little prospect of a remunerative price being given if the stores were taken back.

37. PIER STORES.—The Master Attendant proposes to use up the old pier stores lying in the fort in constructing jetties for boats within the harbour. These stores may be turned to account at any time, and the Committee recommend that they may be held at the disposal of the Master Attendant.

List of Gas Materials remaining under the charge of the Superintendent of the Government Gas Works on the 25th February 1880.

Quantity.	Description of Articles.	Remarks.
10	Common round shades, large	
1	Flowered do.	Good.
38	Frosted do.	Do.
2	Chamber shades, small	Do.
2	Frosted chamber shades	Do.
29	Chimneys	Do.
6	Punkah or shade tops	Do.
1	Lantern covered on three sides with an oval glass and with tin cover and chimney on the back.	Moderate.
1	Spare oval glass for the above lantern	Good.
1	New gas lantern made of brass for muster	Do.
10	Lanterns for oil light	Do.
About 600	Feet of composition pipes of ½ inch in diameter	Moderate.
About 49	Feet of do. of ¼ inch in diameter with ten side lights attached.	Good and new.
5 feet.	¼ Inch composition pipes in three pieces	Good.
12 „	⅜ Inch do. in three pieces	Old.
10 „	½ Inch do. in two pieces	Old.
3 „	1 Inch leaden pipes with a stop cock attached	Old.
2½ „	1¼ Inch do. do.	Old.
1	Leaden flange with four holes	Old.
1	Glass flower-case	Old.
a 1	20 lights metre	Good.
1	Large old metre	Do.
1	Photometer, complete	Old and rotten.
6	Brass screws for the above metre	Good and new.
2	Jets of the above	Do.
1	Box containing scales and weights and 1 thermometer	Do.
3½	Dozen jets	Do.
1	Argand burner	Do.
1	Wooden ladder, small	New.
	Brass Materials.	Good.
40	Wall brackets, bronzed	
2	1 Inch stop cocks for the use of main pipes	Good, 3 useless.
10	1 Inch do. for the use of service pipes	New and good.
3	1 Inch stop cocks for the use of leaden pipes	New.
6	Wall brackets with pieces of wrought iron pipes attached.	Old.
9	Chimney holders	Old.
2	Side lights of theatre room	Good.
17	1½ Inch brass unions for iron pipes	Old.
2	1 Inch do. iron and lead	New and good.
1	1½ Inch do. do.	Do.
30	⅜ and ¼ inch do. do.	Do.
35	⅜ and ¼ inch do. leaden pipes only	Good.
34	⅜ Inch brass tees for the use of iron pipes	Do.
17	⅜ Inch do. do. of leaden pipes	Do.
27	¼ Inch do. do. of do.	Do.

List of Gas Materials remaining under the charge of the Superintendent, &c.—*cont.*

Quantity.	Description of Articles.	Remarks.
	Brass Materials—cont.	
48	Brass elbows	Twenty-three quite new and 25 good.
15	Argand burners for chimneys	Good.
22	Do. for shades	Do.
117	Brass galleries or shade holders	Do.
1	Eight lights star with jets attached	Do.
2	Brass gilt pendants of sorts	New and good.
1	Handsome bracket, bronzed	Good.
1	Brass blow-pipe	Do.
9	Jets of different sorts	Do.
3	Brass pipes of small size	Do.
1	Iron pipe with a funnel and brass stop cock attached	Moderate.
1	Eight-sided light	Old.
1	Light in the form of A	Old.
1	Do. do. of V	Old.
	Iron Materials.	
2	Furnace frames	Good.
1	Do. door	Do.
1	Lid of the retort	Do.
14	Ash-pans of the furnace	Do.
1	Key for the lid of the retort	Do.
6	Trays for small lime purifiers	Do.
1	Pickaxe	Do.
2	Tongs	Do.
2	Iron frames for the mouth piece of the retort	Do.
About 130	Feet of wrought iron pipes of 1 inch	Do.
5	Syphon boxes	Do.
1	Collar of cast iron pipe, 4 inches in diameter	Do.
a 2	Lamp posts of the reading room, of wood	Old.
2	Do. of wrought iron pipes	Old.
6	Long pendants of 7 feet each	Good.
26	Iron tees of 1 inch	Moderate.
9	Elbows	Do.
4	Caps	Do.
105	1 Inch iron couplets	Moderate.
6	Iron hooks for hanging lanterns	Good.
5	Keys for turning valves, &c.	Do.
3	4 Inch pipes of 3 feet with a branch cast in it	Do.
3	Mouth pieces	Do.
1	Retort cost 94 rupees 11 annas	Do.
	One packed dealwood box containing the following articles:—	
2	Large round shades	New and good.
2	Small do.	Do.
2	Large shade covers	Do.
2	Small do.	Do.
2	Large shade holders	Do.
1	1 Inch brass stop cock	Do.
1	Large brass ceiling plate	Do.
2	Small brass unions	Do.
1	½ Inch stop cock	Do.
1	Stop cock for iron and lead	Do.
1	Do. leaden tubes	Do.
1	Do. elbow everything complete	Do.
1	Double bracket	Do.
1	Single do. with a shade holder	Do.
3	Packs containing 23 dozen jets	Do.
1	Pack do. 5 crutches	Do.
1	Packed dealwood box full of iron pipes	Do.

795/17

List of Gas Materials remaining under the charge of the Superintendent, &c.—*cont.*

Quantity.	Description of Articles.		Remarks.
	Coals.		
...	* Cannel coal remaining on the 25th February 1880 is about	TONS. £. 311 1,830	Per ton. RS. A. P. 33 6 11
...	Common coal remaining on the 25th February 1880	7 2,202	Per ton. RS. A. P. 26 8 0
	Old and rotten materials, Brass materials.		
12	Frosted round shades		Broken.
3	Brass sundries		Old and rotten.
3	1 Inch brass stop cocks		Do.
5	1 Inch do. do. plugs		Do.
17	Ceiling plates of sort		Old and broken.
21	Plugs of the stop cocks of old pendants and side lights.		Old and rotten.
12	Stop cocks of the old pendants		Do.
32	Elbows		Do.
7	Side lights		Do.
2	¾ Inch brass stop cocks		Do.
6	Locks, old, of the boxes in barracks		Do.
3	Brass hinges		Do.
1	Do. wheel		Do.
1	¾ Inch to ½ inch stop cock		Do.
1	Copper measure with a stop cock		Do.
1	Iron frame and door		Do.
30	Old pendants		Do.
2	Outlet valves, old		Do.
2	Pulleys, old		Do.
1	Portable forge		Do.
1	Water gas retort		Do.
1	Furnace for melting lead		Do.
1	Hydraulic main of oil gas		Do.
2	Oil gas measures or retorts		Do.
4	Lids of the retort		Do.
6	Ash-pans		Old and rotten.
About 50	Feet of chains		Do.
About 30	Do. of wrought iron pipes		Do.
4	Iron rollers		Do.
3	Iron bars		Do.
1	4-inch pipe, 6 feet long		Do.
3	Round hammers		Do.
6	Keys of oil gas retorts		Three broken.
11	Iron dies		Old.
6	Retorts, unserviceable		Moderate.
68	Feet of thick coir ropes		Rotten.
38	Do. of do. hemp ropes		Old.
2	Tin cisterns		Old.
.	Several sundries of iron pipe, bolts, nuts, rods, &c., weighing about 3 or 4 maunds.		Old and rotten. All corroded and useless.

a. a. c. a. c.

* Note dated 7th December 1880, this amount was arrived at by calculation merely.—T.K.R.

MADRAS,
4th March 1880.

(Signed) T. K. ROGERS, M.B., F.R.C.S.,
Chemical Exr. & Supt., Gas Works.

Gas Work Materials under charge of the Public Works Department.

Name of Material.		
Stock and dies, ⅛ and ⅜ inch	Set	1
Do. ½ and 1 ,, ...	,,	1
Do. ¼ × ⅜ for brass-work	,,	1
Rymers 2, 1½, 1¼ inch	,,	1

a.

Gas Work Materials under charge of the Public Works Department—*cont.*

Name of Materials.			
Tube lure	No.	1	
Pliers, gas-fitters...	,,	6	
Augers, worm	,,	4	
Pipe-cutter, large	,,	1	
Cast steel yarming tools	,,	1	a
Spanners for cocks	,,	7	a
Do. back nuts	,,	8	
Pipe tongs, ¾, 2, 2¼ inch	,,	1	
Plug	,,	7	
Hand hammer	,,	1	
Fire clay retorts	,,	6	
Cast iron oval retorts	,,	4	
Do. at bottom	,,	4	
Do. mouth pieces	,,	1	c
Do. mouth covering plate	,,	13	
Do. do.	,,	13	
Do. 3-inch way pipe box	,,	1	
Do. socket pipes, 9 feet long, 3 inch diameter ...	,,	16	a
Do. do. 9 do. 4 do. ...	,,	29	
Do. bend, 4 inches diameter	,,	6	c
Do. pipe, 6 feet long, 1½ inches diameter ...	,,	566	
Do. do. 4 do. 1 do.	,,	2,528	
Iron chain, 22 do.	,,	6	a
Iron hooks, large	,,	6	
Do. do.	,,	6	
Do. do.	,,	5	
Do. do.	,,	7	c
Iron handles	,,	3	
Iron jumper	,,	1	
Lead tube, 2 inch	R. ft.	12	
Do. 1½ ,, ...	,,	27	
Do. 1 ,, ...	,,	68	c
Do. ¾ ,, ...	,,	24	
Do. ½ ,, ...	,,	240	
Do. ⅜ ,, ...	,,	120	a
Brass main cocks, 2 inch	,,	1	
Do. do. 1½ ,, ...	,,	76	b 25
Do. do. 1 ,, ...	,,	18	a
Do. do. ¾ ,, ...	,,	10	b 2 new.
Do. do. ½ ,, ...	,,	109	b 50
Do. do. ⅜ ,, ...	,,	534	b 200
Do. do. ½ ,, ...	,,	10	a
Do. do. 1 ,, ...	,,	15	b 5 new.
Union for iron and tin, 2 inch	,,	2	
Do. do. 1½ ,, ...	,,	10	
Do. do. 1 ,, ...	,,	2	c
Ceiling plate, ½ ,, ...	,,	68	
Do. ⅜ ,, ...	,,	336	
Elbow cocks and galleries, ¾ inch	,,	545	b 200
Do. drop screws, ¾ inch	,,	328	b 200
Do. do. 1 ,, ...	,,	110	
Do. do. ¾ ,, ...	,,	14	c
Do. do. 1 ,, ...	,,	2	
Do. do. for tin, ½ inch	,,	83	b 40
Brass lever for socket	,,	21	
Lever lantern cocks	,,	145	c
Copper syphon pumper	No.	2	a
Water gauges with glass tube	,,	4	b 2
1½-inch cocks, brass plug	,,	7	1 c
1 do. do.	,,	1	
India-rubber bags for mains	,,	15	a
Wet meter, 80 lights	,,	1	
Do. 10 do.	,,	1	c
Bodies for 15 set pendants	,,	2	
Drop for do. 16 feet long	,,	2	

295/18

Gas Work Materials under charge of the Public Works Department—*cont.*

Name of Materials.			
Bodies for 4 set	No.	4	
Do. for 3 set	„	2	
Double brackets, two lights	„	2	
Do. joint bracks	„	3	
Bodies for pendants, 6 set	„	4	
Drop tubes, 2 inch	„	2	*c*
16 feet long and bodies 2 inches	„	3	
27 do. and do. 2 „	„	1	
16 do. and do. 3 „	„	2	
7 do. and do. 4 feet	„	1	
13 do. and do. 6 „	„	1	
Pan head revets, $\frac{1}{2}$ and $\frac{1}{4}$ inch	„	3,074	*a* burners.
Snap head revets, $\frac{7}{16}$ and $\frac{1}{4}$ „	„	3,252	*a*
Side glass	„	1,102	
Top glass	„	2,211	
Bottom glass	„	403	
Clear glass globes, 8 inch	„	1,859	
Cut do. 8 „	„	457	
Large glass chimneys, 3 boxes	„	136	*c*
Punkah tops with wire gauge bottoms, 5 boxes	„	800	
W. I. pendants, $3\frac{3}{4}$ long $\frac{1}{2}$ diameter	„	70	
Do. tubes with coupling 1 inch diameter, $1\frac{3}{4}$ feet long.	„	36	
Do. do. $1\frac{1}{2}$ do.	„	8	
Do. do. 1 inch diameter $1\frac{3}{4}$ do.	„	103	
Do. do. $1\frac{1}{2}$ inch do. $1\frac{1}{2}$ do.	„	30	
W. I. tubes with coupling 1 ft. diameter, $\frac{1}{2}$ ft. long	„	5	
Do. bend $1\frac{1}{2}$ inch do.	„	67	
Do. do. 1 „ do.	„	16	*c*
Do. do. $\frac{1}{2}$ „ do.	„	5	
Do. tubes for lamp tops, $1\frac{1}{2}$ feet long, $\frac{3}{4}$ inch diameter.	„	504	
Do. pendants	„	485	*b* 150
Do. rod, $6\frac{1}{2}$ feet long, $\frac{3}{4}$ inch	„	2	*c*
Do. carrying bars for retorts	„	2	
Do. charging scoops for retorts	„	1	*a*
Do. do. do small	„	1	
Do. C. I. 2-inch flange bend pipe	„	4	
Do. do. 3 feet long, 1 inch pipe fitted with plug $\frac{3}{8}$ inch.	„	28	
Do. do. flange and spigot pipes, $1\frac{1}{4}$ feet long, $1\frac{1}{8}$ inch diameter.	„	6	*c*
Do. do. do. $\frac{1}{2}$-inch diameter			
Do. 3-inch valve with handle	„	1	
Do. 2 do. do.	„	3	*a*
C. I. bends, $1\frac{1}{2}$ inch	„	1	
Do. do. $1\frac{1}{4}$ „	„	1	
Do. pipe 3 „ $\curlyvee$ $1\frac{1}{2}$ inch	„	6	*c*
Do. demy pipes	„	1	
Loose sockets	„	86	
Flange sockets valve	„	48	*b* all of 4 inch wanted.
C. I. 12-inch street syphon boxes	„	14	
Do. 10 „ do.	„	5	
Do. 8 „ do.	„	5	
Do. scrubbers sieves, pieces	„	1	
Do. iron sieves, oxide purifier	„	11	
Do. elbow connection bend, 1 inch	„	12	
Do. do. $1\frac{1}{2}$ „	„	47	
Do. syphon traps and covers	„	72	
Do. elbow carrior for brackets	„	39	
Do. lamp brackets	„	140	*c*
Do. bundles of flat backs for brackets	„	96	
Belly pipes, each 3 feet long with sockets at both ends and stopped for $1\frac{1}{2}$ serivices and fitted with plug	„	36	
Fire bars	„	15	
C. I. 14-inch lamp tops	„	30	
Do. do. do.	„	61	
	„	106	

Gas Work Materials under charge of the Public Works Department—*cont.*

Name of Materials.			
C. I. shell castings for lamp	No.	63	
Do. iron tops for lamp	„	123	
Solder bolts for brackets	„	29	
Bottom for lamps	„	141	
Rods	„	51	
Knobs	„	148	
W. I. elbow, 1, $\frac{1}{2}$, inch	„	98	
Do. tees, 1, $\frac{3}{4}$, 1 inch	„	45	
Do. do. $1\frac{1}{4}$, $\frac{1}{2}$, $1\frac{1}{4}$ „	„	130	
Do. do. 1, $\frac{1}{2}$, 1 „	„	66	
Do. do. $1\frac{1}{4}$, 1, $1\frac{1}{4}$ „	„	37	
Do. do. $1\frac{1}{4}$, $\frac{3}{4}$, $1\frac{1}{4}$ „	„	21	*c*
Do. do. $1\frac{1}{4}$, $\frac{3}{4}$, 1 „	„	9	
Do. do. $1\frac{1}{4}$, $\frac{1}{2}$, 1 „	„	13	
Do. do. 2, $\frac{1}{2}$, 1 „	„	3	
Do. do. 2, 1, 1 „	„	5	
Do. elbow 2, 2 inch	„	16	
Do. do. 1, $\frac{3}{4}$ „	„	27	
Do. tees 1, 2 1 inch	„	53	
Do. do. 2, 2, 1 „	„	10	
Do. do 2, $\frac{1}{2}$, 2 „	„	30	
Do. do. $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ „	„	33	
W. I. crosses, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch	„	12	*c*
Diminishing coupling, 2, $1\frac{1}{4}$ inch	„	1	
Do. do. $1\frac{1}{4}$, 1 „	„	5	*a*
$\frac{3}{4}$-inch tubes with couples 5 inches long	„	21	
Do. crosses, $1\frac{1}{4}$ inch	„	76	
Do. couplings, 1 inch	„	64	
Do. do. $\frac{3}{4}$ „	„	8	
Do. 2-inch tube ring nut	„	12	*c*
Do. $\frac{3}{4}$ „ to $\frac{1}{2}$ inch	„	29	
Do. screw nails, 6 inches long	„	80	
Do. bolts, 6 inches × $\frac{3}{4}$ inch	„	6	
Do. bends, $\frac{3}{4}$ inch to $\frac{3}{8}$ „	„	6	
Do. gas hooks	„	2,470	*b* all of small size wanted.
Do. washers	„	642	
C. I. lamp washers	„	53	
Screws, $1\frac{1}{2}$ inch × $\frac{1}{2}$ inch	„	360	
Roofing rivets, galvanized	„	756	
Do.	„	405	*c*
Rings,	„	723	
Snap head rivets, 1 inch × $\frac{1}{4}$ inch	„	230	
Do. $1\frac{1}{2}$ inch × $\frac{1}{4}$ inch	„	929	
Do. $\frac{3}{4}$ „ × $\frac{1}{4}$ „	„	22	
W. I. pipe, 2 inches diameter	R. ft.	473	
Do. $1\frac{1}{4}$ „ do.	„	4,200	*b* 500
Do. 1 „ do.	„	12,076	*c*
Do. $\frac{3}{4}$ „ do.	„	$139\frac{1}{2}$	*a*
Do. $\frac{1}{2}$ „ do.	„	1,762	
Do. $\frac{1}{4}$ „ do.			

CHEPAUK,
28th October 1880.

(Signed) S. C. PLUMMER, Lieutenant,
Assistant Engineer.

38. The Committee are of opinion that an unnecessarily large quantity of stock has been accumulated in several of the divisions, and the Committee recommend that the amounts entered in the enclosed statement should be considered as the limit of stock reserve.

Those divisions are omitted in which there is access by railway to the head-quarters, with the exception of Tanjore and Negapatam. In these two divisions a reserve supply of rough stone is required for the immediate protection of the larger irrigation works, but stock appears not to be necessary in the other divisions. In the Godávari and Kistna Deltas a stock of timber is represented to be indispensably required by the Superintendents of Works. Separate columns are entered in the statement for building materials, timber, metals, and a general head miscellaneous is given to comprise other stores. The Committee recommend that the reserve stock should be limited to the amounts under each head, and that the total should not be available to increase the limit given for any separate head. If the specific sums have been set down at figures which some experience shows to be too low, it will remain for the officers to show cause to the Government before an increase is allowed.

795/19

Statement showing the limit of reserve stock proposed for Executive Divisions.

Divisions.	Building Materials.	Timber.	Metals.	Miscellaneous.	Total.	Remarks.
Vizagapatam	...	...	...	500	500	No railway.
Dowlaishweram Workshops.	...	9,000	6,000	15,000	30,000	.....
Godávari Eastern ...	5,000	10,000	...	5,000	20,000	.....
Do. Western ...	...	500	...	500	1,000	.....
Kistna Eastern	3,000	10,000	5,000	2,000	20,000	Includes workshops.
Do. Western ...	...	500	...	500	1,000	
Nellore	...	1,000	...	500	1,500	
Cuddapah	...	...	...	...	...	
Buckingham Canal ...	...	...	...	...	...	On railway.
Salem	...	...	...	...	...	
West Coast	2,000	...	...	...	2,000	
Coimbatore	...	...	...	...	...	
Tinnevelly	...	...	...	...	...	On railway.
Trichinopoly	...	...	...	...	...	
Tanjore	12,000	...	...	...	12,000	
Negapatam	3,000	...	...	...	3,000	
South Arcot	...	...	...	...	...	
North Arcot	...	...	...	...	...	On railway.
Chingleput	...	...	...	...	...	
Presidency	...	...	...	...	...	
Architect	10,000	...	...	...	10,000	

39. MADRAS MINT MACHINERY.—The machinery and stores of the Mint have been lying unused for some years. Endeavours have been made to dispose of these superfluous stores at Calcutta and Bombay, but the engines, cranes, &c., entered in the enclosed list are still left in charge of the Storekeeper.

There is no probability of the Mint stores being turned to account again. The remarks made in the list show almost all the items "repairable;" in other words they are deteriorated and useless; and the Committee recommend that the whole should be sold off, although they believe that not more than the value of old iron will be realised.

List of Machinery, &c., belonging to the late Mint in the custody of the Storekeeper of Machinery.

Description.	Number or Quantity.	Remarks.
Crabs, double purchase ... ... No.	2	Repairable.
Crane, 2 tons ... ... "	1	Do.
Crane, small ... ... "	1	Do.
Crane for lifting crucibles ... ... "	2	Do.
Engines, 15 horse-power, combined in one ... ... "	1	Do.
Boiler for 12 horse-power vertical engine ... ... "	1	Engine repairable, boiler unserviceable.
Engine, 12 horse-power, with boiler ... ... "	1	Repairable, do.
Do. 6 do. vertical tubular ... ... "	1	Unserviceable.
Do. 6 do. do. ... ... "	1	Repairable.
Do. 6 do. do. ... ... "	1	Serviceable.
Fan blower, patent ... ... "	6	Do.
Fly wheels, spare ... ... "	2	Repairable.
Lathes, C. I., turning, 6 feet ... ... "	1	Do.
Do. do. 8 " ... ... "	2	Do.
Do. do. 9 " ... ... "	1	Do.
Do. do. 10 " ... ... "	1	Do.
Do. do. 12 " ... ... "	1	Do.
Do. do. 14 " ... ... "	2	Do.
Do. wooden, turning, small ... ... "		
Do. screw cutting, 12 feet bed with 5 feet bed attached ... ... "	1	Do.

List of Machinery, &c.—*cont.*

Description.	Number or Quantity.	Remarks.
Machines, coin sorting, with 40 beams for ½ rupees... No.	1	Repairable.
Do. wheel, teeth cutting ... ... "	1	Do.
Do. drilling, 6 feet ... ... "	1	Do.
Do. laminating ... ... "	5	Unserviceable.
Do. marking ... ... "	2	Repairable.
Do. planing, 12 feet ... ... "	2	Do.
Do. do. 3 " ... ... "	1	Do.
Do. polishing disc ... ... "	1	Do.
Do. punching and shearing ... ... "	1	Do.
Saws, circular, of sizes ... ... No.	21	...
Machine, platform weighing, to weigh one ton ... "	1	Repairable.
Presser, die, multiplying ... ... "	3	Do.
Tables, cutting C. I., fly ... ... "	24	Do.
Do. do. hand ... ... "	3	Do.
Do. do. brass, hand ... ... "	9	Do.
Bucket, foundry, large geared ... ... "	1	Do.
Shafting, of sizes, W. I. ... ... About feet	100	Do.
Pulleys, of sizes, for shafting ... ... No.	64	Do.
Brackets, C. I., do. ... ... "	64	Do.
Couplings, C. I., do. ... ... "	11	Do.
Ladder, wooden, square ... ... "	1	Do.
Hand-cart ... ... "	1	Do.
Table, circular, saw ... ... "	1	Do.

795/20.

40. TANJORE DIVISION.—In this division there is stock to the nominal value of Rs. 17,900, out of which it is proposed to retain nearly the whole at its full book value for use on works. A few articles aggregating in value not more than Rs. 50 will be sold, and the trifling loss on these items may, the Committee consider, be debited to Profit and Loss.

In this division it is necessary to maintain a considerable amount of stock in the shape of reserve store for use on anicut aprons; the exact amount necessary to be thus retained is still under consideration, but for the present the Committee recommend that the limit of value be fixed at Rs. 12,000.

41. NEGAPATAM DIVISION.—In this division there was on the 1st of October 1880 stock in hand to the nominal value of Rs. 3,176-4-9 and to an estimated actual value of Rs. 1,532-8-8. The Superintending Engineer proposes to retain the whole of this for use on the works, but to reduce its value from the former to the latter sum; as, however, the difference would necessarily be charged to the works in question, it seems unnecessary to make any alteration, and the Committee recommend that the items stand as at present until used, when they should be charged at their full book value to the work concerned. In this division, as in Tanjore, the amount of stock necessary to be permanently retained is under consideration. For the present the Committee consider that a limit of Rs. 3,000 may be fixed.

In the Trichinopoly, South Arcot, and Tinnevelly Divisions there is now no stock, nor does there appear any necessity for maintaining any.

42. FAMINE TOOLS.—In many districts there are large number of tools that were obtained for famine relief works, but that will not be required collectively again until there is another time of severe distress.

The charge of surplus tools is a burden on the Executive Officers of the Public Works Department; and the Committee recommend that the Executive Engineers should be authorised to transfer to their ordinary lists such serviceable tools as they may require for regular use, to sell off all unserviceable tools, and either to sell locally or to send to Madras to the Public Works Stores; or otherwise dispose of, as may be directed, the rest of the tools, which, though serviceable, are of no use in the districts.

(Signed) H. L. PRENDERGAST, Lieut.-Col., R.E.
(") D. H. TRAIL, Major, R.E.
") J. PENNYCUICK, Major, R.E.

11th March 1881.

No. 6 E.W.

Memorandum on Committee's Report on Superfluous Stock in the Divisions.

NELLORE DIVISION.—The cast iron calingulah posts would be of very small value if sent to Madras as old iron. There are not very many, and though calingulahs are but seldom used now-a-days, these posts might be utilized for— Paragraph 6.

(1) small regulating works in the delta;
(2) the grooves of tank and distribution sluices.

This will be much better than treating them as old cast iron.

2. DUMAGUDIEM.—All the useless stores and materials should be sold. There is no market there for metals, &c., of value, and I think therefore the valuable articles should be transferred elsewhere at prices not in excess of current market rates. There was a small planing machine which is wanted at the Bezváda shops, and there was a vertical boiler and engine said to be in good order which can be utilized either in the Godávari or Kistna. There are also many cranes. What is wanted is a descriptive priced list. At Sitanagram an indifferent crane has been put up since last year for the stop gate of the head lock. It would have been better and cheaper to have got a crane from Dumagudiem. Paragraph 8.

3. FLOATING PLANT—GODAVARI.—This plant is not in excess, and whenever any vessel becomes unserviceable the necessary orders are issued by Government on receipt of a report to that effect. Paragraph 9.

4. STEAMER "PRINCE."—I think the Committee's recommendations at the end of this paragraph are based on a misapprehension. The *Prince* has never belonged to the delta, but was procured for the navigation of the river like the other Upper Godávari Steamers. It should be sold if possible, but the proceeds will not belong to the delta. Paragraph 10.

5. DOWLAISHWERAM WORKSHOP.—The probability is that the stock generally is not excessive, but that an annual clearance sale is needed to get rid of things which are useless and which are borne on the lists at a value which does not represent the true value. A considerable stock of timber is necessary, and of stores also, because the first is procurable only at certain seasons and the latter include very many descriptions. If the officer in charge have judgment, the stores long in hand should be of small value. The interest on 10 or 15 thousand rupees is small, but the inconvenience of having to wait for material which is wanted for a special purpose is great. Paragraph 11.

6. No remarks required. Paragraph 12.

7. GODAVARI EASTERN DELTA DIVISION.—The only stock needed in this division is that of building materials, viz., stone of sorts, lime and limestone. I see no reason why there should be any metals. Those not wanted for the shops should be sold if possible. No doubt the figures as shown are the result of the wholesale transference of stores from the Upper Godávari. The value of building materials in hand should depend upon the annual demand. This division supplies materials to nearly the whole of the delta. Paragraph 13.

8. KISTNA EASTERN DELTA DIVISION.—I agree generally with the Committee's recommendations. It is probable that there are many things which are either not wanted at all or are in quantities in excess of requirements. It would be well to send any things to Madras which are likely to be readily saleable there, or which the Public Works Workshops and Stores would be willing to take. For the rest I should be inclined to work down the stock by avoiding further purchase as much as possible. I endeavoured recently to impress on the local officers the necessity for turning to Paragraphs 14 to 16.

795/21

account the material available. This has not been done to anything like the extent desirable.

It would be a waste of money to send the Stoney's valve to Madras or anywhere until it is wanted for a definite work. It was intended for a supplemental head sluice for the Kistna Western Delta Main Canal, and it may yet be wanted for that, and if not, it is more likely to be utilized for some other head sluice or surplus sluice in the Kistna than elsewhere.

9. I am entirely unable to agree with the Committee's recommendation that the reserve of stone, cubes, &c., in the Tanjore Division should be limited to 12,000 rupees. There are scores of most important works, such as anicuts, regulators, surplus works, &c., and there is no stone to be had within many miles of them. Cubes are used in some places instead of stone, and must of course be made at the proper season. Stone also, where procurable at all, can be carted only at certain seasons. I consider the present stock, valued at Rs. 17,900, much too small. The reserve at each work should be a percentage of the contents of the aprons, the percentage in each case being fixed with reference to the circumstances of the work. At my inspections of the last two years I found that some of the outer aprons had almost entirely disappeared, and that there was no material available for their replacement. At the lower anicut on the Coleroon there were no cubes in stock, though a large quantity was needed for immediate use. I think it probable that 40 or 50 thousand rupees would be a reasonable reserve to maintain in this division. Paragraph 40.

10. NEGAPATAM DIVISION.—The works for which a reserve of stone or cubes is needed are much fewer than in Tanjore and of smaller size. The value of the reserve will certainly have to be increased. Paragraph 41.

CHEPAUK,
17th March 1881.

(Signed) JOHN MULLINS, Col., R.E.,
Chief Engineer for Irrigation.

To the Chief Engineer, Public Works Department.

No. 23. ORDER THEREON, 4th April 1881, No. 914 W.

THE Government consider the following modifications of the Committee's proposals desirable:—

CUDDAPAH DIVISION.—The doors and windows provided for the Bookapatnam Cutcherry will be retained till the 1st August 1881; if no allotment for the work is made by that date, they will be sold as proposed. The loss on the rate of materials prepared for the Nandyál Cutcherry will be debited as proposed if sanction to the estimate is given by the 1st August; if not, the loss will be debited to "Profit and Loss." Paragraph 4. Paragraphs 5 and 7.

NELLORE DIVISION.—The iron calingulah posts should be retained for use if required on minor irrigation works. The cast iron truck wheels will be sent to Madras for disposal. Paragraph 6.

CUDDAPAH DIVISION.— } The proposals should be modified in accordance with paragraph 2 of the Memorandum of the Chief Engineer for Irrigation. If the disposal of these stores be incomplete at the close of 1881-82, outright sale of the remainder will be resorted to in the following year. Paragraph 7.
UPPER GODAVARI.— } Paragraph 8.

GODAVARI—FLOATING PLANT.—The *Little Nell* and *Fawn* will be sold outright early in 1882-83 if not previously disposed of. Paragraph 9.

Paragraph 10. The proceeds of the sale of the *Prince* will be credited to "Provincial" and not to "Productive Public Works."

DOWLAISHWERAM WORKSHOP.—A large stock of timber is no doubt essential,

Paragraph 11. but every effort must be made to get rid of useless articles and keep down the value of stores by judicious sales as nearly as may be possible to the sum named by the Committee.

GODAVARI EASTERN DIVISION.—No metals not required in the shops should be

Paragraph 13. retained, arrangements being made for the sale of the remainder during the current year. Stone, lime, and limestone will be alone retained in such quantity as may be deemed essential by the Superintendent of Works.

KISTNA EASTERN DIVISION.—The "Stoney's equilibrium valve" should be retained

Paragraph 16. at Bezváda. The stock should be brought down to the limit of Rs. 48,000 by the end of the current year if possible, and by the 1st August 1882 at furthest.

PRESIDENCY STORES.—The result of

Paragraph 23. the action now proposed will be reported on at the end of the current year.

CONSULTING ARCHITECT.—It is greatly to be regretted that the proper price for the

Paragraph 24. material turned out was not charged in the first instance to the works supplied; there is now no alternative to the disposal recommended by the Committee.

PRESIDENCY WORKSHOPS.—A special report will be submitted at the end of

Paragraph 28. September 1881 on the result of the action proposed in this paragraph.

The undue and apparently unauthorised increase of establishment is very unsatis-

Paragraph 31. factory, and the General Superintendent will furnish early explanation on this subject and show at once how the establishment can be reduced to at least the previous average.

Paragraph 33. The books proposed by the Committee will be at once opened and kept posted to date.

BUCKINGHAM CANAL.—The Superintendent of Works will be careful not to dispose

Paragraph 34. of tools that may possibly be useful in the completion of the works of the canal.

PRESIDENCY GAS WORKS.—This para-

Paragraph 36. graph will be referred for consideration in the Military Department.

PIER STORES.—The stores will be

Paragraph 37. handed over at once to the Master Attendant.

TANJORE DIVISION.—The Superintending Engineer will report at an early date with

Paragraph 40. reference to paragraph 9 of the Memorandum of the Chief Engineer for Irrigation, after which final orders will be passed as to the future limit for stock in this division.

FAMINE TOOLS.—This paragraph will

Paragraph 42. be referred to the Government of India for consideration.

2. Except in so far as they are modified by the foregoing remarks, the Committee's recommendations are accepted in their entirety, and will be carried out without delay; and the Government desire to impress upon officers of all ranks the absolute necessity for avoiding undue inflation of the stock accounts either by over-manufacture or by insufficient debits to works.

3. All sales made under the instructions now given should be extensively advertised in local papers, and special care should be taken to ensure information on the subject reaching the mining districts where there may probably be a demand for some of the surplus stores.

4. The Committee appointed in G.O., No. 2,276 W., of 1st October 1880, having brought to a satisfactory conclusion the laborious inquiry with which they were charged, the Government desire to place on record their appreciation of the thorough and satisfactory manner in which they have discharged the duty assigned to them.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

795/22

To Superintending Engineers.
" Superintendents of Works.
To the Chief Engineer for Irrigation.
" Consulting Architect to Government.
" General Superintendent, Public Works Stores and Workshops.
" Examiner of Public Works Accounts.
" Military Department.
" Marine "

Exd. E. C. Shunker, W. J. Lewis, and A. F. Goodall.
Spare Copies

GENERAL
ACCOUNT.

Govt. of {1881} Madras.

PUBLIC WORKS.

To

SUPERINTENDING ENGINEERS,

&c., &c., &c.

Dated *April*, 4*th*.

Issued

Read. Encl.

G. O., 4*th April* 1881, No. 914 W.

APRIL.

Nos. 22-23.

Superfluous Stock of the Public Works Department, &c.—Orders on proposals of the Committee appointed to investigate and report upon the —.

P.W.D.

795/23

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

5th September 1881, No. 1202.

Chemical Examiner.

Read the following paper :—

From T. K. ROGERS, Esq., M.B., F.R.C.S., London, and F.C.S., Chemical Examiner, to the Chief Secretary to Government, dated Madras, 29th August 1881, *No.* 284 [*Current No.* 1793.]

In continuation of my letter No. 693, I have the honor to submit the following suggestions, which I trust may obtain the favorable consideration of Government, especially as measures to check the adulteration of drugs and food are in contemplation, since the expensive apparatus absolutely required for the investigation of "poison cases" may be also made use of for examining food, &c.

2. *Buildings.*—I am very doubtful whether any additions which can be made to the present quarters will make them as efficient and convenient as the accommodation provided for the Chemical Analyser in Bombay, but possibly the Government Architect may be able to overcome what appear to be insurmountable difficulties.

3. *Gas.*—Dr. Lyon very strongly urged the necessity of gas; and, by adopting a very ingenious plan he has had carried out in Bombay, it might be obtained at much less expense than was anticipated. I would also add that there appears to be a sufficiency of pipes already in stock at the Gas Works.

4. *Apparatus.*—There is a good deal of material in the possession of the Medical College which is not required for teaching purposes. I would propose that this should be transferred to the Chemical Examiner, for whose use it was originally obtained; and that in future all apparatus which can be used for other than educational purposes should belong to the Chemical Examiner, but be loaned to the Medical College when needed.

The sum of 2,000 rupees previously named will certainly not be more than sufficient to supply apparatus absolutely essential in order to perform in a satisfactory manner the work expected to be done in the Government Laboratory, and to maintain the Laboratory in an efficient state, as previously represented, the annual grant would require to be increased. The present grant for apparatus is very much less than is allowed in Bombay.

5. *Staff.*—Necessary as the additional accommodation and apparatus referred to in my previous communication undoubtedly are, reform in the organisation of the subordinate staff is even more urgently needed. It appears, from the result of Dr. King's recent inquiries in Calcutta and of my own at Bombay, that the Chemical Staff at Madras, taking the Chemical Examiner's establishment and that of the Professor of Chemistry together, is at once far more costly and less efficient than in Bombay or Calcutta.

The following statement shows the present staff maintained to assist the Chemical Examiner and Professor of Chemistry respectively, and also the arrangement I venture to suggest, and which follows closely upon the lines adopted in the other Presidencies.

Proposed Staff.	Commencing Salaries.	Maximum Salaries.	Present Staff.	Present Salaries.	Commencing Salaries.
Staff of Chemical Examiner.	RS.	RS.	*Staff of Chemical Examiner.*	RS.	RS.
An Assistant Chemical Examiner, who would be required to be a Graduate of some University, salary to increase 50 rupees per mensem every five years.	200	350	An Assistant to Chemical Examiner.	150	150
			Two Lascars	16	16
House allowance at 10 per cent. of salary.	20	35			
Clerk	30	30			
Laboratory Attendant, salary to be increased to 20 rupees after five years' service.	15	20			
Lascar, with salary of 10 rupees after five years' service.	8	10			
Staff of Professor of Chemistry.			*Staff of Professor of Chemistry.*		
Native Assistant, with salary rising 5 rupees per mensem every five years.	35	50	Assistant to Professor of Chemistry.	300	250
Lascar	8	8	House allowance ..	75	50
			Laboratory Attendant ..	15	15
			Lascar	7	7
Total ..	316	503	Total ..	563	488

	Commencing Salary.	Maximum Salary.
Staff of Chemical Analyser, Bombay.	RS.	RS.
An Assistant Chemical Analyser—an Assistant Surgeon on the establishment rising to Rs. 300 after seven years, and on promotion to first class Rs. 350 ..	200	350
Native Assistant	45	45
Clerk	30	30
Messenger	10	10
Staff of Professor of Chemistry.		
One Laboratory servant	20	20
One do.	10	10
Total ..	315	465
Staff of Chemical Examiner, Calcutta.		
Assistant Chemical Examiner	200	300
First Assistant	70	70
Second Assistant	60	60
Staff of Professor of Chemistry.		
Two servants at 12 rupees each	24	24
One servant	8	8
Total ..	362	462

The above-mentioned scheme, assuming every subordinate to be at the same time on maximum rate, would insure a monthly saving of Rs. 60, and when fairly started would effect a reduction of 247 rupees per month for the first five years. It would also add very considerably to the resources of the Chemical Examiner's Department without being in any way detrimental to the College. The only part of the duties of the Assistant to the Professor of Chemistry not provided for would be what is called the "Exercise Class;" this occupies at present three hours weekly in the winter session only, and I think the Principal of the Medical College would find no difficulty in getting this work done by one of the other Assistants, as it occupies only about seventy hours in the course of the year and does not need any previous preparation whatever.

795/24

C. Cunniah Naidu, the Laboratory Attendant in the College, who at present gets only 15 rupees monthly, can, with very slight assistance, prepare all apparatus for class work, and I should very strongly recommend to the Principal of the Medical College that he be appointed Native Assistant.

6. *Proposed relation between staff of Chemical Examiner and staff of Professor of Chemistry.*—I think that unquestionably the Chemical Examiner's staff should, as at present, be solely under the immediate direction of the Chemical Examiner. Consideration of the important issues dependent upon the work done in this department and that this work is frequently of a kind which cannot possibly admit of revision will, I believe, show the necessity for this arrangement. At the same time I think it should be understood that the Chemical Examiner's staff may be at any time directed by the Chemical Examiner to afford assistance in preparing lecture apparatus, &c., for the Professor of Chemistry. And, on the other hand, the subordinates of the Professor of Chemistry should be called upon to assist in the Chemical Examiner's work when not needed in the College, instead of, as at present, passing the chief part of their time in idleness to the evident loss of Government.

7. *Proposed mode of introduction of new arrangement.*—The Assistant to the Chemical Examiner has applied for, and expects to get, employment early next year in the Salt Department, so I would recommend that a probationer be appointed for the post of Assistant Chemical Examiner from 1st of October next at a salary of Rs. 100 per mensem until the present Assistant leaves. This would afford time for him to become practically acquainted with much of the routine work and enable him to become an Assistant in reality as well as in name when gazetted as Assistant Chemical Examiner. Why I strongly urge the necessity for providing a fairly-educated man as Assistant Chemical Examiner, as already provided in Bombay and Calcutta, is the fact that chemical examinations are much more complicated than formerly and tend to become more and more difficult in the future, and also that the amount and variety of the work expected from this department continually tends to increase.

8. With regard to the appointment of Assistant to the Professor of Chemistry, I can only say that I would advise that it should be abolished upon the retirement of the present incumbent, as I do not wish to recommend that further duties, from which he was exempted in 1879, should be reimposed upon the present incumbent, who, besides being in a very infirm state of health, has other employment at the Agricultural College, Saidápet, which would appear to be nearly as much as he can get through; hence I do not think that he could afford any material assistance in the Chemical Examiner's Department, even if directed to work there in his unoccupied time.

9. Though I have been indebted to Dr. King for several valuable hints and for much information concerning the arrangements at Calcutta, I do not wish to represent that gentleman as concurring with the whole of the above suggestions. But, on the other hand, I may safely assert that they have the entire approbation of Dr. Lyon, who has had an experience of nineteen years as Chemical Analyser, &c., to the Bombay Government, and who also, without any additional assistance beyond that afforded by the staff detailed in paragraph 5, fulfils the duties of Professor of Chemistry in the Elphinstone College and also of Professor of Medical Jurisprudence and Toxicology in the Grant Medical College, where it should be mentioned that his Chemistry classes number (if I am not mistaken) about 100, or something like twice as many as in the Madras Medical College. Dr. Lyon also informed me that at the commencement of the Afghan War he was able to get rapidly through about 1,500 additional examinations for the Commissariat Department.

ORDER THEREON, 5th September 1881, No. 1202.

The Superintendent of Works at the Presidency will be requested in the Public Works Department to prepare, in consultation with the Chemical Examiner, plans and estimates for the improvement of the Laboratory accommodation.

2. The Chemical Examiner should explain in more detail his inexpensive plan for the utilization of gas in his analyses, giving an estimate of the cost,

3. The Director of Public Instruction will be requested to report on Dr. Rogers' proposals regarding (1) the transfer of the apparatus referred to in paragraph 4, (2) the reorganization of the establishment of the Professor of Chemistry, and (3) the suggested relation between the staff of the Chemical Examiner and of the Professor of Chemistry.

(True Extract.)

R. DAVIDSON,
Chief Secretary.

To the Public Works Department.
" Director of Public Instruction.
" Chemical Examiner
" Surgeon-General with the Government of Madras.

Exd. J. W. Fischer.

795/25

Order thereon 26th Sept/81 No. 2362 W

Communicated to the Supdt of W. Presy for submission of the required plans & estimates -

(True Extract)

Sd/ J. P.
Major R.E.
Dt. Secy to Govt.
P.W.D.

Govt. of (1881) Madras.

PUBLIC.

To
THE PUBLIC WORKS DEPARTMENT,
&c., &c., &c.

Dated September, 5th.

Issued

Recd. Encl.

G.O., 5th September 1881, No. 1202.

SEPTEMBER.

B No. 2362 W d/ 26th Septr/81

Chemical Examiner.—Orders passed on letter from the Chemical Examiner, Madras, submitting suggestions for the improvement of the Laboratory and Staff.

The Supdt of W
Presy

795/26

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—again G.O., dated 5th September 1881, No. 1202, Public.

ABSTRACT.—Passing orders on letter from Chemical Examiner, submitting suggestions for improvement of the laboratory and staff.

READ—also the following papers :—

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 29th October 1881, No. 605 N.

With reference to G.O., dated 5th September 1881, No. 1202, I have the honor to forward a letter from the Principal of the Medical College.

2. Dr. King raises no objection to the Chemical Examiner's proposal to remove portion of the apparatus from the College to the Chemical Examiner's office, but he observes that, unless an additional Assistant is appointed to the College staff, the services of an Assistant cannot be partially placed at the disposal of the Professor of Chemistry.

In this opinion I concur, as the work of the Assistants at present is heavy. Possibly, however, the duties now devolving on the Assistant to the Professor of Chemistry might be performed by the Assistant to the Chemical Examiner, if they are as light as stated by Dr. Rogers. Dr. King, however, who has had long experience of the working of the two offices, seems to throw doubt upon the adequacy of the staff proposed for the Professor of Chemistry, and this doubt is entitled to much consideration.

3. I see no objection to the proposed relations between the staff of the Chemical Examiner and that of the Professor of Chemistry, but it must be borne in mind that the offices may not always be held by the same person.

ENCLOSURE.

From Surgeon-Major HENRY KING, A.M., M.B., Principal, Medical College, to the Director of Public Instruction, dated Madras, 5th October 1881, No. 320.

With reference to your No. 4159, dated 22nd ultimo, referring G.O., No. 1202, dated 5th idem, I have the honor to state that I see no objection to Professor Rogers' suggestion contained in the former clause of the 4th paragraph of his letter to the Chief Secretary, No. 284, dated 29th August 1881.

2. His proposal that the teaching work now done by the Assistant to the Professor of Chemistry should be imposed upon one of the other Assistants can be adopted only if an additional Assistant be appointed to the College staff.

3. If Professor Rogers can guarantee the continuance of efficient teaching of Chemistry with the help of an uneducated Native Assistant and a lascar, aided by the power to divert the Chemical Examiner's staff to College purposes, as he proposes, I shall not object to the arrangement, although it is not one that would have commended itself to me when I was Chemical Examiner and Professor of Chemistry.

From Surgeon T. K. ROGERS, Chemical Examiner, to the Chief Secretary to Government, dated Madras, 18th January 1882, No. 531 B.

With reference to the papers forwarded under your endorsement, No. 1772, dated 3rd November 1881, I have the honor to state that the difficulty with regard to the provision of the tutorial assistance required for the junior class in Chemistry might be met in the following manner, which I learn would be likely to meet with the approbation of the Director of Public Instruction and of the Principal of the Medical College.

2. The plan now suggested is to appoint, whenever the office of Assistant to the Professor of Chemistry may become vacant, a student of the Medical College, with a monthly stipend of Rs. 50, who might, as suggested by Dr. King, be designated "Chemical Scholar." The student to be selected by competitive examination in Chemistry and Chemical Physics, and permitted to hold his appointment for two or three years. As the duties of the post, though probably comprising, besides tutorial work, the rendering of assistance during lectures and in preparation work, would occupy altogether at most only from 10 to 15 hours weekly, the appointment should be sufficiently valuable to attract the best students, of whose competence and suitability for the work there can be no question.

3. This alteration, though reducing the saving in the expenditure upon the staff by Rs. 50 monthly, will still provide, at a more economical rate, a better staff than can be obtained under present arrangements. In Bombay and Calcutta no tutorial assistance is given to any of the Chemistry classes, and in Madras the old system of requiring the Assistant to the Chemical Examiner to do tutorial work in the College was evidently very unsatisfactory to my predecessor, Dr. King; for in 1879 he gave up all claim, as Chemical Examiner, upon the services of the Assistant to the Professor of Chemistry, and also a writer, for the sake of obtaining the entire services of an Assistant, drawing less than half the salary of the College Assistant. And it is evident that this change was desired on account of the inexpediency of requiring analytical and tutorial work from the same Assistant, and not on account of increased amount of educational work exacted from the Assistant, leaving him less time in which to assist the Chemical Examiner. As in Proceedings of Madras Government, Educational Department, 3rd September 1867, No. 279, it is stated that the Assistant to the Professor of Chemistry, who also assisted the Chemical Examiner, did at that time 15 hours weekly of actual tutorial work, in addition to his other duties. He was then specially exempted by Government from 10 of the 15 hours of tutorial work, in order to place his services more completely at the disposal of the Chemical Examiner. Now in 1879 the tutorial work had dwindled down to 2 hours weekly. It must certainly be admitted that the numbers of students attending the classes had greatly augmented in the meantime; but this need cause scarcely any increase in the labor of teaching, though of course the work of the lascars in attending upon the practical class would be much heavier. I quite agree with Dr. King in considering it to be essential that an Assistant Chemical Examiner should be appointed, and that he should be solely under the immediate control of the Chemical Examiner, as stated in paragraph 6 of my letter of 5th September 1881. I would therefore suggest that the above modification of my previous proposal be submitted to the Director of Public Instruction.

4. The enclosed letter from the Commissioner of Salt Revenue shows that in the course of a few months the provision of employment in the Salt Department may be expected for the present Assistant to the Chemical Examiner. I would therefore recommend that the probationer for the post of Assistant Chemical Examiner be appointed at an early date, and that the writer and laboratory attendant be not engaged until the present Assistant to the Chemical Examiner leaves, as till that event takes place the probationer would be an addition to the staff.

5. *Gas.*—The information as to the cost of supplying gas will be furnished by the Superintendent of Works with the other estimates. The advantages of

795/27

Dr. Lyons' plan are that small store bells are charged with gas at a low pressure, so that the loss which would arise from leakage, if gas were supplied at a higher pressure, is avoided, whilst after the store bells are filled any pressure desired may be applied to them. Another advantage obtainable by this plan would be the opportunity of chiefly burning gas of low illuminating value. It would be practicable to supply gas without having independent bells; and by giving up the bells a large reduction in the initial outlay would be obtained, but the cost of supplying gas would be increased owing to leakage and better quality of gas used.

6. *Apparatus.*—The special money grant would be required in time to get the apparatus out from Europe by the completion of the new rooms. Assuming that a laboratory will be provided and well fitted out to start with, an annual grant of Rs. 800 would be required in order to maintain it in an efficient state. Of this amount, Rs. 300 might be allotted for obtaining ordinary chemicals (except the common acids, ether, and chloroform, &c., which are obtainable from the Medical Stores) and glass and crockery, &c., upon indent as hitherto. The remainder would be required for the purchase of additional apparatus, and such books as cannot be obtained on indent.

7. Reliance having been placed upon the *primâ facie* necessity of providing the Chemical Examiner with a laboratory, &c., no attempt has been made to enter into details as to the inefficiency of present arrangements.

Referred to the Director of Public Instruction, in original (to be returned), for his further remarks. The Chemical Examiner's proposals regarding establishment can only take effect on the occurrence of two vacancies, neither of which is yet assured. The matter, however, deserves to be carefully considered in advance. With improved laboratory arrangements, it is desirable that the Chemical Examiner should have an efficient staff, and looking to the increase of dispensaries in charge of subordinate members of the medical service, it is probable that references to the Examiner for analysis will yearly become more numerous.

FORT ST. GEORGE,
16th February 1882.

(Signed) C. D. MACLEAN,
Under Secretary.

From Surgeon T. K. ROGERS, Chemical Examiner, to the Chief Secretary to Government, dated Madras, 9th May 1882, No. 85.

With reference to G.O.G., No. 1202, dated 8th September 1881, Public Department, I have the honor to bring to your notice that Mr. W. S. Newman, Assistant to the Chemical Examiner, has written to me to the effect that he would be glad to relinquish his intention of seeking an appointment in the Salt Department and to remain in the Chemical Examiner's Department as Assistant Chemical Examiner, in case of Government acceding to my representation as to the necessity of providing the Chemical Examiner a better staff and a laboratory. Although Mr. Newman is not a University Graduate, I would recommend his appointment to the post of Assistant Chemical Examiner, in consideration of his three years' service as Assistant in the department, and of the serious extent to which he has been injured by exposure to noxious gases.

2. If the inferior subordinates be not made to work in the Chemical Examiner's Department and the Medical College indifferently, as required, the following staff will be needed for the Chemical Examiner's separate use:—

	Commencing Salaries.	Maximum Salaries.
	RS.	RS.
An Assistant Chemical Examiner, who would be required to be a graduate of some University, salary to increase Rs. 50 per mensem every five years	200	350
House allowance at 10 per cent. of salary	20	35

	Commencing Salaries.	Maximum Salaries.
	Rs.	Rs.
Native Assistant, with salary rising Rs. 5 per mensem every five years	35	50
Clerk	30	30
Laboratory Attendant, salary to be increased to Rs. 20 after five years' service	15	20
Lascar, with salary of Rs. 10 after five years' service ...	8	10
Total ...	308	495

I have been obliged to add a Native Assistant to the proposed staff for Chemical Examiner, as it was originally calculated that the larger portion of the time of the Native Assistant on the College staff, in the proposed conjoint scheme, would have been available in the Chemical Examiner's Department.

3. In conclusion, I would respectfully urge upon Government the desirability of dealing with the question of granting an improved staff without delaying further for the receipt of the expected estimates, &c., from the Public Works Department.

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 7th June 1882, No. 39 N.

I have the honor to return with the following remarks the papers referred to me by endorsement No. 21 of 1882.

2. I enclose Dr. King's letter regarding Dr. Rogers' proposals. I have also consulted Dr. Keess demi-officially in the matter. Both these gentlemen are agreed that it is unnecessary that the Professor of Chemistry and Chemical Examiner should have an Assistant in each office. Dr. Keess, however, is of opinion that this Assistant should be Assistant to the Professor of Chemistry, and be required to assist the Chemical Examiner only, and sees no necessity for the absolute division of establishment suggested by Dr. Rogers. In fact, he seems to wish to revert to the arrangement in force before the appointment of a special Assistant to the Chemical Examiner, when the Assistant to the Professor simply assisted the Chemical Examiner as analyst. Dr. Rogers, in paragraph 6 of his letter printed in G.O., dated 5th September 1881, No. 1202, states that the Assistant should help the Professor of Chemistry in the lecture-room, but he clearly does not include tutorial work. Dr. Keess bases his proposal on the inexpediency of entrusting the tutorial work to a Pupil-assistant, although he would have such an Assistant to aid in the College lecture-room, and would remunerate him somewhat in the manner suggested by Dr. King. He grounds his objection to the employment of a Pupil-assistant in lecture work on his inexperience, his want of practice as a teacher and experimentist, his want of authority, and the clashing of his College work with his work as Assistant. This opinion as to the unsuitability of a student for tutorial work is directly opposed to that of Drs. King and Rogers.

3. The first thing it seems to me to be considered is the Chemical Examiner's establishment. His hands, Dr. King states, must be strengthened, and I cannot but think that this should be carried out quite independently of the necessities of the Medical College. Moreover, a vacancy will probably soon occur in the former office, whilst Mr. Hamilton, the Assistant to the Professor of Chemistry, may not retire for some time. Therefore, if financial considerations do not interfere, I would suggest that Dr. Rogers' proposals, so far as the Chemical Examiner's office are concerned, be sanctioned now, the final determination of the changes necessary in the Medical College being left until Mr. Hamilton's retirement.

4. But in expressing this opinion, I accept the view of Drs. King and Rogers, that the Assistant to be appointed should be essentially Assistant to the Chemical Examiner, although the Chemical Examiner might utilize his services in the lecture-room, either in preparing experiments, &c., or in taking his place as lecturer on exceptional occasions, and am opposed to Dr. Keess' view of making the Assistant practically

795/28

the Assistant to the Professor of Chemistry. The experience of the past is against this arrangement. His chief duties and responsibilities should be in the Examiner's office.

5. I am also disposed to agree with the former gentlemen that the tutorial work in College may safely be entrusted to a selected student scholar under the immediate supervision of the Professor. The work, as pointed out in paragraph 5 of Dr. Rogers' letter in G.O., dated 5th September 1881, occupies at present 3 hours weekly in the winter session only, or about 70 hours in the course of the year, and "does not need any previous preparation." I see no reason to fear that a senior student, selected by competition and of approved merit, should not be able to do this work efficiently, if, as would no doubt be the case, he should be placed under the immediate and direct supervision of the Professor of Chemistry. For so light work there can be no necessity whatever for incurring so heavy a charge on account of medical education as Dr. Keess' proposal would involve, whilst nine-tenths of the Assistant's time would naturally be devoted to work in the Chemical Examiner's office.

6. What the remuneration of this student scholar should be, I think, need not now be discussed. Dr. King thinks a much lower salary than Rs. 50, with exemption from fees, would secure Dr. Rogers' object, and Dr. Keess suggests an honorarium of Rs. 50 or so besides exemption from fees. It is possible that the remuneration might be fixed lower with advantage, but I would deprecate exemption from fees as part remuneration. Such a system obscures the real remuneration given for the office.

7. In conclusion, I trust, although the charge to Education for the work done is at present unduly high, that no change may be introduced in the College which would affect injuriously, in Dr. King's words, "the position of so old and useful a servant of Government as the present Assistant, Mr. Hamilton."

ENCLOSURE.

From Surgeon-Major HENRY KING, A.M., M.B., Principal, Medical College, to the Director of Public Instruction, dated Madras, 7th March 1882, No. 532.

I have the honor to return the papers received with your endorsement, No. 1140, dated 2nd instant, and to state that the tutorial assistance required by the Professor of Chemistry may, in my opinion, be rendered by a carefully-selected student, as suggested by Mr. Rogers.

2. I deprecate any change which should injuriously affect the position of so old and useful a servant of Government as the present Assistant, Mr. Hamilton.

3. Feeling strongly the necessity of strengthening the hands of the Chemical Examiner, and aware that financial considerations will enter largely into the question of the efficient reorganization of his establishment, I venture to suggest that the salary proposed for the Chemical Scholar is excessive. If exemption from College fees would not in itself be sufficient remuneration, a much lower salary than Rs. 50 would, I think, secure Professor Rogers' object.

ORDER—dated 12th August 1882, No. 739, Public.

In his letter, dated 29th August 1881, No. 284, recorded in G.O., 5th September 1881, No. 1202, Public Department, Dr. Rogers brought forward proposals for the reorganization of the establishments of the Chemical Examiner and of the Professor of Chemistry (duties discharged by the same officer) so as to secure greater efficiency in the office of the former.

The arrangements suggested for adoption, regarding which both the Educational authorities and the Examiner are now agreed in the main, commend themselves, generally, to the Government.

2. The existing establishments are disposed as follows :—

A. STAFF OF EXAMINER.

	RS.
Assistant to Chemical Examiner on	150
Two Lascars	16

B. STAFF OF PROFESSOR OF CHEMISTRY.

Assistant to Professor on salary rising from Rs. 250 to (the latter being present figure.)	300
House Allowance Rs. 50, rising to	75
Laboratory Attendant	15
Lascar	7

3. The chief features of the new scheme are,—to replace the highly-paid Assistant to the Professor by a Native Assistant on a much reduced salary, assigning the tutorial duties in the College to a selected student nominated to be Chemical Scholar or Tutor; to improve the position of the Examiner's Assistant; and to transfer the Laboratory Attendant from the Professor's to the Examiner's staff, to which a Clerk is to be added. The ultimate distribution will accordingly be as follows :—

A. STAFF OF CHEMICAL EXAMINER.

	RS.
An Assistant Chemical Examiner, salary to increase Rs. 50 per mensem every five years	200 to 300
House Allowance 10 per cent. of salary	20 to 30
Clerk	30
Laboratory Attendant, salary to be increased to Rs. 20 after five years' service	15 to 20
Lascar, Rs. 10 after five years' service	8 to 10

B. STAFF OF PROFESSOR OF CHEMISTRY.

Native Assistant, salary increasing Rs. 5 per mensem every five years	35 to 50
Lascar	8
Chemical Scholar or Tutor	50 (?)

Taking the Chemical Scholar's honorarium not to exceed Rs. 50, the scheme will involve a monthly charge of Rs. 366 rising to a maximum of Rs. 498, as against a present charge of Rs. 488 rising to Rs. 563, at which latter figure it now stands. The pay of the Assistant Chemical Examiner, for which post a University Graduate, if available, will in future be selected, has been assimilated to the Calcutta figure, which seems sufficient.

4. This scheme, however, will not be brought into full operation till the retirement of Mr. Hamilton, the present College Assistant. Meantime the following arrangements are sanctioned. As recommended by the Examiner, his Assistant, Mr. Newman, will be appointed Assistant Chemical Examiner on the new scale; the Laboratory Attendant, now attached to the Professor, will be transferred to the Examiner's staff, receiving the proposed increment, if he counts five years' service in the department; a Clerk will be added to the establishment; and one of the lascars in the Examiner's office reduced. On Mr. Hamilton's retirement the Native Assistant will be appointed, and the arrangements for nominating a Chemical Scholar or Tutor will be carried out, the honorarium to be assigned to the latter being then brought up for consideration.

5. As suggested by Dr. Rogers, the Examiner's staff will continue to be solely under the immediate superintendence of the Chemical Examiner; and so long as both duties are discharged by the same officer, it will be understood that the Examiner's staff may be at any time directed by the Examiner to afford assistance to the Professor of Chemistry; and, on the other hand, that the Professor's subordinates may be called upon to assist in the Examiner's laboratory when not required in the College.

6. Until the Assistant Professor's salary lapses there will be a small present increase of expenditure, which, however, will be amply compensated when that event occurs.

The Accountant-General will be requested to embody the proposals now approved in a proposition statement which he will submit for the [illegible] sanction of Government.

795/29

7. Regarding the minor matters referred to in G.O., 5th September 1881, No. 1202, the transfer of the chemical apparatus not required for teaching purposes in the College to the Examiner is approved. The Public Works Department will be requested to expedite the preparation of plans and estimates for the improvement of the laboratory accommodation, furnishing at the same time estimates for the supply of gas to the laboratory.

(True Extract.)

C. G. MASTER,
Chief Secretary.

To the Public Works Department.
" Director of Public Instruction.
" Chemical Examiner.
" Accountant-General.
" Surgeon-General with the Government of Madras.

Exd. A. F. Goodall.

Govt. of [1882] Madras.

PUBLIC.

Order No 3242 w dy 1 Sept 82

Issued

Recd.

Encl.

G.O., 12th August 1882, No. 739.

Communicated with reference to G.O No 2362w dy 26th September 1881, to the Supty. Engineer Fifth Circle, who will expedite the submission of the plans and estimates referred to at the close of the present order.

(True Extract)
[Sd] A. S. Russell
under Secy. to Govt
Pwd

AUGUST.

Chemical Examiner.

Passing orders reorganizing the establishments of the Chemical Examiner and Professor of Chemistry so as to secure greater efficiency in the former office.

To The Supty Engr. Fifth Circle

Public Works Department, 188 -8 .

Current No. 6355
Letter No. 2237
Dated the 19th Septr. 1882
From the Supg. Engr. Fifth Circle

NOTE OF REMARKS.

Re Est: with plans and Specification report for improvements to the Laboratory of the Chemical Examiner at Madras, amounts to Rs: 22,500-

Re Details are as follows,

Improvements to Laboratory	Rs: 11948
Supply of Gas	3460
Fixtures &c.	7092
Total Est: Rs:	22,500

Re improvements to the Laboratory consists in the construction of three upper rooms in the present building, a store room, laying on water pipes to different parts of the building, & providing gas pipes.

Some of the rates entered in the Abstract Est: are higher than the Dist: Schedule- Re other rates cannot be checked for want of information- Re proper rates are marked By

in pencil on the Abstract Est:— The Supg. Engr. may be called upon to explain the cause of some items of Est. being charged for at rates higher than those given in the Dist: Schedule.

The Plan & Est: have been approved & countersigned by the Chemical Examiner.

795/30.

25/9/82.

C. No. 6355

P. W. Secretariat.

Note by Budget Section.

Work

Improvements to the Laboratory of the Chemical Examiner at Madras

Remarks and References. 795/31

Fund Provincial

Service Head Civil Building

Departmental Head Chief Works

Amount of estimate	...	Rs 22,500
Expenditure in previous year	...	"
Allotment in current year	...	"
Balance required to complete	...	" 22,500
Total Rs...		22,500

Note of available funds.

The balance under Prod. Revenue of 1882/83 is Rs 72,314-

26/9/82

Budget Clerk.

Note by Budget Section.

CHEPAUK.

28th Septr 1882

No. 1742 C

795/32

MEMORANDUM.

In returning the Enclosures of letter from the Supdg: Engineer Fifth Circle No 2237 dated 19th Sept, the Chief Engineer has the honor to request that some explanation may be afforded as to why many of the rates given in the Estimate for improvements to the Chemical Examiners Laboratory are in excess of the District Schedule

(By Order.)

Lieut.-Colonel, R.E.,
Ag. Under Secretary to Government, P.W.D.

To The Supdg Engr Fifth Circle
with 13 Enclos: to be returned

D&W 28/9

B. 2242 w 3/-9-82
B. 2362 w 26-9-81

From

THE SECY. TO GOVERNMENT,

P. W. D.

To

THE

Dated

Despd. 188

Recd.

No.

ENCLOSURES.

No 1742 C 28-9-82

Entd in Record Book

795/33

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 93.

READ—the following papers :—

From Colonel H. L. PRENDERGAST, R.E., Superintending Engineer, Fifth Circle, to the Chief Engineer, Public Works Department, dated Chepauk, 19th September 1882, No. 2237.

With reference to G.O., No. 2242 W., dated 1st September 1882, I have the honor to submit plans and estimate of Rs. 22,500 for improvements to the laboratory of the Chemical Examiner, Rs. 19,040, and for the supply of gas, Rs. 3,460.

1 Detailed Estimate.
1 Abstract do. (in duplicate).
6 Plans.
2 Specifications.
1 Report.

2. The improvements to the laboratory consist in the construction of three upper rooms in the present building and a small store-room, laying on water pipes to different parts of the building, and providing gas pipes. The furniture, benches, cupboards, &c., make up a considerable item of Rs. 7,092. For the supply of gas provision is made for a gas shed with two gas-holders, &c., and for bringing water pipes to the cisterns of the gas-holders and to the condenser.

No. 93-A.

From the same Officer, dated Chepauk, 16th December 1882, No. 3300.

With reference to your memorandum, No. 1742 C., of 28th September 1882, I have the honor to return the plan and estimate of Rs. 22,900 for improvements to the Chemical Examiner's laboratory, together with a printed copy of the current schedule of rates upon which the estimate has been framed.

1 Detailed Estimate.
1 Abstract do. (in duplicate.)
6 Plans.
2 Specifications.
1 Report.
1 Memorandum of extra cost for wood-work.
1 Printed schedule of rate.

Owing to a sudden rise in the market value * since the estimate was framed, the rate for teakwood wrought and put up has increased from Rs. 3 to Rs. 3-10-0 per cubic foot.

* From Rs. 85 to Rs. 110 per ton of 50 cubic feet in logs.

A memorandum is appended showing the extra amount † that has been added to the estimate on this account.

† Rs. 400.

No. 94.

ORDER—dated 10th January 1883, No. 89 W., Public Works.

The estimate, amounting to Rs. 22,900, for improvements to the Chemical Examiner's laboratory at Madras, is sanctioned for execution when funds are available.

2. This sanction has been registered as Provincial No. 196 W. of 1882-83 and classified as Civil Buildings, Original Works.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, Fifth Circle, with fourteen Enclosures.
" Examiner of Public Works Accounts, with duplicate Abstract Estimate.
" Public Department.

Encl. A. F. Goodhall,
Spare Copies

795
34

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1883} Madras.

PUBLIC WORKS.

Dated January, 10th.

Read. Encl.

G.O., 10th Jan. 1883, No. 89 W.

JANUARY.
Nos. 93-94.

Chemical Examiner's Laboratory.

An estimate for improvements to the at Madras, sanctioned.

No. 3907.

Sanitary Engineer's Office
5 Circle, Madras
11 February 1884.

From

The Superintending Engineer
5 Circle

295/35

To.

The Chief Engineer
P. W. Department

Sir

Enclosures-4

With reference to G. O. No. 33208 dated 21 November 1883, I have the honor to forward statements showing

(A) Articles belonging to the existing gas works which are required for the Chemical Examiner's Laboratory at the Medical College, in connection with the improvements now in progress.

(B) Articles of the existing gas works not required for any purpose, & buildings proposed to be demolished.

(C) Articles in store under the charge of the Superintend-
-ent

Superintendent of the Government Gas Works, and

(D) Articles in Store under the charge of the Executive Engineer.

2. The hitherto sanctioned arrangement has been, for the supply of Gas to the Chemical Examiner's Laboratory, from the gas works in the Fort. But now that these works are to no longer kept up, the articles entered in Statement A can be used for the manufacture of gas in the Chemical Examiners Laboratory. By the transfer of these articles free of charge, the extra outlay consequent on the change of arrangements, is estimated at about Rupees 800 or within 5 per cent of the Executive Estimate Rupees 22,900.

3. 795/36 Of the articles entered in Statements B, C, D the Executive Engineer proposes that all the iron articles be sold by public auction at Madras and also the brass articles if a fair price can be obtained for them as old brass - if not, that they should be sent to the Stores Office for disposal - the auction sales to take place after full notice being given in the Salore, Allahabad Calcutta, Bombay and local News papers, and to the Military Works Department at Simla.

4. Steps explained in para 35 of the Report of the Committee on the Superfluous Stock of the P. W. Department, that Dr. Rogers considered it would be worthwhile to send the brass fittings to

* Govt of N.W.P. 9th Revenue 4th April 1881

to England if they were not to be kept. And in para 36 the Committee were of opinion that all should be cleared out by auction sale. I am still of the same opinion, and recommend that every thing be sold off.

5. The Executive Engineer has arranged with Dr. Rogers the modifications required at the Medical College, estimated at about Rs. 800 (para 2 above) and I have authorized his removing such portions of the Fort Gas Works as are not required there, but which are to be used at the Medical College.

I have the honor to be
Sir,
Your most obedient Servant,
Alexr. Prendergast
Captn. R.E.
Superintg. Engineer
5th Circle

Dy no 182
26/12/84

3

795/37

From

THE SUPERINTENDING ENGINEER,
5TH CIRCLE,

To

THE Chief Engineer
P.W.D.

Dated 11th February 1884.
Rcvd.

ENCLOSURES. 4

No. 3907

Old Gas works - Fort St. George — Reports regarding the —

12

128	Tees do 1¼ – ½ – 1"	1	"	"	"	1	Serviceable
129	do 2" – ½" – 1"	1	"	"	"	1	do
130	do 2" – 1 – 1"	1	"	"	"	1	do
131	Elbow. [illegible] 2" – 2"	12	"	"	"	12	do
132	do [illegible] 1" – ¾"	12	"	"	"	12	do
133	Tees 1" – 2" – 1"	3	"	"	"	3	do
134	do 2" – 2" – 1"	3	"	"	"	3	do
135	do 2 – ½" – 2"	3	"	"	"	3	do
136	do ¾" ½" – ¾"	7	"	"	"	7	do
137	Crosses ½" ¾" 1"	12	"	"	"	12	do
138	Diminishing Couplings 2¼" – 1¼"	1	"	"	"	1	do
139	do – 1¼" – 1"	5	"	"	"	5	do
140	Couplings 1"	50	"	"	"	50	do
141	do ¾"	8	"	"	"	8	do
142	Gas hooks	500	"	"	"	500	do
143	W I pipe 2" Dr	22	"			22	do
144	do 1½" Dr	300	"	"	"	300	do
145	do 1" Dr	500	"	"	"	500	do
146	do ¾" Dr	~~300~~ 500	"	"	"	~~300~~ 500	do
147	do ½" Dr	139½	"	"	"	139½	do
148	do ¼ dr	100	"	"	"	100	do.

13

795/93

W H Burton Lt Col R E
[illegible] Ex. Engineer [illegible]
31/1

32/25

100	Lever Lantern Cock	24	"	"	"	24	Serviceable
101	Copper Syphon pumps	2	"	"	"	2	do
102	Water gauges with glass tubes	4	"	"	"	4	do
103	1½ Cock Brass plug	4	"	"	"	4	do
104	Indian rubber bags for ~~mains~~	15	"	"	"	15	do
105	[illegible]	2	"	"	"	2	do
106	[illegible]	12	"	"	"	12	do
107	Cut glass globe	12	"	"	"	12	do
108	Punkah top with wire gauge bottom	36	"	"	"	36	do
109	Tube bends 1½" dr	24	"	"	"	24	do
110	do do 1" dr	14	"	"	"	14	do
111	do do ½" dr	5	"	"	"	5	do
112	Tube pendants	24	"	"	"	24	do
113	Carrying box for rockets	2	"	"	"	2	do

114	Charging Scoops Small	1	"	"	"	1	do
115	Cast iron bend 1½	1	"	"	"	1	do
115	do 1¼"	6	"	"	"	6	do
117	Lead ~~Soft Socket~~ socket	6	"	"	"	6	do
118	~~Flange Socket Valve~~	12	"	"	"	12	do
119	Cast iron elbow Connection bend 1"	3	"	"	"	3	do
120	C. I. Elbow Connection bends 1½	3	"	"	"	3	do
121	Syphon traps & covers	10	"	"	"	10	do
	All fire Bricks ~~[illegible]~~	13	"	"	"	13	do
122	Tees T ¾ 1"	13	"	"	"	13	do
123	do 1¼" T ½, 1¼	1	"	"	"	1	do
124	do 1" T ½, 1"	13	"	"		13	do
125	do 1¼ - 1" - 1¼	1	"	"	"	1	do
126	do 1¼ - ¾ - 1½	1	"	"	"	1	do
127	do 1¼ ¾ 1"	1	"	"	"	1	do

795
42

64	Pliers gas fitters	2	"	"	"	2	Serviceable
65	P.P. Cutting large	1	"	"	"	1	do
66	Cast Steel yarning tools	1	"	"	"	1	do
67	Drilling clips & drills	1	"	"	"	1	do
68	Spanners for Cocks	3	"	"	"	3	do
69	do. Cock nuts	8	"	"	"	3	do
70	Pipe tongs 2", 1 3/4", 1 1/2", 1 1/4", 1", 3/4"	1	"	"	"	1	do
71	Hand Hammers	2	"	"	"	2	do
72	Mouth pieces	1	"	"	"	1	do
73	do. covering plates	3	"	"	"	3	do
74	Socket pipes 9' long 3" Dr	10	"	"	"	10	do
75	do do 4" Dr	6	"	"	"	6	do
76	do bends 4" Dr	4	"	"	"	4	do
77	do pipes 6' long 1 1/2" Dr	120	"	"	"	120	do
78	Lead tubes 2"	12	"	"	"	12	do
79	do. 1 1/2"	27	"	"	"	27	do
80	do 1"	68	"	"	"	68	do
81	do 3/4"	24	"	"	"	24	do
82	do 1/2"	240	"	"	"	240	do
83	do 3/8"	120	"	"	"	120	do
84	Brass Main Cock 1 1/2"	12	"	"	"	12	do
85	do — 1"	6	"	"	"	6	do
86	do 3/4"	5	"	"	"	5	do
87	do 1/2"	24	"	"	"	24	do
88	do 3/8"	60	"	"	"	60	do
89	do 1 1/2"	2	"	"	"	2	do
90	do 1"	10	"	"	"	10	do
91	Unions for iron stem 2"	2	"	"	"	2	do
92	1"	10	"	"	"	10	do
93	Ceiling plate 1/2"	24	"	"	"	24	do
94	do 3/8"	24	"	"	"	24	do
95	Elbow cocks	60	"	"	"	60	do
96	Gallerie 3/8"	50	"	"	"	50	do
97	Elbow drop Screws 3/4"	24	"	"	"	24	do
98	do do 1/2"	12	"	"	"	12	do
99	Brass Unions for Sockets	12	"	"	"	12	do

7

195/41

*10 required in excess to the quantity remaining

No.	Article	Qty			Qty	Condition
33	Pack Containing 42 Jets	1			1	Serviceable
34	Do. 168 Jets Fish tail	1			1	do
35	Brass Pumps	1			1	do
36	Furnace Frame	2			2	do
37	do door	1			1	do
38	Ash pan of the furnace	2			2	do
39	Trays for Small lime purifier	6			6	do
40	Pick axe	1			1	do
41	Tongs	2			2	do
42	Iron frames for the mouth piece of retort	2			2	do
43	Keys to turning Valves	3			3	do
44	Cock turner for pendant	1			1	do
45	Canal Coal about	63 tons			63 tons	
46	Connection pipes	3			3	Unserviceable
47	Tar Cistern	1			1	do
48	Counter poise iron weights for bells	60			60	do
49	Mamooties	1			1	Serviceable
50	Crow bars	2			2	do
51	Iron Rod about	5 ft			5 ft	do
52	Set of Scales & weights	1			1	do
53	Wheel barrow	1			1	In fair order
54	Stocks &c.	3			3	Serviceable
55	Large Steel Hammer	1			1	do
56	Tongs of Sizes	4			4	In fair order
57	Iron mortar & pestle	1			1	Serviceable
58	[illegible] wooden Ladder	2			2	In fair order
59	Large do do	1			1	do
60	Key for turning Cocks of Serviceable pipes	1			1	do
61	Lightning Conductor Copper band	65 Rft	3/8	1/8	65 Rft.	
62	Stock & dies 1/4 x 5/8 Set	1			1	Serviceable
63	Do. 1/2 x 1	1			1	

795/40

A

Government Gas Works

Fort St. George

List of Stores &c. belonging to the Old gas works in the Fort, required for work at the Medical College in addition to Chemical Laboratory.

795/38

Item No	Description of Articles	Dimensions No	2	B	D	Contents	Serviceable or Unserviceable	Remarks
		5	5	4	4	5		
1	Darlington works glass Lanterns	1	"	"	"	1	Serviceable	
2	Spare Oval glass for above	1	"	"	"	1	do	
3	Gas Lanterns made of Brass	1	"	"	"	1	do	
4	Leaden tube ½" Dr. about	500	Rft.			500	Rft. do	
5	Do. ¾" Dr.	57	"	"	"	57	Unserviceable	
6	Do. 1¼" Dr. with 10							
7	Side lights about	30	Rft.			30	do	
8	Do ¼"	30				30	do	
9	Do 1" with a Stop Cock	3	Rft.			3	Rft. do	
10	Do. 1¼ do	2½				2½	do	
11	Leaden flange with 4 holes	1	"	"	"	1	Unserviceable	
12	Photometer Complete	1	"	"	"	1	Serviceable	
13	Jets of the above	2	"	"	"	2	do	
14	Wall brackets bronze	12	"	"	"	12	do	
15	1" Stop Cock with flanges for the use of Drain pipes	2	"	"	"	2	do	
16	1" Stop Cock for Service pipes	9	"	"	"	9	do	
17	Brass Screws & Nuts	1	"	"	"	1	do	
18	1¼" Brass unions for Drain pipes	15	"	"	"	15	do	
19	1" do. for Drain & Lead	2	"	"	"	2	do	
20	1¼" do. do.	1	"	"	"	1	do	
21	1½" & 1¼" do	30	"	"	"	30	do	
22	½" & ¼" for Leaden tubes	25	"	"	"	25	do	
23	½" brass ties for Drain pipes	34	"	"	"	34	do	
24	½" do for leaden tubes	16	"	"	"	16	do	
25	¼" do do	26	"	"	"	26	do	
26	Brass Elbows	24	"	"	"	24	do	
27	Organ burners for Burning	10	"	"	"	10	Unserviceable	
28	do. do. Shades	12	"	"	"	12	Serviceable	
29	Brass gilt pendants of Sorts	2	"	"	"	2	do	
30	Jets of different Sorts	9	"	"	"	9	do	
31	Double Brackets	1	"	"	"	1	do	
32	Single Brackets with							
33	a Shade holder	1	"	"	"	1	do	

795/39

1/438

QUARTERMASTER-GENERAL'S OFFICE,
Fort Saint George
3rd of March, 1884

No. 1503

From

THE QUARTERMASTER-GENERAL,

295/44

To

THE SECRETARY TO GOVERNMENT,

MILITARY DEPARTMENT.

SIR,

In returning Reference Order
N° 771 dated 16th February 1884 with
enclosures, I have the honor, by order,
to state that His Excellency the
Commander-in-chief has no objection
to the various proposals made
by the Superintending Engineer,
5th Circle in his letter N° 3907
dated 11th February, 1884, regarding
the Gas works, Fort Saint George,
provided nothing is done to
interfere with the supply of
Gas to the Barracks until
after the 15th instant by which
date

1/657
31-5-84

1/438

Stores belonging
to Old Gas Works
required for
Chemical Labo
Medical Coll

date, arrangements for
their being lit with kerosine
oil will be completed.

I have the honor to be
Sir,
Your obedient Servant

D. S. McLeod Major
Dep. Quartermaster. Genl

795
45

R39

Fort St. George,
4th March 1884.

No. 1075. Transferred with an expression of the concurrence of Government in the Military Department, and the previous papers returned to the Public Works Department.

(By Order)

A Kenney Herbert - Lt. Colonel
Offg. Secretary to Govt.

No. 914 W d/ 4.4.81
" 1742 C d/ 28.9.82
" 89 W d/ 10.1.83
B " 3320 W d/ 21.11.83
" 364 C d/ 15.2.84

Circ: 7/3/84

Military (1884) Department.

No. 1096

From

THE QUARTERMASTER-GENERAL,

To

THE SECRETARY TO GOVERNMENT,
MILITARY DEPARTMENT.

No. 1503

Dated 3rd } March 1884
Recd. 4th } — " —

Enclosures. 2

Subject.

Stating that His Ex. the Comdr.-in-chief has no objection to Gas being used for Fort Saint George.

Stating that there is no objection to the disposal of the materials of the Fort St. George Gas works &c.

Transferred

No. 795 W

P.W. Department

Proceedings of the Madras Government under date the March 26 1884

Read the following:—

Letter from the Suptg. Engr. V. Circle A.E. No. 3907 d/ 11 Feby/84.

795/26

Endorsement of the Military Department — " 1075 d/ 4 March/84.

The proposals of the Suptg. Engineer for disposal of the materials of the Fort St. George Gas works, and for demolition of the buildings mentioned in Statement B which accompanies the letter above recorded, are sanctioned. Care should

however be taken, as suggested by H.E the Commander-in-Chief, that the supply of gas to the Barracks is not interfered with until the arrangements for lighting by Kerosine oil are in proper working order.

CU. 6-3-84

LLl. 6·3·84

S.E. ~~IV~~ V Circle

Ex. P.W. accts. Mily. Dept.

LS. Circ: 7/3/84

41

795/47

2073.

Govt. of (1883) Madras

PUBLIC WORKS.

(475)

2573

Dated

Recd. Entd.

G.O. 24th March 4 / 79

Gas Works Fort St George

The proposals for the disposal of ma[illegible] of the — & the demolition of [illegible] buildings connected with it sanctioned with remarks

65 / 6 80 / 1

[illegible] 24/3

[illegible] 24/3

Sub-Ordinate Supt. Engr.