

Table "C."

WEST WORKS (CRUSHING)

FOR SIX MONTHS ENDING NOVEMBER 30TH, 1897.

	£	s.	d.		Tons.	s.	d.
STONE BREAKER.							
GENERAL—							
				Ore Crushed	28,387		
Wages	410	5	4				
Stores	59	15	3				
	<hr/>						
	470	0	7	Cost per ton		0	3.97
MAINTENANCE—							
Wages	32	16	11				
Stores	55	3	9				
Mechanics' Work	37	2	7				
	<hr/>						
	125	3	3	Cost per Ton		0	1.05
	<hr/>						
	Total			Total Cost per ton		0	5.03
	<hr/>						
	£595	3	10				
DRIER.							
GENERAL—							
				Ore Dried	28,387		
Wages	432	19	10				
Tons. Stores	148	15	10				
1026 @ 13/6 Billet Wood... ..	696	15	3				
Incd Tramway	59	6	1				
Cartage	0	17	6				
	<hr/>						
	1338	14	6	Cost per ton		0	11.32

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Table "D."

Form of Crusher.	Where Working.	Number of Machines.	Class of Ore.	Size of Screen.	TOTAL.		
					H. P. Required.	Tons per Month.	Cost per ton.
Krupp Ball Mills	West Works	16 No. 5	Low Grade Oxidised	400	192	10,000	s. d. 2 2.34
Krupp Ball Mills	Top Works	4 No. 4	Mundic	1200	40	1400	} 6 7.93
Krom Rolls	Top Works	6 pairs 30" x 16"	Oxidised	400	60	3530	
Krom Rolls	Lower Works	4 pairs 30" x 16"	Oxidised	400	40	2600	} 6 7.23
Otis Ball Mill... ..	Lower Works	1 No. 6	Mundic	1200	12	650	

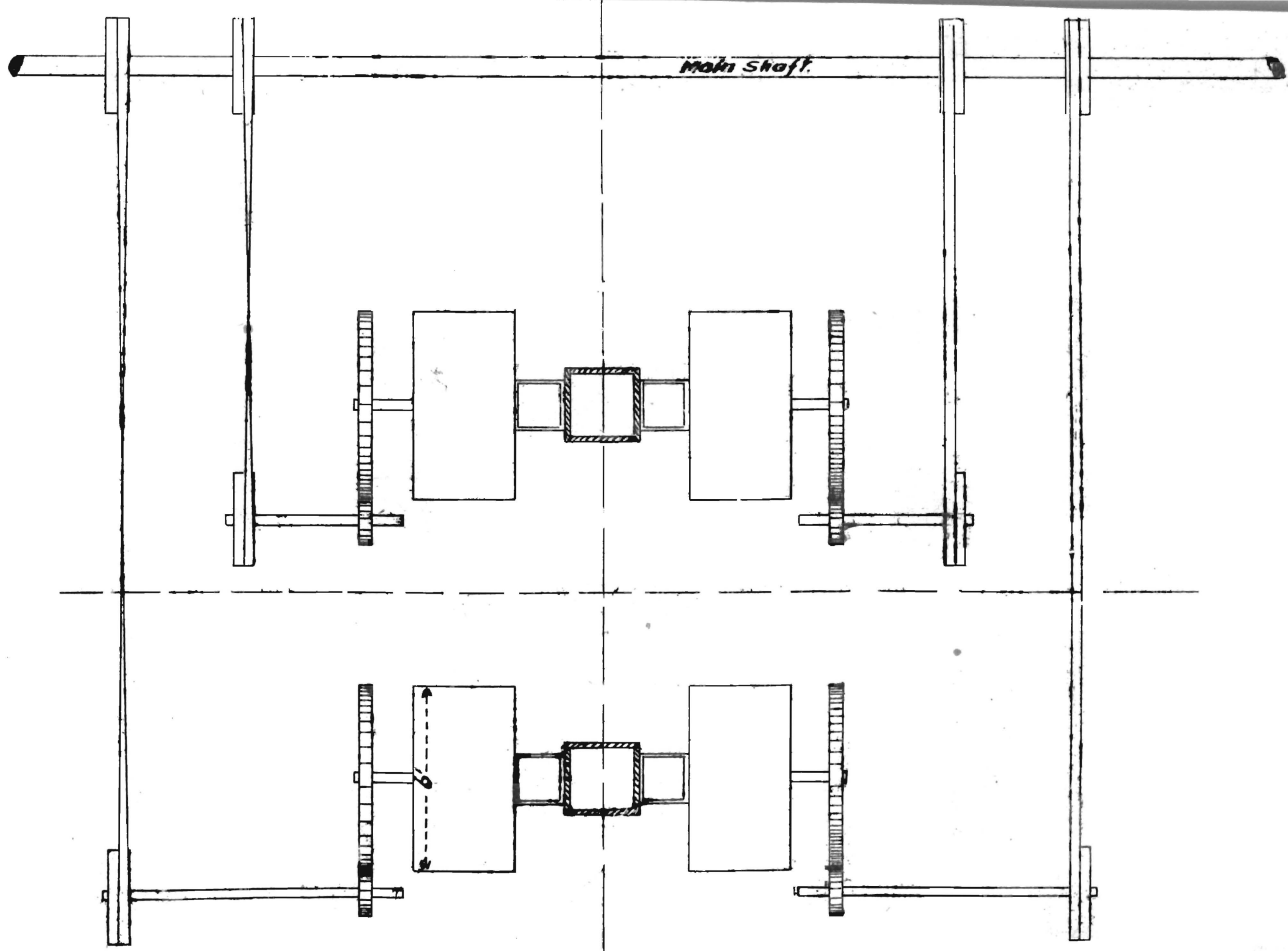
NOTE.—The Total Cost per ton includes Rough Crushing, Drying, Fine Crushing, Maintenance, Lighting and Water Supply, taken over a period of 6 months.

The figures given in the tables are sufficient to show the advantage of Ball Mills over Rolls in regard to cost per ton; their first cost, including engine power, erection, buildings, etc., is also lower than Rolls of the same capacity. Another advantage is that each mill is a complete machine, doing all the operations of crushing, elevating, and screening at the same time, so that unless the plant, when running full time, is only just equal to its work, one machine can always be repaired, and set going again, without interfering with the rest of the plant.

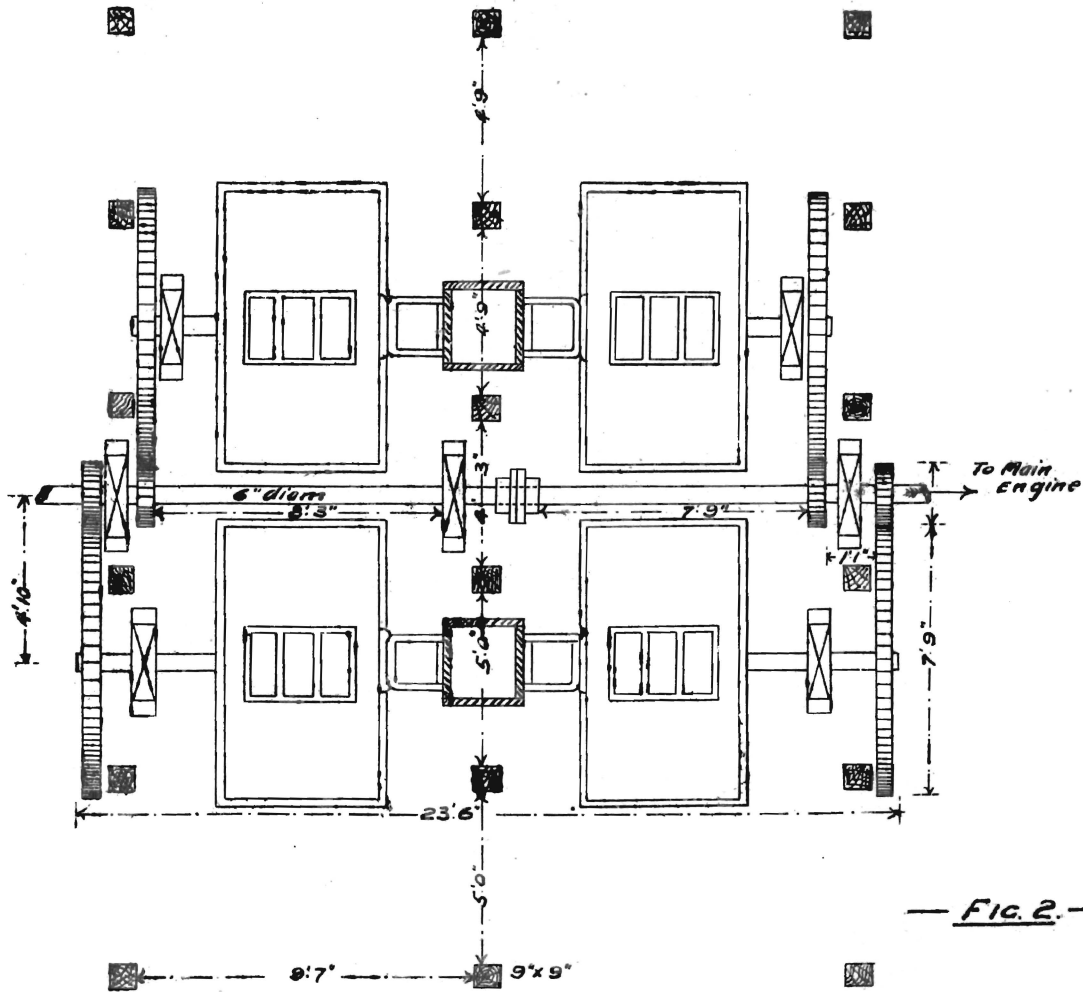
In conclusion, this paper only deals with Ball Mills as dry crushers, but the author is of opinion that, with slight modifications, they would be equally successful as wet crushers, and he would like to hear of some experiments being made in that direction.

APPENDIX.

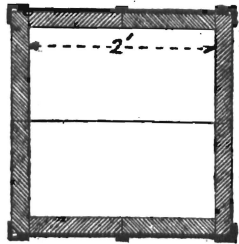
The Cost of a No. 4 Mill complete with one set of balls <i>f.o.b.</i> =	£350 0 0
Cost of Spare Parts No. 4 Mill—		
1 Set of Balls	21 0 0
24 Buckle Plates	27 9 9
6 Middle Plates	14 8 0
6 Scoop Plates	14 8 0
6 Fore Sieves	4 15 0
12 Chilled C.I. Side Plates	13 18 6
38 Side Plate Bolts	1 12 6
24 "D," 24 "E," 18 "F," 18 "G" Bolts	3 9 1
The Cost of a No. 5 Mill complete <i>f.o.b.</i> is	424 0 0
The cost of Spare Parts is—		Per cwt.
Spare Balls	£1 10 0
Grinding Plates	2 0 0
Scoop and Middle Plates	2 15 0
Wear of Parts—		
Plain Elevator Plates last	3 months.
Perforated Screen Plates "	3 "
Side Cheek Plates "	8 to 9 "
Grinding Plates "	8 "
Perforated Elevator Plates "	2 to 3 "
Fine Screens "	6 "



— FIG. 1. —

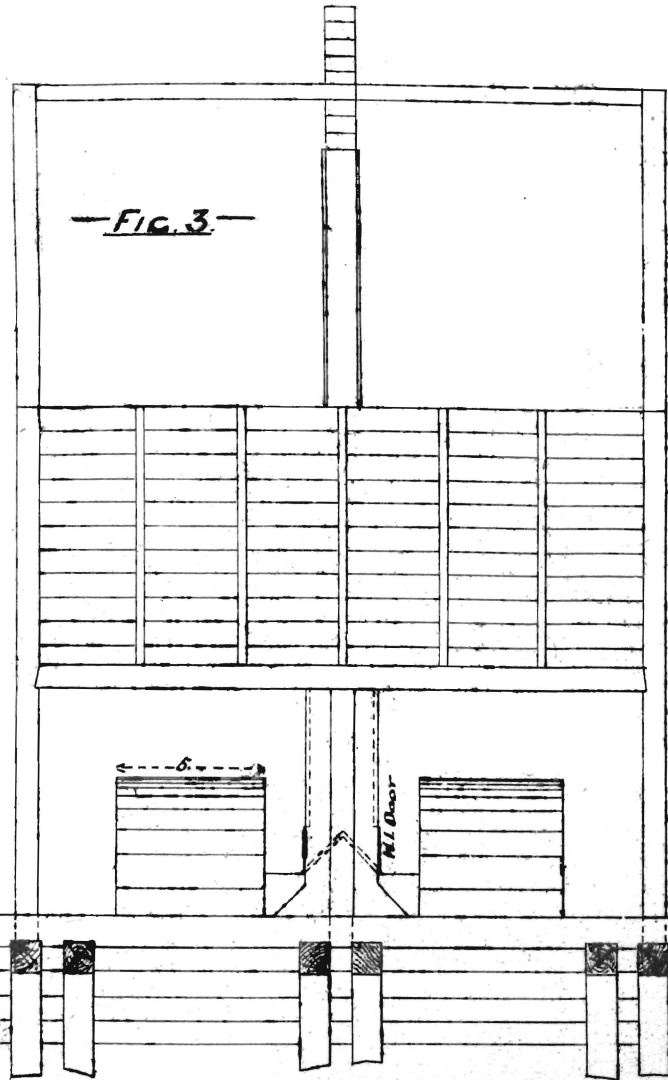
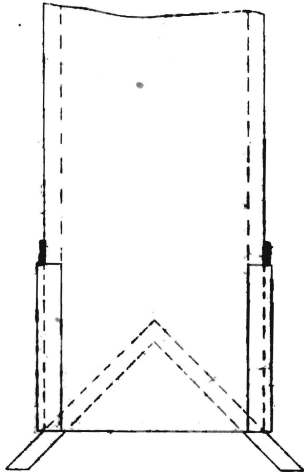
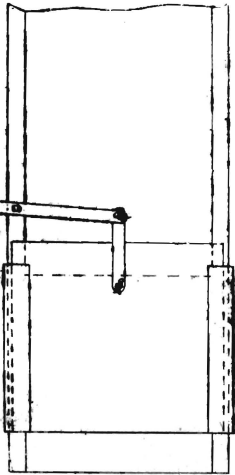


— FIG. 2. —



—FIG. 5—

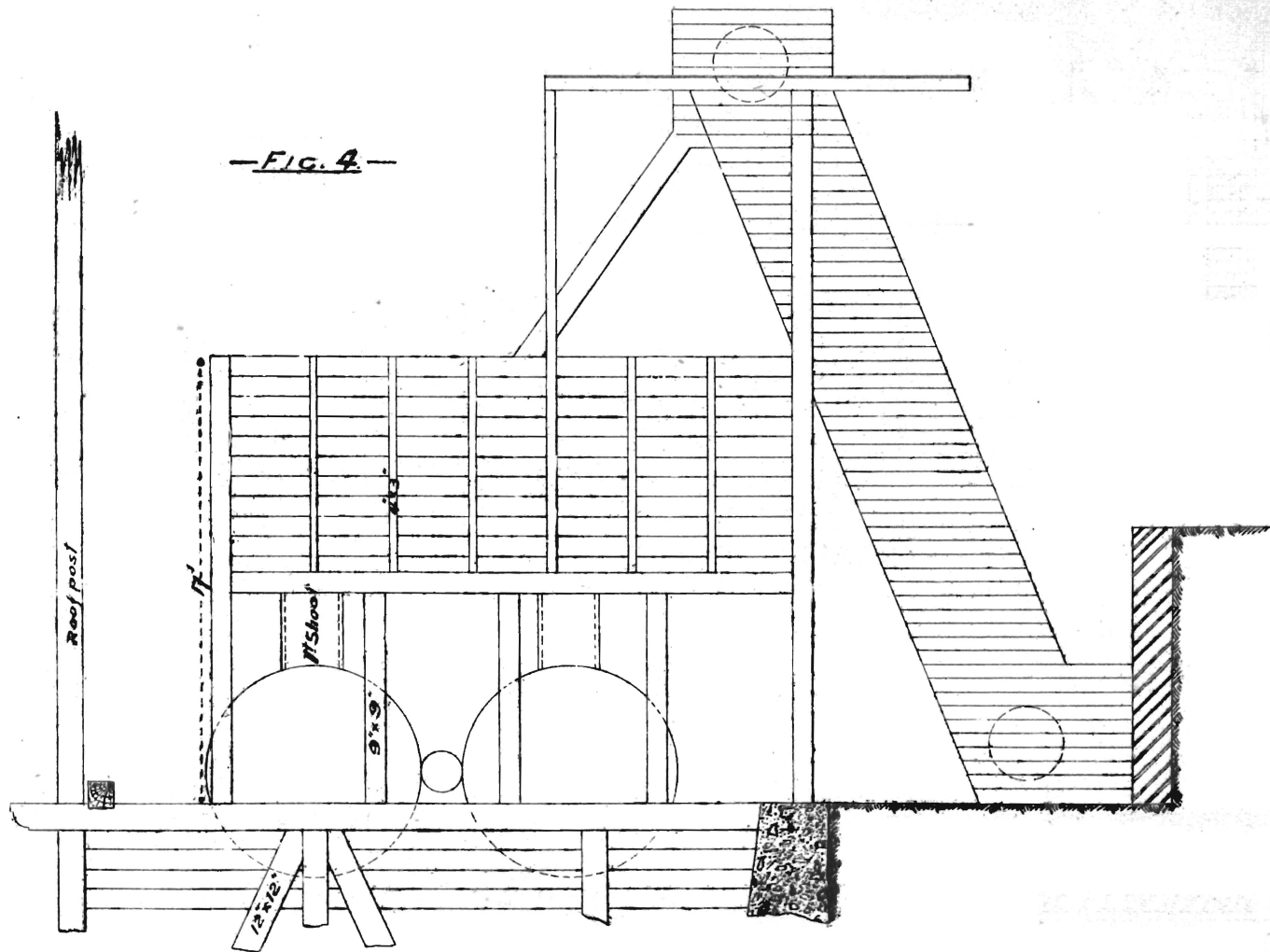
Angle iron

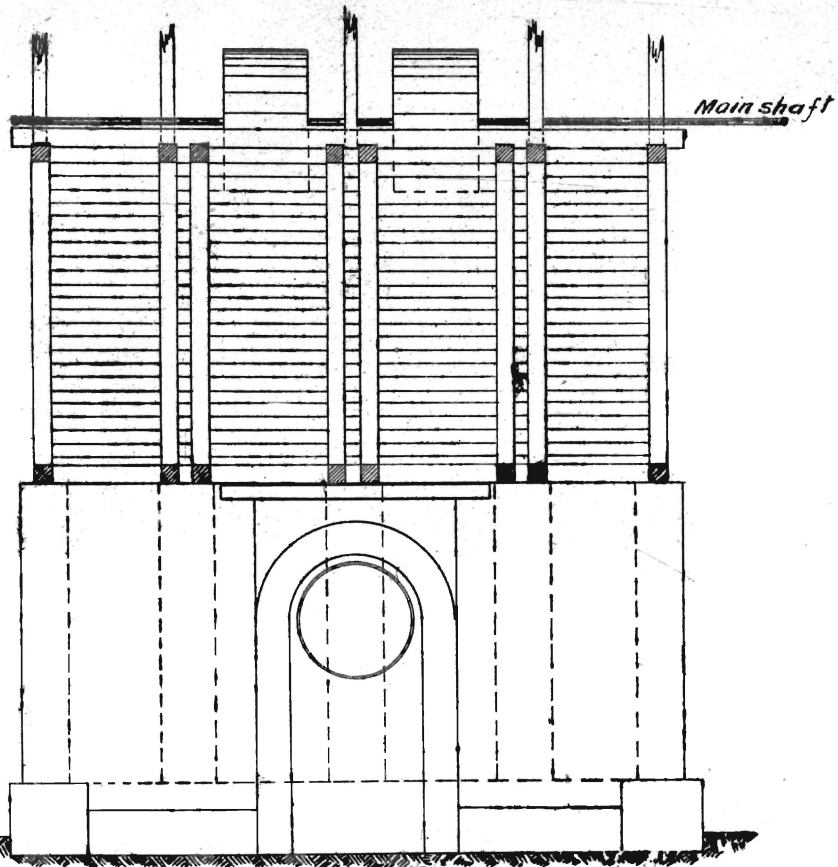


—FIG. 3—

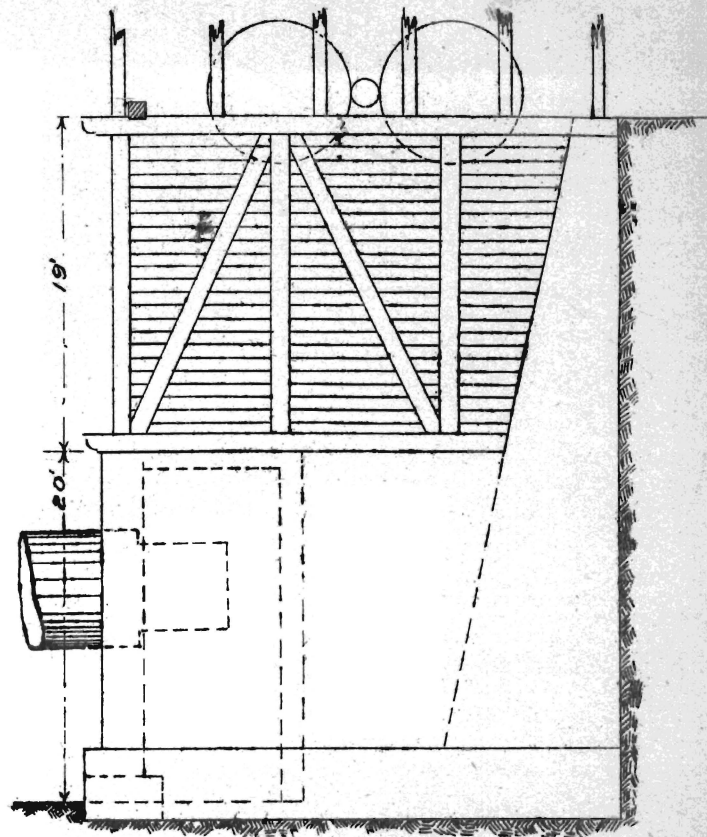
N.I. Door

—FIG. 4—





— FIG. 6. —
— FRONT ELEVATION —



— FIG. 7. —
— SIDE ELEVATION —