Krupps Great Works at Essen Prussia

1884 Sixty years ago Krupps Father worked at his anvil in his little shop in this town situated in Rhenish Prussia It is about 15 miles from the Rhine and railroads meet here more than 50 each day from every direction and about 15 miles from ~~Dusseldorf~~ Dusseldorf These works cover 600 Acres

"A wise man" he has chosen to invest his profits in his business, and not go outside; and it is said can manufacture "Steel" at a lower cost than any body else in the world; he employs about 20,000 men and is worth about 30 to 40-000,000 dollars. There are 439 Steam Boilers Steam Engines 450 with a total power of 18,500 horses & Steam Hammers 82 Machines for working Steel & Iron 1622 - consumption of Coke & Coal 3100 tons daily

He has manufactured more than 20,000 Cannon during the last 20 years for European Governments - he is making now 125 ton Guns for the Italian Gov and are the largest that have ever been made

One dollar & fifty cents is the pay of a Mechanic who would get 3.00 here

The men all go to work at 6 o clock the year round, those who work at the furnace & Mills go off at 6 o clock and the others at 7 P.M the laborer gets about 1.00 per day for the workmen 1/2 of an hour is given at 8 AM for breakfast, another 1/4 of an hour for coffee at 4 P.M. At noon the machinery stops 1 1/2 hours; places are provided in the works for men whose duties prevent them from taking the full 1 1/2 hour

he has made ~~Cannon~~ for almost all countries except England & the U S

Considering the capacity for which German Women are held by their "Lords and Masters" in the agricultural regions to have in the performance of all the hardest drudgery on the soil, it seems rather surprising to find that women are not employed in any department of the Cast Steel Works. 3000 of ~~them~~ men are liable to be called out of the works and mines in time of war for Military Service. - A large number of the young men have to go out each year to do their regular 3 years of actual service in the army. - The men after their 3 yrs service return with better health and character by the service in the army; and are more valuable than they would be if they had no knowledge of Military life. As yet there has been but little necessity of Savings Bank - but I think there is a prospect they will have one soon - perhaps they will have depositors - no one knows.

(Krupp's men — margin note)

Water Works - in London &c

At first water was conveyed into houses by means of "Lead Pipe" from Water Wheels standing under London Bridge Built by one Peter Maurice a Dutchman in year 1582 - "The said Maurice threw water over St Magnus Steeple this was never done before in England."

In 1594 there was another Water wheel erected near Black-Friars Bridge gave motion to 4 pumps and the pipes were of very thick Lead with a large diameter Peter Maurice or some of his family held the London Bridge Water Works till 1701 - The ~~same~~ the New River Water Works was going to interfere with his prices and sold to Richard ~~Soames~~ Soames for £38,000 before the transfer he got the lease of another Arch and they were able to supply 2,000,000 Galls daily. The latter laid down Iron pipes about 1767 - The Iron pipes were used in Chelsea Water Works about 1746 They were laid later in London They used to conduct through wood ~~Elm~~ & Oak trees "bored" and cut at reasonable length and in some cases would lay 6 of side by side but they would leak and rot and they were expensive - Prof Leslie says "Some think the Romans knew nothing about Hydrostatics Pliny says Water will invariably rise to the height of its source and said that leaden pipe must be used to carry water up an eminence. The rainfall a Greenwich is for 40 years average 24 6/10 inches Palladius speaks of the use of lead pipes but does not like to use them because says he they become covered with "Ceruse" and are thereby rendered "unwholesome and even poisonous." This probably prevented the Romans from the adoption freely of "Leaden Pipes." In England they have used them as large as 6 inches. - It is estimated that 200-000-000 Galls will be sufficient for London for a long distant future

In Ancient Rome they allowed 300 galls for each person so liberal were they with "baths & fountains". In these days 30 galls is considered a wasteful quantity

Rain as it leaves the clouds is about pure it absorbs gases and absorbs particles floating in the air

After a dry time there is more, than when the rains are frequent In the country it is purer than near Cities and large manufacturing towns

And if it comes from the roofs it will be liable to be more impure

Where water comes from Peat Districts it is liable to act quickly on Iron Pipes the Oxide of Iron is prevented in some degree by ~~first by~~ a coating of Asphalt Pitch, or some such substance will prevent it mainly; Cast Iron & Steel are less affected than Wrought Iron

(Eng) There was a Rainfall in Scarborough in a single night of 9 in 1857