THE TWO NETHERLANDERS

HUMPHREY BRADLEY

AND

CORNELIS DREBBEL

BY

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previous years. But apart from all this the letter shows that Drebbel was capable of dealing with practical technological processes as well as with 'ingenious and gratifying inventions' which had certainly formed the basis for his earlier letter. In the later letter we have the practical man of business displacing the shrewd propagandist.

But against all this there is the other side to Drebbel's character, a character which was full of contradictions and which alternated between periods of austere practicality and untrammelled imaginative fancy. And not necessarily in the direction of miracle toys for the delectation and persuasion of kings. De Peiresc, whom we have quoted frequently already, has provided us with plenty of evidence for the sensible and practical facet of Drebbel, but certainly on one occasion he gives a glimpse of the fanciful side of his character for which there is no better example than the description of that extraordinary conception characterised by de Peiresc as Drebbel's latest and most excellent invention. This was written in the year 1624. According to de Peiresc Drebbel proposed to make an artificial sun and a fire which would glow and burn continuously. He tells us that when Charles, then Prince of Wales in succession to his brother Henry who had died in 1612, was about to set off to Spain with the Duke of Buckingham on their abortive attempt for the hand of the Infanta, Drebbel made the proposal to him that, since water had now been brought to London and was distributed to individual houses by means of pipes, a similar system could be adopted for the supply of heat. The reference to the water supply was, of course, in relation to the completion in 1613 of the New River scheme under the direction of Sir Hugh Myddelton, but neither this nor the heating proposal had any connection with Charles's visit to Spain.

However, according to de Peiresc, Drebbel intended to make his perpetual fire on a small hill near London, *sur une*

petite montagne auprès de Londres, and from there it would be conducted into the houses in the City of London, by what means is not suggested, so that every householder would be able to roast and boil their food without the need for burning wood or other fuel. It would appear that all this information came to de Peiresc from Abraham Kuffler who told him that Drebbel intended to make a hole in the ground, presumably on the *petite montagne*, and there to install instruments which would collect the rays of the sun, these being used to set on fire the special substance which would burn and glow without being consumed. The instruments to collect the rays of the sun were to comprise sets of concave and convex mirrors. What the non-consumable material was to be is not explained, but as Drebbel wanted twenty thousand pounds sterling for the execution of the scheme it is not surprising, from this point of view alone, that nothing more was heard of it.

The whole idea sounds so impracticable that one is tempted to question whether the exaggeration was in Drebbel's mind, in Abraham Kuffler's report to de Peiresc, or in the latter's final entry in his journal. This journal is clearly stated to be [trans.] "A relation of what I have learnt of the life and inventions of Cornelius Derbel [sic], of the town of Alcmar in Holland, from Abraham Kuffler his son-in-law and Gilles his brother, in Paris, at the beginning of September 1624", and while Drebbel's sons-in-law might excusably be suspected of a little latitude of exaggeration, the remarkable thing is that de Peiresc in all seriousness sets down this preposterous claim without any comment whatever.

But on consideration we must ask ourselves, could there have been any real basis for what seems to be such a ridiculous proposition? Had Drebbel got some idea into his head to use solar energy to produce heat? And even apart from this end of the scheme had he got some idea of producing hot water or

steam and conducting this into the houses by connections from heat mains just in the way that district heating schemes are constructed to-day? After all, from this latter angle there was nothing much to differentiate his scheme from the hypocaust used by the Romans for the heating of buildings. And looked at from this aspect it is not unrealistic to say that the whole scheme begins to have a germ of possibility in it, a very small germ it is true, and a possibility some hundreds of years in advance of the current ideas. Unfortunately, however, the fantastic conception which arises out of a literal acceptance of de Peiresc's description was more than likely to raise in the minds of scientific men a doubt as to Drebbel's reliability, or even sanity, and to create the impression that such a scheme was merely the wild imagining of a *windmaker* and *grote ezel*. Indeed, one suspects here that Drebbel's friends and relations were his greatest enemies. But once again let us go back from the fanciful to the practical.

John Evelyn, the diarist, tells us that on 1 August 1666 'I went to see Dr. Kuffler, who married the daughter of the famous chymist, Drebbell, inventor of the bodied scarlet. I went to see his iron ovens made portable (formerly) for the Prince of Orange's army'. Now, first of all we must say that there is not space to discuss the ovens to which Evelyn refers, although they were certainly noteworthy in being provided with thermostatic control in the form of a draught regulator operated fundamentally by a thermoscope, through the expansion of air in a glass bulb. These ovens, therefore, were essentially practical and novel even if, as we know, the expansive property of heated air was known to the ancients. What we are interested in at the moment is what Evelyn terms 'the bodied scarlet'.

It is all very well for Jaeger to say that Drebbel was not the inventor, the *uitvinder* as the Dutch word is, of the bodied