frequently left by himself for whole weeks together, to execute works concerning which his master had given him no previous instructions. These works, therefore, he finished in his own way; and Mr. Bennet was often astonished at the improvements his apprentice from time to time introduced into the millwright business, and earnestly questioned him from whom he gained his knowledge. He had not been long at the trade before the millers, wherever he had been employed, always chose him again, in preference to the master or any other workman; and before the expiration of his servitude, at which time Mr. Bennet, who was advanced in years, grew unable to work, Mr. Brindley, by his ingenuity and application, kept up the business with credit, and even supported the old man and his family in a comfortable manner."

After some years spent partly as apprentice, partly as workman, in the service of Mr. Bennet, James Brindley set up in business for himself. The care with which he constructed almost every piece of machinery ensured success, and his reputation in all the various branches of engineering became each year more and more extensive.

It is, however, in connection with canals that we have chiefly to notice this great man.

"Artificial water-roads, or canals," says the author of "The Pursuit of Knowledge under Difficulties," "were well known to the ancients. The Egyptians had early effected a junction by this means between the Red Sea and the Mediterranean; both the Greeks and Romans attempted to cut a canal across the Isthmus of Corinth, and the latter people actually cut one in Britain, from the neighbourhood of Peterborough to that of Lincoln, some traces of which are still discernible. Canal navigation is also of considerable antiquity in China. The greatest work of this description in the world is the Imperial Canal of that country, which is two hundred feet broad, and, commencing at Pekin, extends southward to the distance of about nine hundred miles. It is supposed to have been constructed about eight centuries ago; but there are a great many smaller works of the same kind in the country, many of which are undoubtedly much older. The Chinese are unacquainted, as were also the ancients, with the contrivance called a lock, by means of which the different levels are connected in many of our modern European canals, and which, as probably all our readers know, is merely a small intermediate space, in which the water can be kept at the same elevation on either part of the channel, into which the boat is admitted by the opening of one flood-gate, and from which it is let out by the opening of another, after the former has been shut; the purpose being thus attained of floating it onwards, without any greater waste of water than the quantity required to alter the level of the enclosed space. When locks are not employed, the canal must be either of uniform level throughout, or it must consist of a succession of completely separate portions of water-way, from one to the other of which the boat is carried on an inclined plane, or by some other mechanical contrivance.

"Canals have also been long in use in several of the countries of modern Europe, particularly in the Netherlands and in France. In the former, indeed, they constitute the principal means of communication between one place and another, whether for commercial or other purposes. In France, the canals of Burgundy, of Briare, of Orleans, and of Languedoc, all contribute important facilities to the commerce of the country. The last-mentioned, which unites the Mediterranean to the Atlantic, is sixty feet broad and one hundred and fifty miles in length. It was finished in 1681, having employed twelve thousand men for fifteen years, and cost twelve hundred thousand pounds sterling.

"It is remarkable that, with these examples before her, England was so late in availing herself of the advantages of canal navigation. The subject, however, had not been altogether unthought of. As early as the reign of Charles the Second a scheme was in agitation for cutting a canal (which has since been made) between the Forth and the Clyde, in the northern part of the kingdom; but the idea was abandoned, from the difficulty of procuring the requisite funds. A very general impression, too, seems to have been felt, in the earlier part of the last century, as to the desirableness of effecting a canal navigation between the

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