WHAT IS THE NATIONAL DEBT?

OUR National Debt—the largest of any nation, with the exception of that of France—may be said to have had its beginning in 1688, when the "King's Debt" at the accession of William and Mary amounted to £664,263. Before that date it had been the custom for kings to borrow money at times of emergency, but it had always been done upon the security of the Crown, and the money borrowed was always repaid within a few years. But when Parliament obtained, by the Revolution Settlement of that date, a strict control over the standing army and the national purse, and it was suggested (it is said by Bishop Burnet) that money could be borrowed on the security of the nation, we find the National Debt to quickly take a permanent shape.

Accordingly, when the finances of the country were in great straits, owing to the war then being carried on against France, a formal establishment of the National Debt was made by an Act passed on the 3rd of January, 1693, by which £2,000,000 sterling were borrowed, to provide funds for the first of our wars on account of the "balance of power in Europe." There being a vast accumulation of private savings in the country, stored away in all sorts of hiding-places for the sake of safety, the opportunity of employing it on a Government guarantee was eagerly seized, and the money was immediately subscribed for; the idea being a new one in this country, though not in Holland, whence many of King William's advisers came. This loan was quickly followed by one in 1693, when the then capital of the Bank of England (£1,200,000) was advanced to the Government at eight per cent. interest, on the occasion of the founding of the Bank and in accordance with the conditions of its charter.

From the small beginning of 1688 the Debt has rapidly increased, the cause always being war (with the exception of £20,000,000 spent in 1833 for the abolition of slavery in the British Colonies)—until in 1857, at the close of the Crimean War, it reached its maximum of upwards of £835,000,000.

For many years, with the exception of the loan from the Bank of England, the moneys borrowed were always of the nature of short loans, of annuities for life, or of terminable annuities, at various rates of interest according to the value of money at the time. For instance, a sum might be borrowed as a short loan at six per cent. interest, the capital to be repaid or renewed at the end of the term; or instead, the same sum might be borrowed as a terminable annuity, the Government paying, say, seven per cent. for so many years, all payment ceasing at the end of the term. In this latter case, the excess interest (beyond the six per cent. paid upon the loan) would in reality be yearly payments of an amount calculated, if put away at compound interest, to repay the lender his capital at the expiration of the term.

The rate of interest paid upon the Debt varied until 1726, when the system was adopted of fixing the rate at three per cent., and making the so-called amount of the loan vary according to the value of money at the time. Thus, the value of money being four per cent., the lender would receive stock of the nominal value of £133 6s. 8d. for each £100 actually lent. It has been estimated that by this method the amount of the National Debt (and consequently the capital sum to be redeemed) is over one-third more than the amount of money actually received.

At the present moment the National Debt (amounting on the 31st of March, 1881, to £768,719,000) consists of the Floating Debt (that is to say, the moneys owing for current advances from the Banks of England and Ireland, and of Exchequer Bills), and of various descriptions of stocks, the four following being the principal:—

(1) Three per Cent. Consols (Consolidated Annuities), interest on which is payable on the 5th of January and July. The origin of this stock was in 1751, when various debts, all bearing three per cent. interest, were *Consolidated* into one description of stock.

(2) Three per Cent. Reduced Annuities, interest on which is payable on the 5th of April and October. This description arose by the funding together in 1757, and since, of several loans bearing varying and higher rates of interest, which were *Reduced* to three per cent.—the reductions being made with the sanction of Parliament, either by agreement with lenders, or by the calling in of the old stocks and the creation of new.

(3) New Annuities, bearing interest at three per cent., payable on the 5th of April and October. These annuities were created in 1844, by the conversion of certain then existing stocks into one fund, to bear interest at three and a quarter per cent. until 1854, and at three per cent. thereafter.

(The term *Annuities*, applied to the above stocks, simply refers to the interest, the capital being repayable at the option of the Government only; the lender, or holder, having no right to demand repayment, and can only realise by selling the debt on the Stock Exchanges.)

(4) Terminable Annuities, expiring at various dates—the principal and interest being repaid to the owner by fixed half-yearly payments, of equal amount, until the expiration of the term.

Various efforts have been made from time to time for reducing the amount of the National Debt—partly from a fear of the decadence and disappearance of such sources of the national wealth as our coal-beds, and partly on the ground of the unfairness of saddling posterity with the cost of wars and charges, &c., entered into for the advantages and purposes of the present and past generations. The first attempt was that of Sir Robert Walpole (1716), who proposed the creation of a sinking fund, by converting certain temporary taxes (previously imposed for paying the interest of the Debt), into perpetual taxes, and devoting any proceeds not required for the payment of interest to reducing the Debt. As, however, new loans were raised as fast as the old ones were redeemed, the scheme was soon abandoned. In 1786 the Act authorising Mr. Pitt's sinking fund was passed, enacting that the sum of £1,000,000 be provided for in each Budget, and applied yearly to the reduction of the Debt, the amount of the interest of the stock so purchased being again devoted to the same purpose. As, however, the National Debt was being continually increased (as in the previous instance) by fresh loans, the scheme did not work, and in 1829 it was arranged that the yearly surplus, if any, of the national revenue over expenditure should be devoted to the reduction of the National Debt.

In 1866 a serious effort was made by the conversion of some twenty-eight millions of three per cent. stock into short annuities to terminate in 1885—that is to say, the excess of the yearly payments beyond the interest required on the capital converted will at compound interest have by that date recouped the lender the amount of the principal.

Another step was taken in 1875, when, by an Act passed on the 2nd of August of that year, the annual charge for the service of the National Debt was fixed for the year 1875-6 at £27,400,000, for 1876-7 at £27,700,000, and permanently thereafter at twenty-eight millions per annum; all moneys not required for the payment of interest and expenses being devoted to the reduction of the Debt (the amount so devoted for the year 1880-1 was £350,000).

But by far the most extensive arrangement yet made for extinguishing the National Debt is that proposed in Mr. Gladstone's Budget for 1881-2. The proposal is to extinguish by 1906 no less an amount than sixty millions, by continuing to that date two millions of terminable annuities which were to have expired in 1885, and which would then have been applicable to the reduction of taxation. By the conversion of this amount from short into long annuities, a considerable reduction will, of course, be made in that portion of the short annuities which really repays the principal borrowed, the reduction amounting to about £1,550,000 per annum. The sum so saved put aside yearly until 1906 at three per cent. compound interest will amount at that time to sixty millions sterling, so that the new terminable annuities to end in 1906 will have to consist of the yearly reduction referred to of £1,550,000, plus the interest on the sixty millions, that is to say, of £3,350,000.

The sixty millions of Consols required to be so exchanged for annuities are readily found in the existence of stocks held on account of institutions for whose liabilities the nation is responsible. As the Government guarantees the amount in the hands of the Court of Chancery (belonging to estates under the care of the Court), and also the amounts of the Deposits in the Post Office Savings Bank, the funds of these two institutions have to be invested in the Government stocks. Instead, therefore, of having to go into the open market to arrange the conversion of the stock required, the Government simply exchanges for sixty millions of the stock held by the Chancery Court and by the Post Office Savings Bank, the yearly annuity (previously explained) of £3,350,000 to terminate in 1906.

As the funds of both institutions have hitherto always increased, the payments into their hands being larger than the withdrawals, and as they will therefore have to re-invest at least, not only the £1,550,000 per annum required to reinstate the original sixty millions by 1906, but the whole of the annuity in the Government Stocks, it is probable that the result will be to materially diminish the amounts held by private investors, and bring about some scarcity in the markets. The consequence is likely to be a gradual and steady increase of the price (already at about, or over, par), and ultimately yield an opportunity for the conversion of the remainder of the National Debt into fresh stocks bearing a lower rate of interest.

Should this be done, and the amount of twenty-eight millions provided for the permanent service of the National Debt be left untouched, funds will be provided for a still more rapid reduction—to say nothing of the opportunity provided in 1885 for creating further terminable annuities, or otherwise continuing to reduce the Debt, with the present annual amount of the remainder of the annuities terminating in that year.

W. J. W.

A FAMILY OF INVENTORS: THE BROTHERS SIEMENS.

THERE are families in which genius for art or literature seems to be hereditary, but we were not till this present generation aware that the genius of invention could spread its light on several members of one family. The great epoch of technical science and invention is still young, but, as every season brings with it its own peculiar flowers, so will this age enrol in it many eminent men of genius, among whom some will stand out conspicuously, and their names be heard again and again. It would be difficult to find a family more richly endowed with intellectual power and inventive genius than that of the late Ferdinand Siemens, of Lenthe, near Hanover. The sons of this gentleman numbered eight, of whom five are still living. As eminent engineers, as men of enterprise, they stand in the first rank, and three of the brothers have, through their inventions, attained a world-wide fame.

The eldest brother, Werner Siemens—the "Berlin Siemens," as he is generally designated—was born at