

through the influence of six senior managers, especially William Richardson (1811-92) and John Dodd (1837-1912). He continued the policy of appointing the best managers as directors and from 1873 he made the best foremen into shareholders. He created a trust fund in 1894 to provide pensions. The number of hands employed rose from 6,000 in 1872 to nearly 15,000 in 1902. The process of vertical integration was completed with the extension into coal mining from 1874. Dividends rose to a relative peak in 1876-77 under the influence of the boom in the formation of joint-stock spinning companies and reached their absolute peak in 1891-92, averaging 18 per cent per annum over the thirty years 1873-1902. When the firm was reincorporated in 1898 its capital of £3,091,800 was more than treble the £912,306 of 1868. The range of products was extended to include the fine spinning mule from 1874, the revolving flat card from 1881, the carpet loom and the ring spinning frame from 1882, the Heilmann comber from 1885, the exhaust opener from 1889, the hopper feeder from 1894 and the Nasmith comber from 1901. Rival machine-makers were so discouraged by the spectacle of their competitive incapacity that they ceased in the 1890s to display their products at international exhibitions: Platt Bros were the sole British exhibitors of cotton machinery at Milan in 1881 and at Chicago in 1893.

The international eminence of the firm was recognised by foreign powers: Austria created Platt a knight of the Order of Francis Joseph in 1873 and France awarded him in 1878 the Cross of the Légion d'Honneur. But he failed to recruit anyone of comparable calibre to his father's managers and he lived to some extent upon the paternal inheritance. The value of sales certainly rose in an era of declining prices from £966,538 in 1872 to £1,255,449 in 1901. Foreign sales became decidedly more important than domestic sales from 1886 and reached their peak proportion of 83 per cent of total sales in 1896, under the influence of German and Japanese demand. Foreign markets took 63 per cent of the firm's sales between 1873 and 1902, Europe taking 66 per cent, Asia 24 per cent and America 10 per cent. The production of powerlooms doubled between 1872 and 1879 but the firm reached its peak production and export of looms in 1879, its peak export of mule spindles in 1889 and its peak export of ring and mule spindles taken together in 1896. The share of direct sales abroad sank from 32 per cent of foreign sales in 1877 to 10 per cent in 1894 as sales through agents increased. From 1894 profits fell off sharply as competition increased in the marketing of the ring frame from Howard & Bullough of Accrington as well as from Tweedale & Smalley of Rochdale. From 1895 the number of ring spindles exported regularly surpassed the number of mule spindles but the total production of mule spindles continued to exceed that of ring spindles until 1915. The firm's exports of £9,710,200 during the decade 1893-1902 nevertheless represented some 16.7 per cent of the total exports of textile machinery.

Platt became a member of the Institution of Mechanical Engineers in 1867 and a member of the Iron and Steel Institute in 1873. He subscribed for £25,000 of shares in the Manchester Ship Canal in 1887, served as a director of the company from 1886 to 1891, precipitating the crisis of 1891-92 by his report of 21 November 1890 on the slow progress of the works. He carried the directors on his yacht *Norseman* on the inaugural voyage of 1 January 1894 and diverted the trade of his firm in timber and machinery