LET GLASGOW FLOURISH

GLASGOW CONTEMPORARIES

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AT

THE DAWN OF THE XXTH CENTURY.

PUBLISHERS:
THE PHOTO-BIOGRAPHICAL PUBLISHING CO.,
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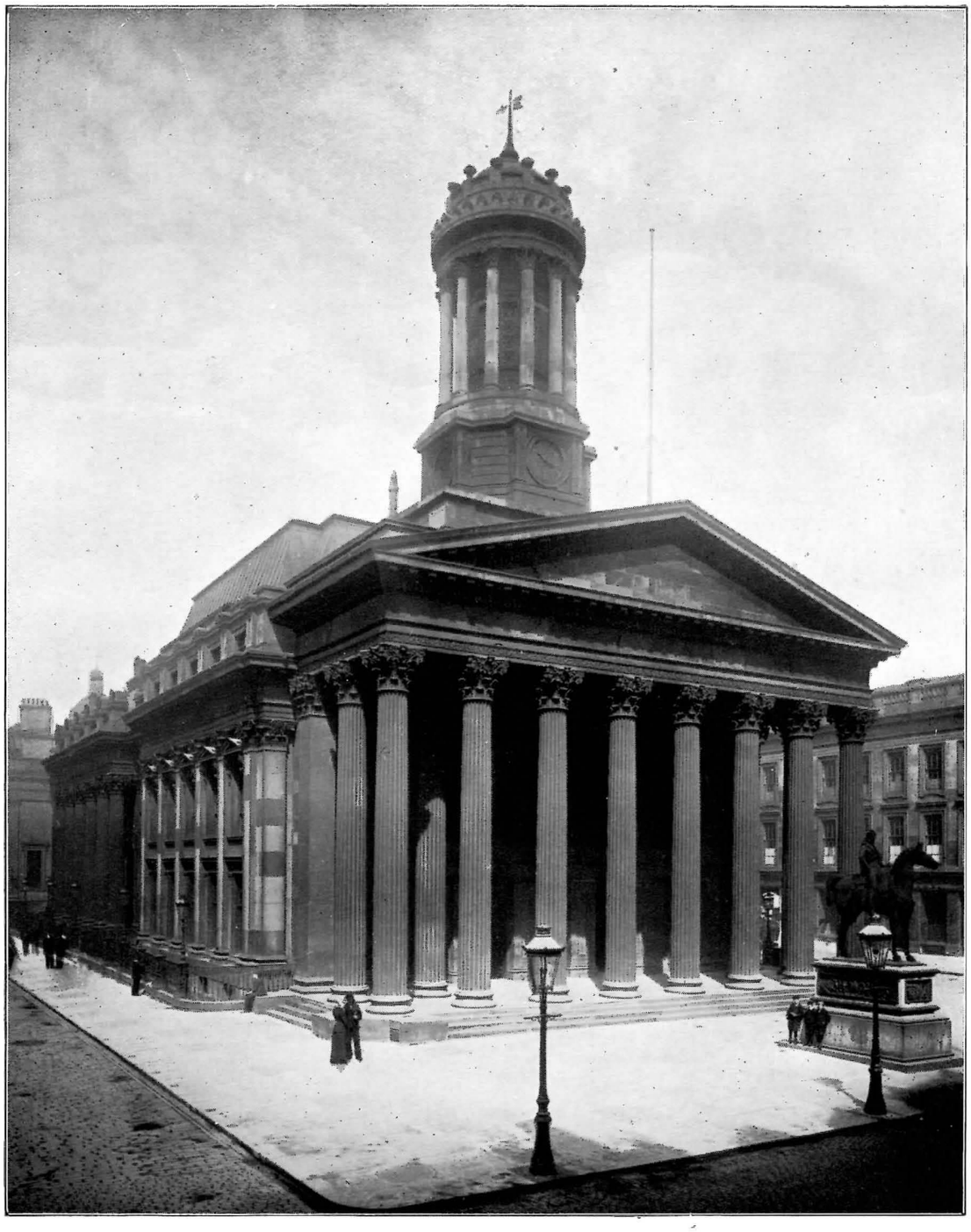

ROYAL EXCHANGE.

GLASGOW CONTEMPORARIES

AT

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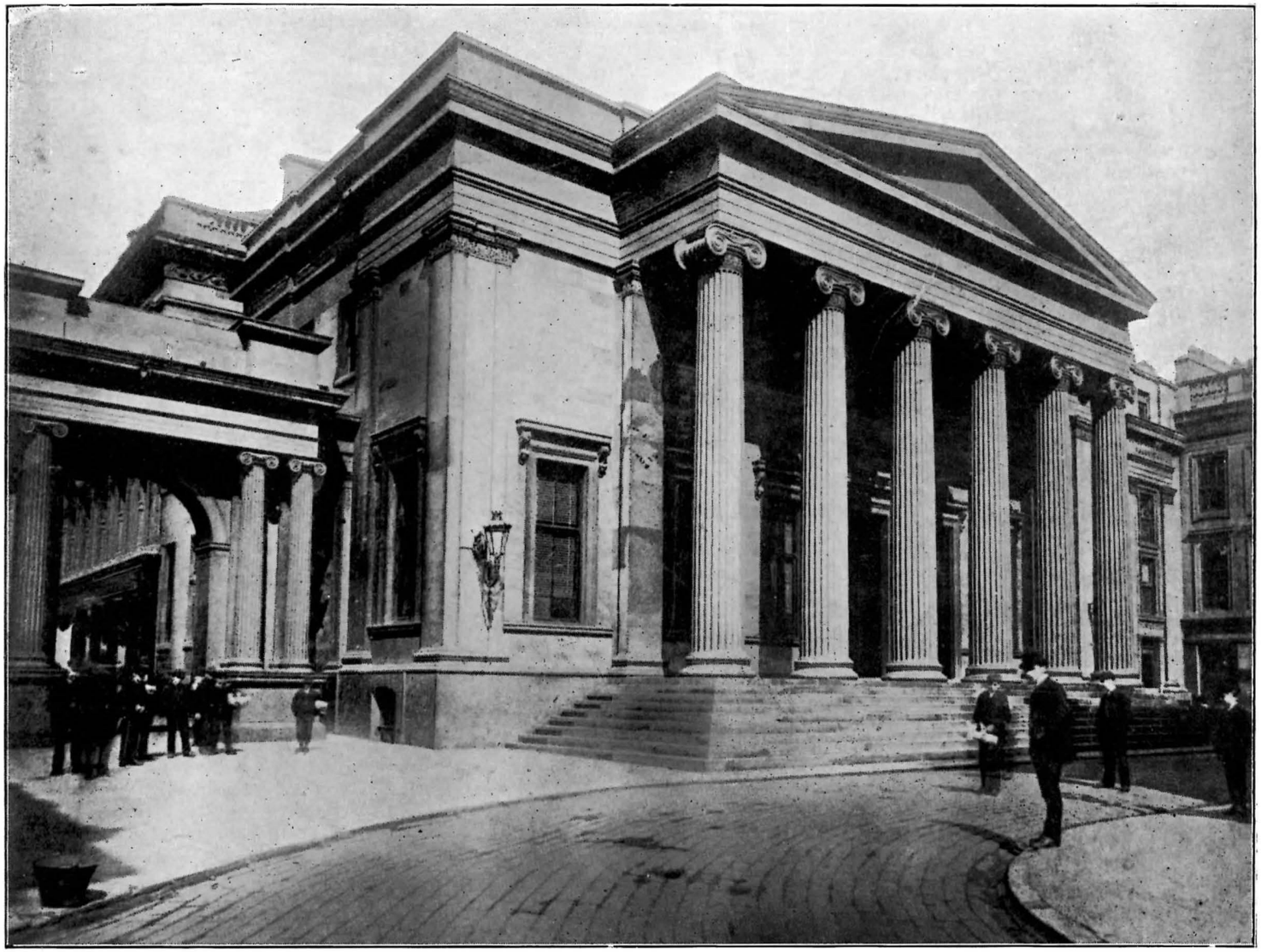
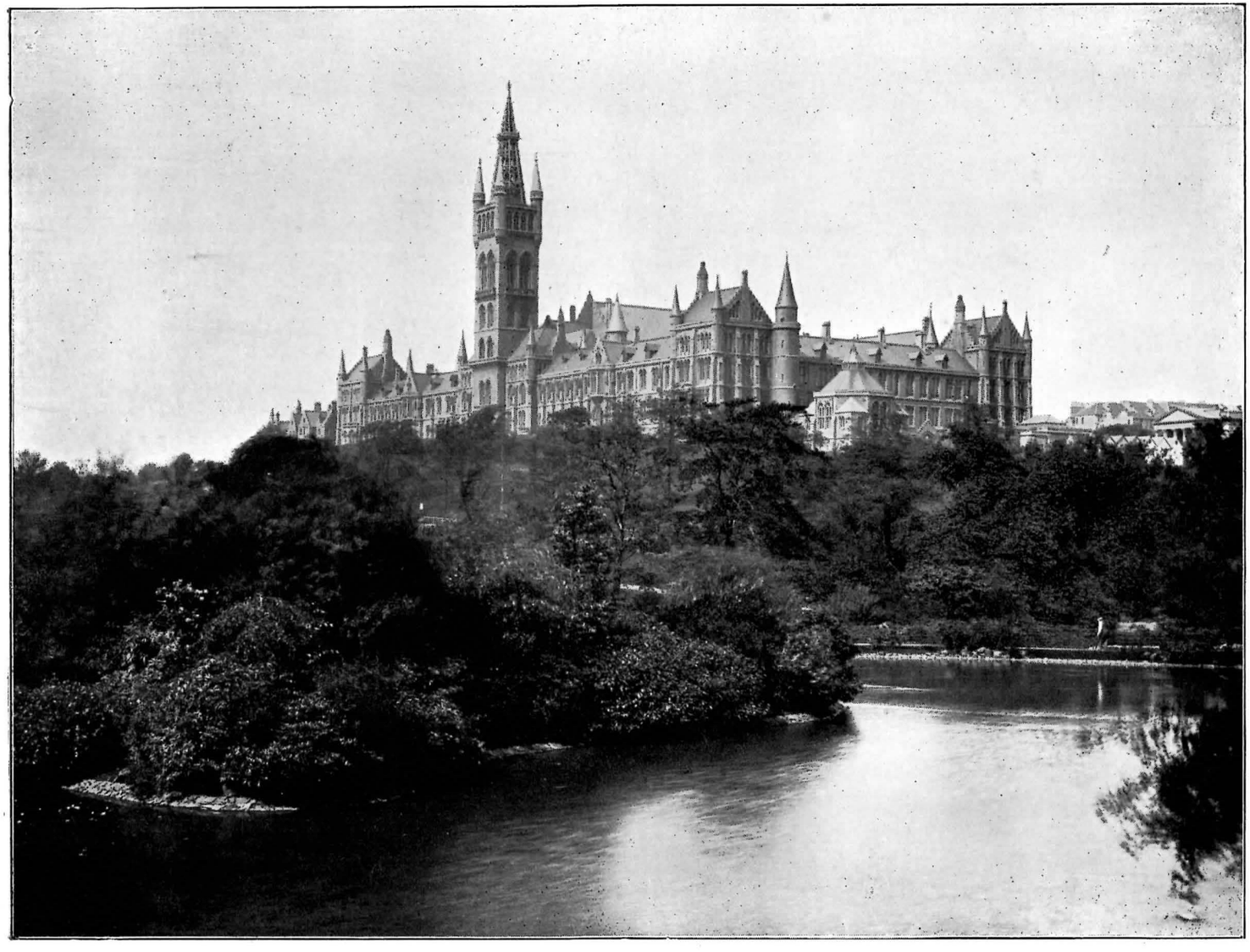


ROYAL BANK OF SCOTLAND.



GLASGOW UNIVERSITY.

GLASGOW CONTEMPORARIES

AT THE DAWN OF THE XXTH CENTURY.

EARLY GLASGOW.

HISTORICAL SKETCH OF THE CITY.

FROM the position of a tiny missionary settlement on the banks of the Molindinar Burn, Glasgow has arisen to the heights of the "Greatest Municipality on Earth." As a city it presents this paradox—that while old it is yet young. The Glasgow we know is scarcely more than sixty years of age. And while it has a past of antiquarian value, it is, as a seat of modern industry that it is known to fame, and it will, probably, for all time, so remain. As a great seat of industry it emerged some sixty years ago, and emerging, it delayed not in assuming a position amongst the great cities of the earth, second only to that of London, which, on every hand, is acclaimed as the greatest seat of commerce the world has ever seen. Nor, like the Mediterranean ports of old, has Glasgow been neglectful of the fine arts, architecture, science, or literature. From its University have gone forth great men, and greater thoughts. Out of its art school have come works, admired of Europe. Its scheme of buildings may be solid, rather than artistical, but in the Municipal Buildings, the Cathedral, the University, the Art Gallery, the Merchants' House, Trades' House, and Hospitals, there is sufficient proof, that the higher ideal has never wholly been absent. In this the opening year of a new century it is the custom to "mark time;" to institute a centennial comparison; to note the signs of progress. And how does Glasgow stand? What can the city of Saint Mungo (of herring, tobacco, cotton, coal, and iron, more nearly) bear witness to?

In those one hundred years it has seen the growth of Glasgow Harbour, from the humble beginning of 262 yards of quay wall at the Broomielaw, to an enormous stretch of 14,606 yards, or 8¼ miles of quayage, extending in a continuous line on both banks of the river, from Glasgow Brig down to the mouth of the Kelvin, where the Harbour may be said to terminate; it has seen the tow-path of the south-side give place to the horse-power of the steam-tug; it has seen the same tow-path become the site of quay walls, warehouses, docks, and shipyards of astonishing extent, and growing outwards, almost without a break, to the very burgh of Renfrew, where the tow-path began; it has seen a hiving city grow on the southern banks of the river, where one day it looked on green fields, plantins, windmills, and inviting pasturage; it has seen the revenue of the Clyde Trust advance from £1,070 per annum to £500,000; it has seen the four and five ton gabberts of its youth disappear before the 5,000 and 6,000 ton steamers of its riper years; it has seen the humble seed, sown by the "Comet's" hull and machinery, become a stately plant, which, last year, gave to the Clyde an output of 500,000 tons of

shipping, and 500,000 indicated horse-power of marine engines; it has seen the so-called staple industries of herring fishing, tobacco fabricating, and cotton spinning, sink into insignificance, as beside the grandeur of the newer industries, begotten of coal and iron; it has seen the population of the city grow from barely 70,000 to close upon 1,000,000 souls; it has seen the area of a few streets become a vast state of 13,000 acres, employing 11,000 servants, and administering an annual revenue of upwards of two-and-a-half millions sterling, with an accumulated (and accumulating) debt of ten millions, and real property valued at fourteen millions; it has seen the rent-roll increase from perhaps £60,000 to four-and-three-quarter millions; it has seen the initial cost of Broomielaw Quay—£1,666—swell into a sum of £18,000,000 for harbour extension and river development; it has seen the little bubbling stream 3¼ feet deep (high water) and 145 feet broad, become a mighty waterway, having an average width of 450 feet, and a depth of 28 feet; also it has seen the disappearance of the stage coach, the rise of the locomotive, gas, electric lighting, electric traction, the telephone, the motor car, and the daily and evening newspaper, in all of which it will be granted there is much to think of, and a great deal from which the men of the time, and the coming masters of the city, may derive much hopeful inspiration and cheerful encouragement for the days of continued effort that are before them.

So much for centennial progress, remarkable no doubt it is, but it simply pales in contrast with the work of the past fifty years. One fact will summarise the whole position. In 1855-56, the first year of the valuation roll for Scotland, the population was put down at 355,000, and the rental at £1,362,168; by 1899-1900, the last available return, these figures had become 747,000 and £4,780,000. That is to say, that while the population had doubled, the city had increased more than three-fold in wealth. True as these figures are, in their applicability to the city boundary proper, they by no means give a clear indication of its influence. The whole West of Scotland, it is not too much to say, is nearly related to Glasgow—without the city, the seaboard could scarcely have being; without it, many of the thriving coast towns and holiday resorts would never have been heard of, supposing they had ever come into existence. From the petty dimensions of scattered villages or ferry inns, in less than fifty years, there have grown up on the Firth of Clyde, such places of magnificence as Helensburgh, Garelochhead, Gourock, Kilmun, Kirn, Dunoon, Wemyss Bay,

GLASGOW HARBOUR AND ENTRANCE TO PRINCE'S DOCK.

Largs, Millport, Rothesay, Saltcoats, Brodick, etc., etc. These towns, and Royal Burghs some of them, primarily exist as playgrounds for the citizens of Glasgow, and their reclaimed rugged slopes, and castle-like mansions are but evidence of the munificence of Glasgow's coal kings, iron princes, shipbuilding lords and trading barons. And to come nearer the city; even such anciently marked hamlets as Rutherglen, Cathcart, Lenzie, Eaglesham, Renfrew, Kilpatrick or Bearsden, Maryhill, Govan, Partick, Langside—in fact every nestling nook within a ten mile radius of Glasgow—are to all intents and purposes, a portion of the city. Most

JAMES WATT'S HOUSE—1848.

of them—every one of them, were crumbling to decay when the great maritime port arose, and shaking off the lassitude of centuries assumed its proper state among the modern seats of industry. To take a few illustrations, and very recent ones at that.

In 1891 Maryhill could boast of 3,411 houses, and a population of 16,798; in 1898 the figures were respectively 6,578 and 30,235, or increases equivalent to 80 and 90 per cent.; West Pollokshields and Bellahouston had a population in 1891 of 3,538, in 1898 it had increased to 5,620, equal to 58 per cent.; in the same period Crosshill increased from 4,320 to 6,768, or 56·7 per cent.; Langside and Mount Florida from 9,141 to 13,317, or 45·7 per cent. The noteworthy point about these figures, is not so much the increase of population they betoken, as the steady rise in social comfort of the upper and lower middle classes, which they so conclusively demonstrate; for, be it remembered, the districts enumerated are altogether of a residential character. Such illustrations could be multiplied scores of times, but sufficient has been said, to make clear, the one great living fact, of modern life in Glasgow. That great fact, is the steady move suburban-wards of the population; the getting away, as speedily as means will allow, from the congestion, the smoke, the slums and the stifling (moral as well as physical) atmosphere, inseparable from exaggerated aggregations of humanity. In a word, the great cry of nature for open healthy lives has struck Glasgow with commanding force; so commanding, that on every hand, you see old rookeries disappearing before the merciless scythe of the medical and sanitary authorities, and handsome, freshening buildings taking their places; you see also comparative wildernesses awakening to the life of rest-seeking toilers and pushful builders—financially put, this revolution, according to the Dean of Guild Court returns, represents an annual expenditure of £2,000,000 sterling in new buildings. Could enterprise go

further? The introduction of steam-power sent the people flocking into the towns; a welcome reaction would now seem to have set in, to the accompaniment of electric traction, which promises soon to make practicable and economical the complete segregation of factories and workmen's dwellings. At all events, ever alive to the needs of the community, the Corporation of Glasgow is paving the way for a decided development in this migratory movement by the installation of extensive tramcar routes, tapping all the highways to "Suburbia" or Greater Glasgow. Having by this time, made quite

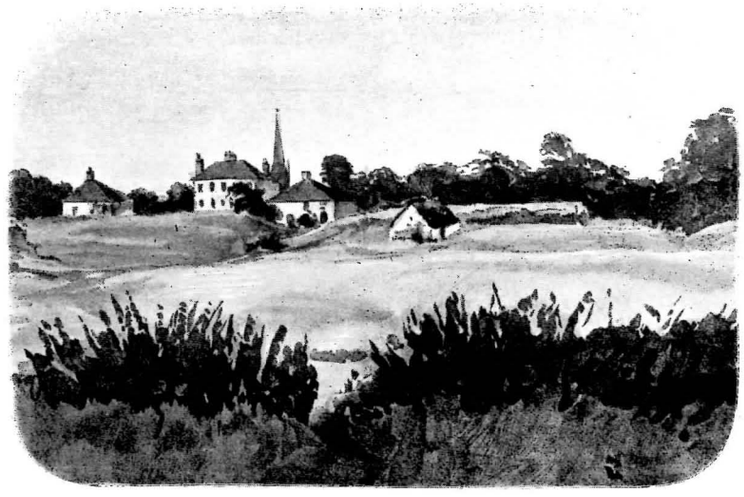
AT PARTICK.

apparent, the innate modernity of Glasgow, we may now, with some profit, turn a little light upon the past.

Glasgow is old, yet young. Old, because it was the site of a Roman camp, giving the name of Camphill to what is now a public park on the south-side of the city, and because it formed part of the province of Valentia, bounded on the north by the wall of Antoninûs. This wall—portions of it are still traceable—extended from the Firth of Forth to the Firth of Clyde, and the country within it, including Glasgow, is believed to have been in the possession of the Romans down to 426, about which time they finally abandoned Great Britain. But Glasgow has taken little account of the Roman occupation, all its traditions circumnavigate the life of St. Mungo, who, good man, on the present site of the Cathedral, established a religious house or See about the year 560. Out of the doings of this missioner the city built up its quaint coat of arms and its simple Christian motto, "Lord, let Glasgow flourish by the preaching of Thy word." The coat of arms consist of a tree with a bird perched on its boughs; on the one side is a salmon with a twig in its mouth, on the other a bell. The tree commemorates a miracle which St. Mungo is said to have performed at Culross, when he broke a frozen bough from a hazel and kindled it into flame by simply making the sign of the cross over it. Regarding the ring and the fish an equally extraordinary story is told. The queen of Cadzow having been threatened with death for losing a ring presented to her by her Lord, she besought the supernatural powers of the Saint. These of course were granted, and walking along the banks of the Clyde, as was the custom of the holy man, he requested the fishermen to bring him the first fish that was caught. In the mouth of the fish the ring was found, and the lady saved from ignominious death. The bell is the effigy of one brought from Rome. It was preserved in Glasgow till the Reformation; and some think, to a more recent date. St. Mungo died about 601, and for 500 years after the history of the See appears to be somewhat of a blank. But the people who inhabited the valley of the Clyde are believed to have acquired, during this period, a certain degree of civilization, and the "Kingdom of Strathclyde," founded after the departure of the Romans, was intact, when Bede, the historian, died in 734. One of the princes of Strathclyde conferred a grant of lands on the religious house of St. Mungo, but the fraternity was robbed and maltreated alternately by Picts, Scots, Saxons, and Danes.

In 1115, David, Prince of Cumberland, repaired the devastations of St. Mungo's settlement, and in 1129, four years after he ascended the Scottish throne, he appointed John, otherwise known as Achaius, to be Bishop of the See. A few years later the pile was rebuilt, and on its consecration, David I., in addition to his previous gifts, conferred on the community of St. Mungo, the valuable lands

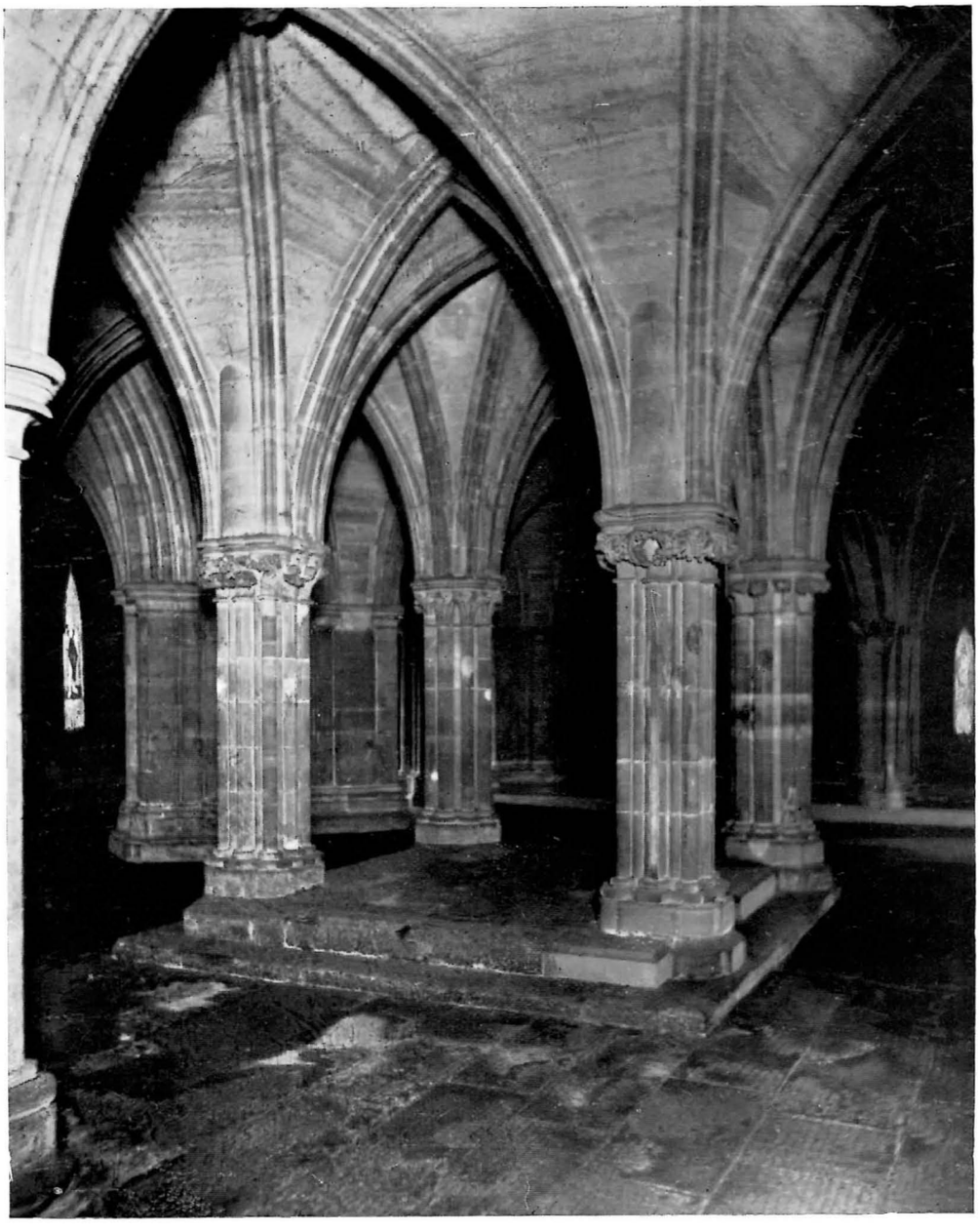
of Partick, now in the possession of the University. In 1781 the building erected by David I. was replaced by the present handsome specimen of mediæval architecture, and King William the Lion, in 1190, raised Glasgow to the dignity of a Royal Burgh, with the privilege of an annual fair. This fair is still held, though it now takes the form purely of a ten days' holiday carnival in the month of July. A wooden bridge is said to have crossed the Clyde in the thirteenth century, but whether or not, we know that in 1345 a stone bridge was built by Bishop Rae. It occupied the site of the present Stockwell Bridge, and served the city for a period of 500 years—it was finally cleared away in 1847. In 1451 Bishop Turnbull, on the authority of a Bull obtained from Pope Nicholas V., established the University. At this time, on the authority of Sir James Marwick, and according to Sir James Bell's excellent account of the struggle towards municipal freedom, "the city was possessed of real property which, properly formed and held to the present day, would have made the Corporation rich beyond the dreams of avarice—when and how the bulk of these properties fell out of Corporation control and ownership it would now require much research to discover." As an example of how the lands of the city have gone up in value, the illustration of Hutcheson's Hospital may be given. In 1650, the patrons of this institution acquired half the barony of the Gorbals for £3,400. That investment now brings into the hospital an income of £16,000 per annum, which is dispensed in the relief of indigent persons and in the provision of special educational facilities. Notwithstanding all the prestige of its ecclesiastical connection, Glasgow did not attain any particular eminence; down to 1600 it may be said to have been in a state of tutelage as compared with such assertive burghs, as Rutherglen and Dumbarton, the inhabitants of which regularly exacted toll from Glasgow.



KELVINSIDE HOUSE—1874.

HIGH STREET FROM CROSS STEEPLE TO BELL STREET—1870.

It was not till 1690 that the city had power to elect its own magistrates, and even then it was ruled by such close corporations as the Merchants' and Trades' House. Not till 1833, when the Reform Act introduced popular election, was it municipally emancipated. In its struggle towards eminence and power the city has experienced all the ill and all the weal of (1) a missionary settlement, (2) an ecclesiastical See, (3) Episcopal domination, (4)



TOMB OF SAINT KENTIGERN—GLASGOW CATHEDRAL.

Regality, (5) Royalty, and (6) the County of a city; 1893. Its slow growth would be best indicated by the following figures:—

CITY POPULATION.

Reformation Period,	... ...	1560 ...	4,500
Before the Union of the Crowns,	...	1610 ...	7,644
After Union of the Kingdoms,	...	1708 ...	12,766
Before the Rebellion,	... ...	1740 ...	17,034
Before the American War,	...	1763 ...	28,300
After the American War,	... ...	1780 ...	42,832
For Statistical Account,	... ...	1791 ...	66,578

In the 17th century it was described as a city of four streets and one bridge. In the 19th it was so important as to send seven representatives to Parliament. Apart from the Saint Mungo stories, it will be thought from the foregoing that there never has been—as there is not—much of the romantic about Glasgow. Its citizens would always seem to have been of a "gey matter of fact" turn of mind, and to expect, therefore, that its streets have many stories to tell would perhaps be too much. Like another city, famous for its early commerce, it can boast of its "Bridge of Sighs," but unlike that other, its bridge merely conducts the dead across the Molindinar Burn to the graveyard or Necropolis of the Cathedral—a prosaic enough tale. All the same the city is not without some little romance or history of the good old kind.

DOORWAY OF CRYPT—GLASGOW CATHEDRAL.

In the thirteenth century Wallace "wight that doughty knight" visited it with 300 men and gave battle to Earl Percy on the "Bell o' the brae," in the High Street. Cromwell also visited it on two occasions and made his mark. The Regent Murray passed through its streets, with 4000 troops, on his way to Langside, to give that crushing blow to the hopes of Queen Mary. James VII., when Duke of York, held high festival in it, on one occasion, at the expense of Provost Bell. In 1745 Prince Charlie, and his rievin' Hielanders, made good use of the city during their ten days' foraging in the district, previous to trekking north to the ill-fated field of Culloden. It was on Glasgow Bridge, that Sir Walter Scott laid the famous scene of the meeting of Francis Osbaldistone with Rob Roy, under a "waning and pallid moon." Jeanie Deans, also, was a bit disappointed in journeying to Edinburgh, under the escort of the Duke of Argyll's groom, that she could not cross Glasgow Bridge into the city. "You are not for going intill Glasgow then?" she said. The reply of the groom being that the "disturbances in Glasgow made it improper for His Grace's people to pass through the city." Aye, there have been many disturbances in Glasgow, and numbers of "Martyred Radicals" have headstones marking their graves in several of the churchyards within range of the city's hum. The more serious of these riots occurred at the "Union of the Kingdoms;" the policy of it was denounced in all the city pulpits; and the document itself burned at the Market Cross. The riot, on this occasion, is described as having been "violent and continued." On the whole then, Glasgow has been a city of peace and not given over much to the glories of the "drum beat" or the "pibroch shrill" or raiding or even smuggling; being, in these latter respects, rather sinned against than sinning.

TRADE, COMMERCE, AND MANUFACTURERS.

Glasgow, like many another British seat of commerce, began its trading career by bartering herring, skins, coarse cloths, etc., for the finer goods of France and Flanders. Herring fishing, at one time, may be said to have been the staple industry of the port. Precedence, however, has had to be given in turn to tobacco, cotton, coal, and iron. But unlike tobacco and cotton the humble *clupea harengus*, or "Glasgow Magistrate" continues to feed an extensive industry that has not waned, but rather thriven, with the years. Instinctively traders, the citizens of Glasgow fought against serious odds, for centuries. It was not until 1243 that they secured trading rights throughout Scotland, and even then they were subjected to tolls, and other exactions that tended to hamper their trafficking. The discovery of America in 1492, by Columbus, had a most important bearing upon the fortunes of Glasgow, by placing it in the highway of the traffic, to and from the great continent. But it was not until 1707, when the union of the kingdoms took place, that the full effect, of this displacement of the centre of trade, was brought towards fruition, in Glasgow.

The union, for the first time, besides allowing of the legitimate interchange of commodities between Glasgow and England, opened up the colonies, the West Indian plantations, and the American continent, to the enterprise of the merchants of the city; advantages that they were not slow to make the utmost use of. As an illustration, by 1720, the annual value of white and brown linen sent to England was £200,000; Scotland taking in return woollen cloths to the value of £400,000. All this, however, is rather anticipatory. Of the early attempts at trading in Glasgow, there seems to be a difficulty in obtaining reliable information. According to McUre, who published a history of the city in 1736, the first important merchant of the city was William Elphinstone, father of Bishop Elphinstone, the founder of King's College and University at Aberdeen. About 1420, this gentleman acquired considerable fame by the curing of salmon and herring. These he exported to France and other parts of the continent, taking in exchange brandy, wine, and salt. As the "second promoter and propagator" of trade, McUre mentions Archibald Lyon, a protégé of Archbishop Dunbar. Lyon is described as having undertaken "great adventures and voyages in trading to Poland, France, and Holland." That these ventures proved highly remunerative is attested by the following inventory of wealth—"a great lodging for himself and family upon the south side of the Gallowgate Street, four closes of houses and forty-four shops, high and low, on the south side of the Gallowgate; and a part of the left side of the Saltmarket."

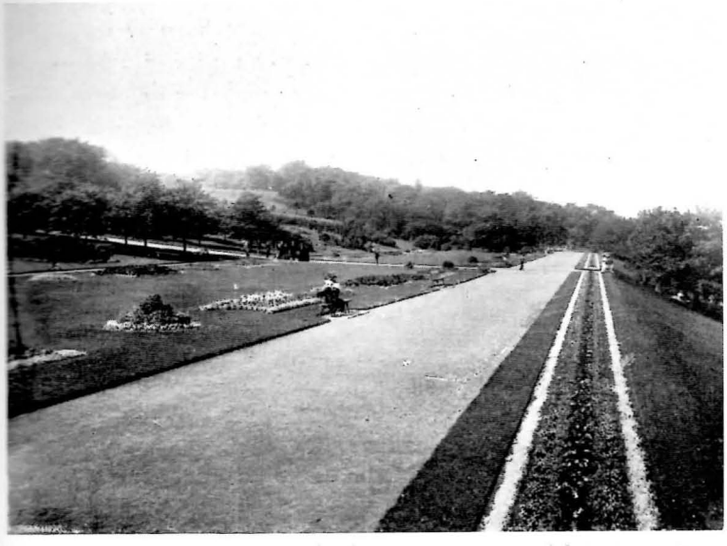
Notwithstanding this apparent wealthy trading connection, the foreign business of the port must have been pretty light. Commissioner Tucker (of the excise and customs) reported in 1651 that, "with the exception of the coliginers, all the inhabitants are traders. Some to Ireland, with small smiddy coals, in open boats from four to ten tons, from whence they bring hoops, rungs, barrel-staves, meal, oats, and butter; some to France, with plaiding, coals, and herring, from whence the return is salt, pepper, raisins, and prunes; some to Norway for timber. There have likewise been some who have ventured as far as Barbadoes. The mercantile genius of the people is strong, if they were not checked and kept under by the shallowness of the

GLASGOW BRIDGE—1900.

river, every day more and more increasing and filling up, so that no vessel of any burden can come up nearer the town than fourteen miles, where they must unload and send up their timber rafts, and all other commodities by three or four tons of goods at a time, in small cobbles or boats, of three, four, or five, and none above six tons a boat. There are twelve vessels belonging to the port, none of which come up to the town—total 957 tons." There are now 1,607 vessels registered as belonging to Glasgow—aggregating 1,363,748 tons.

Again, in 1692, a report on the finances, trade, and conditions of the Royal Burghs, states that the annual value of the foreign trade of Glasgow was not more than £17,083 sterling. At the same time, the citizens must have attached considerable importance to this trade, as the craftsmen of the Royal Burgh became rather jealous of the influence of the foreign merchants. Bitter disputes took place between the two, and these led to the establishment of merchants and trades guilds in 1605. They were presided over by a Dean of Guild who was to be "a merchant, a merchant sailor, and merchant venturer." The Dean of Guild is still an important functionary in Glasgow, but needless to say, he is not always "a merchant sailor." So powerful did these guilds become, that down to 1833 they were the absolute masters of the city, electing the magistrates and councillors from amongst themselves; and down to 1846 they held the sole right of trading within the Royal Burgh. All these privileges have passed away, but the Merchants' House with a capital of £320,000 (always being added to) and an annual income of £9,000, and the Trades' House with a combined stock account of £600,000, and a combined annual income of £25,000, remain to do the good and necessary work of philanthropic institutions.

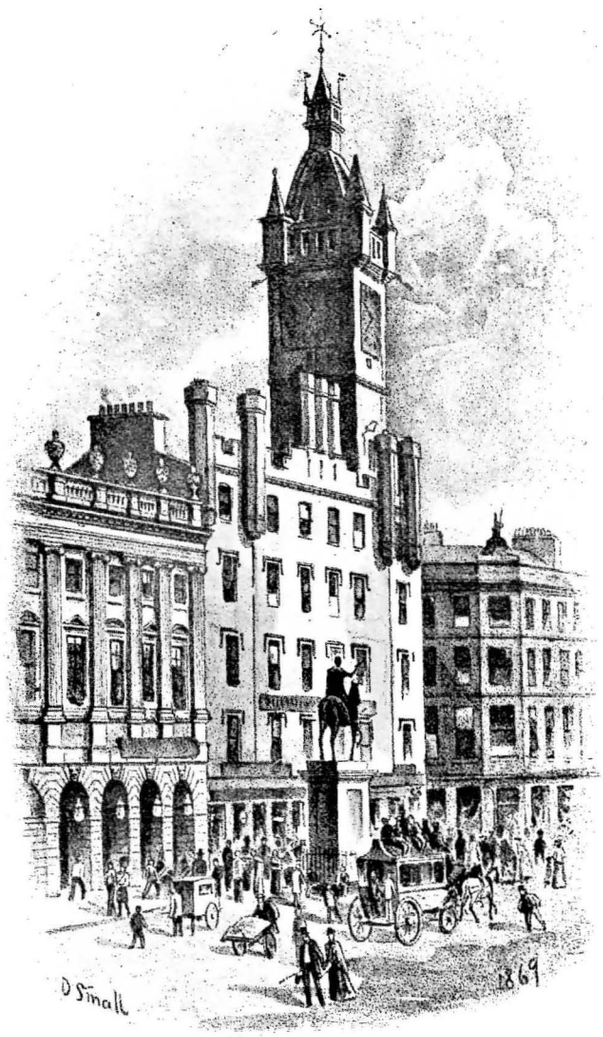
CATHEDRAL—CATHEDRAL SQUARE.



QUEEN'S PARK.

From 1651 to 1707 the most notable merchants appear to have been Walter Gibson and John Anderson. The former did business with France, Spain, Norway, and Virginia, and was the first merchant to bring iron to Glasgow; while the latter is credited with being the first to import wine direct into the city. However, let the foreign trade of the city have been big or small in the 17th century, the merchants themselves appear to have been satisfied that it was capable of expansion. To facilitate matters they looked around for a suitable harbour as near at hand as possible. Dumbarton refused their overtures, but succeeding further down the river, in 1668, they established the harbour and port of

"Port-Glasgow," which was the beginning of the great maritime works of Glasgow, some leading particulars of which have already been given. Progress was, however, slow, and not until the Act of Union opened up the colonies, America, and the West Indies, did Glasgow's trade get beyond the bounds, of comparatively humble proportions. The first great movement was the creation of the tobacco monoply. The merchants of the city had few ships of their own, but they chartered those of other ports, and with such shrewdness that tobacco speedily became the staple industry of the inhabitants, and Glasgow the centre of the trade in Great Britain. As one writer puts it, the "canny" nature of this traffic may be best gathered from Gibson's description in his history of Glasgow:—"A super-cargo went out with every vessel, who bartered his goods for tobacco until such time as he had either sold all his goods, or procured as much tobacco, as was sufficient to load his vessel. He then returned immediately, and if any of his goods remained unsold, he brought them home with him."



TONTINE AND CROSS STEEPLE.

It has been estimated, that from 1735 till the Declaration of American Independence in 1776, more than half the available capital of the city was embarked in this trade. Its extent may be gauged from the fact, that in 1772, out of 90,000 hhds. of tobacco imported into Great Britain, 49,000 hhds. came direct to Glasgow. And in the year preceding the war of independence 57,143 hhds. were consigned to the Virginia merchants of the city. The war closed the tobacco monoply for ever, and, although Glasgow has once again become a fairly important centre for tobacco, the glories of the 18th century have by no means returned. Having Virginia closed to them, owing to the war, the opulent and proodfu' lords turned their attention to sugar growing in the West Indies, as also to the manufacture of cotton fabrics. They eventually succeeded in diverting, practically, the whole product of the cane plantations to the Clyde, where a huge sugar refining industry was fostered and developed, until the Burgh of Greenock came to be familiarly known as "Sugaropolis," just as another great centre of trade is now known as "Cottonopolis." This state of prosperity continued right down until about twenty years ago, when the continental bounty fed "beet" began to eat its way into general use, eventually crushing the cane plantations, and leaving the sugar refinery industry of Great Britain in a parlous state. Unfortunately, it did more than this. It also crushed the sugar-mill machinery trade of Glasgow, which, at one time was a most important branch of the city's manufactures. Several firms who were exclusively employed in the production of this plant, have now gone out of the trade altogether; they have found, that attention to other things is much more remunerative. But while the trade was at its height, there was exported annually from Glasgow to the West Indies, sugar-making machinery to the value of £400,000. The cotton trade also, which, next in order, was a staple industry in Glasgow, may now be said to be represented solely by the thread factories of Paisley, the turkey-red dyeing of the Vale of Leven, and the great warehousemen of the city, who, outside shirting—broadly speaking—get their orders executed elsewhere than in the Glasgow district. Numbers of cotton mills around the city have, during the past thirty years, either been closed or turned to other

account. Unlike Lancashire, the cotton factoring of Glasgow never really recovered from the stagnation brought about by the American Civil War. This is all the more disappointing, as calico printing was commenced in Glasgow in 1738, quite thirty years before it took root in Lancashire, and the weaving of light textures, lawns, muslins, and gauzes had been carried on (and is still) in Glasgow from a very early period. Glasgow's first weaving factory dates back to 1638, when Robert Fleming was granted permission to "erect a weaving factory" on condition that he employed only "freemen of the weaver's incorporation." Down to the close of the 18th century, weavers are described, as being the best paid and most highly respectable class of artisans, in the West of Scotland. They are now the poorest, and except for the looms scattered through a few of the villages and smaller towns, there is little "wabstering" done in the vicinity of Glasgow. In 1806, the earnings of a weaver were 32/6 per week; by 1838 he could only earn, at the same work, 6/7. But, to resume, the cotton trade of Glasgow, which was introduced on an extensive scale at New Lanark by Mr. David Date in 1785, in the course of about fifty years, assumed gigantic proportions. The quantity of cotton imported into the Clyde in 1775 was 137,000 lbs.; in 1790 it was 1,757,504 lbs., or 6,500 bales. By 1834 this quantity had increased to 95,873 bales.

In 1792 power-looms began to be introduced, and shortly after the opening of the 19th century steam began generally to be applied. In 1850 there were 1,683,093 spindles, consuming 120,000 bales of cotton, employed in the Glasgow district; while the power-looms numbered 23,564, turning out 625,000 yards of cloth daily. A Parliamentary return made in 1862 states that there were in Glasgow and its dependencies, in the previous year, 163 factories, with 1,915,398 spindles, 30,110 looms, giving employment to 41,237 persons. In 1875 there were 1,526,880 spindles, 27,479 power-looms, giving employment to 33,276 persons. Since then, except for the instances quoted, Glasgow's connection with cotton fabrication has grown steadily less. So far, we have got through the three great periods—(1) herring, (2) tobacco, (3) cotton and sugar—of Glasgow's rise to power and affluence, but the greatest of all remains. Coal and iron are the potent factors of the commercialism of the day, and Glasgow was fortunate in having a rich store of both, close at hand, when their value first began to attract attention.

The city was also fortunate in its inventors—James Watt, Henry Bell, David Napier, David Mushet, Beaumont Nelson, etc. But for the work of these men, the rich mineral store of Lanarkshire, might have lain waste for several more ages; at all events, the city could never have shot up to its present proportions had not Watt made practicable the steam engine; Bell the river boat; Napier the ocean-going steamer; Mushet the working of the black band ore; and Nelson the hot blast. For

TRONGATE FROM SALTMARKET TO TRON STEEPLE.

everyone of those separate inventions are really interdependent; iron smelting and steam raising account for the greater proportion of the Lanarkshire coal output; shipbuilding and marine engineering for the bulk of the iron and steel, that is, leaving altogether to the one side the many cognate industries that have arisen upon these, such as pipe founding with its output of 140,000 tons per annum; locomotive engineering giving steady employment to 11,700 workmen; boiler-making; iron roofing; bridge building; waggon building; iron tubing; light cast-iron work, sanitary as well as ornamental, etc., etc.; all important branches of the city's trade and manufacture, and all of which date their origin from the rise of the coal and iron industries. Seventy years ago there was probably not

1,000,000 tons of coal raised in Lanarkshire; there is now 15,000,000 tons raised annually. One hundred years ago the yield of pig iron in Scotland was 18,000 tons; in 1825 it was 30,000 tons; in 1845, 476,000 tons; in 1870, 1,206,000 tons, and since that date it has averaged 1,000,000 tons per annum. Malleable iron, for the past twenty years has been superseded, for shipbuilding and engineering purposes, very largely, by mild steel, which was introduced about 1873. In 1883 the output of mild steel was 230,000 tons; it now approaches 1,000,000 tons. Shipbuilding was at first confined to wooden vessels, but about 1840 iron began to find favour and to steadily grow in popularity. The industry, however, did not begin to make rapid strides until the advent of the compound engine and surface condensers, with the boiler pressure increased from 30 lbs. to 80 lbs. per square inch, which period may be put down between the years 1860 to 1866. The following statistics will show this more clearly. They give the total annual Clyde output for the years mentioned. It would be well, however, to keep in mind that iron shipbuilding is now no more, that "steel" shipbuilding and tri-compound engines getting steam at 180 to 200 lbs. per square inch are the vogue:—

1859	...	...	...	35,700 tons.
1860	...	...	...	47,800 ,,
1866	...	...	...	124,500 ,,
1870	...	...	...	180,400 ,,
1874	...	...	...	262,400 ,,
1880	...	...	...	241,100 ,,
1883	...	...	...	419,600 ,,
1890	...	...	...	349,900 ,,
1900	...	...	...	490,000 ,,

TRADES' HOUSE.

The one other great industry in Glasgow is "chemicals." There are several firms of great repute engaged in it, and colossal fortunes have been amassed by some of the principals. The leading works are easily distinguished by the height of their stalks in the city, and their effluent at the river side. Another industry, of lively promise, has but recently been introduced—the manufacture of motor cars. There is also a big business done in pumping machinery, machine tools, and electrical plant. In fire-clay tiling, bricks, and other clay goods, Glasgow has

long held a leading position. Almost any one of the branches of Glasgow's so-called minor industries are of extent sufficient to found a decently sized community upon, yet they are regularly overlooked, and almost lost sight of, in the whirl and fascination, somehow inseparable from shipbuilding and maritime affairs generally. This portion of "our tale" may, therefore, be fittingly closed by noting the curious coincidence, in the fact, that the opening years of last century gave to Glasgow and the world, its first passenger steamer; and that this year (1901) the opening one of another century, has seen launched on the Clyde a turbine river steamer, which may lead to a complete revolution in the accepted methods of marine steam propulsion. Whatever be the upshot, the building and sailing of the boat on the Clyde has served the useful purpose of demonstrating to the world that Glasgow and its river is still in the van of mechanical or industrial progress.

MERCHANTS' HOUSE.

MUNICIPAL TRADING.

If there be one thing more than another, outside commerce and manufactures, that has made Glasgow known in all self-governing communities, it has been the city's reputation for municipal enterprise. Many absurd stories have been circulated in connection therewith, and many of them are still in currency. The most persistent one still going the round of the American Continent being, that the public spirited citizens of Glasgow have, by an unerring commercial instinct, relieved themselves of all taxation. The method being the simple one of putting into practice the theory, of a common supply from a common source and under common control. This theory has been styled indifferently, Municipal Socialism, and Municipal Trading. Whichever be its proper designation, there is this much to be said, it has not yet relieved Glasgow of its taxation, nor, is it ever likely to. It can, however, be claimed for it, that, in certain directions, it has saved considerable sums of money to the citizens, and that, in others, it has wrought with extremely beneficial effect. The Corporation gas supply saves the citizens annually £625,000, representing the reduction in the price from 4/4 per 1,000 cubic feet to 2/2; the water supply besides promoting the health and improving the manufacturing facilities of the city has also been considerably reduced in cost to consumers; the tramways provide the cheapest form of street loco-

motion in the kingdom, they carry you half a mile for one half-penny, and one mile and three-quarters for a penny; of the electric lighting no comparison can be formed, as it has been a communal property from the start, but with regard to the latest venture, the telephone, great things are expected. In these five departments of municipal trading, it is computed, Glasgow has invested at the present time eight millions sterling, a large trading concern indeed, is it not? At the same time, it must be pointed out that the idea of commercial trading is not quite original, to the City Fathers of the day. So far back as the 17th century, they were anticipated by their predecessors in office, who, as one method of raising the wind, established flour mills, to which, all the citizens were bound to bring their meal to have it ground. There is of course little prospect of the Corporation of Glasgow embarking in the grain trade, or once again becoming millers on the banks of the Molidinar Burn, but the point serves to suggest the further one, that even in the Municipal Government of Glasgow, there are some things, not new. As the way may now be considered clear for a few leading particulars about the undertakings referred to, we will proceed to introduce them, commencing with

STOCK EXCHANGE.

THE WATER SUPPLY.

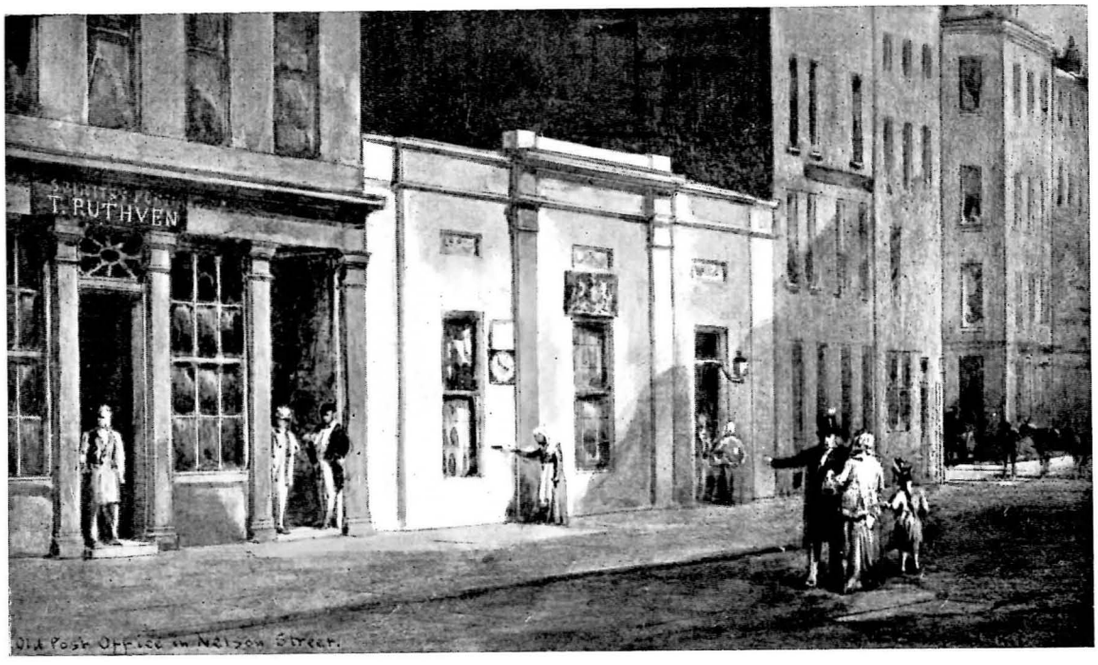
The water supply of Glasgow, after the usual period of public wells and contiguous river tinkering, is now drawn entirely from Loch Katrine, thirty miles away, the home of the Macgregors, and the wettest region in Christendom. The average annual rainfall is never less than 60 inches and oftener 95 inches. At Glengyle, at the upper end of the Loch, the fall has been as high as 130 inches. In May, 1856, the works

were begun, and on the 14th October, 1859, the water was turned on at Loch Katrine by Her Majesty Queen Victoria. The cost of the undertaking, as completed at that time, was £920,000. At the close of 1899 the cost had increased to £3,780,826, which represented the expenditure on additions and extensions since the opening day. When the aqueduct from the Loch was first constructed it was estimated to have a capacity equal to 42,000,000 gallons per day. The Loch has since been raised, and the total storage capacity is now put down at 9,849 million gallons, equal to a supply of 65 million gallons per day. The consumption of the population per head is 54 gallons per day. During 1896, Dr. John Murray of the "*Challenger*" expedition, sounded Loch Katrine and found it to be 751 feet deep. This great depth has the effect of keeping the water cool in summer, and warm in winter. In 1856-7, the first year of the Corporation Water Department, the revenue was £62,300, twenty years later it had risen to £136,200; in 1899 it was £216,744, and this, notwithstanding that the rates were half the amount originally levied.

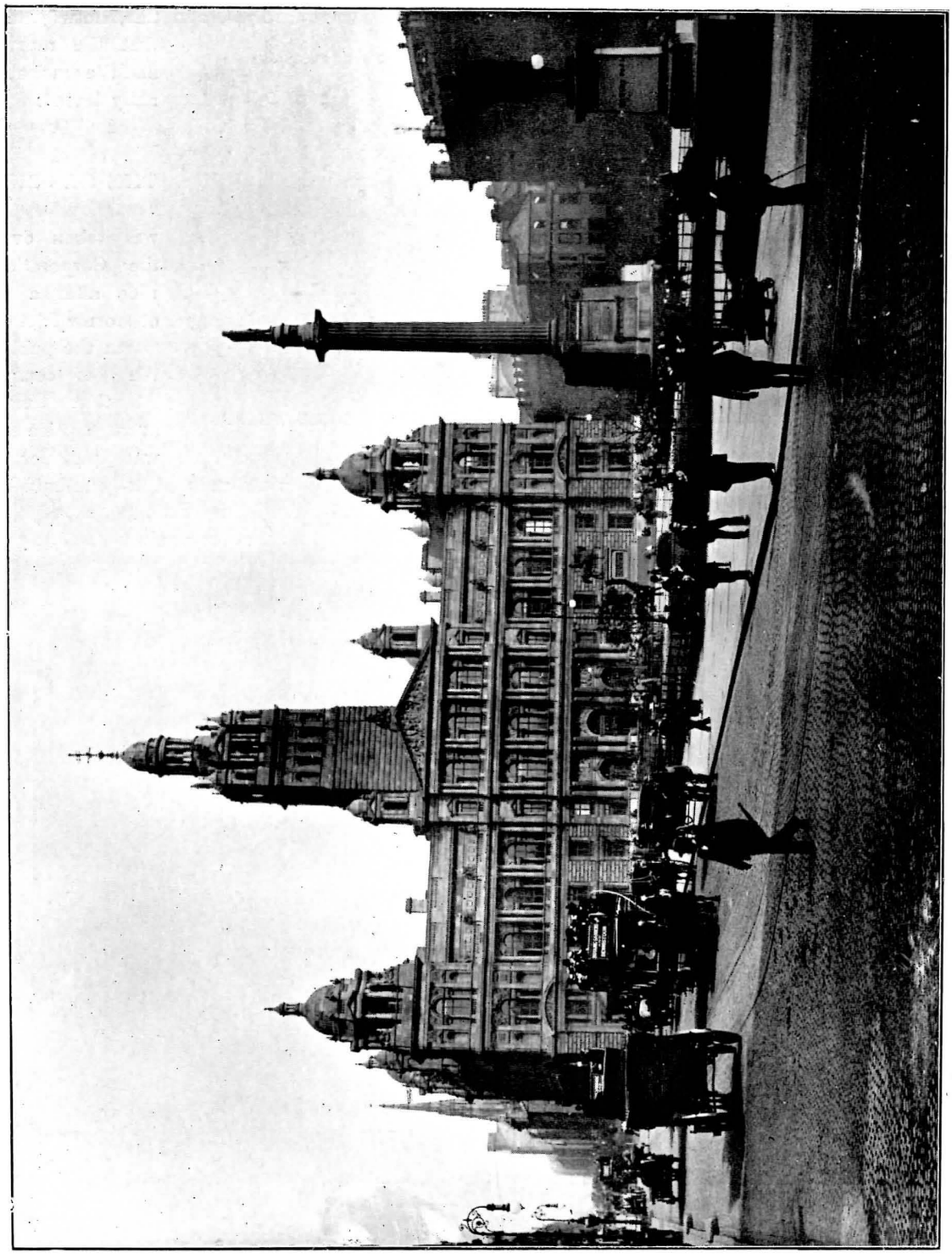
YORKHILL HOUSE, 1887—THE SITE OF YORKHILL WHARF AND TIMBER SALES OFFICE.

THE GAS SUPPLY

was taken over by the Corporation in 1869 after a period of stormy friction between the public and the gas companies. At that time the average price for gas was 4/4 per 1,000 cubic feet; it is now reduced to one-half. And at this rate, the Corporation, in 1899, sold 5,213,914,550 cubic feet as against 1,026,324,000 in 1869-70; the revenue in 1899 was £700,149 4s. as compared with £235,701 6s. 4d. in 1869-70; at the close of 1870 the capital account of the department stood at £534,265; at the end of 1899 this sum had



OLD POST OFFICE IN NELSON STREET.



MUNICIPAL BUILDINGS.