

DUNDEE
BUILT
LOCOMOTIVES

OMER
LAVALLEE

AN EXTRACT FROM

RAILROAD HISTORY

149

AUTUMN 1983

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Kinmond
died
Montreal Feb 12.
Feb 17 1874 Am. Spect
William L. Kinmond

Dundee-Built Locomotives on Canada's First Railways

By Omer Lavallée

During the years 1848 and 1849, five steam locomotives, all built in the Scottish Tayside city of Dundee, were brought to Canada to be used on three Montreal-area railways, the only public, steam-operated railways in British North America at that time. In the chronological order of their arrival and introduction to service, these engines are:

Arrival	Name	Railroad	Builder	Year	Type	Gauge
7/1848	<i>Montreal</i>	Montreal & Lachine	Kinmonds & Co.	1848	2-2-2	4'9"
7/1848	<i>James Ferrier</i>	Montreal & Lachine	Kinmonds & Co.	1848	2-2-2	4'9"
7/1849	<i>Princess</i>	St. Lawrence & Atlantic	Stirling & Co.	1840	0-4-2	5'6"
8/1849	<i>John Molson</i>	Champlain & St. Lawrence	Kinmonds & Co.	1849	2-2-2	4'8½"
11/1849	<i>Britannia</i>	St. Lawrence & Atlantic	Stirling & Co.	1839	2-2-2	5'6"

Historically, the study of these locomotives is of some consequence. Together, they made up more than one-third of the total of 14 steam locomotives in operation in what is now Canada at the end of 1849.

Because they were constructed by two small and obscure builders, the origins, identities, and appearances of these locomotives have been a research project for locomotive historians since early in this century, at least since 1907 when Angus Sinclair referred to them in his book *Development of the Locomotive Engine*.¹ While there are many documentary sources on this subject—written references, illustrations, and even a model in a Montreal museum, all dating to the 1840s and 1850s—the identities have often been confused

Acknowledgment: I wish to express my appreciation not only to the sources named in the bibliographical notes, but also to my colleague, Paymond F. Corley; to Glenn T. Wright, archivist, Public Archives of Canada, Ottawa; and to C.W. Kenneth Heard, National Museums Corporation of Canada, for special assistance in this research.

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through well-intentioned but subjective interpretation of this evidence. An example of the result of insufficient research is a full-sized, operating 2-2-2 tender locomotive, named *John Molson*, which was designed under the direction of the Canadian Railroad Historical Association in the 1960s and built in Japan in 1970. This engine, which purports to represent the Kinmonds-built locomotive of the same name, is now at the Canadian Railway Museum at Delson, near Montreal, and it is considered in the latter part of this text.

In 1969, when the Delson locomotive had been designed but before it was built this author challenged its authenticity.² The controversy that followed stimulated my pursuit of serious research, not only into the original *John Molson* but all of the Dundee-built locomotives. The result is this article, in which an attempt has been made to identify the traditional information and place it in proper perspective, adding to it new data which has come to light. This work is by no means complete, and many questions remain to be answered; the hope in publishing at this time is that further pieces of the puzzle surrounding this least-known group of early Canadian locomotives will come to light.

The background necessarily includes a brief review of railway development in the Dundee area of Scotland, and some historical notes about the two builders involved, one of which, incidentally, may also have produced the first steam locomotives in South America. The liaison thus established between Scotland and Canada led also to the opening of a foundry which became Canada's second, and Montreal's first, locomotive works. This operation will be dealt with at the appropriate place in the story.

Dundee and Its Railways

The city that is the locale of the two locomotive works concerned in this account is currently Scotland's third largest center of population and its second largest industrial city. It occupies an ancient site; there are Roman ruins and evidences of pre-Roman settlement. Almost eight hundred years ago, Dundee was designated as a royal burgh by the Scottish kings, and it developed into an important center for whaling in the Middle Ages. This industry was formalized in 1756 by the incorporation of the Dundee Whale Fishing Company.

A concomitant industry, practiced by the wives of the whalers, was the spinning and weaving of flax, nurturing a textile industry which became associated with whaling when it was discovered that immersion of jute fiber into whale oil strengthened it considerably. As a result, the city became an important center for textiles,

particularly jute, but also for linen, canvas, sacking, and ropes. The processing of the flax into these manufactured products engendered the development of industry in Dundee early in the 19th century.³

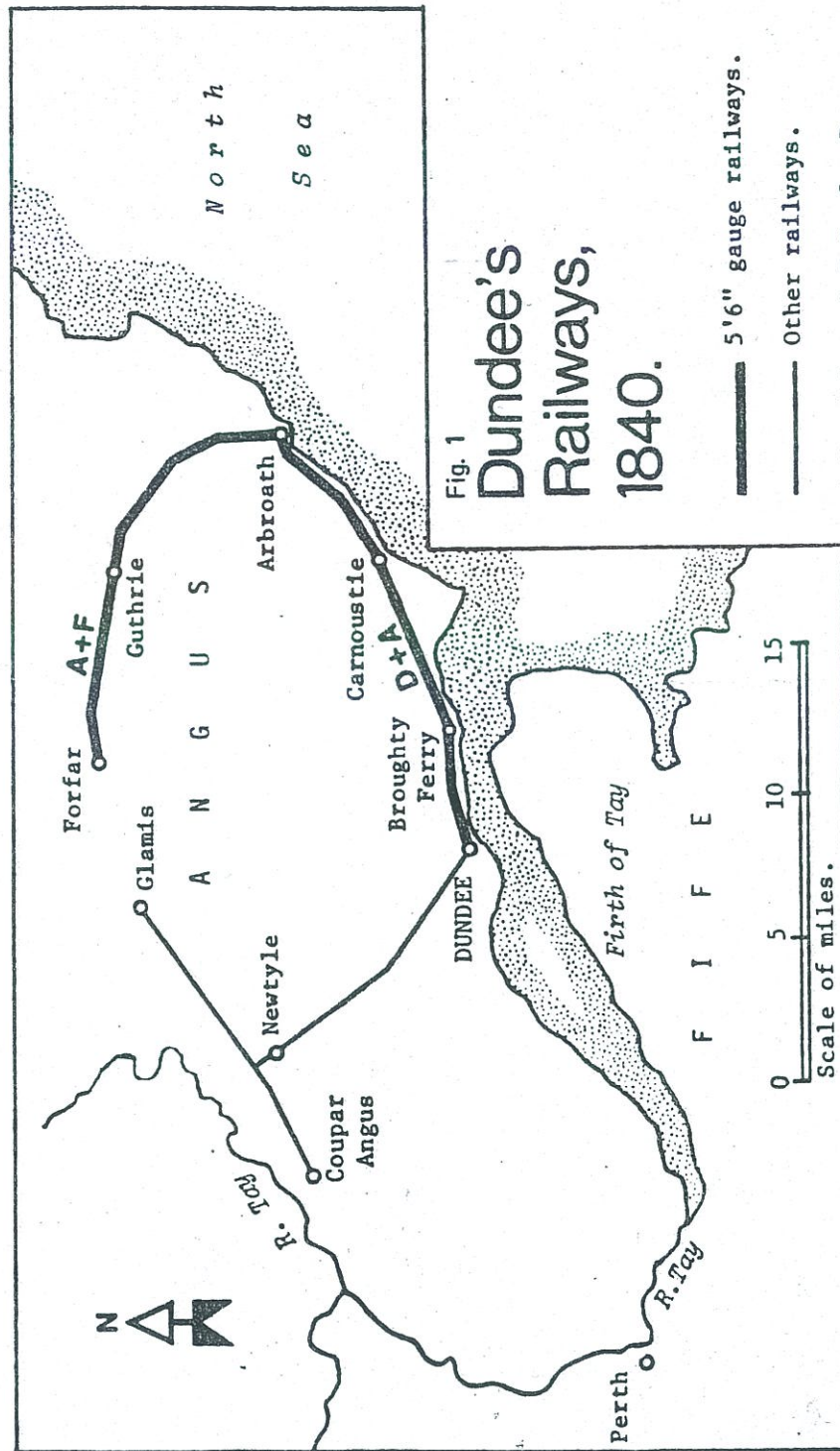
In the 1830s, Dundee became the hub of its own small railway network, which would not be physically linked with the rest of the Scottish system until the middle of the following decade. Its first line, the Dundee & Newtyle Railway, used a system of inclined planes, interspersed with segments served by adhesion locomotives, to reach the inland town of Newtyle, whence branches operated by corporately-separate companies connected to Coupar Angus and Glamis (now Glamis). The common or "Scotch" gauge in use at this time on a number of railways in Scotland was four feet, six inches, but the Dundee & Newtyle and its extensions were built to a gauge of four feet, six and one-half inches.

When the Dundee & Arbroath Railway was opened eastward along the Scottish coast in 1838, it was built to a width of five feet, six inches, a decision which met with the disapproval of Francis Whishaw, a railway civil engineer. Whishaw wrote:

Messrs. Grainger and Miller, under whose directions the Dundee and Arbroath Railway was constructed, are among the few engineers who have ventured on a new gauge. This is the more remarkable, as they had already used, in three other railways of Scotland, a gauge even less than 4 feet 8½ inches. We object to any alteration of gauge, where a line is likely to become a link in any long chain of railway-communication already established; but whether this railway is likely in future years to be so circumstanced, we have not at present the means of judging.⁴

In 1839, the Arbroath & Forfar Railway was opened inland to the town of Forfar. This company, which was a physical prolongation of the Dundee & Arbroath, also chose the 66-inch gauge.⁵ Whishaw's concerns were vindicated in the late 1840s when the non-standard-gauge railways of Scotland were converted uniformly to the Stephenson width, a step which initiated the process of consolidation of local lines into the great systems of pre-grouping (1923) days. The Dundee & Arbroath and the Arbroath & Forfar were changed to standard gauge in 1847, a development which resulted in two of the latter company's locomotives being sent on journeys aboard sailing ships to far-off Canada. The railways serving Dundee at this time are shown in figure 1.

As a railway center, Dundee was the site of various works which were engaged, albeit briefly, in the construction of locomotives. Those which concern us in this study are: Wallace Foundry, operated by Kinmonds, Hutton & Steel, later Kinmonds & Company; and Dundee Foundry (or East Foundry), operated by James Stirling & Company, later Gourlay, Mudie & Company.



Wallace Foundry—Kinmonds, Hutton & Steel

The Kinmond family had been associated with the textile industry from the late 1700s. The elder Kinmond, the financial backer of the partnership of Kinmonds, Hutton & Steel, was the owner of bleachfields outside Dundee. His partners were engineers. The firm, apparently organized in the 1830s, produced textile machinery for the flax and jute industries, with several notable improvements being attributed to it.⁶ By the late 1830s, the Kinmonds in the title included Peter Kinmond and William Leighton Kinmond, nephews of the founder.⁷

Locomotive building under the partnership began in 1838 with three 2-2-2 type tender engines, *Wallace*, *Griffin*, and *Fury*, which went to the Dundee & Arbroath Railway.⁸ Three other locomotives were built for the same company in 1839-41, followed by twelve engines for the standard-gauge Glasgow, Paisley, Kilmarnock & Ayr Railway between 1840 and 1846.⁹ All of these locomotives appear to have been outside-connected 2-2-2s. In July 1847, the partnership of Kinmonds, Hutton & Steel was dissolved by mutual consent and the Kinmond brothers took over management of the Wallace Foundry themselves. Concurrently, James Steel, one of the former partners, took over the Lilybank Foundry in Dundee and, with his own two sons, operated it as "James Steel & Sons." The elder Steel died in 1852.¹⁰

Figure 2 shows the only drawing of a Kinmonds-built locomotive known to the author. The original is part of the collection of the Dundee Museum & Art Galleries, Dundee, Scotland, and this copy was furnished through the kindness of Mr. J.D. Boyd, the chief officer of that institution. Since the engraving bears the title "Kinmonds, Hutton & Steel," it was prepared, obviously, prior to July 1847 when the partnership was dissolved and the Wallace Foundry passed to Kinmonds & Company. According to the graphic scale, the locomotive depicted is standard gauge, with 66-inch driving wheels and 42-inch carrying wheels. The drawing does not indicate when or for what company this locomotive was constructed, or indeed whether it was ever built at all. James Lowe states that it is an illustration of the *Wallace* of 1838,¹¹ but, since the latter was 66-inch gauge, this conclusion is obviously incorrect. In the early 1960s, the author corresponded with G. MacLennan Steel, a descendant of James Steel of the original partnership; it was Mr. Steel's opinion that the engraving represented one of the locomotives built by KH&S for the Glasgow, Paisley, Kilmarnock & Ayr Railway.¹² A comparison with an illustration of a contemporary GPK&ARy locomotive, built in its own works in Glasgow in 1846 (see figure 13 on page 45), supports this assumption.

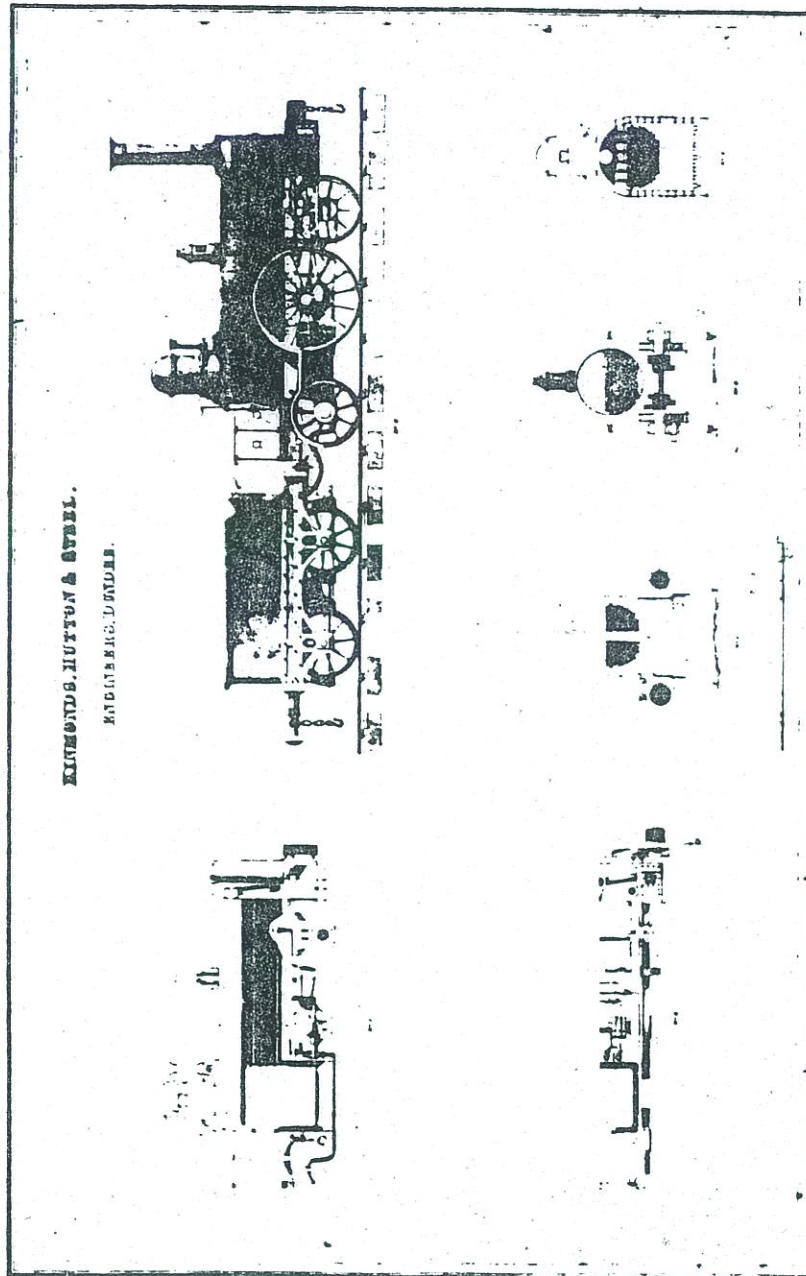


Fig. 2—Engraving of 2-2-2 tender locomotive prepared by Kinmonds, Hutton & Steel, Dundee.
(Original in collections of Dundee Museum & Art Galleries)

Wallace Foundry—Kinmonds & Company

With the dissolution of the partnership, the Kinmond brothers continued in business under the name of "Kinmonds & Company, Engineers and Iron Founders." Between 1847 and 1850, when the Wallace Foundry was closed, the firm built six locomotives for the Dundee, Perth & Aberdeen Junction Railway, and nine for the Glasgow, Dumfries & Carlisle.¹³ However, of particular interest to us are three locomotives built for Canada: two built for the Montreal & Lachine Rail-Road, delivered in July 1848, named *Montreal* and *James Ferrier*; and one built for the Champlain & Saint Lawrence Rail Road, delivered in August 1849 and named *John Molson*. These locomotives were single-driven, but their wheel arrangements are not known. Certain mechanical and statistical particulars, however, were published in 1859 and 1861 by the Board of Railway Commissioners of the Province of Canada, in reports prepared by Inspector of Railways Samuel Keefer, who will be cited frequently throughout this article.¹⁴

Peter and William Leighton Kinmond came to Canada following the closing of the Wallace Works in 1850.¹⁵ They established a foundry in Montreal, which was then the headquarters of Canada's three steam-operated public railways and also an important ship-building center. Evidently, the foundry in Dundee was later reopened and, by 1861, it was owned by one Robertson Orchar.¹⁶ The author knows of no illustrations of locomotives built by Kinmonds & Company at the Wallace Foundry.

Dundee Foundry (East Foundry)—James Stirling & Company

James Stirling & Company began operations in 1831. It was in the locomotive construction business as early as 1834 when it outshopped *Trotter*, an 0-2-4 locomotive for the Dundee & Newtyle Railway.¹⁷ James Stirling, its proprietor, was an uncle of Patrick Stirling who started his career as an apprentice in his uncle's works at the age of 17 and who later went on to achieve fame in his own right.¹⁸ Latterly the locomotive superintendent of the Great Northern Railway in England, perhaps his most familiar design was that of the so-called "Stirling Single," a 4-2-2 type tender locomotive. Other apprentices at the Dundee Foundry in the 1830s include Archibald Sturrock, later in charge of the Great Western's Swindon works and afterwards locomotive superintendent of the Great Northern, preceding Patrick Stirling;¹⁹ and the Great Western's own locomotive superintendent, Daniel Gooch, a draftsman at the Dundee Foundry in 1836-37.²⁰

In 1839, the Dundee Foundry produced three locomotives for the Arbroath & Forfar Railway. Named *Victoria*, *Britannia*, and *Caledonia*, they were of the 2-2-2 tender type, having 60-inch driving

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wheels, 42-inch carrying wheels and 13x18-inch outside inclined cylinders.²¹ In 1840, Stirling built at least two further locomotives for the A&FR: *Princess* and *Albert* were of the 0-4-2 tender type, and had 54-inch drivers and 12x16-inch inside cylinders. In 1845, *Princess* was equipped with 12x18-inch cylinders.²²

There are two illustrations of Stirling-built locomotives. Figure 3 is an engraving of the 2-2-2 tender locomotive *Victoria*, sister to *Britannia* and *Caledonia*, which appears in Whishaw's 1840 book.²³ As this was published the year after the locomotives were built it can be accepted as an accurate portrayal of its prototype. Figure 4 illustrates a model of an Arbroath & Forfar 2-2-2 locomotive of the *Victoria* class, which appears in Sinclair.²⁴ The accompanying text identifies this locomotive erroneously as a Kinmonds-built locomotive. The model is lettered "A. & F. R." and but for the fact that its driving wheels are placed farther forward, and the crosshead and guide bars are unenclosed, otherwise follows the Whishaw engraving quite closely. It seems, therefore, to portray the same class. This model still exists, owned by the Dundee Museum & Art Galleries.

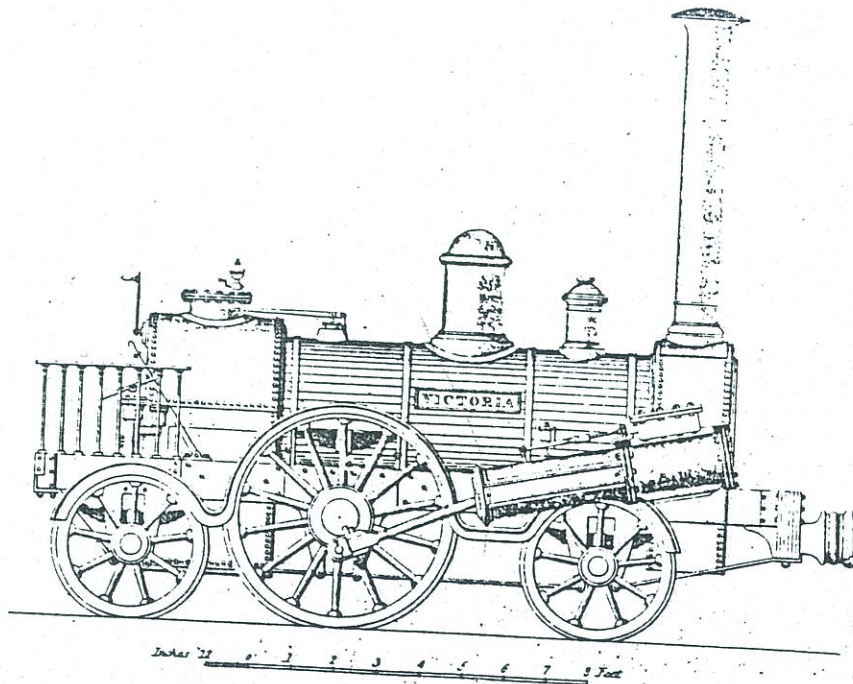


Fig. 3—Engraving of 2-2-2 tender locomotive *Victoria* of the Arbroath & Forfar Railway, built by Stirling & Co., Dundee. (From Francis Whishaw, *The Railways of Great Britain Practically Described and Illustrated* [1840])

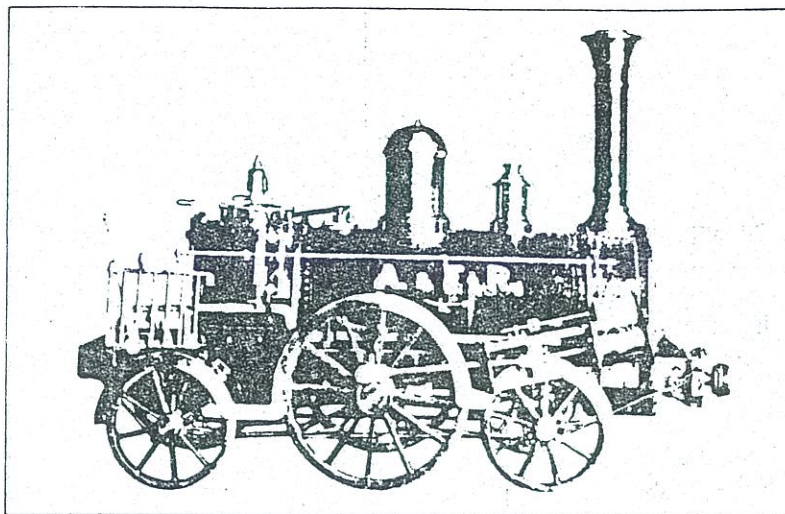


Fig. 4—Model of Arbroath & Forfar 2-2-2 tender locomotive. (From Angus Sinclair, *Development of the Locomotive Engine* [1907])

Dundee Foundry—Gourlay, Mudie & Company

About 1843, the Dundee Foundry was taken over by Gourlay, Mudie & Company, which continued to operate it until about 1850, also using the alternative name of "Gourlay Brothers." At least five locomotives are reported to have been built—all for Scottish lines—up to 1849, though the principal business of the foundry at this time was shipbuilding and general engineering.²⁵

In 1847, as we have seen, the Arbroath & Forfar Railway was converted to standard gauge. Most of its motive power and rolling stock was regauged, but the Stirling-built locomotives *Britannia*, *Princess*, and *Albert* were not considered to be worth converting. Instead, they were offered for public sale at Arbroath and Colliston stations on December 21, 1848.²⁶ *Britannia* and *Princess* were sold to Gourlay, Mudie & Company, *Princess* fetching £68.8.0 sterling.²⁷ The disposition of *Albert* at this sale is unknown.

Sinclair states that, at about this time, two further locomotives named *Firefly* and *Mosquito*, said to be Kinmonds products, are claimed to have been the first locomotives to be shipped across the South Atlantic. They were built for the Demerara & Georgetown Railway in what is now Guyana.²⁸ This was the first railway in South America, built to standard gauge and opened between Georgetown and Plaisance, eight km (five miles), on November 3, 1848.²⁹ Since the information about these locomotives accompanies an illustration of a model of a Stirling-built 2-2-2 which is erroneously captioned as having been built by Kinmonds, perhaps these locomotives, supposedly 2-2-2, were actually built at the Dundee Foundry.

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Alexander Millar

The beginning of Montreal's contacts with Dundee came with the incorporation of the Montreal & Lachine Rail-Road Company on June 9, 1846.³⁰ This law enabled the company to build a railway from Montreal to the suburban town of Lachine, 7½ miles, bypassing the Lachine Rapids in the Saint Lawrence River just above Montreal. Though steamers had access past the rapids via the Lachine Canal, opened in 1825, the passage through this waterway with its various locks was slow and, as a result, steamers destined for points on the Upper Saint Lawrence River, the Great Lakes, and the Ottawa River, arrived at and departed from the wharf at Lachine (see figure 5).

The railway, intended to speed up the transport of passengers and goods over this portage, was the brainchild of James G. Ferrier, who was born in Fifeshire, Scotland, on October 22, 1800, and died in Montreal on May 30, 1888. Ferrier emigrated to Canada in 1821 and became a successful hardware merchant in Montreal.³¹ In addition to serving as the first president of the Montreal & Lachine Rail-Road, his activities included spells as mayor of Montreal, chancellor of McGill University, chairman of the Canadian board of the Grand Trunk Railway of Canada, a legislative councillor of the Province of Canada, and, finally, a member of the Senate of the Dominion of Canada from 1867.³²

To construct the line, which had been surveyed by John Ostell,³³ the M&L hired William R. Casey, a New York civil engineer, in 1846. Casey had constructed the pioneer Champlain & Saint Lawrence Rail Road, which had been opened for traffic in 1836. Unfortunately, he was not to see his second Canadian project through to completion, because he fell ill of tuberculosis and died on August 6, 1846, at the early age of 38.³⁴ In order that the work then under way should not be interrupted, Ferrier, not unnaturally, turned to his native Scotland for the replacement. During a visit to the United Kingdom in the autumn of 1846,³⁵ he contacted Kinmonds, Hutton & Steel of Dundee, with whom he had had dealings in connection with his hardware business, and asked the firm to recruit a practical engineer to come to Canada. Kinmonds offered the position to Alexander Millar, the locomotive superintendent of the Dundee & Arbroath Railway. In view of the urgency of the situation, Millar is reported to have been given but 24 hours to accept or refuse the proffered position of engineer to the company. He decided that the salary involved, £200 sterling, was sufficiently attractive,³⁶ and he left for Canada early in 1847.³⁷

In the summer of 1847, Millar accompanied Ferrier to the United States to inspect various rail lines.³⁸ They went together again in the autumn to purchase a locomotive from Norris Brothers of Philadelphia.³⁹ At about the same time, Millar was induced to remain

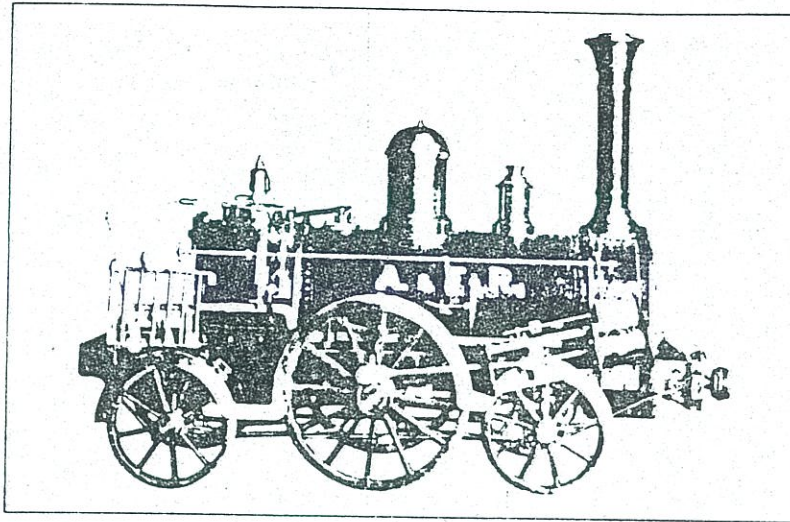


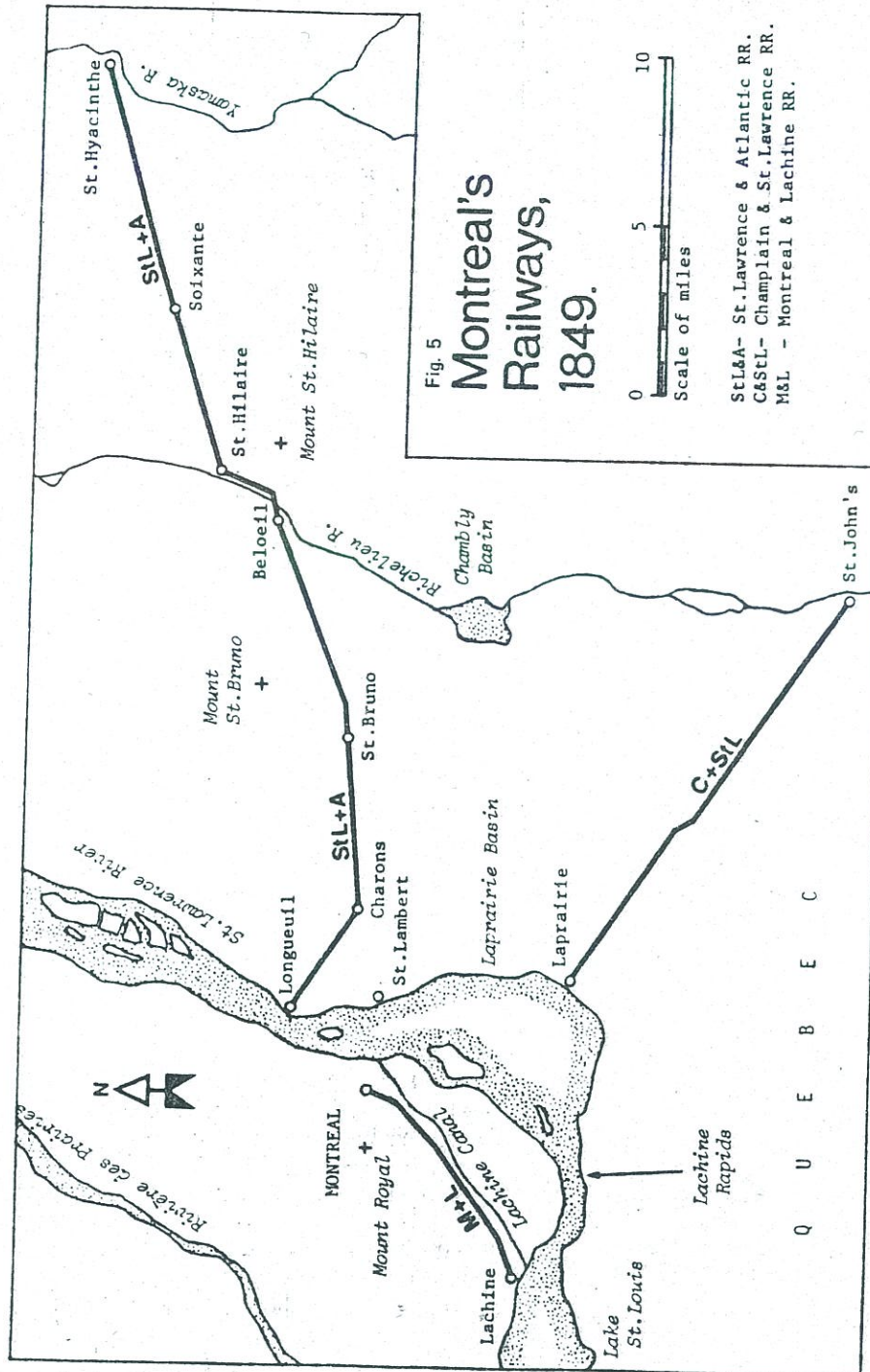
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permanently in Canada, and he assumed eventually the superintendency of the Montreal & Lachine Rail-Road.⁴⁰

The new locomotive, for which the M&L paid £2062.10.0 currency, was a standard Norris 4-4-0 tender engine, which was given the name *Lachine*.⁴¹ The arrival of this locomotive in Montreal, and the ordering of two others, was noticed in the *Montreal Witness* on November 8, 1847:

We are glad to see that the Montreal & Lachine Rail-Road is rapidly approaching completion. . . . On Saturday [6 November 1847] we saw the engine recently purchased in the United States: two others being ordered from England; moving in great state along St. Antoine Street to be set up and placed on the line. It weighs no less than seventeen tons and the boiler is drawn by eighteen horses!⁴²

On Friday, November 19, 1847, the Montreal & Lachine was opened to public service, the *Lachine* on that occasion pulling a train of eight cars.⁴³

Montreal and James Ferrier

The two locomotives referred to in the *Witness* as having been "ordered from England" were, in fact, ordered from Kinmonds & Company. Named *Montreal* and *James Ferrier*, they were transported from Scotland to Montreal on board the vessel *Hector*, arriving at their destination late in June or early in July 1848.⁴⁴ While the wheel arrangement of these locomotives is not known, they were designed with a single pair of driving wheels 66 inches in diameter, 14x20-inch cylinders, and a boiler 10 feet, 6 inches long, containing 109 tubes of 1¾ inches inside diameter.⁴⁵ Weight was sixteen tons.⁴⁶ The tenders carried 1,200 imperial gallons of water.⁴⁷

Unloaded from the *Hector* by a "well-lubricated"—and undoubtedly enthusiastic—crew of workmen (the accounts record the payment of £1.15.5 for "refreshments"),⁴⁸ *James Ferrier* was the first of the two locomotives to be ready for service, as noticed in the *Witness* for July 31, 1848:

On Monday, the *James Ferrier*, one of the two new locomotives constructed for the Lachine Railroad Company by Messrs. Kinmonds & Co., Dundee, was placed on the line for the first time. This being the trial trip, and the machinery all new and untried, no very extraordinary speed was made in going to Lachine, but in returning, the speed of 50 miles an hour was attained with the utmost ease, though it was not judged advisable to maintain it for the whole distance, which, nevertheless, was done in 14 minutes, being much the shortest time in which it has been performed. It is confidently expected that in a very short time, the journey will be made in ten minutes. The writer of this notice was on the locomotive both going and returning, and, during the greatest speed, the vibration was absolutely trifling, owing to the nice adjustment of the various parts of the machinery. It reflects great credit, both on the makers, and on those to whom the putting together of the engine was entrusted here, that no single portion of the machinery required the slightest re-adjustment after being put

together. The other locomotive, the *Montreal*, will be ready in about a fortnight, when the company will be able to devote one locomotive to the conveyance of freight, etc., exclusively.⁴⁹

Shortly after the two Kinmonds locomotives were put on the road, Alexander Millar took the occasion of a special trip for the directors to demonstrate the speed capabilities of the "Scotch" locomotives. According to this report, the outward trip of nearly eight miles, with three coaches, was made in eleven minutes. Unnerved, the passengers remonstrated with Millar and threatened to return to Montreal in road carriages. This incident was recalled in later years by Peter Kinmond, who continued: "Sandy Millar gave his promise— with a wink however. He got up on the engine . . . and we flew back to Montreal in nine minutes—that is, nearly a mile a minute." He reported further that Ferrier was ready to fire Millar, but cooler heads prevailed—after all, they were all Scots—and "Sandy" kept his position.⁵⁰

The two Kinmonds locomotives proved to be fully adequate for the Lachine railway's regular services, and the Norris-built *Lachine* was sold to the Champlain & Saint Lawrence Rail Road in November 1848 for £1962.10.0 currency, exactly £100.0.0 less than the price paid a year previously for the new locomotive.⁵¹ The C&StL renamed it *Champlain*.⁵² The Kinmonds locomotives remained with the Montreal & Lachine through its 1850 integration into the Montreal & New York Rail Road, and later, in 1856, into the Montreal & Champlain Rail Road. The other component of the M&C was the Champlain & Saint Lawrence, and this amalgamation caused a problem in locomotive nomenclature as the C&StL also had a locomotive named *Montreal*, a 4-4-0 built by Baldwin in 1847. Neither locomotive was renamed, at least by the end of 1860, and the M&C's enginemen solved this problem unofficially by calling the Baldwin (weighing ten tons) the "little *Montreal*" and the Kinmonds (weighing sixteen tons) the "big *Montreal*."⁵³ Sometime after 1860, the confusion was resolved by bestowing the name *Lady Molson* on the latter locomotive.⁵⁴

In 1864, the M&C came under the control of the Grand Trunk Railway of Canada, then broad (66-inch) gauge. Early in the 1870s, the GTR was converted to standard gauge. The resulting purchase of new locomotives at that time rendered redundant the inherited ex-M&C 1850s-era motive power. Referring in 1871 to the Kinmonds-built locomotives, the Trouts' *Railways of Canada* stated that "Some of them are still running."⁵⁵ One of the ex-Montreal & Lachine locomotives, thought to be the *Lady Molson* (ex "big *Montreal*"), was sold in 1872 to the Hamilton & Lake Erie Railway where it was renamed *Lucy Turner*.⁵⁶ In this guise, an eyewitness recorded it in a family diary of the time:

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Father went over to the Hamilton & Lake Erie Railway which crossed the Canada Southern Railway at Hagersville. I remember the first engine that came on the H&LE into Hagersville. She was a woodburner with a big funnel-shaped smokestack. Her name was *Lucy Turner*, made in England. She had lots of brass trimmings on her. . . .⁵⁷

In 1875, this locomotive became the Hamilton & North Western Railway's No. 5, *Erie*, and in 1880 was reported sold to a lumber company in northern Ontario.⁵⁸

There are no known illustrations of the Montreal & Lachine locomotives, but the mechanical particulars given above appear in Keefer (figure 6). An undated engraving by J. Walker (figure 7) purporting to be an illustration of one of these locomotives with its train on the Montreal & Lachine Rail-Road, is actually an illustration of one of the Stirling-built locomotives on the St. Lawrence & Atlantic Rail Road.

John Molson

The Company of the Proprietors of the Champlain and Saint Lawrence Rail Road, incorporated in 1832, was Canada's first public, steam-operated railway. It opened for service between Laprairie, opposite Montreal, and St. Johns on the Richelieu River in what was then Lower Canada, now the Province of Quebec, on July 21, 1836. Service was inaugurated using a Stephenson-built *Planet* type 2-2-0 tender engine.⁵⁹ Two U.S.-built locomotives were added in the following decade.

After the Montreal & Lachine had received its two Kinmonds-built locomotives, the C&StL ordered a similar, single-drivered locomotive from the Wallace Foundry of Kinmonds & Company in Dundee. Delivered in the summer of 1849,⁶⁰ it was named *John Molson* after the then-chairman of the Champlain & Saint Lawrence. (Molson's dates are 1787-1860; his father of the same name [1763-1836] had been the founder of family business enterprises which have been closely identified with Montreal for nearly two centuries.) As in the case of the Montreal & Lachine locomotives, the wheel arrangement of *John Molson* is not known apart from the fact that it, too, had a single pair of 66-inch driving wheels. The cylinders and boiler, respectively 14x20 inches and 10 feet, 6 inches in length, were also the same. However, *John Molson's* 109 tubes were of 2 inches inside diameter, a quarter-inch larger than those on the Lachine locomotives. This increased *John Molson's* evaporative surface by about 14 percent above that of its contemporaries. To supply this boiler, the tender carried 1,600 imperial gallons of water.⁶¹ The increased size of these features of *John Molson* may be explained by the fact that the C&StL's 23-km (14-mile) main line was about double the length

No. 95.

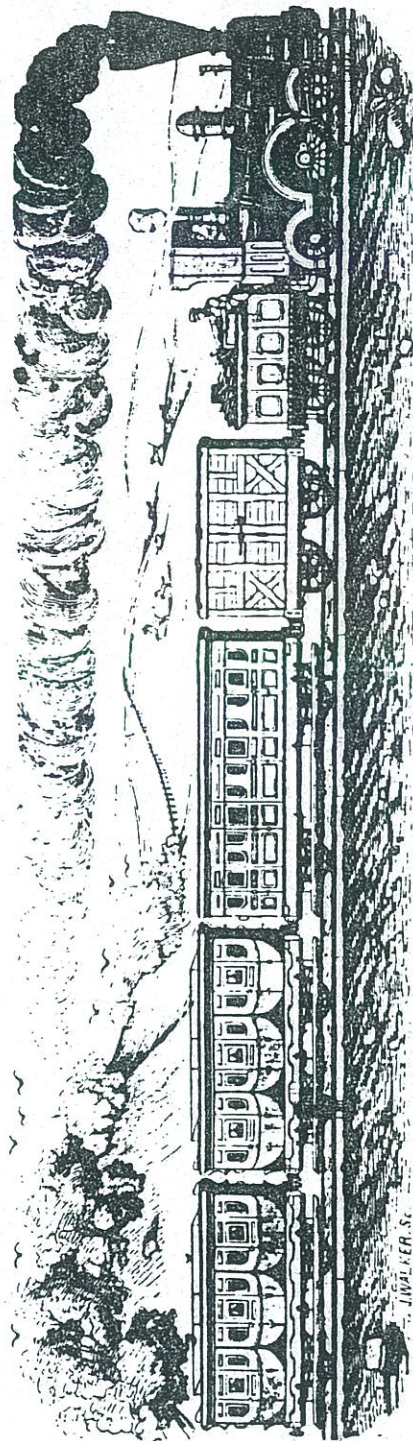
MONTREAL AND CHAMPLAIN RAILWAY.

Number, description and condition of Locomotive Engines owned by this Company, on the 31st December, 1860, and Miles run by the same up to that date.

ENGINES.	NAME.	Connections.	Driving Wheels.		Cylinders.	Place.		Weight of Engine.	Water capacity of Tender.	Weight of Tender with Wood and Water.	Total Weight of Engine and Tender with Wood and Water.	WHERE BUILT OR BUILDERS NAME.	When first put in use.	Miles run during the year 1860.	Total miles run since first put on Road.	GENERAL CONDITION AND REMARKS.
			Number.	Diameter.	Stroke.	Number.	Length.	in feet.	in ins.	in ins.	in ins.					
1	Laprairie	Inside	4	54	16	20	146	11	11	1800	1800	Taunton manufactory, Co.	1852	17,650	97,662	Ready for use.
2	Dorchester	do	4	54	16	20	146	11	11	1800	1800	do	1852	11,864	120,94	In use Freight train.
3	St. Lambert	do	4	54	16	20	146	11	11	1800	1800	do	1852	21,000	166,097	Passenger train.
4	St. Helens	do	4	54	16	20	146	11	11	1800	1800	do	1852	18,636	158,428	Ready for use.
5	New York	Outside	4	54	16	20	146	11	11	1800	1800	Philadelphia, M. W. Baldwin	1851	15,732	97,848	Ready for use.
6	Canada	do	4	54	16	20	146	11	11	1800	1800	do	1851	11,960	90,216	Ready for use.
7	Champlain	do	4	54	16	20	146	11	11	1800	1800	do	1847	33,676	Out of use.
8	John Molson	do	2	51	14	26	109	10	10	1600	1600	Dundee, Kimmond and Co.	1849	11,151	75,974	Rebuilding.
9	McManningford	do	4	41	10	24	113	11	11	1800	1800	Manchester, Amoskeag Co.	1853	10,543	31,425	On Wood train.
10	Sonbegan	do	4	41	10	24	113	11	11	1800	1800	Boston, Kinckley Co.	1852	1,341	8,059	Ready for use.
11	St. Lawrence	do	4	41	10	24	113	11	11	1800	1800	Manchester, Amoskeag Co.	1853	9,943	39,292	Ready for use.
12	St. Rmi.	do	4	41	10	24	113	11	11	1800	1800	do	1853	13,411	45,236	Ready for use.
13	Montreal	do	2	51	14	26	109	10	10	1600	1600	Dundee, Kimmond & Co.	1848	16,000	43,493	In use Passenger train.
14	Jan. Ferrier	do	2	51	14	26	109	10	10	1600	1600	do	1848	12,958	34,068	In use Passenger train.
15	Caogunawaga	do	4	41	11	16	94	8	8	1200	1200	Manchester, Amoskeag Co.	1853	13,141	40,027	In use Passenger train.
16	Montreal	do	4	41	11	16	94	8	8	1200	1200	M. W. Baldwin, Philadelphia	1847	27,126	27,126	Sold.

(Signed) JOHN DODSWORTH, Superintendent Motive Power.

Fig. 6—Locomotive roster of the successor to the Montreal & Lachine, from Samuel Keefer's report for 1860 (published in 1861). The *John Molson*, *Montreal*, and *James Ferrier* appear as Nos. 8, 13, and 14, respectively, numbers inconsistent with previous Keefer reports and probably intended as line numbers only.



THE FIRST RAILWAY TRAIN TO COME INTO MONTREAL, MONTREAL & LACHINE RAILROAD, NOV. 19, 1847.
FROM AN ENGRAVING BY J. WALKER, MADE AT THE TIME. FROM THE COLLECTION OF THE LATE ALD. DOUGAL MAC DONALD, MONTREAL.

Fig. 7—Engraving by J. Walker (see page 39), with erroneous caption added subsequent to 1918 by the late John Loye, from whose collection it was obtained by the author.

of the Montreal & Lachine. Moreover, while the Lachine road was nearly level throughout, the C&StL ascended a rather abrupt fifty-foot-high escarpment at Côte de la Bataille, about midway between Laprairie and St. Johns (see figure 5).

The author has been unable to find accounts of the arrival of this locomotive in Montreal, nor references to payment to Kinmonds & Company covering its cost. However, entries in Ledger "B" of the Champlain & Saint Lawrence Rail Road show a number of cash advances to W.D. Lindsay, the secretary of the company. One of these, made in June 1849 for £2527.0.0, would have been more than adequate to pay for the cost of the locomotive and its shipment from Scotland to Canada, as well as any "extras" which might have accompanied it.⁶²

Following its arrival, the only other early references to the *John Molson* are records of payment for painting the locomotive which appear in the record book of a professional painter named Thomas Lester Dixon, of St. Johns, C.E. (Quebec), between 1849 and 1851.⁶³

In 1857, *John Molson* formed part of the assets of the C&StL which were conveyed to the newly-organized Montreal & Champlain Rail Road, joining its two sister ex-Montreal & Lachine locomotives on the same roster. Keefer lists this locomotive as "rebuilding" at the end of 1860, after having operated a total of 76,000 miles in twelve years.⁶⁴ As we have seen, the M&C was integrated into the Grand Trunk in 1864. *John Molson* is thought to have been broken up early in the 1870s. There is no known illustration of this locomotive, and the only contemporary mechanical and statistical references are what appear in Keefer.

Princess and Britannia

The St. Lawrence & Atlantic Rail Road was organized on March 17, 1845,⁶⁵ to build a railway from Montreal to the international boundary, connecting there with its counterpart, the Atlantic & St. Lawrence Rail Road, to complete a through line between Montreal and Portland, Maine. The A&StL had been incorporated in the three states concerned between 1845 and 1848.⁶⁶ In order to secure for Portland a monopoly on Canadian export traffic, the combined line was built to the 66-inch gauge, a decision which would influence the selection of the same track width for the Canadian trunk system built in the 1850s.

Construction of the Canadian end of this railway was begun at Longueuil, on the right bank of the St. Lawrence River opposite Montreal, in 1847. By the summer of 1848, rail-laying began using a second-hand engine, *Longueuil*, unidentified save for the fact that it

Railroad History

had been purchased in the United States.⁶⁷ At the same time, the StL&A ordered a new 4-4-0 tender locomotive from the Portland Company. Outshopped in October 1848,⁶⁸ it was brought to Longueuil on a ship via the Gulf of St. Lawrence.⁶⁹ This inside-connected locomotive—named *A.N. Morin* after Augustin Norbert Morin, the president of the StL&A—was the third product of the Portland Company. It pulled the first train at the inauguration of public service over the first section of the StL&A between Longueuil and St. Hyacinthe, Quebec, 48 km (30 miles), on December 27, 1848.⁷⁰

Early in 1849, the StL&A's board issued its fourth annual report. It contains this statement:

The board, in reporting the purchase of a second-hand locomotive during the past season, and of an engine of first-class power from the Portland Company, at a cost of £3281 Os. 8d., have to state that they have ordered a locomotive from Messrs. Kinmonds & Co., of Dundee, to reach this country in early navigation, and with that addition to their motive power, they are still within the necessities of the road, should the traffic reach what may fairly be expected.⁷¹

The need for further motive power was hardly surprising. A timetable published at the end of March 1849 provided for a round trip from each end of the line daily, necessitating two locomotives.⁷² As far as the new locomotive from Kinmonds is concerned, apparently there were second thoughts as this acquisition was not made. Instead, the StL&A hired the redoubtable Alexander Millar, of the Montreal & Lachine Rail Road, as an agent to go to Scotland to purchase two second-hand steam locomotives.⁷³ Obviously aware of the Arbroath & Forfar's sale of three of its locomotives to Gourlay, Mudie & Company, Millar reported, under date of April 4, 1849, that two locomotives could be purchased from the latter company.⁷⁴ One may speculate whether Millar himself suggested the substitution of two second-hand engines for one new one, undoubtedly at a great saving in price as well. At any rate, the StL&A's directors concurred and Millar's recommendation was adopted.

First to arrive was the "Second Hand locomotive *Princess*," which was shipped from the port of Leith, near Edinburgh, on board the vessel *Elizabeth Ross*.⁷⁵ Evidently it arrived in Montreal in July 1849, as the payment of import duty at the Montreal customs house is recorded in that month.⁷⁶ Gourlay, Mudie was paid the sum of £200 sterling for *Princess*, equivalent to £243.68 in Canadian ("Halifax") currency, which was then at a discount of 9½ percent in terms of sterling.⁷⁷ This was about three times the price paid by Gourlay's to the Arbroath & Forfar only a few months before.

Britannia was purchased from the same source for £325 sterling (£395.84 currency). It was sent to Canada on board the ship *Prince*

Albert from Perth, Scotland, arriving in Montreal in November 1849.⁷⁸ Both locomotives were repaired at John Molson's foundry in Montreal in January 1850.⁷⁹

As construction extended the line toward a meeting with its U.S. counterpart, the StL&A acquired new locomotives from several New England builders. In July 1853, the last spike was driven and service inaugurated between Montreal and Portland. With the completion of construction, *Princess* became surplus to requirements and in June 1853 the 0-4-2 was sold to one Thomas McCaw for £137.10.0 currency.⁸⁰ Previously, in December 1852, McCaw had purchased *Longueuil* for £125.0.0.⁸¹ These prices suggest that *Princess* and *Longueuil* were disposed of as serviceable locomotives rather than as scrap, but their trails stop at this point as this author has not yet been able to discover McCaw's identity. Perhaps he was a railway contractor or subcontractor, who used these locomotives elsewhere, as there was a lot of construction under way in Canada at this time.

As far as *Britannia* is concerned, the author has not found any record of disposal. This suggests that the 2-2-2 remained with the StL&A to be transferred with the other assets to the Grand Trunk Railway of Canada on July 1, 1853. If we are to believe the date on figure 8 (referred to below), it was still in use in 1855. Certainly it had disappeared from GTR stock prior to the end of 1858 when the first Keefer report was published.

Although the author has found no identified illustrations of *Princess*, *Britannia* is well-documented. Figures 3 and 4 show members of its class in Scotland. An original black-and-white wash drawing in the author's possession, from the collection of the late John Loye, is shown in figure 8. This sketch is entitled "St. Lawrence & Atlantic R.R. Longueuil Station 1855." The 2-2-2 locomotive—apparently *Britannia*—is coupled to a four-wheeled box car under cover of a trainshed. In the near background is the StL&A's ferry *Transit*.⁸² Farther off is Ile-Sainte-Hélène, the twin towers of Notre Dame church at the far left, and Mount Royal in the background. The drawing is not signed but is of great age. It is mounted with glue on a backing or stiffener made up of part of an old GTR poster timetable which appears to date from the 1880s. One may postulate that *Britannia*, its construction duties over and its second-hand running mates disposed of, had by 1855 been relegated to the duties of station pilot (switcher) at Longueuil. In one respect, the locomotive in this drawing does not agree with Stirling practice as depicted in figures 3 and 4. It has Kinmonds-style horizontal cylinders with casing integrated into the smokebox, as in figure 2. Perhaps this alteration was made by Gourlay, Mudie between the time that *Britannia* was purchased from the A&FR and its resale to the StL&A a few months later.

McCaw
Britannia
Mills five
Jan 1
1855

Acton
Copper
Mine

Acton
R.R.

Sherbrooke
Gazette

Aug 1 1863
Aug 15 1863

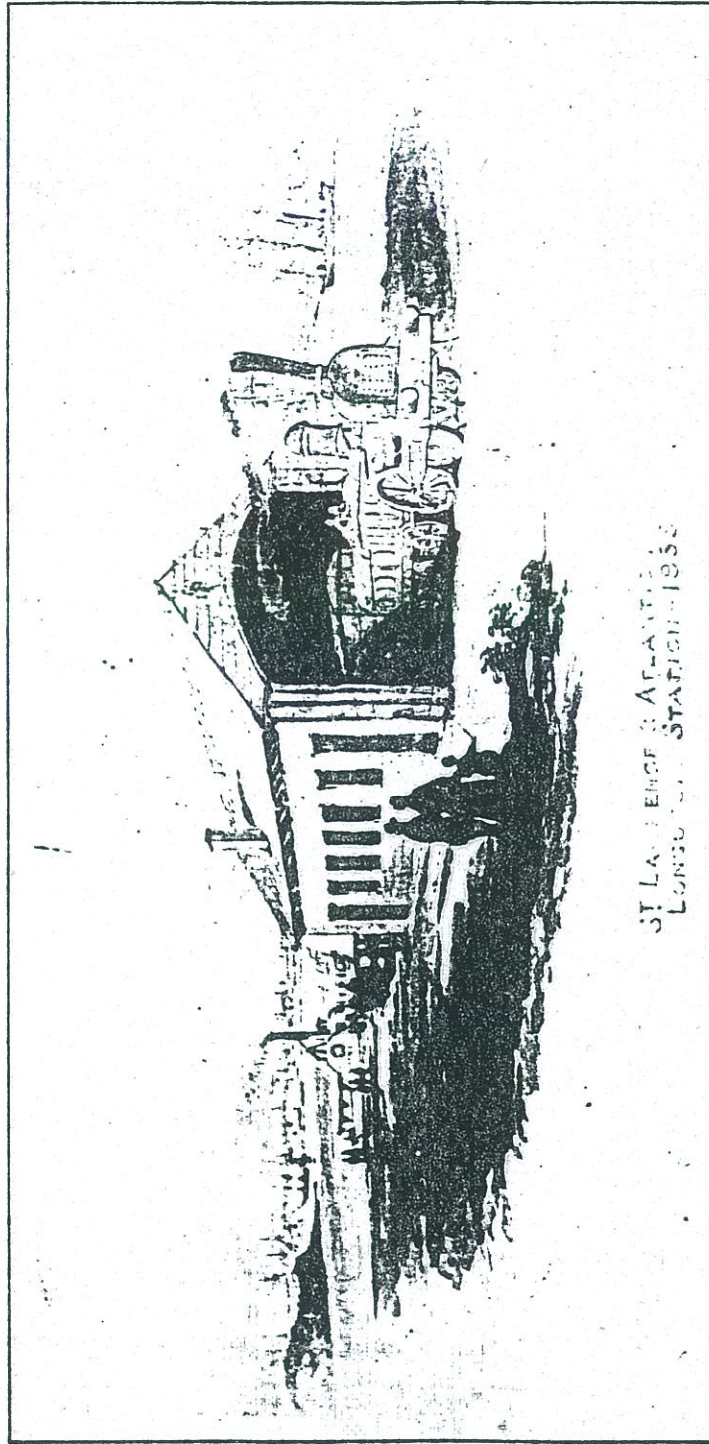


Fig. 8—Wash drawing of 2-2-2, apparently *Britannia*, at Longueuil Station.
(Author's collection, obtained from the collection of the late John Loye)

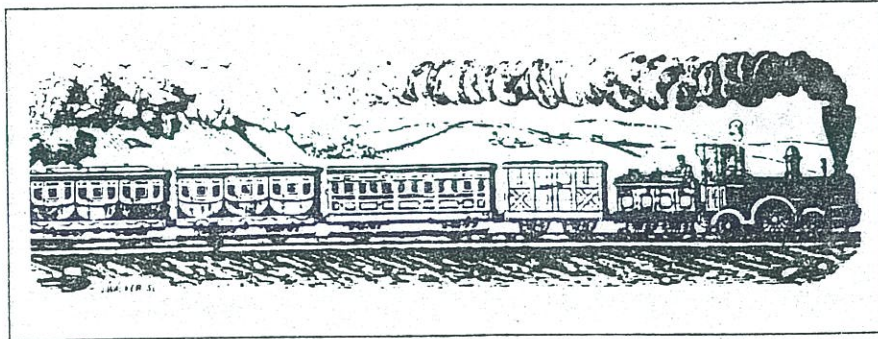


Fig. 9—Engraving by J. Walker which is undated, though the engraver was active in Montreal, 1850s-1870s. (From the collection of the late John Loye)

Figure 9 is an uncaptioned and undated engraving of a 2-2-2 locomotive, tender, four-wheeled baggage car, and three coaches, signed by J. Walker, an engraver who flourished in Montreal between the 1850s and 1870s.⁸³ It seems apparent, by comparison with figure 8, that Walker had access to the Longueuil wash drawing as he has used it as the basis of his 2-2-2 locomotive, its tender, and the four-wheeled baggage car. His principal alteration to the locomotive has been to add a rudimentary wooden shelter, secured by tie rods, to the open footplate. However, the main rod seems to ride in the air, unconnected to the driving wheel! The passenger cars appear to be lifted from a contemporary engraving of British rolling stock.⁸⁴ This illustration is from the collection of the late John Loye, who obtained it at an unknown date from Miss Eileen Goodman of Montreal.⁸⁵

What figure 7 shows is the Walker engraving (figure 9) to which has been added a caption identifying the illustration with the opening of the Montreal & Lachine Rail-Road on November 19, 1847. The caption, which is in error—the Kinmonds locomotives did not arrive in Canada until 1848—attributes the engraving to the collection of the “late Ald[erman] Dougal MacDonald, Montreal.” Dugald Macdonald, a Montreal lawyer and businessman, had been born at Dalhousie Mills, L.C. (Quebec), in 1838. He was alderman for Montreal’s Notre-Dame-de-Grace ward from 1912 to 1918, and died in August of the year he was defeated, 1918.⁸⁶ Hence, the caption was added to the Walker engraving after 1918, presumably when John Loye obtained it from Miss Goodman and perhaps using information supplied by her. In fact, this author is satisfied that the lettering style of the caption is that of Loye, who was a mechanical draftsman by profession and who was a personal friend from 1945 until his death in 1962.

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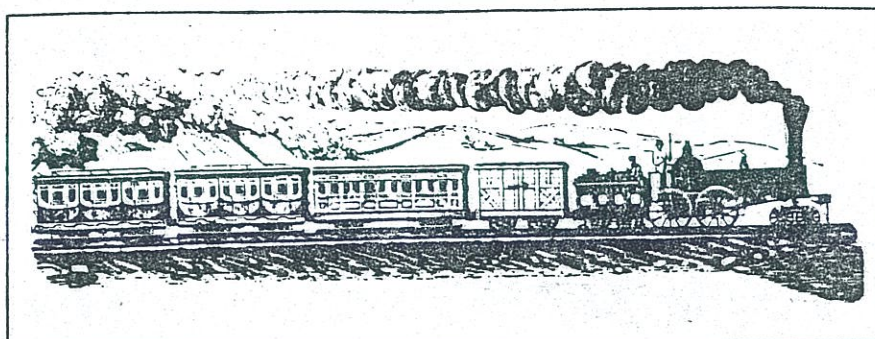


Fig. 10—Walker engraving with a Norris 4-4-0 substituted. (From *Yesterday and Today: A Century of Railway Progress, 1847-1947* [1947])

Yet another “version” of the Walker engraving appears in figure 10. In 1947, Canadian National Railways prepared a brochure for the centennial of the Montreal & Lachine Rail-Road.⁸⁷ The Walker drawing with the erroneous caption (figure 7) was re-adapted by the late A.L. Sauviat, an officer in Canadian National’s display department, for use in the booklet. He removed the 2-2-2 locomotive from the drawing and substituted a contemporary side elevation of a standard Norris 4-4-0 of the 1840s, in an attempt to have the drawing agree with its caption.⁸⁸ This “version” of the Walker drawing is mentioned here as it has already been mistaken, by at least one professional historian, as an authentic alteration made by Walker himself.

The Kinmonds Come to Montreal

1852
The last phase of this account of the “Dundee connection” came in 1850 when, as we have seen, the Wallace Foundry was closed and Peter and William Leighton Kinmond came to Montreal. They established a foundry in the Chaboillez Square area adjacent to the St. Bonaventure Street station of the former Montreal & Lachine Rail-Road, by then the Montreal & New York Rail Road.⁸⁹ The foundry, using the same name as that used latterly in Scotland, “Kinmonds & Company,” was in operation as early as June 1851, according to references made in the accounts of the St. Lawrence & Atlantic for the purchase of various types of foundry work, including castings, wheels, and fireboxes.⁹⁰ A similar journal entry in July 1853—when the StL&A was incorporated into the GTR—indicates that the StL&A had placed an order for a number of steam locomotives with what had by this time become “Kinmond Brothers.”⁹¹ The work must have been well under way, as the first locomotive of the order was delivered to the GTR only two months

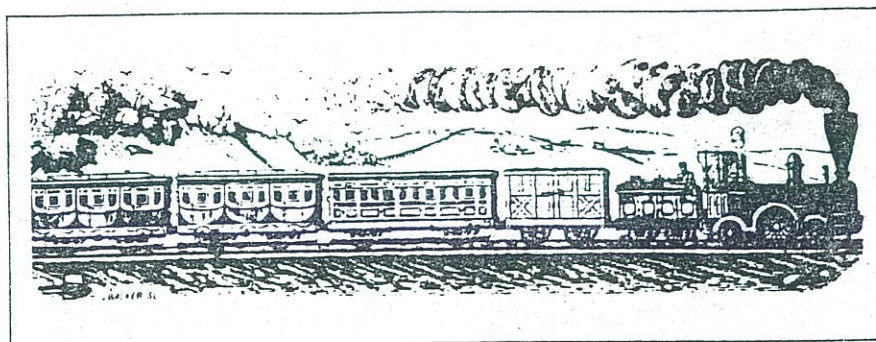


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later, in September 1853. During the ensuing year, Kinmond Brothers built seven more locomotives for the Grand Trunk.⁹²

The ninth locomotive product of Kinmond Brothers was noticed in the *Montreal Gazette* of September 2, 1854:

Kinmonds' Locomotive Factory

There is now completed and standing outside on the rails near the factory, close by the Lachine Railroad station, a superb locomotive engine and tender intended to be sent up immediately to Carillon to run between that place and Grenville over that section of the Montreal and Bytown Railroad. This is the ninth engine made by Messrs. Kinmond during the last twelve months, besides other descriptions of engines and other work; the other eight having been purchased by the Grand Trunk. The present one is a beautiful specimen of that wonderful iron horse and is well worthy of the notice and admiration of the public. This factory employs 170 or 180 persons—is the only locomotive factory in Lower Canada and well deserves public encouragement.⁹³

The sought-after business did not materialize and no locomotives were produced in 1855. This was due largely to the chronic lack of funds experienced by railway companies then under construction, exacerbated by the dislocation of the money markets as a result of the Crimean War. However, the Kinmonds continued to seek business through an advertisement placed occasionally in the *Gazette*.⁹⁴

**Locomotive Engine Works
Montreal**

The Subscribers, in addition to the manufacture of Locomotive Engines are prepared to furnish

Steam Engines, Boilers, Etc.,

of the most efficient and approved character for

Saw and Grist Mills

as well as every description of Millwright Work.

Kinmond Brothers,
Engineers.

Early in 1856, the Grand Trunk Railway ordered three further locomotives, which were outshopped beginning in May of that

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year.⁹⁵ These proved to be the end of locomotive production at this pioneer establishment, which was the second such manufactory in Canada.⁹⁶ The bank failure of 1857 caused the Kinmonds to sell the business, including machinery and goodwill, to Daniel C. Gunn of Hamilton, Canada West (Ontario). William Leighton Kinmond went along to become Gunn's works superintendent, and it is reported that most of the skilled workmen went with him.⁹⁷

The works list of Kinmond Brothers in Montreal appears on page 44. An interesting feature of the products of this works—all 4-4-0 locomotives—is that the leading wheels were mounted rigidly in the plate frames and not in the usual swiveling leading truck.⁹⁸ Perhaps the single-drivered locomotives built for Canada by the Kinmonds while still in Dundee, if they were of the 4-2-2 type, were designed in the same way.

Canadian Railway Museum's 2-2-2-Type Locomotive

The Canadian Railroad Historical Association possesses an operating 2-2-2-type tender locomotive, which is kept at the Canadian Railway Museum at Delson, Quebec, near Montreal.⁹⁹ This locomotive was constructed for the suppliers, Kawasaki Heavy Industries Limited, Kobe, Japan, by Kyosan Kogyo Limited, Fukushima, in 1970.¹⁰⁰ A photograph appears in figure 11, while side, front, and rear elevations are shown in figure 12. The designer was W. Gordon Small of Alloa, Scotland, by profession an instructor in technical drawing. The cost, \$75,000, was provided by the Molson family philanthropic foundation. The locomotive, named *John Molson*, is portrayed as a full-sized replica of the Kinmonds-built locomotive of the same name which was purchased in 1849 by the Champlain & Saint Lawrence Rail Road.¹⁰¹

There are serious discrepancies between the "replica" and the meager information about the prototype locomotive which appears in the Keefer reports. Specifically, the boiler length and tender capacities in the latter were not utilized. The Keefer dimensions—a ten-foot, six-inch-long boiler and a tender carrying 1,600 gallons of water—would have materially affected the appearance of the Delson locomotive had they been embodied into its design. The Delson locomotive has a boiler approximately eight feet, six inches in length, scaled from figure 12. Its tender's water capacity, while unknown to this author, could not accommodate more than about 500 imperial gallons. The Delson engine has the 2-2-2 wheel arrangement, but all that is known from Keefer is that the original *John Molson* had a single pair of 66-inch driving wheels. The longer boiler given in Keefer suggests at least the possibility that the Kinmonds locomotives built for Canada could have been constructed as 4-2-2s, as veterans interviewed by the late John Loye assert.¹⁰²

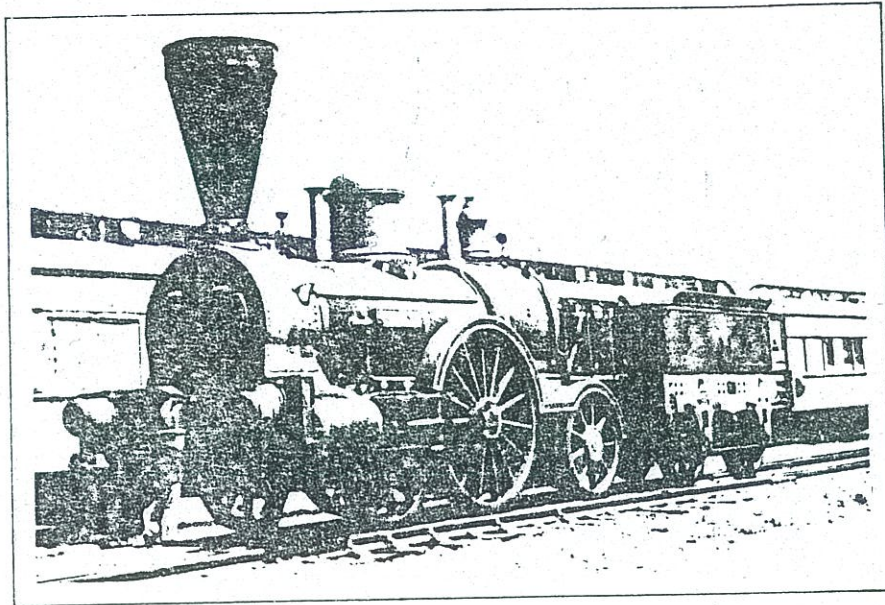


Fig. 11—So-called *John Molson* replica at Delson, 1981. (Author's collection)

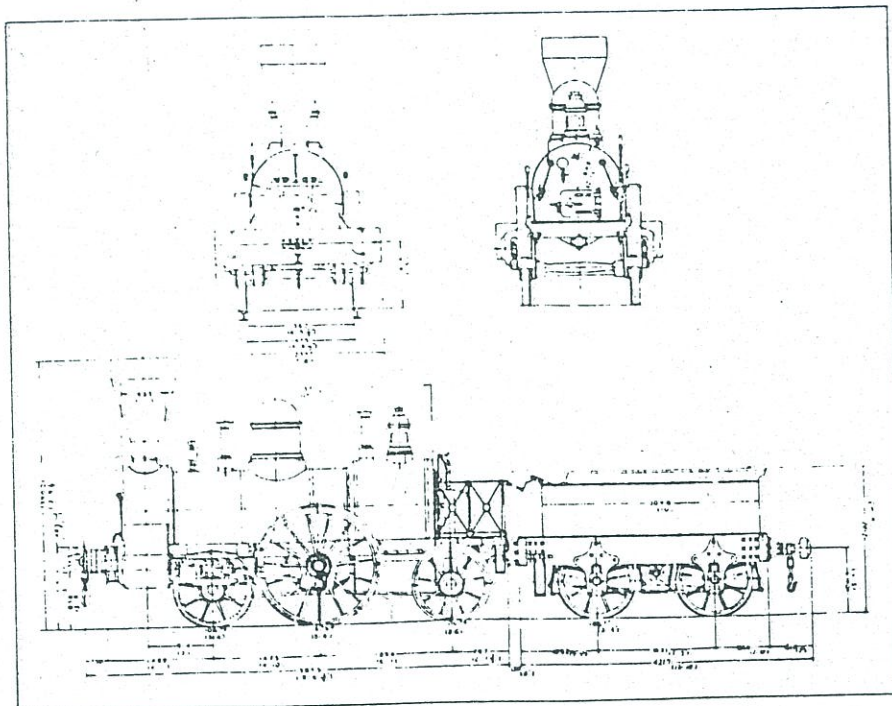


Fig. 12—Drawings of the Delson locomotive. (From *Canadian Rail No. 237*)

Kimmond Brothers, Montreal. Works List.

Date Outshopped No.	Works No.	Road Co.	Type	Dri.	Cyls.	Tubes			Weight (Loco) T. cwt.	Tender Water Weight (gals.) T. cwt.	Weight E.&T. T. cwt.	Miles run: Before	Notes			
						No.	Length	I. Dia.					1858	1859	1860	Total
1853, Sept.		GTR 17	4-4-0	66"	16x24"	136	10'10½"	1-13/16	26 2	1658	19 13	45 15	40607	19162	3872	11018 74659
	Sept.	GTR 20	4-4-0	60"	15x24"	156	10'11"	1-13/16	26 12	1658	18 11	45 3	38440	16931	5083	7337 67791
1854, Feb.		GTR 31	4-4-0	60"	16x24"	154	11'10"	1-13/16	26 12	1658	19 13	46 5	46590	13994	16125	5698 82407
	June	GTR 29	4-4-0	60"	16x24"	154	11'10"	1-13/16	26 12	1658	19 13	46 5	31301	18637	14588	4240 68766
	June	GTR 30	4-4-0	66"	16x24"	154	11'10"	1-13/16	26 2	1658	19 13	45 15	5317	144	7314	8104 20879
	July	GTR 10	4-4-0	60"	14x21"	160	11'10"	1-13/16	22 6	1450	15 12	37 18	45612	475	14368	3085 63540 (1)
	Aug.	GTR 25	4-4-0	66"	15x21"	160	11'10"	1-13/16	28 10	1450	16 9	44 11	47755	9542	16227	8198 81722
	?	GTR 14?	-	-	-	-	-	-	-	-	-	-	-	nil	nil	-
Sept.	9	M&B 1	4-4-0	66"	15x24"	132	10'6"	2	17	1600	8	25	-	-	6750	3500 - (3)
1856, May		GTR 71	4-4-0	66"	15x21"	160	10'10"	1-13/16	28 2	1473	16 9	44 11	28921	7437	17245	4849 58452
	Oct.	GTR 86	4-4-0	66"	15x21"	160	10'10"	1-13/16	28 2	1473	16 9	44 11	24248	6116	26125	27002 83491
	Nov.	GTR 87	4-4-0	66"	15x21"	160	10'10"	1-13/16	28 2	1473	16 9	44 11	17543	17572	2985	11692 49792

Note (1) - Rebuilt 6 January 1861 with 66" drivers.
 Note (2) - No particulars. Locomotive said to have derailed in Lac à Loutre (Turcot swamp) c1854 and abandoned there.
 Note (3) - Named *Ottawa*. Weights are obviously wrong.

Works list of locomotives built by Kimmond Brothers, Montreal, adapted from Keefer reports 1858, 1859, 1860 (see n. 14, page 47), and Robert Brown's article on Kimmond Brothers (see n. 92, page 50).

Though Small had access to the one known Kinmonds drawing (figure 2), he did not embody two apparent design features of Kinmonds practice: a steam dome positioned over the firebox, and valves mounted on top of the cylinders in a shell or casing contiguous to the smokebox. Accompanying an article written by Small describing his preparation of plans for the locomotive is another drawing of a 2-2-2 tender locomotive, *Lightning*, identified as having been built by the Glasgow, Paisley, Kilmarnock & Ayr Railway in its own works in Glasgow in 1846.¹⁰³ This drawing is reproduced in figure 13. Though the designer did not explain in his article what connection the *Lightning* has with Kinmonds practice, the Delson locomotive follows the GPK&A design quite closely.

Early in 1983, the author obtained Mr. Small's address and contacted him. He is, incidentally, a skilled builder of museum-quality models and has an extensive knowledge of early locomotive design. In explaining the anomalies commented upon above, Small stated that he assumed that the locomotive in the so-called Montreal & Lachine drawing (figure 7) was a correct representation of a later Kinmonds product, especially when compared with the drawing of *Lightning*, which was a company-built contemporary of twelve 2-2-2s built by Kinmonds for the GPK&A between 1840 and 1845. Hence he embodied some of *Lightning*'s features into the Delson locomotive's design. As far as the omission, in this design, of the Keefer details is concerned, Small stated that the Canadian Railroad

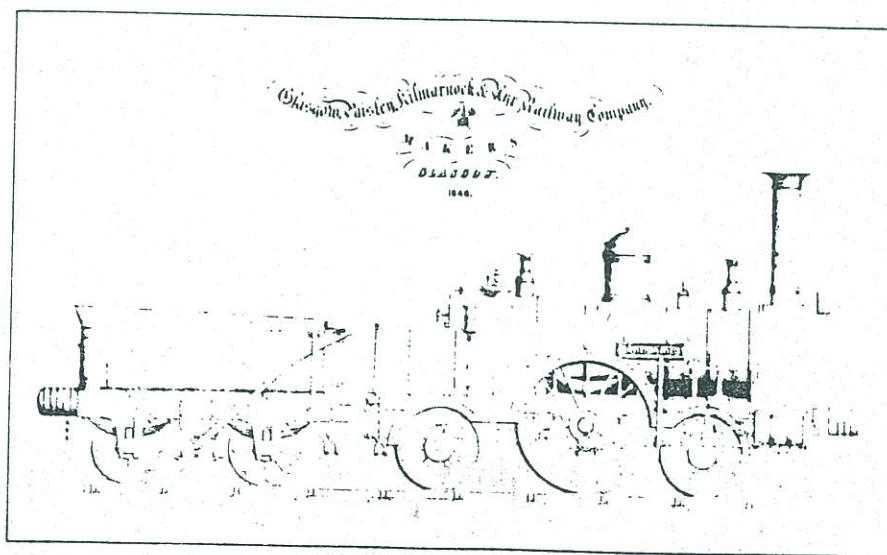


Fig. 13—Diagram of locomotive *Lightning* of the Glasgow, Paisley, Kilmarnock & Ayr Railway. (From *Canadian Rail No. 237*)

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Historical Association did not provide him with that information, and he had never seen it before I sent it to him with my inquiry.¹⁰⁴ Considering that the association was in possession of this information about the original *John Molson*, this is in my view an astonishing omission. For these reasons, and despite the name that it carries, the Canadian Railway Museum's Kawasaki-built 2-2-2 can not be considered to be a replica of *John Molson*.

The Rodier Model

The Château de Ramezay, a Montreal museum, possesses a working model of a 4-2-2 tender locomotive, built by P. Rodier of St. Hyacinthe, Canada East (now Quebec), in 1850, at which time Rodier is stated to have been fourteen years old.¹⁰⁵ This model is disproportionate and the scale unknown, but its gauge is 171 mm (6¾ inches). It is illustrated in figure 14. The Château de Ramezay also possesses an ambrotype photograph of Rodier and his locomotive. The model is well-constructed, and, if it was indeed built when Rodier was only fourteen, he must have been a very skillful mechanic. It bears a brass plate on each side of its boiler carrying the inscription No. 1 St. Hyacinthe. Another plate on top of the firebox reads P. Rodier, 1850.

The superficial resemblance of this model to the prototype Stirling locomotive *Britannia* probably inspired the oft-told yet unauthenticated story that *Princess* and *Britannia* were renamed *St. Hyacinthe* and *Beloil* by the St. Lawrence & Atlantic and rebuilt to 4-2-2.¹⁰⁶

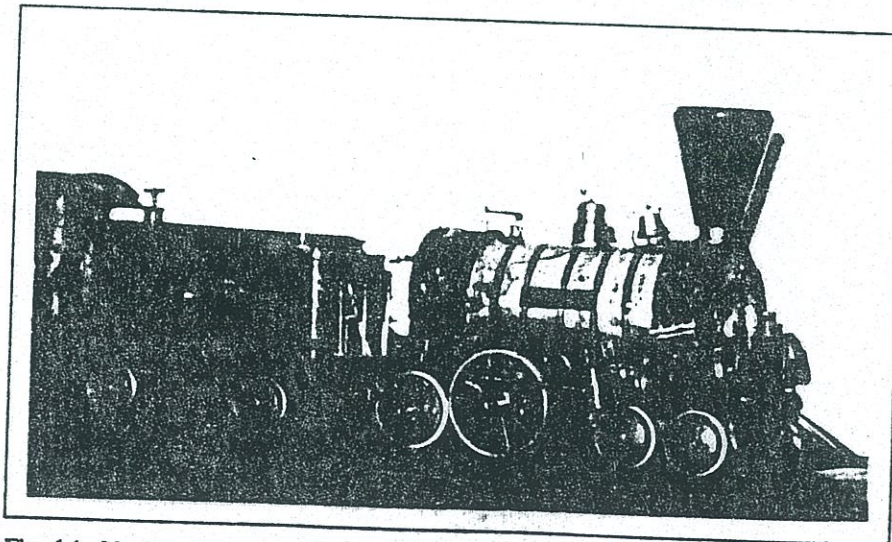


Fig. 14—Model of 4-2-2 tender locomotive built by P. Rodier, 1850, and now in the collections of the Château de Ramezay. (Photo by author, 1955)

See
Oxford
Museum
Democrat
May 4
1850

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17. G.A. Sekon, *The Evolution of the Steam Locomotive* (London: The Railway Publishing Co. Ltd., 1899), p. 58.
18. E.L. Ahrons, *The British Steam Locomotive, 1825-1925* (London: The Locomotive Publishing Co. Ltd., 1927), p. 40.
19. Sekon, p. 58.
20. Lowe, p. 618.
21. Whishaw, p. 5. This source gives the following additional information about these locomotives: 105 tubes, 2" external diameter, 8'5" long; firebox: 4' long, 2'6" wide, and 3'6" high; boiler: 3'9" diameter; chimney: 12" diameter, height above smokebox, 6'; steam passage equal to 10 square inches; tender: weight, 6 tons, 540 gallons of water, 18cwt. of coke.
22. Steel, 26 February 1963.
23. Whishaw, plate 4.
24. Sinclair, p. 613.
25. Lowe, p. 618.
26. Steel, 26 February 1963, quoting from the Minute Book of the Arbroath & Forfar Railway for 9 November 1848.
27. Ibid., quoting from letter dated 6 February 1849 from the Arbroath & Forfar Railway to Gourlay, Mudie & Co., Engineers, Dundee.
28. Sinclair, p. 612.
29. John Marshall (comp.), *The Guinness Book of Rail Facts & Feats* (Enfield, Middlesex: Guinness Superlatives Ltd., 3d ed., 1979), pp. 25-26.
30. Province of Canada, 9 Victoria Chapter 82.
31. W. Stewart Wallace (comp.), *The MacMillan Dictionary of Canadian Biography* (London, Toronto: St. Martin's; New York: MacMillan, 1963), pp. 228-229.
32. Robert R. Brown, "The Montreal & Lachine Rail Road, 1847-1947," *Railway & Locomotive Historical Society Bulletin* No. 71 (1947), p. 26. (Hereinafter cited as Brown.)
33. Public Archives of Canada (hereinafter cited as PAC), RG 30, vol. 281.
34. John Beswarick Thompson, "William L. Casey, The Forgotten Engineer," *Engineering Journal*, Jan./Feb. 1971 (Engineering Institute of Canada).
35. PAC, RG 30, vol. 281, 16 November 1846, Incidental Expenses.
36. Brown, pp. 26-27.
37. PAC, RG 30, vol. 281, 27 March 1847.
38. Ibid., 14 August 1847.
39. Ibid., 13 October 1847.
40. Brown, p. 30.
41. PAC, RG 30, vol. 281, 13 October 1847.
42. Brown, pp. 27-28, quoting *Montreal Witness*, 8 November 1847.
43. Ibid., p. 28, quoting *Montreal Witness*, 22 November 1847.
44. PAC, RG 30, vol. 281, 27 June 1848, Provincial duty, £483.3.3; 8 July 1848, Wharfage, £5.2.9; 10 July 1848, Freight from Dundee per *Hector*, £160 stg. @ 9¼% premium, £194.13.4; 21 July 1848, Cartage from Harbour to Terminus, £30.0.0.
45. Keefer, see figure 6.
46. John Loye, "Locomotives of the Grand Trunk Railway," *Railway & Locomotive Historical Society Bulletin* No. 25 (1931), p. 16. These weights are apparently in long tons of 2,240 pounds.
47. Keefer, see figure 6.
48. PAC, RG 30, vol. 28, 22 September 1848, "Paid A. Munro for refreshments to men employed discharging locomotives from the vessel," £ 1.15.5.
49. Robert G. Bales, "The Montreal & Lachine Rail Road and Its Successors," *Canadian Rail* No. 177 (May 1966), quoting *Montreal Witness*, 31 July 1848.
50. Brown; the author does not give the source of Kinmond's recollections, unfortunately.
51. PAC, RG 30, vol. 281, 15 November 1848.
52. Keefer, figure 6.
53. Brown, p. 30.
54. Loye, pp. 23-24.
55. J.M. and Edward Trout, *The Railways of Canada for 1870-1, shewing the Progress, Mileage, Cost of Construction . . .* (Toronto: Monetary Times, 1871), pp. 33-34.
56. Brown, p. 30.

As readers will see for themselves under the appropriate references, *Princess* retained its name until its disposal in 1853. *Britannia* still retained that name at least until May 1852, when a journal entry makes references to repairs to it under that name.¹⁰⁷ Figure 8 shows it as a 2-2-2 as late as 1855. In October 1853, what had by then become the GTR acquired a new 4-4-0 from Amoskeag which was named *St. Hyacinthe*.¹⁰⁸

Since the wheel arrangement is inconsistent with our present information about the Stirling-built locomotives, we must conclude that the Rodier model is a freelance one, named after the builder's home community, perhaps drawing its prototype from locomotives which its builder saw in the Montreal area at the time. Perhaps the Rodier model is a composite of the features of both Stirling and Kinmonds locomotives. □

Notes

1. Angus Sinclair, *Development of the Locomotive Engine* (New York: Angus Sinclair Publishing Co., 1907), pp. 612-613.
2. Omer Lavallée, "Will the Real John Molson Please Steam Forward?" *Clearboard*, Vol. 4, No. 5 (Ottawa: Ottawa Branch, Canadian Railroad Historical Association, September 1969).
3. *Encyclopaedia Britannica*, 15th edition, s.v. "Dundee," 3: 707-708.
4. Francis Whishaw, *The Railways of Great Britain, Practically Described and Illustrated* (London: Simpkin, Marshall & Co., 1840), p. 79.
5. *Ibid.*, p. 3.
6. W. Gordon Small, "Designing the 'John Molson' of 1971," *Canadian Rail* No. 237 (Montreal: Canadian Railroad Historical Association, October 1971).
7. G. MacLennan Steel, letter of 7 September 1963. In 1963, the author corresponded several times with this gentleman, of Caterham, Surrey, who was a descendant of James Steel of the partnership of Kinmonds, Hutton & Steel. Mr. Steel was then engaged in research into his ancestor's affairs, and he shared his information fully and generously in a number of letters. Subsequently, contact with Mr. Steel was lost, but his assistance is gratefully acknowledged. This source is cited hereinafter as Steel, followed by the date of his letter.
8. Whishaw, p. 81.
9. James W. Lowe, *British Steam Locomotive Builders* (Cambridge: Goose and Son Publishers Ltd., 1975), p. 361; also, Steel, 23 April 1963.
10. Steel, 7 September 1963.
11. Lowe, p. 360, caption to Fig. 302.
12. Steel, 7 September 1963.
13. Lowe, p. 361.
14. Board of Railway Commissioners of the Province of Canada, *Report of Samuel Keefer, Esq., Inspector of Railways* (a) For the Year 1858 (Hamilton: Gillespy & Robertson, 1859); (b) For the Years 1859 and 1860 (Toronto: Leader and Patriot Establishment, 1861). Because of the rarity of this volume, page 199 of the 1859-60 volume, showing the locomotives of the Montreal & Champlain Rail Road as of 31 December 1860, is reproduced as figure 6.
15. Steel, 7 September 1963.
16. Lowe, pp. 360-361.

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57. Charles Cooper, *Rails to the Lakes, the Story of the Hamilton & Northwestern Railway* (Erin, Ont.: Boston Mills Press, 1980).
58. Brown, p. 30.
59. Whishaw, Appendix, p. xxviii.
60. PAC, RG 30, vol. 134, 24 August 1849, "Duties and Wharfage on Locomotive *John Molson*," £295.18.5; 9 September 1849, "Paid freight on Locomotive *John Molson*," £91.5.0.
61. Keefer, figure 10.
62. PAC, RG 30, vol. 138.
63. Anon., "Record Book of Thomas Lester Dixon," Canadian Railroad Historical Association *Bulletin* No. 3 (November 1937): 29 September 1849, Painting engine *John Molson*, £8.5.0; 27 April 1850, Painting engine *John Molson*, £8.5.0; 29 June 1850, Painting New Platform for *John Molson* Engine, £2.6; 31 March 1851, Painting the *John Molson* Engine, £8.5.0.
64. Keefer, figure 6.
65. Province of Canada, 8 Victoria Chapter 25.
66. A.B. Hopper, and T. Kearney (comp.), *Canadian National Railways, Synoptical History of Organization, Capital Stock, Funded Debt and Other General Information, as of December 31, 1960* (Montreal: Canadian National Railways, 1962), p. 2.
67. PAC, RG 30, vol. 159, 12 August 1848, Payment to (R.T. Bailey) to cover freight on second hand locomotive from St. John's to Longueuil, £15.0.0; 31 August 1848, Payment to R.T. Bailey for cost of a second hand locomotive, repairing and furnishing materials for same, £677.12.1.
68. Ibid., 30 November 1848, Payment to Portland Company of invoice dated 10 October 1848 for the locomotive *A.N. Morin*, US\$8,485.79.
69. Ibid., 31 October 1848.
70. Hopper and Kearney, p. 719.
71. *American Railroad Journal*, 10 February 1849, p. 84, quoting StL&A report.
72. Ibid., 31 March 1849, p. 193. The schedule was as follows:

First train,	l. St. Hyacinth [sic]	7 am.
	a. Montreal	8½ am.
	l. Montreal	2 pm.
	a. St. Hyacinth	3½ pm.
Second train,	l. Montreal	9 am.
	a. St. Hyacinth	10½ am.
	l. St. Hyacinth	4 pm.
	a. Montreal	5½ pm.
73. PAC, RG 30, vol. 159, 30 March, 30 April, 31 July 1848. Millar went to Scotland "for the purpose of purchasing two locomotives."
74. Ibid., 15 September 1849.
75. Ibid., 12 July 1849.
76. Ibid.; the duty was £64.12.0 currency.
77. Ibid., 15 September 1849.
78. Ibid., 10 November 1849: "Freight on locomotive engine *Britannia* from Perth, and sundry disbursements," £87.5.0 stg. = £106.7.1 cy.
79. Ibid., 29 January 1850.
80. PAC, RG 30, vol. 161, 30 June 1853.
81. Ibid., 31 December 1852.
82. PAC, RG 30, vol. 159, 1 September, 13 September 1849. The *Transit* was purchased in Kingston and brought to Montreal by Captain Richardson, to operate between the railway terminus in Longueuil and Montreal.
83. Memorandum from John Beswarick Thompson, 22 December 1970.
84. Record books of the StL&A and the Montreal & Lachine lines, in the Public Archives of Canada, fail to reveal references to any rolling stock built in the United Kingdom. The first cars on the Lachine line in 1847 were built in its own facilities in Montreal using contract labor. Two years later, new cars were built by McLean & Wright and Michael O'Meara of Montreal (PAC, RG 30, vol. 281). The first cars on the StL&A were built in 1848 by McLean & Wright (PAC, RG 30, vol. 159).
85. *Montreal Star*, 13 March 1942, p. 13. Miss Goodman's address was given as 5863 Côte des Neiges Road.

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86. Personal communication from Henri Gérin-Lajoie, surintendant, section des archives, secretariat municipal, cité de Montréal, 30 September 1981.
87. *Yesterday and Today: A Century of Railway Progress, 1847-1947* (Montreal: Canadian National Railways, 1947), inside front cover.
88. The author has personal knowledge of these circumstances as he knew Mr. A.L. Sauviat personally at the time and, as a member of the Canadian Railroad Historical Association, was a member of the Montreal & Lachine Rail Road centennial committee in 1946-47.
89. *Lovell's Montreal Directory*, 1853 (Montreal: John Lovell & Son, 1853). The same entry also lists William Kinmond, residing at 63½ St. Antoine Street, Montreal.
90. PAC, RG 30, vol. 160, 31 January 1851.
91. *Ibid.*, 15 July 1853: "Advances made ... on account of their contract for engines," £4400.0.0.
92. Robert R. Brown, "Kinmond Brothers' Locomotive Factory," *Canadian Railroad Historical Association News Report*, December 1953.
93. *Ibid.*, quoting *Montreal Gazette*, 2 September 1854.
94. *Ibid.*, quoting *Montreal Gazette* intermittently during 1855.
95. Brown (n. 92 above).
96. The first locomotive builder in Canada was James Good, Toronto, who outshopped the locomotive *Toronto* for the Ontario, Simcoe & Huron Union Rail Road in April 1853.
97. Brown (n. 92 above).
98. *Ibid.*
99. There are several published articles on this subject: Lavallée (n. 2 above); R.V.V. Nicholls, "The Impossible Dream, the Construction of the John Molson of 1971," *Canadian Rail No. 237* (October 1971); Small (n. 6 above).
100. An illustration of the builder's plate of this locomotive appears in *Canadian Rail No. 237* (October 1971), p. 237.
101. *Ibid.*, pp. 284, 288, 282.
102. John Loye (1880-1962) was a long time member of The Railway & Locomotive Historical Society and a personal friend of the author from 1945 until his death. As an adolescent in downtown Montreal in the 1890s, he lived within a stone's throw of Bonaventure Station and spent much of his spare time at the station talking with veteran railwaymen. Many of the people interviewed by Loye were men with three or four decades of service with the Grand Trunk Railway of Canada, who had themselves worked with Canada's pioneer locomotives built in the 1840s and later.
 A mechanical draftsman by profession, Loye made drawings to represent the recollections which he heard, thereby unwittingly committing to print some errors in information. In retrospect, however, it must be said that many of these alleged errors contained the germ of truth. For example, many of the men interviewed remembered Canada's first locomotive, *Dorchester*, as a locomotive with a leading truck, whereas the records of the builder, Robert Stephenson & Co., indicate that it was a four-wheeled *Planet* type. In recent years, records have come to light establishing that *Dorchester* was, in fact, rebuilt to 4-2-0 within a year or two of its delivery in 1836.
 As the text indicates, these same veterans recall that the three Kinmonds-built locomotives were placed in service as 4-2-2s. However, a four-wheeled leading truck is not necessarily implied. The practice of embodying two leading axles rigidly in the frame, to achieve better weight distribution, was introduced in Great Britain about 1846 by Crampton (standard-gauge 4-2-0s) and Gooch (broad-gauge 4-2-2s). Since all three of the Dundee Kinmonds locomotives used in Canada lasted well into the age of photography, it is possible that photographs still exist which will shed light on this most vexing of the questions related to these engines.
103. *Canadian Rail No. 237* (October 1971), p. 294.
104. Personal communication from William G. Small, 23 April 1983.
105. Records of the Antiquarian & Numismatic Society of Montreal.
106. *Inter alia*, Robert R. Brown, "British and Foreign Locomotives in Canada and Newfoundland," *Railway & Locomotive Historical Society Bulletin No. 43* (1937), p. 8.
107. PAC, RG 30, vol. 161, 31 May 1852.
108. PAC, RG 30, vol. 1972, p. 20, 20 October 1853, payment to Amoskeag for four locomotives, *Manchester, Upton, St. Hyacinth* [sic] and *Acton*, @ £2400.0.0 each.

Extractions from the Oxford *Democrat* newspaper, once published in South Paris, Maine

Tuesday, Apr 03, 1849 Page 3

St. Lawrence & Atlantic Railroad. We have much pleasure at being enabled to state, that the receipts on thsi road have been steadily increasing, and have already reached 20 Pounds (sterling) per day. - *Montreal Herald* -

Tuesday, May 14, 1850 Page 3

A Frech-Canadian boy at St. Hyacinthe has constructed a working model of a steam locomotive, complete in all its parts, about 18" long, without any assistance or instruction in the use of tools. He is only 14 years old and has had to make for himself every implement necessary for his work with exception of one or two files. His model is of one of the engines he has seen on the St.L&A RR. - *Montreal Herald* -

Friday, Jun 11, 1852 Page 2

ACCIDENT. We learn that Mr. Noale Creasey, Jr., of this city, an engineer on the St. Lawrence & Atlantic Railroad was severely injusred on that road, near St. Hyacinthe last Tuesday. While a train was in motion, he saw an obstruction on the track, and leaped from the car (cab?), and in so doing, received an injruy which it is feared will prove fatal. - *Portland Advertiser* -

Friday, Jul 18, 1853 Page 3

The rails are all laid down on the Atlantic and St. Lawrence, nad the St. Lawrence and Atlantic Roads, and the lease having been perfected, two regular, through trains, will commence running on the 18th inst., between Portland and Montreal.

Friday, Sep 02, 1853 Page 3

Boiler Explosion on the Montreal Road. We learn by the *Montreal Pilot*, that the boiler of the engine *Coaticooke*, on its way from Portland to Montreal, exploded on Saturday morning about 10 o'clock. The fireman, Mr. Beech, was badly bruised; and the engineer, Mr. Seeley, so severely injured, that he is not expected to recover. The engine was attached to a freight train. (No location of the accident site is given)

Friday, Oct 07, 1853 Page 2

Legislature Excursion. The Legislature, Governor, and Council accepted the invitation of the Grand Trunk Railway Company to take a trip to Montreal last week. They had a fine time of course.

Friday, May 04, 1866 Page 2

Mr. Henry Little, of Auburn, was one of the passengers on a night train from Montreal, on Saturday. Before daylight the car ran off the track, and off an embankment fifteen feet high, overturning and instantly catching fire from the lamps. Mr. Little escaped by crawling out of the car window losing his overcoat and carpet bag. It requires considerable courage to face the dangers of the "Grand Trunk".

Le 28 août 2001

Royal Ontario
Museum

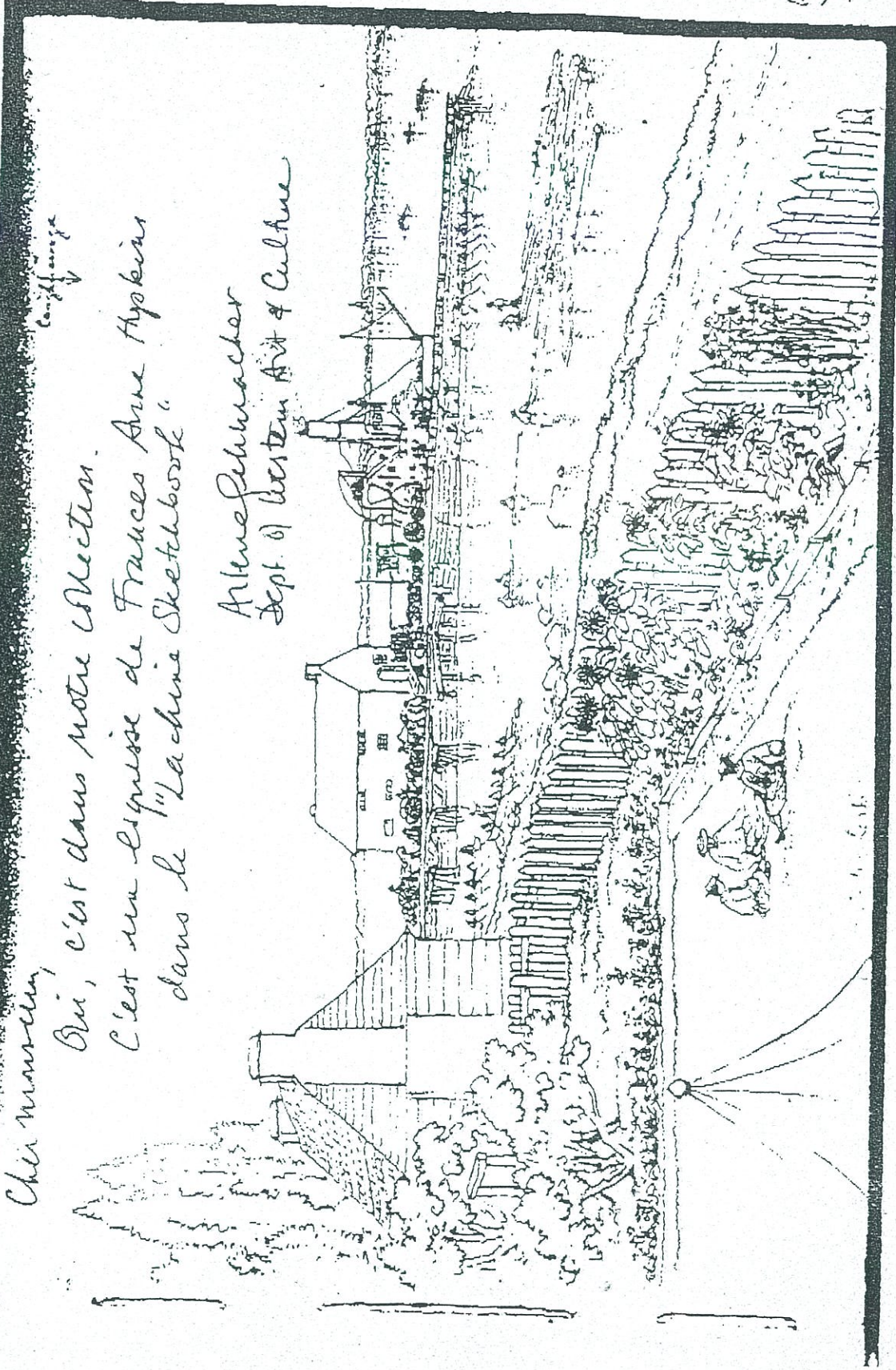
Cher monsieur,

Oui, c'est dans notre collection.

C'est une esquisse de Frances Anne Hopkins
dans le "La Chine Sketchbook"

Alfred Schuchmacher
Dept. of Western Art & Culture

Confiance



Train du Montcal et la Chine au puits de la Chine

Renseignements: → titre: The La Chine Pier Seen from Hopkins Garden
→ Numéro d'acc: 961.219h

- pen & black ink over pencil

- Inscrit en base de données: "Our Garden Secret..."

Photo noir et blanc: key. no. 70 CAN 269
dispo: 70.1.740

*SVP adresser votre lettre à Share Corsaut
(ShareC@rom.on.ca)
- indiquez le numéro d'accès

THE TIMES, MONDAY, JANUARY 10, 1848.

RAILWAY SHARES.

No material alteration occurred in the prices of railway shares this afternoon, which, however, considering the amount of business transacted, were tolerably well supported.

Railways.	Paid.	Closing Prices.	Business done
Aberdeen	45	20 to 16 dis.	26
Aberdeen, Nottingham & Boston	24	24 - 21 dis.	
Birmingham and Oxford	20	24 - 22 pm.	23 1/2
Birmingham, Wolverhampton, and Dudley	10	4 - 4 1/2 pm.	
Birmingham, Wolverhampton, and Stour Valley	10 14 6	14 - 14 dis.	
Boston, Stamford, and Birmingham	5	1 - 1 1/2 dis. in	41 ex int.
Bristol and Exeter	80	14 - 14 dis.	
Do. Third	20	6 - 6 dis. in	
Buckinghamshire	10 4 0	24 - 24 1/2 dis. in	
Caledonian	50	36 - 36 1/2	36 1/2
Do. 4 shares	34	24 - 24 dis.	
Cheshire and Holyhead	37 1/2	20 - 18 dis.	
Dublin and Belfast Junction	20	20 - 20 dis.	
East Anglian (25 L. & E. & L. & D.)	25 1/2	11 - 13	12 1/2
East Anglian (25 L. & E. & L. & D.)	12	8 - 10	
East Anglian (25 L. & E. & L. & D.)	3	4 1/2 - 4 1/2	
Eastern Counties	20	14 - 14 1/2	15 1/2 1/2
Do. Eaten, Specul., No. 1	6 13 4	4 dis. - 4 1/2 dis. in	
Do. New	6 13 4	4 dis. - 4 1/2 dis. in	
Do. (York Extension)	10	24 - 17 dis.	4 dis.
Do. (Northern & Eastern)	40	60 - 61	
Do. 4 shares	124	114 - 124	
Do. New	22	2 dis. - 2 1/2	
East Lancashire	26	4 - 5 dis.	
Do. New	13	44 - 34 dis.	
Do. 4 shares	34	14 - 14 1/2	
East Lancashire	124	44 - 44 1/2	
Edinburgh and Glasgow	50	44 - 44	
Do. 4 shares	13	34 - 24 dis.	
Do. 4 shares	124	11 - 12	
Federated, South & Dorchester	2	14 - 14 dis.	
Great Northern	104	64 - 64 1/2	44 ex int.
Do. London and York	24	2 - 13 dis.	
Great Southern and Western (Ireland)	36	16 - 16	
Great North & England	104	224 - 232	
Do. New, £40	5	71 - 63 pm.	
Do. New, £30	30	38 - 40 pm.	
Do. New, £15	64	16 - 18 pm.	
Great Western	80	10 - 12 pm.	14 1/2
Do. 4 shares	174	7 - 8 pm.	
Do. 4 shares	174	14 - 14 1/2	14 1/2
Do. Fifth	20	24 - 24 1/2	
Do. New, £17	24	1 - 1 1/2	104 1/2
Huddersfield & Manchester	24	3 dis. - 3 1/2	
Do. Third	8	2 dis. - 2 1/2	
Hull and Selby	60	100 - 102	
Do. 4 shares	26	49 - 61	50
Do. 4 shares	24	7 - 9 pm.	
Ipwich and Bury St. Edmunds	174	10 - 10 1/2	
Do. do. and Norwich	15	10 - 10 1/2	
Do. Extension (Scotch date)	24	14 - 14 1/2	
Cambridge and Ely	60	3 - 4 pm.	64
Lancaster and Carlisle	10	1 - 2 pm.	
Do. Third	82	9 - 7 dis.	
Lancashire and Yorkshire	144	6 - 4 dis.	
Do. 4 shares	144	2 - 2 dis.	
Do. 4 shares	8	4 dis. - 4 1/2	
Do. Fifth	61	4 dis. - 4 1/2	
Do. Sixth	10 4 0	54 - 44 dis.	21 dis.
Do. Third, Reg.	4 2 0	3 - 24 dis.	
Do. West Riding Union	24	24 - 34	
Do. Preston and Wyre	24	24 - 34	
Do. 4 shares	11	24 - 34 pm.	
Do. do. (B)	11	24 - 34 pm.	
Leeds and Bradford	104	97 - 96 1/2	14
Leeds and Bradford	164	4 dis. - 4 1/2	
Leeds and Thirsk	36	17 - 15 dis.	
Do. 4 shares	20	15 - 13 dis.	
Do. Preference, 6 per cent.	34	2 - 1 dis.	
Liverpool, Chester, & Southport	2	1 - 4 dis.	
London and Blackwall	16 13 4	44 - 44	5
Do. New, No. 2	4 13 4	24 - 14 dis. in	
London, Brighton, & South	50	42 - 43	43 1/2 1/2
Do. Consolidated Eighths	30	8 - 6 dis.	
London and North Western	100	150 - 152	161 1/2
Do. Quarters, L. & B.	22	114 - 124 pm.	24 1/2 1/2
Do. do. New	2	84 - 64 pm.	8
Do. Fifth	2	9 - 10 pm.	
Do. 4 shares, M. & B.	40	50 - 60 pm.	
Do. 4 shares, M. & B. (a)	74	34 - 44 pm.	
Do. 4 shares, M. & B. (b)	74	34 - 44 pm.	
Do. 4 shares, M. & B. (c)	74	34 - 44 pm.	
London and South Western	41 8	62 - 64	64 3/4
Do. New, £40	32 1/2	4 - 2 pm.	
Do. New, £40	32 1/2	4 - 2 dis.	
Do. Consolidated Tenth	60	4 - 2 dis.	
Do. do. Tenth	40	4 - 2 dis.	
Do. Third	8 6 8	2 - 1 dis.	
London, Salisbury, & Yeovil	14	1 - 4 dis.	

RAILWAY INTELLIGENCE.

DUNDEE AND ABERDEEN RAILWAY.

The half-yearly meeting of this company was held on Monday, at Dundee, Lord Kinnaird in the chair.

The report stated that the revenue for the half-year ending the 31st of October amounted to 11,154*l.*, and by the agreement with the Dundee and Perth and Caledonian railway companies it was provided that the line shall be worked at a rate not exceeding 87 1/2 per cent. on the gross revenue, which in this case amounted to 4,183*l.*, leaving a net sum of 6,972*l.* The paid up capital amounts to 176,252*l.*, upon which a dividend is to be paid for the half year at the rate of 8 per cent. per annum, which will require 7,050*l.*; there are other charges to be added, interest and feu-duties, 543*l.*, making a total sum to be provided of 7,593*l.*; and, after deducting the above net sum of 6,972*l.*, leaving 621*l.* to be made up by the other companies under the agreement. That the revenue for the past half year exceeded that of the corresponding period of the preceding year by the sum of 1,654*l.*, notwithstanding the great delays and inconveniences arising from the alteration of the gauge, and other works upon the line. A further increase in the traffic was expected from the line being now in complete working order, and the new junction line at Arbroath ready to be opened in connexion with the continuous through lines to Montrose, Forfar, and Brechin. Since the 31st October last a further increase had taken place in the revenue amounting to nearly 40*l.*. By the agreement with the Dundee and Perth company, the additional capital of 10,000*l.*, created lately to be expended in constructing a railway through the town of Dundee to join the Dundee and Perth at a common terminus; this, it was stated, could be effected without interfering with any of the great thoroughfares of the town, or crossing a single street on the level. Bills for this undertaking, and for leasing the line in accordance with the terms of the agreement, will be submitted for the approval of the shareholders at a meeting to be called for that purpose.

The Scottish Central and Caledonian lines being about to be opened, a continuous line of railway communication will be completed from this line to Glasgow, Edinburgh, and London. With all these railways in full operation, the directors expect that the traffic on this and the local lines of the district cannot fail to be increased to an extent fully equal to the expectations entertained of it.

The report was unanimously adopted, thanks were voted to the chairman, and the meeting separated.

STATE OF TRADE.

(From the *Manchester Evening Courier* of Saturday.)

MANCHESTER. During the last few days our market has not continued to exhibit those systems of improvement which were anticipated at the beginning of the week. Business has been comparatively quiet, and very low rates have been in many cases submitted to show considering the late upward tendency in cotton. The better feeling prevalent a few days ago has been somewhat checked by the heavy failures in London announced in our last publication, and by the intelligence received yesterday and today of several stoppages in Glasgow. The confidence which was gradually beginning to revive has unfortunately received a temporary shock, and during the week considerable distrust and uneasiness have again been exhibited. The effect has been to make sellers more cautious, and transactions have, consequently, been a good deal curtailed during the last few days. The Greek houses continue to operate in goods suitable for their markets, but with much caution. In yarns there is no alteration to notice. Prices remain steady, but the business done has been limited. In shirting for the export market some few transactions have taken place, at rates fully as low as any that have been accepted for the last few months.

RECHARGE. The market has been flat, and but little business transacted.

HALIFAX. The place has been but thinly attended, and not much business done. The yarn trade is also in a very languid state, as a consequence of the frost, there is nothing doing for export.

HIPPOCRIST. The market has been decidedly better, and there is every appearance of improvement throughout the district. New designs in checks and stripes, of good quality, are principally in request.

LEITH. The opening markets of the new year are seldom very brisk, nor have those of the present year been an exception to the rule. The market has been but thinly attended, and not much business done. The yarn trade is also in a very languid state, as a consequence of the frost, there is nothing doing for export.

CONFIRMATION OF THE BISHOP OF MANCHESTER.

On Saturday last the election of the Rev. James Prince Lee to the new Bishopric of Manchester was formally confirmed by the Archbishop of the province. The proceeding took place in St. James's Church, Piccadilly, where a citation of opposers had been published on a previous day. An unusual interest was manifested on this occasion, and a number of persons were present; among whom we observed the Rev. Mr. Marriott, of Oriel; the Rev. Ernest Hawkins, and other clergymen and gentlemen. It had been rumoured that Mr. Gutteridge would attend and object to the person elected, and there seemed to be much curiosity with regard to the method and the success of so extraordinary a step—a step not quite unprecedented, however, because it appears that in 1628 an objection was made to the confirmation of Dr. Mountague, who had been promoted to the see of Chichester, and who was opposed by one Jones, charging "Popery, Arminianism, and other heresies, for which Dr. Mountague's books had been censured by the Parliament," but the exceptions were overruled on the ground that they were not offered in due form of law, and particularly that they were neither given in writing, nor signed by an advocate, nor presented by any proctor of the court.

The proceedings commenced at 11 o'clock, when the Litany was read by the Rev. John Jackson, the rector of St. James's. That service being concluded, the court was formed in the body of the church, near the top of the middle aisle, where a table and chairs had been placed. Sir J. Dodson, Master of the Faculties, and Dr. Burnaby, Vicar-General of the Archbishop of Canterbury, took their seats at the head of the table; and Dr. Adams and Dr. Twiss appeared as advocates for the Dean and Chapter of Manchester and the bishop elect. Mr. F. H. Dyke, principal registrar of the province of Canterbury, then read the license of the Archbishop of Canterbury, allowing the Archbishop of York to confirm and consecrate the new bishop anywhere within the province of Canterbury; and afterwards a commission from the Archbishop of York, whereby, after reciting that he had received letters patent from the Queen, commanding him to confirm the election of the Rev. J. P. Lee to be bishop and pastor of the see of Manchester, his Grace gave power and authority to Mr. G. H. Vernon (his Vicar General), Dr. Burnaby, Sir H. Jenner Fust (Official Principal of the Arches Court of Canterbury), Dr. Lushington (Chancellor of the Diocese of London), and Sir J. Dodson, or any or either of them, to confirm the election accordingly, so far as it should appear to them that it was rightful, &c.

Mr. R. Townshend, proctor for the Dean and Chapter of Manchester, then handed in Her Majesty's letters patent, and presented the Rev. J. P. Lee to be confirmed; and proclamation was made for opposers by an officer as follows:— "All manner of persons who shall or will object to the confirmation of the election of the Rev. James Prince Lee to be bishop of the episcopal see of Manchester, are now to come forward and make their objections in due form of law, and they shall be heard."

Mr. GUTTERIDGE, who was standing in the aisle, immediately said, "I am an opposer, and object to these proceedings."

Sir J. DODSON. What is your name?
Mr. GUTTERIDGE. Thomas Gutteridge.
Where is your residence?—I live in Cannon-street, Birmingham.

What is your profession?—I am a surgeon.
Do you mean to object to the confirmation of the Lord elect Bishop of Manchester?—I do.

Have you your objections drawn up in what purports to be due form of law?—Yes.

Sir J. DODSON. Let me see them.
Mr. GUTTERIDGE. The first is a protest against the proceedings of this day. "I, Thomas Gutteridge, a member of the united church of England and Ireland, do protest against the proceedings of this day, for the confirmation of the Rev. J. P. Lee, Bishop elect of Manchester, on the ground that it is unlawful to proceed to such confirmation elsewhere than in the province of York, and also on the ground that due and sufficient notice and publicity have not been given of such intended confirmation."

Sir J. DODSON immediately intimated that the protest could not be entertained.

Mr. GUTTERIDGE. I have also articles to present.
Sir J. DODSON. By whom are they signed?

guilty on this charge, and sure, and it being thought other indictment, he was years. Great expense has been made for the safety of this des country.

THE TIMES, MONDAY, JANUARY 10, 1848.

RAILWAY SHARES.
No material alteration occurred in the prices of railway shares this afternoon, which, however, considering the amount of business transacted, were tolerably well supported.

Railways.	Paid.	Closing Prices.	Business done
Aberdeen	46	20 to 16 dis.	264
Amberg, Nottingham, & Boston	24	24 - 21 dis.	
Birmingham and Oxford Junction	20	24 - 23 pm.	224
Birmingham, Wolverhampton, and Dudley	10	4 - 4 1/2 pm.	
Birmingham, Wolverhampton, and Stour Valley	10 14 0	14 - 14 dis.	
Boston, Stamford, and Birmingham	5	1 - 1 1/2 dis.	4 ex int.
Bristol and Exeter	80	14 - 14 dis.	
Do. Third	20	6 - 5 dis.	
Buckinghamshire	10 4 0	24 - 24 1/2 dis.	
Caledonian	50	36 - 36 1/2	36 1/2
Do. 4 shares	39	24 - 24 dis.	
Chesster and Holyhead	37 1/2	22 - 18 dis.	
Dublin and Belfast Junction	20	22 - 20 dis.	
East Anglian (L. & E. & L. & D.)	25	11 - 11	122
East Anglian (L. & E. & L. & D.)	18	8 - 10	
East Anglian (L. & E. & L. & D.)	2	1 dis.	
Eastern Counties	20	12 1/2 - 12 1/2	154 1/2
Do. Extension, No. 1	6 13 4	4 dis.	1 dis.
Do. Extension, No. 2	6 13 4	4 dis.	1 dis.
Do. (York Extension)	10	21 - 17 1/2 dis.	
Do. (Northern & Eastern)	50	60 - 61	
Do. 4 shares	124	114 - 124	
Do. New	22	2 dis.	
East Lancashire	25	4 - 5 dis.	
Do. New	13	34 - 34 dis.	
Do. 4 shares	34	12 - 12 1/2	
East Lincolnshire	124	4 dis.	
Edinburgh and Glasgow	60	44 - 46	
Do. 4 shares	15	34 - 24 dis.	
Do. 4 shares	124	11 - 12	
Exeter, Yeovil, & Dorchester	24	14 - 11 dis.	
Great Northern	104	64 - 64 1/2 ex int.	
Do. (London and York Extension)	24	2 - 12 dis.	
Great Southern and Western (Ireland)	26	16 - 13 dis.	
Great North (England)	104	224 - 224	
Do. New, £40	5	71 - 63 pm.	
Do. New, £20	30	36 - 40 pm.	
Do. New, £15	64	16 - 18 pm.	
Great Western	60	10 - 12 pm.	16 1/2
Do. 4 shares	24	7 - 8 pm.	
Do. 4 shares	174	11 - 12	10 1/2
Do. Fifth	20	24 - 3 pm.	234
Do. New, £17	24	14 - 14 pm.	104 1/2
Huddersfield & Manchester	24	3 dis.	
Do. Third	8	2 dis.	
Hull and Selby	60	104 - 102	
Do. 4 shares	24	49 - 61	
Do. 4 shares	224	7 - 9 pm.	50
Ipswich and Bury St. Edmunds	174	10 - 9 1/2 ex int.	
Do. Extension (Scrip date)	15	10 - 9 1/2 ex int.	
Do. Extension (Scrip date)	24	14 - 14 dis.	
Lancaster and Carlisle	50	3 - 3 pm.	504
Do. Third	10	1 - 2 pm.	
Lancashire and Yorkshire	82	9 - 7 dis.	
Do. 4 shares	24	4 - 4 pm.	
Do. 4 shares	144	3 - 2 dis.	
Do. Fifth	8	4 dis.	
Do. Sixteenth	61	54 - 44 dis.	54 1/2
Do. Third, Rev.	10 4 0	24 - 24 dis.	
Do. West Riding Union	4 2 0	24 - 24 dis.	
Do. Preston and Wyre	2	24 - 24 pm.	
Do. 4 shares (A)	9	24 - 24 pm.	
Do. do. (B)	14	4 - 4 pm.	14
Leeds and Bradford	24	24 - 24 pm.	
Leeds and Bradford	164	14 - 14	
Leeds and Thirsk	164	17 - 15 dis.	
Do. New	24	16 - 14 pm.	
Do. Preference, 6 per cent.	24	2 - 1 dis.	
Liverpool, Crosby, & Southport	2	1 - 1 dis.	
London and Blackwall	16 13 4	4 - 4	5
Do. New, No. 2	4 13 4	24 - 14 dis.	
London, Brighton, & South Coast	50	424 - 434	434 1/2
Do. Consolidated Eighties	30	5 - 6 dis.	
London and North Western	100	150 - 152	151 1/2
Do. Quarters, L. and B.	24	114 - 124 pm.	54 1/2
Do. do. New	2	4 - 4 pm.	
Do. Fifth	2	4 - 4 pm.	
Do. £40 shares, M. and B.	40	50 - 60	
Do. £10 shares, M. and B.	10	34 - 41 pm.	
Do. £10 shares, M. and B.	10	34 - 41 pm.	
Do. £10 shares, M. and B.	10	34 - 41 pm.	
London and South Western	41 8 8	52 - 54	54 3/4
Do. New Consolid. Eighties	40	4 - 2 pm.	
Do. New, £20	30	4 - 2 dis.	
Do. New, £40	20	4 - 2 dis.	
Do. Consolid. Tenth	50	4 - 2 dis.	
Do. do. Tenth	40	4 - 2 dis.	
Do. Third	8 6 8	2 - 1 dis.	

RAILWAY INTELLIGENCE.
DUNDEE AND ARBROATH RAILWAY.
The half-yearly meeting of this company was held on Monday, at Dundee, Lord Kinnaird in the chair. The report stated that the revenue for the half-year ending the 31st of October amounted to 11,150*l.*, and by the agreement with the Dundee and Perth and Caledonian railway companies it was provided that the line shall be worked at a rate not exceeding 37 1/2 per cent. on the gross revenue, which in this case amounted to 4,183*l.*, leaving a net sum of 6,972*l.*. The paid up capital amounts to 176,252*l.*, upon which a dividend is to be paid for the half year at the rate of 8 per cent. per annum, which will require 7,050*l.*; there are other charges to be added, interest and feu-duties, 583*l.*, making a total sum to be provided of 7,633*l.*; and, after deducting the above net sum of 6,972*l.*, leaving 661*l.* to be made up by the other companies under the agreement. That the revenue for the past half year exceeded that of the corresponding period of the preceding year by the sum of 195*l.*, notwithstanding the great delays and inconveniences arising from the alteration of the gauge, and other works upon the line. A further increase in the traffic was expected from the line being now in complete working order, and the new junction line at Arbroath ready to be opened in connexion with the continuous through lines to Montrose, Forfar, and Brechin. Since the 31st October last a further increase had taken place in the revenue amounting to nearly 400*l.*. By the agreement with the Dundee and Perth company, the additional capital of 100,000*l.* created lately is to be expended in constructing a railway through the town of Dundee to join the Dundee and Perth at a common terminus; this, it was stated, could be effected without interfering with any of the great thoroughfares of the town, or crossing a single street on the level. Bills for this undertaking, and for leasing the line in accordance with the terms of the agreement, will be submitted for the approval of the shareholders at a meeting to be called for that purpose. The Scottish Central and Caledonian lines being about to be opened, a continuous line of railway communication will be completed from this line to Glasgow, Edinburgh, and London. With all these railways in full operation, the directors expect that the traffic on this and the local lines of the district cannot fail to be increased to an extent fully equal to the expectations entertained of it. The report was unanimously adopted, thanks were voted to the chairman, and the meeting separated.

STATE OF TRADE.
(From the *Manchester Evening Post* of Saturday.)
MANCHESTER. During the last few days our market has not continued to exhibit those symptoms of improvement which were anticipated at the beginning of the week. Business has been comparatively quiet, and very low rates have been in many cases submitted to, notwithstanding the late upward tendency in cotton. The better feeling prevalent a few days ago has been somewhat checked by the heavy failures in London announced in our last publication, and by the intelligence received yesterday and today of several sales of goods in Glasgow. The confidence which was gradually beginning to revive has unfortunately received a temporary shock, and during the week considerable distrust and uneasiness have again been exhibited. The effect has been to make sellers more cautious, and transactions have, consequently, been a good deal curtailed during the last few days. The stock houses continue to operate in goods suitable for their markets, but with much caution. In yarns there is no alteration to notice. Prices remain steady, but the business done has been limited. In shirting for the eastern markets some few transactions have taken place, at rates fully as low as that which have been accepted in the last few months.
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HUDERSFIELD. The market has been decidedly better, and there is every appearance of improvement throughout the district. New designs in checks and stripes, of good quality, are principally in request.
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Sir J. Donson. Be where you then sit.

