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CITY OF SALFORD

ARTS AND LEISURE DEPARTMENT

Archives catalogue

U268

Records of Nasmyth, Gaskell and Co. and subsequently Nasmyth, Wilson and Co., 1836-1922, n.d.

Deposited: see below.

Catalogued: A.N. Cross, Apr., 1987-Feb., 1990.

Location: Archives Centre, 658/662 Liverpool Road, Irlam, Manchester, M30 5AD.

James Nasmyth (1808-90) was one of the most famous engineers of his time and his role in the engineering industry has been the subject of numerous printed accounts, incl. his Autobiography (edited by Samuel Smiles, 1863). The subject of this role has been treated so thoroughly by Mr. J.A. Cantrell in his book, James Nasmyth and the Bridgewater Foundry: a study of entrepreneurship in the early engineering industry (Chetham Society, series III, vol. 31, Manchester University Press, 1985), which includes a bibliography, that no additional printed sources are referred to in this introduction. The book is quoted below in this catalogue under the short title James Nasmyth and the Bridgewater Foundry. Mr. Cantrell has also generously made a deposit (ref.:U269) of his collection compiled during his studies of James Nasmyth to help users of the following records. The catalogue for this collection should be consulted to see what material this collection contains.

The Nasmyth Collection in Salford Local History Library, besides much published material on Nasmyth's life and work, contains copies in the form of microfilm or photocopies of virtually all of the records catalogued below as U268.

For letters from or concerning Nasmyth see also U312-313. For records of Nathan Walker, 1875-1938, n.d., apparently a worker in the company, see U49.

The history of Nasmyth's business partnerships is discussed in James Nasmyth and the Bridgewater Foundry, incl. that with Holbrook Gaskell from 1836, by which time the Bridgewater Foundry had been established and was engaged in production, until Holbrook Gaskell left the partnership in 1850. James Nasmyth withdrew from partnership in the firm at the end of 1856 and Robert Wilson, formerly works manager at the Bridgewater Foundry, became a partner. Mr. Cantrell notes (p.25) that the company changed its name from Nasmyth Gaskell and Co. to Nasmyth Wilson and Co. in 1867 and that it became a limited company in 1882.

Earlier names for the company had been Nasmyths Gaskell and Co., 1836-43, Nasmyth Gaskell and Co., 1843-50, and James Nasmyth and Co., 1850-56.

During the later nineteenth century the company came to concentrate on producing locomotives. In 1940 it ceased production and went into voluntary liquidation. The works were taken over as a Royal Ordnance Factory.

The records catalogued below were saved by Mr. R. Arbuthnott (1900-80), a former works manager and director of Nasmyth, Wilson and Co. Ltd. He came back from war leave to find the records in the process of being sent for salvage but was able to save those catalogued below. They were later deposited in the Local History Collection in Eccles Central Library and were transferred from Salford Local History Library to the Archives Centre in Apr., 1987 (except for U268/B4/3 which was transferred in Feb., 1990).

UNOFFICIAL COLLECTIONS

BUSINESS

U268/B1

"Specifications", letter book containing copies of letters or statements specifying conditions of prices and sometimes of delivery for supplying orders, with occasional copies of orders by Nasmyth, Wilson and Co. to other firms, with index of names at front and, at front and end, pages headed "Prices quoted for" [tools, machinery, etc.], noting nature of order, name of other party and page number, 15 May, 1875-10 Sept., 1878 (1 vol., repair done to some damaged, incomplete pages)

1875-78

/B2

Vol. containing pages printed for keeping record of technical details of locomotives sold, with index to names of customers (1 vol. stamped "Secretary's Office")

c.1867-1922

The pages have been printed with a blank diagram showing blank circles as for indicating wheels of a locomotives and with spaces for entering details under various printed headings. These headings include:

- loco/motive/no.
- ten/der/no.
- gauge
- owners' numbers (names sometimes entered in this space as well as or instead of numbers)
- wheels
- cylinders
- boiler
- heating surface
- duty (e.g. load exclusive of engine on a level speed at piston speed of 1,000 feet per minute, etc.)
- weights
- tender.

For the years from 1867 to 1922 and for locomotive nos. 120 to 1382 there are illustrations (incl. photographs mostly measuring 2" (5.1 cm) high x c.3¼" (8.5 cm) wide, a few a little larger) and considerable detail except in cases where a locomotive was not finished or was not in fact manufactured. This detail includes the name of the customer and often a note of the price (f.o.b. if going from a port to an overseas destination) and possibly a percentage figure for the profit, as well as technical detail. Some tender numbers are given.

Entries for nos. before 120 are much sketchier. Some are in pencil. Technical details often do not appear at all or, if they do, are limited to a few, such as those of cylinders or wheels. The information most likely to be given consists of the names of owners and of numbers allotted by owners to locomotives. Many entries have been struck out, some duplicated numbers are shown for locomotives and there was obviously difficulty in obtaining information on the locomotives produced at these early dates. The years noted are 1838-39, 1842, 1844-53 and 1861-62. Of the numbers up to 99 inclusive many in a sequence that was written in ink from no.1 onwards have been struck out and sometimes other numbers have been written in pencil to replace them. The result is that in some cases there are gaps (e.g. for no.1) and in other cases duplicate numbers (e.g. for no. 16).

BUSINESS

Customers included the Earl of Ellesmere and other local colliery owners.

c.1867-1922

For the manufacture of locomotives see also U268/B3/1-2.

/B3/1

Vol., "W.M. Wilson, Bridgewater Foundry, Patricroft, Nr. Manchester" written on page at front, containing notes, drawings and photographs relating to production and prices of locomotives and machines, with index (1 small vol. containing, loose and attached, some photographs and, loose, and index; 402 numbered pages, not all used, leaves printed as for graphs)

c.1886-94

The notes consist of:

- General rules, e.g. for finding the centre of gravity of a locomotive (p.10) or "Boyle or Mariotte's Law" (p.246);
- Indications of practice e.g. "Gauges of Different Railways" (p.8) or "Pressures for Forcing Loco. Wheels on their Seatings - N.W. & Co. I find (April 1887) are supposed to be working to the following table" (p.10) or "Weights of Rails and Sections - Imperial Railways of Japan 61 lbs. per yd. Given me by Mr. Shewinton, March, 87" (p.9);
- Many tables of figures and measurements;
- Many small diagrams.

The main subjects of these notes are:

- Locomotives;
- Steam hammers;
- Boilers, esp. stationary boilers, incl. list, described as compiled from the Order Books, of stationary boilers constructed at Bridgewater Foundry from 1838 to 1890, usually noting briefly customers (pp.182-194) and list of stationary boilers constructed at Bridgewater Foundry from 1865 to 1887, described on p.194 as compiled from extant drawings giving more details of measurements but not indicating customers, written in a different hand from most of the rest of the vol. (pp.195-200);
- Letterheaded certificate, attached to p.194, by W.M. Wilson as Manager, for a boiler, 1886;
- Between pages 140 and 178 are notes, tables and diagrams regarding a "Trial of the Engines and Boiler at E. Heyworth's Esq. J.P., Audley Hall Weaving Shed, Blackburn, conducted on behalf of The Engine, Boiler, and Employers' Liability Insurance Company, Limited, by Michael Longridge, M.A., M. Inst. C.E., Chief Engineer,"
- An added note by "W.M.W." is included suggesting that the notes are a copy in 1887 of a pamphlet. The greater part of these notes are written in a hand different from most of the rest of the vol.;
- Presses, esp. hydraulic presses, incl. list of numbers of presses manufactured at the Bridgewater Foundry from 1853 to 1890, usually also noting briefly customer, purpose or type or press and number and/or diameter of cylinders (pp.288-293);

UNOFFICIAL COLLECTIONS

BUSINESS

c.1886-94

The main subjects of these notes are (contd.);

- In lesser detail, other machines (e.g. cranes, condensers, ventilating fans for mines (p.41)) or components of machines (e.g. belting, connecting rods).

The notes include:

- A table of rates of wages in the shops in the Bridgewater Foundry as fixed in 1886 (p.15);
- "Standard Orders given by me to N.W. & Co. Ltd." during years 1885-87, e.g. for drawings or for work (e.g. firedoor rings to be machined on the inside) (p.11);
- "Old Hammer List used for reference by R. Wilson, Senr." (p.90);
- "Particulars as to Steam Hammers during London Agency", quoting various measurements during years 1891-94 (p.120);
- "Engines - Prices" during years 1887-88, 1890-91 (10 "engines" only and few details usually given) (p.247);
- "Workshop Recipes", mixtures of metals for making machines or their components (pp.350-354);
- "Plan of N.W. and Co.'s Foundry-Maximum output about 100 tons per week", small diagram showing location of cranes, "tramway", etc. (p.395);
- "Sundry Materials - Prices - N.W. & Co. Ltd." during years 1888-90 (c.30 items only), e.g. black sand, steel castings, boiler (pp.401-402).

The photographs show machines that could be used in a workshop. They are mostly or entirely of machines produced by Nasmyth, Wilson and Co. Five are attached, five small ones (all stamped "Nasmyth, Wilson and Co") are loose and there is also a loose blueprint of a machine.

/B3/2

Vol., in format as above and mostly written in same hand- c.1886-1894 writing as for most of U268/B3/1 but relating entirely to production and prices of locomotives, containing notes and photographs, with index (1 small vol. containing, loose and attached, photographs, and, loose, some papers; 402 numbered pages, not all used, leaves printed as for graphs)

Among these notes are:

- General rules, e.g. extract from an article in "The Engineer", 1886, regarding heating surfaces of locomotives (p.7);
- Indications of practice, e.g. "Explanations as to way the Costs are taken out by W.M.W." (regarding estimating costs of making locomotives) (p.2);
- Particulars of locomotives built for Japan by Nasmyth, Wilson and Co. during years 1885-89, 1893, nos. 298, 300-303, 305-310, 326-340, 342-347, 369-374, 383-388, 390-401, 446-453, incl. brief notes on type of engine, its weight and name of railway in Japan (pp.35-36);
- Detailed specification, incl. some very small diagrams, for "Johnstone" patent double bogie compound locomotive for the Mexican Central Railway Co., 1892 (pp.49-52);

BUSINESS

U268/B3/2

Vol. (contd.)

c.1886-94

Among these notes are (contd.):

- List of locomotive nos. 110-263 built by Nasmyth, Wilson and Co. between the years 1860 and 1885, giving various technical details (pp.209-210), with explanation of abbreviations used (p.207);
- "Worsdell's Compound Locomotives", 1887 (p.28);
- Towards end are various notes on the costs of locomotives, incl. some numbered locomotives, but also for other figures quoted during the years 1885-94.

In addition the volume contains notes with sometimes also diagrams and photographs on numbered locomotives manufactured by the company and also notes and diagrams on numbered tenders manufactured by the company. The amount of information given in these notes varies a great deal. Water capacity, fuel capacity, "Duty-Ex." (e.g. "Level 1387, 1 in 120, 382") and measurements may be indicated but sometimes only measurements of parts are given. Names of customers, years of production and prices are quite often included. Towards the end of the volume the notes on numbered locomotives are chiefly of costs. Diagrams and photographs, where they appear, are usually about half the size of the pages of the volume (which measure 9" (23 cm) high x 8" (20.5 cm) wide) or less.

These notes are not arranged in any order, such as no. or date, and often notes on the same design of locomotives appear many pages apart. For convenience, the following table of references to numbered locomotives and tenders has been drawn up to cover references to them in these scattered notes and also in the lists, mentioned above, on pages 35-36 and 209-210. The presence of a diagram or photograph is shown by, respectively, the letters "D" and "P".

Locomotives

nos.	page nos.	years	if diagram or photograph
110	99-100, 209-210	1860	D (+ D and note for a tender)
111-113	101-102, 209-210	1860	D
114-119	105-106, 209-210	1863	D
120-124	109-110, 209-210	1871	D
125-144	113-114, 209-210	1872-73	D
145-147	117-118, 209-210	1872	D
148-167	115-116, 209-210	1873	D
168-173	123-124, 209-210	1873-74	D
174-176	125-126, 209-210	1874	D
177	121-122, 209-210	1874	D
178-183	133-134, 209-210	1874-75	D
184	135-136, 209-210	1875	D
185-187	119-120, 209-210	1875-76	D
188-189	127-128, 209-210	1875-76	D
190-193	137-138, 209-210	1876	D,P
194-197	129-130, 209-210	1877	D
198-199	145-146, 209-210	1878	D

UNOFFICIAL COLLECTIONS

BUSINESS

U268/B3/2

A table of references to numbered locomotives and tenders (contd.):

Locomotives

nos.	page nos.	years	if diagram or photograph
200-201	137-138, 209-210	1878	D,P
202-204	141-142, 209-210	1878	D,P (differing in some of features shown)
205-206	131-132, 209-210, 323	1881	D
207	149-151, 209-210, 343-344	1881	D,P
208-215	147-148, 209-210, 325	1881-82	D,P
216-223	153-154, 209-210, 327-328	1882-83	D,P
224-229	157-158, 209-210	1882-83	D
230-231	103-104, 209-210, 333-334	1882-83	D,P
232-234	159-160, 209-210	1883	D
235-240	151-152, 209-210	1883	D,P
241-248	161-162, 209-210	1883-84	D,P
249	149-150, 209-210, 345-346	1883-84	?D, ?P
250-251	165-166, 209-210, 355-356	1883-84	D,P
252-261	169-170, 209-210	1884-85	D,P
262-263	177-178, 209-210	1884	D
264-266	181-182	n.d.	D
267-269	201	1884-85	
270-271	201	1884-85	
272-281	173-174	1885	D,P
282-284	202	1885	
285-286	25, 385-386	1884	P
287-290	185-186	?1885	D
291-293	187	1885-86	described as similar to locomotives nos. 264-266
294-295	188	1886	D
296-297	167-168, 395	1885	D
298	35-36, 175-176, 349-350	1885-86	D, ?P
299	149-150	1885-86	?D, ?P

UNOFFICIAL COLLECTIONS

BUSINESS

A table of references to numbered locomotives and tenders (contd.):

Locomotives

nos.	page nos.	years	if diagram or photograph
300-303	35-36, 189-190, 199, 351-352	1886	D
304	192, 401	1886	D
305-310	35-36, 193-194, 353	1886-87	D
311-315	90, 195-196	1886-87	D
316-319	166, 357-358	1887	?D, ?P
320-321	197-198	1887	D
322-323	93, 195-196	1886-87	D
324-325	27	n.d.	
326-335	35-36, 95-99	1887-88	D,P
336-337	17-18, 35-36	1887-88	D,P
338-340	22, 35-36, 353	1887-88	D
341	24	1887-88	D
342-347	35-36	1888	
348-351	166	1888	?D, ?P
352-353	26	1888	D,P
354-368	1	1889	D,P
369-374	35-36, 250	1889	D,P
375-382	251-254	1889-91	D,P
383-388	35-36	1889	
389	12	n.d.	D
390-401	35-36	1889	
402-403	25	1890	P
446-453	35-36	1893	

On pp. 96-97 locomotives nos. 342-347, 383-388, 390-401, 446-453 are described as similar to locomotives nos. 326-335. They were all built for Japanese railways.

Others

Dart type 2	13	n.d.	P
St. Pancras type 3	14	n.d.	P
engine type 1	33	1894	P
" " 7	15	n.d.	P
" " 10	21	n.d.	P
" " 13	16	1887	P
" " 17	43	n.d.	P
" " 28	88	1892	P
type not indicated	89	1892-94	P

Tenders

99-104	107-108	n.d.	D
105-109*	111-112	n.d.	D
110-113	139-140	n.d.	D
116-118	143-144	n.d.	D
119-126	155-156, 329-330	1882-83	D
127-134	163-164	n.d.	D
135-144	171-172	n.d.	D
145-146	179-180	n.d.	D
147-149	183-184	n.d.	D
177-191	2	n.d.	D

* 110-113 with note "Also 114/15 for locos 200/1"

UNOFFICIAL COLLECTIONS

BUSINESS

U268/B3/2

A table of references to numbered locomotives and tenders (contd.):

<u>Tenders</u> nos.	page nos.	years	if diagram or photograph
192-197	35-36, 250	1889	D
198-205	254	n.d.	D
tender type 29	19	n.d.	P
" " 30	20	n.d.	P

A diagram and a few notes on a tender are also shown for locomotive 110.

The notes on tenders usually omit the years for their construction. However, the notes on locomotives for which the tenders were constructed usually give the years for building and often as well the numbers of any tenders that were constructed for these locomotives.

In the index to this vol., a handwritten list of locomotives nos. 110-403, 446-453, was found with an accompanying business card of R. Arbuthnott. This list gives, for most of these nos., references to page nos. in this vol. and brief notes on customers, rail gauge, if tank or tender and one set of measurements.

/B4/1

Printed catalogue of Nasmyth Gaskell and Co., Bridgewater Foundry, Patricroft, near Manchester, engineers, etc., listing products with prices added in ink incl. illustrations of patent steam hammer and patent steam pile driver, printed letterheading incl. illustration with view of the Foundry, name Nasmyth Gaskell and Co. printed in the letterheading altered in ink to "James Nasmyth and Co." ("9 Jan. 58 2290 · SN27, SNO305") (1 doc.) n.d.

This catalogue is referred to in James Nasmyth and the Bridgewater Foundry (p. 44, footnote 55 to Ch. III).

/2

Printed catalogue as above, n.d., with additional annotations in ink for prices (incl. some dates in Nov., 1849) and additional annotations in ink for orders in 1849 and 1850, some notes added in pencil next to illustration of steam hammer (SN27, SNO279) (1 doc.) n.d.

For copy, see U269/Z34. This catalogue is referred to in James Nasmyth and the Bridgewater Foundry (p. 44, footnote 54 to Ch. III).

/3

"Patent Special and General Machinery, Tools, etc., manufactured by Nasmyth, Wilson, and Co., Bridgewater Foundry, Patricroft, near Manchester", n.d., annotated on cover "June 1877" and "Delivery (at Works) Terms (Net Cash on Delivery)" and inside containing: n.d., c.1867-81

UNOFFICIAL COLLECTIONS

BUSINESS

- U268/B4/3 "Patent, Special and General Machinery, (contd.): n.d., 1867-81
- Printed or written lists (with annotations to 1881 or n.d.) of machines or parts of machines, with prices for various sizes added in most lists, for packing presses, boilers, donkey pumping machines, hammer side engines, steam hammers, lathes (incl. self-acting and slide types), drilling, planing, shaping, slotting, punching and shearing and plate bending machines;
 - Six attached photographic illustrations of various unnamed machines;
 - Six loose or attached sheets with plans of various unnamed machines;
 - At end, summary list of kinds of manufacture undertaken by the Bridgewater Foundry
- (1 pamphlet, poor condition, parts of some pages missing; also marked ("SN 27", "SNO333" and "99 Jun 58 2290")
- This catalogue is referred to in James Nasmyth and the Bridgewater Foundry (p.105, footnote 52 to Ch. V), where it is described as probably produced 1867-77.

CORRESPONDENCE

- /C1/1-6 Letter books, containing copies of outgoing letters 1838-40
(incl. some diagrams);
- /1 Letterbook, marked "2", 14 Mar.-c.5 1838
Sept., 1838;
 - /2 do., marked "3", 6 Sept., 1838- 1838-39
10 Jan., 1839;
 - /3 do., marked "4", 10 Jan.-15 May, 1839; 1839
 - /4 do., marked "5", 16 May-21 Sept., 1839; 1839
 - /5 do., marked "6", 23 Sept., 1839- 1839-40
c.16 Jan., 1840;
 - /6 do., marked "7", 16 Jan.-9 Apr., 1840 1840

(6 small vols., some leaves of U268/C1/4 damaged at bottom by water and small parts of leaves missing)

These vols. are indexed with name of correspondent. Usually, the name "Nasmyth Gaskell and Co." appears in place of a personal signature. The copies of letters, which were mostly sent to customers or suppliers, are not always placed in one sequence in order of date from one end of a vol. to the other. Some annotations have been added in pencil.

For notes by Mr. J.A. Cantrell summarising their contents see U269/Z2/1-2.

The letter book for the period 23 Sept., 1839, to c.16 Jan., 1840 (ref: U268/C1/5), is quoted in James Nasmyth and the Bridgewater Foundry (pp.146-148) with reference to the controversy over the invention of the steam hammer. The letter books are also referred to on p.268 of the same book.

UNOFFICIAL COLLECTIONS

FINANCE

U268/F1/1-2

/1
/2

Order books: 1836-59
 Order book, 27 Jan., 1836-27 Aug. 1849; 1836-49
 do., 4 Aug., 1849-21 Sept., 1859 (2 large vols.) 1849-59
 These vols have columns for: dates; brief
 statements of names of customers and goods or services
 required; financial amounts, sometimes note entered or
 entered only in pencil (though a running total was
 carried forward from page to page); other dates,
 presumably for completion of orders, together with other
 entries, esp. cross references to the pages of the Sales
 Books U268/F2/1-3.

At the front of each volume is an index to names
 of customers with references to page numbers in the vol.
 concerned.

These order books are described in James Nasmyth
 and the Bridgewater Foundry (pp.80-81, 268).

/F2/1-4

/1
/2
/3
/4

Sales Books: 1837-61,
 1870-77
 Sales Book, marked A, 4 July, 1837- 1837-44
 31 Dec., 1844;
 do., marked B, 10 Jan., 1845- 1845-54
 21 Sept., 1854;
 do., marked C, 5 Sept., 1854- 1854-61
 21 Dec., 1861;
 do., marked E, 23 Sept., 1870- 1870-77
 31 Dec., 1877

(4 large vols)

These vols. contain columns for: dates; names
 of customers and descriptions of goods or services
 provided; financial amounts; and numbers, presumably
 cross references to another ledger. There are also
 some cross references in the date column to pages of
 the Order Books U268/F1/1-2.

The order is usually by date though there are
 exceptions, e.g. overlapping in dates between
 U268/F2/2 and U268/F2/3 or, after entries for the month
 of December of a year, entries for dates earlier in that
 year might be inserted. Sometimes entries for the same
 customer might be placed together and not interspersed
 with other entries in date order, e.g. for James Nasmyth
 of Patricroft in one block from Jan. to May, 1851
 (U268/F2/2, p.226).

A running total is carried forward from page to page.
 Mr. Cantrell describes these as journals, the entries
 being copies of invoices sent to customers and having
 numbers relating to customer accounts in the sales ledger.
 They served as a check on the sales account. (James
 Nasmyth and the Bridgewater Foundry, p.40, 80-81, 268).
 For notes by Mr. Cantrell on these sales books to 1856
 see U269/Z4.

UNOFFICIAL COLLECTIONS

FINANCE

U268/F3 Day Book, 22 Feb., 1837 - 28 June, 1854 (1 large vol.) 1837-54
 This has columns for: dates; very brief statements for items; and three columns for amounts. These last three columns were headed wages account, office account and profit and loss until mid 1837; until the end of 1837 they were then usually headed general expenses, carting account and office account; from the beginning of 1838 the headings were general expenses, foundry or smithy account and carting or cart account until 1843 after which the headings were discontinued (though there continued to be three columns).

Individual entries are for small accounts, usually less than a £, and Mr. Cantrell describes this as essentially a record of petty cash transactions (James Nasmyth and the Bridgewater Foundry, p.40).

/F4/1 Bill owed by the Manchester and Leeds Railway Co. to Nasmyth, Gaskell and Co. regarding tenders and engines (Derby, Thule and Sheffield), 1840-41 (2290 Jun. 58, SN32, SNO346) (1 doc., with added pencilled note "N G & Cos 20 and 21 RA [?R. Arbuthnott] 12/5/33") 1840-41, 1933

MAPS AND PLANS

U268/M1-38 consist of plans apparently prepared or collected for the purpose of making machinery for a ropeworks at Nicolaiev or Nicolaeff, Russia. They are all single docs.

Apart from U268/M1-2 most bear the name "James Nasmyth and Co., Bridgewater Foundry, Nr. Manchester"; exceptions among U268/M3-38 are in this catalogue noted as having "no name of company" or described as being without wording.

In Eccles Central Library, they were datestamped Sept., 1958, and given the reference "2352" and also various references taken from a series SNO441 to SNO489. In this catalogue, the second of these references (e.g. SNO447) is shown in round brackets. The plans were given a backing and folded; in some cases very small parts of a plan have become detached from the backing.

Measurements are shown below in round brackets, height being given first.

In chapter 17 of his Autobiography Nasmyth refers to an order received from the Russian government for this ropeworks at their naval arsenal at Nicolaiev on the Black Sea in 1849 and to Capt. Putchkraskey. The order is also referred to in James Nasmyth and the Bridgewater Foundry (p.68, footnote 36 to Ch. IV; pp.208, 210, footnotes 208-210 to Ch. VII).

For positive and negative photographs of these plans see U269/Z122-144.

UNOFFICIAL COLLECTIONS

MAPS AND PLANS

- U268/M1 Plan, no title but presumably of ropeworks, signed by Charles Ackroyd, architect, coloured, one small part missing, scale 1" = 20 feet, 26 May, 1850 (SNO444) (51 (one small part 56)x 189 cm) 1850
- /M2 Transverse section and part of longitudinal section, of ropework at Nicolaeff, signed by Charles Ackroyd, architect, only a small part coloured, scale 1" = 8 feet, 26 May, 1850 (SNO446) (46 x 69 cm) 1850
- /M3 Copy, by J.E. Scrivener, Bridgewater Foundry, near Manchester, of transverse section and part of longitudinal section as in U268/M2, not coloured, scale 1" = 8 feet 13 Dec., 1850, (SNO442) (46 x 72 cm) 1850
- /M4 "Plan and Sectional Elevation of Second Storey of Rope Walk Nicolaef [sic] Showing Arrangement of Shafting & Position of Machines", by E. Barlow, coloured, scale 1" = 33 feet, 14 Dec., 1850 (SNO441) (88 x 146 cm) 1850
- /M5 "Plan and Sectional Elevation of Rope Walk upper storey showing arrangement and position of machines", names of company and origin not indicated, part coloured, scale 1" = 40" (SNO447) (83 x 129 cm) n.d.
- /M6 Large upper end laying machine, with name of company but no other indication of origin, plan and two sections, a few parts coloured, scale apparently 3" = 1 foot (SNO460) (93 x 125 cm) n.d.
- /M7 "Upper Hook of Upper End Laying Machine 22 ratio", no name of company or indication of origin, not coloured, no scale or measurements (SNO467) (43 x 24 cm) n.d.
- /M8 Upper end laying machine, by William Sykes, plan and sections largely as in U268/M6 but omitting part shown in plan in U268/M6, coloured, scale 3" = 1 foot, Nov. (no day given), 1850 (SNO480) (90 x 133 cm) 1850
- /M9 do., by Hugh Laurence, plan and sections largely as in U268/M8, most parts coloured, scale 3" = 1 foot, 14 Aug., 1851 (SNO489) (87 x 120 cm) 1851
- /M10 Lower end laying machine, by J.T. Burgess, no name of company, plan and two sections, some parts coloured, some notes, scale 3" = 1 foot, 23 July, 1850 (SNO459) (88 x 133 cm) 1850
- /M11 do., by J.T. Burgess, no name of company, plan and two sections showing some alterations from U268/M10, some parts coloured, scale 3" = 1 foot, 5 Sept., 1850 (SNO454) (90 x 140 cm) 1850

UNOFFICIAL COLLECTIONS

MAPS AND PLANS

U268/M12	do., by J.J. Farthing, plan and two sections largely as in U268/M11, coloured, scale 3" = 1 foot, 4 Oct., 1850 (SNO456) (88 x 143 cm)	1850
/M13	do., by J. Moysey, no name of company, plan and sections largely as in U268/M12 but colouring done more roughly and apparently incomplete, scale 3" = 1 foot, 17 Sept., 1851 (SNO481) (88 x 130 cm)	1851
/M14	"Large Equalizing Machine Exhibiting the Latest improvements, which are desired by Lt. Poucharsky to be introduced into the machine now being made by J. Nasmyth and Co., Bridgewater Foundry, Nr. Manchester", no name given for draughtsman, two sections apparently a draft for U268/M15-16 but one section in reverse view from that on two following plans and both sections differing in features shown, several notes and small rough diagrams added in ink, scale apparently 3" = 1 foot (SNO464) (70 x 140 cm)	n.d.
/M15	Large equalizing machine, no name of company or other indication of origin, one note "Altered by Mr. Farthing", some lines drawn in coloured ink, scale apparently 3" = 1 foot (SNO466) (65 x 174 cm)	n.d.
/M16	Large equalizing machine, no name of company or other indication of origin, some lines drawn in coloured ink, scale apparently 3" = 1 foot, some parts of plan missing (SNO463) (64 x 135 cm)	n.d.
/M17	Large equalizing machine, by J. Tipping, two sections on lines of those in above and additional section, coloured, scale 3" = 1 foot, 14 Oct., 1851 (SNO4555) (89 x 140 cm)	1851
/M18	Large equalizing machine, by S. Daniels, three sections largely as in U268/M17, scale 3" = 1 foot, 27 July, 1852 (SNO457) (91 x 140 cm)	1852
/M19	Small equalizing machine, by E.G. Gregory, G. Fuller and J. Scrivener, no name of company, plan and two sections, not coloured, scale 3" = 1 foot (SNO482) (77 x 95 cm)	n.d.
/M20	Small special equalizing machine, by J. Tipping, two sections, coloured, scale apparently 3" = 1 foot, 12 Sept., 1851 (SNO451) (58 x 104 cm)	1851
/M21	"Twisting jack 6 & 8 to 1", by J.M. Tipping, two sections, coloured, scale 3" = 1 foot, 28 July, 1852 (SNO452) (53 x 95)	1852
/M22	"8 to 1 twisting jack", by J.T. Burgess, no name of company, two sections, not coloured, scale apparently as above, 14 Sept., 1850 (SNO483) (50 x 94 cm)	1850

UNOFFICIAL COLLECTIONS

MAPS AND PLANS

- U268/M23 "14 to 1 twisting jack", by same, no name of company, 1850
two sections, not coloured, scale apparently as above,
17 Sept., 1850 (SNO469) (51 x 87 cm)
- /M24 "Machine for Winding the Threads on to the Bobbins", by 1851
J.E. Scrivener, plan and two sections, coloured, scale
3" = 1 foot, 10 Sept., 1851 (SNO488) (73 x 79cm)
- /M25 "Machine for winding the thread on to the small [this 1852
word "small" inserted into title] Bobbins", by S. Daniels,
plan and two sections, largely as in U268/M24, coloured,
scale 3" = 1 foot, 22 July, 1852 (SNO472) (74 x 85 cm)
- /M26 "Bobbin Rack", name of company but no other indication of n.d.
origin, plan (apparently only of part of arrangement),
section and two details, coloured, no scale or measure-
ments (SNO486) (82 x 94 cm)
- /M27 "Bobbin Rack", by G. Fuller, plan (differing from arrange- 1852
ment as in U268/M26) and section (largely as in U268/M26),
coloured, no scale or measurements, 27 Aug., 1851 (SN
0475) (57 x 58 cm)
- /M28 "Large Bobbin Winding Machine", by J. Tipping, two 1851
sections, coloured, scale 3" = 1 foot, 13 Aug., 1851
(SNO484) (86 x 127 cm)
- /M29 "Apparatus for arranging the threads and twisting them 1851
slightly so as to fit them for removal to store in order
that they may become mellow", by J. Moysey, three sections,
coloured, scale apparently 3" = 1 foot, 26 Aug., 1851
(SNO462) (65 x 132 cm)
- /M30 "Rope Reeling Machine", name of company but no other n.d.
indication of origin, plan and section, not coloured, a
few words regarding parts of the machine, scale 3" = 1
foot (SNO458) (47 x 136 cm)
- /M31 "Spinning Wheel", by Saml. Rodgers, two sections, coloured, 1851
scale 3" = 1 foot, 5 Aug., 1851 (SNO487) (57 x 74 cm)
- /M32 "Registering machine", by E.G. Gregory, no name of company, 1851
plan and two sections, coloured, scale 3" = 1 foot,
20 Oct., 1851 (SNO471) (86 x 99 cm)
- /M33 "Design for Improved Regertor Stand submitted for 1850
consideration and approval of Lt. Puchkerskey Sep. 3 1850
by J. Nasmyth", doc. with plan and two sections, some
lines in coloured ink and inked notes on design, scale 3"
= 1 foot (SNO473) (86 x 94 cm)
- /M34 "Proposed arrangement of the Lever of the compressing n.d.
Dies", no name of company or other indication of origin,
one section coloured, a few rough diagrams in pencil
(SNO470) (31 x 41 cm)

UNOFFICIAL COLLECTIONS

MAPS AND PLANS

- U268/M35 No title or wording apart from "Scale 3/4 in = 1 foot", two sections of machinery, apparently incl. a piston, some parts coloured (SNO465) (50 x 43 cm) n.d.
- /M36 Plan, two sections, and three details, apparently of a stand or support for machinery, only writing near figures, no scale (SNO477) (37 x 61 cm) n.d.
- /M37 Section of part of a machine, no wording apart from the letters B-D added to parts of a machine (SNO461) (22 x 85 cm) n.d.
- /M38 Doc., with stamp of "Butt & Martin" at mostly illegible address apparently in Paris, showing two sections apparently of a driving wheel, no title or wording apart from letters shown at parts of machine (SNO476) (42 x 56 cm) n.d.

CITY OF SALFORD

ARTS AND LEISURE DEPARTMENT

Archives catalogue

U269

Correspondence, notes, publications and photocopies and photographs of records relating to James Nasmyth, 1953-85, n.d.

Deposited: J.A. Cantrell, Esq., 36 Peel Moat Road, Heaton Moor, Stockport, SK4 4PH, May, 1986 (indefinite loan).

Catalogued: A.N. Cross, July-October, 1986.

Location: Archives Centre, 658/662 Liverpool Road, Irlam, Manchester, M30 5AD.

There is an embargo of 20 years on U269/C2. All items are subject to copyright.

Mr. J.A. Cantrell has deposited this collection compiled during his studies of James Nasmyth (1808-90) in order to help users of the records of Nasmyth, Gaskell and Co. (U268) held in the City Archives. Mr. J.A. Cantrell's collection not only indicates the information obtainable from the records of Nasmyth, Gaskell and Co. but also points to manuscript and published sources elsewhere and to other studies of Nasmyth's career.

Mr. Cantrell took James Nasmyth as the subject of his Ph.D. thesis, "Enterprise and growth in the early engineering industry: the case of James Nasmyth" (University of Manchester, 1982), and of his book, James Nasmyth and the Bridgewater Foundry: a study of entrepreneurship in the early engineering industry (Chetham Society, series III, vol. 31, Manchester University Press, 1985). He also delivered a paper, "James Nasmyth and the steam hammer" (U269/Z1/3), to the Newcomen Society in 1985. The aspects of Nasmyth's career on which he has concentrated and to which the contents of this collection particularly relate are the following:

- The career of his brother, George Nasmyth.
- Nasmyth's controversy with the Schneider brothers of Schneider Freres et Cie, Le Creusot, France, and their engineer, François Bourdon, over the invention of the steam hammer.
- The role of his associates, Holbrook Gaskell, Robert Garnett, the Birley brothers and Edward Humphrys, in the companies in which he was a partner.

U269/Z292 consists of copies of applications for patents by a contemporary of James Nasmyth, who was also named James Nasmyth and an engineer.

Original references found on docs., incl. photographs, are shown below in round brackets. Photographs are in black and white unless otherwise indicated. The height of photographs is given before the width.

UNOFFICIAL COLLECTIONS

CORRESPONDENCE

Letters to Mr. John Cantrell concerning his search for information on James Nasmyth, his family and his business enterprises, esp. location of printed and manuscript sources of information, and some letters to him asking for information from his research, 1979-84, n.d., with related papers and extracts, n.d. (1 looseleaf file containing docs.) 1979-84, n.d.

These letters and papers contain much information on the location of Nasmythiana and related records. They include papers and letters from public or private holders of material in England, Scotland, France and the U.S.A. Particular subjects referred to include: Holbrook Gaskell, his business enterprises, his family and his descendants; records of Birley and Garnett families; George Humphrys, solicitor; contributions by others to success of James Nasmyth's partnerships; surviving records of contemporary engineering firms; photographs or illustrations of machines made at the Bridgewater works; invention of the steam hammer; sketches by James Nasmyth; George Nasmyth; Alexander Nasmyth; publication of article written by Mr. J.A. Cantrell and issuing of leaflet written by him, both concerning James Nasmyth.

*Folder containing items apparently compiled by A.E. Musson, 1953-55, subsequently Professor in the Department of History, Manchester, 1957-58, 1978-79, n.d.

Written copies of or extracts from letters and related papers, n.d., sent to or from Holbrook Gaskell in years 1836 to 1884 (incl. some from James Nasmyth or Robert Wilson) or to Robert Willis from James Nasmyth;

Written extracts, n.d., from third edition in 1866 of printed version of lecture by T.S. Rowlandson on the history of the steam hammer originally given in 1864 with added written notes; n.d.

Written extracts, n.d., from evidence of Eugène Schneider and James Nasmyth to a select committee on patents in 1871; n.d.

Written extracts, n.d., from obituary notices regarding James Nasmyth in The Engineer in 1890; n.d.

Written brief notes, n.d., on the steam hammer, Robert Wilson and T.S. Rowlandson's lecture on the history of the steam hammer; n.d.

Photocopy, n.d., of printed plan of the Bridgewater Foundry, part marked in pencil; n.d.

Written extracts, n.d., from minutes of the Board of Directors of London and Birmingham railway or letters to it in 1840 regarding supply of locomotives by Nasmyth, Gaskell and Co.; n.d.

*Embargo of 20 years on this folder

UNOFFICIAL COLLECTIONS

CORRESPONDENCE

*Folder (contd.):

List (described as Stephenson Locomotive Society Makers' list) written in ink, n.d., of locomotives described as built by Nasmyth, Wilson and Co. Ltd. of locomotives (nos. 1-471, name of customer, technical details and year from 1839 to 1895) and brief notes on totals supplied and their customers from 1896 to 1901, on back of one sheet pencilled copy of page of item in Eccles Public Library with names of some locomotives made at the Bridgewater Foundry in 1841 and 1842;

Pencilled list of notes, n.d., on list compiled by R. Arbuthnott of early Nasmyth locomotives (nos. 1-109, in years 1838-53, with names of customers);

Typed extract with annotations, n.d., from articles of co-partnership of Nasmyth, Gaskell and Co. in 1838 (original in Lancashire Record Office, DDX 260/1);

Written copy, n.d., of schedule of deeds (from 1835 to 1856, with reference to doc. of 1927 summarising purchases and transfers of property in connection with the business in years 1835 to 1856), in possession of Nasmyth, Wilson and Co. in 1930, marked at top "From Mr. Arnott", with additional annotations, n.d.;

Written extract, n.d., from agreement in 1850 (original in Lancashire Record Office, DDX 260/6) for dissolution of partnership in firm of Nasmyth, Gaskell and Co. in respect of Holbrook Gaskell on his retirement from it;

Typed extract, n.d., from assignment in 1850 (original in Lancashire Record Office, DDX 260/4) of shares of George Nasmyth and Holbrook Gaskell in land and works at Patricroft;

Brief written notes, n.d., on George Humphrys, Birley and Co., Macintosh and Co. and Holbrook Gaskell, with two pages otherwise blank headed "George Nasmyth" and "Henry Garnett";

Correspondence of Mr. A.E. Musson, subsequently Professor in the Department of History, University of Manchester, regarding location of records relating to James Nasmyth and research into his career, 1953-55, 1957-58, 1978-79, n.d.;

Duplicated "Supplementary List" prepared for James Nasmyth 150th anniversary exhibition by Eccles Public Libraries, found with above correspondence, 1958

(1 folder containing docs.)

Robert Willis of Kirkcaldy, Scotland, became general works manager at the Bridgewater Foundry, 1852-56, and Robert Wilson (1803-82) of Dunbar, Scotland, inventor, was a works manager at the Bridgewater Foundry and later a partner in the firm. See James Nasmyth and the Bridgewater Foundry.

*Embargo of 20 years on this folder

1953-79, n.d.
n.d.

n.d.

n.d.

n.d.

n.d.

n.d.

n.d.

1953-55,
1957-58,
1978-79,
n.d.

1958

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

- U269/Z1/1-4 Publications of Mr. J.A. Cantrell relating to James Nasmyth: 1981-82, 1985, n.d. 1981
- /1 Offprints of "James Nasmyth and the Bridgewater Foundry: Partners and Partnerships" by Mr. J.A. Cantrell printed in Business History (vol. 23, no. 3, Nov., 1981) (3 pamphlets);
- /2 "Local History Fact Sheet: Eccles No. 3, James Nasmyth and the Bridgewater Foundry" by Mr. J.A. Cantrell, duplicated leaflet issued by City of Salford Cultural Services Department (1 leaflet); 1982
- /3 Offprints of "James Nasmyth and the Steam Hammer" by Mr. J.A. Cantrell read to the Newcomen Society in 1985 and printed in its Transactions (vol. 56, 1984-85) (3 pamphlets); 1985
- /4 Offprints of "Gaskell, Holbrook (1813-1909) Chemical Manufacturer" [by Mr. J.A. Cantrell written for the Dictionary of Business Biography, edited by D. Jeremy, Butterworths, 1984-], with notes on sources and relevant publications (3 sheets) [198-] (10 items)
- /Z2/1-2 Two looseleaf files containing written notes as follows: n.d.
- /1 Looseleaf file containing at beginning notes on letter books nos. 2-7 (noting no. in book, usually the word "copy" added and, in some cases, other brief notes), made for reference, followed by copies of letters, arranged by correspondents of James Nasmyth in alphabetical order of names from A to I;
- /2 Looseleaf file containing copies of letters, arranged by correspondents of James Nasmyth in alphabetical order of names from J to Z (2 looseleaf files containing notes) These notebooks refer to the letter books of Nasmyth, Gaskell and Co. (ref.: U268/C1/1-6) and can be used as summaries of them.
- /Z3 Cards containing brief references arranged under various headings (e.g. "Locomotive Design", "Cost Accounting", "Showing Customers the B.F.", "J.N.s Role") referring to entries in letter books as in U269/Z2/1-2 (1 bdle.) n.d.
- /Z4 Written notes, headed "1837 Sales Book" to "1856 Sales", indicating briefly date, customer, nature of work and various figures, with for each year various analyses (e.g. major customers, nature of work, areas (parts of England, Scotland, Wales, Ireland, export)) (1 stationery wallet containing 20 bdl. and 1 sheet) n.d. These are transcripts of the Sales Books of Nasmyth, Gaskell and Co. from 1837 to 1861 catalogued as U268/F2/1-3.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

Nasmyth and Nasmyth family

Positive photographs of Nasmyth: n.d.

Positive photograph showing photograph of him by Octavius Hill, 26 x 20.5cm.;

Positive photograph showing later photograph of him, 22 x 17cm

(2 docs.)

Folder, marked "Nasmyth Family", containing: n.d.

Photocopy, n.d., of extract of trust settlement of Alexander Nasmyth of

Edinburgh registered in 1840 (1 doc.);

Photocopies, n.d., of wills and related certificates of Jane, Barbara and

Charlotte Nasmyth all of Putney, Surrey,

wills proved in 1867, 1870 and 1884 respectively (6 docs.)

(1 folder containing 7 docs.)

Stationery wallet, marked "George Nasmyth", 1980-81, n.d.
containing:

Photocopies, n.d., of pages of Post Office Annual Directory for Edinburgh published in 1833 and 1834 containing references to addresses of several members of the Nasmyth family (2 bdles.);

Photocopy, n.d., of page relating to admission of George Nasmyth to the Institution of Civil Engineers in 1844 (1 doc.);
Photocopy, n.d., of page of writing on his appointment as Curator of the Patent Museum in 1856 and his suspension and dismissal in 1859 (1 doc.);

Photocopy, n.d., of pages of Science Museum Handbook of the Collections Illustrating Marine Engineering incl. entry on salinometer (patented by F.G. Spray and G. Nevett in 1849) contributed by G. Nasmyth (1 bdle.);

Photocopies, n.d. of printed texts of specifications (one with sheets of plan joined together by cello tape) being parts of five applications by G. Nasmyth from 1848 to 1856 for British patents (5 bdles.);

Certified copy, 1981, of register entry for his marriage in 1849 (1 doc.);

Letter to Mr. J.A. Cantrell relating to George Nasmyth, 1980 (1 doc.);

Photocopy, n.d., of letter from Alexander Nasmyth, Edinburgh, to James Nasmyth in 1833 asking him to return after assisting "Mr. Stein" to help George Nasmyth (1 bdle.);

Photocopy, n.d., of page of evidence from trial of Fergus O'Connor; information supplied by Mr. J.A. Cantrell incl. evidence by George Nasmyth on movements of men from the Bridgewater Foundry through Eccles in 1848 (1 doc.)

(1 stationery wallet containing 9 bdles., 5 docs.)

U269/Z5-6

/Z6

/Z7

/Z8

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

U269/Z9-10

Positive photographs, n.d., of sectional model made by George and James Nasmyth of Watt's steam engine, in 1826, in the Mechanical Engineering Building of the Heriot-Watt University, Edinburgh, and original plaque: Model, 12 x 16.5cm. (1 doc.); Original plaque bearing inscription "G. and J. Nasmyth Edinr. 1826", 8.5 x 12 cm. (1 doc.) (2 docs.) n.d.

/Z9
/Z10

/Z11-12

Positive photographs, n.d., of illustrations from Nasmyth's Autobiography: His factory flat, Manchester; Bridgewater Foundry, from a painting by Alexander Nasmyth (2 docs., 18 x 25.5 cm) n.d.

/Z11
/Z12

/Z13-31

Photocopies, n.d. (unless otherwise indicated below) of correspondence of James Nasmyth, of Nasmyth, Gaskell and Co. or Nasmyth, Wilson and Co.; accompanying papers and envelope, 1980, n.d.: 1970, 1980, n.d.

/Z13

Three letters (A.E. Musson collection) from Nasmyth to Holbrook Gaskell in 1836 (3 docs.);

/Z14

Letter (Liverpool City Libraries, Waterhouse collection, 942 WAT 2/31) from Nasmyth to Mr. Fletcher, Haigh Foundry Co., Wigan, in 1836 (1 doc.);

/Z15

Three letters (Cornwall Record Office, DDH1/31, 177, 270, 280) from Nasmyth, Gaskell and Co. to Messrs. Harvey and West or Messrs. Harvey and Co., ?Garton, in 1843 (3 docs.);

/Z16

Letter (Edinburgh University Library, DL4/101-3) from Nasmyth to Haigh Foundry Co. in 1845 (1 doc.);

/Z17

Letter (Birmingham Public Libraries, Boulton and Watt collection, Box 5 V) from Nasmyth to H. Wollaston Blake in 1846 (1 doc.);

/Z18

Six letters (Sheffield City Libraries, Sheffield Literary and Philosophical Society 51-6, 51-7, 51-7(A), 51-8, 51-9, 51-18, 51-21) from Nasmyth to Henry Clifton Sorby in 1848 and 1850-51 (6 bdles.);

/Z19

Letter to Nasmyth from J.D. Forbes in 1849 (1 doc.);

/Z20

Letter (Sheffield City Libraries, Sheffield Literary and Philosophical Society 51-74) to Nasmyth from Alfred ?Tylor, Paradise Row, Stoke Newington, in 1856 (1 doc.);

/Z21

Letter (Nasmyth collection) to Nasmyth in French in ?1851 recommending to him a firm of French iron-masters and accompanying incomplete translation typed in English, n.d. (2 docs.);

/Z22

Letters (Hick Hargreaves Collection, Bolton) from Nasmyth and Co. to Benjamin Hick and Co., Bolton, in 1854 (3 docs.);

/Z23

Letter (Edinburgh University Library, AAF) from Nasmyth to the Duc de ?Roumillon in 1855 (1 doc.);

/Z24

Letter (41) from Nasmyth to Professor J.D. Forbes in 1855 (1 doc.);

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

- U269/Z13-31
/Z25
Photocopies, n.d., of correspondence (contd.): 1970, 1980, n.d.
Letter (Science Museum Library, photocopy made in 1970) from Nasmyth [to Henry Deacon; information supplied by Mr. J.A. Cantrell] in 1856 (1 doc.);
- /Z26
Three letters (Science Museum, London) from Robert Millward in 1857-59 (2 bdles.);
- /Z27
Letters to Nasmyth from Robert Chambers in London in 1858, original annotated "Robert Chambers of Edinburgh" (1 doc.);
- /Z28
Letter (Fitzwilliam Museum Library, Cambridge, MS146-1947) from Nasmyth to S[amuel Smiles] in 1863 (1 doc.);
- /Z29
Three letters (Royal Institution, London) from Nasmyth to Mr. Grove in 1865-66, with accompanying letter and envelope, 1980 (4 docs., 1 envelope);
- /Z30
Letter (Fitzwilliam Museum Library, MS108-1947) to Nasmyth from Joshua Field in ?1868 (1 doc.);
- /Z31
Letter (Fitzwilliam Museum Library, 131-1947) to Nasmyth from William Lassell, Maidenhead, 1877, annotated "Wm. Lassell 1799-1880 Astronomer" (1 doc.)
(8 bdles., 26 docs., 1 envelope)
- /Z32
Photocopies, n.d., of pages of accounts of Birley & Co. n.d. relating to Nasmyth, Gaskell and Co. during years 1837-40 (1 bdle. comprising 10 sheets each one composed of 2 smaller sheets joined together by cellotape)
These account throw light on the Birley connection. The originals are in the University of Florida. For further information see footnote 24 in the article in Business History (U269/Z1/1).
- /Z33-34
Photocopies, n.d., of two different catalogues (with on original written annotations) of engineering and other tools produced by Nasmyth, Gaskell and Co., original of U269/Z33 marked "1839" (2 docs.)
For original of U269/Z34 see U268/B4/2. n.d.
- /Z35
Photocopy, n.d., of printed set of testimonials to and list of users of Nasmyth's steam hammers in 1852 or later (1 doc.) n.d.
- /Z36
Photocopy, n.d., of catalogue of plant and machines of Avonside Engine Co. Ltd., Bristol, for auction in 1881, incl. machines made by Nasmyth's companies (7 sheets joined together) n.d.
- /Z37
Photocopy, n.d., of indenture (Science Museum, London) for apprenticeship of Robert Millward of Allestree, Derbyshire, to Nasmyths, Gaskell and Co. in 1839 and amended regarding Millward's wages in 1845 (1 bdle.) n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

U269/Z38 Photocopies, n.d., of pages between pages 427 and 469 from vol. of book by Robertson Buchanan, Essays in Millwork (John Weale, London, 3rd. edn., 1841), incl. description of Nasmyth machines (1 bdle.) For photographs of plates in another vol. of the same book showing Nasmyth machines, see U269/Z39-78. n.d.

Z39-78 Positive and negative photographs, n.d., of plates in one vol. of Robertson Buchanan's book, Essays in Millwork (John Weale, London, 3rd. edition, 1841), showing machines of Nasmyth, Gaskell and Co.:

/Z39 One positive of a double grinding machine, 28.5 x 42cm. (1 doc., slightly torn);
/Z40 One positive of a self acting nut cutting machine ("J. Nasmyth delin."), 21 x 28.5cm. (1 doc.);

/Z41-77 Positives, one measuring 14.5 x 8cm., one measuring 11 x 14 cm., nine measuring 14.5 x 9.5 cm., twenty-six measuring 12.5 x 9cm. or 9 x 12.5cm. (37 docs., incl. duplicate copies);

Z78 Negatives of drawings of machines on 35mm. negative film (1 envelope containing 10 strips of film with 36 negatives)

(39 docs., 1 envelope containing 10 strips; the largest positives are stamped as photographed by Manchester Central Library)

Some of the plates in Buchanan's book show machines of which there are photographs elsewhere in this collection. Another volume of the book had explanations of the plates (U269/Z38).

For a reference to this book see James Nasmyth and the Bridgewater Foundry (p. 128).

/Z79 Photocopy, n.d., of typed pages headed "Portfolio of Drawings pertaining to the firms of Nasmyth, Gaskell and Company (1835-1850) James Nasmyth and Company (1850-1856) Nasmyth, Wilson and Company (1867-1940)", with dates at end in 1940 and 1941 listing drawings and illustrations relating to Nasmyth or his associates (1 bdle. of 4 sheets) n.d.

This is the index to the portfolio of Nasmyth drawings in the Library of the Institution of Mechanical Engineers; information supplied by Mr. J.A. Cantrell. Some of the drawings it refers to are now outside this Library.

/Z80-121 Positive and negative photographs, n.d., of drawings in the portfolio of drawings in the Library of the Institution of Mechanical Engineers of machines of James Nasmyth and of a drawing of his factory with particular emphasis on the roof: n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

- U269/Z80-121
/Z80-81
- /Z82-84
- /Z85
- /Z86-120
- /Z121
- /Z122-144
- /Z122-143
- /Z144
- /Z145-151
- /Z145
- /Z146
- /Z147
- /Z148
- /Z149
- /Z150
- /Z151
- /Z152-159
- Photographs (contd.): n.d.
- Positives of drawing of Nasmyth's factory with particular emphasis on the roof, 19 x 25.5cm. and 16.5 x 21.5cm. (2 docs.);
- Positives of drawings, two of one machine and one of part of another, 20.5 x 25.5cm. (3 docs.);
- Positive of drawing of another machine, 18 x 25.5cm. (1 doc.);
- Positives of drawing of factory as above and of machines incl. other copies of machines as above, 9 x 13 or 13 x 9cm. (35 docs. incl. duplicate copies);
- Negatives of drawings of factory and machines on 35mm. film (1 envelope containing 10 strips of film with 36 negatives)
- (41 docs., 1 envelope containing 10 strips)
- Positive and negative photographs, n.d., of plans of Nasmyth of building for and of ropemaking machinery intended to be sent to Nikolaieff, Russia: n.d.
- Positive photographs, 9 x 13.5cm. or 13.5 x 9cm. (21 docs., incl. duplicate copies);
- Negatives on 35mm. film (1 plastic envelope containing 6 strips with 20 negatives)
- (21 docs., 1 envelope containing 6 strips)
- For originals of these plans see U268/M1-38.
- Positive photographs by the Science Museum, London, n.d., of machines by Nasmyth or models of them in the same Museum: n.d.
- Positive of bench shaping machine of 1850, 23.5 x 29.5 cm. (20642) (1 doc.);
- Positive of model of 1940 of his steam hammer, 29.5 x 22.5cm. (21736) (1 doc.; see also U269/Z216-217);
- Positive of flywheel side of model of his inverted or steam-hammer type of steam engine of c.1848, 29 x 21cm. (22/46) (1 doc.);
- Positive of front view of same model, 29.5 x 17.5cm. (21/46) (1 doc.);
- Positive of his planing machine of 1857, 24 x 19.5cm. (20643) (1 doc.);
- Positive of model of his vertical cylinder boring mill of 1838, 20.5 x 16.5cm. (734/60) (1 doc.);
- Positive of his bench drilling machine of c.1840, 21 x 16cm. (20641) (1 doc.)
- (7 docs.)
- Positive photographs, n.d., of Nasmyth machine tools in Monks Hall Museum, Eccles: n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

Photographs (contd.):

- | | | | |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|
| U269/Z152-159 | | | n.d. |
| /Z152-153 | Positive photographs of machine by wall seen from front, 19 x 13cm. (2 docs.); | | |
| /Z154-155 | Positive photographs of different view of same machine, 19 x 13cm. (2 docs.); | | |
| /Z156-157 | Positive photographs of different view of same machine, 13 x 18cm. (2 docs.); | | |
| /Z158-159 | Positive photographs of another machine, 13 x 18cm. (2 docs.)
(8 docs.) | | |
| /Z160-162 | Positive photographs, n.d., all of one view of a Nasmyth machine tool in Birmingham Museum of Science and Technology (3 docs., one measuring 21 x 16.5cm., the other two 19 x 12.5cm.) | | n.d. |
| /Z163-164 | Positive photograph, n.d., of view of ambidextrous lathe shown in sales catalogue in the Nasmyth collection, 13 x 19.5cm. (2 docs.) | | n.d. |
| /Z165-166 | Positive photographs, n.d., of model of wrought-iron gun designed by Nasmyth, 13 x 19cm. (2 docs.) | | n.d. |
| /Z167 | Positive photograph, n.d., of drawing by Nasmyth in 1830 of a locomotive at Liverpool called by him the "Rocket" (wrongly, the locomotive being in fact the "Northumbrian"; information supplied by Mr. J.A. Cantrell) (1 doc.) | | n.d. |
| /Z168-174 | Positive photographs, n.d., of drawings by Nasmyth: | | n.d. |
| /Z168-169 | Positive photographs of drawing in 1862 of use of his safety ladle of 1835, 13 x 19.5cm. (2 docs.); | | |
| /Z170 | Positive photograph of drawing as above, 8.5 x 11cm. (1 doc., edges round plate slightly trimmed); | | |
| /Z171-172 | Positive photographs of drawing in 1862 of dangers of usual design of ladle, 13 x 19.5cm. (2 docs., 1 slightly stained); | | |
| /Z173-174 | Positive photographs of drawing as above, 8.5 x 11cm. (2 docs.)
(7 docs.) | | |
| /Z175-177 | Positive photographs, n.d., of drawings by Nasmyth: | | n.d. |
| /Z175-176 | Positive photograph of drawing of road steam-carriage, 13 x 19cm. (2 docs.); | | |
| /Z177 | Positive photograph of same drawing, 12 x 13.5cm. (1 doc.)
(3 docs.) | | |
| /Z178 | Positive photograph, n.d., of Nasmyth locomotive, <u>Electra of Great Western Railway</u> , 13 x 21cm. (1 doc.) | | n.d. |
| /Z179 | Positive photograph, n.d., of unidentified Nasmyth locomotive, apparently the Norris locomotive manufactured by Nasmyths Gaskell and Co. (information supplied by Mr. J.A. Cantrell), 9 x 14cm. (1 doc.) | | n.d. |

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His work

- U269/Z180 Cutting, n.d., from publication of photographic illustration showing the Centaur, a Nasmyth locomotive of Great Western Railway (1 doc.) n.d.
- /Z181 Envelope containing photocopies, n.d., of printed specifications, plans and other docs., parts of applications by James Nasmyth (sometimes in conjunction with other parties) from 1851 to 1856 for British patents (1 envelope, marked "Nasmyth Patents", containing bdlcs.) n.d.
- /Z182 Photocopy, n.d., of letter (65) from J.D. Forbes to his wife in 1848 with references to Nasmyth (1 doc.) n.d.
- /Z183 Folder marked "Nasmyth's Inventions" containing: n.d.
- Photocopy, n.d., of pages from paper, n.d., from proceedings of the Institution of Mechanical Engineers describing operation in Abercarn Collieries, South Wales, of ventilating fan made by James Nasmyth (1 bdle.);
 - Photocopy, n.d., of page from Patent Journal and Inventors' Magazine (vol. 12, p.51) incl. description of patent dated 1851 of James Nasmyth and Herbert Minton of Stoke-on-Trent, Staffordshire, china manufacturer, for improvements in manufactures from pulverised clay, in 1851 or 1852 (1 sheet);
 - Photocopy, n.d., of page of The Practical Mechanic's Journal (vol. III, p.142, 1850-51) incl. notes on James Nasmyth's arrangement of small, detached steam engines for separate machines (1 sheet);
 - Photocopy, n.d., of page of same periodical (vol. I, p.223, date not given), incl. notes on tap-guide and swage-block of James Nasmyth (1 sheet);
 - Photocopy, n.d., of page of The Builder (p.70, 10 Feb., 1855), incl. references to James Nasmyth's "monster guns" (1 sheet)
 - Photocopies, n.d., of page or part of page of Railway Chronicle (p.320, 1844) incl. "Some remarks on the principle of railways" by James Nasmyth regarding action of wheels on rails (3 sheets);
 - Photocopies, n.d., of pages (possibly from same periodical in 1845) containing letters by Robert Mallet on claims by James Nasmyth and Samuel Carson to be inventors of the method of using steam for making vacuums for atmospheric railways, with notes in ink giving words missing from the photocopies of the text (3 sheets);
 - Photocopies, n.d., of printed pages (possibly from the same periodical), n.d., incl. copy from the Mining Journal of account by James Nasmyth of his proposal for using steam for an atmospheric railway (2 sheets)
- (1 folder containing 1 bdle., 11 sheets)

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS:

His work

U269/Z184

Folder marked "The Bridgewater Foundry" containing: n.d.
 Photocopy, n.d., of account of Nasmyth,
 Wilson and Co. Ltd., part of "The Engineering
 and Other Industries of Manchester and District"
 in The Ironmonger, 1887 (2 sheets);
 Photocopy, n.d., of two pages headed "Notices
 of Works" and "June 1929" containing paragraph
 on Messrs. Nasmyth, Wilson and Co. (1 sheet)
 (1 folder containing 3 sheets)

/Z185

Photocopy, n.d., of pages of publication, n.d., on n.d.
 the Royal Arsenal, Woolwich, incl. references to
 James Nasmyth (1 bdle.)

/Z186-190
 /Z186

Photocopies or other extracts, n.d., from publications n.d.
 or papers incl. references to James Nasmyth:

/Z187

Photocopy, n.d., of article, "Chorlton Mills and
 their Neighbours" by Silvia Clark, mainly references
 to the Birley family and to the accounts of Birley
 and Co now held by the University of Florida,
Industrial Archaeology Review, [1978] 1 bdle.);

/Z188

Photocopy, n.d., of paper, "The Development of
 the Bessemer Process in Lancashire, 1856-1900",
 read by W.M. Lord at the Iron and Steel
 Institute, London, in 1947, from Transactions of
 the Newcomen Society, vol. XXV, 1945-47 (1 bdle.);

/Z189

Photocopy, n.d., of article, "Joseph Whitworth
 and the growth of mass-production engineering"
 by A.E. Musson, Business History, [1975], (1 bdle.);

/Z190

Photocopy, n.d., of article, "The machine tool
 industry in Britain to 1914" by S.B. Saul, in
Business History, n.d. (1 bdle.);
 Printed text, "British Origins", by A.E. Musson
 (1 set of sheets stapled together)
 (5 bdles.)

The controversy over the invention of the steam hammer

For account of this controversy explaining the names
 and terms mentioned below see paper, "James Nasmyth and the
 Steam Hammer" by Mr. J.A. Cantrell (U269/Z1/3).

/Z191-192

Photocopies, n.d., of extracts from Watt's and Deverell's n.d.
 patents for steam hammers in 1784 and 1806, using
 original copy of Deverell's patent printed in 1855
 (2 bdles.)

/Z193-209

Positive photographs, n.d., relating to Nasmyth's steam n.d.
 hammers, of following material:

/Z193

Page 227 of letterbook of Nasmyth, Gaskell and
 Co. incl. rough sketch of a design for a steam
 hammer, 15 x 12cm. (1 doc.);

/Z194

Page 227 as above, 25.5 x 20.5cm (1 doc.);

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

The controversy over the invention of the steam hammer

- U269/Z193-209
/Z195 Positive photographs (contd.): n.d.
Page described by Nasmyth as original drawing of his steam hammer cut out from his scheme book in 1845, showing sketches of design of a steam hammer, 25.5 x 20.5cm. (1 doc.);
- /Z196-197 Positive marked on back as "Scheme Book Sketches" incl. parts of sketches as immediately above, 9 x 13cm. (2 docs.);
- /Z198 Scene of Nasmyth and workmen round the steam hammer at Patricroft in c.1851, 19 x 13cm. (1 doc.);
- /Z199 Scene of Nasmyth by the steam hammer at Patricroft in c.1852, 14.5 x 12.5cm. (1 doc., photograph reduced in size at top and bottom and marked in ink on left hand side of front);
- /Z200 Larger positive of same scene but with view reduced on all sides and more indistinct in detail, 22 x 16.5cm. (1 doc.);
- /Z201-202 Later photograph showing workmen by a steam hammer in the interior of the foundry at Patricroft, 13 x 19cm. (2 docs.);
- /Z203 View of a Nasmyth steam hammer before removal to Smithsonian Institution, U.S.A., 21.5 x 16.5cm. (1 doc.);
- /Z204-206 View of a Nasmyth steam hammer in the Smithsonian Institution, 25.5 x 20.5cm. (1 doc.);
- /Z207-209 Other views of same scene, 14.5 x 9.5cm. (3 docs.)
(14 docs.)
- The reference of the letterbook (of which page 227 was copied) referred to in U269/Z193-194, 210-212 is U268/C1/5 (a letterbook of Nasmyth Gaskell and Co., 1839-40).
- U269/Z198 shows demonstration of steam hammer with Robert Wilson's invention of selfacting motion (see James Nasmyth and the Bridgewater Foundry, opposite p. 138).
- /Z210 Photocopy, n.d., of part of page of a publication, n.d., showing Nasmyth's sketch of his idea of a steam hammer in letterbook (as in U269/Z193-194) (1 doc.) n.d.
- /Z211-212 Photocopies, n.d., of different parts of page from letterbook as above showing Nasmyth's early idea for a steam hammer (as in U269/Z193-194) (2 docs.) n.d.
- /Z213-215 Three photocopies, n.d., showing page of Nasmyth's scheme book in the Library of the Institution of Mechanical Engineers, two showing Nasmyth's later idea for a steam hammer and varying parts of sketches on same page and the third showing parts of other sketches on the same page (as U269/Z195) (3 docs.) n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

The controversy over the invention of the steam hammer

- U269/Z216-220 Positive photographs, n.d., of model of Nasmyth's steam hammer in the Science Museum: n.d.
- /Z216-217 Front view as in U269/Z145, 14.5 x 9.5cm. (2 docs.);
- /Z218-220 Oblique view of front, also showing part of case, 14 x 9cm. (3 docs., one with slight staining in one part) (5 docs.)
- /Z221 Photocopy, n.d., of evidence (incl. references to the invention of the steam hammer) by Nasmyth before the Select Committee on Letters Patent in 1871 (1 bdl.) n.d.
- Eugène Schneider of the Creusot Works also gave evidence to this Committee on the invention of the steam hammer and his remarks resulted in complaints by Nasmyth and another letterwriter in The Engineer, 1871 (see U269/Z251). For comments on this Select Committee see James Nasmyth and the Bridgewater Foundry (pp.170-171).
- /Z222 Photocopies, n.d., of text of the three letters from Eugène Schneider in 1840 as below (3 docs.) n.d.
- /Z223 Envelope, 1981, containing typed copies of three letters from Eugène Schneider to his brother in 1840, typed copy of letter from Schneider Frères et Cie to Nasmyth, Gaskell and Co. in 1843 and typed copy of part of patent for steam hammer granted to Schneider Frères et Cie in 1842, all docs. referring to the steam hammer (1 envelope enclosing 5 docs.) 1981
- /Z224-238 Photocopies, n.d., of material, of various dates or not dated, in the French language relating to the controversy over the invention of the steam hammer, to steam hammers in England and France or to François Bourdon, some accompanying material written in English: n.d.
- /Z224 Photocopies, n.d., of typed docs., papers and photographs, originals dated 1906-45 or later or not dated, produced or compiled with regard to the Schneider side of the controversy, incl. copy of "Étude" issued by the Chambre Syndicale de la Grosse Forge Française, Paris, in 1945 or later, and incl. copies of papers compiled by the company in 1928 and 1939 (3 bdles., 15 docs.);
- /Z225 Photocopy, n.d., of letter written to Schneider et Cie, Le Creusot, in 1908 to accompany "notice" on François Bourdon (1 doc.);
- /Z226 Photocopy, n.d., of printed pages incl. a "Brevet" for a patent in 1842 of Schneider Frères et Cie for a steam hammer incl. text and plate (1 bdl.):

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

The controversy over the invention of the steam hammer
Photocopies (contd.):

n.d.

U269/Z224-238
/Z227

Photocopy, n.d., of report by Monsieur Calla printed in Bulletin of the Société d'Encouragement pour l'Industrie Nationale in 1842 on steam engines in France, with a reference to a steam hammer of Schneider Frères (1 bdle.);

/Z228

Photocopy, n.d. of pages from issues (referred to in Mr. J.A. Cantrell's paper delivered to the Newcomen Society in U269/Z1/3) from the Moniteur Industriel incl. letters and a translation (from the English) on the invention of the steam hammer (1 bdle.);

/Z229

Photocopy, n.d., of account printed in the Publication Industrielle in 1845 of Nasmyth's steam hammer, incl. two plates (1 set of sheets stapled together; see also U269/Z243);

/Z230

Photocopy, n.d., of another printed version of first part of same account, without plates; translation, n.d., written in English (1 bdle.);

/Z231

Photocopy, n.d., of report by Monsieur Cavé printed in the Bulletin of the same Society in 1848 on his steam hammer (1 bdle.);

/Z232

Photocopy, n.d., of account by Gabriel Boutmy published by the Société des Ingenieurs Civils de France in 1884 on François Bourdon and the invention of the steam hammer (1 bdle.);

/Z233

Photocopy, n.d., of same account and of an additional page quoting a letter disputing Boutmy's claim that François Bourdon had invented the hydraulic press in 1862 (1 bdle.);

/Z234

Photocopy, n.d., of "notice" by Henri Tresca published by the Société des Ingenieurs Civils de France in 1884 on the death of Eugène Bourdon (not described as a relative of François Bourdon) and of additional pages quoting same letter disputing Boutmy's claim (1 bdle.);

/Z235

Photocopies, n.d., of same "notice" by Henri Tresca in 1884, of part of article (origin not indicated) printed on Schneider et Cie (incl. long account of the controversy over the steam hammer), n.d. (1883 or later), of text and plates of "brevet" in 1836 printed for an invention of François Cavé for a steam engine and of text and plates of "brevet" in 1827 printed for an invention of François Cavé of another machine; translation written in English of part of text for "brevet" in 1836 as above (1 bdle.);

/Z236

Photocopy, n.d., of article printed in La Nature in 1889 on the invention of the steam hammer (2 sheets stapled together);

/Z237

Photocopy, n.d., of pages from the Histoire Documentaire de la Mécanique Française, 1902, incl. illustrations of François Bourdon and of a model of his steam hammer and remarks on François Cavé, François Bourdon and steam hammers (1 bdle.);

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

U269/Z224-238
/Z238

The controversy over the invention of the steam hammer
Photocopies (contd.);

n.d.

Photocopy, n.d., of printed paper, "François Bourdon, 1797-1865, ingénieur-precursur; l'axe Méditerranée-Mer du Nord" by Jean Piffaut, n.d. (1968 or later), chiefly written in relation to navigation on the river Saône (1 bdle.)
(15 bdles., 16 docs.)

U269/Z224 includes:

- Copy of two of Nasmyth's sketches for a steam hammer in his scheme book (as in U269/Z195).
- Copies of illustrations of steam hammers or of a model of a steam hammer.
- Copy of a "notice" by Eugène Flachet and Gabriel Boutmy in the "Memoires de la Société des Ingenieurs Civils", n.d.
- Copy of each of typed versions of letters from Schneider et Cie to Nasmyth, Gaskell and Co. in 1843 and 1844, the copy of the letter for 1843 with some words in English added in pencil.
- Copy of typed version of letter from John L. Cox in 1928, the language being French.

A few of the papers in U269/Z224 refer to other material, copies of which may form some of the other items in this collection.

The printed copies of printed texts of "brevets" are presumably copies of the official Publication des brevets.

/Z239

Printed leaflet, in English and French, published by the American Society of Mechanical Engineers on the Creusot steam hammer (1 leaflet)

1981

/Z240

Photocopy, n.d., of pages from an American periodical, Mechanical Engineering (vol. 50, no. 11, Nov., 1928, pp. 869-871), incl. letter by John L. Cox in favour of the Schneider side of the controversy over the steam hammer (1 bdle.)

n.d.

/Z241

Photocopies, n.d., of pages of notes by J.M. Edmonson on French publications and statistics on French shipbuilding and use of engines for ships, incl. references to controversy over the steam hammer, during early nineteenth century, annotated in red ink (4 sheets, 3 bdles.)

n.d.

/Z242

Photocopy, n.d., of introduction to dissertation, "From Mécanicien to Ingénieur: technical education and the machine building industry in nineteenth century France" by J.M. Edmonson, submitted to the Faculty of the University of Delaware, U.S.A., in 1981 (1 bdle.)

n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

The controversy over the invention of the steam hammer

U269/Z243 Bdle. containing photocopies, n.d., of items as below (cont.) n.d.

Part (pp. 149-170, 551-555) of dissertation, "From Mécanicien to Ingénieur: technical education and the machine building industry in nineteenth century France" by J.M. Edmonson, submitted to the Faculty of the University of Delaware, U.S.A., in 1981 (27 sheets);
Covering letter in 1981 to part of dissertation as above and referring to above part of dissertation and also to items listed below (1 sheet);

Brief bibliographical notes written on the Bourdon and Nasmyth steam hammers and on the 1876-78 Schneider hammer (2 sheets);

Illustrations of the Bourdon hammer in Gabriel Boutmy's "François Bourdon et le marteau-pilon" (Memoires et Comptes rendus, des travaux de la Société des Ingénieurs civils, 42 (1884) (4 sheets);

Article by Jacques Eugène Armengaud in Publication Industrielle in 1845 (as in U269/Z229) with also copies of two pages of illustrations (vol. 4, pl. 32) on Nasmyth's steam hammer (11 sheets);

Two pages of illustrations from same publication in 1848 (vol.6, pl. 26) on steam hammer of Cave and of Petin and Gaudet (2 sheets);

Article, "La plus grande économie et la précision la plus exacte"; L'Oeuvre d'Honoré Blanc" by Selma, Thomas in the Bulletin trimestriel des Amis du Musée d'Armes de Liège in 1979 (June, no. 24, 7th year) (4 sheets)

(1 bdle. containing sheets)

/Z244

Photocopies, n.d., of two letters from A.S.C. Black, Edinburgh, to Professor Forbes in 1856 regarding obtaining a drawing of Nasmyth's steam hammer for an article in the Encyclopaedia Britannica (2 docs.) n.d.

Z245

Photocopy, n.d., of second edition printed in 1865 of lecture by T.S. Rowlandson originally given at the Mechanics Institution, Patricroft, in 1864 on the history of the steam hammer (1 bdle.) n.d.

/Z246

Photocopy, n.d., of third edition printed in 1866 of same lecture (1 bdle.) n.d.

/Z247

Photocopy, n.d., of page of The Engineer in 1871 (vol. 32, p.35, 21 July, 1871) incl. letter from T.S. Rowlandson on Nasmyth's claim to inventions and development of the steam hammer, particularly with reference to the role of R. Wilson, the manager of the works (1 sheet) n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

- U269/Z248-252 The controversy over the invention of the steam hammer n.d.
 Photocopies, n.d., of pages of other British publications relating to Nasmyth's steam hammer;
- /Z248 The Practical Mechanic and Engineer's Magazine (vol. II, pp. 264-265, Apr., 1843) (2 sheets);
- /Z249 Mechanics Magazine (vol. 43, 1845, pp. 72-73, 75) (2 sheets incl. one with part of text added in ink);
- /Z250 Proceedings of the Institute of Mechanical Engineers in 1855, comprising part of a description of improvement by - Morrison to steam hammers, followed by questions referring to steam hammers of Nasmyth, Gaskell and Co. (1 bdle.);
- /Z251 The Engineer, incl. letter from Nasmyth (vol. 31, 1871, p. 444) (1 sheet);
- /Z252 The Railroad and Engineering Journal (vol. LXII (vol. 11, New Series), June, 1888, p. 254 (1 sheet) (1 bdle., 6 sheets)
- /Z253 Offprint, "Tiny Tim - relic of a bygone age: one of the giant hammers which made history" by R. Benson, English Steel Corporation Review, (no. 5, summer, 1967), describing a steam hammer of that name of the Darlington Forge Ltd. with references to James Nasmyth (1 pamphlet) 1967
- /Z254-255* The industrial background n.d.
 Positive photographs by the Science Museum, London, illustrative of nineteenth century industry:
- /Z254 Positive of model of a pair of tilt hammers, James Watt collection, 29 x 24cm. (830);
- /Z255 Positive of model of representation of typical nineteenth century workshop, 14 x 20cm. (374/51) (2 docs.)
- /Z256-261 Positive photographs of a model in the Library of the Institute of Mechanical Engineers of a mid-nineteenth century machine workshop: n.d.
- /Z256-258 General view along length of model (3 docs.);
- /Z259 Reverse of same view(1 doc.);
- /Z260-261 Two different views, apparently of same machine (2 docs.) (6 docs., 9 x 13cm.)
 This model should not be confused with that in the Science Museum (U269/Z254-255).

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

The industrial background

U269/Z262-266

Photocopies of articles or papers containing background information on industry and not incl. references to James Nasmyth:

n.d.

/Z262

Photocopy, n.d., of article, "James Watt and Law of Patents" by Eric Robinson, University of Massachusetts-Boston, n.d. (1 bdle.);

/Z263

Photocopy, n.d., of paper, "Richard Roberts, his Life and Inventions" by H.W. Dickinson, read at the Institution of Mechanical Engineers in 1946 (1 bdle.);

/Z264

Photocopy, n.d., of paper, "Technological Change in the Machine Tool Industry, 1840-1910" by N. Rosenberg, Journal of Economic History (vol. XXIII, 1963), describing the American machine tool industry (1 bdle.);

/Z265

Photocopy, n.d., of article, "Interchangeable Parts Re-examined: The Private Section of the American Arms Industry on the Eve of the Civil War" by R.A. Howard, published by the Society for the History of Technology in 1978 (1 bdle.);

/Z266

Photocopy, n.d., of typed text of paper, "Mass Production and Consumption in the United States, 1850-1930", given to a workshop in the history of technology, University of Manchester Institute of Technology, Manchester, in year not stated, by D.A. Hounshell (1 bdle.)

(5 bdles.)

/Z267

Photocopy, n.d., of pages from publication by G. Farr, Shipbuilding in the Port of Bristol (National Maritime Museum monograph no. 27, pp. 10-12, 1977) relating to the firm of Acraman, Morgan and Co. of Bristol, shipbuilders (3 sheets stapled together)

n.d.

/Z268

Photocopy, n.d., of two printed pages headed "Miscellanea" and "Wages in the Engineering and Shipbuilding Trades" and dated June, 1905, giving information on wages in and around Manchester (2 sheets stapled together)

n.d.

/Z269

His associates

Photocopy, n.d., of letter (original held by Mr. Roger Gaskell) to Holbrook Gaskell from T.S. Rowlandson in 1850 (2 sheets)

n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His associates

- U269/Z270 Folder marked "Holbrook Gaskell" containing photocopies, n.d., of items as below: n.d.
- Will (Lancashire Record Office) of Roger Gaskell of Liverpool, gent., father of Holbrook Gaskell, proved in 1837 (1 bdle.);
- Manuscript pedigree (in Warrington Public Library) of the Gaskell family in 1909 (1 bdle. incl. 2 sheets joined together by cello tape);
- Manuscript pedigree by E.H. Gaskell of Gaskell family in 1940 (2 sheets joined together by cello tape);
- Newspaper extracts on death of Holbrook Gaskell in 1909 (7 sheets);
- Printed account entitled "In Memoriam: Holbrook Gaskell" containing extracts from the press or addresses from memorial services on his death in 1909 (1 bdle.);
- Pages from Mrs. Gaskell's Observation and Invention by John Geoffrey Sharp (Linden Press, 1970) on Mrs. Elizabeth Gaskell, the novelist, incl. references to Nasmyth (3 sheets)
- (1 folder containing 3 bdles., 12 sheets)
- /Z271-277 Positive photographs of photographs of Holbrook Gaskell and his family: n.d.
- /Z271-276 Positive photographs of photograph in oval frame of Holbrook Gaskell and his wife, one measuring 13 x 19cm., one 15.5 x 12cm. and three 9.5 x 14.5cm. (6 docs.);
- /Z277 Positive photograph of Holbrook Gaskell and his son, 18.5 x 12.5cm. (1 doc.) (7 docs.)
- /Z278 General Chemicals Division News, no. 38, Aug. 1953, published by I.C.I. Ltd., incl. references to James Nasmyth and more esp. to Holbrook Gaskell and to his partner Henry Deacon in the chemical industry (1 pamphlet) 1953
- /Z279 Photocopy, n.d., of will (Public Record Office, ref. PROB 11 2163) of Robert Garnett of Wyreside, esq., father of Henry Garnett, proved in London in 1852 (1 bdle.) n.d.

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His associates

U269/Z280

- Material relating to Garnett family of Wyreside, near Lancaster, Lancs., or Casterton, Westmor; n.d.
- Photocopy, n.d., of will (Lancaster Probate Registry) of Henry Garnett of Wyreside, partner of Nasmyth, proved in 1897 (1 bdle.);
- Photocopy, n.d., of certificate (Lancaster Probate Registry) of certificate in 1897 regarding proving of the same will (1 doc.);
- Photocopies, n.d., of newspaper cuttings regarding death of Henry Garnett of Wyreside in 1897 (2 sheets);
- Photocopy, n.d., of typed account and attached, written pedigree, n.d. [compiled by Miss Emmeline Garnett; information supplied by Mr. J.A. Cartmel] of Garnett family of Casterton, Westmorland, and neighbourhood (1 doc.);
- Photocopies, n.d., of pages of Burke's Landed Gentry in 1858 and of Armorial Families in 1902, incl. entries for Garnett family of Wyreside (3 sheets);
- Printed pamphlet, Quernmore Park: a History, issued by the Society of the Sacred Mission, n.d., incl. details of the house, the home of William Garnett, uncle to Henry Garnett and brother to Robert Garnett (1 pamphlet)
- (1 folder containing 1 pamphlet, 1 bdle, 7 docs.)
- /Z281-286 Positive photographs of Wyreside by Miss Emmeline Garnett: n.d.
- /Z281 Positive photograph in colour of the front of the house (1 doc.);
- /Z282 Positive photograph in colour of the front of the house seen from another angle (1 doc.);
- /Z283-284 Positive photographs in colour of same view slightly different in colour (2 docs.);
- /Z285-286 Positive photographs in black and white of same view (2 docs.)
- (6 docs., 9 x 13cm.)
- /Z287-288 Two postcards in colour showing two different views of Quernmore Park, Lancaster, Lancs., as in the occupation of the Society of the Sacred Mission (2 docs.) n.d.
- /Z289 Photocopy, n.d., of pages from Proceedings of the Institution of Mechanical Engineers, [1868], with "Memoirs" of members deceased in 1867, incl. Edward Humphrys (1810-67), for three years with Nasmyth at Patricroft (2 sheets) [1868]

UNOFFICIAL COLLECTIONS

LITERARY AND MISCELLANEOUS

His associates

U269/Z290

Photocopy, n.d., of printed page of account in 1977 P.J. McCartney of Henry de la Beche incl. reference to advice to him by James Nasmyth in 1842 regarding arrangement of specimens illustrating steel-making and showing extract from DLB [de la Beche] papers in the National Museum of Wales (1 sheet) n.d.

/Z291

Photocopy, n.d., of printed pages from Technology and Culture, 22(2), 1981, referring to correspondence of Henry Clifton Sorby with James Nasmyth concerning microscopes (1 sheet) n.d.

/Z292

The other Nasmyth

Envelope marked "The other Nasmyth" containing photocopies, n.d., of printed specifications, plans and other docs., parts of applications by a James Nasmyth, of various addresses and a contemporary of the James Nasmyth of steam hammer fame, from 1845 to 1859 for British patents (1 envelope containing bdles. and a sheet) n.d.

This other James Nasmyth described himself for the letters patent as follows:

of Arundel Street, Middlesex, gent., 1845;
do., 1846;
of Lille, France, engineer, 1850;
of Stafford Street, Bond Street, Middlesex,
engineer, 1852;
of St. Germain in Laye, France, civil engineer,
1855;
of Lille, France, civil engineer, 1858;
of Surrey Street, Strand, Westminster,
engineer, for his petition on 17 May, 1859,
though the beginning of the patent, which was
sealed on 15 Nov., 1859, described him as late
of Surrey Street, Strand, but now of Lille,
France, engineer.

The patents were mainly for means of applying motive power, e.g. by a piston for an atmospheric railway or by a head of water in a syphon.

Mr. J.A. Cantrell, in James Nasmyth and the Bridgewater Foundry notes (p.128) that the patents of James Nasmyth (1808-90) can be distinguished because the address in them is always given as Patricroft, Barton-upon-Irwell or Manchester.