

IG Records of Cutler Hammer Europa, Bedford

In 1883 George Mower, an American citizen and an engineer, came to England and opened up an office for the Sturtevant Company of America at 147 Queen Victoria Street, London. Between 1895 and 1897 he visited an old school friend, Harry Cutler in America. Cutler had a business in Electric Motor Control. Cutler agreed to forward enquiries from Europe to the Sturtevant office. Mower then imported C-H faceplate button type starters and re-badged them with a Sturtevant nameplate before supplying them to customers. Later it was found that alterations were needed and additional premises were acquired at Bankside, London, to deal with the growing electrical business. In 1904 A H Curtis, a consulting electrical engineer, joined the company and around this time J T Mould (Sales), A H Mackley (Engineering) and S E Hall (estimating) also joined.

In 1906 The Adams Manufacturing Company was formed in Bedford. Arthur Harry Adams was originally the European manager for the Eastern Electric company of America and a Sturtevant engineer. Adams had an interest in the Hewitt Motor Company of America for he married Mr Hewitt's daughter.

Two thirds of the Bedford factory was allocated to car production and the remainder to rheostat production. George Mower was one of Adam's main financial backers. On 1st January 1906 the Sturtevant Electrical business was transferred to Adams works at Bedford and the rheostats were called 'ADAMS IGRANIC type made by Adams Manufacturing Company'.

The name Igranitic was the result of a competition and was explained as follows: I was taken from the iron wire tube resistances wound on asbestos tubes and mounted behind the rheostat. GRAN was taken from the slate base on which the button contacts were mounted. This slate base was finished in a marble-like covering resembling granite. It had no electrical significance but was only a finish. The IC came from the two last letters of electric.

Adams continued to build cars in the main part of the works and introduced foot pedals for clutch and brakes and pioneered the electric starter motor.

In July 1913 the electrical assets of Adams Manufacturing Company with the premises of both businesses were acquired by Mr Bacon who was president of Cutler-Hammer. On 14th August a new English company was formed - the Igranitic Electric Company. The car business was sold. Capital for the new company was £35,000 in £1 shares. Five sevenths of the company shares were owned by George Mower and two sevenths by Cutler-Hammer. From 1913 the company were mainly concerned with manufacturing electric motor control gear.

In 1920 to 1925 they entered the radio business making 'honeycomb' tuning coils under licence from Westinghouse, and sets of components for amateurs to make their own sets. When the company decided to make complete radio sets themselves they ran into trouble.

In 1923 Igranitic and Cutler-Hammer entered into the first formal written agreement. This gave Igranitic the right to patent Cutler-Hammer inventions throughout the world excepting America. The agreement was for 21 years and payment to C-H was 15% of Igranitic profits. C-H then sold their part interest in Igranitic to George Mower.

Between 1936 and 1937 Igranitic decided that their future lay not so much in the starter business as in control gear and thus started their entry into the steel mill and crane gear business. The first steel mill equipment was started in 1937 and Igranitic and C-H designed it together.

George Mower died in 1941 and to meet death duties Igranitic was sold. C-H was not in a position to buy and through Sales director J H Enion's association with Mr Hirst (Brookhirst had been purchased some time before by Metal Industries) Igranitic was bought by Metal Industries.

When the agreement with Cutler-Hammer came to an end a new one was negotiated with a fixed royalty of £80,000 per annum. In 1952 this was superseded with one that had a royalty of 2% turnover.

From 1959 the company was known as Brookhirst Igranitic Ltd. This was taken over by Thorn Electrical Industries in 1967 and was bought by Cutler-Hammer Incorporated in 1971. 1974 saw the name change to Cutler-Hammer Europa Ltd. In 1978 the Bedford plant became the Europe and Africa headquarters for the Eaton Corporation's Industrial Control and Power Distribution Division.

The 1979 deposit was arranged by series as received at that time, where possible the second deposit (2002) has been added to these series; new series being created for material which did not fit within the original scheme.

IG Records of Cutler Hammer Europa, BedfordClassification Scheme

- IG1 Agreements, contracts etc
- IG2 Patents Registers
- IG3 Patents
 - IG3/1 Patent patents
 - IG3/2 Assignment of patent rights by staff to company
 - IG3/3 Assignment of patents to, or from, other firms
 - IG3/4 Ceased patents of the Donovan Electric Co, Birmingham
 - IG3/5 Foreign patents taken out by the Igranic Electric Co
 - IG3/6 Foreign patents, some issued to Brookhirst Switchgear
 - IG3/7 British patents
 - IG3/8 British patents – code cases
 - IG3/9 Transfer of patents between Igranic and Brookhirst
 - IG3/10 Patent cases
- IG4 Design and production
- IG5 Trademarks
 - IG5/1 Certificates of registration
 - IG5/2 Correspondence regarding renewal of trade marks
 - IG5/3 Permissions granted by Igranic for use of trade mark
 - IG5/4 Transfer of trade mark from Adams Co
 - IG5/5 Registration of trade marks in various countries
 - IG5/6 Foreign trade marks – correspondence
- IG6 Employee handbooks, information and company magazines
- IG7 Catalogues
- IG8 Marketing and public relations
- IG9 Photographs
- IG10 Management records
- IG11 Incorporation and capital
- IG12 Finance
- IG13 Property
- IG14 Personnel
- IG15 Ephemera

IG Records of Cutler Hammer Europa, Bedford

IG1	Agreements, contracts etc	
IG1/1	Contract between Cutler-Hammer Igranic and Igranic Electric Company	30 Oct 1929
IG1/2	Cutler-Hammer Inc., Milwaukee, Wisconsin, USA and Igranic Electric Co Ltd., Bedford	2 Aug 1950
IG1/3	Agreement, Cutler-Hammer Inc and Igranic Electric Co Ltd., (effective from 1 April 1954) and related papers	23 March 1955
IG1/4	Copy of working agreement between Cutler-Hammer, Brookhirst Igranic and LDEP	c 1965
IG1/5	Assignment between Cutler-Hammer Igranic Ltd, Elstow Road, Bedford, and Brookhirst Igranic Ltd., Elstow Road, Bedford	1972
IG1/6	Assignment between the Donovan Electrical Co Ltd, Elstow Road, Bedford, and Brookhirst Igranic Ltd, Elstow Road, Bedford	1972
IG1/7	Papers related to agreements including correspondence about the amended agreement of 1959, a brief history of the relations between Bureau Technique International and Cutler-Hammer International CA, various charts giving the organisation of Cutler-Hammer Inc, a copy of a booklet on the American Anti-Trust laws and other papers	1955-1964
IG1/8	Agreement between 1) Cutler-Hammer Manufacturing Company and 2) Adams Manufacturing Company Limited. 1) grants to 2) sole full and exclusive license to use and exercise all patents licenses inventions processes trade names and trade marks of 1) in Great Britain and Ireland, all colonies and dependencies of Great Britain excluding Canada, the continent of Europe and the continent of Asia excluding Australia for at least 5 years for consideration of 10% of profits of 2's business as manufacturer of electric apparatus.	28 April 1908
IG1/9	Agreement for sale of electrical business of Adams Manufacturing Co Ltd between 1) Mr Lewis Hardy (appointed receiver under judgment dated 11 April 1913 and liquidator for the purposes of winding up the company) and 2) Mr Frank Rogers Bacon of Milwaukee. 1) to sell to 2) business as a going concern except the assets called 'the car business'. For £15,000. [Includes inventory of the assets of the car business including tools]	17 July 1913
IG1/10	Agreement between 1) Frank Rogers Bacon and 2) Igranic Electric Co Ltd. 1) to sell business as a going concern to 2) for £35,000.	16 October 1913
IG1/11	Agreement and charge between 1) Igranic Electric Co Ltd and 2) Arthur Herbert Curtis, electrical engineer and until recently employed as manager of the company's business. 2) to act as technical advisor to the company for 1 year. (with copy)	27 May 1933
IG1/12	Agreement between 1) Igranic Electric Company Ltd and 2) James Henry Enion. Re appointment as managing director. Duplicate. With letter from J H Enion regarding his pay during the take over period between the Igranic Electric Co Ltd and Metal Industries (Electrical Group) Ltd.	12 May 1942 and 11 Oct 1945
IG1/13	Agreement between 1) Igranic Electric Co Ltd and 2) Herbert Cecil Hodges, electrical engineer. Re rights to the designs for Hodac Goods and the trade name Hodac. With letter noting Mr Hodges retirement from the company.	4 Aug 1943 and 26 July 1945

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IG1	Agreements, contracts etc	
IG1/14	Agreement between 1) Igranic Electric Co Ltd and 2) Philips Electrical Industries Ltd. 1) grant licence to 2) for manufacture of electric snap switches patent No 543355. For consideration of 20 shillings per 1000 switches made.(licence and royalty)	3 Nov 1955
IG1/15	Copy of Agreement between 1) Igranic Electric Co Ltd and 2) La Thermostatique S.A. License to sell within Italy Switzerland, Sweden and Belgium industrial motor starting or controlling resistors covered by French letters patent 1013067.	8 Nov 1955
IG1/16	Agreement 1) Rheostatic Co Ltd and 2) Metal Industries Ltd. 1) to sell to 2) goodwill and other assets of its business manufacturing and supplying unbreakable industrial motor starting or controlling resistors for use with heavy electrical equipment	29 March 1955
IG1/17	Assignment of patents between 1) Rheostatic Co Ltd and 2) Igranic Electric Co Ltd.	29 July 1955
IG1/18	Agreement between 1) Igranic Electrical Co Ltd and 2) A B Metal Products Limited. Grant of licence 1) to 2) under the terms of an agreement between 1) and Cutler-Hammer Inc. (licence and royalty)	10 May 1956
IG1/19	Agreement between 1) Igranic Electric Co Ltd and 2) Welwyn Electrical Laboratories Ltd. Grant of licence under terms of agreement between 1) and Cutler-Hammer Inc.(licence and royalty)	10 July 1956
IG1/20	Sealed packet No 5: contents listed on outside as follows: Agreements - 1 photographic copy of agreement dated 2 Aug 1950 with Cutler Hammer Inc, 2. Barco negatives of above agreement, 3. Barco negatives of a) Igranic /CH supplementary agreement 10 Nov 1947, b) Igranic /CH/Bristol NSF, c)Igranic/CH/Bristol supplementary agreement 1 Aug 1950	1947-1950
IG1/21	Sealed packet no 7. Contents listed on outside as follows: 1. Original Agreement betwn Cutler Hammer Inc and Igranic Electric Co Ltd dated 23 March 1955 2. copy of letter dated 12 Oct 1955 written to Mr R F Horne (AA Thornton & Co) to Mr W C Lyon, Cutler Hammer Inc and of Mr Lyon's reply dated 6 Dec 1954 relating to the invalidation of patents by prior publication 3. Statement of stamp duty assessed on the agreement 4. Photographic copy of letter from CH dated 24 April 1956 waving royalty for Brookhirst components held on consignment by ISSA and assembled on switchboards for A S Williams 5. Letter from CH Inc relating to the exemption of royalties on Stromag? clutches 6. copy memo by Mr Aitken relating to the acceptance of direct orders from Canada and Newfoundland and to orders for hydraulic bakes for crane services.	1955-56
IG2	Patents registers	1897-1967
IG2/1	Register marked 'Igranic Electric Co Patents Register' giving lists of British, Irish and foreign patents, acquired patents, code cases, trade marks etc. The register gives serial number, subject, applicants, agent, dates, renewals, remarks etc. With list of categories at front	1897-1967
IG2/2	Patents file containing printed copies of related patents (including some of Brookhirst and Donovan). With list in front arranged in date order.	1899-1944

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IG3	Patents	
IG3/1	Patent patents (inventions of the Patent Electric Company of New York, for which the Igranic Electric Co were taking out the British patents)	1925-1930
IG3/1/1	Patent no 257617, for improvements in or relating to variable air electric condensers, and related papers	1925-1926
IG3/1/2	Patent no 278930 for precision potentiometers, and related papers	1927-28
IG3/1/3	Patent no 292893 for a gramophone pickup and related papers	1927-28
IG3/1/4	Patent no 293243 for the Phoovox Pick-up and related papers	1927-28
IG3/1/5	Patent no 298209 for the pick-up device and related papers	1928-30
IG3/1/6	Patent no 309484 for a mounting for pick-up and related papers	1928-30
IG3/1/7	Patent no 322010 for improvements in electrical connecting devices, with related papers	1928-30
IG3/2	Assignment of patent rights by staff to Company	1926-1957
IG3/2/1	Hen B Aldridge - dial indicator	1928
IG3/2/2	George Francis Dandridge - improvements in variable inductance devices for wireless	1926-1927
IG3/2/3	K Younghusband - lifting magnets. Envelope marked 'patent sent to Younghusband.'	1928
IG3/2/4	Rich H Robbins - adjustable tongs for conveyor belts	1928
IG3/2/5	Johann Hermann Abbink-Spauk - improvements in electric switches and relays etc	1928
IG3/2/6	D Sinclair - related papers re 3 patents. Envelope marked 'Assigned to Graham Amplion'	1928-30
IG3/2/7	Fred John Henry Charman - improvements in electrical transformers, thermionic valve circuits, and radio receiving apparatus	1928-30
IG3/2/8	L E Currah - various, mainly for radio apparatus	1929
IG3/2/9	George Francis Dandridge - improvements in variable resistance devices and in forms for electric coils	1929-30
IG3/2/10	George Holdaway - improvements in variable resistance and inductance devices	1929
IG3/2/11	Assignment of patents to Graham Amplion [see IG3/2/6]	1930
IG3/2/12	William M Holbeach - improvements in methods of assembling and mounting plates and sheet like elements in structure, and improvements in rotary adjusting devices, and improvements in electrical condensers	1928-1930
IG3/2/13	Peter Wm Willans - wireless apparatus - various	1928-1931
IG3/2/14	A Hodgson - improvements in thermionic amplifiers	1928-1931
IG3/2/15	A Hodgson - improvements in radio apparatus, valve circuits and transformers	1931
IG3/2/16	Herb S Payman - improvements in electrical condensers, transformers, tuning coil units and variable resistance devices	1933

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IG3/2	Assignment of patent rights by staff to Company	1926-1957
IG3/2/17	Arthur H Curtis - various devices	1933
IG3/2/18	Ernest Wm Short - tank emptying devices Stanley Robt Wright - various devices George Henry Pickering - improvements in electro-mechanical brakes Harold H Rapley - improvements in newspaper conveyors Jn Russell Taylor - various Leslie Harold Paddle - various Alf Hen Mackley - various	26 July 1934
IG3/2/19	Letters of assignment from various people, including some of those in IG3/2/18	1936-57
IG3/2/20	Stanley Robt Wright - various Jn Russell Taylor - various Cyril Ernest Randall - various Percy Wm Townsend - improvements in timing devices Jn R Raylor and Stanley Robt Wright - 2 devices Wm Fred Grafton - 2 devices	16 Jan 1945
IG3/2/21	Deed of assignment between 1) Cyril Ernest Randall and 2) Igranic Electric Co Ltd. Various patents	2 May 1949
IG3/3	Assignment of patents to, or from, other firms	1916-1959
IG3/3/1	Automatic Reclosing Circuit Breaker Co of the USA to the Igranic Electric Co (Patent no 258250)	1926
IG3/3/2	Automatic Reclosing Circuit Breaker Co of the USA to the Igranic Electric Co (Patent no260457)	1926
IG3/3/3	Burndept Wireless Ltd and Wm Rooke to the Igranic Electric Co relating to variabel inductance devices	1927
IG3/3/4	2 papers relating to a patent for improvements in means of fastening plates together. Marked 'taken over by Bifurcated Rivet co'	1928
IG3/3/5	Igranic Electric Co Ltd to the Chorlton Metal co Ltd, Manchester, relating to Vernier Indicating Dials	1929
IG3/3/6	Assignment fo Patents by Igranic Electric Co Ltd to Fawcett Preston & Co Ltd. Patent number 672010.	6 Oct 1959
IG3/3/7	Assignment of patents: 1) The Adams Manufacturing Co Ltd (in liquidation) 2) liquidators to the Adams co, 3) Frank Rogers Bacon 4) Igranic Electric Co Ltd. 3) assigns to 4) with the agreement of 2) in consideration of £500	13 Jan 1916
IG3/4	Ceased patents of the Donovan Electric Co, Birmingham	1948-64
IG3/4/1	Improvements in electric switch and fuse contacts (patent no 613297)	1948
IG3/4/2	Improvements in switch fuses (patent no 613482)	1948
IG3/4/3	Improvements in electric switch fuses (patent no 613849) together with letters patent	1949
IG3/4/4	Photocopy of patent specification 642941 submitted by Paul Louis Julien Gerard and relating to improvements in fluid supports, together with 2 letters relaing to the renewal of a trade mark at his number, for 'Runtact'	1950-52
IG3/4/5	Improvements in electric switch mechanism of the metal clad type (patent no 647333)	1949
IG3/4/6	Improvements connected with electric switches (patent no 648081) with letters patent	1949
IG3/4/7	Improvements relating to electromagnetic contactors (patent no 665536)	1950
IG3/4/8	Improvements relating to electromagnetic contactors (patent no 665537)	1950

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IG3/4	Ceased patents of the Donovan Electric Co, Birmingham	1948-64
IG3/4/9	Improvements relating to automatic starters for electric motors (patent no 672031)	1951
IG3/4/10	Improvements in electric switch fuse mechanism (patent no 692200) together with letters patent	1951
IG3/4/11	Improvements in fuse carriers for electric fuses (patent no 693004)	1951
IG3/4/12	Improvements in conveyor control systems (patent no 705204) together with letters patent	1952
IG3/4/13	Improvements relating to electrical control apparatus for transfer and other machines (patent no 871471) together with letters patent	1957
IG3/4/14	Improvements relating to electrical switches (patent no 1044069)	1964
IG3/5	Foreign patents taken out by the Igranic Electric Co	1926-59
IG3/5/1	Australia	1926-1944
IG3/5/2	Belgium	1926-1932
IG3/5/3	Canada	1927-1931
IG3/5/4	Denmark	1933
IG3/5/5	France	1926-37
IG3/5/6	Germany	1929-30
IG3/5/7	Holland	1934-35
IG3/5/8	Irish Free State - certificates of registration	1921-26
IG3/5/9	Italy	1926-31
IG3/5/10	New Zealand	1944
IG3/5/11	South Africa	1941-47
IG3/5/12	Spain	1926-27
IG3/5/13	Sweden	1927
IG3/5/14	United States of America	1922-23
IG3/5/15	Patents relating to US Serial number 360674 (code BQQ) relating to improvements in machines for counting and stacking flat articles) - Australia, Austria, Belgium, France, Holland, Italy, Sweden, Switzerland	1955-59
IG3/6	Foreign patents, some issued by Brookhirst Switchgear	1934-1971
IG3/6/1	Australia – issued to Fawcett Preston and Co for improvements in electrical resistance heater structures (no 233,725)	1961
IG3/6/2	Australia - issued to Brookhirst Igranic for improvements in electric lamp fittings (no 237888)	1962
IG3/6/3	Austria - issued to Cutler Hammer (no 294977)	1971
IG3/6/4	Belgium - Brookhirst Switchgear - no 577722	1959
IG3/6/5	France - Brookhirst Switchgear no 1219949	1959
IG3/6/6	Germany - Brookhirst Igranic - no 1228275	1955
IG3/6/7	Netherlands - Brookhirst Switchgear no 90394	1959
IG3/6/8	South Africa - Brookhirst Switchgear - no 2710/55 (with copy of British Patent specification no 797587)	1956
IG3/6/9	United States - Stanley Robt Wright - improvements in overload switches (no 1875821)	1934
IG3/7	British Patents - issued to Igranic, Brookhirst Switchgear or Brookhirst Igranic [see also patents register IG2/1]	1953-71
IG3/7/1	Specifications - Improvements - electric motor controllers (Patent no 731360)	1953
IG3/7/2	Specifications - Improvements - control means for induction motors (Patent no 772596)	1954
IG3/7/3	Specifications - Improvements - machines for stacking flat articles (Patent no 781652)	1954
IG3/7/4	Specifications - Improvements - newspaper conveyors (Patent no 785042)	1955
IG3/7/5	Specifications - Improvements - snap action mechanisms (Patent no 805662)	1956
IG3/7/6	Specifications - Improvements - snap action limit switch mechanisms, for	1958

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IG3/7	British Patents - issued to Igranic, Brookhirst Switchgear or Brookhirst Igranic [see also patents register IG2/1]	1953-71
	switches (Patent no 857647)	
IG3/7/7	Specifications - Improvements - mult-unit electric contractors (Patent no 859625)	1958
IG3/7/8	Specifications - Improvements - electrical connecting devices (Patent no 869810)	1959
IG3/7/9	Specifications - Improvements - snap action electric switches (Patent no 873761)	1959
IG3/7/10	Specifications - Improvements -electric switchgear, motor starters, contactors, etc (Patent no 882732)	1960
IG3/7/11	Specifications - Improvements -electrical contact devices (Patent no 933162)	1961
IG3/7/12	Specifications -Push button mechanism (Patent no 934797) (code BZB)	1960
IG3/7/13	Specifications -Speed control systems for electric motors (Patent no 948093)	1962
IG3/7/14	Specifications -conveyor apparatus (Patent no 961717) (BZA)	1960
IG3/7/15	Specifications - Improvements - electro-magnetic brakes (Patent no 989631)	1962
IG3/7/16	Specifications - Improvements - brake assemblies (Patent no 1230319)	1964
IG3/7/17	Specifications - Improvements - conveyor systems (Patent no 1051178) (CDJ)	1964
IG3/7/18	Specifications - Improvements - electric switches (Patent no 1079012)	1964
IG3/7/19	Specifications - pushbutton electric switch operation with maintaining mechanism (Patent no 1111405) (CFL)	1967
IG3/7/20	Specifications - measurement classification apparatus (Patent no 1113770) (CFM)	1966
IG3/7/21	Specifications - electro-mechanical device for producing an operation signal on a machine (1120116)	1966
IG3/7/22	Specifications - Electrical distribution apparatus (1134051)	1966
IG3/7/23	Specifications - Pneumatic timing devices (1161382) (CGC)	1967
IG3/7/24	Specifications - Improvements - electrical contactors (1213496)	1969
IG3/7/25	Specifications - mechanism for re-orienting spaced apart ones of flat articles being conveyed as a stream n overlapped relation (1235241) (CHE)	1971
IG3/7/26	Letters Patent (with specifications attached): Improvements - control means for induction motors (772596)	1954
IG3/7/27	Letters Patent (with specifications attached): Improvements - relating to newspaper conveyors (785042)	1955
IG3/7/28	Letters Patent (with specifications attached): Improvements - relating to plunger actuated electric switches (833435) (BUK)	1956
IG3/7/29	Letters Patent (with specifications attached): Improvements - relating to electrical resistance structures, (Fawcett Preston and Co Ltd) (890837)	1958
IG3/7/30	Letters Patent (with specifications attached): Improvements - multi-unit electric contactors (859625)	1958
IG3/7/31	Letters Patent (with specifications attached): Improvements - snap action limit switch mechanisms for switches (857647)	1958
IG3/7/32	Letters Patent (with specifications attached): Improvements - electric lamp and like fittings (880615)	1959
IG3/7/33	Letters Patent (with specifications attached): Improvements - proximity sensing electric switching (907189)	1959
IG3/7/34	Letters Patent (with specifications attached): Improvements : electrical connecting devices (869810)	1959
IG3/7/35	Letters Patent (with specifications attached): Improvements : snap action electric switches (873761)	1959
IG3/7/36	Letters Patent (with specifications attached): Improvements : electrical contact devices (laminated plug contact) (933162)	1961
IG3/7/37	Letters Patent (with specifications attached): Speed control systems for electric motors (948093)	1962
IG3/7/38	Letters Patent (with specifications attached): Improvements - plunger actuating mechanisms (958805)	1962
IG3/7/39	Letters Patent (with specifications attached): Improvements - brake assemblies (1030319)	1964
IG3/7/40	Letters Patent (with specifications attached): Improvements - electric switches (1079012)	1964

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IG3/7	British Patents - issued to Igranic, Brookhirst Switchgear or Brookhirst Igranic [see also patents register IG2/1]	1953-71
IG3/7/41	Letters Patent (with specifications attached): Electro-mechanical device for an operation signal on a machine (1120116)	1966
IG3/7/42	Letters Patent (with specifications attached): Electrical distribution apparatus (1134051)	1966
IG3/7/43	Letters Patent (with specifications attached): Improvements - electrical contactors (1213496)	1969
IG3/7/44	Letters Patent: pushbutton assemblies (1235114)	1968
IG3/7/45	Letters Patent (with specifications attached): electromagnetic relay apparatus (1304158)	1971
IG3/7/46	Letter Patent (with specification attached) (1334571): circuit for stabilising electricity supply reactive power	1971
IG3/8	British patents - code cases [for numbers BQQ - BYU see IG2/1-2]	1948-1971
IG3/8/1	Improvements - lifting magnets	1948
IG3/8/2	Improvements - electrical contact devices	1950
IG3/8/3	BQQ (patent no 781652)	1954
IG3/8/4	BRV (patent no 790371)	1955
IG3/8/5	BSH (patent no 797049)	1955
IG3/8/6	BUS (patent no 861762)	1957
IG3/8/7	BVJ (patent no 875535)	1957
IG3/8/8	BVK (patent no 877053)	1957
IG3/8/9	BVL (patent no 868652)	1958
IG3/8/10	BVV (patent no 886253)	1958
IG3/8/11	BXZ (patent no 917126)	1961
IG3/8/12	BYA (patent no 881259)	1960
IG3/8/13	BYC (patent no 878452)	1960
IG3/8/14	BYF (patent no 918990)	1960
IG3/8/15	BYU (patent no 944281)	1960
IG3/8/16	BZA (patent no 961717) conveyor apparatus	1960
IG3/8/17	BZB (patent no 934797) push button mechanism	1960
IG3/8/18	BZP (patent no 920756) stacking and jogging machines	1961
IG3/8/19	BZP (patent no 965263) imps in conveyor systems	1961
IG3/8/20	BZU (patent no 90883) conveyor systems	1961
IG3/8/21	BZX (patent no 986387) imps in electric switches	1961
IG3/8/22	CAB (patent no 921563) imps in foot or palm actuable electric switches	1961
IG3/8/23	CAF (patent no 932158) imps in time delay devices	1961
IG3/8/24	CAI (patent no 917479) electromagnetic relay	1961
IG3/8/25	CAO (patent no 1009833) imps in electromagnetic contactors	1961
IG3/8/26	CAV (patent no 971267) imps in electric switch assemblies	1961
IG3/8/27	CAX (patent no 959857) imps for displacing units moving along conveyors	1962
IG3/8/28	CAY (patent no 97147) code responsive systems	1962
IG3/8/29	CBA (patent no 956824) imps in moulding of contact carrier assemblies	1962
IG3/8/30	CBC (patent no 974277) electric switch unit	1962
IG3/8/31	CBS (patent no 969137) electrical switch unit	1962
IG3/8/32	CCD (patent no 978814) electrical contact	1963
IG3/8/33	CCF (patent no 986920) measuring system	1963
IG3/8/34	CCG (patent no 983537) imps in counting system	1963
IG3/8/35	CCI (patent no 968320) power supply for inductive loads	1963
IG3/8/36	CCQ (patent no 985008) static switching circuits	1963
IG3/8/37	CCU (patent no 1001730) imps in mechanism control systems	1964
IG3/8/38	CCV (patent no 1013553) imps in sealed magnetic switching devices	1964
IG3/8/39	CCY (patent no 999215) imps in artical transfer mechanisms	1964
IG3/8/40	CCZ (patent no 1034275) imps in stack wrapping machines	1964
IG3/8/41	CDA (patent no 1034161) imps in article wrapping machines	1964
IG3/8/42	CDB (patent no 1056514) current sensing devices	1964
IG3/8/43	CDC (patent no 1056248) imps in magnetically operated electrical switches and relays	1964

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IG3/8	British patents - code cases [for numbers BQQ - BYU see IG2/1-2]	1948-1971
IG3/8/44	CDF (patent no 1008614) imps in load control systems	1964
IG3/8/45	CDG (patent no 1029764) imps in material dispensing systems	1964
IG3/8/46	CDH (patent no 1013098) imps in pulse generating circuits	1964
IG3/8/47	CDI (patent no 1000345) imps in mechanisms for feeding webs	1964
IG3/8/48	CDJ (patent no 1051178) imps in conveyor systems	1964
IG3/8/49	CDK (patent no 1045465) imps in proximity switching systems	1964
IG3/8/50	CDL (patent no 1072792) imps in electromagnetic relays	1964
IG3/8/51	CDM (patent no 1041126) imps in counting systems	1964
IG3/8/52	CDQ (patent no 1064029) switch operating mechanism	1964
IG3/8/53	CDR (patent no 1062327) electrical controller	1964
IG3/8/54	CDT (patent no 1040191) article counting device	1965
IG3/8/55	CDV (patent no 1086146) frequency sensitive systems and phase sensitive systems	1965
IG3/8/56	CDY (patent no 1103731) motor control systems	1965
IG3/8/57	CDX (patent no 110862) reversible shift registers	1965
IG3/8/58	CDZ (patent no 1044415) imps in printing press mist control apparatus	1965
IG3/8/59	CEB (patent no 1107151) imps in control systems for electric motors	1965
IG3/8/60	CED (patent no 1047916) electric inverter	1965
IG3/8/61	CEE (patent no 1047917) variable frequency supply system	1965
IG3/8/62	CEF (patent no 1120994) multisable circuits	1965
IG3/8/63	CEG (patent no 1060217) roller slat conveyors	1965
IG3/8/64	CEH (patent no 1054007) securing device for a push button device	1965
IG3/8/65	CEI (patent no 1062228) pushbutton devices with interlocks	1965
IG3/8/66	CEQ (patent no 1134054) motor control systems	1966
IG3/8/67	CEW (patent no 1086764) feeder device for use in bundle typing machines	1966
IG3/8/68	CEX (patent no 1134653) one piece bus bar support	1966
IG3/8/69	CFH (patent no 1137747) counter stacker system	1966
IG3/8/70	CFL (patent no 1111405) pushbutton switch operator with maintaining mechanism	1967
IG3/8/71	CFM (patent no 1113770) measurement classification apparatus	1966
IG3/8/72	CFN (patent no 1160341) sealed switches or contact units	1967
IG3/8/73	CFO (patent no 1144286) illuminated pushbutton operating mechanism for electrical switch assembly	1967
IG3/8/74	CFP (patent no 1147721) pushbutton sub-assembly for pushbutton electrical switch assembly	1967
IG3/8/75	CFQ (patent no 1148283) pushbutton sub-assembly for pushbutton electrical switch assembly	1967
IG3/8/76	CFV (patent no 1171209) cubicles for housing electrical control apparatus	1967
IG3/8/77	CGC (patent no 1161382) pneumatic timing devices	1967
IG3/8/78	CGD (patent no 1143159) transfer conveyor systems	1967
IG3/8/79	CGE (patent no 1151626) electric switches	1967
IG3/8/80	CGG (patent no 1160342) electromagnetic switching devices	1967
IG3/8/81	CGK (patent no 1200671) imps in ink mist suppression electrodes	1968
IG3/8/82	CGL (patent no 1204396) compact electrical contact block with electrically isolated bridging contacts	1968
IG3/8/83	CGS (patent no 1167702) electromagnetic switching device	1968
IG3/8/84	CGT (patent no 1169131) linearly operated electric switch	1968
IG3/8/85	CHE (patent no 1235241) mechanism for re-orienting spaced-apart ones of flat articles being conveyed as a stream in overlapping relation (no specification)	1969
IG3/8/86	CHQ (patent no 1228349) apparatus for receiving and stacking articles in counted batches (no specification)	1969
IG3/8/87	CIG (patent no 1256212) conveyor apparatus	1970
IG3/8/88	CJA (patent no 1275022) article counter stacker having mechanically operated gates on the stack receiving table (no specification)	1971
IG3/8/89	CJJ (patent no 1320816) conveyor	1971
IG3/8/90	CKI (patent no 1335587) method and apparatus for placing a wrap around 3 sides of an article	1971

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IG3/9	Transfer of patents between Igranic and Brookhirst	1960-62
IG3/9/1	Correspondence regarding transfer of patents from Igranic Electric to Brookhirst Igranic, to simplify management of patents. With list of patents concerned, 1961-62. With copy of agreement of transfer from Igranic electric to Brookhirst Igranic of all assets, buildings, goodwill etc. 19 Dec 1960	1960-62
IG3/9/2	Correspondence regarding transfer of patents from Brookhirst Switchgear to Brookhirst Igranic, to simplify management of patents. With list of patents concerned	1961-62
IG3/10	Patent cases	1943-54
IG3/10/1	3 applications by Concordia Electric Lamps, Cardiff and Elcordia, Cardiff (presumably the same firm), concerning an alledged infringement of a patent by Igranic's Lo-vo-lite equipment. As Igranic could show that they had manufactured this equipment in 1935 which was about 18 months before the patent was issued to Concordia, all 3 applications failed	1943, 1950, 1954
IG3/10/2	Correspondence etc regarding a 'Memoriser' produced for the use of 'Igranic' staff. Chas Letts (diaries) tried to stop them producing such a memoriser, in which the pencil was held in a hollow tube, inside the cover, for which Letts were submitting a patent in 1952. Igranic said that they had used method since 1935 and produced a 1938 memoriser in evidence. Letts withdrew patent.	1952

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IG4	Design, production, contracts and sales	1919-1959
IG4/1	Design and drawing office	1919-1959
IG4/1/1	Certificate of registration of design fo an adjusting knob for use in the construction of radio instruments (no 722599) issued to the Igranic Electric Co. Envelope marked 'Igranic Pacent'	13 July 1926
IG4/2	Production	1919-1959
IG4/2/1	Minutes of the Joint Production Committee	Dec 1947 - Dec 1950
IG4/3	Contracts	1919-1959
IG4/3/1	Binder containing dyelines on linen of EP drawings with notes from the design and drawing offices. Used by D E Richards, contracts department. The drawings show the detailed specifications of various components etc.	1950-1965
IG4/4	Sales	1919-1959
IG4/4/1	Binder used by the Sales office for filing internal communications and additional information re products, orders etc.	1919-1930
IG4/4/2	Internal correspondence regarding particulars, information and advertising matter received by the Adams Mfg Co Ltd from the Cutler Hammer Mfg Co.	May 1911
IG5	Trade Marks	
IG5/1	Certificates of registration [see IG2/1 for details]	
IG5/1/1	Trade mark no 254366 and 331508 (transfer from Adams)	n.d.
IG5/1/2	Trade mark no 372993 Igranic	n.d.
IG5/1/3	Trade mark no 373021 Igranic	n.d.
IG5/1/4	Trade mark no 373022 Igranic	n.d.
IG5/1/5	Trade mark no 373023 Igranic	n.d.
IG5/1/6	Trade mark no 373024 Igranic	n.d.
IG5/1/7	Trade mark no 377958 Igranite	n.d.
IG5/1/8	Trade mark no 434798 Gimbolder	n.d.
IG5/1/9	Trade mark no 439226 Vernob	n.d.
IG5/1/10	Trade mark no 456410 Ultrynic	n.d.
IG5/1/11	Trade mark no 463700 Nillos	n.d.
IG5/1/12	Trade mark no 464063 Nonmic	n.d.
IG5/1/13	Trade mark no 465320 Igranic Pacent	n.d.
IG5/1/14	Trade mark no 470042 Trigranic	n.d.
IG5/1/15	Trade mark no 470281 Triunnicome	n.d.
IG5/1/16	Trade mark no 472329 Unitime	n.d.
IG5/1/17	Trade mark no 474786 Neutrosonic	n.d.
IG5/1/18	Trade mark no 482810 Gramovox	n.d.
IG5/1/19	Trade mark no 482811 Phonovox (covering letter only)	n.d.
IG5/1/20	Trade mark no 486835 XLLOS with silhouette	n.d.
IG5/1/21	Trade mark no 493616 Megostat	n.d.
IG5/1/22	Trade mark no 494497 Phonotrol	n.d.
IG5/1/23	Trade mark no 494923 Igranikit	n.d.
IG5/1/24	Trade mark no 495881 Pentoformer	n.d.
IG5/1/25	Trade mark no 499862 Igranophone	n.d.
IG5/1/26	Trade mark no 504138 Biogranic	n.d.
IG5/1/27	Trade mark no 504139 Triogranic	n.d.
IG5/1/28	Trade mark no 520868 Pentovol	n.d.
IG5/1/29	Trade mark no 526650 Igranovox	n.d.

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IG5	Trade Marks	
IG5/1	Certificates of registration [see IG2/1 for details]	
IG5/1/30	Trade mark no 541050 Igranitor	n.d.
IG5/1/31	Trade mark no 550496 Thermentor	n.d.
IG5/1/32	Trade mark no 556973 Igranitl	n.d.
IG5/1/33	Trade mark no 570355 Lo-vo-lite	n.d.
IG5/1/34	Trade mark no 606354 CondITLe	n.d.
IG5/1/35	Trade mark no 619654 Oporor	n.d.
IG5/1/36	Trade mark no 663888 Torquil	n.d.
IG5/1/37	Trade mark no 666858 Casquil	n.d.
IG5/1/38	Trade mark no 701685 Igranohm	n.d.
IG5/1/39	Trade mark no 739409 Igranohm	n.d.
IG5/1/40	Trade mark no 740187 Igranite	n.d.
IG5/1/41	Trade mark no 742690 Igranite	n.d.
IG5/1/42	Trade mark no 760589 Igrastat	n.d.
IG5/1/43	Trade mark no 795933 Bi-Stat	n.d.
IG5/1/44	Trade mark no B859033 Multibuild - class 9, electrical control apparatus; electrical switchboards, and parts and fittings	n.d.
IG5/1/45	Trade mark no 859034 Costmaster - class 9, switchboards and parts and fittings therefor	n.d.
IG5/1/46	Trade mark no B905150 device incorporating ia (Industrial Automation Controls Ltd); electric control apparatus incorporating switchgear, transformers and meters etc.	n.d.
IG5/1/47	Trade mark no 915389 device incorporating bhi - Class 7, brakes and clutches, all being electrically operated and for use with machinery, conveyors, stacking apparatus, all for handling newspapers	n.d.
IG5/1/48	Trade mark no 915390 bhi - Class 9, electrical apparatus (many uses)	n.d.
IG5/1/49	Trade mark no 915391 bhi - Class 11, electric lighting fittings for bench and machine mounting	n.d.
IG5/1/50	Trade mark no B919742 Powerblok - class 9, electric motor starters etc	n.d.
IG5/2	Correspondence regarding renewal of trade marks [see IG2/1-2]	1903-1968
IG5/2/1	Igranitor including Igranitor in silhouette (trade mark no 254366)	1903-1959
IG5/2/2	Conspede (trade mark no 331508)	1911-1967
IG5/2/3	Igranitor and plate and circle trade mark design (372993, 373021-024, 437252)	1937-1972
IG5/2/4	Igranite (trade mark no 377958)	1917-1973
IG5/2/5	Clapper (trade mark no 380203 - not granted)	1917-1918
IG5/2/6	Preset (trade mark no 428421 - not obtainable)	1922
IG5/2/7	Gimbolder (trade mark no 434798)	1923-1937
IG5/2/8	What are the Wild Waves Saying (trade mark no 438433 - not granted)	1923
IG5/2/9	'Igranitor' for radio apparatus (trade mark no 437252)	1923-1965
IG5/2/10	Vernob (trade mark no 439226)	1923-1937
IG5/2/11	Honeycomb (trade mark no 459684 - not granted)	1925
IG5/2/12	'Indigraph' for wire-less apparatus (trade mark no 460297)	1925-1967
IG5/2/13	'Igrametric' for use with radio (trade mark no 465342) - the suggested name Orthometric having been rejected	1925-1967
IG5/2/14	Trigranitor (trade mark no 470042)	1926-1968
IG5/2/15	Silhouette without the name 'Igranitor' (trade mark no 473846) not granted	1926-1930
IG5/2/16	Neutrosonic (trade mark no 474786)	1926-1968
IG5/2/17	Phonovox (trade mark no 482811)	1927-1928
IG5/2/18	Urelite (registered by the Cutter Co., Philadelphia, USA) (trade mark no 485241)	1927-1929

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IG5/2	Correspondence regarding renewal of trade marks [see IG2/1-2]	1903-1968
IG5/2/19	Autobilt (not proceeded with)	1928
IG5/2/20	Megostat (trade mark no 493616)	1928-1970
IG5/2/21	Phonotrol (trade mark no 494497)	1928-1970
IG5/2/22	IgranITL (trade mark no 556973)	1934-1962
IG5/2/23	Brookhirst in device (trade mark no B627488)	1944-1964
IG5/2/24	Casquil (trade mark no 666858)	1948-1968
IG5/2/25	Igranohm (trade mark no 701685) - class 17	1951-1972
IG5/2/26	Igranohm (trade mark no 739409) - class 9	1955-1962
IG5/2/27	Igranite (trade mark no 740187) - class 17	1955-1962
IG5/2/28	Igranite (trade mark no 742690) - class 1	1955-1962
IG5/2/29	Igrastate (trade mark no 760589)	1956-1963
IG5/2/30	Panelpak (trade mark no 868422)	1964-1965
IG5/2/31	Mini-mural (trade mark no 872806 - not granted)	1964-1965
IG5/2/32	Powerced (trade mark no 888735 - not granted)	1965-1966
IG5/2/33	Ministart (not registered)	1963-64
IG5/2/34	Load-Pak (not registered)	1964
IG5/2/35	Powerstart (not registered)	1968
IG5/3	Permissions granted by Igranic for use of trade mark	1929-30
IG5/3/1	Permission granted to the Pacent Reproducer Corp, New York, USA for registration for the trade mark 'Pacent-Reproducer' (no 505901)	1929-30
IG5/4	Transfer of trade mark from Adams Co	1906-1983
IG5/4/1	Correspondence regarding the use of the trade mark 'Adams Igranic'	1911-1912
IG5/4/2	Photocopies of correspondence regarding the trade mark IGRANIC No 254366 first registered by the Sturtevant Engineering Co Ltd on May 9th 1903 and subsequently assigned to the Adams Manufacturing Co Ltd in 1911.	1903-1917
IG5/4/3	Assignment of Goodwill and trade marks. The Adams Manufacturing Co Ltd (in Liquidation) to Igranic Electric Co Ltd	13 Jan 1916
IG5/5	Registration of trade marks in various countries	1923-69
IG5/5/1	Argentina - Igranic in silhouette (trade mark no 216819 later 332665)	1933, 1954
IG5/5/2	Australia - Neutrosonic	1928
IG5/5/3	Austria - Igranic (trade mark no 437252, 93106 renumbered 20565)	1923-1950
IG5/5/4	Benelux - Igranic (trade mark no 052785)	1971
IG5/5/5	Bolivia - Igranic (trade mark no 125870, formerly RM9854)	1956
IG5/5/6	Brazil - Igranic in silhouette, class 8 & 20 (trade mark no 262691)	1923-1961
IG5/5/7	Brazil - Igranic, class 6 (trade mark no 293201)	1959
IG5/5/8	Burma - Igranic (trade mark no 2199) (Brit patents 254366, 373021-373024, 437252)	1955
IG5/5/9	Canada - Igranic (NS356 register 1)	1932
IG5/5/10	Canada - Igranic and in silhouette (NS 114 register 1)	1932
IG5/5/11	Ceylon - Igranic (trade mark no 16565)	1955
IG5/5/12	Chile - Igranic (trade mark no 109113 renumbered 155895)	1955
IG5/5/13	Columbia - Igranic (trade mark no 36738)	1956
IG5/5/14	Cyprus - Igranic (trade mark no 5139)	1955
IG5/5/15	Czecho-Slovakia - Igranic (trade mark no 23902)	1923
IG5/5/16	Czecho-Slovakia - Igranic (trade mark no 152820)	1956
IG5/5/17	Denmark - Igranic in silhouette (trade mark no 69/1924)	1924
IG5/5/18	Denmark - Igranic ((trade mark no 259/1923, later 912/45)	1923-1945
IG5/5/19	Ecuador - Igranic (trade mark no 68)	1956
IG5/5/20	Egypt - Igranic (trade mark no 30868)	1955

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IG5/5	Registration of trade marks in various countries	1923-69
IG5/5/21	Finland - Igranic (trade mark no 7568 renumbered 29508)	1924-1946
IG5/5/22	France - Igranic (trade mark no 46562 renumbered 61272)	1923-1953
IG5/5/23	France - BHI (trade mark no 768904)	1968
IG5/5/24	Greece - Igranic (trade mark no 20644)	1955
IG5/5/25	Guernsey - Igranic (Brit no. 373021)	1955
IG5/5/26	Hong Kong - Igranic (trade mark no 287/1956), class 7	1955
IG5/5/27	Hong Kong - Igranic (trade mark no 288/1956) class 9	1955
IG5/5/28	Hungary - Igranic (trade mark no 46092, renumbered 57730 and 76176)	1923-1953
IG5/5/29	India - Igranic in silhouette (trade mark no 1461/25 renumbered 9912)	1925-1942
IG5/5/30	Indonesia - Igranic (trade mark no 57883)	1956
IG5/5/31	Irish Free State - certificates of validation of: Audioformer, Igranic, Vernob, Ultrynic and Gimbolder (trade mark no 8600-02, 8785, 8858)	1937-39
IG5/5/32	Israel - Igranic (trade mark no 10925), class 7	1950
IG5/5/33	Israel - Igranic (trade mark no 10926) class 9	1950
IG5/5/34	Iran - Igranic (trade mark no 14637, formerly 788497)	1955
IG5/5/35	Italy - Igranic (trade mark no 25395 and 98934)	1923-1950
IG5/5/36	Japan - Igranic (trade mark no 90904 later 311864)	1925-1939
IG5/5/37	Jersey - Igranic (reg of 373021)	1955
IG5/5/38	Jersey - Igranic (trade mark no 949)	1959
IG5/5/39	Kenya - Igranic (trade mark no 7182)	1956
IG5/5/40	Malaya - Igranic (trade mark no M/26256)	1955
IG5/5/41	New Zealand - Igranic (trade mark no 23031)	1926
IG5/5/42	Nigeria - Igranic (trade mark no 8419)	1956
IG5/5/43	Norway - Igranic (trade mark no 10178)	1923
IG5/5/44	Paraguay - Igranic (trade mark no 27250, formerly 18743)	1956
IG5/5/45	Peru - Igranic (trade mark no 45521, formerly 73343)	1955
IG5/5/46	Portugal - Igranic and device (trade mark no 31967)	1924
IG5/5/47	Portugal - Igranic (trade mark no 30943)	1924
IG5/5/48	Northern Rhodesia - Igranic (trade mark no 2068)	1950
IG5/5/49	Southern Rhodesia - Igranic (trade mark no 294/1950)	1950
IG5/5/50	Singapore - Igranic (trade mark no 19713)	1955
IG5/5/51	South Africa - Igranic in silhouette (trade mark no 806/25)	1925
IG5/5/52	South Africa - Igranic (trade mark no 603/55)	1955
IG5/5/53	South Africa - Igranic (trade mark no 603/55/1)	1955
IG5/5/54	South Africa - Igranic (trade mark no 603/55/2)	1955
IG5/5/55	South Africa - Igranic (trade mark no 69/0979)	1969
IG5/5/56	Spain - Igranic in silhouette (trade mark no 52493)	1924-1945
IG5/5/57	Spain - Igranic (trade mark no 49576)	1923-1963
IG5/5/58	Spain - Igranic in silhouette (trade mark no 52493A)	1945
IG5/5/59	Sweden - Igranic (trade mark no 26993)	1923
IG5/5/60	Sweden - Igranic in silhouette (trade mark no 27810)	1923
IG5/5/61	Switzerland - Igranic in silhouette (trade mark no 59515 now 111794)	1925
IG5/5/62	Thailand (Siam) - Igranic (trade mark no 16955)	1955
IG5/5/63	Uganda - Igranic (trade mark no 4198)	1955
IG5/5/64	Uruguay - Igranic (trade mark no 85218)	1962
IG5/5/65	Venezuela - Igranic (trade mark no 32797-F, formerly 337)	1957
IG5/5/66	Zambia (formerly Northern Rhodesia) (trade mark no 2070)	1950
IG5/6	Foreign Trade Marks - correspondence	1917-1974
IG5/6/1	General correspondence, giving list of countries in which it is proposed to seek registration etc	1925-1926
IG5/6/2	General correspondence and information about foreign firms using wishing to use trade marks similar to Igranic etc	1925-1927
IG5/6/3	Correspondence of the Pacent Electric Co concerning registration of the Audioformer trade mark in Ireland	1925-1928

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IG5/6	Foreign Trade Marks - correspondence	1917-1974
IG5/6/4	Correspondence regarding the registration of Igranic in Europe	1923-1955
IG5/6/5	Argentina - Igranic in silhouette (various numbers)	1933-1974
IG5/6/6	Australia - Igranic (mainly trade mark no 46272)	1940-1970
IG5/6/7	Australia - Igranic (trade mark no 42335)	1925-1967
IG5/6/8	Australia - Brookhirst in device (trade mark no A94124)	1951-1964
IG5/6/9	Bangladesh - Igranic in silhouette	1973-1974
IG5/6/10	Belgium- Igranic (trade mark no 27529, later 43067)	1932-1962
IG5/6/11	Belgian Congo - Igranic (trade mark no 4657)	1956-1969
IG5/6/12	Bolivia - Igranic (trade mark no 12587C)	1955-1966
IG5/6/13	Brazil - Igranic in silhouette (various trade mark nos including 262691, formerly 23500, and 293201)	1942-1969
IG5/6/14	Burma- Igranic (trade mark no 2199)	1955-1962
IG5/6/15	Canada - Igranic and Igranic in silhouette (trade mark no NS 356)	1932-1962
IG5/6/16	Ceylon - Igranic (trade mark no 16565)	1955-1969
IG5/6/17	Chile - Igranic (trade mark no 109113, now 155895)	1955-1967
IG5/6/18	Columbia - Igranic (trade mark no 36738)	1955-1970
IG5/6/19	Cyprus - Igranic (trade mark no 5139)	1955-1962
IG5/6/20	Czechoslovakia - Igranic (trade mark no 152820)	1956-1966
IG5/6/21	Denmark - Igranic - including small booklet on Igranic Newspaper conveyors (trade mark no 912/45)	1923-1965
IG5/6/22	Denmark - Igranic in silhouette (trade mark no 69/24)	1924-1963
IG5/6/23	Ecuador - Igranic (trade mark no 68)	1962
IG5/6/24	Egypt - Igranic (trade mark no 30868)	1956-1966
IG5/6/25	Eire - Igranic (trade mark no 8785, renumbered 52076)	1930-1965
IG5/6/26	Finland - Igranic (trade mark no 7568-20508)	1934-1966
IG5/6/27	France - Igranic (trade mark no 32538, refiled 46562 and 61272)	1923-1969
IG5/6/28	France - bhi (trade mark no 768904)	1968-1970
IG5/6/29	West Germany - Igranic (trade mark no 309202)	1923-1973
IG5/6/30	Greece - Igranic (trade mark no 20644)	1955-1965
IG5/6/31	Holland - Igranic (trade mark no 87003, formerly 46365) includes certificates of registration	1946-1963
IG5/6/32	Holland - Igranic for radio apparatus (trade mark no 64847) includes certificates of registration	1933-1962
IG5/6/33	Hong Kong - Igranic (trade mark no 287/1956)	1955-1962
IG5/6/34	India - Igranic in device (trade mark no 9912/42)	1940-1971
IG5/6/35	Indonesia - Igranic (trade mark no 57883)	1956-1974
IG5/6/36	Iran - Igranic (trade mark no 14637)	1955-1965
IG5/6/37	Iraq - Igranic (trade mark no 4443) includes certificates of registration	1955-1970
IG5/6/38	Israel - Igranic (trade mark no 10925) class 7	1950-1971
IG5/6/39	Israel - Igranic (trade mark no 10926) class 9	1950-1971
IG5/6/40	Italy - Igranic (trade mark no 98934) with certificate of registration	1950-1970
IG5/6/41	Japan - Igranic (trade mark no 311864, formerly 90904)	1917-1958
IG5/6/42	Jersey - Igranic (trade mark no 949)	1955-1974
IG5/6/43	Kenya - Igranic (trade mark no 7182)	1959-1970
IG5/6/44	Luxembourg - Igranic (trade mark no 21700, formerly 13341) with certificate of registration	1955-1965
IG5/6/45	Malaya - Igranic	1957-1962
IG5/6/46	New Zealand - Igranic in device (trade mark no 23031)	1939-1967
IG5/6/47	Nigeria - Igranic (trade mark no 8419)	1955-1970
IG5/6/48	Norway - Igranic (trade mark no 10178)	1923-1973
IG5/6/49	Paraguay - Igranic (trade mark no 18743)	1955-1965
IG5/6/50	Pakistan - Igranic in silhouette	1949-1973
IG5/6/51	Peru - Igranic (trade mark no 73343)	1955-1966
IG5/6/52	Portugal - Igranic (trade mark no 30943 and 124883)	1924-1964
IG5/6/53	Portugal - Igranic in device (trade mark no 126721, formerly 31967))	1923-1974
IG5/6/54	Singapore - Igranic (trade mark no 19713)	1955-1962
IG5/6/55	South Africa - Igranic in silhouette (trade mark no 806/25) class 8 and Igranic (69/0979) class 7	1939-1970
IG5/6/56	South Africa - Igranic (trade mark no 603/55/1 and 2) classes 9 and 11	1955-1969

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IG5/6	Foreign Trade Marks - correspondence	1917-1974
IG5/6/57	South Africa - Brookhirst in device (trade mark no 98/48)	1948-1964
IG5/6/58	Southern Rhodesia - Igranic (trade mark no 294/1950) classes 6 and 8	1950-1964
IG5/6/59	Spain - Igranic in device (trade mark no 52493A) lifting magnets	1945-1965
IG5/6/60	Spain - Igranic in device (trade mark no 52493) electric switches	1944-1964
IG5/6/61	Spain - Igranic (trade mark no 49576)	1923-1973
IG5/6/62	Sweden - Igranic in silhouette (trade mark no 27810)	1923-1972
IG5/6/63	Sweden - Igranic (trade mark no 26993)	1923-1973
IG5/6/64	Switzerland - Igranic in device (trade mark no 111794)	1945-1965
IG5/6/65	Tanganyika - Igranic (trade mark no 4496)	1955-1969
IG5/6/66	Thailand (Siam) - Igranic (trade mark no 16955)	1955-1966
IG5/6/67	Turkey - Igranic (trade mark no 17342) with certificate of registration	1955-1971
IG5/6/68	Uganda - Igranic (trade mark no 4198)	1956-1962
IG5/6/69	Uruguay - Igranic (trade mark no 85,218)	1956-1972
IG5/6/70	Venezuela - Igranic (trade mark no 32797)	1956-1972
IG5/6/71	Zambia (Northern Rhodesia) - Igranic (trade mark nos 2068, 69, 70)	1950-1973
IG5/7	Correspondence, list of trade marks etc concerned in the assignment by the Igranic Electric co to Brookhirst Igranic Ltd	1959-1961

IG Records of Cutler Hammer Europa, Bedford

IG6	Employee handbooks and information	1940-1978
IG6/1	Igranic Electric Co Ltd working conditions and benevolent fund, social & sports club, hospital scheme and general information.	Jan 1940
IG6/2	'Introducing Igranic' a handbook for staff employees of Igranic Electric Co Ltd. Includes photographs and a plan of the works	n.d. [c1950?]
IG6/3-5	<i>renumbered</i>	
IG6/6	Cutler-Hammer Europa employee handbook	c 1978
IG6/7	Intercom: the magazine of the Igranic Electric Co Ltd	1948-June 1959 with gaps
	<p>First published in December 1947 by the Publicity Department in 1950 it became the responsibility of the Personnel Department. In July 1959 editorship reverted to the Publicity Department 'mainly because the demarcation line between Public Relations - one of the functions of [the Publicity] department - and certain Works Relations, as performed by INTERCOM and its Editor, is frequently so fine that it is difficult to differentiate between them' (SH Pryor, Publicity Manager Intercom July 1959 p3). At this time it also became a joint magazine for employees in Bedford and Chester and a new numbering system was employed see IG6/8 for magazines from this date onwards.</p> <p>See on-line catalogue for further details of holdings.</p>	
IG6/8	Intercom: The magazine of Brookhirst Igranic Limited. From July 1959 until the closure of the Chester works in 1968 the magazine covered news from Bedford and Chester. There were also regular reports from Europe and South Africa. After the reorganisation of the company in 1969/70 coverage included various offices around the country, including the works at Melton Constable, Donovan's in Birmingham and the new plant in Kelvin Avenue, Bedford.	
IG6/8/1	New number sequence started. See on-line catalogue for further details of holdings.	July-Dec 1959
IG6/8/2	Intercom post 1959. After 1959 editions of the magazine were just given a running number rather than a volume and piece number and became bimonthly. See on-line catalogue for further details of holdings.	1960-1982 with gaps
IG6/9	The Record - the Cutler-Hammer Quarterly Magazine. Includes article on the history of Brookhirst Igranic p5	Winter 1971-72

IG Records of Cutler Hammer Europa, Bedford

IG7	Company Catalogues	1916-1979
IG7/1	Correspondence concerning the receipt by the copyright libraries of 'Igranic six Valve Supersonic Heterodyne Receiver'	1925
IG7/2	Catalogue marked with the Igranic symbol containing copies of the various advertising leaflets issued for Igranic products at various dates, and kept in book form	1916-1933
IG7/3	Keeping page in the Newspaper Plant', with photographs and diagrams and a list of papers using Igranic Newspaper conveyors	1928
IG7/4	Cutler-Hammer catalogue containing copies of the various advertising leaflets issued for their products at various dates, and kept in book form	1926-1931
IG7/5	Igranic leaflet no 1600 on magnetic separators	1937
IG7/6	Booklet advertising Igranic control gear for A.C. motors - Division 1 (Export edition), with leaflets concerning D.C. motors loose inside	1936-37
IG7/7	'Control Gear for A.C Motors' Division 1, (second export edition)	1938-40
IG7/8	'Control Gear for A.C Motors' Division 1 (3rd edition)	1938
IG7/9	'Control Gear for A C Motors'	1939
IG7/10	'Control Gear for A C Motors' Third Export Edition	1950
IG7/11	'Brookhirst Machine Tool Control'	[post 1950]
IG7/12	'Igranic Stromag Electro-magnetic clutches'	1956
IG7/13	'Mult-disc electro-magnetic Clutches' Brookhirst Igranic Ltd	[1960?]
IG7/14	'Brookhirst Igranic Magnets'	[1960s?]
IG7/15	'Newspaper Counter-Stacker' booklet with extra information on loose sheets inside [incomplete]	[c 1960s?]
IG7/16	Brookhirst Igranic price catalogue	1960
IG7/17	Brookhirst Igranic P50 catalogue, giving items manufactured and separate price list	1963
IG7/18	P50 catalogue	1964
IG7/19	P50 catalogue	1966
IG7/20	P50 catalogue	[c 1970?]
IG7/21	Donovan Electrical Control Gear and Electronics Products	[1968?]
IG7/22	'Bistat R' - Thorn bhi, with supplements to price list inside	1971
IG7/23	Cutler-Hammer Europa industrial control catalogue	1977-1979
IG7/24	Xerox copy of Adams Manufacturing Co Ltd catalogue for Adams Cars. Includes detailed technical specification and notes on maintenance and photographs of the various models. At the back are a series of photographs of	1911

IG Records of Cutler Hammer Europa, Bedford

IG7	Company Catalogues	1916-1979
	Maurice and Henry Farman mono and bi-planes.	
IG7/25	Igranic Catalogues	1918-1959
IG7/25/1	Igranic Electric Control Devices Catalogue sheets marked 'DC Catalogue, R L Paice'	c1918-c1933
IG7/25/2	Igranic Electric Control Devices catalogue marked 'AC catalogue sheets R L Paice'	c1920-1933
IG7/25/3	Igranic Electric Control Devices catalogue marked 'Col B I Rolling'	1922-1935
IG7/25/4	Igranic Electric Co Ltd catalogue	1951-62
IG7/25/5	Igranic Electric Co Ltd Catalogue	1954-1957
IG7/25/6	Igranic Electric Co Ltd catalogue	1955-1957
IG7/26	Brookhirst Switchgear Ltd, Chester	1954-1966
IG7/26/1	Brookhirst catalogue 32 - Motor Control. Arranged into sections for AC components, DC components, AC starters, DC starters, Accessories and Standard Equipment for special applications.	1954
IG7/26/2	Brookhirst Motor Control catalogue	c 1956-58
IG7/26/3	Brookhirst Motor Control - Marine catalogue 31	c 1959
IG7/26/4	Brookhirst motor control - spares catalogue	1959
IG7/27	Brookhirst Igranic Catalogues	
IG7/27/1	BHI off-the-shelf service catalogue	August 1969
IG7/27/2	Brookhirst Igranic Crane Control Catalogue	n.d. late 1960s

IG Records of Cutler Hammer Europa, Bedford

IG8	Marketing and Public Relations	
IG8/1	Technical publications	
IG8/1/1	Electric Control of Printing Machinery by Adams Manufacturing Co Ltd 2nd ed	n.d. c 1913
IG8/1/2	Stage Lighting: a booklet describing Adams Igranic Metallic dimmers (pamphlet no 7)	n.d. c 1913
IG8/1/3	Electric Control Gear applied to woodworking machinery (pamphlet no 8)	c 1913
IG8/1/4	'A New Push-Button Control System' reprinted from The Engineer'	6 Feb 1914
IG8/1/5	A Paper on Electric Motor Control Gear by J T Mould published by the Association of Supervising Electricians	8 May 1917
IG8/1/6	'How to build the Igranikit receiver'	nd c 1920s
IG8/1/7	'Some machine tools with Igranic Electric Control'	July 1932
IG8/1/8	'A stitch in time' a booklet dealing with some of the fundamental principles of Electric Motor Control Gear Maintenance.	May 1952
IG8/1/9	Leaflet on Cutler-Hammer Battery Charging Rheostats	n.d. c1920s?
IG8/1/10	Leaflet on Cutler-Hammer lifting magnets	n.d. c 1920s?
IG8/1/11	Cutler-Hammer's D120 'the expanding force in Programmable Controllers, printed under the Eaton logo.	n.d. 1980s
IG8/1/12	Internal information regarding the connection of over travel limit switches	5 Dec 1938
IG8/1/13	Leaflet on 'Hodac' switchboards	n.d. 1930s-40s?
IG8/1/14	Folder containing information sheets on the installation and maintenance of Igranic Electric Co Ltd products.	1943-1959
IG8/2	Publications relating to the history and organisation of the Company	
IG8/2/1	Pages from the company magazine 'Intercom' containing extracts relating to the the Adams Manufacturing Co Ltd	c 1958
IG8/2/2	Metal Industries Ltd 'who we are what we do'. Booklet giving details of all the companies in the Metal Industries group	n.d. [pre 1959 as Brookhirst and Igranic are listed separately]
IG8/2/3	Metal Industries Limited 'who we are what we do'	April 1960
IG8/2/4	M Group (Metal Industries Ltd) 'who we are what we do' [This edition no longer lists Igranic Electric S A (Pty) Ltd as a subsidiary of Brookhirst Igranic.]	Nov 1964
IG8/2/5	Two billheads from Brook Hirst & Co. Transferred to Cheshire RO 2/7/2002	1906-1983
IG8/2/6	'Perfect Control' reprint of an article in Schope magazine for industry relating the history of the Brook Hirst Company	Jan 1948

IG Records of Cutler Hammer Europa, Bedford

IG8/2	Publications relating to the history and organisation of the Company	
IG8/2/7	'50 years ago' Commemorative publication on fifty years of Cutler-Hammer 1892-1942	1942
IG8/2/8	Cutler Hammer '75 year perspective on the future' a history of Cutler-Hammer 1892-1967	1967
IG8/2/9	'BHI Gets Things Moving' publicity brochure giving details of principal products etc. [note on cover announces that on 26th April 1974 (after this brochure was printed) Brookhirst Igranic or BHI changed its name to Cutler-Hammer Europa Ltd	1974
IG8/2/10	Cutler Hammer Industrial Controls, Eaton Corporation. Booklet giving brief details of the history of the company from 1906 with captioned photographs. Produced as a handout for an open day.	c 1978
IG8/2/11	Single sheet on Cutler Hammer Today and its research and development.	c 1979
IG8/3	Events	
IG8/3/1	Homecoming of the Adams Car	1964
IG8/3/1/1	Three photographs of the Adams car IK268 probably during delivery to the Igranic works	c 1964
IG8/3/1/2	Postcard addressed to the Publicity Department re attendance at the Homecoming of the Adams Car	1964
IG8/3/1/3	List of people invited to attend the ceremony for the homecoming of the Adams car, the list includes the donor 'W R Vincent, director of Vincents of Reading Limited.	1964
IG8/3/1/4	Photograph of two men on board the Adams car. A sign on the car reads 'en route from Brookhirst Igranic to an honourable retirement in the Shuttleworth collection'. The photograph is overprinted with the message 'Merry Christmas'	1964
IG8/3/2	Negative of 'message from the managing director' D W Kent to visitors to the open day	4 Oct 1958
IG8/3/3	Exhibition photographs - series of photographs of the works etc produced for exhibition possibly for an open day at the works	c 1970s
IG8/3/3/1	Interior of a plant possibly the Adams Works, with notice 'Three 350 Horse power crane controllers Adams Manufacturing Co	c 1970s
IG8/3/3/2	Close up view of Igranic Control Device	c 1970s
IG8/3/3/3	Close up of control device	1970s
IG8/3/3/4	Igranic fire brigade? unknown date	1906-1983
IG8/3/3/5	Igranic ARP wardens? during second world war	1906-1983
IG8/3/3/6	Adams Igranic Football Club 1906-7	1906-1983
IG8/3/3/7	View of tennis courts presumed to be the Igranic sports and social ground.	1906-1983

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IG8/3/4	Luncheon to meet E B Fitzgerald, Chairman of the board of Cutler-Hammer Including, Savoy Hotel, London	1 June 1972
IG8/3/4/1	Luncheon menu	1 June 1972
IG8/3/4/2	Who's Who. Pamphlet containing details of the VIP's attending the luncheon	1 June 1972
IG8/3/5	Cutler-Hammer Board of Directors visit to Spain and England	20-24 May 1973
IG8/3/5/1	Programme for the Directors Events	20-24 May 1973
IG8/3/5/2	Programme for the ladies events	20-24 May 1973
IG8/3/5/3	Programme for the Ladies day visit to Blenheim Palace and Oxfordshire	23 May 1973
IG8/3/5/4	Menu for dinner at the County Hotel, Bedford	23 May 1973
IG8/3/5/5	Menu for luncheon at the Dorchester Hotel, London	24 May 1973
IG8/4	Advertising and Publicity Scrapbooks	
IG8/4/1	Guard book embossed 'Adams Manufacturing Company Ltd Electros 1' Gives a sample and block number for various pictures and logos of Adams products etc indexed at front giving block details eg line block, half tone, etc.	1906-c 1915
IG8/4/2	Guard book lettered 'E T Co Ld circulars etc. Contains press cuttings about the Igranic works some from local newspapers and others from technical magazines such as 'Electrical Engineering'	1910

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IG9	Photographs. Mainly of Igranic Electric Co and Brookhirst Igranic (BHI) products.[These photographs have been retained in the absence of any other record of the customers supplied by the company, however having no index and few dates they are of limited use.]	c1910-1974
IG9/1	Photograph album containing 23 albumen prints of electric control devices etc all captioned.	n.d. c1910?
IG9/2	Photograph albums numbered 1-37 containing gelatine photographic prints of Igranic and BHI products, some in situ and some in isolation. Although many of the photographs have a brief caption almost none are dated. Dates for each volume are deduced from cross- referencing negative numbers of photographs of known date with those without dates. There is no key to the numbering system and in many cases it was difficult to tell what the category was intended to be, the descriptions therefore should only be taken as a rough guide.	1919-1969
IG9/2/1	Volume 1 'DC A1.1-A1.5.' A1.1 appears to be hand operated lever starters and switches, neg numbers W123-A2823 □A1.2 - multiple lever starters, W190-A2959□A1.3 push button starters, A1079-2690□A1.4 heavy duty starters and switches, W122-A1004 □A1.5 pillar panels, W37-A1825	c1919-1919
IG9/2/2	Volume 2: 'DC A1.9 - A5.2' □A1.9 - starters, X309-A1452□A2.1 - regulators? many giving names of clients they were for, W120-A4048□A2.2 - drum controllers, W116-A3689□A2.9 - starters with shunt regulators, X114-A3683□A3.1 - shunt regulators?, W304-A3042□A3.9 - special regulators, W290-A1760□A5.1 contactors including orders for the admiralty, W104-A4005□A5.2change over equipment, A62-3027	C1919-1939
IG9/2/3	Volume 3: 'DC A5.3 - A6.3'□A5.3 - relays, W92-A3777□A5.4 - trip and overload switches, W57-A1909□A5.5 - eddy current, X072-A3525□A6.1 - self acting starters, W54-A3897□A6.2 - special starter leaflet 110, W187-A3751□A6.3 - leaflet 125 self acting starter, W8-A3671	1919-1939
IG9/2/4	Volume 4: DC A6.4-A9.2 A6.4 - unclear possibly some sort of resistors, W111-A3118 A6.5 - pillar panels, W3-A3169 A6.9 - unclear various combinations, W117-A3371 A7.2 - push button regulator, W497-A3652 A7.9 - unclear but possibly to do with speed regulators, X494-A3861 A9.1 - mainly steelworks motors many reversing, includes equipment in situ at Richard Thomas Ebbw Vale and at Karabuk iron & steel works, Turkey, A312-4032 A9.2 - for hoists and cranes, A1956-3986	1919-1939
IG9/2/5	Volume 5: DC A9.3-A9.10 A9.3 - crane protective panels, W159-A3987 A9.4 - control panels, W366-A2729 A9.5 - crane control equipment, W240-A2211 A9.6 - blast furnace equipment, X262-A3783 A9.7 - coal and coke handling equipment, W844-A2045 A9.8 - furnace equipment etc, A827-3630 A9.9 - wagon hoists and conveyors, W577-A3159 A9.10 - rubber mill calendar, X266-2393	1919-1939

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IG9/2/6	<p>Volume 6: DC A9.11-A9.19</p> <p>A9.11 - equipment for bridges, W570-A1804</p> <p>A9.12 - paper mill (includes written explanation), A2044-3634</p> <p>A9.13 - steelworks winch, W219-A2433</p> <p>A9.14 - brewery plant, A3170-3171</p> <p>A9.15 - engine testing equipment, X833-A1960</p> <p>A9.16 - various eg control panel for train kitchen equipment etc, W394-A4010</p> <p>A9.17 - laundry machines, X298-A3602</p> <p>A9.18 - lifts, W107-A2222</p> <p>A9.19 - controls for lathes, drills etc, W45-A4007</p>	1919-1939
IG9/2/7	<p>Volume 7: DC A9.20 - A9.31</p> <p>A9.20 - various but many seem to be for marine use, W376-A3669</p> <p>A9.22 - printing press controllers many with name of client, W18-4006</p> <p>A9.23 - printing press controllers many with name of client, W510-A785</p> <p>A9.24 - gas pressure controlled starters etc, W559-A3184</p> <p>A9.25 - pump controllers including pump starters for mounting on an ARP trailer, A1639-3760</p> <p>A9.26 - refrigerator control, A2194-3586</p> <p>A9.27 - For Ward Leonard and Sisalkraft machines, X166-A3615</p> <p>A9.28 - for steel work machines?, W226-A3798</p> <p>A9.29 - starters etc for specialist machines particularly rolling equipment, W994-A3871</p> <p>A9.30 - unknown, A13-15</p> <p>A9.31 - unknown, X058-483</p>	C1919-39
IG9/2/8	<p>Volume 8: AC B1.1 - B3.3</p> <p>B1.1 - hand operated starter motor, X019-A450</p> <p>B1.2 - hand operated star delta starter, W307-A3769</p> <p>B1.3 - transformers, W932-A3156</p> <p>B1.4 - rotor starters, W35-A2441</p> <p>B1.5 - mostly overload switches, X952-A4033</p> <p>B1.9 - A1967-3209</p> <p>B2.1 - rotor starters etc, W550-A2734</p> <p>B2.9 - A3239</p> <p>B3.1 - contactors, W341-A4040</p> <p>B3.2 - timers, X907-A3714</p> <p>B3.3 - latched in contactors, X303-A3344</p>	1919-1939
IG9/2/9	<p>Volume 9: 'AC B4.1-B5.2'</p> <p>B4.1 - across and on the line starters, A3119-3894</p> <p>B4.2 - starters many with particular safety features, A125-3657</p> <p>B4.3 - contactor starters etc, W185-A3347</p> <p>B4.4 - reversing across the line starters, A552-A305</p> <p>B4.5 - starters etc for two or multi speed equipment, A2071-3196</p> <p>B4.9 - Crampton pillans special ac starter, X071-A3658</p> <p>B5.1 - self acting star delta starters,</p> <p>B5.2 - star delta starters A780-3791</p>	1919-39
IG9/2/10	<p>Volume 10: AC B5.3-B6.9</p> <p>B5.3 - resistance starters, neg numbers W103-A3795</p> <p>B5.4 - auto transformer starters, W? - A3664</p> <p>B6.1 - stator and rotor starters, W1-A4036</p> <p>B6.2 - slipping motor starter, A2077-3674</p>	1919-1939

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IG9/2/11	<p>Volume 11: AC B7.1-B9.11</p> <p>B7.1 - printing presses, negs W381-A3330</p> <p>B7.9 - starter for motor in laboratory aluminium mill, A4037</p> <p>B8.1 - various, X052-A3564</p> <p>B9.1 - steel mill Ebbw Vale, A3123-3682</p> <p>B9.2 - cranes, A3129-3341</p> <p>B9.3 - cranes, X160-A3342</p> <p>B9.4 - steel works, W349-A3690</p> <p>B9.5 - bridges, W442 - A3670</p> <p>B9.6 - blast furnace skip hoist, A519-3290</p> <p>B9.7 - coke oven, A282-3436</p> <p>B9.8 - rotary furnace, X165-A3638A</p> <p>B9.9 - coaling plant etc, A82-A3892</p> <p>B9.10 - Banbury rubber mixer, A3183-4051</p> <p>B9.11- voltage regulator equipment, X171-A2068</p>	1919-1939
IG9/2/12	<p>Volume 12: AC B9.12 - B9.19</p> <p>B9.12 - capstan controllers, negs W409-a3368</p> <p>B9.14 - self acting panel for compressor control, A456-1633</p> <p>B9.16 - heater control, X909-A3880</p> <p>B9.17 - washing machines, X780-A3889</p> <p>B9.18 - lifts, X092-A3131</p> <p>B9.19 - metal working machines, X942-A3898</p>	1920-1939
IG9/2/13	<p>Volume 13: AC B9.20-B9.29</p> <p>B9.20 - control panels for woodworking machines, X908-A3793</p> <p>B9.22 - printing presses etc, A177-A3712</p> <p>B9.25 - pumping stations, W546-A3920</p> <p>B9.26 - refrigeration?, A1885-3600</p> <p>B9.28 - synchronous motors, X757-A2713A</p> <p>B9.29 - controls for rolling machines etc eg wire drawing machines and carpet making, X175-A4052</p>	1921-1939
IG9/2/14	<p>Volume 14: ACCESS C1.1 - C2.2</p> <p>C1.1 - pushbuttons, W454-A4022</p> <p>C1.2 - pushbuttons, W49-A4049</p> <p>C2.1 - pole changing switches, W960-A3908</p> <p>C2.2 - master control desks, W242-A4038</p>	1919-1939
IG9/2/15	<p>Volume 15: ACCESS: C2.3-C6.2</p> <p>C2.3 - flush mounting switches?, W467-A3735</p> <p>C2.9 - controllers, W271-A3780</p> <p>C3.1 - pedal operated switches, W236-A3862</p> <p>C4.1 - weight and float controlled switches, W467-A1948</p> <p>C4.9 - float operated switches, W677-A1607</p> <p>C5.1 - pressure switches, W287-A3736</p> <p>C6.1 - switches operated by various different means, W360-A3750</p> <p>C6.2 - screw limit switches, W202-A3896</p>	1920-1939
IG9/2/16	<p>Volume 16: ACCESS C6.9 - C9.9</p> <p>C6.9 - various specialist switches, W234-A3910</p> <p>C7.1 - phase failure and phase reversal relays, A1402-2501</p> <p>C7.2 - eddy current plugging switches, A1405-3909</p> <p>C7.3 - timing relays, X413-A2423</p> <p>C7.9 - control and indicator panels including for carton sealing machine, indicator map in Canadian Pavilion, World Fair, New York, gong and road sign for Birkenhead bridge, hotel call system and various alarm panels for the air ministry, A378-A3857</p> <p>C9.9 - electric clock and hydro-pneumatic pilot control, W914-A4906</p>	1920-39

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IG9/2/17	<p>Volume 17: Special D1.1-D2.1</p> <p>D1.1 - Ebbw Vale includes pictures of the installation of the Igranic clover leaf lifting magnet etc and other interior photographs of the steelworks in operation also other lifting magnets c 1953?, W105-A3825</p> <p>D1.2 - magnets including photographs of them being made, W9-A3308</p> <p>D1.3 - clutches, W113-A3792</p> <p>D1.4 - brakes, A1410-3925</p> <p>D1.5 - brakes including view of the brake assembly shop. W416-A7467</p> <p>D1.6 - solenoids, W640-A3933</p> <p>D1.9 - ?W987</p> <p>D2.1 - valves etc using controls by Payne Dean Ltd NY. W1485-A3980</p>	c1919-1956
IG9/2/18	<p>Volume 18: Special D2.2-D4.9</p> <p>D2.2 - valves, W106-A3597</p> <p>D2.9 - various, W114-A2092</p> <p>D3.2 - controls etc for 6 watertight doors, A3345-3544</p> <p>D3.9 - unknown, W949-951</p> <p>D4.1 - newspaper conveyor equipment, A235-3764(1938)</p> <p>D4.2 - newspaper equipment, A63-3462</p> <p>D4.3 - bundling press, A2736-3200</p> <p>D4.4 - linotype metal pot, A1016-1476</p> <p>D4.9 - paper cutting and newspaper, X516-A2358</p>	c 1919-1938
IG9/2/19	<p>Volume 19: Special D5.1-D9.1</p> <p>D5.1 - refrigerators, A3373-3645</p> <p>D5.2 - thermentors, A2269-2994</p> <p>D5.3 - heater units, X535-A1136</p> <p>D5.4 - soldering irons and welding, W224-A3746</p> <p>D5.5 - A2235-4043</p> <p>D5.9 - heating elements, W573-576</p> <p>D6.1 - lighting, W232-A2604</p> <p>D6.2 - Lo Vo Lites, A2176-4046</p> <p>D6.3 - lighting including emergency lighting for ARP shelter, A3757-4044</p> <p>D6.9 - window display lighting, X278-A2466</p> <p>D9.1 - various, A3761-3794</p>	c 1920-1939
IG9/2/20	<p>Volume 20: SW:BDS E1.1 - E3.3</p> <p>E1.1 - battery charging panel, W41-A3866</p> <p>E1.9 - automatic controller for motor generator battery charging set, W361-A1503</p> <p>E2.1 - circuit breakers, W473-A1431</p> <p>E2.9 - unknown, W149-A7391</p> <p>E3.1 - circuit breakers, A2106-3891</p> <p>E3.2 - chain-link circuit breakers, A2505-3523</p> <p>E3.3 - changeover switches, A1323-A3887</p>	1919-1939
IG9/2/21	<p>Volume 21: SW:BDS E3.9 - E5.9</p> <p>E3.9 - mostly emergency and auxillary lighting, W164-A2700</p> <p>E4.1 - generators and battery charging panels, A2109-3729</p> <p>E4.2 - generator controls, A2108-3993</p> <p>E4.3 - switchboards including one for Bute Hospital Luton, A2234-4011</p> <p>E4.4 - marine generators including ones for Polish and Brazilian warships, A2181-3660</p> <p>E4.5 - Admiralty work, A2253-4045</p> <p>E4.9 - overload alarms etc, A2548-3691</p> <p>E5.1 - distribution switchboards, A2254-3296</p>	c1920-39
IG9/2/22	<p>Volume 22: Misc F1.1 - F2.1</p> <p>F1.1 -spares charts, W461-A3694</p> <p>F1.2 - mostly housings, W7-A7564</p> <p>F2.1 - mostly panels by other companies, W571-A8506</p>	C1919-1960

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IG9/2/23	Duplicates of photographs presumed to have been in Volume 23: F3.2-F3.4 F3.2 - Trade stands includes: Messrs Van Wijk & Visser's tand at Utrecht Fair, 1947, Igranic at RECMF exhibition 1951, 1952, 1953 and 1955, Igranic at Machine Tool Exhibition, Olympia, 1952, Igranic at ASEE exhibition, Earls Court, March 1954 and 1958, Igranic at Mechanical Handling exhibition, Olympia 1954? and 1958, Igranic at MTTA exhibition Olympia 1956, Igranic at Chemical & Petroleum Engineering Exhibition, 1958, Brookhirst Igranic Ltd at ASEE at Earls Court, post 1958, BHI at the Rand Easter Show, South Africa, c1960?, BHI at Birmingham Clutch Exhibition c1960? F3.4 - generator on testing block F3.9 - model skull breaking crane made by experimental department and used in mechanical handling exhibition at Olympia 1954?	1947-1960s
IG9/2/24	Volume 24: G1.1 - various machines (boring and milling) using Igranic and BHI contol gear including views of 'CRAVEN' duplex gun boring machine for internal boring of Bofos gun barrels made by Craven Bros, Manchester, ROF Barnbow probably during World war two. 0282, W62-A7102	1919-1956
IG9/2/24a	Volume 24a: G1.2 - Lathes using controls by Igranic and BHI, includes W97- 8 Lathes installed at Skefko, Luton, 0283, W27-A8659	c1919-c 1960
IG9/2/24b	Volume 24b: G1.3-G1.4 G1.3 - machine tools fitted with Igranic and BHI controls W21-A8782 G1.4 - cranes and transporter bridges many pictures have very full captions X104-A8982	c 1919-c 1960s
IG9/2/24c	Volume 24C: G1.5-G1.6 G1.5 - views of transporters, ships, steelworks, docks and plants supplied with BHI and Igranic control gear, A769-8883 G1.6 - Steelworks including: Patent Shaft and Axletres, Wednesbury, Birmingham, Steel, Peach & Tozer Ltd, Colvilles Ltd at Glasgow & Glengarnock and Ravenscraig, Workington Iron & Steel Works, Richard Thomas Ebbw Vale. X320-A8546	1919-1960s
IG9/2/25	Volume 25: G1.8-G1.9 G1.8 - furnaces (includes pictures of the furaces not just the controls) X476- A5760 G1.9 - pumping - including sewage works (includes pictures of the stations as well as the controls) X201-A7393	1919-1956
IG9/2/25a	Volume 25a: G1.10-G1.17 G1.10 - bridges, W972-A8988 G1.11- coal and coke moving, A938-7056 G1.12 -A1313-1314 G1.13 - paper making includes machinery for Finland and Holland, X246- A7814 G1.14 - printing presses, W65-A1075 G1.15 - newspapers, X461-W595 G1.16 - refrigeration, A2313-A8356 G1.17 - hoists etc including drag scraper at Bedford power station, W675- A8774	1919-1960s

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IG9/2/26	Volume 26: G1.18-G1.20 G1.18 - marine mostly pictures of ships and their engine rooms, W444-A8763 G1.19 - conveyor driving units for Bedford Brick Co Ltd, A2999-3007 G1.20 - range of machines and places using Igranic and BHI controls including tyre building machines, Wirksworth quarry, Derbs, Clay refinery, St Austell, Cornwall, Meadowsise granary, Glasgow, BBC Television Centre, White City, London, ICI new ethylene plant, Guinness brewery, Dublin, SS Empress of Britain, Ford motor works, Dagenham, Vauxhall motors, Luton, Cookham lock, supersonic wind tunnel, Bedford, Gallions dock, sugar refinery, Mauritius, fertiliser factory, Sindra, India, Express dairies, Bromley, North British Rubber Co mills, Rolls Royce engine est beds, Scotstoun shipbuilding yard, coal and ore plant, Durban, Dublin Electricity works, 'Allen oil engine installed in S Africa, Earls Court heating and ventilation plant, Rothesay dock power station, Broadbent dry cleaning plant, Bethnal Green municipal was houses, W58-A8909	1919-1960s
IG9/2/26a	Volume 26a: G1.21-G3.9 G1.21 - unclear but relate to electricity, gas, blast furnace and sewage plants, A1137-3514 G1.22 - watertight bulkhead doors, A1393-4225 G1.23 - textile machinery, A5084-5873 G1.24 - collieries, A6349-A6354 G1.25 - car manufacturing including Vauxhall, A7571-7582 G1.26 - smelter bays, Baie Comeau, Canada, A7803 G2.1 - brakes, W503-A8778 G2.2 - magnetic separator pulleys, W693-X75 G2.3 - plate lifting magnets, W177-A7117 G2.9 - Andrew Fraser & Co Ltd, A7268-7272 G3.1 - Long Bridge traction station, Birmingham, X708-711 G3.2 - battery charger at Glasgow corporation, X518-A2312 G3.3 - generator etc for large motor yacht, A2500 G3.9 - circuit breaker at a sub station in Birmingham, X709-718	1919-1960s
IG9/2/27	Volume 27: G4.1 - newspaper conveyors some views of the Daily Mirror plant include lighting and film cameras suggesting that some type of publicity film was being made, W785-A8975	1920-1960s
IG9/2/28	Volume 28: G4.2-G5.3 G4.2 - Lo-Vo lite transformers, A3293 G4.9 - A2179 G5.1 - A2177-8428 G5.2 -X509-513 G5.3 - Igranic S P A C Contactors on London's largest flashing neon sign□, A3111-3112	1925-1960s
IG9/2/29	Volume 29: 47000-473000 47000 - spares kits for marine generator panels, A4376-4645 471000 - Admiralty patterns, A4056-4876 472000 - Admiralty patterns, A4072-4868 473000 - circuit breakers, A4061-5235	1939-48
IG9/2/30	Volume 30: 474000-52000 various, A4270-6288	1940-1953
IG9/2/30a	Volume 30a: 52000 - lots of prototype motor control centres but also various control desks, A7976-8619	1958-1960s

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IG9/2/31	Volume 31: 61000-66999 61000 - magnets, A5858-8755 62000 - brakes, A5225-8265 63000 - A3248-8265 64000 - solenoids, A4674-7126 65000 - valves, A4202-6739 66000 - clutches, A4065-A8897	1930S-1960S
IG9/2/31a	Volume 31a: 67000-69999 67000 - newspapers etc, A4173-8856 68000 - transformers, A4078-8658 68600 - Lo Vo Lite, A68600-8431 69000 - unknown, A4088-8523	1939-69
IG9/2/32	Volume 32: 71100-72800 includes pictures of John Summers steel mill, Shotton and other steelworks machines 71100 - A4141-4169 71166 - A4058-8994 71500 - A4707-6463 71700 - A4120-8960 72000 - A4176 72400 - A4062-8498 72500 - A4063-6564 72700 - A4100-6540 72800 - A4081-5120	1939-60S
IG9/2/33	Volume 33: 73000-82300 various 73000 - A5025-6760 75000 - A5210-4073 77000 - A4400-4761 78000 - A4071-8115 80400 - A4107-4112 81000 - A4223-8961 82000 - A4277-8260 82300 - A4240-7710	1940-60S
IG9/2/34	Volume 34: 82400 - relays, A4068-8893	1939-1960S
IG9/2/35	Volume 35: 82500-88000 - various 82500 - A6789-4668 82700 - A4050-7304 82800 - A4098-7389 82900 - A4848-5684 83000 - A4966-6631 84000 - A6435-6438 85000 - 4209-7875 87000 - A4109 89000 - A4069-7864	1939-58
IG9/2/35a	Volume 35a: 88000-89000 88000 - control and switchboards, A7662-8452 89000 - igrastat control panelss etc, A7285-8972	1939-60S
IG9/2/35b	Volume 35b: 91000 - various but mostly for Ford Motor Co, A4087-7471	1939-60S
IG9/2/36	Volume 36 92000-93000 92000 - operaors chairs, switches and levers, A4094-8989 93000 - switches, A4077-7496	1939-1960S

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IG9/2/37	Volume 37, 94000-98000 94000 - pressure regulators, A4083-7949 95000 - float switches, A5238-7339 96000 - plugging relays, A4726-6249 97000 - timers, A4070-5994 98000 - resistors, A4075-8984	1939-60S
IG9/3	Photograph albums containing gelatine photographic prints of BHI products, some in situ and some in isolation. Although many of the photographs have a brief caption almost none are dated. These volumes post date those in IG9/2. There may be some duplication between the volumes but this was extremely difficult to check without listing all the images separately. The listing for each section is either taken from the volume or deduced from the photographs themselves.	1969-1974
IG9/3/1	Volume I 7.1 - marine 7.2 - Richard Thomas and Baldwin Spencer Works 7.3 - Power station machinery 7.4 - Pump machinery 7.5 - Power stations	1960s?
IG9/3/2	Volume II 7.6 - machine tools 7.8 - paper 7.10 - conveyors 7.12 - heating and ventilation 7.13 - lifts including car lifts	1960s
IG9/3/3	Volume III 7.15 - newspapers 7.19 - car industry 7.20 - brakes and clutches 7.22 - magnets 7.23 - Lo Vo lites	1960s
IG9/3/4	Volume IV 7.29 - railways 7.31 - sugar 7.32 - Handling (scrap and other) 7.33 - furnace other than blast 7.35 - oil and petrol 7.36 - breweries 7.37 - wood processing	1959-1974
IG9/3/5	Volume V Miscellaneous large machines	1959-1974
IG9/3/6	Volume VI 25237 - terminals 48020 - isolators and ? 48700 - motor control centres 54080 - cable troughing	1959-1974

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IG9/3/7	Volume VII 61100 - circular lifting magnets 61200 - bobbin lifting magnets 61300 - bi polar lifting magnets 63123 - brakes 63144 - disc brakes 66200 - clutches 66241 - misc 66251 - clutches 66263 - induction clutch 67000 - newspaper equipment 68600 - lo vo lite 69000 - amps - university of Cambridge 69541 - amplifier control panel 69600 - bi stat	1959-1974
IG9/3/8	Volume VIII 88401-2 - control panels 88602 - machinery for model 60RS 88811 - control panels	1959-1974
IG9/3/9	Volume IX 80461 - mini starter 81100 - control board 81166 - machinery panels 81346 - band roll drive equipment 81600 - inspection of machinery 81740 - latched relays 81810-20 - control boards 81900 - wire reeling machinery	1959-1974
IG9/3/10	Volume X 82310 - star delta starter 82400 - relays 82401-2 - contactor 82410 - pneumatic timer	1959-1974
IG9/3/11	Volume XI 82451 - across the line starter 82461 - across the line standard starters 82511 - primary resistance starter 82811 - rotor starter	1959-1974
IG9/3/12	Volume XII 92229 - joystick 92243 - controller 93060 - oil tight limit switches 93200 - limit switch 93300 - precision limit switches 93600 - interior view of limit switch 93980 - Bistat limit switch 94000 - pressure switch 96000 - weather proof speed responsive switch	1959-1974
IG9/4	Second World War Publicity Pictures	1941-1946
IG9/4/1	Duplicate of photograph showing fire at the London Office	May 1941
IG9/4/2	Photography of Winston Churchill	c 1942
IG9/4/3	Display of Bristol engine and engine parts	1940s

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IG9/4	Second World War Publicity Pictures	1941-1946
IG9/4/4	Photograph of exhibition of model aircraft and components marked 'Connolleys' on back.	1940s
IG9/4/5	Damage caused by Enemy Action. Flare dropped in Air Raid 29/6/42. Photograph shows minor fire damage to side of corrugated iron building. Photo No A4431.	1942
IG9/4/6	Works war effort exhibition. Photo No A4535. Display aimed to show workers 'products from various sections of the works illustrating the uses to which they are put'. Includes chart of average monthly output up to November and average output for years 1938-1941.	c December 1942
IG9/4/7	Duplicate of photo no A4587 'Works War Effort Exhibition No 3. Bedford Publicity Dept 1943. Aimed to reduce scrap	1943
IG9/4/8	Duplicate of photo A4592. Works War Effort Exhibition No 5. Machine Tool Control Gear, Bedford Publicity Dept 1944.	1944
IG9/4/9	Photo A4593. Works War Effort Exhibition No 5 Machine Tool Control Gear. Bedford Publicity Dept 1944	1944
IG9/4/10	Photo no A4594 Works War Effort Exhibition No 5.	1944
IG9/4/11	Photo No 4595. Works War Effort Exhibition No 5 Machine Tool Control Gear. Bedford Publicity Dept 1944	1944
IG9/4/12	Photo no A4597. Works War Effort Exhibition Machine Tool Control Gear Bedford Publicity Dept 1944.	1944
IG9/4/13	Duplicate of Photo A4618. Painting showing "Swift" Breech Block Screwing Lathe showing Igranic 450/187LN Drum Controller & Lo-Vo-Lite Lighting (The Academy picture)	c1944
IG9/4/14	Photo A4710. Publicity photograph of surgery nurse taking notes as a female worker has a cup of tea.	c 1945-6
IG9/4/15	Photo A4711. Surgery staff posing outside the surgery.	c 1945-6
IG9/4/16	Unnamed secretary sitting at a typewriter.	c 1945
IG9/4/17	Head and shoulders picture of the same woman as in IG9/4/16	c 1945
IG9/4/18	Unnamed woman making brackets?	c 1945
IG9/4/19	Head and shoulders of the same unnamed woman as in IG9/4/18	c 1945
IG9/4/20	Group of female staff including the woman from IG9/4/18-19.	c 1945
IG9/4/21	Fire brigade with four silver cups	c 1940s
IG9/4/22	Igranic victory float outside the factory. One of the four women on the float is the same as in IG9/4/16-17.	c 1945
IG9/4/23	Photos A4846-7. Igranic float for entry in Bedford's Thanksgiving week parade. A4846 shows 'second prize' label. The float gives totals for workers savings from the years 1939-45.	c 1945
IG9/4/24	Photo A4935: German aerial photograph of Bedford. 'This is a copy of an	c 1946

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IG9/4	Second World War Publicity Pictures	1941-1946
	original document abstracted from German Intelligence records after the Allied occupation. The caption stated that the document is confidential and the photograph was taken on 3/9/39. It lists Short Bros, Britannia Ironworks, and Igranic Electric Ltd as having been bombed in January 1942. Their intelligence people were better informed than we were. We have no record of the incident.'	
IG9/5	Views of the Igranic factory	1943-c1952
IG9/5/1	Bays 21 & 22 Main Switchgear assembly shop. Duplicates of photos A4581-2. A4581 has people in, A4582 does not.	May 1943
IG9/5/2	Bays 21 and 22 Main Switchgear Assembly shop. Duplicate of A4600.	1944
IG9/5/3	Duplicate of photo A4690. Group of 22 workers including those from the surgery standing outside part of the factory.	c 1945
IG9/5/4	Duplicates of photos A4758, 4759, 4766 and 4767, presumed to show various interiors of the Igranic works.	c 1945-6
IG9/5/5	Motor Room of Igranic Main Test Bay. Duplicate of photo A4783.	1946
IG9/5/6	Testing Board in Igranic Test Room. Duplicate of photo A4787.	1946
IG9/5/7	View of Igranic Tool Room. Duplicate of A4810.	1946
IG9/5/8	Duplicate of photo A4912. Presumed to show the Igranic drawing office.	c 1946-7
IG9/5/9	View of Igranic Manet Winding Shop showing 65 inch Ltf 1500 Circular lifting magnet being wound. Duplicate of photo A4699.	c 1943-4
IG9/5/10	View of Igranic Lifting Magnet winding and assembly shop. Duplicate of A4700.	c 1943-4
IG9/5/11	65 inch Lft 1500 circular lifting magnet coil during 'baking' process. Duplicate of A4701.	c 1943-4
IG9/5/12	Man operating pull/stroke testing apparatus in Igranic Research Lab. Duplicate of A4738.	c 1944
IG9/5/13	Pull/stroke testing apparatus Igranic Research Laboratory. Duplicate of A4739.	c 1944
IG9/5/14	Power House. Duplicate of A4952.	1946
IG9/5/15	Two views of the production planning board. Duplicates of photos A4963-4	1947
IG9/5/16	Semi-continuous stoving oven by Curran & co	c 1959
IG9/5/16/1	General view loading semi-continuous stoving oven.(duplicate of photo A8181)	c 1959
IG9/5/16/2	General view unloading. Duplicate of A8182	c 1959
IG9/5/16/3	Side view of oven (duplicate of photo A8183)	c 1959
IG9/5/16/4a-b	Operator attending to automatic control (duplicates of photos A8184-5)	c 1959

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IG9/5	Views of the Igranic factory	1943-c1952
IG9/5/16/5	Oven showing interior of oven loaded. (duplicate of photo A8186)	c 1959
IG9/5/17	Front of part of factory. (Duplicate of photo A4522)	c 1942
IG9/5/18	View of factory. (duplicate of photo A4523)	c 1942
IG9/5/19a-b	Two overhead views of model of factory. Photos A4733 and A4734.	c 1945
IG9/5/20	Reproduction of model of factory with fake background. (duplicate of photo A4961)	1947
IG9/5/21	Aerial view of works (duplicate of photo A7616)	Sept 1957
IG9/5/22	Interior view of Lecture room in Development block (duplicate of photo A5960)	July 1952
IG9/5/23	View of Lecture room in development block (duplicate of photo A5961)	July 1952
IG9/6	Cups and trophies	c1913-1974
IG9/6/1	Bedfordshire model aero challenge cup, presented to Igranic Social and Sports Club by Sir Richard Wells MP for competition. (duplicate of photo A4034)	c 1939
IG9/6/2	Table tennis trophies and replicas presented to Igranic Social and Sports Club by H H Broughton Esq. (duplicate of photo A4265)	c 1940-41
IG9/6/3	Miniature rifle club trophy presented to Igranic Social and Sports Club by Mr R L Paice. (duplicate of photo A4393)	c 1941
IG9/7	Volume of photographs labelled 'development'. Photos from A5002/D - A8882/D showing various experimental products and results of tests.	c 1948 - early 1960s
IG9/8	Volume marked 'radio components' arranged by subject ie coils, coil stands, variometers and variocouples, transformers, resistances, small components, special app: and sets.	1921-1923
IG9/9	Volume marked 'radio and television' . Contains: □ photos of radio and television components photos from A4281-A8146. □ technical photos A4324-4929 including anaesthetic mask for Bedford County Hospital (A4781) and instruction plates in Russia (A4413-5)	c 1940-c 1960
IG9/10	Volume of photographs marked 'MAG AMP'	c early 1960s
IG9/11	Photographs of various products from the Publicity department to Mr Bennett marked 'circulation photographs prints of photographs produced since the previous circulation'	18 June 1965

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IG9/12	35mm slides presumably used in staff training and publicity	c1950-1979
IG9/12/1	Exterior of works with man on a forklift truck and another man standing at the open door.	n.d.
IG9/12/2	Interior of works showing fold out barrier. Possibly used as part of health and safety training?	n.d.
IG9/12/3	Exterior of works with man using a forklift truck to load a skip.	n.d.
IG9/12/4	Interior of works possibly the despatch department.	n.d.
IG9/12/5	Unidentified large machine presumably using Cutler Hammer Control gear.	n.d.
IG9/12/6	Unidentified man in the staff locker room?	1970s
IG9/12/7	View of metal implement being used to rake out metal filings from around machinery on a work bench.	1970s
IG9/12/8	Man looking at the gearing? on a piece of machinery marked 'Richmond'	n.d. c 1970s
IG9/12/9	Close up of hand using some sort of jet or other device attached to a tube possibly to clean a work area?	n.d. c 1970s
IG9/12/10	Close up of man filing metal at a work bence.	n.d. c 1970s
IG9/12/11	Close up of a drill on a workbench	n.d. c 1970s
IG9/12/12	View of man at a work bence	n.d. c 1970s
IG9/12/13	View of man with a machine	n.d. c 1970s
IG9/12/14	View of the Igranic football pitch	n.d.
IG9/12/15	Exterior view of factory frontage	c 1967
IG9/12/16a-b	View of the 'Brookhirst Igranic' sign on the front of the factory.	c 1958-67
IG9/12/27	Nurse examining a man's ear in the company surgery	c 1970s?
IG9/12/28	First aid exercise. Group of men tying other men's legs so as to immobilise them ready to be moved.	1940s?
IG9/12/29	First aid exercise: patient being removed on a stretcher	n.d.
IG9/12/30a-b	Interior views of saloon bar of social club?	c 1970s
IG9/12/31	Interior of workshop with man in white coat pointing out details of on a drawing to a young man in a brown coat	1970s
IG9/12/32	Man in office? surrounded by various pieces of electrical equipment such as televisions, Kenwood food mixers etc.	1970s
IG9/12/33	photograph of a wage packet.	1970s?
IG9/12/34	Cartoon showing a service department with men being hung on coat pegs.	1970s?
IG9/12/35	Photograph of front cover of 'Intercom', the company magazine.	1970s?

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IG9/12	35mm slides presumably used in staff training and publicity	c1950-1979
IG9/12/36	Slide showing the organisation of Cutler-Hammer divisions	1970s
IG9/12/37	Slide showing the names of 'Unions at CHE'	1970s
IG9/12/38	Slide showing a copy of the General Guide to the Office, Shops and Railway Premises Act 1963	1970s
IG9/12/39	Slide showing the 'procedure for dealing with a grievance'	1970s?
IG9/12/40	Four slides dealing with health and safety, three cartoons showing how to lift, danger of electric shock, and danger of flying objects and one slide just saying 'danger'.	1970s?
IG9/12/41	Slide saying 'The End. The Personnel Officer will now answer any questions arising from the programme.'	1970s?
IG9/12/42	Set of slides all taken at the same time	Feb 1975
IG9/12/42/1	View of a room with four men working at tables possibly assembling items.	Feb 1975
IG9/12/42/2	View of an organisation chart for Cutler Hammer Europa	Feb 1975
IG9/12/42/3	View of woman operating a drill?	Feb 1975
IG9/12/42/4	View of two young men assembling panels?	Feb 1975
IG9/12/42/5-11	Photographs of various control panels and products	Feb 1975
IG9/12/43-64	Slides of various control panels etc	early 1970s
IG9/12/65-67	Slides for the logos of 'Profile Cutler Hammer', 'C H World Trade' and 'EATON'.	1971-1978
IG9/12/68	View of Cutler-Hammer plant in America?	c 1971
IG9/13	Photograph album of colour prints mostly of Igranic products but including photographs of Woburn Town Hall (Market Hall), Woburn church, thatched cottages, three views of the Shuttleworth estate, the Adams car leaving the Igranic factory on its way to Shuttleworth and father christmas distributing presents to a group of children.	c 1964
IG9/14	Group of photographs of medium and heavy press sections of Vauxhall works, Luton	c 1957
IG9/15	Views of a moveable bridge, one external view of the control tower and one internal view of the control panel.	c 1970s

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IG9/16	Full plate glass negatives	c1906-1920s
IG9/16/1	View of the Adams Manufacturing Co workshop	c 1906-1913
IG9/16/2	Group photograph possibly of Adams Manufacturing Co staff dressed as if for an outing or special occasion, approximately 71 people including about 39 men and a boy.	c 1910?
IG9/16/3	View of the Igranic Electric Co Ltd workshops neg no W892	c 1919
IG9/16/4	Interior view probably of the tool shop of Igranic Electrical Co Ltd	c 1919
IG9/16/5	Interior of workshop. Neg X391	c 1924
IG9/16/6	Interior, probably part of one of the machine shops. Neg X392	c 1924
IG9/16/7	Exterior view of new office block (built c1924) attached to Igranic Electric Co workshop sheds. Neg no X394	c 1924
IG9/16/8	View of the Igranic Electric Co Ltd works, Elstow Road, Bedford. Neg X395	c 1924
IG9/16/9	View of the new Igranic Electric Co Ltd offices (built c1924) from Elstow Road. Neg X396	c 1924
IG9/16/10	Igranic Electric Co Ltd display stand at a trade exhibition. Neg W230	c 1919
IG9/16/11	Publicity photograph of an Igranic electrical control. Neg W852	c 1919
IG9/16/12	Publicity photograph of Igranic Electrical control gear neg W879	c 1919
IG9/16/13	Photograph of a display of Igranic boxes and packages for Igranic coils, rheostats, potentiometers, transformers etc. Neg X074	c 1919
IG9/16/14	Christmas display of Igranic electric products around a Christmas tree neg A81	c 1920s
IG9/16/15	Publicity photograph of an apparatus using Indigraphs. Controls are labelled as volume, frame, HF, oscillator, filaments and telephones neg A142	c1920s
IG9/16/16	Publicity photograph of the Igranic Supersonic Heterodyne Receiver Outfit patent no 143583. neg A229	c 1920s
IG9/16/17	Publicity photograph of an Igranic radio cabinet neg A532	c 1920s
IG9/16/18	Radio receiver	c 1920s
IG9/16/19	Display of Igranic controls on Berry Skinner & Co products? reading in amperes. Neg 886	c 1920s
IG9/16/20	Publicity photograph of a float operated switch neg 984	c 1920s
IG9/16/21	Publicity photograph of an electrical control bearing a Berry & Skinner patent plate and an Igranic Adams Manufacturing Co plate. neg 929	c 1913-1920s?
IG9/16/22	Large control panel? neg X380	c 1924
IG9/16/23	Radio receiver? neg X384	c 1924

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IG9/16	Full plate glass negatives	c1906-1920s
IG9/16/24	Control panel with controls for: oscillator filament, oscillator, oscillator vernier, 1st and 2nd condensers, amplifier filaments, tone and loud speakers. neg X386	c 1924
IG9/16/25	Radio receiver? neg X445	c 1924
IG9/16/26	Switching gear? neg X499	c 1925
IG9/16/27	Crystal set? neg A793	c 1920s
IG9/16/28	Central control station for electrically operated watertight door system. S S Borinquen. Neg A1396	c 1930s
IG9/16/29	Permanent magnet moving coil loud speaker type D9 rear view. Neg A1697	c 1930s
IG9/16/30	Igranic Button-hole microphone neg A1911	c 1930s
IG9/16/31	Photograph of framed circular design centred around a holy leaf and containing the signatures of all the staff surrounded by the following message 'xmas greetings from the whole staff of the Igranic Electric Co Ltd to A H Curtis esq, general manager'.	1925
IG9/17	Half plate negatives	c 1906-1920s
IG9/17/1	Display of switch boards neg 38D	c 1906-1920
IG9/17/2	Exterior view of the Igranic Electric Co Ltd factory. Neg O55	pre 1924
IG9/17/3	Electric control panel with three valves. neg 24A	c 1920s
IG9/18	Negatives and photographs of staff	c 1920s
IG9/18/1	Photograph of A H Mackley, chief engineer (print and two nitrate negatives)	prior to 1930
IG9/18/2	Photograph of Col B I Rolling, managing director. (1 print and two nitrate negatives)	pre 1930?
IG9/18/3	Photograph of Robert Keith Fleming, (born Scotland 1891, joined Igranic at Bedford, 1924, chief of test, 1926, assistant branch manager Glasgow 1926, Glasgow office manager 1933, London office 1935, assist general manager Bedford 1937, general manager Bedford Oct 1937, joint managing director 1941, sole managing director 1947, chairman of the board 1953 until his retirement in September 1956. Died 3 Feb 1958 aged 67) (1 print and three nitrate negatives)	c 1926?
IG9/18/4	The factory firebrigade?	c 1930s
IG9/18/5	Nitrate negative of table and room decorated with christmas decorations	1913-30
IG9/18/6	Negative, group photograph, presumed to be Igranic staff	1913-30

IG Records of Cutler Hammer Europa, Bedford

IG10	Management records	1906-1983
IG10/1	Minutes	1906-1983
IG10/1/1	Igranic Electric Co Ltd Shareholders Minutes	10 Dec 1913 - 23 Dec 1940
IG10/1/2	Minutes of the directors of Igranic Electric Co Ltd.	25 September 1941 - 12 January 1943
IG10/2	Directors reports and Accounts	1978-1982
IG10/2/1	Cutler-Hammer Europa Limited Annual Report and Accounts	1978
IG10/2/2	Cutler-Hammer Europa Limited Annual Report and Accounts	1979
IG10/2/3	Cutler-Hammer Europa Limited report and accounts	1982
IG10/3	Appointments of first directors and substitute directors for Igranic Electric Co Ltd	1913-1933
IG11	Incorporation and Capital Structure	
IG11/1	Shares in Igranic Electric Co Ltd	1914-1958
IG11/1/1	Volume of Preference Shares Certificates 1-50 (only 1-32 have been issued)	1914-1942
IG11/1/2	Volume of Ordinary Share certificates 1-50.	1914-1935
IG11/1/3	Volume of Ordinary Share certificates 51-100	1935-40
IG11/1/4	Volume of Ordinary Share certificates 101-200 (only 101-146 used)	1940-1958
IG11/1/5	Bundle of share transfer certificates as referred to in IG11/1/2-4.	1914-1958
IG11/2	Articles of Association	1906-1983
IG11/2/1	Memorandum and Articles of Association of The Adams Manufacturing Company Ltd. Incorporated 11 April 1905. Marked 'A H Adams private copy'	1905
IG11/3	Receipts by Mr Bacon for payments under purchase contract	15 Oct 1913 to 6 March 1914
IG11/4	Duplicate letters of indemnity to Radio Advertising Ltd, Hazeltine Neutrodyne Radio Sets Ltd, The Investmet Securities Co Ltd, Christy Safety Razor Co Ltd, Iris Cars Ltd, Croydon Eng Co Ltd in respect of their holding as nominees of one interest each in the Compagnie Cosmos limited company.	Jan 1932
IG11/5	Register of debentures of the Adams Manufacturing Co. Gives number and date of debenture, amount, when repayable, description of property charged, name and address of debenture holder, rate of interest per annum, date interest becomes due.	8 Jan 1909 - 24 Nov 1911

IG Records of Cutler Hammer Europa, Bedford

IG12	Financial records	
IG12/1	Annual accounts of the Igranic Electric Co Ltd	1913-1959
IG12/1/1	Adams Manufacturing Co Ltd - Statement of Affairs	22 April 1913
IG12/1/2	Accounts	30 June 1914
IG12/1/3	Accounts	30 June 1915
IG12/1/4	Accounts	30 June 1916
IG12/1/5	Accounts	30 June 1917
IG12/1/6	Accounts	30 June 1918
IG12/1/7	Accounts	30 June 1919
IG12/1/8	Accounts	30 June 1920
IG12/1/9	Accounts	30 June 1921
IG12/1/10	Accounts	30 June 1922
IG12/1/11	Accounts	30 June 1923
IG12/1/12	Accounts	30 June 1924
IG12/1/13	Accounts (these are not the official accounts but an internal letter to Mr Galer showing the final operations for the year)	30 June 1925
IG12/1/14	Accounts	30 June 1926
IG12/1/15	Accounts	30 June 1927
IG12/1/16	Accounts	30 June 1928
IG12/1/17	Accounts	30 June 1929
IG12/1/18	Accounts	30 June 1930
IG12/1/19	Accounts	30 June 1931
IG12/1/20	Accounts	30 June 1932
IG12/1/21	Accounts	30 June 1933
IG12/1/22	Accounts	30 June 1934
IG12/1/23	Accounts	30 December 1935
IG12/1/24	Accounts	31 December 1936
IG12/1/25	Accounts	31 Decemer 1937
IG12/1/26	Accounts	31 December 1938
IG12/1/27	Accounts	31 December 1939
IG12/1/28	Accounts	31 December 1940
IG12/1/29	Accounts	31 December 1941
IG12/1/30	number reserved	1913-1959
IG12/1/31	Accounts	31 March 1943
IG12/1/32	Accounts	31 March 1944
IG12/1/33	Accounts	31 March 1945
IG12/1/34	Accounts	31 March 1946
IG12/1/35	Accounts	31 March 1947
IG12/1/36	Accounts	31 March 1948
IG12/1/37	Accounts	31 March 1949
IG12/1/38	Accounts	31 March 1950
IG12/1/39	Accounts	31 March 1951
IG12/1/40	Accounts	31 March 1952
IG12/1/41	Accounts	31 March 1953
IG12/1/42	Accounts	31 March 1954
IG12/1/43	Accounts	31 March 1955
IG12/1/44	Accounts	31 March 1956
IG12/1/45	Accounts	31 March 1956
IG12/1/46	Accounts	31 March 1957
IG12/1/47	Accounts	31 March 1958
IG12/1/48	Accounts	31 March 1959

IG Records of Cutler Hammer Europa, Bedford

IG12/2	Annual accounts of Igranic Electric S A (Proprietary) Ltd (previously Brookhirst Igranic SA(Pty) Ltd	1955-1959
IG12/2/1	Accounts of Brookhirst Igranic S A (PTY) Ltd	31 March 1955
IG12/2/2	Accounts of Igranic Electric S A (Proprietary) Ltd	31 March 1956
IG12/2/3	Accounts	31 March 1957
IG12/2/4	Accounts	31 March 1958
IG12/2/5	Accounts	31 March 1959
IG12/3	Annual accounts of Igranic Electric Co Ltd Radio Advertising Ltd	1926-1958
IG12/4	Income Tax Returns	1919-1942
IG12/4/1	Folder of correspondence and income tax returns for staff of Igranic Electric Co Ltd.	1919-1942
IG12/5	Account books etc	1906-1983
IG12/5/1	Completed account book for the Igranic Canteen's account with J H Whittall, family butcher of 48 Amphill Road, Bedford	May 1921 - April 1924
IG12/5/2	Loose leaf ledger indexed at front and then arranged by lettered account codes. Includes receipts and payments and accounts include individuals, companies, shares, securities, creditors, liabilities and the Cutler Hammer concessions and settlement.	1913-c 1931
IG12/6	Monthly Salary Account books	1941-1959
IG12/6/1	Monthly Salary Book. Includes name, salary, income tax, other deductions, net salaries.	Aug 1941 - June 1948
IG12/6/2	Monthly salary book. Includes name, office, PF No, salaries, income tax, employees ins, pension fund, other deductions, net salaries, Coy's Ins, Cr No, Ins group.	June 1948 - June 1954
IG12/6/3	Monthly Salaries Book. Gives account no, +C or L award, rate, name, PF No, Salaries, Income tax, employees Ins, Pension fund, other deductions, net salaries, Coy's Ins, Cr No.	April 1954 - 1956/7.
IG12/6/4	Monthly Salary Book. Gives: a/c no, C or L award, name, PF no, salaries, income tax, employees ins, pension fund, other deductions, net salaries, Coy's ins, Cr No.	1957/8 - 1958/9
IG12/7	Account book for Salaries paid by the London Office. Includes Monthly and Weekly paid staff. Gives name, office and amount.	5th Jan 1924 - 1934 (weekly) and 1937 (monthly)
IG12/8	Foremen and Staff Mutual Benefit Society account book. Gives name, weekly or montly, scheme (A or B), reference, date joined, contributions of employee and company.	1957/8 - 1967/8

IG Records of Cutler Hammer Europa, Bedford

IG13	Property Records	1904-1983
IG13/1	Elstow Road	1904-1927
IG13/1/1	Incomplete photographic copy of conveyance C Franklin to A H Adams of 6ac 17p in the parish of St Mary, Bedford for £2,444 16s includes plan	19 December 1904
IG13/1/2	Correspondence relating to the dispute over the southern boundary between Igranic, Peek Frean & Co Ltd and Wells and Winch. The dispute centred around whether the boundary ran through the centre of the hedge or whether Wells and Winch could claim 4 feet on the Igranic side of the hedge. It was the building a new public house 'The Angel', architect Mr Inskip, which brought matters to a head.	Sept 1923 - May 1927
IG13/2	Factory at Kelvin Avenue	1968
IG13/2/1	Pictorial souvenir of the opening of BHI's new factory at Kelvin Avenue	26 July 1968
IG13/3	37 Putnoe Lane	1948
IG13/3/1	Correspondence re the second mortgage on 37 Putnoe Lane, £1500 lent to W E Aitken	1948
IG13/4	Land at Kempston	1952-59
IG13/4/1	Letter form J R Eve & son enclosing notice of determination of development value under the Town & Country Planning Act, 1947 and relating to 11.031 acres in Kempston, Beds	1952-59
IG13/5	Memoranda regarding items deposited in the company deed box at Westminster bank, Bedford	1949-1957

IG Records of Cutler Hammer Europa, Bedford

IG14	Personnel Records	1906-1983
IG14/1	Personnel record cards (Blanket embargo until 2050 – staff may search the cards to see whether a particular card exists in order to advise searchers on whether it is worth their while to proceed in requesting permission to gain access)	1920-c1965
IG14/1/1	Series labelled 'Ex Bedford Employees (Male)'. Each card gives name, date of birth, address, educational standard, apprenticeship and experience, department, capacity, start and end dates for employment at Igranic, reason for leaving, physical defects, useful suggestions received, general history and remarks.	c 1930 - c 1959
IG14/1/2A	Series labelled 'Past Staff Records Male'. Each card gives: surname and initials, department, details of pay and superannuation with brief notes on employment history, date of leaving. Some also give reason for leaving. Includes list of 'draughtsmen released from September 1939'.	c 1936-c1963
IG14/1/2B	Series labelled 'Past Staff Records Female'. Each card gives: surname and initial, department and capacity, date of joining, pay and related employment details, date of leaving. Some include reason for leaving and comments on standard of work.	c 1930 - c 1963
IG14/1/3	Series labelled 'Current staff'. Each card gives: surname and initial, pay and related employment details, superannuation, department. There are also cards which list male and female staff and break the staff down by age group.	up to 1962/3
IG14/1/4A	Series labelled 'Leavers works male'. Each card gives: name, date of birth, address, employed as, category, department, commenced, left, previous employ, reason leaving, code, foreman's remarks, re-engage, ability, conduct, timekeeping.	Up to c 1965
IG14/1/4B	Series labelled 'leavers works - females 1960-65'. Each card gives: name, date of birth, address, employed as, category, department, commenced, left, previous employ, reason leaving, code, foreman's remarks, re-engage, ability, conduct, timekeeping.	1960-65
IG14/2	Training department register of apprentices and trainees commencing training with the company from 1919 and register of placement of Ex-Chester apprentices.	1919 - 1974 (compiled 1970s?)
IG14/3	Letter from Ernest Janner? to Mr Reeve giving his reminiscences of the company during its early years.	16 November 1978
IG14/4	Licence registration book for a grey and black laudaulette NM 1173 made by Iris Cars Ltd in 1912 and registered to Igranic Electric Co Ltd	1921
IG14/5	Who's who: Cutler-Hammer and Brookhirst Igranic personalities. Booklet containing photographs and biographies produced for the directors visit in 1973 see IG8/3/5.	23/24 May 1973

IG Records of Cutler Hammer Europa, Bedford

IG15	Ephemera	1906-1983
IG15/1	Poem - 'The end of the month on Output - Rotten'	c1920 with annotations from 1930
IG15/2	Play 'They also serve: a tribute to the patience of our long suffering customers'.	n.d. c 1920-30
IG15/3	Transcript of memorial plaque: 'In grateful memory of those employees of Igranic Electric Co Ltd who gave their lives in the service of their King and Country during the World War - Robert G Blackburn, Frederick A Carter, Cyril G Chesher, Ivor J church, John Clark, Arthur J Cole, Leslie K Crane, Albert H Edwards, Percy Fuller, Michael J Gooch, Frederick A Jennison, Richard D Labrum, Wilfred Leach, Albert Lett, Eric J Livermore, Edward Pell, Aubrey Taylor, Norman C Wattling, Bertie Williams, Geoffrey F Wyes.	1906-1983