

MS 2019

[Miscellaneous wartime (WW1) collection of chiefly reports, mostly from M.I.D.'s Anti-Aircraft Experimental Section (at Rochford and at Orfordness) and Acoustical Research Station (at Imber Court) re sound location and allied subjects, complemented by material compiled later by Science Museum staff relating to echo-sounding, sound ranging, hydrophones, etc. Many items, from /1 to /48, bear an ms. report number.]

A.A.E.S. = Anti-Aircraft Experimental Section

A.E.S. = Armament Experimental Station

A.R.S. = Acoustical Research Section

M.I.D. = Munitions Inventions Department

M.I.P. = Munitions Inventions Panel

Capt. (later Major) A.V. Hill was Director, A.A.E.S.

Capt. W.S. (or W.T.) Tucker, R.E. was Supt. of Acoustical Research, M.I.D.

/1-6 Imber Court: A.R.S. M.I.D. at Experimental Ground, Thames Ditton, Surrey

/1 - 236. [To] Controller, M.I.D., Westminster / W.S. Tucker. [Report on previous week's progress] 7p.

/1a - Tube resonators. (Preliminary discussion) 10p.

/2 1918 Feb 18 237. [To] Controller, M.I.D., Princes Street / W.T. Tucker. [Report on previous month's progress] 11p.

/3 1918 Mar 239. [Report for w/e 16 Mar] / W.S. Tucker. 5p.

/4 1918 Mar 246. A.R.S. M.I.P. [Report for w/e 30 Mar] / W.S. Tucker. 4p.

/5 1918 Apr 247. [Report for w/e 6 Apr] / W.S. Tucker. 3p.

/6 1918 Oct 10 [Report on sound mirrors] / W.T. Tucker. [Bears ms. name 'Lt. MacAlister'] 5p. + blueprint

/7-10 Orfordness: A.A.E.S. M.I.D. at A.E.S., Royal Flying Corps.

/7 1917 Jan 15 207. Tests of accuracy of sound-locating trumpets on moving aircraft. Preliminary report. 20p.

/8 1918 Feb 18 220. Direction of searchlights to aeroplanes by means of sound-locating trumpets. 5p. + 4p.

/8a 1918 Feb 24 Report A/82 on value of a tetrahedral prism for indicating to a searchlight whether a machine it has picked up is hostile or friendly / Capt. F.W. Musson, O. i/c No. 1 Section, Major B.M. Jones, Chief Experimental Officer, Lt. Col. A.C. Boddam-Whetham O.C. A.E.S., Royal Flying Corps. 2p.

/9 1918 Feb 27 219. Note on flying to intersections of searchlight

		beams. 3p.
/10	1918 Mar 18	224. Use of sound-locating trumpets in the direction of searchlight beams. 10p.
/11-18		Rochford Sub-station, A.A.E.S., M.I.D.
/11	-	Experiments with ear-defenders in sound-locator trumpets. [Bears ms. name 'Lt. MacAlister'] 7p.
/12	1918 Jan	206. Sound locating apparatus used for position plotting and height finding. 3p.
/13	1918 Mar 15	232. Bennett plane acoustic height and position finder / C. Jakeman. 4p.
/14	1918 May 8	Modifications of trumpet sound-locators to produce increased audibility and greater freedom from disturbances / Archd. Ward, Lt. R.A.F. [Bears ms. name 'Lt. MacAlister'] 6p.
/14a	1918 Jun 8	To Director A.A.E.S. M.I.D. Note on sound location by double disc apparatus / Lt. A Ward R.A.F. [Bears ms. names 'Lt. MacAlister [&] Col. Monkhouse'] 6p.
/15	1918 Aug	Experiments made to determine suitable sound detection means for faint sounds / 'by Sgt. Major Maxwell'. 5p.
/16	1918 Sept 25	Notes on the proportions of trumpets for sound locators / C. Jakeman. [Bears ms. name 'Lt, MacAlister'] 5p.
/17	1918 Sept 25	Notes on Prof. Stewart's paper on the use of long trumpets / C. Jakeman. [Bears ms. name 'Lt. MacAlister'] 3p.
/18	1918 Nov 5	382. Note on the influence of the separation of the receivers upon the accuracy of binaural sound locators / C. Jakeman. 22p., <u>with</u> 13 blueprint charts & graphs
/18a	1918 Nov 5	381. Note on Mr Jakeman's report [i.e. /18] / A.V. Hill, Major. 3p.
/19-23		[Reports to the Director, A.A.E.S., M.I.D,]
/19	1918 Jun 19	300. --- untitled --- / Lt. A. Ward, R.A.F., 24, A.A.S.S., B.E.F. [Bears ms. name 'Lt. MacAlister'] 2p.
/20	1918 Jun 19	301. Sound locators with 2'-3" trumpets / Lt. Ward, [as /19. Bears ms. name 'Lt. MacAlister'] 3p.
/20a	1918 Jun 24	Experiments on air-pipes for sound-locators. (Preliminary note) / Lieut. E.A. Milne, R.N.V.R., H.M.S. <i>Excellent</i> . 3p
/21	1918 Jul 27	Sound-locators / Lt. A. Ward R.A.F. 5p.

/22	1918 Jul 31	Observations on A.A. defences especially relating to sound-locators / C. Jakeman, N.P.L. [Bears ms. note 'for the personal attention of Lieut. MacAlister'] 15p.
/23	1918 Aug 10	Report on visit to Pont-sur-Seine / A. Ward, Lieut., R.A.F. [Bears ms. name 'Lt. MacAlister'] 5p.
/24-33		[Reports by, or circulated by, Capt. (later Maj.) A.V. Hill]
/24	-	335. Copy of report received by Major A.V. Hill from Professor Burnstead, Scientific Attaché, American Embassy: The use of long (four to six meter) horns in airplane detection and location / G.W. Stewart. [Bears ms. name 'Lt. MacAlister'] 7p. + blueprint graph
/25	1918 Mar 10/11	223. Co-operation of M.I.D. and R.F.C. at Orfordness. Present state of experiments with sound-locators / Lt. E.A. Milne R.N.V.R., H.M.S. "Excellent". [Sent by Capt. Hill to the Controller, M.I.D.] 3p.
/26	1918 Mar 16	231. [Report of meeting of a sub-committee of the Gunsights Committee, sent by Capt. Hill to the Controller, M.I.D.] 5p.
/27	1918 Jun 29	Monthly report [of the A.A.E.S.] / Major A.V. Hill. [Bears ms. name 'Lieut. MacAlister'] 8p.
/28	1918 Jul 31	Monthly report [of the A.A.E.S.] / Major A.V. Hill. [Bears ms. 'Lieut. MacAlister, Stokes Bay'] 8p.
/29	1918 Aug 15	[Translations of reports of 5 & 10 Jun and 3 Jul by Sous Lieutenant Gosse (Section d'expériences de Saint Cyr) to Col. Pierart (Président of the Commission d'Ecoute d'Avions, Paris). Sent 'for the personal information of Lt. MacAlister', by Major Hill] 16p.
/30	1918 Oct 7	370. [Extracted notes from report to the Research Information Committee, Washington: 'The Perrin telesitemeter, the Baillaud paraboloid, and the ring sight' / Lt. B. Loeb, Office of the Scientific Attaché, Paris. Sent by the Scientific Attaché, American Embassy to Major Hill, he forwards it 'for the personal information of Lt. MacAlister'] 16p. + 6 blueprints
/31	1918 Oct 29	377. Sound-proof headpiece / Frank Gray. [Sent to Major Hill by Prof. Bumstead [sic], Scientific Attaché of the American Embassy and circulated by him] 9p. + 1 blueprint
/32	1918 Oct 30	375. Report on visit to Pont-sur-Seine [i.e. the School of Défence Contre Avions] / Major A.V. Hill. [Bears ms. name 'Lt. MacAlister'] 7p.
/33	1918 Nov 1	Tetrahedral prisms for the identification of friendly

- aircraft at night. [Report by Capt. G.E. Scholes and Capt. C.G. Wilcocks to Commandant, R.E. School of Electric Lighting; circulated by Major Hill] 5p.
- /34-37 Miscellaneous reports etc.
- /34 - [Memorandum] / Colonel Jay P. Hopkins, Chief of Anti-Aircraft Service, American E.F. [Bears ms. note 'Lt. MacAlister. Please see & show to Col. Monkhouse'] 1p.
- /35 - Note on the combination of a binaural sound-locator and a searchlight on one mounting. 6p. + blueprint
- /36 - 159. A.A.E.S. M.I.D. Aircraft locating trumpets. 10p
- /37 - 230. Summary of a report on a pair of Darwin listening trumpets by Admiral Sir Henry Jackson, R.N., F.R.S. 3p.
- /38 1916 Sept 4 M.I.D., Princes St., Westminster. The Hartree height-finder (patent). 8p. + blueprint
- /39 1917 Oct 22 164. A.A.E.S. M.I.D. H.M.S. "*Excellent*". Sound locating trumpets. Theory and errors. 11p. + blueprint
- /40 1918 Apr 4 248. M.I.D. A.R.S. Some notes on listening shafts or wells for the location of aeroplanes in space / G.M. Moubray, Lt. R.E. 4p.
- /41 1918 Apr 15 A.A.E.S. The comparison of quality of sound heard in sound-locator trumpets. [Bears ms. note to Lt. MacAlister / A.V. Hill] 1p.
- /42 1918 [May?] Extract from the monthly [April?] report of the anti-aircraft experimental section. For the information of the Gunsights etc. Committee. [Bears ms. name 'Lt. MacAlister, Stokes Bay'] 8p.
- /43 1918 Jul 10 [Letter] Stokes Bay, Gosport, Hants [to] M.I.D., 53 Princes Street, Westminster / Lt. Col. S.E. Monkhouse, Commandant R.E. School of E.L. [Bears stamp of R.E. School of Electric Lighting, and ms. name 'Lieut. MacAlister'] 1p.
- /44 1918 [Aug?] 392. Variations in wind velocities and air-speeds of E.A.S. observed in France during June and July 1918 and their effect upon estimation of height in single station height-finding by sound. 7p.
- /45 1918 Sept 3 [Circular letter, this copy to] Lt. MacAlister / Lt. Col. S.E. Monkhouse, Commandant of R.E. School of Electric Lighting, Stokes Bay, Gosport, Hants., [re] Trials made with Mallock-Armstrong ear defenders in use with sound locators. [Bears stamp as /43] 1p.
- /46 1918 Oct 31 A.A.E.S. M.I.D. The use of sound locators with guns and searchlights. (Notes made on 9 Oct in France by Lieut. E.A. Milne R.N.V.R. made for the

		information of the A.A.D.C. 1 st Army B.E.F.) [Bears ms. name 'Lt. MacAlister'] 8p.
/47	1918 Nov 24	A.A.E.S. M.I.D. H.M.S. <i>Excellent</i> . Notes on Mark F sound locators. [Bears ms. name 'Lt. MacAlister'] 4p.
/48-50		Papers
/48	1907 Nov	401. Sound location / Lord Rayleigh, [from] <i>New Quarterly</i> , No.1, 3-16. [Ts. transcription circulated by Major A.V.Hill, Director A.A.E.S. on 3 Jan 1919] 14p.
/49	1920 Mar	The theory of receivers for sound in water / H.A. Wilson, [from] <i>Physical Review</i> , XV, 178-205
/50	1922 Feb	Sound-ranging / E. Lancaster Jones, [from] <i>Proceedings of the Musical Association</i> , 77-79
		Science Museum material
/51	1921	[Folder of 31 museum labels relating to 27 objects presented in 1921 by the Admiralty]
/52	-	[Folder, previously marked 'Submarine Signalling / Detection, Echo-sounding', containing: <ul style="list-style-type: none"> a) Select bibliography on hydrophones (excluding patents) 3p. ts. b) Abstracts of Articles [1923-1939] in <i>Hydrographic Review</i> relating to Echo-sounding, etc. 9p. ms. c) Signalling Abstracts of B[ritish] Patents [1909-1938] on Submarine Acoustic Receivers. 9p. ms. d) [other notes on sound-ranging, echo-sounding etc., chiefly re patents] 7 leaves ms.
/53		[Folder, previously marked 'Sound ranging and hydrophones', including, inter alia, patent specification 129,364 of 1918 of Western Electric Co. Ltd. et al re 'Improvements in Sound Detectors'; ms. notes re Kelvin lecture of Apr 1920 by C.V. Drysdale re anti-submarine work; ms. notes re sound-ranging, and re 'Tucker Hot Wire Microphone'; ts. lists of 'Instruments offered to the Science Museum by the Admiralty', and of 'Acoustic Appliances at Shandon'; ts. copy of paper 'Acoustics under water during the period of the Great War', read by G.H. Nash before the Western Electric Engineering Soc., Oct 1922, (ms. extracts of same), and brief Museum correspondence, 1932, with Nash]