

VOLUME II

Appendices  
Principal Sources and Bibliography  
Charts  
Maps  
Plans  
Plates

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APPENDIX A

Table 1

"Arbury Estates in the several parishes of Arley, Astley, Bedworth,  
Chilvers Coton and Nuneaton, the property of Francis Newdigate, Esq."<sup>(1)</sup>

Surveyed by John Kempson

1807

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	<u>A</u>	<u>R</u>	<u>P</u>
1. In the Parish of Arley:-	97	2	19
2. In the Parish of Astley:-	1285	2	14
3. In the Parish of Bedworth:-	179	3	21
4. In the Parishes of Chilvers Coton and Nuneaton (including also Ciney Field near Attleborough)	3913	0	20
<u>Total</u>	<u>5476</u>	<u>0</u>	<u>34</u>

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(1) Source CRL36/M/1

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APPENDIX A

Table 2

Property acquisitions made by Sir Roger Newdigate in London and North Warwickshire, 1748-1794

	Date	Description	Price (net)	Area in Acres (where known)	Subject of the Chilvers Coton Inclosure Award
1.	1747	"Lands in Chilvers Coton"	£   s.   d. 210. 0. 0.	---	---
2.	1748	Estate formerly belonging to H. Beighton in Griff	135. 0. 0.	---	---
3.	1750	Several houses and half a yardland	350. 0. 0.	---	---
4.	1753	Purchase of two houses and an ordhard in Chilvers Coton	35. 3. 6.	---	---
5.	1755	The "old Lane from Potlid Gate in Bedworth Common field to Griff"	42. 0. 0. (a)	---	---
6.	1756	Messuage and land in Nuthurst Heath (Astley)	88.13. 6.	---	---
7.	1760	Messuage and land in Sea Lane, Heath End	350. 0. 0.	---	---
8.	1761 (23 March)	Estate belonging to the Earl of Coventry	7750. 0. 0.	378	---
9.	1762	Purchase of 41 year lease on town house in Spring Gardens, London	1050. 0. 0.	---	---
10.	1765 (Award)	Land acquired as result of the Chilvers Coton Inclosure Act (1764)	548. 0. 0.	744	---
11.	1766	Two tenements in Chilvers Coton	235. 5. 0.	---	---
12.	1767	Several tenements, a cottage and a croft in Chilvers Coton	260. 0. 0.	---	---



Table 2 (contd.)

	Date	Description	Price (net)	Area in Acres (where known)	Subject of the Chilvers Coton Inclosure Award
			£ s. d.		
13.	1768	For two tenements, a cottage and a croft in Chilvers Coton	255. 0. 0.	---	---
14.	1768	Allotment of Commons in Chilvers Coton "purchased of" Will. Bond, M. Oliver, T. Morris and W. Kinder	33.17. 6.	Less than 1 acre	Yes
15.	1769	Lands in Astley and Nuthurst Heath, formerly belonging to J. Ludford (of Ansley)	60. 0. 0.	---	---
16.	1770	Land acquired as result of the Bedworth Inclosure Act 1769	120.19.8.	52	---
17.	1771	"House" in Nuneaton (a)	340. 0. 0.	---	Yes
18.	1777	Property in Nuneaton	115.10. 0.	---	---
19.	1785	Purchased from the Rev. Liptrott, "for his allotment in Chilvers Coton Windmill Field	1160. 0. 0.	40	Yes
20.	1785	Other "property"	72.19. 0.	---	---
21.	1788	A freehold in Chilvers Coton	520. 0. 0.	---	---
22.	1795	Three houses	126. 0. 0.	---	---
		(a) Together with the grant of an annuity of three guineas			

Explanatory notes

1. In all cases the descriptions given in Column 3 are all that MSS sources have to offer.
  2. Column 6 indicates those properties which are known to have been partially or wholly the subject of the Chilvers Coton Inclosure Award of 1765.
  3. Acreages given in Column 5 have been given to the nearest whole number.
  4. Since property values changed substantially during the latter part of the century it has been thought inadvisable to attempt any total addition of Column 4.
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APPENDIX A

Table 3

Major estate holdings by landowners in Warwickshire, 1780 - 1874

Estate Owner	Estimated acreage for period 1780-1825	Acreage given for these estates in national returns of owners, 1873
1. Lord Leigh	25,000	14,891
2. Lord Craven	9,903	8,447
3. Earl of Warwick	9,000	8,262
4. Duke of Buccleuch	8,500	6,881
5. Earl of Northampton	7,000	4,985
6. Sir Roger Newdigate	5,476	5,318
7. Earl Spencer	4,600	3,555

Sources: (i) J. M. Martin, unpublished Ph.D. thesis, (1965) (See Bibliography)  
(ii) Craven MSS., CR8/184  
(iii) Newdigate MSS., CR136/M/I.  
(iv) Returns of Owners of Land 1875, Vol. II (H.M.S.O.)

Observations:

- (i) In several instances, e.g. entries 2, 4 and 6, important estates were held elsewhere in the country by the families concerned. These figures should not, therefore, be regarded as the grand total of landholdings in every case.
- (ii) In every instance quoted, some diminution had taken place between the dates given in Columns 3 and 4

APPENDIX B

Table 1

Purchases of farm produce, fuel and livestock by Sir Roger Newdigate, 1748-1796: an Abstract

Class of item	1748 (Michaelmas)	1750	1752 (Christmas)	1754	1756	1758	1760	1762	1764
	£ s. d.								
A. <u>Cereals</u>									
1. Wheat	5.16. 0.	7. 2. 0.	10. 5. 0.	32. 0. 2.	45.15. 5.	48.13. 4.	42. 1. 6.	37.18. 0.	16.10. 4.
2. Barley	84. 7. 0.	82. 5. 3.	87. 4. 6.	74. 5. 6.	93. 4. 9.	47.13. 0.	31. 2. 0.	33.16. 0.	58. 1. 0.
B. <u>Meat</u> (Butcher)	78.12. 6.	76.17. 4.	10. 3. 1.	71.15. 4.	73.19. 2.	42.11. 0.	25. 2. 6.	43. 6. 9.	72.10. 9.
C. <u>Fuel</u> Coal	24.19. 6.	35. 1. 6.	18. 2. 4.	27. 9. 9.	20. 0. 6.	20. 9. 5.	18.16. 6.	16. 4. 6.	12.17. 9.
D. <u>Animal</u> <u>Foodstuffs</u> Oats, beans, Bran, hay, straw	41.11. 6.	95.15.5.	112.13. 4.	157. 2. 2.	127. 1. 4.	59.11. 2.	38.11. 0.	89. 0. 9.	113. 9.10.
E. <u>Livestock</u> (in numbers)									
1. Sheep	65	51	4	Nil	41	36	10	27	48
2. Cattle	2	4	7	Nil	Nil	4	5	5	5
3. Pigs	7	16	23	37	17	18	8	18	8

APPENDIX B

Table 1 (contd.)

Class of item	1766	1768	1770	1772	1774	1776	1778	1780	1782
	£ s. d.								
A. <u>Cereals</u>									
1. Wheat	52.12. 0.	117. 5. 0.	90.15. 0.	87.14. 6.	26. 9. 6.	38. 2. 0.	2. 5. 0.	24.14. 6.	4.10. 0.
2. Barley	100.15. 9.	116. 1. 6.	99. 4. 0.	135. 8. 0.	62. 2. 0.	94. 2. 6.	79.11. 3.	42. 4. 0.	6.17. 0.
B. <u>Meat</u>									
Butcher	42.17. 6.	89.14. 0.	99.18. 0.	58. 7. 0.	13. 5. 0.	79.19. 0.	104.16. 0.	74. 9. 6.	24.10. 6.
C. <u>Fuel</u>									
Coal	33.15. 6.	34. 2. 0.	60. 9. 4.	65.18. 0.	77.11. 0.	-----	-----	-----	-----
D. <u>Animal Foodstuffs</u> (Oats, beans, bran, hay Straw)	130. 9. 0.	145.16. 0.	111. 7. 6.	129. 3. 6.	96. 6. 9.	63.14. 6.	92. 0. 0.	99. 0. 0.	131.17. 0.
E. <u>Livestock</u> (in numbers)									
1. Sheep	30	60	60	80	Nil	160	85	124	98
2. Cattle	2	16	13	11	8	17	18	8	8
3. Pigs	11	11	Nil	18	Nil	Nil	12	---	---

APPENDIX B

Table 1 (contd.)

Class of item	1784	1786	1788	1790	1792	1794	1796
<u>A. Cereals</u>	£ s. d.						
1. Wheat	60. 4. 0.	71. 8. 6.	18. 0. 0.	27. 0. 0.	7. 0. 0.	11. 0. 0.	8. 8. 0.
2. Barley	63.13. 6.	Nil	Nil	Nil			
<u>B. Meat</u> (Butcher)	66. 5. 6.	53.17. 0.	85.14. 0.	115. 7. 0.	147. 5. 0.	157.10. 0.	269. 9. 0.
<u>C. Fuel</u> Coal	-----	-----	-----	-----	-----	-----	-----
<u>D. Animal</u> <u>foodstuffs</u> (Oats, beans, bran, hay, straw)	187.10. 6	156. 7. 0.	136.19. 0.	55. 2. 0.	178. 0. 6.	247. 0. 0.	167.18. 0.
<u>E. Livestock</u> (in numbers)							
1. Sheep	106	98	111	112	119	111	92
2. Cattle	6	Nil	8	12	14	10	10
3. Pigs	---	---	---	---	---	---	--

Sources (i) CR136/V/156

(ii) CR136/V/119

APPENDIX B

Table 2

Sales of farm produce and livestock by Sir Roger Newdigate (1748-1796)

Date	Receipts	Two principal items	Date	Receipts	Two principal items
	£. s. d.			£ s. d.	
1748	38.15.10.	a) Wool b) Hides	1774	275.10. 0.	a) Cattle b) Malt
1750	53.16. 0.	a) Tallow b) Wool	1776	66.12. 0.	a) Cheese b) Cattle
1752	28. 6. 4.	a) Tallow b) Wool	1778	106. 2. 0.	a) Cattle b) Hides
1754	21. 8. 6.	a) Hides b) Tallow	1780	96.19. 0.	a) Cattle b) Cheese
1756	26.19. 6.	a) Cattle b) Tallow	1782	44. 5. 9.	a) Cheese b) Hides
1758	77. 9. 0.	a) Cattle b) Hides	1784	137.17. 0.	a) Cattle b) Wheat
1760	130.13. 9.	a) Cattle b) Sheep	1786	73.19. 0.	a) Hides & skins b) Tallow
1762	88. 0. 4.	a) Cattle b) Sheep	1788	117.15. 0.	a) Cattle b) Cheese
1764	91.12. 0.	a) Cattle b) Horses	1790	90.14. 0.	a) Cheese b) Hides & skins
1766	61.12. 0.	a) Cattle b) Hides	1792	205.11. 0.	a) Cattle b) Hides
1768	76. 9. 9.	a) Cattle b) Hides & skins	1794	214. 5. 0.	a) Cattle b) Cheese
1770	55. 8. 3.	a) Cattle b) Hides & skins	1796	237.12. 0.	a) Cattle b) Cheese
1772	52. 4. 0.	a) Cattle b) Hides & skins			

Sources: (i) CRL36/V/156  
(ii) CRL36/V/119

APPENDIX C

Table 1

A Chronology of Parliamentary Inclosure on the  
Warwickshire Coalfield, 1756-1774

	<u>Date of Acts</u>	<u>Designation</u>	<u>Area</u>	<u>Acreage</u>	<u>Source</u>
1.	1756	29 Geo. II -	Sowe (Coventry)	1591	CR556/300, 309
2.	1758	31 Geo. II C34	Wilnecote	700	CR153/86
3.	1761	1 & 2 Geo. III C27	Exhall	365 (11 yardlds)	Tate ( <u>loc. cit.</u> )
4.	1763	4 Geo. III C46	Atherstone	(prob.) 700	H.R. 35
5.	1763	4 Geo. III -	Mancetter	1100	Tate ( <u>loc. cit.</u> )
6.	1764	4 Geo. III C9	Chilvers Coton	1003	CR136/C95
7.	1769	8 & 9 Geo. III C101 (Sess. 2)	Bedworth	500	CR136/C94
8.	1770	10 Geo. III C38	Bulkington	36 yardlds.	Slater ( <u>op. cit.</u> )
9.	1771	11 Geo. III C84	Polesworth (Waverton)	840 (24 yardlds)	" " "
10.	1774	14 Geo. III C56	Foleshill	795	C.R.O. (Coventry)

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- References: (a) Items 1, 2, 4, 6 and 7 are located in the County Record Office, Warwick.
- (b) C.R.O. (Coventry) = City Record Office, Coventry
- (c) Slater = Slater G. The English Peasantry and the Enclosure of Common Fields, Appendix B.
- (d) Tate = Tate W. E. Enclosure Acts and Awards relating to Warwickshire. T.B.A.S. LXV, 1943-44
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APPENDIX D

Table 1

PROPRIETORS AND LANDHOLDINGS IN THE PARISH OF CHILVERS COTON ALREADY INCLOSED BY 1763

	Owner	Location	Quantity			Cumulative Total		
			A	R	P	A	R	P
1.	Sir Roger Newdigate	a) Manor of Arbury b) Manor of Griff and Coton. Manor of St. John's in Jerusalem c) Woodland d) Land lately purchased from Earl of Coventry in Chilvers Coton	856	1	39 $\frac{1}{4}$			
			779	2	34 $\frac{1}{2}$			
			831	0	5 $\frac{1}{4}$			
			378	2	29 $\frac{1}{2}$	2845	3	28 $\frac{1}{2}$
2.	R. Geast and E. Farmer (Trustees of Francis Stratford)	Longslough	35	0	0			
3.	Nathaniel Smart	In Woodland	16	1	10			
4.	Robert Hutchins	Coxes Close	9	2	39			
5.	Francis Ward	Potters Close	9	0	17			
6.	Joseph Harper	--	8	0	0			
7.	John Robinson (for Trustees of the Meeting House)	--	2	0	0	86	0	26
			<u>Grand total</u>			<u>2926</u>	<u>0</u>	<u>14<math>\frac{1}{2}</math></u>

Source: CR764 (unnumbered analysis)

APPENDIX D

Table 2

Common Lands and Waste Grounds in the Parish of Chilvers Coton in 1763

I.	<u>Common Fields</u>	<u>Area (A R P)</u>	<u>Cumulative total</u>
"By the amount of the several owners Lnds."			
	(a) Greenmore Field		
	(b) Windmill Field		
	(c) Warnebrook Field	640 3 2 $\frac{3}{4}$	
"By the Furlongs 581. 2.16. But the several Homestalls roads lanes and streets are not I believe comprehended wh <sup>t</sup> makes the difference."			
	(d) Cinney or Sinney Field	141 0 11 $\frac{1}{2}$	781 3 14 $\frac{1}{4}$
II.			
	<u>Commons or Waste Grounds</u>		
	(a) Chilvers Coton Outwoods	261 0 23 $\frac{1}{2}$	
	(b) Abels Piece	21 1 18	
	(c) Lawn	30 0 31 $\frac{1}{4}$	
	(d) Nuthurst Heath	5 2 4 $\frac{1}{2}$	
	(e) Lanes	25 2 25 $\frac{1}{4}$	343 3 22 $\frac{1}{2}$
"Total of Common Fields & Commons & Waste Grounds			1125 2 36 $\frac{3}{4}$ "

Source: CR136/C1238

APPENDIX D

Table 3

"Proprietors of the Lands etc. in the Parish of Chilvers Coton"

	Proprietor	Extent of land			Attitude to Bill of Inclosure	
		Common Field Measure in Yardlands	A	R		P
1.	Sir Roger Newdigate (i)	-	2845	3	28 $\frac{1}{2}$	"Hath signed the Bill"
	(ii)	8 $\frac{3}{4}$	420	2	27 $\frac{1}{4}$	
2.	Joseph Harper (i)		8	0	0	"Hath consented"
	(ii)	3 $\frac{3}{4}$	148	0	19	
3.	Dr. Cheney Hart	1 $\frac{1}{2}$	77	3	4 $\frac{1}{4}$	"Have signed"
4.	Rev. Thomas Liptrott	1	42	0	39 $\frac{1}{2}$	
5.	Edward Dudley	$\frac{1}{2}$	14	0	28 $\frac{1}{2}$	
6.	Town Lands	$\frac{1}{4}$	16	2	5 $\frac{1}{2}$	
7.	William Pearcey	$\frac{1}{4}$	9	1	32 $\frac{3}{4}$	
8.	William Smart and Trustees of Nuneaton Charity School	$\frac{1}{4}$	8	2	35 $\frac{1}{2}$	
9.	Rev. Christopher Preston	$\frac{1}{4}$	9	3	21	
10.	Mr. Phillips	$\frac{1}{8}$	5	1	35 $\frac{1}{4}$	
11.	Isabel & Nath. Marston	-	2	3	31	
12.	John Baker	-	1	1	0	
13.	Richard Geast & Edw. Farmer	-	35	0	0	
14.	Nathaniel Smart	-	16	1	10	
15.	Mary Parkins	-	6	2	10 $\frac{1}{2}$	
16.	Robert Hutchins	-	9	2	39	
17.	Francis Ward	-	9	0	17	
18.	Hannah Jelliff	-	2	0	0	
19.	Joseph Dagley	-	2	0	0	
20.	Elizabeth Burbidge	-	1	0	0	

Carried forward

3692 3 24 $\frac{3}{4}$

Brought over

3692 3 24 $\frac{3}{4}$

21.	John Robinson (for Trustees of the Meeting House)	2 0 0	
22.	Benj. Bindley		
23.	Joseph Hill		
24.	George Taylor		
25.	William Kinder		
26.	William Pane		
27.	John Pane		
28.	John Mallabone		
29.	John Simkins		
30.	Richard Satchwell		
31.	Joseph Everson		
32.	John Cooper/S. Parker		
33.	Alice Thompson		
34.	Thomas Booth		"Have signed the Bill"
35.	John Turner		
36.	John Kinder		
37.	Thomas Oliver		
38.	Samuel Goode		
39.	William Bond		
40.	Anne Messenger		
41.	Henry Clay		
42.	George Morton		
43.	Susannah Chipman		
44.	John Hans		

"Have Tenements  
with gardens or  
small parcels  
of Land some of  
which have right  
of Common about"

5 0 0

Carried forward

3699 3 24 $\frac{3}{4}$

Brought over:

3699 3 24 $\frac{3}{4}$

45.	Joseph Kemm	In Ciney field	8 1 14	"Refused to sign but would not oppose
46.	James Wigley Esq.	"	6 0 8 $\frac{1}{2}$	" "
47.	Henry Ashton Esq.	-	4 2 4	Abroad but his steward does not object
48.	Henry Buswell	Tenement with Garden	0 1 0	Refus'd because he thought it w'd hurt the Poor
49.	Edward Chipman	"	0 0 10	Refused for the same reason"

"The Common fields and antient  
Enclos'd Lands -

3719 0 21 $\frac{1}{4}$ \*

"Total of the Commons or  
Waste Grounds -

343 3 22 $\frac{1}{2}$

Total of the Lands of the  
Parish of Chilvers Coton"

4063 0 3 $\frac{3}{4}$

\* Corrected. The original figure understated the true total to the extent  
of 4 acres, 2 roods and 4 perches.

Source: CR764 (unnumbered analysis)

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APPENDIX D

Table 4

Chronology and summary of Chilvers Coton inclosure, 1764-1765

<u>Item</u>	<u>Date</u>	<u>Subject</u>	<u>Source</u>
1.	6 Dec. 1763	Presentation of Petition to Parliament by Sir R. Newdigate Reason given: "That the Lands and Grounds of the Petitioners be intermixed and dispersed in the said Fields; and in their present Situation are incapable of Improvement; and the said Commons or Waste Grounds are now but of small Advantage..."	J.H.C. XXIX; p.693
2.	23 Jan. 1764	Presentation of Bill and First Reading.	<u>Ibid.</u> p.725
3.	27 Jan. 1764	Second Reading. Sent to Select Committee of the Commons.	" p.756
4.	21 Feb. 1764	Report of Select Committee. Approved by all except:- (a) Two persons who refused to sign but would not actively oppose the Bill. (b) Two others who thought "it would hurt the Poor" (c) One who was abroad but whose steward raised no objection.  No objector appeared before the Committee. Bill ordered to be engrossed.	" pp.852-3
5.	24 Feb. 1764	Third Reading	" p.873
6.	2 Mar. 1764	Bill passed House of Lords	" p.900
7.	21 Mar. 1764	Royal Assent	" p.970

8. 4 Apr. 1764 Formal appointment and swearing in of Commissioners of Inclosure "at Chilvers Coton". CR136/C3553  
viz:-  
 (a) William Wyatt, of Seany Park, Staffs.  
 (b) Richard Jee, of Chilvers Coton.  
 (c) John Probert, of Shrewsbury.  
 (d) Joseph Nutt, of Hinckley.  
 (e) John Brothers, of Wyken.
9. 20 Sept. 1765 Promulgation of Commissioners' findings, viz:- (i) CR136/C3553  
 (ii) Q.S. 75/34  
 (a) Land allotment according to the award:- 1003 acres 2 roods 11 perches ("by statute measure").  
 (b) Land actually allotted: 1003 acres 2 roods 3 perches.  
 (c) Cost of the award:- £786  
 (d) Land allotted to Sir R. Newdigate:-  
     744 acres, 30 perches  
 (e) Land allotted to other proprietors:-  
     259 acres 1 rood 13 perches  
 (f) Allowance for public roads (8), for private roads (5), for footpaths (13).
10. 1 Oct. 1765 The date set for payment of inclosure costs to be made Ibid
11. --- Average charge per acre of the inclosure, 15/-8d.
12. 20 Sept. 1765 Special charges to be borne pro rata by all proprietors:- (i) CR136/c3553  
 Cost of building ditches and hedges around the inclosure of the Vicar of Chilvers Coton and maintaining the same for a period of seven years. (ii) Q.S. 75/34

Summary of sources:

1. Journals of the House of Commons XXIX B.R.L.
2. Private Act for the Inclosure of Chilvers Coton, 4 and 5 Geo. III C9 CR136/D/95
3. Copy of Inclosure Award CR136/c3553
4. Inrolled copy of Inclosure Award Q.S. 75/34
5. Sir Roger Newdigate's private summary of the Inclosure Award CR136/85

APPENDIX D

Table 5

Public roads required to be built by the terms of the  
Inclosure Award for Chilvers Coton  
1765

<u>Number</u>	<u>Description</u>	<u>Route</u>	<u>Size (width)</u>
1.	Horse carriage and drift road	"Town of Chilvers Coton" to Cuttle Bridge	35 feet (between the ditches)
2.	" "	"Cross End" in Chilvers Coton by Virgins Inn to the Coventry-Nuneaton turnpike	40 feet
3.	" "	Chilvers Coton town street at Heath End to Nuneaton Common	40 feet
4.	" "	Seaswood Pool - Nuneaton Common - towards Atherstone	40 feet
5	-- --	Robinson End to Astley	40 feet
6.	"One half of horse carriage and drift road	Arley Street towards Anteley ( <del>recte</del> Ansley)	20 feet
7.	" "	Astley towards Anteley	20 feet
8.	"One other public horse carriage and drift road"	Nuneaton to Burton Hastings	15 feet

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8 Total

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Source: CR136/C3553

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APPENDIX D

Table 6

Chilvers Coton Inclosure Award

20 September 1765

	Owner	Allotment in acres												Share of Cost		
		Over 100			50-100			10-50			under 10					
		A	R	P	A	R	P	A	R	P	A	R	P	£	s.	d.
1.	Sir R. Newdigate	744	0	30										548.10.	4.	
2.	J. Harper	110	1	07										107.19.	0.	
3.	Dr. Cheney Hart				50	3	38							57.19.	1.	
4.	Rev. T. Liptrott							40	1	35				31.18.	6.	
5.	G. Taylor							12	3	30				12.11.	0.	
6.	J. Kem										7	2	03	3.17.	7.	
7.	Rev. C. Preston										7	0	24			
8.	M. Wigley										5	2	39	2.10.	9½.	
9.	Trustees of Mr. Smith's Charity School (Nuneaton)										5	0	36	3. 2.	8.	
10.	H.Aston Esq.										5	0	28	3.11.	4½.	
11.	B. Bindley										3	1	12	5. 0.	0.	
12.	N. Marston										2	3	08	1. 5.	8.	
13.	Phillips Farmer										2	2	38	4. 2.10.		
14.	J. Baker										1	0	03	4.11½.		
15.	J. Paine										0	3	21	13.11.		
16.	W. Paine										0	2	30	16. 9.		
17.	H. Clay										0	1	30	6. 4½.		
18.	W. Bond										0	1	20	5. 5		
19.	R. Messenger										0	1	01	3. 9.		
20.	W. Bond										0	0	38	5. 3.		
21.	Town House (Overseers of the Poor - Chilvers Coton)										0	0	32	0.		
22.	M. Shipman <u>et al</u>										0	0	21	2. 1.		
23.	J. Evison/S. Golde										0	0	20	2. 0.		
24.	T. Oliver										0	0	16	1. 6.		
25.	J. Hill										0	0	14	1. 3½.		
26.	S. Parker										0	0	14	1. 3½.		
27.	J. Hands										0	0	13	1. 3.		
28.	H. Buswell										0	0	10	2. 0.		
29.	G. Moreton										0	0	10	3½.		
30.	R. Satchwell										0	0	08	1. 6.		
31.	J. Mallabone										0	0	07	10.		
32.	W. Kinder										0	0	07	8½.		
<u>Totals</u>		854	1	37	50	3	38	53	1	25	44	2	23	786. 0. 0.		

Sources: (i) CR136/C3553

(ii) Q.S. 75/34

(iii) CR136/85

APPENDIX D

Table 7

The Commissioners award to Sir Roger Newdigate

<u>Item</u>	<u>Grant</u>	<u>Extent</u>		
		A	R	P
1.	All cottages, orchards and wastes as right of Royalty of and interest in the soil of the wastes and commons.	21	0	00
2.	As impropiator of rectorial and vicarial tithes as to $\frac{1}{7}$ of the Common Fields (but only as far as land to be inclosed is concerned).	91	0	00
3.	For his share in town lands and as proprietor of lands with commons.	277	0	26
4.	In lieu of tithes of part of the old inclosures.	14	0	21
5.	The remainder of Chilvers Coton Common	239	3	37
6.	Nuthurst Heath	3	2	00
7.	In Sinney Field and for a share in town lands.	97	1	26
"Allotted to the said Sir R. Newdigate" Total		744	0	30

Source: As for Table 6

APPENDIX D

Table 8

Sir Roger Newdigate's own estimate of the cost of  
inclosure on his estate in Chilvers Coton

<u>Year</u>	<u>Outlay</u>	<u>Amount</u> s.	<u>Cumulative Totals</u> £ s. d.
1. 1764	Expenses of Proprietors preliminary meeting	3.15. 6.	
2. 1765	"Charge to R.N."	551.16. 6 $\frac{1}{2}$ <sup>(a)</sup>	
	Quickset	263.11. 1 $\frac{1}{2}$ .	
	"Other bills"	22. 1. 3.	841. 4. 5.
3. 1766	"Stocking gorse on the comms"	84. 2. 0 $\frac{3}{4}$ .	925. 6. 5 $\frac{3}{4}$ .
	Posts, rails, ditches and quicksets to several tenants	24. 4. 2.	949.10. 7 $\frac{3}{4}$ .
4. 1767	--	161.11. 0.	1111. 1. 7 $\frac{3}{4}$ .
5. 1768	Posts and quicksets	<u>50.18. 0.</u>	<u>1161.19. 7<math>\frac{3}{4}</math></u>

(a) The discrepancy between this figure and the one quoted in table 6 (supra) may be due to the baronet's share of the costs of item 7 (ibid).

Source: CR136/V/119

APPENDIX E

Table 1

Records of Proceedings in Quarter Sessions  
(Warwickshire) 1763-1776

"A Particular of the Rates of Wages of all manner of Artificers, Husbandmen, Labourers, Servants, Workmen and Workwomen as well by the Day with Meat and Drink as without as also by the whole year in gross or by Task, limited, noted and appointed by the said Justices assembled....."(a)

	Per day	Without drink	With drink	Without drink and meat	With meat and drink	Per annum	£	s.	d.
1. Labourers from Martinmas to 25 March	8d.								
2. Labourers from 25 March to Martinmas	9d.								
3. Mowers of grass, by the day		1/-2d.	1/-0d.						
4. Labouring man in corn harvest				1/-6d.	1/-0d.				
5. Woman in haymaking		6d.	5d.						
6. Woman in corn harvest		7d.	6d.						
7. Every carpenter by the day in summer, viz. from 25 March to Michaelmas		1/-2d.	1/-0d.						
8. From Michaelmas to Lady Day		1/-0d.	10d.						
9. Every mason by the day in Summer		1/-2d.	1/-0d.						
10. Every mason.....Winter		1/-0d.	10d.						
11. Thatcher, summer and winter	1/-0d.								
12. Weeders of corn	4d.								
1. Head Servant in husbandry						5.10.	0.		
2. Second Servant						4.	0.	0.	
3. Servant boy - 11-14 years						1.	0.	0.	
4. Servant boy - 14-18 years						2.10.	0.		
5. Head servant maid						3.	0.	0.	
6. Second servant maid						2.10.	0.		

(a) Q.S. 40/1/12 pp. 692-3 (1773)

Authority: Statute of Artificers, 5 Q.E. C4

Source: Quarter Sessions Order Books, QS40/1/10-40/1/12

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A. Although the Justices Sessions for 1776 ordered the wage rates for 1775 to be continued for a further year, it is evident that between April 1776 and April 1777 some amendments were made to the old scales. Further amendments were made again in April 1777, as shown by the following table:-

	New rate (1777)	Old rate (1776-1777)
1. Labourers from Martinmas to 25 March, by the day	1/-0d.	10d.
2. Every labouring man in Corn Harvest:-		
(a) with meat and drink	1/-4d.	1/-0d.
(b) Without meat and drink	2/-4d.	2/-0d.
3. Every woman in Haymaking		
(a) With drink	6d.	5d.
(b) Without drink	7d.	6d.

All other rates "to be the same as last year  
except in the particulars noticed."

B. Easter Session 1778

"To be the same as last year.....copies to be sent to all Chief Constables to be distributed and stuck upon the most publick places and one to be transmitted to each of the acting Magistrates."

C. Easter Session 1779

"To be the same as last year".

D. Easter Session 1780

"No Amendment for this Year."

Source: Quarter Sessions Minute Books, Q.S. 39/7-39/8

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APPENDIX F

Table 1

Total Annual Receipts from Estates in both  
Middlesex and Warwickshire

<u>Year</u>	<u>Total</u>	<u>Year</u>	<u>Total</u>
	£ s. d.		£ s. d.
1763	5626. 2. 0.	1780	8428. 8. 0.
1764	4559. 2. 0.	1781	7403.16. 0.
1765	5405.16. 0.	1782	8330.10. 0.
1766	5695. 5. 0.	1783	8615.11. 0.
1767	6473. 7. 0.	1784	9304. 3. 0.
1768	5179. 7. 6.	1785	13304. 9. 0.
1769	5370.14. 6.	1786	9643. 4. 0.
1770	7520. 0. 9.	1787	10522.13. 0.
1771	10979. 8. 0.	1788	12625. 5. 0.
1772	5442. 7. 4.	1789	15409. 5. 0.
1773	5317.10. 0.	1790	10353.15. 0.
1774	9692.11. 4.	1791	9139. 5. 0.
1775	6045.14. 4.	1792	15190.12. 0.
1776	9913.15. 0.	1793	10544.15. 0.
1777	10387.15. 0.	1794	8595. 1. 0.
1778	7778.11. 6.	1795	10182. 0. 7.
1779	6182. 0. 0.	1796	9410. 0. 9.
<u>Total</u>	£117569. 9. 3.	<u>Total</u>	£177002.13. 4.

Grand total: £294,472. 2. 7.

Source: CR136/V/119

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APPENDIX F

Table 2

Gross Receipts from all Warwickshire Sources

"From Michaelmas to Michaelmas"		1750	(a) 1751	1752	1753	1754	1755	1756	1757
		£ s. d.	£ s. d.	£ s. d.	£ s.	£ s. d.	£ s.	£ s. d.	£ s. d.
1.	"Receipts of the Manors of Arbury and Moorbarn	648. 5. 2.	822.18. 4 $\frac{3}{4}$ .	687. 4. 6.	680.11. 3.	677.13. 6.	712. 0. 1 $\frac{1}{2}$	758.18. $\frac{1}{2}$	746.16. 9 $\frac{1}{2}$ .
2.	Chilvers Coton, Griffie and St. John's in Jerusalem	427. 9. 8.	527.18.11 $\frac{3}{4}$	438. 3. 3.	448.12. 8.	458.10. 0.	438. 4. 2 $\frac{1}{2}$	435. 4. 2 $\frac{1}{2}$	459. 8. 0.
3.	Woodland of D <sup>o</sup>	418.18. 8.	443.15. 3.	391. 0. 6.	662. 0. 8.	332.14. 8.	332.14. 8.	343. 9. 8.	342.19. 8.
4.	Astley (Manor of)	669.11. 8.	831.10. 0.	672.14. 0.	672. 9. 0.	706.15.10.	669.14. 0.	669.14. 0.	669.14. 0.
5.	Casual Rects."	660. 0. 0.	260. 0. 0.	262.17. 0.	482. 2. 0.	692. 6. 0.	861. 6. 0.	459. 7. 9.	210. 0. 0.
							3013.19. 0.	2666.13. 8.	2428.18. 5( $\frac{1}{2}$ )
							750.19. 0. <sup>(b)</sup>	330.13. 8. <sup>(b)</sup>	100.18. 5( $\frac{1}{2}$ ) <sup>(b)</sup>
<u>Total</u>		2860. 5. 2.	2886. 2. 7 $\frac{1}{2}$	2451.19. 3.	2945.15. 7.	2868. 0. 0.	2263. 0. 0.	2336. 0. 0.	2328. 0. 0.

(a) To Xmas  
1751. "One  
year and one  
quarter."

(b) "Extra Rects. by Trust money by  
Gift and on Credit for several  
purchases."

Gross Receipts (contd.)

"Total Rects. of the Year"		1758	1759	1760	1761	1762	1763	1764	1765
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Rects. of the Manors of Arbury and Moorbarn	778.17.10 $\frac{1}{2}$	807. 1. 4 $\frac{1}{2}$	790. 0. 1 $\frac{1}{2}$	1094. 0. 8 $\frac{1}{2}$	1103. 4. 4 $\frac{1}{2}$	891.12. 8 $\frac{1}{2}$	886. 9. 2.	934. 5. 0.
2.	Chilvers Coton, Griffie and St. John's in Jerusalem	468.10. 4.	480. 6. 5.	524. 1. 9.	540. 1. 1.	557. 1.10.	641.17. 8.	606.13. 8.	737. 0. 0.
3.	Woodland of Chilvers Coton etc.	344. 4. 8.	349. 9. 8.	351.13. 8.	359. 4. 2.	361.16. 8.	366. 6. 0.	371. 9. 6.	391.10. 6.
4.	Manor of Astley	672. 9. 0.	675. 5. 3.	676. 6. 6.	676.14. 0.	676.14. 0.	824.14. 0.	859. 9. 1.	906. 0. 0.
5.	Casual Receipts."	491. 2. 0.	615.16. 0.	1494. 9. 0.	6815. 8. 9.	893. 2. 5.	1059.12. 6.	528.12.10	1066.18. 9 $\frac{1}{2}$
		2755. 3.10.	2927.18. 8.	3836.11. 0.	9485. 8. 8.	3591.19. 3.			
	(a)	310. 3.10.	400.18. 8.	1181.11. 0.	6532. 8. 8.	546.19. 3.			
	<u>Total</u>	2445. 0. 0.	2527. 0. 0.	2655. 0. 0.	2963. 0. 0.	3045. 0. 0.	3784. 2.10 $\frac{1}{2}$	3252.14. 3.	4035.14. 3 $\frac{1}{2}$

(a) "Extra Rects. by Trust money, by Gift and on Credit for several purchases."



Gross receipts (contd.)

"Total Rects. of the Year"		1766	1767	1768	1769	1770	1771	1772	1773
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	(Receipts of the Manors of Arbury and Moorbarn	962. 9. 9.	979. 2. 3.	977.18. 6 $\frac{1}{2}$	982.16. 3 $\frac{1}{2}$	1028. 5. 1.	1050.12.10.	1064. 8. 4.	1352.15. 3.
2.	Chilvers Coton, Griffe and St. John's in Jerusalem	842. 6. 0.	838.13. 6.	910. 1. 6.	892.19. 6.	908.17. 6.	813. 7. 9.	833.14. 6.	1099. 0. 0.
3.	Woodland of Chilvers Coton etc.	378.17. 4.	375.13. 0.	385.13. 0.	390.16. 0.	391. 4. 0.	374.10. 0.	371.10. 0.	831. 8. 0. 373. 0. 0.
4.	Manor of Astley	936.15. 8.	1103. 5. 2.	994.13. 8.	938. 3.10.	927.12. 4.	1345.10.10.	1353. 4. 6.	1426. 1. 0.
5.	Casual Rects."	1367.13. 0.	1972.11. 0.	879.14. 8.	1060. 6. 9.	3146.11. 7 $\frac{1}{2}$	6161.18. 4.	749. 0. 6.	236. 6. 0.
		4488. 1. 9.	5269. 0. 5.	4128. 1. 4 $\frac{1}{2}$	4265. 2. 4 $\frac{1}{2}$	6402.10. 6 $\frac{1}{2}$	9745.19. 9.	4371.17.10.	5318.10. 3.

Gross receipts (contd.)

"Rects. of the Year"		1774	1775	1776	1777	1778	1779	1780	1781
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Arbury and Moorbarn and Bedworth	1116.14. 4.	1105. 3. 0.	1118. 6. 4.	1143.16. 4.	1162. 6. 4.	1164. 3. 4.	1169.15. 4.	1178.12. 4.
2.	Chilvers Coton, Griffie and St. John's in Jerusalem and Nuneaton	847.13. 6.	848.14. 0	876.16. 6.	957. 8. 6.	981.10. 6.	986.18. 6.	1001.16. 0.	1026. 2. 0.
3.	Woodland of Chilvers Coton	371. 0. 0.	371. 6. 0.	364.16. 0.	374.13. 3.	378. 9. 0.	380.12. 0.	384.14. 0.	387.14. 0.
4.	Astley	1398.16. 6.	1432.13. 0.	1572. 4. 6.	1330.17. 0.	1366.17. 8.	962.11. 0.	968. 6. 0.	968.16. 0.
5.	Casual Rects.	4409.14. 4.	1036. 0. 0.	4763. 6. 0.	4848. 9. 9.	2737.17. 0.	924. 2. 8.	2887.12. 6.	2114. 3. 2.
6.	Spring Woods and Timber, Arbury, Ch. Coton, Astley, etc.						719.15. 0.	737.12. 0.	633.19. 0.
	<u>Total of Rects.</u>	8143.18. 8.	4793.16. 0.	8695. 9. 4.	8655. 4.10.	6627. 0. 6.	5138. 2. 6.	7147.15.10.	6309. 6. 6.

Gross receipts (contd.)

"Rects. of the Year		1782	1783	1784	1785	1786	1787	1788	1789
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Arbury and Moorbarn and Bedworth	1207. 7. 4.	1223.17. 4.	1273. 4.10.	1325. 2. 4.	1341. 1. 4.	1341. 1. 4.	1312.11. 4.	1338. 9. 3.
2.	Chilvers Coton, Griffie and St. John's in Jerusalem and Nuneaton	997.12. 0.	989. 7. 0.	990. 0. 0	1041.12. 3.	1051. 0. 0.	1079. 6. 0.	1129.18. 6.	1142. 2. 0.
3.	Woodland of Chilvers Coton	391. 1. 6.	416.14. 0.	426. 4. 0.	479.16. 0.	515.11. 0.	526. 6. 0.	565.12. 0.	577. 2. 0.
4.	Astley	968.18. 0.	968.18. 8.	970. 5. 6.	1012. 5. 0.	1032.17. 6.	1033.18. 6.	1068.19. 6.	1073.19. 6.
5.	Casual Rects.	3079.16. 2.	3364.19. 0.	4122.15. 8.	7754.13. 5.	4200. 3. 2.	4934.12. 2.	6606.17. 8	9345. 6. 9.
6.	Spring Woods and Timber, Arbury, Ch. Coton, Astley etc."	622. 3. 0.	608. 9. 0.	450. 5. 0.	503.13. 0.	399. 0. 0.	462. 9. 0.	690.16. 0.	747.11. 0.
	<u>Total of Rects.</u>	7266.18. 0.	7572. 5. 0.	8232.15. 0.	12117. 2. 0.	8539.13. 0.	9377.13. 0.	5374.15. 0.	14224.10. 6.

Gross receipts (contd.)

"Rects. of the Year		1790
		£ s. d.
1.	"Arbury and Moorbarn and Bedworth	1348. 9. 3.
2.	Chilvers Coton, Griffe and St. John's in Jerusalem and Nuneaton	1140.19. 0.
3.	Woodland of Chilvers Coton	587.12. 0.
4.	Astley	1073.19. 6.
5.	Casual Rects.	4132. 2. 9.
6.	Spring Woods and Timber, Arbury, Ch. Coton, Astley etc."	643. 5. 0.
	<u>Total of Rects."</u>	8926. 7. 6.

Gross receipts (contd.)

"Rects. of the Year		1791	1792	1793	1794	1795	1796
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Manors of Arbury and Moorbarn	1237.17. 6.	1238.17. 6.	1254.12. 6.	1256. 2. 6.	1257.12. 6.	1238.14. 6.
2.	Of Chilvers Coton and Griffie	886. 9. 0.	892. 9. 0.	897. 8. 0.	911. 2. 0.	936. 8. 0.	957.12. 0.
3.	Of St. John's in Jerusalem and Ch. Coton Woodland	675.19. 6.	653. 9. 6.	650. 9. 6.	667. 0. 6.	667. 0. 6.	667. 0. 6.
4.	Manor of Astley	1093.17. 3.	1117.17. 0.	1126. 7. 0.	1152.11. 9.	1162.11. 9.	1162.11. 9.
5.	Lands in Nuneaton and Bedworth	255.18. 0.	255.18. 0.	255.18. 0.	255.18. 0.	255.18. 0.	255.18. 0.
6.	Rects. casual"	3977. 6. 3.	10912. 1. 0.	5300. 0. 0.	3806. 7. 1.	5342. 9.10.	4548. 4. 0.
<u>Totals</u>		8123. 7. 6.	15070.12. 0.	9484.15. 0.	8035. 0.10.	9622. 0. 7.	8830. 0. 9.

Source: As for Table 1

APPENDIX F

Table 3

Total Receipts of the Manors  
of  
Harefield and Moorhall  
in  
Middlesex

	£	s.	d.		£	s.	d.		£	s.	d.
1763	1841.	19.	1½	1773	1352.	15.	3.	1783	1163.	6.	0.
1764	1306.	7.	9.	1774	1548.	13.	0.	1784	1071.	8.	0.
1765	1370.	1.	8½	1775	1251.	18.	4.	1785	1187.	7.	0.
1766	1207.	3.	3.	1776	1218.	5.	8.	1786	1103.	11.	0.
1767	1206.	6.	8½	1777	1732.	10.	2.	1787	1145.	0.	0.
1768	1031.	6.	1½	1778	1151.	10.	0.	1788	1250.	0.	0.
1769	1105.	12.	1¾	1779	1043.	17.	6.	1789	1184.	4.	6.
1770	1117.	10.	2½	1780	1274.	12.	2.	1790	1433.	7.	6.
1771	1233.	8.	2.	1781	1094.	9.	6.	1791	1111.	17.	6.
1772	1070.	9.	6.	1782	1063.	12.	0.	1792	1020.	0.	0.
<u>Totals</u>	12490.	4.	8¼		12732.	4.	7.		11670.	1.	6.
				1793	1060.	0.	0.				
				1794	560.	0.	0.				
				1795	560.	0.	0.				
				1796	560.	0.	0.				
				<u>Total</u>	2740.	0.	0.				

Grand total £39632.10. 9¼

Source: As for Table 1

APPENDIX F

Table 4

"Totals of Payments" in both Middlesex and Warwickshire  
1750-1796

From Michaelmas 1749 to Michaelmas		1750	1751 <sup>(a)</sup>	1752	1753	1754	1755	1756	1757
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Exp. of House	475. 4. 8.	511. 6. 7.	436.19. 8.	547. 4. 8.	416.16. 8.	782. 9. 0.	839. 0. 0.	784. 6. 6.
2.	Cellars	218.16.10.	270.19.10½	219.12. 2.	237.15. 0.	255. 4. 2.	235. 3.11.	237.10. 0.	275. 3. 9.
3.	Stables	229. 6. 0.	244. 6. 0.	216.13. 9.	313.12. 6.	255.14. 9.	321. 0. 7.	235. 9. 1.	320.16.10.
4.	Gardens	77. 2. 0.	86.15. 3.	67.19. 0.	88. 7. 0.	77. 9. 3.	82.10. 8.	67. 9. 4.	85. 9. 3.
5.	Farm	344. 7. 2.	424. 5. 0.	271. 4. 5.	319. 0. 1.	369. 7. 0.	300.12. 3.	288.10. 7.	313. 7. 6.
6.	Person	233. 5. 3.	259. 9. 8.	291. 1. 8.	375.12. 5.	191. 8. 3.	325. 5. 1.	218.19. 5.	377.13. 3.
7.	Dues	746.19. 0.	791.17. 8.	625.13. 5.	875. 5. 6.	648.12. 2.	605. 9. 0.	731. 2. 0.	736. 0. 2.
8.	Manors	745.11. 0.	440.17. 3.	198. 6. 5.	379. 4. 2.	258. 8. 6.	473.16. 0.	291.16. 9.	231. 7.10.
9.	Casual"	146.18. 0.	321. 0. 9.	553.10. 5.	468.17. 4.	374. 7.10.	306. 6. 6.	280. 7. 3.	291.19. 4.
<u>Totals</u>		3217. 9.11.	3350.18. 0.	2881. 0.11.	3604.18. 8.	2847. 8. 7.	3432.13. 0.	3190. 6. 5.	3392.13. 0.

(a) To Christmas  
1751. One  
year and a  
quarter.

"Total of Payments by Exp'ces of House etc."

"Total Payments of the Year		1758	1759	1760	1761	1762	1763	1764	1765
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Exp. of House	656. 0. 0.	631. 9. 0.	635.14. 0.	458. 2. 0.	568.17. 0.	1010.14. 2.	705.14. 4.	794.18. 8.
2.	Cellars	184.12. 0.	187. 2. 6.	273. 5. 0.	139.19. 0.	128. 6.10.	225.10. 0.	143. 8. 5.	327.19. 3.
3.	Stables	359.14. 4.	274.14. 3.	199. 4. 5.	228.15. 0.	224. 5. 0.	275.14. 6.	217. 6. 5.	400.10. 2.
4.	Garden	99.14. 0.	76.13. 2.	63.13. 0.	76. 0. 0.	87. 9. 6.	112.13. 6.	100. 1. 0.	112. 0. 0.
5.	Farms	274. 0. 6.	314.18. 0.	284. 1. 8.	236.17. 0.	244.19. 0.	264. 6. 2.	351. 1. 6.	368.13. 8.
6.	Person	208. 0. 0.	201.15. 9.	216.18. 0.	173. 8. 5.	177.13. 6.	278. 9. 0.	234.11. 0.	279. 6. 0.
7.	Dues	1114.18. 6.	803. 2. 0.	1118.16. 3.	942. 3. 7.	2414.14. 0.	3092. 7. 4.	3412. 0. 6.	4340. 6. 3.
8.	Manors	320. 9. 2.	249. 5. 4.	626.16. 0.	8137. 7. 0.	1443.11. 6.	1966. 3. 6.	1279.10. 6.	1776. 0. 0.
9.	Casual"	255.12. 0.	291. 0. 0.	293.13. 7.	410.14. 4.	378.11. 0.	217. 6. 3.	187. 5. 4.	217.18. 0.
<u>Totals</u>		3473. 0. 6.	3030. 0. 0.	3712. 2. 0.	10803. 6. 4.	5668. 7. 4.	7443. 4. 5.	6631. 0. 0.	8617.12. 0.



"Total of Payments by Exp<sup>t</sup>ces of House etc"

"Total Payments of the Year"		1766	1767	1768	1769	1770	1771	1772	1773
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Exp. of House	639. 2.10	799.18. 1.	747.11. 8.	790. 1.10.	1114. 8. 8.	783.16. 0.	965. 0. 8.	1009.16. 9.
2.	Cellars	281.15. 3.	242. 9. 3.	331.18. 4.	218. 6. 0.	191. 1. 0.	191.14. 0.	219. 0. 1.	300. 5. 2.
3.	Stables	262.19. 9.	314. 2. 5.	245. 0. 3.	236. 1. 5.	222.18. 5.	325.10. 0.	285. 0. 0.	257. 5. 4.
4.	Garden	112.10. 6.	139.17. 0.	119.18. 6.	133.17. 0.	134.14. 6.	126.15. 0.	129.19. 6.	126. 9. 6.
5.	Farm	346. 3. 0.	397. 4. 8.	471. 8. 6.	348.10. 0.	476. 9. 3.	476. 4. 6.	596. 1. 8.	411.16. 0.
6.	Person	316.18. 6.	349. 2. 6.	250. 6. 0.	270. 0. 0.	262. 6. 6.	295.16. 3.	334.14. 9.	246.15. 6.
7.	Dues	1370.14. 0.	2497. 4. 9.	1288. 3. 6.	1702. 3. 0.	2386.11. 9.	1185.18. 8.	1280.12. 3.	1427.17. 6.
8.	Manors	1328.11. 0.	1230.13. 0.	1202. 8. 0.	1703.12. 0.	1183.12. 0.	2788. 9. 4.	2054. 2. 1.	2693.16. 3.
9.	Casual	433. 3. 6.	261. 0. 0.	510. 3. 0.	707.17. 0.	1020. 2.11.	556. 2. 0.	680.15. 0.	794.17. 0.
<u>Totals</u>		5091.18. 4.	6231.11. 8.	5166.17. 9.	6110. 8. 3.	6992. 5. 0.	6730. 5. 9.	6545. 6. 0.	7268.19. 0.

"Totals of Payments"

"Total Payments of the Year"		1774	1775	1776	1777	1778	1779	1780	1781
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Exp. of House	807. 7. 2.	382. 3. 4.	848. 4. 0.	1123.10. 4.	1124.19. 8.	3021. 3. 6.	1143. 5. 0.	1383. 0. 0.
2.	Cellars	132. 0. 0.	11. 1. 2.	274. 9. 0.	220. 7. 0.	288.15. 0.	121.10. 0.	204. 5. 6.	66. 4. 6.
3.	Stables	258. 2. 9.	40.10. 0.	274.17. 0.	351. 7. 7.	305.14. 0.	301.12. 0.	236.18. 6.	234.10. 0.
4.	Garden	104. 4. 8.	83. 3. 0.	88. 8. 6.	116. 8. 0.	162.15. 6.	139. 3. 0.	143.13. 0.	154. 4. 0.
5.	Farm	175. 3. 0.	256.18. 0.	449. 9. 6.	585. 1. 4.	554. 6. 1.	566. 3. 0.	535.18. 0.	605.15. 0.
6.	Person	460.10. 0.	901. 9. 0.	2027.16. 0.	373. 7. 6.	435. 8. 0.	(c)	---	---
7.	Dues	1441.16. 0.	1527.11. 0.	1620. 5. 6.	1787.13. 3.	2242. 5. 9.	2067.13. 7.	2271.13. 0.	2077.15. 0.
8.	Manors	3405. 4. 0.	2946.18. 0.	3552. 7. 0.	2458.15. 0.	2004.13. 0.	2177. 9. 6.	1552.10. 0.	1839. 0. 0.
9.	Casual	1185.15. 0.	1627.18. 0.	1014. 2. 0.	1405.13. 0.	317. 1. 0.	857. 9. 0.	647.18. 0.	692.14. 0.
<u>Totals</u>		7970. 2. 7.	7777.12. 0.	10149.18. 6.	8422. 3. 0.	7437.18. 0.	9252. 3. 7.	6736. 1. 0.	7053. 2. 6.

(c) From this date "Expences of the Person" were shifted into item 8, "Casual"

"Totals of Payments"

"Total Payments of the Year"		1782	1783	1784	1785	1786	1787	1788	1789
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	"Exp. of House	1091. 9. 6.	1065. 6. 0.	1313.15. 0.	1288. 3. 0.	1230. 0. 0.	1652.18. 0.	1625.16. 0.	1295. 9. 0.
2.	Cellars	190. 1. 0.	124. 5. 0.	194.18. 0.	83. 5. 6.	98. 0. 0.	198. 1. 0.	194. 9. 0.	329.13. 0.
3.	Stables	274.15. 0.	369.16. 0.	431. 7. 0.	375. 5. 0.	455.13. 0.	502.14. 0.	321. 8. 0.	406.11. 0.
4.	Garden	151. 9. 0.	143.11. 0.	137. 4. 0.	152.16. 0.	145. 7. 0.	152.15. 0.	163. 4. 0.	165. 7. 0.
5.	Farm	594. 1. 0.	700.16. 0.	584. 4. 0.	655.18. 0.	620. 1. 0.	670.12. 0.	599.10. 0.	640. 2. 0.
6.	Person	---	---	---	---	---	---	---	---
7.	Dues	2106. 3. 0.	2085.17. 0.	2261. 8. 0.	2420. 6. 6.	2459. 5. 0.	2395.15. 0.	2387.11. 0.	2328.12. 0.
8.	Manors	2060. 4. 0.	1840. 4. 0.	1976.12. 0.	3521.19. 0.	3013. 1. 0.	2403. 0. 0.	3429.16. 0.	3848.16. 0.
9.	Casual	844. 2. 0.	757.12. 0.	1100. 8. 0.	1106.16. 0.	1013. 0. 0.	1206.14. 0.	1073. 3. 0.	1367. 2. 0.
<u>Totals</u>		7312. 4. 6.	7087. 7. 0.	7999.16. 0.	9604. 9. 0.	9034. 7. 0.	9182. 9. 0.	9294.17. 0.	10381.12. 0.

"Totals of Payments"

"Total Payments of the Year"		1790	1791	1792	1793	1794	1795	1796
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	Exp. of House	1217.13. 0.	1161.17. 0.	1219. 6. 0.	1284. 9. 0.	1244. 4. 0.	1245.16. 0.	1343.16. 0.
2.	Cellars	142.15. 0.	268. 7. 0.	181. 9. 0.	165.11. 0.	229. 4. 0.	203. 2. 0.	191.18. 0.
3.	Stables	216. 7. 0.	286.11. 0.	334. 9. 0.	276. 9. 0.	365. 7. 0.	267. 0. 0.	285. 8. 0.
4.	Garden	163. 0. 0.	90. 1. 0.	105. 8. 0.	93.14. 0.	113.15. 0.	101.14. 0.	96.12. 0.
5.	Farm	759.17. 0.	580. 7. 0.	544.10. 0.	602.11. 0.	559. 5. 0.	666. 2. 0.	434.13. 0.
6.	Person	---	---	---	---	---	---	---
7.	Dues	2210.18. 0.	2235. 5. 0.	6439. 9. 0.	2288. 3. 0.	3468.16. 6.	1734.18. 6.	3422.12. 0.
8.	Manor	5138. 6. 0.	1900.13. 0.	2513.14. 0.	2813. 2. 0.	2167. 5. 0.	3972.13. 3.	4104. 8. 6.
9.	Casual	1316. 8. 0.	679.17. 0.	872.17. 0.	761.16. 0.	889.13. 0.	871.14. 0.	964.15. 0.
<u>Totals</u>		11165. 4. 0.	7202. 1. 0.	"Add under charged £3000" 15011. 2. 0.	8685.15. 0.	9037. 9. 0.	9060. 9. 9. (corrected)	10844. 2. 6. (corrected)

Sources: As for Table 1, with the addition of CR136/V/156

APPENDIX F

Table 5

Expenditure by the "Manors" in Middlesex and Warwickshire, 1763-1796

Expenses of the Manors for the year ending		1763	1766	1769	1772	1775	1778
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	Manor Courts and woodland	35. 2. 0.	43. 3. 0.	24. 5. 0.	19. 7.10.	30. 2. 3.	141.18.10.
2.	Estate purchases and Game account	105.14. 0.	371.10. 6.	509. 1. 6.	28. 7. 8.	9.15. 1.	17.10. 2.
3.	Colliery and canals	---	---	---	946.12.10.	2499.17. 2.	400.10. 0.
4.	Repairs and alterations to property	519.16. 4.	353. 5. 6.	543.19. 6.	648. 6. 9.	208. 4. 0.	1012. 1. 0.
5.	Harefield and Moorhall (Middlesex)	1305. 9. 2.	560.12. 0	626. 6. 0.	411. 7. 0.	198.19. 6.	434.13. 0.
<u>Totals</u>		1966. 3. 6.	1328.11. 0.	1703.12. 0.	2054. 2. 0.	2946.18. 0.	2006.13. 0.

Expenditure by the "Manors" (contd.)

Expenses by Manors for the year ending		1781	1784	1787	1790	1793 <sup>(b)</sup>	1796
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.	Manor Courts and woodland	111. 3. 0.	130.11. 6.	91. 6. 0.	111.10. 0.	91.15. 0.	71.15. 0.
2.	Estate purchases and Game account	117. 2. 1.	151. 9. 6.	33. 3. 0.	967. 0. 0.	975.16. 0.	2061. 0. 6.
3.	Colliery and canals	705. 7. 4.	475.17. 0.	435. 5. 0.	722. 9. 0. <sup>(a)</sup>	935.12. 0.	1054.12. 6.
4.	Repairs and alterations to property	685. 7. 6.	961. 2. 0.	1256. 0. 0.	1541. 2. 0.	770. 3. 6.	870.11. 0.
5.	Harefield and Moorhall (Middlesex)	220. 0. 0.	257.12. 0.	587. 6. 0.	1765.15. 0.	n.s.	n.s.
<u>Totals</u>		1838.19.11.	1976.12. 0.	2403. 0. 0.	5138. 6. 0.	2813. 2. 0.	4104. 8. 6.

(a) corrected

(b) From 1791 onwards expenditure incurred under sub-head 5 was scattered through the other

APPENDIX F

Table 6

A preliminary note

The following receipts and payments account for Griff Colliery was compiled from annual records kept by Sir Roger Newdigate and summarised in his main volume<sup>(1)</sup> of accounts for most of the period concerned.

Statistics were entered in two odd-sized notebooks indifferently sewn together,<sup>(2)</sup> and were concerned principally with summaries of income and expenditure under particular headings. The quality of many of the entries leaves much to be desired, as indeed were many other aspects of the baronet's accounting procedures.<sup>(3)</sup> Those for the early years of the undertaking were fairly extensive. With the passage of time, however, these declined considerably, especially after 1800. Detail is markedly irregular, even suspect in certain cases, and matters are not improved by weaknesses in the baronet's arithmetic. Several entries were made but not properly debited whilst others were included after the year to which they applied. The only consistent interest shown by him between 1770 and 1805 was in revenue.

Internal evidence in the records indicates that the baronet's statistics given in column 2 were net of wage-payments to miners. However, no trace has been found of the cost of salaries paid to estate officials who spent part or most of their time on colliery business, or of

(1) CR136/V/119

(2) CR136/A347

(3) Supra. Chapt. 3 (Part II)

expenses incurred in effecting repairs and maintenance which are known to have been periodically quite heavy. There is also some doubt as to whether the whole of the initial cost of certain items of equipment was fully included. Both building costs and subsequent listed expenditures must therefore be considered incomplete, especially in view of the baronet's occasional claim that the mine initially cost him £20,000. An additional factor which enjoins caution upon the reader seeking accurate statistics is the complete absence of data on depreciation charges (if indeed these were ever made), and only limited reference to rent lost by land reserved for colliery use.

Statistical summary

		<u>In £s</u>	
1.	Gross receipts (a) 1777-1800 (incl.)	87,586	
	" " (b) 1801-1805	20,600	108,186
	" " (c) 1806-(Nov.) 1806 (estimated)	4,000	<u>112,186</u>
2.	Total payments (a) 1770-1800 (incl.) (including interest)	40,198	
	" " (b) 1801-1806 (estimated)	5,600	<u>45,798</u>
3.	Net receipts (a) to 1800	47,387	
	" " (b) 1801 to 1806 (estimated)	19,000	<u>66,387</u>
4.	Stated cost of building the colliery and its associated communication canal	20,000	



5.	Period of operation of the colliery during the baronet's lifetime	30 years (rounded)
6.	Period between full opening of the colliery (1779) and amortisation of debt	11 years
7.	Tonnage raised and sold between 1775 and 1805	605,973
8.	Probable tonnage raised and sold, January to November, 1806	21,000

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For further statistics on Griff Colliery  
see Appendix L, Tables 1 and 2

APPENDIX F

Table 6

Griff Colliery

Receipts and Payments Account, 1776-1800

Year	Receipts (£ s. d.)	Payments							
		Wages (a)	Gratuities	Rent (c)	Interest on loans	Carriage and timber	Canal (b)	Brick-ki ln	Miscellaneous (d)
1776	Nil			60. 0. 0.	475. 0. 0.	400. 0. 0.			2226.11. 0.
1777	2876. 6. 6.	2803. 8. 6.		10. 0. 0.	617. 0. 0.	155. 0. 0.			1117.11. 0.
1778	570. 0. 0.	400. 0. 0.		10. 0. 0.	699. 0. 0.	200. 0. 0.			190.10. 0.
1779	649. 8. 0.			10. 0. 0.	900. 0. 0.	573. 9. 0.		100. 0. 0.	505.18. 0.
1780	1316. 0.10.			10. 0. 0.	900. 0. 0.	511. 1. 1.		100. 0. 0.	65. 7. 0.
1781	2000. 0. 0.			10. 0. 0.	900. 0. 0.	539.12.10.	900. 0. 0.	100. 0. 0.	40. 0. 0.
1782	3000. 0. 0.		14.14. 0.	10. 0. 0.	900. 0. 0.	517.15. 4.			
1783	3000. 0. 0.		14.14. 0.	10. 0. 0.	900. 0. 0.	383. 0.10.			
1784	4000. 0. 0.		35.14. 0.	10. 0. 0.	900. 0. 0.	350.13. 0.			
1785	4025. 0. 0.		35.14. 0.	10. 0. 0.	745. 0. 0.	429. 2. 0			
1786	3800. 0. 0.		35.14. 0.	10. 0. 0.	625.10. 0.	307.14. 4.			
1787	4700. 0. 0.		36.15. 0.	10. 0. 0.	490.10. 0.	388. 9. 8.			

Griff Colliery

Receipts and Payments Account (contd.)

Year	Total payments	Annual balance (+ or -)	Balance of outstanding debt
1776	3161.11. 0.	-3161.11. 0.	13718. 0. 8. <sup>(e)</sup>
1777	4703. 7. 6.	-1827. 1. 0.	15545. 1. 8.
1778	1499.10. 0.	- 929.10. 0.	16474.10. 0.
1779	2089. 7. 0.	-1439.19. 0.	17914. 9. 0.
1780	1586. 8. 1.	- 270. 7. 3.	18184.16. 3.
1781	2489.12.10.	- 489.12.10.	18674. 9. 1.
1782	1442. 9. 4.	+1557.10. 8.	17116.18. 5.
1783	1307. 0.10.	+1692.19. 2.	15423.19. 3.
1784	1296. 7. 0.	+2703. 3. 0.	12720.16. 3.
1785	1219.16. 0.	+2805. 4. 0.	9915.12. 3.
1786	978.18. 4.	+2821. 1. 8.	7094.10. 7.
1787	925.14. 8.	+3774. 5. 4.	3320. 5. 3.

- (a) Excluding chalter payments to colliers which apparently had already been deducted.
- (b) Associated canal-building costs were included in early expenditure totals.
- (c) Annual rent changes for spoiled land, given for the previous six years in 1776.
- (d) On occasion, wages were included under "total expences" shown here as the "Miscellaneous" column.
- (e) Expenditure incurred between 1770 and 1775 and brought forward, totalled £10,556. 9. 9. at the beginning of 1776.

Griff Colliery  
Receipts and Payments Account (contd.)

Year	Receipts (£ s. d.)	Payments							
		Wages	Gratuities	Rent	Interest on loans	Carriage and timber	Canal	Brick-kiln	Miscellaneous
1788	4100. 0. 0.		36.15. 0.	10. 0. 0.	360. 0. 0.	490. 3. 0.			
1789	9200. 0. 0.		136.15. 0.	10. 0. 0.	135. 0. 0.	482.17. 2.			
1790	3900. 0. 0.		64.14. 0.	10. 0. 0.		628.16.10.			1000. 0. 0.
1791	3100. 0. 0.		44.14. 0.	10. 0. 0.		553.14. 0.			(g)
1792	3000. 0. 0.		43.13. 0.	10. 0. 0.		556.16. 0.			
1793	4400. 0. 0.		63.13. 0.	10. 0. 0.		488.12.10.			
1794	3300. 0. 0.		14.14. 0.	n.s. <sup>(h)</sup>		493. 8. 0.			
1795	4400. 0. 0.		14.14. 0.			417.15. 0.			
1796	3600. 0. 0.		14.14. 0.			323. 5. 0.			
1797	5050. 0. 0.		64.14. 0.			n.s.			
1798	4700. 0. 0.		64.14. 0.						
1799	4700. 0. 0.		14.14. 0.						
1800	4200. 0. 0.		15.15. 0.						357.10. 0. <sup>(j)</sup>

Griff Colliery

Receipts and Payments Account (contd.)

Year	Total payments	Annual balance (+ or -)	Balance of outstanding debt (f)
1788	896.18. 0.	+3203. 2. 0.	117. 3. 3.
1789	764.12. 2.	+8435. 7.10.	8318. 4. 7. <sup>(f)</sup>
1790	1703.10.10.	+2196. 9. 2.	10514.13. 9.
1791	608. 8. 0.	+2491.12. 0.	13006. 5. 9.
1792	610. 9. 0.	+2389.11. 0.	15395.16. 9.
1793	562. 5.10.	+3837.14. 2.	19233.10.11.
1794	508. 2. 0.	+2791.18. 0.	22025. 8.11.
1795	432. 9. 0.	+3967.11. 0.	25992.19.11.
1796	337.19. 0.	+3262. 1. 0.	29255. 0.11.
1797	64.14. 0.	+4985. 6. 0.	34240. 6.11.
1798	64.14. 0.	+4635. 6. 0.	38875.12.11.
1799	14.14. 0.	+4685. 6. 0.	43560.18.11.
1800	373. 5. 0.	+3826.15. 0.	47387.13.11.

(f) From 1789 onwards this column represents the cumulative balance to receipts

(g) Minimum estimated expense of new "fire engine".

(h) No rent is imputed to spoiled land after this date. The Collycroft site was closed c1789 and probably the land had been returned to pasture by 1794.

(j) Including £132.10. 0. "extra to colliers" and £225. 0. 0., the value of 50 dead horses.

APPENDIX F

Table 7

The Household and Estate Accounts (General) of Richard Geast  
1761-1799 (incl.)

<u>Year</u>	<u>Receipts</u>	<u>Payment</u>	<u>Annual Balance</u>
	£	£	(+ or -)
1761	816	873	-57
1762	1224	1175	+49
1763	1616	1489	+126
1764	1617	1446	+170
1765	1377	1357	+20
1766	1259	1257	+2
1767	1894	1873	+21
1768	2073	2047	+26
1769	2643	2619	+23
1770	2973	2933	+39
1771	2692	2667	+25
1772	3266	3218	+48
1773	3755	3672	+82
1774	3613	3496	+116
1775	4802	4730	+72
1776	4304	4186	+118
1777	4247	4187	+59
1778	5548	5480	+68
1779	3155	3123	+32
1780	4451	4406	+43
<u>Totals:</u>	£57325	£56034	

Table 7 (contd.)

<u>Year</u>	<u>Receipts</u>	<u>Payments</u>	<u>Annual balance</u>
	£	£	(+ or -)
<u>Brought forward:</u>	57325	56034	
1781	9104	9084	+20
1782	5616	5453	+163
1783	8704	8497	+207
1784	11424	11359	+65
1785	7459	7173	+285
1786	9967	9916	+ 51
1787	9944	9879	+64
1788	8210	7952	+257
1789	9004	8839	+164
1790	8141	7882	+258
1791	10544	10394	+150
1792	8672	8550	+121
1793	10415	10407	+8
1794	7872	7668	+203
1795	11139	10618	+521
1796	11696	10514	+182
1797	7504	7392	+111
1798	9684	9415	+269
1799	8292	8049	+243
<u>Totals</u>	£230716	£225075	

---

Receipts, payments and annual balances are given in £s only. Occasional discrepancies are entirely covered by fractional parts omitted from these statistics.

Source: Dugdale Muniments, 23(V), 24(V)

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APPENDIX F

Table 8

Recorded tax payments: a preliminary note

The following table contains no details of Poor Rate levies or other local imposts, being concerned exclusively with recorded payments to central government.

In many instances details of particular tax payments are unavailable and the totals shown may be regarded only as a rough guide to the broad base upon which indirect taxation was imposed, and the number and complexity of taxes faced by landowners and others. It cannot therefore be regarded as an exhaustive list of tax liabilities and payments by the baronet in any single year.

For the sake of simplicity several taxes have occasionally been aggregated. For example, horse duties were levied at different rates according to the purpose for which the animals were intended. Likewise the duty payable on a heavy coach differed from that on a phaeton, which in turn was heavier than that on a Sedan chair. Items 14 and 6 in the table should therefore be regarded as totals for all types in any particular year.



APPENDIX F

Table 8

Recorded tax payments by Sir Roger Newdigate, 1763-1805  
(excluding Poor Rate and local imposts)

Tax	1763	1765	1767
	£. s. d.		
<u>A. London</u> (Spring Gardens house)			
1. Land tax	10. 0. 0.	10. 0. 0.	8. 2. 6.
2. Window	2.12. 6.	2.12. 6.	3. 9. 0.
3. House	---		
<u>B. Middlesex</u> (Harefield and Itchenham)			
4. Land tax	132.17. 6.	132.17. 6.	99.13. 1.
<u>C. Warwickshire</u> (All taxes not speci- fically shown under <u>A</u> or <u>B</u> )			
5. Land tax:			
(a) Astley	82. 2. 0.	82. 2. 0.	67. 4. 1 $\frac{1}{2}$
(b) Bedworth	2. 2. 0.	2. 2. 0.	1.14. 1 $\frac{1}{2}$
(c) Chilvers Coton	37.15. 8.	37.15. 8.	30.14. 1 $\frac{1}{2}$
(d) Arbury	87.10. 2.	87.10. 2.	76.13. 1
6. Coach (all carriages)	8. 0. 0.	8. 0. 0.	8. 0. 0.
7. Malt	6. 0. 0.	6. 0. 0.	6. 0. 0.
8. Plate	1.10. 0.	1.10. 0.	1.10. 0.
9. Window (Arbury Hall)	8.11. 0.	8.11. 0.	11. 3. 0.
10. House (inhabited)(i)	---		
11. Commutation	---		
12. Stamped paper	---		
13. Waggon	---		
14. Horse	---		
15. Servants (ii)	---		
16. Armorial bearings	---		
17. Dogs	---		
18. Brick and tile	---		
19. Hair Powder	---		
20. 10% Tax	---		
21. Gamekeepers' licences	---		
22. Income Tax	---		
<u>TOTALS</u>	379. 0.10.	379. 0.10.	314. 3. 0 $\frac{3}{4}$



Recorded tax payments (contd.)

	1769	1771	1773	1775	1777
	£. s. d.				
1.	7.10. 0.	9. 7. 6.	7.10. 0.	7.10. 0.	10. 0. 0.
2.	3. 9. 0.	3. 9. 0.	3. 9. 0.	3. 9. 0.	3. 9. 0.
3.					
4.	99.13. 1.	132.17. 6.	99.13. 2.	99.13. 2.	132.17. 7.
5. (a)	60.11. 6.	76. 9. 4.	61.11. 6.	61.11. 6.	37.15. 6.
(b)	1.11. 6.	1.19. 4 $\frac{1}{2}$	1. 4. 0.	1. 4. 0.	1.12. 0.
(c)	28. 6. 9.	30. 5. 4.	24. 4. 0.	24. 4. 0.	32. 5. 4.
(d)	65.17. 6.	76.17. 1.	65.17. 6.	65.17. 6.	87.17. 6.
6.	8. 0. 0.	8. 0. 0.	8. 0. 0.	8. 0. 0.	10. 0. 0.
7.	6. 0. 0.	6. 0. 0.	6. 0. 0.	6. 0. 0.	6. 0. 0.
8.	1.10. 0.	1.10. 6.	1.10. 0.	1.10. 0.	1.10. 0.
9.	11. 3. 0.	5.11. 6.	5.11. 6.	11. 3. 0.	11. 3. 0.
10.	---				
11.	---				
12.	---				
13.	---				
14.	---				
15.	---				
16.	---				
17.	---				
18.	---				
19.	---				
20.	---				
21.	---				
22.	---				
	293.12. 4.	352. 6. 7 $\frac{1}{2}$	284.10. 8.	290. 2. 2.	324. 9.11.

Recorded tax payments (contd.)

	1779	1781	1783	1785	1787
	£. s. d.				
1.	10. 0. 0.	10. 0. 0.	10. 0. 0.	10. 0. 0.	10. 0. 0.
2.	3. 9. 0.	3. 9. 0.	3. 9. 0.	3. 9. 0.	3.11. 0.
3.	4.10. 0.	6. 0. 0.	6. 0. 0.	8. 5. 0.	12. 0. 0.
4.	132.17. 7.	132.17. 0.	132.17. 7.	132.17. 7.	132.17. 7.
5.	(a) 23. 0. 0.	23. 0. 0.	23. 0. 0.	23. 0. 0.	23. 0. 0.
	(b) 5. 0. 0.	5. 0. 0.	5. 0. 0.	5. 0. 0.	5. 0. 0.
	(c) 32. 5. 4.	32. 5. 4.	32. 5. 4.	120. 2. 0. (iii)	125.15. 5.
	(d) 87.17. 6.	87.17. 6.	87.17. 6.		
6.	10.10. 0.	11. 0. 0.	13.14. 4.	13.14. 4.	17.10. 0.
7.	6. 6. 0.	10.10. 0.	7.14. 3.	50. 6. 6.	13.18. 1.
8.	N.S.				
9.	11. 3. 0.	11. 3. 0.	11. 3. 0.	11. 3. 0.	11. 3. 0.
10.	18. 9.	18. 9.	18. 9.	18. 9.	18. 9.
11.				6.10. 0.	13. 0. 0.
12.				5. 4. 0.	5. 0. 4.
13.				12. 0.	12. 0.
14.				3.10. 0.	4. 0. 0.
15.	6. 0. 0.	8. 8. 0.	9.18. 5.	11. 0. 8.	23.10. 0.
16.	---				
17.	---				
18.				6. 6. 6.	39. 4. 8.
19.	---				
20.	---				
21.				1.13. 6.	1.14. 6.
22.	---				
	333.17. 2.	342. 9. 2.	343.17. 2.	413.12.10.	442.15. 4.

Recorded tax payments (contd.)

	1789	1791	1793	1795
	£. s. d.			
1.	10. 0. 0.	} sold in 1792		
2.	3.11. 0.			
3.	12. 0. 0.			
4.	130.16. 7.	N.S.		
5.	(a) 23. 0. 0.	23. 0. 0.	23. 0. 0.	23. 0. 0.
	(b) Paid by tenants hereafter			
	(c) (iii) 125.15. 5.	125.15. 5.	125.15. 5.	125.15. 0.
	(d)			
6.	17.10. 0.	21.10. 0.	28. 0. 0.	28. 0. 0.
7.	31.13. 4.	41.10. 0.	N.S.	41.14. 8.
8.				
9.	11. 3. 0.	11. 3. 0.	11. 3. 0.	11. 3. 0.
10.	18. 9.	18. 9.	18. 9.	18. 9.
11.	13. 0. 0.	13. 0. 0.	13. 0. 0.	13. 0. 0.
12.	3.10. 0.	12. 6. 0.	3. 0. 0.	4.15. 8.
13.	12. 0.	12. 0.	Repealed	
14.	4. 0. 0.	7. 2. 0.	6.10. 0.	6.10. 0.
15.	23.10. 0.	18. 0. 0.	18. 0. 0.	18. 0. 0.
16.				
17.				
18.	29. 8. 0.	20.13. 2.	17.14. 0.	32.19. 4.
19.				
20.		3. 1. 2.	6. 9. 2.	6. 9. 2.
21.	2.17. 6.	5.10. 0.	5.10. 0.	5.10. 0.
22.				
	443. 5. 7.	304. 0. 6.	259. 0. 4.	317.16. 0.

Recorded tax payments (contd.)

	1801	1802	1803 (Assessment)	1804 (Assessment)	1805
		£. s. d.			
1.		N.S.			
2.	No entries	"			
3.		"			
4.		"			
5.		"			
(c)			(iv)		
(d)		125.15. 5.	125.15. 0.	103.18. 5.	103.18. 4.
6.		9.12. 0.	10. 0. 0.	7.12. 6.	7.12. 6.
7.		N.S.	N.S.	N.S.	N.S.
8.		"	"	"	"
9.		40. 0. 0.	56. 9. 0.	92.11. 6.	92.11. 6.
10.		1. 5. 0.	2.10. 0.	4. 5. 0.	4. 5. 0.
11.		N.S.	N.S.	N.S.	N.S.
12.		"	"	"	"
13.		"	"	"	"
14.		23. 0. 0.	15. 3. 6.	63. 2. 6.	63. 2. 6.
15.		28.16. 0.	36.16. 0.	17. 1. 0.	24.13. 6.
16.		1.11. 6.	2. 2. 0.	1. 1. 0.	1. 1. 0.
17.		3. 0. 0.	5. 0. 0.	9.18. 0.	12. 5. 0.
18.		N.S.	N.S.	N.S.	N.S.
19.		"	"	10. 6.	10. 6.
20.		"	"	N.S.	N.S.
21.		"	"	"	"
22.		780. 0. 0.	N.S.	"	"
		1013.19.11	253.15. 6.	300. 0. 5.	310. 0.10.

APPENDIX F

Table 8

Key

- (i) Originally fixed at £25 per annum, with a rate of 9d. in the £.
  - (ii) Differential rates for men and women servants existed at first.
  - (iii) Chilvers Coton and Arbury Land Rent liabilities were combined from 1785 onwards in the baronet's accounts.
  - (iv) The full impact of the tax in 1803 was £180. The incidence of the tax, however, was shared between the baronet and his tenants, thereby explaining the distinction between this and the recorded sum.
- 

Principal sources:

- (i) CR136/V/119
- (ii) CR136/B2637

APPENDIX G

Measures and Weights: some local problems

A problem often encountered by the historian, but one which does not always command the attention it deserves when compiling statistics, is that of the variable and sometimes quite arbitrary systems of measurement in common use during the seventeenth and eighteenth centuries. Thus, comparable areas of woodland and field were sometimes assessed in units of the same name but different size. Again, measures and weights of coal offered for sale varied according to time, place and sometimes destination even though the same terminology might be employed on each occasion. The student of agrarian history, with his need to be able to distinguish between different measures of grain often all bearing the same title is therefore not alone with the difficulty of trying to establish common denominators when calculating production totals.

Variations in measurement had many causes. Sometimes they arose from local custom; occasionally they stemmed from fraud. The sensitivity of consumer demand was also taken into consideration. A fourth factor, the existence of which did not become apparent to a Warwickshire landowner and his steward for some time, was that of different regional practices being used simultaneously in one place. A coalmaster from Derbyshire operating mines near Nuneaton, for example, would not necessarily adopt the local system of measures. Some of these variations were so well known and accepted at the time that, like many other important but commonplace occurrences, they were rarely

recorded. Others only come to light after examining the causes of local strikes or by delving into the minutiae of estate records and legal proceedings.

## I. Land measure

### (a) Yardlands

Between 1756 and 1774, when so much coal-bearing land between Tamworth and Coventry was inclosed, it was common to express the areas concerned in terms of yardlands and/or acres. From the examples listed<sup>(1)</sup> local yardlands appeared to average 34 acres at that time. This, however, was by no means universal. Sir Roger Newdigate's own analysis<sup>(2)</sup> of landholdings in 1763, in Chilvers Coton, showed variations ranging from 28 to over 50 acres per yardland, all within a single parish. It might be thought, from a superficial examination, that yardland measures varied according to ownership or the use to which land was put. Thus, church yardlands would differ from those belonging to the laity, private holdings from town holdings, inclosed arable from common pasture. Unfortunately, the problem admits of no such easy solution. Even Sir Richard Newdigate's note in 1698 that "Common Report goes that each yardland contains 30 acres"<sup>(3)</sup> implied that some

(1) Appendix C, Table 1.

(2) Appendix D, Table 3.

(3) CR136/V/183, p. 32.



doubt existed even then as to its true meaning.

Possibly the local yardland at this time was a measure of land calculated according to value, and linked to tithes. In this way it might be possible, given additional data, to construct a common denominator for different types of land, even for land in different ownership. Thus, the yardland of the lord of the manor would be greater than that of the tenant, as Sir Roger Newdigate's figures imply<sup>(4)</sup>. Whatever the final solution might be, the Warwickshire yardland during this period was not a standard unit of measurement, nor was it used exclusively for uninclosed land. The only point of consistency was its use to assess the holdings of the greater proprietors<sup>(5)</sup>.

(b) Acres

It might be thought that where land was measured solely by the acre matters would be greatly simplified. This was not always so. During the seventeenth century and for at least part of the eighteenth, woodland acres, properly measured, were slightly larger than field acres. Fortunately, Sir Richard Newdigate II in 1698 noted that a particular portion of woodland on his estate "in wood measure as it ought to be" came to 15 acres, 2 roods and 24 perches, but by land measure equalled 18 acres, 2 roods and 20 perches. The woodland acre was therefore

(4) Supra, footnote 2.

(5) The Commissioners of Inclosure in all the cases cited in Chapter 2 (Part II) were careful to emphasise the use of "statute measure" for all types of land.

equivalent to  $1\frac{1}{5}$  field acres<sup>(6)</sup>. The cautionary note sounded by the baronet strongly suggests that this difference was not always observed on his estate. Consequently, calculations of his acreage of woodland must be regarded only as approximations to the truth, the more so since his own arithmetic as well as that of some of his stewards was often woefully inaccurate.

A second survey carried out by Sir Richard Newdigate III in 1724<sup>(7)</sup> reveals that this dual system of measurement was still in occasional use and that no significant change in the relationship of woodland to field acres had taken place since the seventeenth century. Nevertheless in all cases there appears to have been no decided effort made to enforce the use of woodland acres for measuring woodland. Possibly there was a traditional system employed to measure mature woodland as opposed to young plantations. If so, no details have yet come to light. Sufficient data exist, however, to prove that the acre was not a single, standard unit of measurement any more than the yardland, and it may be that such distinctions as existed were thought to be too well known to deserve special record.

(6) More precisely, the proportions were 1 : 1.19. Thus woodland assessed at 100 acres would be equivalent to 119 field acres. Unguarded distinctions (sometimes even their absence) could have had repercussions when calculating rents.

(7) CR764 (Miscellaneous bundle). Survey by Harry Walker, 21 Sept. 1724

## II. Coal measures

The common form of selling coal at the pithead during the first half of the century was by the stackload<sup>(8)</sup>. Thereafter, the ton of 21 hundredweights became the standard measure south of Nuneaton. Elsewhere in the county, however, the stackload continued to be used, with even greater variations in size than existed in earlier years.

At Griff Colliery efforts were made in 1713 to peg it at a level "not exceeding" 30 cwt.<sup>(9)</sup> By 1729/30, however, competition had forced it above this level<sup>(10)</sup>. That it should have done so at a time when coal prices were nominally stable suggests that some form of price agreement existed between coalmasters, reinforced in certain cases<sup>(11)</sup> by the need to establish a basis on which to calculate shareowners' dividends. Nevertheless, it is clear from some of the practices<sup>(12)</sup> which existed locally that real prices varied substantially between collieries as well as at particular ones over quite a short space of time.

(8) Occasionally shortened to "load".

(9) CR136/C3152, Lease.

(10) CR136/C619

(11) Notably in the case of Stonier Parrott's colliery at West Synnall.

(12) See Thesis (Wh.), pp. 195-198.

Sir Roger Newdigate was advised<sup>(13)</sup> in 1761 to change from the stackload system to one of weight, the reasons being the highly variable weights of stacks and the profit sometimes made by stavers in selling stack bottoms which purchasers had been unable to carry away. A special additional advantage pointed out to him was that of selling (by weight) coal freshly drawn "and full of water"! This change seems to have been a stabilising force where estate revenues were concerned even if customers now faced new hazards from wet coal and useless stone packed in by disgruntled miners.

At mines leased by the Stratford family and their descendents to different venturers in and to the north west of Nuneaton, the old system continued in use after mid-century with a bewildering set of variations<sup>(14)</sup>. A lease of mines in Baddesley Ensor in 1752<sup>(15)</sup>, for example, stipulated that the (stack) load was to be fixed at five feet, eight inches high and three feet, nine inches square or, "if the same be sold on the range (i.e. heaped) before the same is Stacked the range to be three Ells long, one Yard wide and two feet in height". This was rather larger than the Stratford stackload for 1738<sup>(16)</sup> but nothing like as large as the difference introduced

(13) Correspondence: CR136/C625  
Sir C. Sedley to Sir. R. Newdigate, 11 May 1761.

At this time Newdigate was considering reopening Griff Colliery and had evidently sought the advice of his Nottingham cousin on special problems.

(14) Dugdale Muniments: (D.M.) 1870. In re Geast v Bracebridge and Greaves. (1787).

(15) Lease: DM 83, F. Stratford to J. England, S. Lythall and E. Lythall. (1752).

(16) Thesis (Wh.) p. 197.

by a former Derbyshire coalmaster, John Fletcher, who obtained a 99 year lease of Haunchwood Colliery, Nuneaton<sup>(17)</sup>, in 1729, at a mine rent of one shilling per stack.

As expected, the terms of such a lease inevitably gave rise to friction and ultimately led to an action at Warwick Assizes in 1787 which incidentally gave little comfort to the plaintiff. During proceedings it was alleged that stackloads, estimated at 70.25 cubic feet in 1729 rose to 96 cu. feet during the following twenty years<sup>(18)</sup>, and that after 1766 they increased still more whilst the mine rent remained unaltered. A second coalmaster<sup>(19)</sup> at the same colliery continued the practice of variable stacks, being accused inter alia of raising them on occasion as high at 104 cu. feet, or nearly 45 cwt. Bankruptcy inevitably followed this desperate expedient to boost sales but it was claimed in his defence that inflated stackloads were the rule rather than the exception, locally, being the "Custom of the Country".<sup>(20)</sup>

For the plaintiff the Assessors found that the loss of mine rent due to inflated stackloads (37%) amounted to over £100 per annum when the mine in question (Haunchwood) was in full production, and that in

(17) Lease: DM1410 (a & b). R. Stratford to J. Fletcher,  
6 February 1729.

The same man also leased mines in Ansley in 1747 from the Stratford family, thereby becoming the most important coalmaster between Nuneaton and Baddesley Ensor for nearly twenty years.

(18) Correspondence: DM 1876. D. Baxter to R. Geast.

(19) John Barber, devisee and executor of Fletcher some of whose colliery accounts are summarised in Appendix O, Table 1

(20) DM 1873. Answer of Defendant J. Barber to the Bill of Complaint by Richard Geast.

consequence an additional ld. would be payable henceforth for measures of 6 cubic feet over and above 70 cubic feet. More important for the historian, however, was the claim that very large stacks were in fact a Derbyshire mining practice, introduced originally in 1729. Considering that numbers of mine operators from Staffordshire, Derbyshire and Oxfordshire took leases of local pits from time to time it is no surprise to learn that different regional practices could sometimes cut sharply across local ones with considerable effect upon landowners' receipts. Worse could follow for the lessor (and his servant!) when it could be claimed in open court that his steward "never knew what size the stacks were till lately," (1787).

By the early nineteenth century the tonnage system had become well established at the larger Warwickshire pits. Nevertheless, even this had its variations. The "Pit ton" was commonly of 23 cwts, each of 120 lbs., but sold to customers at 21 cwts. Coal for loading at canal wharves in Nuneaton, however, was calculated by imperial measure<sup>(21)</sup> to enable "castemen" to stack and retail it without loss. Not until 1872 was a national system of weighing rather than measuring coal established by Parliamentary Act<sup>(22)</sup>, with the substitution of the imperial ton for the long ton.

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(21) Correspondence: DM 1546, J. Twigg to Dugdale S. Dugdale,  
1 April, 1826.

(22) 35 and 36 Vic. C76.

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APPENDIX H

The Employment of Steampower in the Warwickshire Coal Industry  
during the century 1714 to 1813

During this century at least 25 possibly 29 Newcomen and Boulton-Watt engines were erected at Warwickshire collieries. Most of these were new models but the importance of the second-hand market should not be underestimated. No account has been taken of the number of reciprocating or rotary machines employed outside the coal industry but evidence<sup>(1)</sup> may be adduced to show that canal companies and textile manufacturers were important buyers.

Although the basic atmospheric engine was introduced to this county as early as 1714 the more spectacular machines were not built until the latter half of the century. On the basis of present evidence, some of these were among the largest, most powerful and possibly most expensive in Britain at the time of completion. That so much attention should have been lavished upon machines erected at medium sized collieries in the South Midlands is a testimony to the value rather than the sheer size of the market, and the type of competition<sup>(2)</sup> which existed within it.

- (1) The Birmingham firm of Boulton and Watt alone sold two engines for use on Warwickshire canals and one to a Warwick cotton and worsted manufacturer by 1810.
- (2) Competition in the local coal industry was distinctly oligopolistic. Only four groups of mineowners controlled coal production between Nuneaton and Coventry.

Wherever possible in Table 1 the location of engines erected during the second half of the period under review has been given clearly but except in the case of two of the Newdigate machines a greater degree of precision is out of the question. The dates quoted have been the latest stated in all but one instance. It should not be assumed, therefore, that these necessarily represent the times when particular engines first began to work at specific collieries. Indeed, in some cases, they had been employed for lengthy periods before clear reference was made to them in primary sources.

It is worth noting that no reference has been made to machines probably erected at the Charity Colliery (Bedworth) and at Wyken. Considering that £60,000 was sunk in the latter undertaking in the twenty years ending 1811, and that its proprietors were then prepared to invest a further £5000, given the support of the Corporation of Coventry<sup>(3)</sup>, it seems extremely unlikely that they would have been content to use horse gins and similarly outdated equipment. Likewise, collieries between Mancetter and Tamworth have been excluded from calculations. The reason in all these cases has been the lack of accurate data.

The totals recorded in Table 1 should therefore be regarded as conservative estimates of the employment of steam power in the Warwickshire coal industry during the latter part<sup>(4)</sup> of an extremely important century of growth.

(3) Council Minute Book (Coventry), A14 (M). 3 Sept. 1811. C.R.O.

(4) On the employment of atmospheric engines during the early period, see: A. W. A. White: Early Newcomen Engines on the Warwickshire Coalfield, 1714-1736. T.N.S. XLI.



APPENDIX H    TABLE 1

THE DISTRIBUTION OF NEWCOMEN AND BOULTON-WATT ENGINES IN WARWICKSHIRE COLLIERIES BETWEEN 1747 and 1813

Entry	Date	Location	Ownership	Manufacture	Type		B. & W.	Principal references	Cylinder bores
					Newcomen	and			
					Etabd.	Possible	!		
1.	1747 (10 Aug.)	Hawkesbury	R.P., J.B. <sup>(1)</sup>	---	1	-	-	(i) H.M.B. 31 <u>Corres.</u> 10/8/47 (ii) M. B. Rowlands T.N.S. XLI	-
2.	1761 (28 July)	Chilvers Coton	J.B., J.F., J.T.	---	-	1	-	(i) H.M.B. 31 <u>Corresp.</u> 28/7/61	-
3.	1767 (28 Sep.)	Wilnecote	-	---	1	-	-	CR136/86; 87	-
4.	1768 (27 Oct.)	Ansley	J.B.	---	1	-	-	(i) D.M. 2270	-
5.	1774 (9 May)	Griff (Collycroft)	R.N.	Carron Iron Comp. Falkirk	1	-	-	(i) CR136/C627 (ii) CR136/Diary	-
6.	1774	Hawkesbury	R.P. and Co.	---	1	-	-	(i) W.H.B. Court E.H.R. VII (i) (ii) B. & W. Colln. <u>Corresp.</u> 1/1/1779	-
7.	1774	Hawkesbury	R. P. and Co.	---	1	-	-	(iii) B. & W. Colln. (A.O.) Notebook N.B. 11	61"

APPENDIX H Table 1  
(Continued)

Entry	Date	Location	Ownership	Manufacture	Type			Principal references	Cylinder bores
					Newcomen	and	B. & W.		
					Estab.	Possible	/		
8.	1776	Hawkesbury	F.P. and Co.	Bersham (J. Wilkinson)	-	-	1	(i) B. & W. Colln. Folio 625 (ii) B. & W. Colln. Catalogue p.284 (iii) B. & W. Colln. Corresp. 6/7/1777	58"
9.	1778 (2 July)	Griff	R.N.	Carron Iron Comp, Falkirk	1	-	-	(i) CR136/C633 (ii) CR136/Diary	60"
10.	1791 (31 Jan.)	Griff (Hollows)	R.N.	Coalbrookdale (A. Darby III)	1	-	-	(i) CR136/Diary (ii) CR136/V/147 (Memorandum)	--
11.	1791 (Feb.)	Hawkesbury	F.P. and Co.	Bersham (J. Wilkinson)	-	-	1 (Rotary)	(i) B. & W. Colln. (A.O.) Notebook N.B.61 (ii) C. & Y. 81/1 Notebook "1791" (iii) B. & W. Colln. Catalogue p. 40	10 $\frac{1}{2}$ "
12.	1792	Hawkesbury	F.P. and Co.	Bersham (J. Wilkinson)	-	-	1 (Rotary) D.A.	(i) B. & W. Colln. Catalogue p. 41 and p. 109	16"
13.	1793 (10 Aug.)	Griff (Hollows)	R.N.	---	1	-	-	(i) CR136/V/16 (ii) CR136/Diary	62 $\frac{1}{2}$ "
14.	1796	Hawkesbury	F.P.(II) & Co.	---	-	-	1 (Rotary) D.A.	(i) B. & W. Colln. Catalogue p. 109 (ii) B. & W. Colln. Corresp. 31/8/1796	--

APPENDIX H, Table 1  
(Continued)

Entry	Date	Location	Ownership	Manufacture	Newcomen and Etabd. Possible	Type B. & W.	Principal references	Cylinder bores
15.	1797 (29 Nov.)	Nuneaton (Haunchwood?)	A.D.	Bersham (J. Wilkinson)	-	- 1 (second-hand)	(i) B. & W. Colln. catalogue pp. 288-290 (ii) B. & W. Colln. Folios 563; 627	45"
16.	1802 (7 Oct.)	Baddesley	D.S.D.	Prob. Coalbrookdale	1		(i) D.M. 178 (ii) D.M. 1408	
17.	1807 (25 Mar.)	Oldbury (Warwickshire)	D.D.	---	1	-	(i) D.M. 1401 (A)	-
TOTALS:					11	1	5	

LEGEND: Abbreviations (Names)

1. R.P. - Richard Parrott	R.N. - Sir R. Newdigate
J.B.(i) - John Bourne	F.P. - Francis Parrott
J.B. - John Barber	F.P.(II) - Francis Parrott II
J.F. - John Fletcher	A.D. - Alexander Donald
J.T. - John Tomkys	D.D. - Dugdale S. Dugdale
	R.G. - Richard Geast

(References)

2. B. & W. Colln.	- Boulton & Watt Collection
B. & W. Colln.(A.O.)	- As above (Assay Office).
C. & Y.	- Caddick & Yates MSS.
D.M.	- Dugdale Muniments
Q.S.	- Quarter Sessions Records
H.M.B.	- Hand, Morgan, Bourne MSS.
T.N.S.	- Transactions of the Newcomen Society
E.H.R.	- Economic History Review

APPENDIX J

The Rise of the Hawkesbury Colliery Company

The rise of the Hawkesbury Colliery Company<sup>(1)</sup> during the eighteenth century forms an important chapter in the history of the Warwickshire coal industry. Important though the Griff ventures of the Newdigates were during this period the pre-eminence which they had enjoyed in the early years of the century was gradually whittled away and before the end of the third quarter pride of place had been yielded to the mines lying between Bedworth and Hawkesbury and controlled by the Parrott family. In terms of geographical extent, annual output and the employment of advanced technology these collieries easily outstripped the rest of the field and by the turn of the century the gap lying between them and their nearest rivals was still widening.

Their development from a series of small, isolated workings at the beginning of the eighteenth century is bound up with the Warwickshire history of three men: Stonier Parrott, and his two sons, Richard Parrott of Hawkesbury and Dr. Francis Parrott of Birmingham. The first was largely responsible for the successful introduction of a revolutionary form of power to the coalfield; the second rebuilt the

(1) Curiously enough no single, formal title was employed by the proprietors. The terms, "Parrott and Company", "Hawkesbury Company", "Parrott and Partners", and "F. Parrott of Hawkesbury" have all been used in assorted correspondence. The names "Exhall" and "Hawkesbury" have also been used interchangeably on occasion. For present purposes the term "Hawkesbury Company" is applied to all the undertakings of the Parrott family and its various partners.

family enterprise from the wreckage left by his father's bankruptcy; the third, despite his early preoccupation with medicine, established the venture on a sound business basis and made it, for a while, a showpiece of applied science and technology.

#### I. Stonier Parrott

Stonier Parrott was born in or about the year 1686, the eldest son in a family of seven children belonging to Richard Parrott, a minor landowner, then living at Upper Bignall End in Audley, Staffordshire. The family were already comfortably off by this date for an abstract of the will of Richard's father, Francis, who died in 1680, describes him as a "yeoman", mentions the disposal of land and goes on to list a number of legacies.<sup>(2)</sup>

The family interests, however, were by no means confined exclusively to farming. Abraham, a younger brother of Richard, became a wealthy mercer in Lichfield whilst Richard himself, his son Stonier and a neighbour, George Sparrow, in company with various relatives, gradually became immersed in a wide range of mining ventures.

By 1711 they were already described as being "Great Farmers, occupiers and undertakers of mines of Cole Iron Stone and Ironworks and other mineralls an(d) also Brine pitts and Saltworks....."<sup>(3)</sup> in Stafford, Warwick and elsewhere in England and Wales. Within the following seven years their joint and several interests had spread to

(2) The Midland Antiquary II, pp. 61-65

(3) Agreement: Aqualate MSS. D1788/40/5 (1711) S.C.R.O.

ten counties<sup>(4)</sup> and as yet this rate of progress showed little sign of slowing down.

What was it that enabled them to achieve so much in so short a time? The answer lies in the fact that the increasing size and depth of coal mines during this period posed technical problems which became more serious with the passage of time. That of draining coal pits and keeping them in working condition was especially acute. The Staffordshire men set out to find solutions, not hesitating to take advantage of legal devices where it suited them so that their engineering knowledge, presence and goodwill were, for a time, well-nigh indispensable to anxious coal-owners in many parts of the country.

Richard Parrott and George Sparrow came to Warwickshire in 1710/11 and concluded an eleven year lease<sup>(5)</sup> with Sir Richard Newdigate (II), the new squire of Arbury, for coal-bearing land at Griff in Chilvers Coton, a hamlet located between Bedworth and Nuneaton. Two and a half years later they renegotiated their agreement<sup>(6)</sup>, part of the purpose of which was to justify the expense of experiments with the Newcomen atmospheric engine. The results were entirely satisfactory<sup>(7)</sup> and the partners, now joined formally<sup>(8)</sup> by Stonier Parrott, gradually extended

(4) Marie B. Rowlands: Stonier Parrott and the Newcomen Engine  
T.N.S. XLI

(5) Lease: CR136/C3150, Sir R. Newdigate to R. Parrott and G. Sparrow,  
5 May 1711 W.C.R.O.

(6) Lease: CR136/C3152, Sir R. Newdigate to R. Parrott and C. Sparrow,  
26 Dec. 1713.

(7) See Thesis (Wh.), Part III, Chapt. 3 for details.

(8) Assignment: Aqualate MSS. D1788/61/IX. 14 June 1714.

their interests by purchase and lease, jointly and severally, south-eastwards towards Coventry. In this action lay the genesis of the modern Exhall and Hawkesbury collieries with which the fortunes of the Parrotts were thereafter bound for more than a century and a quarter. By 1719 the three men had obtained, from the Corporation of Coventry, local small owners and lessees, and metropolitan speculators<sup>(9)</sup>, control over a substantial length of coal-bearing land, stretching intermittently from Chilvers Coton to Wyken and Sowe<sup>(10)</sup>.

When working in harmony the Stonier Parrott-George Sparrow combination was a formidable one. Jointly they enjoyed a favourable relationship<sup>(11)</sup> with the London controllers of the Newcomen engine patent. This fact conferred special benefits upon them which they were not slow to exploit in the Midlands, in North Wales and in north-eastern England<sup>(12)</sup>. Parrott, himself, was an engineer of considerable ability whose innovations<sup>(13)</sup> in mining were widely adopted. Sparrow, for his part, was well versed in legal practices<sup>(14)</sup>

(9) Engine Licence and Agreement: Aqualate MSS. D1788/61/IX, 7 Mar. 1715

(10) See Thesis (Wh.), Part II, Chapt. 2 for details

(11) This business relationship bore many of the aspects of a modern franchise.

(12) Marie B. Rowlands: loc. cit.

(13) (i) E. Hughes: North Country Life in the Eighteenth Century (The North-East), 1700-1750, p.152.

(ii) A. W. A. White: Men and Mining in Warwickshire, Part II (IV)

<sup>5</sup>  
(14) The known cases in which these men were involved have been listed in Bibliography.

which he was able and ready to employ in courtroom combat, both in his own and in the interest of the partnership, whenever it suited him. Unfortunately for this pair their business relationship was a stormy one. When they were not joining forces against an opponent they frequently took issue with each other, the ground usually having been secretly and carefully prepared beforehand with rivals. As a result, during the years 1720 to 1741 a most complex set of legal battles<sup>(15)</sup> were threatened or actually fought out in the Courts of Chancery and King's Bench, during the course of which Parrott was forced into bankruptcy.

In 1720 the partners, believing Griff Colliery to be nearing exhaustion, and taking advantage of Sir Richard Newdigate's revived interest in coal mining, terminated their lease<sup>(16)</sup> with the baronet and shifted their centre of interest nearer to Coventry, the principal coal market in E. Warwickshire, six miles to the south. During the next ten years Stonier Parrott<sup>(17)</sup> consolidated his hold on the Hawkesbury area of the then County of the City of Coventry by adding to his possessions in the parish of Foleshill and in Sidnall Field in neighbouring Exhall<sup>(18)</sup>. Sparrow, meanwhile, established his own

(15)<sup>+</sup> Norton MSS. 24 (1115) B.R.L.

(16) Agreement: CR136/C616. R. Parrott, S. Parrott and G. Sparrow  
to Sir R. Newdigate. 10 Nov. 1720.

(17) By this time Stonier Parrott had virtually taken control of the family's Warwickshire mining interests.

(18) (i) A. W. A. White: Men and Mining.....IV. passim.  
(ii) W. H. B. Court. A Warwickshire Colliery in the Eighteenth Century. E.H.R. VII (No. 1), 1936-37, p. 222.  
(iii) See Map 5



colliery in Bedworth in collaboration with two local operators, Francis Saunders and James Pickard, whilst sites held jointly by the partners in Exhall, Sowe and Foleshill became the focal point of extended litigation<sup>(19)</sup>.

Both Bedworth and Hawkesbury enterprises had progressed so far by 1730 that Henry Beighton of Griff, then surveyor and mining consultant to the Newdigates, advised<sup>(20)</sup> the family to discontinue their efforts and suspend further investment for the time being in view of the losses caused by local competition<sup>(21)</sup>. This action left the market between Bedworth and Coventry to be exploited by Parrott and Sparrow, with only feeble competition from other local operators.

The business outlook for the partnership at this time was undoubtedly good and had Parrott and Sparrow been able to sink their differences it is possible that their joint undertakings would have dominated all mining activity between Nuneaton and Coventry. Unfortunately, relations between the two men had reached a critical stage by 1728. Desire to monopolise the Coventry market individually and thus recover a large part of their respective outlays was the root cause of the trouble. At this time the

(19) (i) Bibliography and Sources (Legal suits)

(ii) Woolllcombe-Adams MSS. CR285/B2 W.C.R.O.

(20) Report: CR136/C619. Henry Beighton to Lady E. Newdigate.  
Reproduced fully in Thesis (Wh.), Appendix D (Part III) p. 213.

(21) Already by 1724 over £6000 had been spent on that part of the venture which was held in partnership, by virtue of which it was claimed that £30,000 worth of coal would be laid dry and ready for raising. (Current price for coal: 8 shillings perload of approximately 30 cwts.) Chancery Proceedings C11/301/10. P.R.O.

In a later legal dispute Sparrow admitted the probability that Parrott had laid out more than £9000 in setting up workings but claimed that as a result he, Parrott, had drawn coal exceeding £13,000 in value. (From 1725 onwards the price of coal was 10 shillings per load). Chancery Proceedings C11/1212/15.

city was hardly able to absorb the full output of two, let alone three large collieries<sup>(22)</sup>, in addition to that of small undertakings in the Wyken area, and success therefore awaited the coalmaster who could produce large quantities of fairly cheap coal, first. Further legal exchanges revealed ugly details<sup>(23)</sup> of mutual sabotage in the open field but the overall consequences were more serious for Parrott than for Sparrow. Creditors, among them the Collector of Excise in Coventry, became restive when the long-expected and over-advertised profits of his mines failed to materialise, and their fears multiplied when Parrott himself was nowhere to be found.

The inevitable consequence of unbridled ambition, fraud and excessive litigation followed in November 1732 when Parrott attended his examination in bankruptcy in Coventry. His substantial undertakings in Hawkesbury and Exhall, together with equipment<sup>(24)</sup>, passed initially into the hands of his chief creditor, John Metcalfe, a London scrivener from whom he had borrowed, both foolishly and recklessly, during the previous six years, who in turn attempted<sup>(25)</sup> (but failed) to make the mine a working proposition.

An extremely complicated legal situation then developed, Parrott's

(22) Based on the loss of sales to Griff, the annual capacity of the Coventry market is estimated conservatively to have been 30,000 tons at this time.

(23) A. W. A. White. Men and Mining..... pp. 44-45.

(24) Schedule of Possessions at West Sidnall in 1732.  
Chancery Proceedings: C11/141/22.

(25) Chancery Depositions by Commission (1736/40), H.M.B. I/47. W.S.L.  
Also H.M.B. 31 and H.M. 46, passim.

interest being assigned to James Burslem<sup>(26)</sup>, a one time partner of Sparrow whose conduct in this sordid affair left much to be desired. In 1740/41 it was alleged that neither of these men could be found<sup>(27)</sup> to appear in a fresh round of legal suits and, in point of fact, were sought by the Court of King's Bench for non-payment of debt in yet another case<sup>(28)</sup>. The problem was eventually resolved by the deaths of the principal participants, Parrott and Metcalfe, and by Parrott's lawyer paying off outstanding claims from family resources<sup>(29)</sup>.

As a result of the settlement ownership of a large part of Parrott's former lands and mining rights fell into the hands of John Bourne who, in his turn, attempted to draw success from the graveyard of earlier ambitions.

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(26) M. B. Rowlands. loc. cit.

(27) Writ. Norton MSS. 437 (1198) B.R.L.

(28) James Burslem was, at this period working Badgley (Baddesley) Colliery under lease from the Stratford family of Atherstone. Understandably he was absent at this time.  
D.M. 1408. (Coal Account Book, 1730-1770).

(29) John Bourne, a wealthy lawyer of Newcastle-under-Lyme, was Stonier Parrott's brother-in-law.

II. Richard Parrott of Hawkesbury<sup>(30)</sup>

"I think the following from Terence<sup>(31)</sup> is more nearly my character":-

'Such was his life - to bear with and suffer all men easily. With whomsoever he was in company to resign himself; to devote himself to their pursuits, at variance with none and never putting himself before others.'

'Men's lives are but shadows and dreams.'

Thus did Richard Parrott, a successful coalmaster, in his will recommend a suitable inscription for his memorial stone in Foleshill Parish Church, Coventry<sup>(32)</sup>.

This wonderful self-eulogy conceals from the occasional visitor to the church the degree of determination and skill which Richard Parrott employed to rebuild the Hawkesbury Company after his father's death in 1744. During the following thirty years he gradually established himself as the leading partner in a major industrial enterprise which eventually stretched from the Astrills in central Bedworth south-south eastwards for more than two miles into the Foleshill area of Coventry<sup>(33)</sup>

(30) Grandson of the Richard Parrott who came to Griff in 1710.

(31) Terence: Andria I, l. 37.

I am indebted to Mrs. E. A. Gooder (Department of Extramural Studies, University of Birmingham) for translations of the above Latin and Greek texts.

(32) Parish records and numerous memorials prove that this was the family place of worship for more than a century.

(33) A. W. A. White: Men and Mining..... II (V) passim.

By March 1770 seven pits out of thirteen in Exhall and Hawkesbury were raising coal at the rate of 150 tons per day<sup>(34)</sup>.

Within three days of his father's burial he had concluded a business agreement<sup>(35)</sup> with the family lawyer, the current owner of much of his father's former property and a one-time partner in the ill-fated venture. Under the terms of the agreement Parrott paid £2000 to Bourne and granted him a half share in two valuable pieces of coal bearing land which he, Parrott, had recently leased in Bedworth. In return he received a moiety of Bourne's substantial but scattered lands and mining rights in Bedworth, Exhall and Foleshill. Both men agree to cooperate on an equal basis to develop the undertaking and, inter alia, to frustrate schemes by Burslem Sparrow, son of the wily ex-partner of Stonier Parrott, and still active in Warwickshire, to claim a vested interest in proceedings.

The money was used in part by Bourne to extend the partnership by means of leases and occasional purchases from the Trustees of the Bedworth Charity of Nicholas Chamberlaine, and to buy other strips of land, sometimes measuring less than an acre apiece, as they came on to the market. The extent to which family fortunes had recovered as a result of these piecemeal operations and improvements in coal sales by 1748 may be gauged from the fact that Richard Parrott was able to buy his uncle's share of landholdings in the Fackleys (Foleshill)<sup>(36)</sup>,

(34) Advertisement: Jopson's Coventry Mercury, 26 Mar. 1770 C.W.C.

(35) Articles of Partnership: C and Y 81/1 John Bourne of Newcastle  
and 55/B under Lyme and Richard Parrott  
of Glasshouse Farm.  
4 April 1744. B.R.L.

(36) H.M.B. 31 passim.

give him £200 for his share of Tolldish Hall<sup>(37)</sup> and repay the final instalment of the mortgage on nearby Glasshouse Farm where he was then living.

The 1750s appear not to have been so fruitful a period as the previous years. Nevertheless Parrott continued to make progress, shifting his abode<sup>(38)</sup> to his father's former home and taking advantage of the fact that land prices in this area had recently dropped quite considerably<sup>(39)</sup>, leaving a number of speculators only too anxious to recover at least a part of their capital.

One of the factors which had seriously limited the growth of the local coal industry in the 1720s and 1730s was the absence of a good system of roads. The importance of this lesson was not ignored by later coalmasters, including Parrott. During the second half of the century he and Bourne invested in the Coventry-Bedworth and Coventry-Southam turnpikes. How narrow their margins were at this time may be noted from the fact that in order to buy more cheap land in Exhall in 1755 Parrott was obliged to seek repayment of £400 from the Trustees of the turnpikes. This, however, was only a temporary adjustment. Further sums were

(37) Tolldish Hall formerly belonged to Stonier Parrott,

(38) Conveyance: C. and Y. 56/2, R. Parrott to R. Richardson et al.  
1761. B.R.L.

(39) H.M.B. 31 passim.

invested in the new highways as the colliery began to flourish.

Further portions of land in "Sidnall Field", Exhall, were added to the Hawkesbury Company in 1757 and it was strengthened by the entry of Thomas Whieldon, "Earthpotter" of Stoke on Trent, who purchased a half of Parrott's existing holdings<sup>(40)</sup>.

By 1758 Parrott was able to report a definite and substantial improvement in the affairs of the company. In a letter<sup>(41)</sup> to his partner he revealed that the year's efforts had yielded them £2000 despite "an uncommonly wet summer" which had adversely affected sales. Part of this sum was used towards reducing existing debt, part towards buying yet more land and £200 was allocated to buying a "new" engine<sup>(42)</sup>. A further small sum was set aside for the building of a link road from the colliery at "Exal" to the new Bedworth turnpike, due to be completed that winter. Total cost was estimated at £25, a cheap price considering that weekly sales during the winter as a result of this action would yield precisely double that sum.

By 1763 Richard Parrott, now of "Hawkesbury, gent.," had become the senior partner in the company on Bourne's retirement. His shares in the Bedworth and Southam turnpikes had also mounted, standing at well over £1000. The lean days of the early 1750s when he "weathered it out.....without selling anything"<sup>(43)</sup> were a thing of the past.

(40) H.M.B. 31. passim.

(41) Correspondence: H.M.B.31 loc. cit. R. Parrott to J. Bourne  
1758 (no month).

(42) At least one engine (Newcomen) was already at work at the mine.  
Supra. Part III, Chapt. 1.

(43) See footnote 41, Supra.

The sharp drop in land values locally which had enabled him to buy cheaply, sometimes at only half the price originally paid by speculators in 1750, now reversed its trend, carrying with it upwards the fortunes of the Parrott-Whieldon venture.

Two further partners were drawn into the Hawkesbury Company during the following eighteen months: a divine<sup>(44)</sup>, and a local coalmaster<sup>(45)</sup> who soon became the principal representative of the company in the frequent absence of the other partners. Ownership of the company's assets by 1768 was now vested in shareholdings held in the proportions of  $\frac{3}{8}$  (Parrott),  $\frac{1}{4}$  (Whieldon),  $\frac{1}{4}$  (Fernyhough), and  $\frac{1}{8}$  (Taylor).

Little reliable evidence has so far come to light showing how Parrott coped with the rise of general business activity which took place in the Coventry area during the 1760s, which Sir Roger Newdigate noted so excitedly as early as 1760<sup>(46)</sup>, and which spurred him to begin planning Griff Colliery in 1769. Nevertheless the results of some of his efforts are revealed by two documents: his will<sup>(47)</sup>, and a memorandum book<sup>(48)</sup> of the colliery compiled by his brother,

(44) The Rev. John Fernyhough of Newcastle under Lyme.

(45) Conveyance: C. and Y. 53/2. M. Kelley to - Pickford, 19 May 1798. This is one of the very rare documents in which Richard Parrott was openly acknowledged as son and heir of the unfortunate Stonier. Significantly it is dated nearly a quarter of a century after Richard's death and three years after that of his brother, Francis.

(46) Correspondence: CR136/B1599. Sir R. Newdigate to Lord Coventry. "The demand for coals increases daily". Feb. 1760.

(47) Will (Richard Parrott). C. and Y. 55B(3). A copy. B.R.L.

(48) A description of this memorandum book, since lost, was given by W. H. B. Court in: A Warwickshire Colliery in the Eighteenth Century. E.H.R. VII (No. 1), 1937.



Francis<sup>(49)</sup>, the main proprietor from 1774 onwards.

According to the memorandum book Exhall Colliery in 1774 consisted of eight coal pits, with two more in course of preparation. Francis Parrott claimed that the colliery yielded his brother and himself "a handsome income" and that its lands stretched as far as the Astrills in central Bedworth. Three Newcomen-type engines were employed to drain the mine workings, one of which was a very large one<sup>(50)</sup>.

Extensive though the company's interests were at this time, other records<sup>(51)</sup> confirm that operations were concentrated in Hawkesbury and Exhall, close to the Bedworth-Coventry turnpike. Coal-bearing land in Foleshill at the south end of the company's estates, purchased originally by Stonier Parrott in 1721 for £700, was leased to other operators for a mine rent of 1/-6d. per ton. Other parties were equally interested in local industrial development in 1774, both Nicholas Chamberlaine's Charity (Bedworth) and Christ's College, Cambridge<sup>(52)</sup>, taking an unobtrusive yet profitable part.

The period between the drawing up of Richard Parrott's will (1769) and the provision of codicils (1774) was evidently a particularly lucrative one for the Hawkesbury Company. Under the terms of the original will his wife received Hawkesbury Hall, the bulk of the contents and an income for life, "to enable her to continue in the same easy and elegant manner to which she has been accustomed with me".

(49) Infra III.

(50) On the Hawkesbury engines see, supra, Part III, Chapt. 1.

(51) Principally Caddick and Yates MSS. passim. B.R.L.

(52) W.H.B. Court: loc. cit.

This was achieved by granting her the interest on £1,300 which her husband had invested on the tolls and gates of the Southam turnpike. In addition, bills and cash in the house worth £150 were to be made over to her on his death and his brother was to pay her an extra hundred guineas a year out of estate income. Bequests were also made to his sister, her son, neighbours and friends.

The codicils reveal that within the space of five particularly prosperous years Parrott had made £1000 net profit and that he possessed "£3000 in Cash and Securities in my Account Book". The balance in the hands of junior partners already exceeded £1700 by May, 1772. Two canals had been "opened to the colliery" (Exhall) and a new "Foundation" (i.e. a further colliery) in Hawkesbury, on which nearly £5000 had been spent, was almost completed. Remaining debts totalled £2,300 and these were secured by mortgages on land. His brother, for whom the lion's share of the enterprise was being prepared would, he wrote, "be free from this and many other Expences which have lain heavy on me for many years, as purchasing of Coal and Lands, Buildings, lending money to Turnpike Roads and Canals....."

Provision was made for the continuation of Foleshill School, originally purchased in 1766 for £100. The Trustees thereof were required to spend, out of estate income, the sum of £7 10s. 0d. per annum on the teaching of "15 Poor children.....as I have done for 23 years past". As was so often the case in schools specially endowed by industrialists in this period emphasis was to be given to teaching the Ten Commandments and the Scriptures.

Disposal of his possessions reveals a man who was by no means devoted exclusively to business accounts. He possessed a treasured library which he carefully portioned between friends and relatives, a collection of plate, books of drawings and sets of prints and pictures. The overall impression of Richard Parrott is that of a man of ability and determination, acquainted with classical authors of antiquity and hardly the easy-going person suggested by his memorial inscription.

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### III. Francis Parrott

The colliery undertaking, of which Richard Parrott assumed the leadership, was almost certainly the largest in Warwickshire in 1774. Coal was being won at eight deep pits at the rate of 1800 to 2000 tons per fortnight, and two or more were in course of preparation. Short term prospects for the market in Coventry were excellent, and with the completion of the Oxford Canal as far as Braunston (3 miles N.W. of Daventry) lay the promise of early entry into the markets of south-east Warwickshire and north Oxfordshire. Wyken Colliery as yet posed no serious threat and the only other undertaking (Griff) south of Nuneaton likely to prove troublesome to the Hawkesbury Company was still under construction.

If he exhibited little sign of the "boundless monetary ambition which has sometimes been supposed to animate the capitalist of all times and places"<sup>(53)</sup>, this was more apparent than real. Under his leadership the company became for a while one of the most technologically advanced in the Midlands. In addition, fragments of the company's accounts reveal a level of cost consciousness in mining operations not approached by any other important proprietor in the county during the eighteenth century. In terms of the growth of the company's mineral estates he maintained a watchful eye for new mining rights and sites as and when they came on to the market. These were hardly the characteristics of one dedicated to a quiet and comfortable life with limited ambitions, or even one content to maintain the highly satisfactory trading position achieved by his brother and partners.

Parrott was, by training, a doctor and surgeon with a practice in Birmingham but cultivated an interest<sup>(54)</sup> in industrial developments there as well as in eastern Warwickshire. In consequence of these many commitments the day to day administration of the Hawkesbury Company was carried out by the junior partner<sup>(55)</sup> in the undertaking, a local man who possessed long experience of the local market and mining problems peculiar to the Warwickshire coalfield.

(53) W. H. B. Court. loc. cit.

(54) Francis Parrott was one of the earliest Wardens of the Birmingham Assay Office.

(55) George Taylor, "Coal Merchant of Bedworth", described as being "indebted to many persons in considerable sums of money", became a partner in 1764. Caddick and Yates MSS. 53(2).

Surveys of the company's estates in Bedworth, Exhall and Hawkesbury in 1761, 1781 and 1811<sup>(56)</sup> reveal that additions took place at a slower rate than in earlier years. Two factors account for this: the growing shortage of coal-bearing land not already under the control of an important landlord, himself interested in the possibility of mining operations, and the steadily rising price of such property as it came on to the market. Most of the mining rights and associated land had in any case been acquired by the company by 1761 and consolidation therefore took the form of leases or purchases of tiny parcels of ground, frequently under one acre in extent and held originally in the form of open-field strips, or leases of mining rights underneath specified strips. "Mines in Foleshill", for example, together with scattered portions of land in Foleshill and Exhall, plus mining rights under named open-field strips, passed into the hands of the company in 1778 for £4,800, payable in instalments over twenty years<sup>(57)</sup>.

Business of this type, however, was made all the more hazardous at

- (56) (i) 1761 Survey: H.M.B. 31. Reproduced in Men and Mining.....  
(Geo. Salmon) pp. 46-48.
- (ii) 1781 Survey: M.K. 416. See also Map 5.  
(Thos. Eagle)
- (iii) 1811 Survey: C. and Y. 81/1  
(Thos. Eagle)

Land sales exceeded purchases between 1761 and 1811 by nearly 36 acres but this was more than covered by purchases in Wyken and Sowe, east of Coventry.

- (57) Lease: H.M.B. 31. John Buxton (of Coventry) to F. Parrott (of Birmingham); J. Fernyhough (of Newcastle under Lyme; Thomas Whieldon (of Fenton) and G. Taylor ("Cole Master" of Bedworth).  
23 Mar. 1778.

this time by the frequency with which some of the smaller operators resorted to fraud in order to take advantage of the rising coal market. On this particular occasion the vendor's deeds bore a suspiciously large erasure, and matters were not helped by contemplation of his extremely rapid promotion from the rank of ground bailiff to royalty receiver within the space of a few years. Local society had in any case been recently rocked by revelations of a series of skilful frauds by one of the best-known Coventry attorneys of the day,<sup>(58)</sup> a man long associated with the business of local mineowners and whose speciality consisted of forging bonds and mortgages and tampering with agreed rates of interest to his own advantage. Nevertheless, small though the degree of consolidation might be between Bedworth and Foleshill the company attached greater importance on acquiring land to the south-east in the Sowe and Wyken areas of Coventry, in order to check the expansionist schemes of the proprietors of Wyken Colliery. To this end, mineral rights belonging, inter alios, to Lords Clifford and Craven, had been purchased by 1778.

In contrast to the local coalmasters of the early eighteenth century Parrott and his contemporaries were well aware of the advantages to be obtained from occasional combinations. The earlier proprietors were driven to raise and sell coal in sharp competition with each other. In this policy lay seeds of decline<sup>(59)</sup> since the Coventry market was as yet distinctly limited in size. Later owners were more actively concerned with marketing their product and to this end sponsored canal

(58) William Dadley.

(59) Thesis (Wh.) pp. 16-20.

and turnpike projects, and linked forces to oppose the invasion of the local scene by outsiders from Leicestershire and Staffordshire.

Combination was not, however, without its disadvantages, especially when practised by others. A critical note on the state of the market in Banbury, only recently opened to water-borne coal traffic from Warwickshire pits<sup>(60)</sup>, revealed that a price ring there was already working against the interests of both Griff and Hawkesbury companies. Whether this agreement was drawn up exclusively by coalmasters or, as seems more likely, by some of the latter in concert with monopoly interests at Banbury wharf is not clear, but a consequence was that Newdigate and Parrott coal supplies, allegedly superior in quality to the rest, were marked down in price.

Energetic combination in the face of threats from Birmingham suppliers was a marked feature of the 1780s. Proposals to build a canal from Birmingham to Napton, near Southam, in 1781, met with stiff but unsuccessful opposition. Temporary success was gained in the following year against a proposal to build a canal from Oakthorpe, near Ashby de la Zouch to link with the Coventry Canal in Chilvers Coton. Sharper opposition still was shown to legislation supporting differentials in tonnage charges in favour of Birmingham coal brought

(60) William A. Potts: History of Banbury, p. 197.

"An event of commercial and economic importance to Banbury was the opening here on March 30th, 1778 of the Coventry to Oxford Canal, when.....200 cauldrons of coal.....ushered into the wharf 'amidst the loudest acclamations of a prodigious number of spectators' and the day was spent in festivities". Coal prices: one shilling per cwt. or eleven pence to persons sending teams to cart it to any place within fourteen miles of Banbury. Price per ton of 21 cwts. at Hawkesbury - 10/-.

via Fazeley to the Oxford Canal. Local producers viewed the prospect of competition from S. Staffordshire pits with misgivings in view of the latter's lower production costs, and differential tonnage rates, which bore the aspect of subsidy<sup>(61)</sup>, added to their alarm. At a canal company meeting in Banbury in August 1783, Sir Roger Newdigate "protested for the Coalowners of Warwickshire against the partiality and injustice of letting Wednesbury Coal pay one third less"<sup>(62)</sup> but it was not until December 1785 that the offending clause was repealed.

Concern for external threats to their oligopolistic position did not conceal from Parrott the advantages of judicious competition. The author of the memorandum book in question noted that Griff colliers paid part of the cost of punching wood and the fuel requirements of their engines. A second colliery notebook<sup>(63)</sup> records in detail the getting and winding charges operating at Griff, Exhall<sup>(64)</sup> and Wyken collieries besides revealing the extent to which the charter system (i.e. butty system) had become prevalent in Warwickshire by the last decade of the century. Thomas Hutchins, Sir Roger Newdigate's mine steward paid "5 winds down Charter 3/-3(d) per ton" plus a further "One Shilling a Yard opening", whereas at Hawkesbury charter payments ranged from 2/10 to 3/-3 per ton of 24 cwts. (21 cwts. paid).

(61) In fact there was no intention to grant a subsidy.

See W. H. B. Court: loc. cit. p. 226

(62) CR136/Diary: 22 August 1783.

(63) C. and Y. 81/1. Notebook "1791". B.R.L.

(64) Supra. footnote 1.



A further note added, "Pay all winds above two", suggesting a division of winding charges between the company, on the one hand, and the men, on the other. This was a common practice at pits in the county, although the proportion met by owners varied widely. An earlier temporary<sup>(65)</sup>, practice of paying the miners coal-money at Hawkesbury (at the rate of one shilling per week) was by now replaced by a grant of fuel.

Little is known about conditions of work, the average earnings of mines, or problems of recruitment during the closing years of the eighteenth century at Hawkesbury, save for a crude recommendation for dealing with gas in the mines<sup>(66)</sup>. Nevertheless, it appears that both the company and employees ran a joint "widows fund", into which the charter groups paid four pence per fortnight, the proprietors adding a further five pence. By contrast, it was Sir Roger Newdigate's practice at Griff to pay a standard rate of 10/-6d. per injury, or one guinea to dependents when one of his colliers was killed<sup>(67)</sup>.

In terms of cost-consciousness and the need for careful accountancy procedures the Hawkesbury Company was many years ahead of its rivals at Baddesley and Griff. The former were content merely to record details

(65) Advertisement: Jopson's Coventry Mercury. 26 March 1770

(66) Supra: Part III, Chapt. 3.

(67) CR136/Diary - 1780-1790, passim

of production and sales<sup>(68)</sup> whilst the baronet's practices were casual to an extreme degree, the simplest, rounded approximations being sufficient for his purposes<sup>(69)</sup>. By contrast, accounts for Parrott and his partners were drawn up in detail every six months and summarised annually to show not only production, expenses and receipts but to give a detailed analysis of the proportions of each avenue of costs to the product of every ton sold. Thus, the "Accountant to Mr. Whieldon" demonstrated that for the year ending 23 June 1787, the company had sold 28,560 tons, 14 cwts. of coal at a profit of £4,121 6s. 2d.<sup>(70)</sup>, or  $2/10\frac{1}{2}$ d. on each ton (of ten shillings). Items of expenditure were carefully calculated to fractions to a farthing, as a proportion of each ten shillings received (per ton). Thus, chalter charges, the largest single item, came to  $3/4\frac{1}{2}-\frac{1}{4}$ (d); sinking and heading  $10\frac{1}{2}$ (d); "Engine"  $1\frac{1}{4}-\frac{3}{4}$ ; stables  $11\frac{1}{4}$ ; wood  $8\frac{1}{4}-\frac{3}{4}$ ; ropes  $\frac{1}{2}-\frac{3}{4}$ ; proprietors' payments  $8\frac{1}{4}$  and contingencies  $4\frac{3}{4}-\frac{3}{4}$ , a total of  $7/1\frac{3}{4}(\frac{1}{2})$ . Unfortunately only fragments of<sup>(71)</sup> the company's accounts have survived but the degree of care exhibited on the few pages extant would do credit to many a twentieth century business enterprise.

To a rather larger extent than Sir R. Newdigate<sup>(72)</sup>, Parrott and

(68) See Appendix L, Table 1

(69) See Appendix L, Table 2

(70) Given the detail in which costs were examined, and the interest of historical accuracy, conversion into modern decimal currency is impracticable.

See also Part II, Chapt. 3.

(71) Half-year accounts for 1785. See also Plate I.

(72) Infra. Part IV, Chapt. 2.

his partners were heavily dependent upon local bankers<sup>(73)</sup> for long term credit. A short period of banking crises between 1793 and 1794 marred what otherwise had apparently been a period of continuous ease and prosperity. Together with many other small banks the Coventry firm were under severe pressure from their creditors and were at pains to recover £7000 lent in earlier years to the company. £3000 was raised and paid to the bankers during the course of nine months and strenuous efforts were made by the partners to pay the remainder. What degree of success they had is not recorded.

The history of the company after the death of Francis Parrott in 1795 is<sup>(74)</sup> as yet unknown. Documentary fragments for 1808<sup>(75)</sup> show that gross income during that year reached £20,000 but no evidence has so far come to light showing how the undertaking fared during the Napoleonic Wars. A schedule dated 1828 proves that the nature of the company had survived unchanged during these years but goes on to describe in detail how the enterprise was, at last, to be broken up into distinctly separate parts<sup>(76)</sup>.

The end of 130 years of continuous association with the coal industry in Warwickshire came in 1842 when a bitter and disillusioned

(73) Principally Little and Woodcock of Coventry. This firm amalgamated with the Birmingham Banking Company in 1865 which, in turn, was absorbed by the Midland Bank in 1914.

(74) H.M.B. 31.

(75) Schedule of Partition: C. and Y., 55(B). 25 March 1828

(76) But not before offering his colliery to his lawyer (Troughton of Troughton and Lea, Coventry) for three-quarters of its then estimated value £60,000).

Francis Parrott (II) died, leaving no issue<sup>(77)</sup>. The family which had been instrumental in modernising the local coal industry, thereby laying the foundation of industrial expansion in E. Warwickshire, finally severed all direct connections with the coalfield, and the undertaking passed into other hands.

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APPENDIX J, Item 2

"Correspondence: Matthew Boulton to the Rev. J. Fernyhough" 1 Jan. 1779

To the Revd. Mr. Fernyhough

1st Jan. 1779

I send you, along with this letter to you as one of the proprietors of Hawkesbury Colliery, and as you have never entered so particularly into the subject of that letter as the other partners, think it a piece of Justice to explain to you my business with your company that you may judge how far I shall be justified in taking the measures I intend to do. If the letter I now send to the company meet with the same fate that all my other applications have done, (fair promises unperformed) and also that you may judge for yourself how far you will think it becoming to appear defendant in this cause.

Your Company after having enquired into & been convinced of the Engine in the instances of those we have erected at Bloomfield, Soho, & New Willey, agreed with Mr. Watt & me in the presence of Mr. Wilkinson that an engine of our construction should be erected at Hawkesbury under our directions and at the expence of the company - that the profit we should receive for granting you a licence for the use of our Engine, for which we have an exclusive privilege, should be a yearly sum equal to the value of one third of the value of the Coals which should appear by trials made on the Old and New Engines to be saved by the use of the new Engine instead of the old one. Mr. Taylor made a memorandum of agreement to which memorandum I refer you, but this point has always been admitted. We accordingly did give proper directions and the Fire Engine was erected. Since which time we have repeatedly applied to your Company, that your part of the contract should be fulfilled, namely that the trial of your old Engine should be made in order to ascertain the savings made by the

new Engine and consequently the sum due to us, as often as we have applied so often have we been disappointed under various reasons & pretences. I have now before me three letters from your company, appointing a trial of our old Engine and desiring our attendance. We never failed to attend in consequence of their messages, but no sooner did we arrive at Hawksbury then found excuse was made for a further delay, in this manner we have been treated near 2 years. Your company enjoying the benefit of the Engine, while we have had none. To induce them to come to a conclusion, I offered to rate the consumption of their Engine at less considerably than I am sure it will appear when a trial is made, that it ought to be rated. No offer of accomodation that I have been able to make has been received & therefore I recur to the mode originally agreed agreed, a comparative trial and indeed it is necessary for us that such a trial should be made publicly that we may refute the truth of those highly injurious aspersions with which your servants have endeavoured to ruin the credit of our Engine and although that credit is now too firmly established for their malice to do us farther injury - I must inform you that they have been so far successful as by the representations (which we can prove to be false) which they gave to a Cornish Engineer who went purposely to Hawksbury to determine his resolution whether he should recommend our Engine to his employers who were proprietors in a mine in Cornwall, he was determined against & thereby we lost the erection of four Engines which would have yielded us above £300 p annum - The consequences were no less fatal to the proprietors of the mine, who being thus misled erected Engines of the old sort which were unable to perform the business required, which ours would have easily done and the loss they have already sustained is not estimated at less than £20,000 and are farther

obliged to abandon the mine, all which would have been prevented had they erected our Engine - I could give you one more Instance at least of the great injury done us by the ignorance or malice of your Servants and I doubt not but the injuries mentioned which we and others have sustained must make an unpleasing impression on your mind & of every man who has a feeling for his neighbour.

I do not accuse your partners of having intentionally contributed to the injuries, but I maintain that if they had allowed the trial of the Engine to be made, as they ought to have done according to their original agreement those injuries could not have happened.

Your Partners have some time complained of their having been put to more expence than they expected in erecting the Engine this complaint is not my business to answer, because I never undertook to sell the Engine to them but only to furnish Drawings and directions it was their business to have considered the propriety of that expence before they determined to have it - But I will observe that I beleive these are not sufficient grounds for such complaint for the following reasons - 1st that the parts of the Engine cost no more than has been charged & paid by all those for whom Engines have been erected and that as to the few things we make at Soho for engines we know very well that we loose money by making them, but our reason for doing them ourselves is because they require more accuracy in the execution than we can depend upon others for - 2nd that your new Engine can not have cost more than an Engine of the old sort would have done of equal power, as the house and cylinder are smaller, and there is only one boiler instead of two which differences and the many parts of the old Engine which are not in the new one must compensate for those parts that belong only to the new Engine - I beleive much of your inconveniencies and expence are all

from some mismanagement of the pumps but the pumps are no part of the Engine, we had nothing to do with them; and indeed were erected in a manner contrary to our advice having only three instead of four which we recommended - But in considering the as well as the merit of the Engine, it ought not to be forgot that (you) used to have three fire Engines, of which you worked sometimes two and sometimes three Engines - when they all worked as you will find by your books they burnt near ten times the quantity of coals than the new one consumes, that the expence of keeping 3 Engines with their pumps &c in repair & of requiring the greater number of people to attend them must have been enormous in comparison of the present, that from the best enquiries I have made in Cornwall where the Engines are well managed these expences exclusive of Coals amount to 5 or 600 £ p ann: p Engine the savings of which expences by using our Engine instead of the old one, we do not partake of but is entirely your profit - In making all comparison between the expence and merits of the old and new construction, regard must always be had to the effects produced, and not to the number or size of the Engines - For to give you a striking instance of the difference between the powers of the new and old Engines - at a mine in Cornwall called Chacewater - there were two large Engines of the old sort, one of which had a Cylinder 64 inches diamr and the other 66 inches diamr. These Engines were found to be not capable of draining the water of the mine. The proprietors of the Mine applied to us and we erected one of ours whose Cylinder is 63 in: diamr and this one Engine has drained the mine in the worst season the two old Engines burnt 11 Chaldrons of Coals p day and our does only burn  $2\frac{1}{2}$  Chaldrons



p day a very great advantage arises to the proprietors from the diminishing the number of Engines and this advantage you receive from our Engine for your present old Engine is not capable of keeping your pits dry at this time whatever your Engineers in whom your company may have thought fit to confide may pretend.

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Source: Boulton and Watt Colln. Letter Book (Office) 1779, pp. 99-101.

APPENDIX K

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A.D. 1789      PATENT      No. 1681

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Expelling Foul Air from Mines, Ships, &c.

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WHITE'S SPECIFICATION

(To be read in conjunction with Plate VIII)

TO ALL TO WHOM THESE PRESENTS SHALL COME, William White of  
Garlick Hill, in the City of London, Tallow Chandler, sends  
greeting.....

.....NOW KNOW YE, that that the said William White, in compliance  
with and in performance of the condition in the said provisoe expressed  
and contained, doth hereby declare that the nature of his said Invention,  
and the manner in which the same is to be performed are herein-after  
particularly described and ascertained:-

The skin or piece of parchment hereunto annexed contains a Draught  
or Representation of the machine & the parts of which it is composed,  
calculated to elucidate the description and to ascertain the nature of  
the said Invention. In which Draught or Plan, -

Figure 1 represents a profile or side view of the machine, in  
which the parts distinguished by the letters: A represents the stand  
or frame of the machine; B, the external case or cover, consisting of  
two parts, so constructed that the upper part may be taken off, leaving  
the lower part on, & vice versa. In this case or cover apertures

must be made to admit the air at the points distinguished by the letter O, and to discharge it at the parts marked K. C represents one end of an axis or spindle, on which the wings of the fan represented by Figure 3 are to be fixed, and which axis or spindle is supported by the frame of the machine. D represents a block placed at the end of the axis to receive the strop or band G, herein-after mentioned, from the wheel E. E represents a wheel by which the fan is turned. F are iron supporters placed in the frame A, upon which the axis of the wheel E rests; G, a band of leather or cord surrounding the wheel and block, and communicating motion from one to the other. H represents the winch by which the wheel E is turned. I represents a tube or pipe, which may be made of wood, tin, or other matter, and may be fixed to the machine at K, and serves to receive the air from the machine, and to convey it to the box L, and may be taken on or off at pleasure, or used as occasion requires. K represents apertures in the case or cover B to discharge the air. L is a box which may be made of wood, tin, or other matter, constructed so as to fit on at the end of the tube I, and to be used occasionally to receive the air and to convey it into the pipes M. M are pipes, which may be made of wood, tin, or other matter, and placed on the box L to receive the air, to convey it from thence, and disperse it in the directions required. These pipes are made to slide on one to the other so that the neck or mouth of each may be moved compleatly round. N represents two legs or supporters for the tube and box I & L. O represents a view of the aperture in the cover at the end of the axis or spindle C, and of part of the fan as it appears through that cavity or aperture. P represents an aperture in the back part of the external case.

Figure 2 represents a front view of the machine as it appears when the upper part of the cover is off, in which the parts distinguished by the letters: A are the stand. B is the lower part of the case or cover. Q, the fan as it appears when the upper part of the case or cover is taken off. R is a tube or pipe, which may be constructed of wood, tin or other matter, & may be affixed at either end of the axis or spindle at O, to either of the cavities or apertures there of the case or cover B, and extended into any room, apartment, mine, or other place from whence foul air may be required to be exhausted or drawn, and which will be accordingly drawn out by the suction of the machine through this tube or pipe, and thrown out, either immediately at that part of the apperture K which is next to this tube or pipe, or may be conveyed to any further distance by placing another tube or other tubes or pipes to that part of the cavity to receive it from the machine, and to convey it where required. S is a tube or pipe constructed in like manner, and which may be fixed to the other part of the cavity K, from which it will be supplied with fresh air, and that fresh air will be conducted by means of that tube or pipe to any place or in any direction required, according to the length, possition, and form of the tube or pipe, and by placing this tube or pipe into the same mine or place as the tube R, the same motion of the machine which draws up the foul air by means of the tube or pipe R will replace fresh air in its stead at the same time by means of the tube or pipe S.

Figure 3 represents the fan as it appears without the cover or frame. This fan consists of various wings, which may be made of thin boards or other matter, & must be affixed to the spindle or axis C, either by iron strops with nuts and screws, or it may be fixed by

brackets and many other means. The part in this Figure distinguished by the letter T represents partitions placed between each wing in the fan, compleatly dividing the fan into two apartments, and by means of which partitions the twofold operation of the machine explained in the description of Figure 2 is effected at one and the same time, and consequently, if the machine is wanted for only one of those purposes, the partitions will be unnecessary, and the machine may therefore be made with or without them.

Figure 4 represents a view of a box or frame constructed for the purpose of dispersing the air in smaller and finer quantities when the tubes are found too powerful for the purposes required. The parts in this Figure distinguished by the letters: U represents the frame or box, which may be made of wood or other matter, to receive the brass plate V. V represents a plate of thin brass, or the plate may be constructed of tin, copper, or other matter, with numerous small apertures through which the air is to pass. This plate may be fixed in the box or frame U, or may be placed at the end of or within a tube, and the form may be varied so as to suit the tube.

The Invention is performed and used in the following manner:-  
The machine is worked by turning the wheel E, which communicates motion to the axis of the fan by the band G and the block D, and the Patentee conceives that sufficient motion and velocity may also be communicated to the fan by clockwork, water, and many other ways. When the machine is worked or used, the cover or case C must be on, as it derives considerable part of its power and effect from suction. The machine charges itself at the apertures O, and discharges itself at the apertures K and P. Fresh air may be introduced into the room

in which the machine stands immediately from the machine itself, and if not required to be directed particularly to one part of the room more than another, the tubes may in that case be dispensed with; but by fixing a tube or pipe to the aperture K, the immediate force and body of air may be conducted to any particular parts or places in the room. If required to supply any room, apartment, or place distant from that in which the machine is worked, then tubes or pipes must be applied to the aperture K, and the air conducted by means of those tubes or pipes to the place required; and thus the most recluse parts of any house, ship, coalmine, or place may be supplied with cool fresh air, tho' in point of situation it will not receive or admit the machine itself; and by encreasing the number of the tubes or pipes, and branching the one from the other, various apartments may be supplied at one and the same time. When required to exhaust foul or stagnated air, a tube or tubes or pipes must be placed at one or both ends of the axis or spindle against the aperture O, so as to cover that aperture by one end of the tube, and the other end must be extended to the place required. These tubes may also be branched out so as to operate on various apartments at once. The machine being then set in motion, the foul air will be drawn thro' the tubes, and discharged from the machine either thro' the aperture K, or may be conducted to a distant place by applying other tubes or pipes to that aperture. The diameter and extent of the tubes or pipes must be adapted to the size of the machine and the purposes to which they are to be applied; but the aperture to which it is fixed in the machine should not exceed the diameter of the tube, or if it does, the aperture should be contracted

so as to correspond with the tube. If the machine is to be used for both purposes, that is, for the purpose of exhausting foul and supplying fresh air at one and the same time, the fan of the machine must then be separated by the partitions T, and then the one division serves to draw up and expel the foul air whilst the other supplies fresh. Wines and fruits may be cooled by being placed while the machine is worked under the aperture P, at the back part of the external case or cover, and the machine may be also used to cool various other articles in like manner. The air introduced by means of the machine may be impregnated with various kinds of scent or perfume by placing a tube to the aperture at the axis O, and apply the scent or perfume at the mouth or entrance of the tube; and in this way it is conceived that it will be found to have very powerful and beneficial consequences in warm climates, as it affords a means of impregnating the air with any scent, perfume, or fluid obnoxious or destructive to the musquitos and other troublesome insects, and thus expelling them from the apartments or destroying them. If the machine is only wanted for one purpose at a time, the tube or pipe S may be carried into the pipe R, and fresh air carried down that pipe when the foul air is not drawing up it; but in that case a stop or register must be placed in each pipe above the places where the two tubes or pipes join, and the register of tube or pipe R must be shut whilst the fresh air is going down, and so on the other hand the register of the tube or pipe S must be shut while the foul air is coming up the tube or pipe R; and by this means one tube or pipe will be made to serve both purposes, from the place where they are connected or joined together.

APPENDIX L

Table 1

"Coals sold at Griffie Collery", 1775-1790

YEAR	SALES (IN TONS)		CONSUMPTION ON THE ESTATE					
	<u>"GREAT COAL"</u>	<u>"SMALL COAL"</u>	<u>TOTAL</u>	<u>INTERIM TOTAL</u>	<u>ARBURY</u>	<u>BRICK KILN</u>	<u>COKING</u>	<u>"COLLIERY"</u>
1775			2,152					
1776			3,678					
1777			5,654					
1778			10,318		125	122		
1779			11,210	33,012	133	136		
1780			13,407		213	116		
1781			16,718		248	71		
1782			20,190		205	94		
1783			19,718		182	139		
1784			22,927	92,960	200	97	1	
1785			23,955		221	92	12	
1786			22,134		226	70	-	5
1787			22,266		214	114	6	8
1788			20,098		255	61	7	14
1789	32,205	370	32,575	121,028	255	125	6	8
1790	22,496	640	23,136		290	67	20	9



"Coals sold at Griffe Colliery", 1791-1805

YEAR	SALES (IN TONS)		CONSUMPTION ON THE ESTATE					
	<u>"GREAT COAL"</u>	<u>"SMALL COAL"</u>	<u>TOTAL</u>	<u>INTERIM TOTAL</u>	<u>ARBURY</u>	<u>BRICK KILN</u>	<u>COKING</u>	<u>"COLLIERY"</u>
1791	20,949	776	21,725		335	88	7	10
1792	19,446	1,202	20,948		316	102	5	10
1793	26,166	1,277	27,443		322	85	16	7
1794	22,316	556	22,867	116,119	317	84	-	7
1795	21,867	770	22,657		327	81	20	5
1796	19,023	955	19,978		342	90	30	5
1797	--	-	24,927		349	88	10	32
1798	--	-	21,639		320	88	4	44
1799	--	-	22,023	111,224	327	96	7	28
1800	--	-	23,064		375	96	-	7
1801	--	-	20,041		417	72	-	-
1802	--	-	20,786		400	56	-	-
1803	--	-	23,000(a)		-	-	-	-
1804	--	-	20,848	107,739	368	50	-	28
1805	22,963	928	23,891	23,891	382	42	-	-

(a) Estimated from receipts

GRAND TOTAL 1775-1805 (INCL.) 605,973

Source: CR136/A247

APPENDIX L

Table 2

"Griffe Collery"

Monthly Receipts, 1779-1787 (complete years)

	1779	1780	1781	1782	1783	1784	1785	1786	1787
Jan.	£ 60	98	200	100	250	200	200	200	200
Feb.	No entry	80	100	150	200	300	200	100	200
Mar.	No entry	50	100	220	200	200	200	200	300
Apr.	50	100	50	200	100	100	100	200	300
May	No entry	100	100	200	150	300	400	200	300
June	100	No entry	100	200	200	200	200	200	300
July	50	100	50	200	205	200	200	200	300
Aug.	100	20	100	200	100	400	200	200	200
Sep.	129	150	100	200	200	200	200	300	400
Oct.	50	150	200	300	300	400	325	400	800
Nov.	20	100	400	500	600	400	500	500	700
Dec.	90	300	500	530	494	1100	1300	1100	700
	649	1248	2000	3000	2999 (corrected)	4000	4025	3800	4700

"Griffe Collery"

Monthly Receipts,     -     1788-1796

	1788	1789	1790	1791	1792	1793	1794	1795	1796
Jan.	300	600	400	200	300	200	0	100	200
Feb.	200	500	500	200	200	300	200	200	200
Mar.	200	1000	400	200	200	200	200	300	300
Apr.	300	400	300	100	200	400	200	300	200
May	200	600	400	100	200	300	300	200	200
June	200	800	300 <sup>(a)</sup>	200	200	200	400	400	400
July	300	1000	200	200	200	300	200	400	300
Aug.	300	400	0 <sup>(b)</sup>	0	100	300	200	300	400
Sep.	300	800	0	200	200	400	400	500	400
Oct.	400	1000	200	400	300	500	400	600	400
Nov.	600	800	400	300	300	300	300	500	300
Dec.	800	1300	800	1000	600	1000	500	600	300
	4100	9200	3900	3100	3000	4400	3300	4400	3600

(a) "Junction opened"

(b) "13th 1st. Boatl'd. from Wednesbury to Coventry"

"Griffe Collery"  
Monthly Receipts, 1797-1805

	1797	1798	1799	1800	1801	1802	1803	1804	1805
Jan.	300	300	200	200	200	200	200	200	200
Feb.	200	200	200	300	200	200	500	200	300
Mar.	300	200	200	300	100	200	400	200	300
Apr.	400	200	300	200	200	300	300	300	200
May	400	300	300	300	200	300	300	300	300
June	400	200	300	200	200	300	400	300	300
July	200	200	300	200	200	300	400	300	300
Aug.	300	200	200	200	500	300	400	500	400
Sep.	400	500	300	300	500	500	500	500	400
Oct.	400	500	500	500	300	500	500	400	400
Nov.	500	500	500	500	500	500	500	400	300
Dec.	1250	1400	1400	1000	500	600	400	400	600
	5050	4700	4700	4200	3600	4200	4800	4000	4000

Source: CR136/A247

APPENDIX L

Table 3

Annual Production and Sales of Coal at Griff Colliery, 1831-1836

"The Summary of each Quarterly Account and the Mine Rent"

YEAR	QUARTER	DATE (TO)	TONNAGE SOLD	ANNUAL SALES	GROSS RECEIPTS	GROSS ANNUAL RECEIPTS	ROYALTY RENT (1/7)	ANNUAL ROYALTY
					(£)		(£)	
1831	1st	24 Dec.	2993 $\frac{3}{4}$		1469.11. 7.		209.18. 9.	
1832	2nd	31 Mar.	1957 $\frac{1}{2}$		988.18. 6.		141. 5. 6.	
	3rd	24 June	2039 $\frac{1}{2}$		919.13.10.		131. 7. 8.	
	4th	29 Sep.	3664		1633.15. 6.		233. 7.11.	
	1st	24 Dec.	4543	15,197 $\frac{3}{4}$	2091.17.10.	7103.17. 3.	298.16.10.	1014.16. 8.
1833	2nd	30 Mar.	4534		2089. 1.10.		298. 8.10.	
	3rd	22 June	3980		1795. 9. 6.		256. 9.11.	
	4th	28 Sept.	5492		2382. 0. 4.		340. 5. 9.	
	1st	21 Dec.	6681	20,687	3019. 3. 0.	9285.14. 8.	431. 6. 1.	1326.10. 7.
1834	2nd	29 Mar.	6744		3115. 7. 4.		445. 1. 0 $\frac{1}{2}$ .	
	3rd	21 June	5817		2685.15. 8.		383.13. 8.	
	4th	27 Sept.	7669		3513.13. 2.		501.19. 0 $\frac{1}{2}$ .	
	1st	20 Dec.	8312	28,542	3901. 7. 2.	13216. 3. 4.	557. 6. 8 $\frac{1}{2}$ .	1888. 0. 5 $\frac{1}{2}$ .

Griff Colliery, (contd.)

"The Summary of each Quarterly Account and the Mine Rent"

YEAR	QUARTER	DATE (TO)	TONNAGE SOLD	ANNUAL SALES	GROSS RECEIPTS	GROSS ANNUAL RECEIPTS	ROYALTY RENT (1/7)	ANNUAL ROYALTY
					(£)		(£)	
1835	2nd	28 Mar.	8246		3833. 7. 2.		547.12. 5 $\frac{1}{4}$	
	3rd	20 June	6980		3232.12. 4.		461.16. 0 $\frac{1}{2}$	
	4th	26 Sept.	8204		3765.19. 6.		537.19.10.	
	1st	31 Dec.	10239	33669	4791. 1. 2.	15623. 0. 2.	684. 8. 8 $\frac{1}{2}$	2231.17. 0 $\frac{1}{4}$
1836	2 2nd	26 Mar.	9027		4274. 7. 4.		510.12. 5 $\frac{1}{2}$	
	3rd	2 July	9069		4391.15. 0.		627. 7.10 $\frac{1}{2}$	
	4th	24 Sept.	7490		3958.17.10.		565.11. 1 $\frac{1}{2}$	
	1st	31 Dec.	8100	33686	4765.15.10.	17390.16. 0.	680.16. 6 $\frac{1}{2}$	2484. 8. 0.

Source: CR136/V/68

APPENDIX I

Table 4

Griff Colliery

Weekly Account of Coal raised for sale, from 1 January 1832 to 28 December 1833

(Retail Prices, 11/8 --- 6/6 per ton)

First Quarter			Second Quarter		Third Quarter		Fourth Quarter	
<u>Year</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>
1832	7 Jan.	213	7 Apr.	180	30 June	186	6 Oct.	300
	14 Jan.	146	14 Apr.	211	7 July	200	13 "	335
	21 Jan.	90	21 Apr.	151	14 "	215	20 "	344
	28 Jan.	125	28 Apr.	163	21 "	183	27 "	334
	4 Feb.	191	5 May	247	28 "	243	3 Nov.	339
	11 "	104	12 "	189	4 Aug.	860	10 Nov.	327
	18 "	90	19 "	114	11 Aug.	270	17 "	483
	25 "	130	26 "	205	18 "	270	24 "	451
	3 Mar	111	2 June	227	25 "	289	1 Dec.	416
	10 "	185	9 "	138	1 Sep.	282	8 "	425
	17 "	193	16 "	279	8 "	285	15 "	376
	24 "	170	23 "	28	15 "	301	22 "	413
	31 "	183			22 "	333		
					29 "	247		
		<u>2,041</u>		<u>2,132</u>		<u>3,664</u>		<u>4,543</u>

Griff Colliery

Weekly Account of Coal raised for sale, from 1 January 1832 to 28 December 1833

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
<u>Year</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>	<u>Date</u>	<u>Tonnage</u>
1833	5 Jan.	365	6 Apr.	384	29 June	348	5 Oct.	526
	12 "	379	13 "	406	6 July	307	12 Oct.	389
	19 "	302	20 "	434	13 "	433	19 "	604
	26 "	268	27 "	425	20 "	185	26 "	621
	2 Feb.	290	4 May	345	27 "	392	2 Nov.	592
	9 "	278	11 "	298	3 Aug.	299	9 "	446
	16 "	250	18 "	298	10 "	306	16 "	574
	23 "	312	25 "	254	17 "	240	23 "	589
	2 Mar.	374	1 June	250	24 "	356	30 "	567
	9 "	324	8 "	277	31 "	436	7 Dec.	584
	16 "	331	15 "	269	7 Sept.	481	14 "	560
	23 "	344	22 "	340	14 "	624	21 "	629
	30 "	430			21 "	590	28 "	397
					28 "	495		
		<u>4247</u>		<u>3980</u>		<u>5392</u>		<u>7078</u>



APPENDIX L

Table 5

"AN ESTIMATE of the Expence of Building a Double Engine and Sinking a double Eng<sup>n</sup> Pitt for a New Foundation 106 yds. deep at Griff Colliery

To Erecting a double Engine .....	£2500. -.	-.
To Sinking the first 10 fms @ £4.4sh. yd. ....	42.	-.
To Sinking the remaining 43 fms at £12 per .....	516.	-.
To Bricks for the Shafts .....	200.	-.
To Oak Timber for Cribs Deals for Brattish & Nails .....	200.	-.
To a Ginn to draw the Sinkers Stones .....	20.	-.
To Building a Black Smiths Shop & finding all Materialls	30.	-.
To Ropes .....	150.	-.
To Keeping the Fire Engine 52 Weeks the Time of	}	208.
Sinking finding Leather Candles &c at £4 per		
To Heading Materialls and other Contingencies		100.
		-.
		-.
		£3966.

To Coals consum'd by the Fire Engine & Black Smiths )  
the Time of Sinking ..... ) "

Source CR 136/C627

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Table 1.

- A 116 -

Source: Anglesey MSS. D(W) 1734, p. 13.

APPENDIX N

Table 1

Weekly coal production and sales at Haunchwood Colliery, Nuneaton,  
from 7 April 1804 to 6 April 1805

<u>"BACON PIT"</u>			<u>"DEAMON PIT"</u>		
	<u>Date</u>	<u>Quantity</u>		<u>Date</u>	<u>Quantity</u>
W/E	14 Apr.	55 (Loads)	W/E	14 Apr.	42 (Loads)
	21 "	24		21 "	39
	28 "	35		28 "	47
	5 May	19		5 May	55
	12 "	29		12 "	63
	19 "	36		19 "	42
	26 "	57		26 "	42
	2 June	45		2 June	51
	9 "	53		2 "	49
	16 "	39		16 "	31
	23 "	34		23 "	32
	30 "	53		30 "	42
	7 July	51		7 July	34
	14 "	44		14 "	33
	21 "	44		21 "	41
	28 "	59		28 "	56
	4 Aug.	82		4 Aug.	88
	11 "	52		11 "	83
	18 "	45		18 "	91
	25 "	30		25 "	54
	1 Sep.	44		1 Sep.	60
	8 "	57		8 "	102
	15 "	50		15 "	65
	22 "	40		22 "	61
	29 "	23		29 "	55
	6 Oct.	4		6 Oct.	47

"BACON PIT"		
	Date	Quantity
W/E (a)	13 Oct.	3 (Loads)
	20 "	2
	27 "	3
	3 Nov.	2
	10 "	9
	17 "	47
	24 "	22
	1 Dec.	19
	8 "	12
	15 "	23
	22 "	19
	29 "	11
1805	5 Jan.	17
	12 "	15
	19 "	17
	26 "	16
	2 Feb.	17
	9 Feb.	18
	16 Feb.	21
	23 Feb.	13
	2 Mar.	13
	9 "	12
	16 "	13
	23 "	10
	30 "	8
	6 Apr.	17

(a) Renamed "Chatin Pit" as from  
this date

"DEAMON PIT"		
	Date	Quantity
W/E	13 Oct.	49 (Loads)
	20 "	67
	27 "	70
	3 Nov.	65
	10 "	21
	17 "	39
(b)	24 "	16
	1 Dec.	24
	8 "	15
	15 "	41
	22 "	28
	29 "	11
1805	5 Jan.	14
	12 "	29
	19 "	40
	26 "	53
	2 Feb.	11
	9 Feb.	2
	16 Feb.	41
	23 Feb.	13
	2 Mar.	11
	9 "	12
	16 "	22
	23 "	21
	30 "	14
	6 Apr.	24

(b) Renamed "Shilton Pit" as from  
this date

Source: Dugdale Muniments, 1625

APPENDIX N

Table 2

Haunchwood Colliery

Coal Production, Sales and Mine Rent from  
29 September 1809 to 28 September 1826

DATE		PRODUCTION (LOADS)		MINE RENT
YEAR	MONTHS	HALF YEAR	FULL YEAR	ONE SHILLING PER STACKLOAD
				£. s. d.
1809/1810	29 Sept.- 24 Mar.	1654		82.14. 0.
1810	24 Mar.- 29 Sept.	2682	4336	134. 2. 0.
1810/ 1811	29 Sept.- 23 Mar.	1810		172. 9. 0.
1811	23 Mar.- 12 Oct.	2382	4192	119. 2. 0.
1811/ 1812	12 Oct.- 30 Mar.	700		35. 0. 0.
1812	30 Mar.- 26 Sept.	748	1448	37. 8. 0.
1812/ 1813	26 Sept.- 27 Mar.	881		44. 1. 0.
1813	27 Mar.- 25 Sept.	1065	1946	53. 6. 0.
1813/ 1814	25 Sept.- 20 April	679		33.19. 0.
1814	20 April- 21 July	330	1009	16.10. 6.
1814/ 1815	21 July- 30 Mar.	27½		1. 7. 6.
1815	30 Mar.- 28 Sept.	1114½	1142	55.14. 6.

DATE		PRODUCTION (LOADS)		MINE RENT
YEAR	MONTHS	HALF YEAR	FULL YEAR	ONE SHILLING PER STACKLOAD
				£. s. d.
1815-1816	20 Sept.- 26 Sept.	--	1973 $\frac{1}{2}$	98.13. 6.
1816-1817	26 Sept.- 6 Nov.	--	2105	105. 5. 0.
1817-1819	6 Nov.- Mar	--	?	?
1819	- Mar.- 23 Sept.	671	--	33.11. 0.
1819-1820	23 Sept.- 23 Mar.	1721		86. 1. 0.
1820	23 Mar.- 5 Oct.	2868 $\frac{1}{2}$	4589 $\frac{1}{2}$	143. 8. 6.
1820-1821	5 Oct.- 4 Oct.		3582	179. 2. 0.
1821-1822	4 Oct.- 3 Oct.		7296	364.16. 0.
1822-1823	3 Oct.- 15 Oct.		. ?	?
1823-1824	16 Oct.- 30 Sept.		10596	529.16. 0.
1824-1825	2 Oct.- 29 Sept.		6873 $\frac{1}{2}$	348.13. 6.
1825-1826	29 Sept.- 28 Sept.		3529	176. 9. 0.

Source: Dugdale Muniments, 973C-999

APPENDIX O

Table 1

"An Account of Coals got and sold by Mr. Fletcher at my work at  
Ansley and Nuneaton", from 1 January 1757 to 24 December 1768

<u>1757</u>		<u>1758</u>	
<u>STACKLOADS</u>		<u>STACKLOADS</u>	
Week ending:-	"Got"	Week ending:-	"Got"
1 Jan.	64	14 Jan.	38
22 Jan.	145	4 Feb.	53
12 Feb.	-	25 Feb.	49
5 Mar.	188	24 Mar.	80
26 Mar.	33	22 Apr.	60
16 Apr.	37	13 May	363
7 May	38	3 June	369
28 May	62	24 June	181
18 June	139	15 July	242
9 July	478	5 Aug.	78
30 July	162	26 Aug.	77
20 Aug.	59	16 Sept.	145
10 Sept.	77	7 Oct.	436
1 Oct.	484	28 Oct.	129
22 Oct.	204	18 Nov.	41 <sup>(a)</sup>
12 Nov.	200	9 Dec.	$\frac{1}{2}$
3 Dec.	$52\frac{1}{2}$		
24 Dec.	83		
	<hr/>		<hr/>
	2505 $\frac{1}{2}$	Total	2381 $\frac{1}{2}$
	72 $\frac{1}{2}$		
	<hr/>		
Total	2578		
	stacks		

(a) 53 stacks deducted, "they  
having been got upon  
Mr. Ludford's ground"

<u>1759</u>			<u>1760</u>		
Week ending:-	"Got"	"Sold"	Week ending:-	"Got"	"Sold"
20 Jan.	1	1	12 Jan.	77	62
3 Mar.	31	14	1 Feb.	162	137
24 Mar.	71	43	23 Feb.	54 $\frac{1}{2}$	93 $\frac{1}{2}$
14 Apr.	75	34	15 Mar.	75	61
5 May	70	77	5 Apr.	121	66 $\frac{1}{2}$
26 May	-	79	26 Apr.	112 $\frac{1}{2}$	89
7 July	1	1 $\frac{1}{2}$	17 May	124	98 $\frac{1}{2}$
28 July	4	4	7 June	134 $\frac{1}{2}$	149
18 Aug.	52	42	28 June	176	155
8 Sept.	122	130	19 July	237	193 $\frac{1}{2}$
29 Sept.	221	223	9 Aug.	223	264 $\frac{1}{2}$
20 Oct.	127	126 $\frac{1}{2}$	30 Aug.	125	141
10 Nov.	129	119	20 Sept.	248	248 $\frac{2}{3}$
1 Dec.	150	147	11 Oct.	22	209
22 Dec.	168	181	1 Nov.	114	107
			22 Nov.	74	88
			13 Dec.	130	133
Total	<u>1222</u>	<u>1222</u>	Total	<u>2407<math>\frac{1}{2}</math></u>	<u>2274</u>



<u>1761</u>			<u>1762</u>		
Week ending:-	"Got"	"Sold"	Week ending:-	"Got"	"Sold"
3 Jan.	102	143	16 Jan.	15	82
24 Jan.	35	37			
14 Feb.	68	50	6 Feb.	38	35
7 Mar.	85	67	27 Feb.	30	22
28 Mar.	29	26	20 Mar.	187	56
18 Apr.	79	43	10 Apr.	210	66
13 May	242 $\frac{1}{2}$	102 $\frac{1}{2}$	1 May	167	57
30 May	116	39	22 May	149	179
20 June	187	161	12 June	138	440
11 July	73	176	3 July	127	130
1 Aug.	166	174	24 July	107	110
22 Aug.	182	176	14 Aug.	93	100
14 Sept.	215	270	4 Sept.	151	169
3 Oct.	125	228	25 Sept.	238	173
24 Oct.	155	183	16 Oct.	200	133
14 Nov.	205	205	6 Nov.	77	109
5 Dec.	172	132	27 Nov.	--	58
26 Dec.	<u>172</u>	<u>149</u>	24 Dec.	<u>36</u>	<u>53</u>
Total	<u>2408<math>\frac{1}{2}</math></u>	<u>2361</u>	Total	<u>1963</u>	<u>1972</u>

<u>1763</u>			<u>1764</u>		
Week ending:-	"Got"	"Sold"	Week ending:-	"Got"	"Sold"
15 Jan.	60	58	14 Jan.	11	83
29 Jan.	85	80	4 Feb.	32	102
19 Feb.	170	56	3 Mar.	73	17
12 Mar.	164	53	24 Mar.	98	43
9 Apr.	317	70	14 Apr.	133	79
30 Apr.	282	101	12 May	155	131
21 May	142	90	9 June	118	148
11 June	137	244 $\frac{1}{2}$	30 June	67	82
1 July	117	164	21 July	110	75
23 July	83	86	11 Aug.	112	71
20 Aug.	91	77	1 Sept.	73	137
10 Sept.	43	62	22 Sept.	92	104
1 Oct.	23	145	13 Oct.	116	132
22 Oct.	53	281	3 Nov.	107	107
12 Nov.	161	253	24 Nov.	64	55
3 Dec.	194	205 $\frac{1}{2}$	22 Dec.	20	24
24 Dec.	<u>202</u>	<u>155</u>			
Total	<u>2324</u>	<u>2181</u>	Total	<u>1381</u>	<u>1390</u>

1765

Week ending:-	"Got"	"Sold"
12 Jan.	3	0
2 Feb.	53	6
23 Feb.	71	29
23 Mar.	93	34
13 Apr.	111	25
11 May	196	89
8 June	132	204
29 June	191	191
22 July	221 $\frac{1}{2}$	104 $\frac{1}{2}$
10 Aug.	228	321
31 Aug.	229 $\frac{1}{2}$	173 $\frac{1}{2}$
21 Sept.	247 $\frac{1}{2}$	217
12 Oct.	312 $\frac{1}{2}$	315
2 Nov.	203 $\frac{1}{2}$	205
23 Nov.	97	98
24 Dec.	111 $\frac{1}{2}$	88 $\frac{1}{2}$
Total	<u>2501</u>	<u>2100<math>\frac{1}{2}</math></u>

1766

Week ending:-	"Got"	"Sold"
18 Jan.	96	127
8 Feb.	140 $\frac{1}{2}$	101 $\frac{1}{2}$
8 Mar.	59 $\frac{1}{2}$	73 $\frac{1}{2}$
29 Mar.	115	82
19 Apr.	140	114
13 May	177 $\frac{1}{2}$	123
31 May	194 $\frac{1}{2}$	136
21 June	238	220
12 July	205	214
2 Aug.	150 $\frac{1}{2}$	173 $\frac{1}{2}$
23 Aug.	144	247 $\frac{1}{2}$
18 Sept.	144	218
4 Oct.	210	221
15 Nov.	181	173
6 Dec.	168	169
27 Dec.	171 $\frac{1}{2}$	158 $\frac{1}{2}$
Total	<u>2535</u>	<u>2551<math>\frac{1}{2}</math></u>

<u>1767</u>			<u>1768</u>		
Week ending:-	"Got"	"Sold"	Week ending:-	"Got"	"Sold"
17 Jan.	139 $\frac{1}{2}$	99 $\frac{1}{2}$	23 Jan.	236 $\frac{1}{2}$	231 $\frac{1}{2}$
7 Feb.	226	177	13 Feb.	223 $\frac{1}{2}$	132 $\frac{1}{2}$
28 Feb.	227	118	5 Mar.	217	103
21 Mar.	196	110	26 Mar.	314	118
11 Apr.	167	91	16 Apr.	252 $\frac{1}{2}$	192 $\frac{1}{2}$
13 May	145 $\frac{1}{2}$	205	7 May	252	164 $\frac{1}{2}$
30 May	104	121	28 May	193 $\frac{1}{2}$	287
20 June	212 $\frac{1}{2}$	212	18 June	225	309
11 July	303	272 $\frac{1}{2}$	9 July	276 $\frac{1}{2}$	252.
1 Aug.	270	217	30 July	271	206
22 Aug.	253	378 $\frac{1}{2}$	20 Aug.	302 $\frac{1}{2}$	193 $\frac{1}{2}$
12 Sept.	265	313	10 Sept.	191 $\frac{1}{2}$	216 $\frac{1}{2}$
30 Sept.	142 $\frac{1}{2}$	299	1 Oct.	196 $\frac{1}{2}$	360 $\frac{1}{2}$
24 Oct.	164	184 $\frac{1}{2}$	22 Oct.	226	265
14 Nov.	144 $\frac{1}{2}$	127 $\frac{1}{2}$	12 Nov.	160 $\frac{1}{2}$	175 $\frac{1}{2}$
5 Dec.	172 $\frac{1}{2}$	149	3 Dec.	148	127 $\frac{1}{2}$
26 Dec.	206	214	24 Dec.	75 $\frac{1}{2}$	78 $\frac{1}{2}$
Total	<u>3338</u>	<u>3288<math>\frac{1}{2}</math></u>	Total	<u>3762</u>	<u>3413<math>\frac{1}{2}</math></u>

Source: Dugdale Muniments, 1478.

APPENDIX P

Table 1

Monthly production and sales of coal at Badgley Colliery, 1735 to 1739

"Got from Xmas 1735 to Xmas 1736

(Calculated in stackloads of uncertain size)

	Date	"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
1735	Jan. 10	19 $\frac{1}{2}$		20 $\frac{1}{2}$	
	17	9		9	
	24	10 $\frac{1}{2}$		10 $\frac{1}{2}$	
	31	8	47	8	48
	Feb. 7	3 $\frac{1}{2}$		3 $\frac{1}{2}$	
	14	11 $\frac{1}{2}$		11 $\frac{1}{2}$	
	21	15		15	
	28	15	45	15	45
	Mar. 6	15 $\frac{1}{2}$		15 $\frac{1}{2}$	
	13	13 $\frac{1}{2}$		13 $\frac{1}{2}$	
	20	8		8	
	27	9	46	9	46
1736	Apr. 3	11		11	
	10	7		7	
	17	19		19	
	24	27	64	27	64
	May 1	23 $\frac{1}{2}$		23 $\frac{1}{2}$	
	8	23 $\frac{1}{2}$		23 $\frac{1}{2}$	
	15	64		64	
	22	57		54	
	29	49	217	44	209
	June 5	47		39	
	12	63		65	
	19	55		46	
1736	26	23 $\frac{1}{2}$	188 $\frac{1}{2}$	38 $\frac{1}{2}$	188 $\frac{1}{2}$
Totals			607 $\frac{1}{2}$		600 $\frac{1}{2}$

Date		"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
Brought over:-			607½		600½
1736	July 3	21		19	
	10	11		8½	
	17	25½		22½	
	24	26		14½	
	31	14½	98(a)	20½	85
	Aug. 7	13		17½	
	14	8		21	
	21	7		12½	
	28	5	33	5	56
	Sept. 4	23		23	
	11	16		16	
	18	13½		13½	
	25	8½	61	8½	61
	Oct. 2	13		13	
	9	6½		6½	
	16	4½		4½	
	23	4		4	
	30	6	34	6	34
	Nov. 6	3		3	
	13	5½		5½	
	20	3		3	
	27	6½	18	6½	18
	Dec. 4	4		4	
	11	3½		3½	
1736	18	3	10½	3	10½
(To Dec. 18 only)					
Total for Year			862		865

(a) Corrected

"Got from Xmas 1736 to Xmas 1737"

Date	"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
1736				
From 18th Dec. to 5th Feb.		7½	--	--
Mar. 5	4½			
12	2			
1737 26	3	9½		
Apr. 9	24½		4	4
30	1	25½		
May 7	4½	4½		
June 4	14			
1737 25	7	21		
Totals		68		4

Date		"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
Brought over:-			68		4
1737	July	9	8		
		16	7		
		22	6 $\frac{1}{2}$	21 $\frac{1}{2}$	
	Aug.	6	8	17 $\frac{1}{2}$	
		13	17 $\frac{1}{2}$	16	
		20	16	11	
		27	11	--	44 $\frac{1}{2}$
	Sept.	3	16	16	
		10	23	23	
		17	11 $\frac{1}{2}$	11 $\frac{1}{2}$	
		24	14	14	64 $\frac{1}{2}$
	Oct.	1	20	20	
		8	15 $\frac{1}{2}$	15 $\frac{1}{2}$	
		15	12 $\frac{1}{2}$	12 $\frac{1}{2}$	
		22	37 $\frac{1}{2}$	37 $\frac{1}{2}$	
		29	20	20	105 $\frac{1}{2}$
	Nov.	5	26	26	
		12	24	24	
		19	12 $\frac{1}{2}$	12 $\frac{1}{2}$	
		26	15 $\frac{1}{2}$	15 $\frac{1}{2}$	78
	Dec.	3	9	9	
		10	14	14	
		17	18	18	
1737		24	21	21	62
Total for Year			452		358 $\frac{1}{2}$



"Badgley Coalwork:- Acct. of Coales got and sold  
by Messrs. England and Burslem

Date	"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
1737 Jan. 7	7		7	
14	7 $\frac{1}{2}$		-	
21	7		7	
28	12	33 $\frac{1}{2}$	12	26
Feb. 4	14 $\frac{1}{2}$		9 $\frac{1}{2}$	
11	15 $\frac{1}{2}$		15	
18	13 $\frac{1}{2}$		14 $\frac{1}{2}$	
25	14	57 $\frac{1}{2}$	15	54
Mar. 11	15 $\frac{1}{2}$		15 $\frac{1}{2}$	
18	2 $\frac{1}{2}$		5	
25	14	32	13	33 $\frac{1}{2}$
1738 Apr. 1	11		11	
8	3 $\frac{1}{2}$		4 $\frac{1}{2}$	
15	14 $\frac{1}{2}$		13 $\frac{1}{2}$	
22	8 $\frac{1}{2}$		8 $\frac{1}{2}$	
29	18	55 $\frac{1}{2}$	15 $\frac{1}{2}$	53
May 13	7		8 $\frac{1}{2}$	
20	29		16 $\frac{1}{2}$	
27	30	66	12	37
June 3	42 $\frac{1}{2}$		31 $\frac{1}{2}$	
10	81		18 $\frac{1}{2}$	
17	67		39 $\frac{1}{2}$	
24	9 $\frac{1}{2}$		42 $\frac{1}{2}$	
1738 31	20 $\frac{1}{2}$	220 $\frac{1}{2}$	14 $\frac{1}{2}$	146 $\frac{1}{2}$
Totals		465		350

Date	"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
Brought over:-		465		350
1738 July 8	59		22 $\frac{1}{2}$	
15	51 $\frac{1}{2}$		31	
22	56		38 $\frac{1}{2}$	
29	71 $\frac{1}{2}$	238	69 $\frac{1}{2}$	161 $\frac{1}{2}$
Aug. 5	54		89 $\frac{1}{2}$	
12	52		20	
19	37		61 $\frac{1}{2}$	
26	73	216	69 $\frac{1}{2}$	240 $\frac{1}{2}$
Sep. 2	73 $\frac{1}{2}$		124	
9	44 $\frac{1}{2}$		66 $\frac{1}{2}$	
16	65		86 $\frac{1}{2}$	
23	49 $\frac{1}{2}$		63 $\frac{1}{2}$	
30	76	308 $\frac{1}{2}$	69 $\frac{1}{2}$	410
Oct. 7	24		45	
14	53		54	
21	46		38	
28	18 $\frac{1}{2}$	141 $\frac{1}{2}$	61	198
Nov. 4	36		47 $\frac{1}{2}$	
11	19 $\frac{1}{2}$		27 $\frac{1}{2}$	
18	7		25	
25	22	84 $\frac{1}{2}$	14	114
Dec. 1	4 $\frac{1}{2}$		6 $\frac{1}{2}$	
9	8		15	
16	19 $\frac{1}{2}$		12	
1738 23	27 $\frac{1}{2}$	59 $\frac{1}{2}$	20	53 $\frac{1}{2}$
Total for Year		1513		1527 $\frac{1}{2}$

Mr. Robert Stow in Trust for Mr. James Burslem

Got from

Date		"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
1738	Jan. 27	14 $\frac{1}{2}$	14 $\frac{1}{2}$	13 $\frac{1}{2}$	13 $\frac{1}{2}$
	Feb. 3	32 $\frac{1}{2}$		12	
	10	2		11	
	17	22 $\frac{1}{2}$		16	
	24	32 $\frac{1}{2}$	89 $\frac{1}{2}$	13	52 <sup>(a)</sup>
	Mar. 3	53		15	
	10	42 $\frac{1}{2}$		12	
	17	67 $\frac{1}{2}$		16	
	24	69 $\frac{1}{2}$		14	
1739	31	74	306 $\frac{1}{2}$	13	70 <sup>(a)</sup>
	Apr. 7	85 $\frac{1}{2}$		17 $\frac{1}{2}$	
	14	80		30	
	21	121 $\frac{1}{2}$		32 $\frac{1}{2}$	
	28	25 $\frac{1}{2}$	312 $\frac{1}{2}$	25	105
	May 5	137 $\frac{1}{2}$		38	
	12	94 $\frac{1}{2}$		40	
	19	100 $\frac{1}{2}$		20 $\frac{1}{2}$	
	26	107 $\frac{1}{2}$	440	37	135 $\frac{1}{2}$
	June 2	110 $\frac{1}{2}$		38 $\frac{1}{2}$	
	9	138 $\frac{1}{2}$		71 $\frac{1}{2}$	
	16	87 $\frac{1}{2}$		41	
	23	67		68 $\frac{1}{2}$	
1739	30	97	500 $\frac{1}{2}$	38	257 $\frac{1}{2}$
Totals			1663 $\frac{1}{2}$		633 $\frac{1}{2}$

(a) Corrected

Date		"Got in a week"	"In a month"	"Paid per week"	"Pd. per month"
Brought over:-			166 $\frac{1}{2}$		633 $\frac{1}{2}$
1739	July 7	100 $\frac{1}{2}$		34 $\frac{1}{2}$	
	14	72 $\frac{1}{2}$		40 $\frac{1}{2}$	
	21	125 $\frac{1}{2}$		34	
	28	81 $\frac{1}{2}$	380	85 $\frac{1}{2}$	194 $\frac{1}{2}$
	Aug. 4	32		76 $\frac{1}{2}$	
	11	32		25 $\frac{1}{2}$	
	18	39 $\frac{1}{2}$		15 $\frac{1}{2}$	
	25	48 $\frac{1}{2}$	152	73 $\frac{1}{2}$	191
	Sep. 1	53 $\frac{1}{2}$		106	
	8	51 $\frac{1}{2}$		72 $\frac{1}{2}$	
	15	49 $\frac{1}{2}$		65	
	22	28		74	
	29	55 $\frac{1}{2}$	238	81	398 $\frac{1}{2}$
	Oct. 6	35		25	
	13	55		17	
	20	60		35 $\frac{1}{2}$	
	27	35	185	96 $\frac{1}{2}$	174
	Nov. 3	16		66	
	10	12		32	
	17	8		19 $\frac{1}{2}$	
	24	3	39	28 $\frac{1}{2}$	146
	Dec. 1	-		19 $\frac{1}{2}$	
	8	-		12	
	15	-		8	
1739	22	2	2	8 $\frac{1}{2}$	48
Totals for Year			2659 $\frac{1}{2}$		1785 $\frac{1}{2}$

Source: Dugdale Muniments 1478

APPENDIX P

Table 2

Monthly production and sales of coal, from 25 March 1758 to 25 March 1768

"Badgley Colliery Messrs. England & Co. from Lady Day 1758 to Michelmas following"		"	"	"	"
		" Got in a week	" Got in a month	" Sold in a week	" Sold in a month
(1758) Week ending:-	April 8	25		14	
	" 15	29		7 $\frac{1}{2}$	
	" 22	33		17 $\frac{1}{2}$	
	" 29	33 $\frac{1}{2}$	120 $\frac{1}{2}$	14 $\frac{1}{2}$	53 $\frac{1}{2}$
	May 6	59		17 $\frac{1}{2}$	
	" 13	72		52	
	" 20	49		64	
	" 27	34	214	56	189 $\frac{1}{2}$
	June 3	2		23	
	" 10	7 $\frac{1}{2}$		41	
	" 17	48 $\frac{1}{2}$		43	
	" 24	47 $\frac{1}{2}$	105 $\frac{1}{2}$	41 $\frac{1}{2}$	148 $\frac{1}{2}$
	July 1	80 $\frac{1}{2}$		64	
	" 8	95 $\frac{1}{2}$		55 $\frac{1}{2}$	
	" 15	68		59	
	" 22	113 $\frac{1}{2}$		41	
	" 29	71 $\frac{1}{2}$	429	22	241 $\frac{1}{2}$
	Aug. 5	91 $\frac{1}{2}$		35 $\frac{1}{2}$	
	" 12	79		36 $\frac{1}{2}$	
	" 19	42		22	
	" 26	1	213 $\frac{1}{2}$	14 $\frac{1}{2}$	108 $\frac{1}{2}$
	Sept. 9	3		38	
	" 16	15 $\frac{1}{2}$		67	
	" 23	8		98 $\frac{1}{2}$	
	" 30	18	44 $\frac{1}{2}$	166	369 $\frac{1}{2}$
	Oct. 7		32		63
		+3 $\frac{1}{2}$	<u>1159</u>		
"So far Acctd. and Paid for 21 March 1759"		Totals	<u>1162<math>\frac{1}{2}</math></u>		<u>1174</u>

"Badgley Colliery  
Messrs. England & Co.  
from Michellmas 1758  
to Lady Day 1759"

		Got in a week	Got in a month	Sold in a week	Sold in a month
(1758)	Week ending:-				
	Oct. 14	47		46	
	" 21	51 $\frac{1}{2}$		47	
	" 28	45 $\frac{1}{2}$	144	52	145
	Nov. 4	43 $\frac{1}{2}$		42 $\frac{1}{2}$	
	" 11	46		44 $\frac{1}{2}$	
	" 18	48		49	
	" 25	29	166 $\frac{1}{2}$	28	164
	Dec. 2	57 $\frac{1}{2}$		45 $\frac{1}{2}$	
	" 9	42		44 $\frac{1}{2}$	
	" 16	43		33	
	" 23	48 $\frac{1}{2}$		36 $\frac{1}{2}$	
	" 30	--	191	--	159 $\frac{1}{2}$
(1759)	Jan. 6	--		--	
	" 13	--		--	
	" 20	5 $\frac{1}{2}$		39 $\frac{1}{2}$	
	" 27	15 $\frac{1}{2}$	21	12 $\frac{1}{2}$	52
	Feb. 3	19 $\frac{1}{2}$		14	
	" 10	42		21	
	" 17	46 $\frac{1}{2}$		19 $\frac{1}{2}$	
	" 24	44	152	41	95 $\frac{1}{2}$
	Mar. 3	70 $\frac{1}{2}$		20	
	" 10	59 $\frac{1}{2}$		15 $\frac{1}{2}$	
	" 17	67 $\frac{1}{2}$		22 $\frac{1}{2}$	
	" 24	71		17	
	" 31	58	326 $\frac{1}{2}$	19	94
	Totals		1001		710

"Badgley Coalwork  
Messrs. England & Comp.  
from Lady Day 1759  
to Michelmas following"

		Got in a week	Got in a month	Sold in a week	Sold in a month
(1759) Week ending:-	April 7	89		17	
	" 14	71 $\frac{1}{2}$		18 $\frac{1}{2}$	
	" 21	77		20	
	" 28	85 $\frac{1}{2}$	323	21 $\frac{1}{2}$	77
	May 5	81		20	
	" 12	70 $\frac{1}{2}$		35	
	" 19	59		32 $\frac{1}{2}$	
	" 26	95	305 $\frac{1}{2}$	68 $\frac{1}{2}$	156
	June 2	79		71	
	" 9	70 $\frac{1}{2}$		41	
	" 16	27		22	
	" 23	43 $\frac{1}{2}$		39 $\frac{1}{2}$	
	" 30	59 $\frac{1}{2}$	279 $\frac{1}{2}$	33 $\frac{1}{2}$	207
	July 7	56 $\frac{1}{2}$		21 $\frac{1}{2}$	
	" 14	31		36	
	" 21	39		61	
	" 28	68	194 $\frac{1}{2}$	111	229 $\frac{1}{2}$
	Aug. 4	60		148 $\frac{1}{2}$	
	" 11	61 $\frac{1}{2}$		56 $\frac{1}{2}$	
	" 18	20 $\frac{1}{2}$		26 $\frac{1}{2}$	
	" 25	60 $\frac{1}{2}$	202 $\frac{1}{2}$	41 $\frac{1}{2}$	273
	Sept. 1	60 $\frac{1}{2}$		75 $\frac{1}{2}$	
	" 8	68		158 $\frac{1}{2}$	
	" 15	85		230 $\frac{1}{2}$	
	" 22	48 $\frac{1}{2}$		356 $\frac{1}{2}$	
	" 29	80	342	170 $\frac{1}{2}$	991 $\frac{1}{2}$
	Oct. 6	102	102	107	107
	<u>Totals</u>		<u>1749</u>		<u>2041</u>

"Badgley Coal Work  
Messrs. England & Company  
from Micheldmas 1759  
to Lady Day 1760"

		Got in a week	Got in a month	Sold in a week	Sold in a month
(1759) Week ending:-	Oct. 13	103 $\frac{1}{2}$		52	
	" 20	57		63	
	" 27	96 $\frac{1}{2}$	257	117 $\frac{1}{2}$	232 $\frac{1}{2}$
	Nov. 3	100 $\frac{1}{2}$		103	
	" 10	88		83	
	" 17	77		54	
	" 24	71	336 $\frac{1}{2}$	42	282
	Dec. 1	72 $\frac{1}{2}$		45	
	" 8	60		39 $\frac{1}{2}$	
	" 15	74 $\frac{1}{2}$		29	
	" 22	87		130 $\frac{1}{2}$	
	" 29	-	294	-	244
(1760)	Jan. 5	-		11	
	" 12	14		19	
	" 19	33 $\frac{1}{2}$		29 $\frac{1}{2}$	
	" 26	1	48 $\frac{1}{2}$	16 $\frac{1}{2}$	76
	Feb. 2	4 $\frac{1}{2}$		15 $\frac{1}{2}$	
	" 9	9 $\frac{1}{2}$		13 $\frac{1}{2}$	
	" 16	-		-	
	" 23	-	14	-	29
	Mar. 1	-		83	
	" 8	6		6	
	" 15	8 $\frac{1}{2}$		8 $\frac{1}{2}$	
	" 22	15 $\frac{1}{2}$		14 $\frac{1}{2}$	
	" 29	38 $\frac{1}{2}$	68 $\frac{1}{2}$	28 $\frac{1}{2}$	
	Totals		1018 $\frac{1}{2}$		863 $\frac{1}{2}$

"26 September 1760  
Rec'd of Mr. Lythal to the 29th above"



		Got in a week	Got in a month	Sold in a week	Sold in a month
"Badgley Coal Work Messrs. England and Company from Lady Day 1760 (to Michaelmas following)					
(1760) Week ending:-	5 April	31 $\frac{1}{2}$		10 $\frac{1}{2}$	
	12 "	-		-	
	19 "	-		-	
	26 "	-	31 $\frac{1}{2}$	-	10 $\frac{1}{2}$
	3 May	-		-	
	10 "	-		-	
	17 "	-		-	
	24 "	-		-	
	31 "	-		-	
	7 June	-		-	
	14 "	-		-	
	21 "	6 $\frac{1}{2}$		38 $\frac{1}{2}$	
	28 "	-	6 $\frac{1}{2}$		38 $\frac{1}{2}$
	5 July	-		-	
	12 "	3		-	
	19 "	-		-	
	26 "	-	3	3	3
	2 Aug.	-		-	
	9 "	3 $\frac{1}{2}$		3 $\frac{1}{2}$	
	16 "	-		-	
	23 "	39		5	
	30 "	44 $\frac{1}{2}$	87	54	62 $\frac{1}{2}$
	6 Sept.	47 $\frac{1}{2}$		71 $\frac{1}{2}$	
	13 "	79 $\frac{1}{2}$		79 $\frac{1}{2}$	
	20 "	70 $\frac{1}{2}$		68 $\frac{1}{2}$	
	27 "	56	253 $\frac{1}{2}$	49	
	Totals		381 $\frac{1}{2}$		114 $\frac{1}{2}$

"So far Accounted and paid for  
the 13th of April 1761."

"Badgley Coal Work Messrs. England & Company from Michaelmas 1760 (to Lady Day 1761)		Got in a week	Got in a month	Sold in a week	Sold in a month
(1760) Week ending:-	4 Oct.	86		78	
	11 "	71		80	
	18 "	37		34 $\frac{1}{2}$	
	25 "	41 $\frac{1}{2}$	235 $\frac{1}{2}$	53 $\frac{1}{2}$	246
	1 Nov.	77		44 $\frac{1}{2}$	
	8 "	74		78	
	15 "	67 $\frac{1}{2}$		60	
	22 "	72 $\frac{1}{2}$		49 $\frac{1}{2}$	
	29 "	87 $\frac{1}{2}$	378 $\frac{1}{2}$	45 $\frac{1}{2}$	277 $\frac{1}{2}$
	6 Dec.	62		24	
	13 "	92 $\frac{1}{2}$		29 $\frac{1}{2}$	
	20 "	90 $\frac{1}{2}$		37 $\frac{1}{2}$	
	27 "	72	317	28	119
(1761)	4 Jan.	-		-	
	10 "	38		42	
	17 "	40		30	
	24 "	42		21	
	31 "	19 $\frac{1}{2}$	139 $\frac{1}{2}$	19 $\frac{1}{2}$	112 $\frac{1}{2}$
	7 Feb.	22		14	
	14 "	7 $\frac{1}{2}$		12 $\frac{1}{2}$	
	21 "	47 $\frac{1}{2}$		27 $\frac{1}{2}$	
	28 "	29	106	27	81
	7 Mar	27		16	
	14 "	76 $\frac{1}{2}$		23 $\frac{1}{2}$	
	21 "	109 $\frac{1}{2}$		21	
	28 "	51	264	20	80 $\frac{1}{2}$
	Totals		1440 $\frac{1}{2}$		916 $\frac{1}{2}$

"So far Accounted  
and paid for Nov. 5 1761"

"Badgley Coal Work Messrs. England and Company from Lady Day 1761 to Michaelmas following"		Got in a week	Got in a month	Sold in a week	Sold in a month
(1761) Week ending:-	16 May	-	-	162	162
	13 June	-	-	40	
	27 June	4 $\frac{1}{2}$	4 $\frac{1}{2}$	63	103
	8 Aug.	1		72 $\frac{1}{2}$	
	22 "	15		13 $\frac{1}{2}$	
	29 "	16	32	14 $\frac{1}{2}$	100 $\frac{1}{2}$
	5 Sept.	15		30	
	12 "	29 $\frac{1}{2}$		72	
	19 "	27		31	
	26 "	22 $\frac{1}{2}$	94	34	167
	<u>Totals</u>		<u>130<math>\frac{1}{2}</math></u>		<u>532<math>\frac{1}{2}</math></u>

"Badgley Coal Work  
Messrs England & Company  
from Michaelmas 1761  
to Lady Day 1762"

		Got in a week	Got in a month	Sold in a week	Sold in a month
(1761)	Week ending:-				
	3 Oct.	35 $\frac{1}{2}$		43	
	10 "	68 $\frac{1}{2}$		60 $\frac{1}{2}$	
	17 "	26 $\frac{1}{2}$		37 $\frac{1}{2}$	
	24 "	40		26	
	31 "	22	192 $\frac{1}{2}$	36	203
	7 Nov.	-	-	-	-
	14 "	-	-	-	-
	21 "	-	-	-	-
	28 "	-	-	-	-
	5 Dec.	1 $\frac{1}{2}$	1 $\frac{1}{2}$	-	64 $\frac{1}{2}$
(1762)	30 Jan.	20	20	-	20 $\frac{1}{2}$
	6 Feb.	22 $\frac{1}{2}$		11	
	13 "	33		15 $\frac{1}{2}$	
	20 "	52		25 $\frac{1}{2}$	
	27 "	57 $\frac{1}{2}$	165	14 $\frac{1}{2}$	66 $\frac{1}{2}$
	6 Mar.	51		17	
	13 "	59 $\frac{1}{2}$		15 $\frac{1}{2}$	
	20 "	57		8	
	27 "	49	216 $\frac{1}{2}$	14	54 $\frac{1}{2}$
	<hr/> Totals		<hr/> 595 $\frac{1}{2}$		<hr/> 409

		Got in a week	Got in a month	Sold in a week	Sold in a month
"Badgley Coal Work Messrs. England and Company from Lady Day 1762 to Michaelmas following"					
(1762) Week ending:-	3 April	54		12	
	10 "	62		12	
	17 "	39		15	
	24 "	48 $\frac{1}{2}$	203 $\frac{1}{2}$	17 $\frac{1}{2}$	56 $\frac{1}{2}$
	1 May	51		21	
	8 "	40 $\frac{1}{2}$		23 $\frac{1}{2}$	
	15 "	35 $\frac{1}{2}$		30	
	22 "	10		23	
	29 "	18	155	285	384 $\frac{1}{2}$
	5 June	4 $\frac{1}{2}$		108 $\frac{1}{2}$	
	12 "	1		72	
	19 "	2		53 $\frac{1}{2}$	
	25 "	-	7 $\frac{1}{2}$	1 $\frac{1}{2}$	235 $\frac{1}{2}$
	3 July	14		14	
	10 "	16		13	
	17 "	28		26	
	24 "	43		43	
	31 "	54 $\frac{1}{2}$	155 $\frac{1}{2}$	38 $\frac{1}{2}$	134 $\frac{1}{2}$
	7 Aug.	52 $\frac{1}{2}$		18	
	14 "	52 $\frac{1}{2}$		28 $\frac{1}{2}$	
	21 "	82 $\frac{1}{2}$		36 $\frac{1}{2}$	
	28 "	69	256 $\frac{1}{2}$	29	112
	4 Sept.	59 $\frac{1}{2}$		77 $\frac{1}{2}$	
	11 "	61 $\frac{1}{2}$		77 $\frac{1}{2}$	
	18 "	6 $\frac{1}{2}$		75	
"So far Acc'd. and paid for Oct. 20, 1762	25 "	-	127 $\frac{1}{2}$	38 $\frac{1}{2}$	268 $\frac{1}{2}$
	Totals		975 $\frac{1}{2}$		1191 $\frac{1}{2}$

"An Account of Coals Got and  
Sold at Badgley by Messrs.  
England and Company"

		In a week got	In a month got
(1762) Week ending	2 Oct.	1	
	9 "	-	
	16 "	4	
	23 "	9	
	30 "	12	26
(1763)	22 Jan.	2	2
	12 Feb.	5	5
"So far paid for November 25, 1763"	<u>Total</u>	<u>          </u>	<u>33</u>
(1763) Week ending:-	10 Sept.	2	
	17 "	8	
	24 "	20 $\frac{1}{2}$	30 $\frac{1}{2}$
"So far paid for March 26, 1764	<u>Total</u>	<u>          </u>	<u>30<math>\frac{1}{2}</math></u>

"An Acct. of Coals Got and Sold at Badgley by Messrs. England and Company"		Got in a week	Got in a month
(1763) Week ending:-	1 Oct. 8 "	20 $\frac{1}{2}$ 1	21 $\frac{1}{2}$
(1764)	21 Jan. 28 "	1 $\frac{1}{2}$ 3	4 $\frac{1}{2}$
	4 Feb. 11 " 18 " 25 "	10 12 $\frac{1}{2}$ 15 12	49 $\frac{1}{2}$
	3 Mar. 10 " 17 " 24 "	11 $\frac{1}{2}$ 5 13 -	29 $\frac{1}{2}$
	<u>Total</u>		<u>105</u>

"So far Accounted and  
paid for, October 8th, 1764"

"An Acct. of Coals got and Sold  
at Badgley by Messrs. Lythal  
and Company"

		In a week got	In a month got
(1764) Week ending:-	7 April	-	-
	26 May	3	3
	2 June	1	-
	16 "	5	6
	14 July	4	4
	25 Aug.	2 $\frac{1}{2}$	2 $\frac{1}{2}$
	22 Sept.	9 $\frac{1}{2}$	
	29 "	6	15 $\frac{1}{2}$
	<u>Total</u>		<u>31<math>\frac{1}{2}</math></u>

"So far accounted and  
paid for Feb. 25, 1765"



"An Account of Coals got and Sold at  
Badgley by Messrs. Lythal and  
Company from the 29th Sept. 1764"

		In a week	In a month
(1764) Week ending:-	6 Oct.	11	
	13 "	21 $\frac{1}{2}$	
	20 "	16 $\frac{1}{2}$	
	27 "	36	85
	3 Nov.	46	
	10 "	65 $\frac{1}{2}$	
	17 "	69 $\frac{1}{2}$	
	24 "	73 $\frac{1}{2}$	254 $\frac{1}{2}$
	1 Dec.	55	
	8 "	102 $\frac{1}{2}$	
	15 "	90	
	22 "	58 $\frac{1}{2}$	306
(1765)	5 Jan.	17	
	12 "	29	
	19 "	27	
	26 "	41	114
	2 Feb.	33 $\frac{1}{2}$	
	9 "	39 $\frac{1}{2}$	
	16 "	20	
	23 "	11 $\frac{1}{2}$	104 $\frac{1}{2}$
	2 Mar.	3	
	9 "	6 $\frac{1}{2}$	
	16 "	10	
	23 "	7	26 $\frac{1}{2}$
	<u>Total</u>		<u>890<math>\frac{1}{2}</math></u>

"So far Accounted and paid  
for Sep. 21, 1765"

"An Account of Coals got and sold  
at Badgley by Messrs. Lythal and  
Company"

		In a week	In a month
(1765) Week ending:-	5 April	13 $\frac{1}{2}$	
	13 "	15 $\frac{1}{2}$	
	20 "	24	
	27 "	14	67
	4 May	25 $\frac{1}{2}$	
	11 "	35 $\frac{1}{2}$	
	18 "	22 $\frac{1}{2}$	
	25 "	33 $\frac{1}{2}$	117
	8 June	5	
	15 "	8 $\frac{1}{2}$	
	22 "	3 $\frac{1}{2}$	
	29 "	1 $\frac{1}{2}$	18 $\frac{1}{2}$
	6 July	16	
	13 "	11	
	20 "	11	38
	3 Aug.	1 $\frac{1}{2}$	
	24 "	4 $\frac{1}{2}$	
	31 "	16	22
	7 Sept.	6	
	14 "	6	12
			<hr/>
			274 $\frac{1}{2}$
			14
			1
			<hr/>
"Brought home for the family	<u>Total</u>		289 $\frac{1}{2}$
John March	<u>Total</u>		<hr/>
N.B. This Account Exceeds			"So far Accoud.
Mr. Lythal's by half a load"			and paid for
			the 24th
			Feb. 1766

"An Account of Coals got and Sold  
at Badgley by Messrs. Lythal and  
Company from 14 Sept. 1765"

In a week

In a month

(1765) "None got to Lady day 1766

(1766) To the 19th July  
26th "

29  
18

47

To Michaelmas 1766

Total

47

(1766) "None got to Lady day 1767

(1767) 19 Sept.

6

Total

6

		Got in a week	Got in a month
(1767) Week ending:-	17 Oct.	2	
	31 "	4	6
	7 Nov.	5	
	28 "	1	6
	26 Dec.	6	6
(1768)	2 Jan.	5	
	9 "	5	
	16 "	4	14
	6 Feb.	6	
	13 "	17	
	20 "	9	
	27 "	15	47
	19 Mar.	3	
	26 "	4	7 <sup>(a)</sup>
	<u>Total</u>		<u>86</u>

(a) Corrected

Source: Dugdale Muniments 1478

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APPENDIX P

Table 3

Baddesley (Badgley) Colliery

Half yearly and yearly production and sales of coal from 25 March (Lady Day) 1758 to 25 March 1768

<u>Half Year</u> <u>To</u>	<u>Production</u> <u>(Half Year)</u>	<u>Production</u> <u>(Full Year)</u>	<u>Sales</u> <u>(Half Year)</u>	<u>Sales</u> <u>(Full Year)</u>	<u>"Got and Sold"</u> <u>(Half Year)</u>	<u>"Got and Sold"</u> <u>(Full Year)</u>
		- Stackloads -				
1758 (Mich.)	1162½		1174			
1759 (L.D.)	1001-	2163½	710-	1884		
1759 (Mich.)	1749		2014			
1760 (L.D.)	1018½-	2767½	863½-	2904½		
1760 (Mich.)	381		114½			
1761 (L.D.)	1440½-	1821½	916½-	1031		
1761 (Mich.)	130½		532½			
1762 (L.D.)	595½-	726	409-	941½		
1762 (Mich.)	975		923			
1763 (L.D.)					33	
1763 (Mich.)					30½	
1764 (L.D.)					105-	135½
1764 (Mich.)					31½	
1765 (L.D.)					890½-	922
1765 (Mich.)					289½	
1766 (L.D.)					Nil -	289½
1766 (Mich.)					47	
1767 (L.D.)					Nil -	47
1767 (Mich.)					6	
1768 (L.D.)					86 -	92

Source: Dugdale Muniments 1478

APPENDIX Q

Table 1

(Mancetter) Colliery

"Account of Colliery" from 22 January 1813 to 22 January 1814

DATE		WRIGHT'S PIT				CHETWYND'S PIT			
1813	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	
Week ending	Tons Cwt.	Tons Cwt.	£. s. d.	£. s. d.	Tons Cwt.	Tons Cwt.	£. s. d.	£. s. d.	
30 Jan.	69 10½	46 10½	44. 4. 3.	15.14. 3.	24 19	12 19	9.17. 0.	6. 8. 4½.	
6 Feb.	83 15	26 15	28.11. 0.	15.18. 9.	41 4½	45 4½	35. 8. 0.	30. 3. 3.	
13 Feb.	90 8½	12 8½	17. 7. 1½	1.10. 7.	56 11	47 11	34.11. 3.	27. 9. 3.	
20 Feb.	89 7½	30 7½	25.16. 1½	6. 4. 0.	48 0½	58 0½	38. 0. 9.	30. 0. 6.	
27 Feb.	70 19¾	11 19¾	17.15.10½	2. 3. 0.	45 2½	9 2½	11. 3. 6.	3. 7. 9.	
6 March	51 11¾	23 11¾	29. 0. 7½	13. 0. 4½	50 5½	29 5½	22. 1. 9.	11. 3. 3.	
13 March	47 8½	3 8½	10. 8. 6.	0.12. 9.	55 14½	24 14½	22.19. 6.	15. 7. 9.	
20 March	35 11½	5 11½	18. 8. 6.	7.10. 6.	47 12	37 12	30.16. 3.	12. 9. 9.	
27 March	47 8½	6 8½	13. 0. 4½	1. 2. 3.	69 3	11 3	13.12. 6.	3.11. 3.	
3 April	46 15¾	1 15¾	10. 2. 4½	1. 3. 9.	55 18	30 18	22. 4. 0.	13.12. 3.	
10 April	2 19¾	3 19¾	10. 4. 7½	1. 2. 3.	50 6	50 6	42.12. 0.	27. 2. 3.	
17 April	Nil	0 8	1. 8. 6.	0. 5. 0.	62 2½	21 2½	27.18. 3.	11. 8. 9.	
24 April	Nil	5 4	6.10. 9.	5.16. 9.	51 0	16 0	19. 3. 9.	7. 3. 6.	

DATE		WRIGHT'S PIT				CHETWYND'S PIT				DEEMING'S PIT			
1813	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	
Week ending	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	
1 May	Nil	2 13	2.19. 0	1.17. 0	37 6½	25 6½	24.13. 3	9.13. 3	42 12	23 12	16.17. 3½	0. 9.10½	
8 May	Nil	"Small"	3. 5. 9	0.14. 6	67 10	50 10	38.19.10½	7.12. 9	35 19	37 19	34.11. 6	25. 9. 4½	
15 May	Nil	9 4	4.12. 0	4.12. 0	64 15	35 15	35. 5. 0	20. 0. 3	50 10	4 10	14.11. 1½	3.19. 6	
22 May	Nil	"Small"	0. 8. 3	--	64 3¾	20 3¾	24.10. 1½	8.14. 0	52 8	50 8	53.17. 1½	42. 5. 9	
29 May	Nil	11 0	5.10. 0	5.10. 0	50 2½	56 2½	49. 1. 9	31. 2. 6	54 16	28 16	38.10. 7½	24. 0. 0.	
5 June	Nil	--	--	--	62 14½	8 14½	22.17. 0	8.11. 9	39 2	97 2	82.16.10½	76 3. 4½	
12 June	Nil	14 11	7. 8. 0	7. 8. 0	50 19½	20 19½	18. 2. 2½	5. 7. 4½	37 11	36 11	40. 1. 0	36. 7. 0	
19 June	Nil	--	--	--	45 14½	35 14½	28.10. 8½	16.18. 7½	71 13	24 13	24.17. 6	17.13. 0	
26 June	Nil	--	--	--	54 1	34 1	25.13.10	9.12. 6½	54 13	47 13	52.14. 1½	40.12. 1½	
3 July	Nil	--	--	--	27 16½	42 16½	28.17. 4½	12. 0. 7	20 0	33 0	37.19. 0	17. 3. 0	
10 July	Nil	--	--	--	29 3	37 3	25.16. 2	16.13. 5½	52 17	15 17	36.17. 7½	27. 9. 0	
17 July	Nil	--	--	--	Nil	19 6½	9.18. 7	5.15. 0½	10 19½	15 9½	20.18.10½	16. 1. 9	
24 July	Nil	--	--	--	--	75 2	35. 8. 7½	16.11.10	Nil	15 5	12.19. 3	7. 4. 0	

DATE		WRIGHT'S PIT				CHETWYND'S PIT				DEEMING'S PIT			
1813	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	
Week ending	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	
31 July	Nil	--	---	---	Nil	104 12½	49.15. 3½	28.12.10	Nil	14 11	15.18. 0	6. 2. 3	
7 Aug.	Nil	171 8 <sup>(1)</sup>	81.14. 7½	72.19. 3	Nil	124 9½	63. 5. 1	32.10. 8½	28 7	30 11	32. 4. 6	18. 5. 3	
14 Aug.	Nil	50 7	17.12.10½	5. 3. 5	Nil	58 14	27.18. 7½	3.11. 9½	27 1	71 1	55. 3.10½	35.17. 0	
21 Aug.	Nil	85 14	29.19. 4½	15. 7. 0	Nil	4 3	1.17.11½	---	47 12	64 12	54.12. 7½	46.16. 3.	
28 Aug.	Nil	13 16	8. 6.10½	5. 9. 0	Nil	5 6	2. 7. 6	2. 4. 6	43 3	23 3	34.10. 0½	21.18.10½	
4 Sept.	Nil	44 17	17. 9. 3	11.12. 1½	Nil	1 6	1. 3. 3	0. 9. 0	53 19	66 19	67.11.10½	42. 9. 9	
11 Sept.	Nil	38 0	13. 5. 7½	9. 2. 9	Nil	1 13½	1.11.10	0.11. 9	54 11	62 11	69. 8. 1½	50. 7. 7½	
18 Sept.	Nil	18 0	6. 6. 0	6. 6. 0	36 7	36 7	20.14. 3½	5.15. 0½	51 13	31 13	51.12. 9	27. 1.10½	
25 Sept.	Nil	12 0	4. 4. 1½	4. 4. 1½	47 10½ <sup>(2)</sup>	43 10½	27. 9. 6	7. 3. 4½	61 9	86 9	81.10. 0	43. 7. 6	
2 Oct.	Nil	---	---	---	23 9	21 9	20. 1. 8	7.12. 2½	53 6	47 6	51. 8.10½	23.19. 3	
9 Oct.	0 16 <sup>(3)</sup>	0 16	1. 7.11	1. 6. 5	57 4½	59 4½	42. 7. 5	21. 3. 7½	66 16	73 16	75.17. 5	53. 2. 4½	
16 Oct.	25 2	15 2	11.17. 2	8. 1. 0	64 15	52 15	38. 1. 5	9.10. 8	67 6	58 6	63. 7. 9	35.17. 3	
23 Oct.	19 0	26 0	19. 9.10	7. 8. 1	65 15½	70 15½	48. 4. 1	28. 0. 8½	64 16	61 16	65. 7. 0	33.16. 0	

(1) "May 28 to Aug. 7"

(2) Now renamed "Smith and Comp."

(3) Now renamed "Ross and Comp."



DATE		ROSS' PIT				SMITH'S PIT				DEEMING'S PIT			
1813	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	Raised	Sold	Sale	Trust	
Week ending	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	Tons Cwt	Tons Cwt	£. s. d.	£. s. d.	
30 Oct.	16 1	9 1	11.11. 5	6.18. 9	62 15	23 15	19. 3. 0½	9.14. 0	61 0	62 0	68.13. 0	47.11. 4½	
6 Nov.	13 12	19 12	15.13. 5	8. 1. 6	69 5½	77 5½	56.12. 7	36.15. 8	61 5	55 5	62.17. 0	34.19. 4½	
13 Nov.	16 4	15 4	13.11. 2	5. 6. 6	61 14½	68 14½	50. 9. 4½	22. 5.11	64 6	64 6	80.19. 3	48.19. 7½	
20 Nov.	13 15	12 15	13. 8. 4	4.19. 6	74 18	79 18	51. 1. 9	26.11. 9	64 8	66 8	72.12. 9	31.14. 4½	
27 Nov.	13 0	9 0	13.10. 3	7.10. 8	62 14	66 14	42.15. 0	29.11. 0	80 13	88 13	83.17. 3	54.17. 7½	
4 Dec.	1 5	6 5	13. 3.11	6.11. 9	65 17	91 17	59.18. 9½	36.15.11	63 18	65 18	75.14.10½	54.15. 4½	
11 Dec.	Nil	3 13½	6. 9. 2½	4. 4.10	85 18½	51 18½	32.17. 3½	20. 7. 6	74 2	60 2	66.13. 0	34. 7. 4½	
18 Dec.	Nil	--	0. 7. 0	---	88 14	109 14	63. 1. 1	43. 2. 7	59 7	75 7	79.17. 7½	46. 5. 1½	
25 Dec.	Nil	0 5	0. 2. 0	---	91 17	85 17	54. 9. 7	34. 5. 7	75 14	74 14	83.17. 7½	50.12. 3	
1814													
1 Jan.	Nil	--	---	---	56 19¼	28 19¼	20. 1. 1½	8.18. 0	37 4	11 4	17.19. 1½	2.10. 1½	
8 Jan.	Nil	--	---	---	76 10½	37 10½	30. 3. 1	7.16. 3	61 8	49 8	57. 1. 0	20.19.10	
15 Jan.	Nil	--	---	---	79 6½	78 6½	50.16. 1	13. 1. 2	60 7	59 7	66. 1. 1½	22. 8. 7½	
22 Jan.	Nil	--	---	---	98 17	128 17	77. 5. 4.	14.19. 2	63 3	75 3	84.17. 3	30. 3. 9	

Source: Dugdale Miniments 1408

APPENDIX R

Table 1

Wyken Colliery

Coal Sales, and Mine Rent paid by Messrs. Inge and Stanton  
to Sir Thomas White's Charity Trust, from 20 May 1811 to 3 April 1828

DATE		SALES		MINE RENT
Year	Months	Tons	Cwts.	at 6d. per ton
				£. s. d.
1811/1812	20 May - 11 April	691	11	17. 5. 9.
1812/1813	11 April - 10 April	14,168	9	354. 4. 3.
1813/1814	10 April - 9 April	12,948	10	323.14. 3.
1814/1815	9 April - 24 Mar.	16,506	6	412.13. 2.
1815/1816	24 Mar. - 22 Mar.	13,509	4	337.14. 7.
1816/1817	22 Mar. - 28 Mar.	11,740	12	293.10. 4.
1817/1818	28 Mar. - 3 April	14,914	17	372.17. 5.
1818/1819	3 April - 2 April	13,084	19	327. 2. 6.
1819/1820	2 April - 30 Mar.	18,301	18	457.10.11.
1820/1821	20 Mar. - 29 Mar.	16,413	4	410. 6. 7.
1821/1822	29 Mar. - 28 Mar.	11,267	9	281.13. 9.
1822/1823	28 Mar. - 27 Mar.	10,061	13	251.10.10.
1823/1824	27 Mar. - 25 Mar.	10,397	19	259.14. 9.
1824/1825	25 Mar. - 24 Mar.	9,812	9	245. 5. 9.
1825/1826	24 Mar. - 23 Mar.	7,746	-	193.13. 0.
1826/1827	23 Mar. - 5 April	6,932	-	173. 5. 6.
1827/1828	5 April - 3 April	5,575	-	139. 7.10.
		194,062	0	

APPENDIX S

Table 1

Coventry Canal Navigation: half-yearly shipments to Coventry

	Canal	Point of Origin	Tonnage	Date	Destination
			T. C. Q		
1.	Coventry Canal Navigation	(a) Warwickshire (unstated) (b) Wednesbury	11,497. 7. 0. 1,175.18. 0.	31 Aug. 1802 - 28 Feb. 1803	Coventry
2.	" "	(a) Warwickshire (b) Wednesbury	11,503.10. 0. 848. 0. 0.	28 Feb. 1803 - 31 Aug. 1803	"
3.	" "	(a) Warwickshire (b) Wednesbury	10,734. 0. 0. 715.13. 0.	31 Aug. 1803 - 28 Feb. 1804	"
4.	" "	(a) Warwickshire (b) Wednesbury (c) Leicestershire (unstated)	12,008. 0. 0. 671.10. 0. 66.10. 0.	28 Feb. 1804 - 31 Aug. 1804	"
5.	" "	(a) Warwickshire (b) Wednesbury	12,885.13. 0. 1,278. 0. 0.	31 Aug. 1804 - 28 Feb. 1805	"
6.	" "	(a) Warwickshire (b) Wednesbury	12,528. 2. 0. 1,057. 0. 0.	28 Feb. 1805 - 31 Aug. 1805	"

	Canal	Point of Origin	Tonnage	Date	Destination
			T. C. Q.		
7.	Coventry Canal Navigation	(a) Warwickshire (b) Wednesbury	14,776.12. 0. 1,402. 6. 0.	31 Aug. 1805 - 28 Feb. 1806	Coventry
8.	" "	(a) Warwickshire (b) Wednesbury	12,200. 9. 0. 1,629.13. 0.	28 Feb. 1806 - 31 Aug. 1806	"
9.	" "	(a) Warwickshire (b) Wednesbury	15,479.15. 0. 1,594. 0. 0.	31 Aug. 1806 - 28 Feb. 1807	"
10.	" "	(a) Warwickshire (b) Wednesbury	14,586.15. 0. 1,565. 4. 0.	28 Feb. 1807 - 31 Aug. 1807	"

B.T.C. Historical Records: CVC4/156,

Source: Memorandum Book: Coventry Canal Navigation, 1802-1808

APPENDIX S

Table 2

Coventry Canal Navigation: half yearly shipments to the Oxford Canal

Canal		Point of Origin	Tonnage	Date	Destination
			T. C. Q.		
1.	Coventry Canal Navigation	(a) Warwickshire (unstated) (b) Wednesbury (c) Harecastle (Burslem)	15,100.15. 0. 16,998. 7. 0. 2,467.19. 0.	31 Aug. 1802 - 28 Feb. 1803	Oxford Canal
2.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	21,062. 5. 0. 15,609. 1. 0. 4,487. 0. 0.	28 Feb. 1803 - 31 Aug. 1803	" "
3.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	9,701.15. 0. 18,976.17. 0. 3,648.11. 0.	31 Aug. 1803 - 28 Feb. 1804	" "
4.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle (d) Leicestershire	13,407.12. 0. 19,047.15. 0. 5,036. 4. 0. 56. 0. 0.	28 Feb. 1804 - 31 Aug. 1804	" "

Canal		Point of Origin	Tonnage	Date	Destination
			T. C. Q.		
5.	Coventry Canal Navigation	(a) Warwickshire (b) Wednesbury (c) Harecastle	9,239.15. 0. 19,810.15. 0. 2,518.10. 0.	31 Aug. 1804 - 28 Feb. 1805	Oxford Canal
6.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	12,338.16. 0. 26,723. 0. 0. 4,135. 7. 0.	28 Feb. 1805 - 31 Aug. 1805	" "
7.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	10,496. 6. 0. 23,355. 9. 0. 4,230.10. 0.	31 Aug. 1805 - 28 Feb. 1806	" "
8.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	9,782.15. 0. 22,265.13. 0. 4,072. 0. 0.	28 Feb. 1806 - 31 Aug. 1806	" "
9.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	11,855.11. 0. 19,021.18. 0. 2,803.15. 0.	31 Aug. 1806 - 28 Feb. 1807	" "
10.	" "	(a) Warwickshire (b) Wednesbury (c) Harecastle	12,598.17. 0. 13,823.13. 0. 4,574. 5. 0.	28 Feb. 1807 - 31 Aug. 1807	" "

Source: As for Table 1

APPENDIX S

Table 3

Fragment of canal coal shipments observed by the (Exhall)  
Hawkesbury Colliery Company

A. During the two weeks  
ending 19th July, 1800

"Boats"

	Cooks <sup>(1)</sup>	Exhall	Griff	Barbers <sup>(2)</sup>	Badgley <sup>(3)</sup>	Polesworth	Birmingham
<u>Coventry</u>	3	6	15	2	-	-	6
<u>Oxford</u>		23	28	4	1	3	165
Total	3	29	43	6	1	3	171

B. During the two weeks  
ending 16 Aug. 1800

<u>Coventry</u>	7	6	18	2	-	N.S.	9
<u>Oxford</u>		41	47	14	2	"	158
Total	?	47	35	16	2	"	167

(1) Cook's Colliery:- possibly in Wyken area of Coventry

(2) Barber's Colliery:- Nuneaton

(3) Badgley Colliery:- Baddesley Colliery, near Atherstone.

Source: H.M.B. 31 Fragment of Exhall Coalery (sic) Account

APPENDIX S

Table 4

Fragment of production and sales distribution by the  
(Exhall) Hawkesbury Colliery Company

A. During the two weeks  
ending 19th July 1800

	"Sale"				"Got"			
	Cov.	Oxf.	Land	Total				
	Tons	Tons	Tons	Cwts.	Tons	Cwts.	Tons	Cwts.
1st deep Bedworth			100		100			
2	70	112	10	14	192	14	188	14
4	31	215	40	8	286	8	278	8
5	11	61	13	6	85	6	95	6
Total	112	388	164	7	664	7	562	7

B. During the two weeks  
ending 16 Aug. 1800

	"Sale"				"Got"			
	Cov.	Oxf.	Land	Total				
	Tons	Tons	Tons	Cwts.	Tons	Cwts.	Tons	Cwts.
2nd deep Bedworth	46	192	28	12	266	12	258	12
4	34	264	44	19	342	19	36	19
5	6	90	294	10	390	10	390	10
Total	86	546	367	20	999	20	715	20

Source: as for Table 3



APPENDIX T

The Arbury Canal Network

Between 1767 and 1795 slightly more than six miles of navigable waterways were built on the Arbury estate of Sir Roger Newdigate. The twin objectives of promoting local commerce and increasing opportunities for pleasure boating were the mainspring of this lengthy period of investment. Much of the area was ill-served by roads and trackways as late as 1780, and it was initially intended that trade in such products as timber, gravel, lime and coal would be facilitated by a private canal network which linked the north-western parts of the estate, near Stockingford, with the public Coventry Canal Navigation at its opposite extremity<sup>(1)</sup>.

Unlike that of most other colliery proprietors in eastern Warwickshire the Newdigate estate was abundantly supplied with water. The importance of this for mining operations had been noted by local operators as early as 1602<sup>(2)</sup>. Long before the introduction of the Newcomen atmospheric engine in 1714 expensive operations had periodically been mounted to enlarge and link the many natural pools and feeders which drained eastwards into the Wem Brook, and thence to the River Anker, to provide motive power for colliery machinery and corn grinding mills. Consequently when Sir Roger Newdigate decided,

(1) See Map 7.

(2) Jeffrey Foxe.

See also, supra, Part III, chapt.

after much hesitation, to link parts of his estate by a continuous line of navigable waterways, the nucleus of his future network lay conveniently to hand.

Some of the earlier canals were engineering feats of no mean order. Sir Richard Newdigate II, for example, proposed in 1705 to build a channel 2,179 yards long to convey water to a high point 32 feet above the gins at his coal pits<sup>(3)</sup>. This scheme, or a modified version of it, appears to have been put into effect some time during the following two years.

A signed list<sup>(4)</sup> of pools and waterways drawn up six years later by his son, Sir Richard Newdigate III, on the occasion of the colliery being leased<sup>(5)</sup> to Messrs. Parrott and Sparrow, confirms the existence at that date of sixty five pools and streams together with two "boatways", responsibility for which was entrusted to the lessees. Two and a half years later, when a second lease<sup>(6)</sup> was drawn between the same parties, this total<sup>(7)</sup> had risen to seventy two pools and moats, plus eleven watercourses and canals, one of which wound its way from a point on Nuneaton Common south-eastwards for over two and a half miles to Ridings Pool, near Collycroft. This particular waterway later formed

(3) This scheme was estimated in 1705 to cost £2360.11.0., a sum slightly larger than that expended on opening Griff Colliery in 1701

See also Thesis (Wh.), Appendix E to Part III, p. 215: An Increase in Capital Costs.

(4) CR136/B2681. 30 Apr. 1711. Capital Costs.

(5) Lease: CR136/C3150, Sir R. N. III to Richard Parrott and George Sparrow. 1 May 1711

(6) Lease: CR136/C3152, Sir R. N. III to R. Parrott and G. Sparrow 26 Dec. 1713

(7) CR136/B2684.

the basis of a network which initially stretched from Alderswood, at the northern end of the estate, via the Arbury High and Low Levels to the colliery at Griff and the Bedworth worsted mill, and from thence to the Coventry Canal. Thus, by 1713, the earlier concept of a system of private canals or waterways on the Arbury estate had already translated into actual, if only temporary, fact.

The main sources of water for the estate were located in Seaswood Pool, situated on high ground to the north of Arbury Park, and in Kenilworth Pool<sup>(8)</sup>, lying well to the south-east and quite close to the watershed between the rivers Trent and Severn. Linked to the many large pools elsewhere on the estate these provided an admirable and relatively inexpensive way of conveying bulky commodities.

Whilst the concept of linking the estate to the Coventry Canal by his own private system of waterways was characteristic of Sir Roger Newdigate's talent for well-integrated strategic planning, the execution of it, as in so many other things, left much to be desired. Considering the probable "life" of the eastern end of the mine (at Collycroft), substantial expense must have been incurred in the construction of certain canals whose period of usefulness could only have been severely limited. On the other hand lengths of waterway which could have been employed profitably for many years were frequently closed as a result of poor construction and bad design. Embankments frequently collapsed, stretches had to be widened or deepened repeatedly and locks commonly had to be repaired. Part of this was due to the parsimony and lack

(8) Nowadays no more than a small marshy area.

See also Map 7.

of adequate planning which characterised the early building of Griff Colliery, and part to a failure to decide early enough on the type and size of barge to be used to shift coal. The consequences were that navigation on the upper reaches of the network between Coventry Wood and Seaswood Pool was abandoned by 1819<sup>(9)</sup>, whilst by this date the diminished supply of water to the lower parts near Collycroft had already involved the baronet and his successor<sup>(10)</sup> in bouts of litigation with the proprietor of Collycroft worsted mill.

Nevertheless, at the zenith of its fortunes (1784-1796) the Arbury canal system provided direct access from the northern end of the estate to the public canal, and performed a notably useful function in facilitating the transport of many thousands of tons of coal annually to the market.

#### The building of the Arbury canal system

The very process of building the Arbury canal system was designed to fit into Sir Roger Newdigate's plan for estate growth, and since the development of its mineral resources took place late in the century this was reflected in the plan drawn in 1774 by Thomas Hutchins, the baronet's steward.<sup>(11)</sup> The first consideration

(9) Report: CR136/B3912

"Report of B. Bevan.....on a view of the canals,  
Reservoirs and pools at Arbury....." 2 April 1819.

(10) Francis Parker Newdigate, who succeeded to the Arbury estate on the death of the baronet in November, 1806.

(11) Plate XI.

was to permit the cheap and easy movement of such estate products as timber, large quantities of which were required for the building and lining of the pit shafts and the preparation of the underground workings at the colliery. Consequently emphasis was placed initially on linking woodland in the northern part of the estate<sup>(12)</sup> with the actual site of the proposed colliery by water. This particular scheme was enlarged by the planning and construction of a short arm at Collycroft to link the mine with the Coventry Canal to facilitate the shifting of coal to the market. In turn, this was followed by the rebuilding of the Seaswood complex of watercourses<sup>(13)</sup> which wound their way past Arbury Hall before linking up with the initial network, at the commencement of the Arbury High Level Canal. The whole system was then completed, first, by the addition of the Griff Hollows Canal which linked the northern part of the mine by a secondary route to the Coventry Canal, and secondly by the construction of a "New Cut" to join the middle section of the colliery to the existing system.

#### Phase I

In the planning and execution of the first phase Sir Roger Newdigate was able to call on the services of James Brindley, canal builder to the Duke of Bridgewater, currently involved with the Coventry Canal Navigation scheme. On 5 November 1767 the baronet noted in his diary that discussions had been held between them with a view to linking the "main trunk to my Colepit field" which, at

(12) North Walk area. See Map 7.

(13) Some of which already existed in embryo form from previous undertakings.

that time, was located at the Collycroft end of the estate<sup>(14)</sup>.

The actual digging of this short arm, or communication canal, was begun on 30 June 1768<sup>(15)</sup> "by 2 men in Lane near Newbold" after nearly four years of planning and preparation<sup>(16)</sup>.

By January 1770 the entire line of the canal linking the colliery with the northern end of the estate had been finally settled. In less than twelve months the first part of it, consisting of the Arbury High Level Canal and the Alderswood Canal, together with their connecting link<sup>(17)</sup>, was completed. Work had already begun in October 1770 with the Coventry Wood Canal followed one month<sup>(18)</sup> later by the Arbury Low Level, or Griff, Canal. Nevertheless, special difficulties were encountered in joining the Arbury High Level, Coventry Wood and Arbury Low Level canals. This necessitated the building of locks at both ends of Coventry Wood Canal and it was not until May 1773 that an unbroken line of navigable waterways permitted the transport of timber from other parts of the estate by water directly to the mine<sup>(19)</sup>. With the completion of

(14) Full scale mining operations near Griff Hollows did not begin until after 1788.

(15) CR136/Diary.

(16) Preparation included the raising of an embankment at Seaswood Pool, probably with a view to building up water supplies for future canal expansion.

(17) Much of this connecting link was rebuilt, complete with locks, from 1794 to 1795, as the Coton Lawn Canal.

(18) CR136/Diary

"The Arbury Canal from the Fire Engine scite (sic) begun upon"  
27 Nov. 1770

(19) The mine itself was being sunk at this time.

both of these locks the whole of phase I of operations was complete.

Greater difficulties appear to have been experienced with the building of the Communication Canal to the "Main trunk". Although a beginning had been made as early as 1768 the baronet appears to have had mixed feelings about it two years later for his diary records an unsuccessful attempt having been made by him to persuade the Management Committee of the Coventry Canal to take over the job<sup>(20)</sup>. Nevertheless, by 1771 this short arm had been completed and by the construction of a wharf on its upper reaches commercial access to Bedworth by water became possible for the first time.

## Phase II.

No record of progress made between 1774 and 1776 exists on account of Sir Roger Newdigate's protracted continental vacation but it is clear from some of his observations in the latter years<sup>(21)</sup> that preliminary work on Phase II (the Seaswood complex) of the estate canal network had been completed by that date. During the following seven years, however, considerable energy was expended on widening and deepening the Seaswood Canal, and it was not until 1783 that the first boatload of coal passed from Griff Colliery to Seaswood<sup>(22)</sup>.

(20) CR136/Diary.

29 Oct. 1770

(21) CR136/Diary

"In boat thro' Garden Canal to Seaswood and Wood Lock"  
14 Aug. 1776

(22) CR136/Diary

"First Load of coals to Seaswood" 22 Oct. 1783

A profitable trade in coal in the Stockingford area of Nuneaton appears to have resulted from this for in 1784 a special wharf was constructed at the south eastern edge of the pool to cater for it. Four years later trade had prospered sufficiently to justify the cutting of a deep channel to the western head of the pool in order to land coal as far as possible to the northwest, in the direction of Ansley.

### Phase III

The third and final phase, the linking of different parts of the colliery to the public canal, took place between 1785 and 1795. This consisted, first, of the Griff Hollows Canal<sup>(23)</sup>, begun in November 1785 and opened in July 1787, followed later by linking the Arbury Low Level Canal via a flight of six locks to the Communication Canal in 1792<sup>(24)</sup>. The last stretch of canal to be built - and the first to be abandoned - was the "New Cut" which joined the middle part of the colliery<sup>(25)</sup> to the upper wharf at Collycroft. This was cut some time between 1795 and 1796, and subsequently widened to provide an additional reservoir for the Bedworth worsted mill. With the completion of this stretch of waterway the Arbury canal system was now complete.

(23) Approximately one mile north of, and roughly parallel to, the communication canal at Collycroft.

(24) Although declared "ready for passage of boats" on 22 Dec. 1792, it was not until 24 Feb. 1795 that the "First Boat passed the Six Colliery (sic) Locks". Work on these locks began in 1787. See also Note I.

(25) Then centred slightly to the north of Griff Lane. See also Maps 2 and 7.



The question may be posed: why was the network built in this apparently haphazard way, and for what reason were large sections of it abandoned by 1819?<sup>(26)</sup>

Part of the answer lies in the location of existing waterways which could be modernised with relatively little expense at an early stage in proceedings, thereby bringing speedy benefit to the estate, and part in the rate at which the eastern end of the mine was exhausted. Griff Colliery was in continuous production from 1775 onwards, yet the Collycroft portion was abandoned by Sir Roger Newdigate in 1789 in preference for the better quality seams which lay further north and nearer to Griff Hollows. Poor quality coal (and probably iron) was extracted from the area very close to Griff hamlet during the 1820s<sup>(27)</sup> by Francis Parker Newdigate or his associates, but done so probably to avoid involvement with the expense of sinking an entirely new colliery.

Two additional factors merit consideration. First, for the successful operation of Phase I of the network, ample water supplies could be obtained from Kenilworth Pool<sup>(28)</sup>, which lay fairly close to the Arbury Low Level Canal. Not until the network was extended did it become imperative to draw on larger supplies from Seaswood Pool, at the opposite end of the estate. Consequently such basic

(26) CR136/B3912

Report of B. Bevan ..... on a view of the canals, Reservoirs  
and pools ..... at Arbury ..... 18 April 1819

(27) See Map 2

(28) Now no more than a small, marshy area.

estate requirements as shifting timber and coal could adequately be performed without need to develop the Seaswood or Griff Hollows Canals at a very early date. Secondly, as the centre of coalworking advanced northwards the water levels between the existing canal network and the new working areas widened considerably. Substantial though total water supplies were, these were inadequate to cope with the need to shift upwards of 20,000 tons of coal per annum from the more northerly parts near Griff Hollows uphill via a system of locks to Collycroft, there to descend via a further flight of locks into the Communication Canal before reaching the Coventry Canal. In point of fact, such were the difficulties of alternately preventing flooding at Collycroft during wet weather, and then of providing adequate supplies for normal traffic, that a network of railed ways linking the more important parts of the colliery was substituted for the smaller waterways by the early years of the nineteenth century. Thereafter, the process of neglect and natural decay, allied to the consequences of austere construction, rapidly brought the canal system built by Sir Roger Newdigate to a premature end.

Of more than six miles and two furlongs of private waterways barely 1320 yards survived until the <sup>middle of the</sup> twentieth century. This consisted solely of the Griff Hollows Canal which remained in continuous service until 1961 when Griff Colliery was finally abandoned.

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Calendar of completion of navigable canals(29)

Canal

1. Arbury High Level, Spring Kidden Wood and Alderswood Canals	By Nov. 1770
2. Communication Canal	Aug. 1771
3. Arbury Low Level Canal	1772
4. Coventry Wood Canal and locks	May 1773
5. Seaswood Canal complex	Aug. 1776
6. Griff Hollows Canal	July 1787
7. Collycroft locks and basin	Dec. 1792
8. "New Cut"	1795/96

---

Note 1

The most elaborate engineering feature of the Arbury Canal network proper was the staircase series of locks linking the Lower Arbury Canal with the Coventry Communication Canal at Collycroft. This was built as a four rise and two rise, divided by a right-angled pound. Work took five and a half years to complete, and construction was undertaken by the Derbyshire lock builder, William Bean, at an average charge of £33 5s. 8d.

Source: Newdigate MSS., passim

(29) This ignores subsequent rebuilding or widening

APPENDIX U

Table 1

Dividends on Midland canal stock, and interest on local turnpike mortgages,  
received by Sir Roger Newdigate, 1763 - 1796

<u>Canals</u>		<u>Received during</u> <u>the year:-</u>	<u>Turnpikes</u>			
(a)	(b)		(a)		(b)	
<u>Coventry Canal</u>	<u>Oxford Canal</u>		<u>Hinckley Turnpike</u>		<u>Mancetter Turnpike</u>	
Stock Dividends	Stock Dividends		Principal	Interest	Principal	Interest
		1763	£500	£20	£200	£10
		1764	"	£27/10/ 0	"	"
		1765	"	£25	"	"
		1766	"	"	"	"
		1767	"	"	"	"
		1768	"	"	"	"
- £4/ 8/ 1		1769	"	£28/3/0	£300	£15
- £23/ 3/ 9		1770	£300	£15	"	"
- £40/17/ 9	- £9/ 1/ 0	1771	"	"	"	"
- £42/ 8/ 8	- £23/ 4/ 7	1772	"	"	"	"
- --	- £39/19/ 0	1773	"	"	"	"
- --	- £56/ 1/ 6	1774	"	"	"	"
- --	- £76/17/10	1775	"	"	"	"
- £20/ 0/ 0	- £92/ 0/ 0	1776	"	"	"	"
- £20/ 0/ 0	- £76/ 5/ 4	1777	"	"	"	"
- --	£2000 £86/12/ 5	1778	"	"	"	"
- --	£3000 £125/ 8/ 0					

Table 1 (contd.)

<u>Canals</u>				<u>Year</u>	<u>Turnpikes</u>			
(a)		(b)			(a)		(b)	
Stock	Dividends	Stock	Dividends		Principal	Interest	Principal	Interest
£1000	£20/ 0/ 0	£3000	Unpaid	1779	£300	£15	£300	£15
"	"	"	"	1780	"	"	"	"
"	"	"	"	1781	"	"	"	"
"	"	"	"	1782	"	"	"	"
"	"	"	"	1783	Paid off	£8/ 2/ 0	"	"
"	£40/ 0/ 0	£3720	"	1784	<hr/>		"	"
"	£30/ 0/ 0	"	£95/19/ 6 <sup>(1)</sup>	1785			"	"
"	"	"	£150/ 8/ 0 <sup>(1)</sup>	1786			"	"
"	"	£3800	£76/ 0/ 0	1787			"	"
"	"	"	--	1788			"	"
"	"	"	£7/ 8/10	1789			"	"
"	£40/ 0/ 0	"	£42/15/ 0	1790			"	"
"	£65/ 0/ 0	£3800	£76/ 0/ 0	1791			"	"
"	£100/ 0/ 0	"	--	1792			"	"
"	£120/ 0/ 0	"	£76/ 0/ 0	1793			"	"
"	"	"	--	1794			"	"
"	"	"	£228/ 0/ 0	1795			"	"
"	£140/ 0/ 0	"	£171/ 0/ 0	1796			"	"

(1) Including deferred payments

Source: CR136/V/119



APPENDIX U

Table 3

"A Comparative State of the Price of Staffordshire and Warwickshire Coals, calculated from Wilnecote, Birch Coppice and Polesworth, Baddesley, Oldbury, Griff and Bedworth Collieries, in the County of Warwick, Staffordshire Coal paying One penny per Ton Tonnage and 1 halfpenny Freights, the Warwickshire Coal paying One penny halfpenny per Ton Tonnage and 1 halfpenny Freight."

Coal from	Pithead prices	Price at Coventry <sup>(1)</sup>	Price at Banbury <sup>(1)</sup>	Price at Oxford <sup>(1)</sup>	Relationship of Wednesbury to Warwickshire coal in terms of price			
					Dearer		Cheaper	
					At Cov.	At Banb.	At Banb.	At Oxford
	(Per ton)							
1. Wilnecote	5/-	9/-8	19/-	24/-	1/-4	--	1/-	2/-3
2. Birch Coppice	5/-	9/-	18/-4	23/-4	2/-	--	4d.	1/-7
3. Baddesley	5/-	8/-4	17/-8	22/-8	2/-8	4d.	--	1/-1
4. Wednesbury	3/-6	11/-	18/-	21/-9	--	--	--	--
5. Oldbury	5/-	7/-8	17/-4	22/-4	3/-4	--	--	7d.
6. Griff	6/-8	8/-	17/-8	22/-8	3/-	4d.	--	11d.
7. Bedworth (Exhall)	6/-8	7/-8	17/-4	22/-4	3/-4	8d.	--	7d.

(1) Prices on arrival. It does not necessarily follow that the consumer was allowed to exploit these price differentials to his own advantage

## APPENDIX U

Table 4

Pithead coal prices<sup>(1)</sup> at Griff and Bedworth (Exhall) Collieries, 1687-1801

Date	Griff		Bedworth(Exhall)		Collieries	Canals
	(per ton) <sup>(2)</sup>	(per cwt.)	(per ton) <sup>(2)</sup>	(per cwt.)		
1689	4/5	2/6d.				
1700	4/5	2/6d.				
1701-25	5/4	3/2d.			Griff and Sydnall Bedworth	
1725-29	6/8 <sup>(3)</sup>	4d.				
1762			11/8	7d.		
1764			8/4	5d.		
1768			10/-	6d.		
1769						Bedworth to Coventry
1772					Hawkesbury	Atherstone to Coventry
1774					Griff	
1775						Longford to Napton <sup>(4)</sup>
1778						Longford to Banbury
1779	8/4-10/0	5d.-6d.				
1782-5	6/8	4d.	6/8	4d.	Bedworth Coal Co. Exhall (7)	
1789	10/-	6d.	8/4-10/-	5d.-6d.		
1790	8/4-10/-	5d.-6d.				a.Coventry to Oxford <sup>(5)</sup> b.Coventry to Fazeley <sup>(6)</sup>
1791	8/4	5d.			Wyken	
1792-4	8/4	5d.				
1795	8/4-10/-	5d.-6d.				
1796	10/-	6d.				
1797	5/--10/-	3d.-6d.			Nuneaton	
1798-	5/--10/-	3d.-6d.				
1801						



Footnotes to accompany Table 4

- (1) Measured in money terms only for the entire period.
- (2) Recalculated in tons of 20 hundredweights.
- (3) For the first thirty years of the eighteenth century coal was retailed by the stackload, nominally of 30 hundredweights.
- (4) Firm proposals to effect a junction between the Coventry and Oxford canals at Longford were not made until 1785
- (5) The Coventry-Oxford Canal was opened for its entire length on 1 January 1790.
- (6) The first boatload of Wednesbury coal reached Coventry on 13 August 1780.
- (7) The Exhall (Bedworth) Company was operated by Messrs. Parrott, Whieldon, Fernyhough and Taylor. The Bedworth Coal Company was a separate entity, working coal deposits belonging to the Nicholas Chamberlaine Trust.

<u>Principal sources:</u>	1. <u>Thesis (Wh.), passim.</u>	
	2. CR136/A247 and V/119	W.C.R.●.
	3. Assorted papers CR764/264/1 and 2, and CR1022/2	W.C.R.O.

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APPENDIX V

Table 1

Population Statistics for the City and County of Coventry, Bedworth,  
Chilvers Coton and Nuneaton in 1801

<u>Place</u>		<u>Occupation</u>			<u>All persons</u>
		<u>Agric.</u>	<u>Trade</u>	<u>Other</u>	
1.	Nuneaton Parish	647	2488	1634	4769
2.	Chilvers Coton Parish	116	1757	4	1877
3.	Bedworth Parish	85	1848	1228	3161
4.	City of Coventry	304	7002	8728	16034
5.	County of Coventry				
	(i) Ansty Parish	67	62	60	
	(ii) Exhall "	82	294	273	
	(iii) Foleshill "	65	937	2024	
	(iv) Sow(e) "	110	254	203	
	(v) Stivichall"	64	17	26	5547
	(vi) Stoke "	41	157	307	
	(vii) Willenhall"	34	4	88	
	(viii) Wyken	42	9	15	
	(ix) Keresley Hamlet	166	146	N.S.	
					<u>31,388</u>

Source: (P.P.) Census Report 1801

APPENDIX V

Table 2

Population Statistics of the Principal Areas served by  
Warwickshire Collieries, 1801-1831

	<u>Place</u>	<u>1801</u>	<u>1811</u>	<u>1821</u>	<u>1831</u>
1.	Nuneaton	4769	4947	6610	7799
2.	Chilvers Coton	1877	1873	2169	2494
3.	Bedworth	3161	2794	3519	3980
4.	City of Coventry	16034	17923	21242	27070
5.	County of Coventry	5547	5864	7932	10532
6.	Rugby	1487	1805	2300	2501
7.	Southam	935	1007	1161	1256
8.	Banbury (and Neithrop)	3810	4173	5247	5906
9.	Oxford (City and University)	11705	12931	16364	20434

Source: (P.P.) Census Report 1831

APPENDIX W

Correspondence (Draft):

R. Child to Sir Roger Newdigate

30 October 1788

                      
"Temple Bar

"Sir Roger Newdigate Bart.  
                    

Sir,

A few days ago since Mr. Keysall put into my hands your letter to him of the 23 instant, in answer to the notice he sent you to pay in the £12000 remaining due to us on Mortgage - As I perfectly recollect every circumstance that passed between Mr. Eyre, Mr. Palmer and myself, on the subject of this loan, I will beg leave as far to intrude, as to repeat those circumstances, which were well understood by all the parties at the time the money was lent, and trust by so doing, I may have the good fortune to soften at least a little, your opinion regarding the liberality of our house in this transaction.

The £20,000 was agreed to be lent you in March 1777 at 4 per cent but on this further express condition, that if the then disputes with America should not subside, and a War ensued, the interest was to be raised to 5 per cent. A war did ensue and in June or July 1778 I apprised you of that agreement accordingly. With that rate of interest you seemed dissatisfied and declined paying more than  $4\frac{1}{2}$  per cent, that interest we accepted, though you must be well aware so large a sum as £20,000 could not at that time have been obtained at any interest; and I agree with you, it was entirely owing to the friendship between you and

the House of Child that induced Mr. Child to step through the rule of the shop, and lend you a larger sum than most bankers ever feel right to lend on one security<sup>(1)</sup>, and to accept a less interest from you than he received for any other sum lent during the last war.

In July 1778 you will recollect some letters passed between you and our House on this question of interest; and though we agreed to the interest you proposed, Mr. Child felt himself fully justified in desiring me on the 8 July 1778 to acquaint you he would be very glad to receive back the principal without any notice; whenever you could get it at a less interest or it suited you to pay it.

When you applied (sic) for a reduction of the interest from  $4\frac{1}{2}$  to 4 per cent about two years since, we again complied; though the fair rate of interest was then and is now  $4\frac{1}{2}$  per cent; and we have not yet reduced one loan, yours excepted to the interest you now pay. The interest has not been a motive; for this house has long had it in contemplation to call in the principal, but felt it a delicacy in doing it till money was obtainable at the interest you mentioned it might be had for in the country.

In relating the above circumstances I have no other wish whatever, than to lay before you the whole and fair state of this business. We had no resentment to gratify in calling in the remaining principal; I told Mr. Eyre we would take it at a day's notice at the end of six, or if inconvenient to you, at the end of twelve months, and must hope on a cool review of the business you will not find any ground to consider this House wanting in that liberality and respect which have in many negotiations been its first care and consideration to shew every gentleman whom we have had the honour to be connected with.

R. D. for Messrs. Child, self etc."

(1) The mortgage was granted on the security of Sir Roger's Middlesex estate.

APPENDIX X

Table 1

The Relationship of Estate Debt to the Growth of Colliery Income, 1763-1796

1	2	3	4	5	6	7
Year	Total of major debts at beginning of year	Interest payments during the course of the year	Principal paid off	New debt acquired during the year	Griffe Colliery income for the year	Griffe Colliery income net of columns 3 and 4
	£	£	£	£	£	Rounded up to the nearest £
1763	19293	797	1545	642	-	-
1764	18390	660	1960	1351	-	-
1765	17781	680	2600	705	-	-
1766	15886	679/4/8	400	1964	-	-
1767	17450	669/7/0	1475	1913	-	-
1768	16898	633/9/0	320	868	-	-
1769	17446	670/6/4	666	1375	-	-
1770	18155	727/6/3	1300	8815	-	-
1771	25370	792/17/6	3200	556	-	-
1772	22726	889/4/1	26	Nil	-	-

Table 1 (contd.)

1	2	3	4	5	6	7
1773	22700	905	280	4805	-	-
1774	26600	977	200	Nil	-	-
1775	26400	1050	Nil	2700	-	-
1776	29100	1000/16/0	600	11570	-	-
1777	40070	1215/17/9	6940	9365	-	-
1778	42495	1673/15/6	6680	200	-	-
1779	36015	1549/ 5/6	200	Nil	649	- 1100
1780	35815	1359/ 0/2	340	1110	1248	- 351
1781	36585	1593/ 5/2	205 <sup>(1)</sup>	Nil	2000	+ 202
1782	36380	1577/16/6	630	Nil	3000	+ 793
1783	35750	1548	1400	Nil	2999	+ 51
1784	34350	1486/17/1 $\frac{1}{2}$	1250	Nil	4000	+ 1264
1785	33100	1407/5/0	3000	1500	4025	- 382
1786	31500	1353/6/4	1300	Nil	3800	+ 1147
1787	30200	1266/8/3	1250	Nil	4700	+ 2184

Table 1 (contd.)

1	2	3	4	5	6	7
1788	28950	1141	2700	Nil	4100	+ 259
1789	26250	1033/16/0	4350	Nil <sup>(2)</sup>	9200	+ 3817
1790	21900	916	100	120	3900	+ 2284
1791	21920	913/ 4/0	Nil	Nil	3100	+ 2187
1792	21920	809/18/3	4320	Nil	3000	- 2129
1793	17600	694	1300	2000	4400	+ 4394
1794	16600	621/16/0	2000	Nil	3300	+ 679
1795	14600	581	300	Nil	4400	+ 3519
1796	14300	544/ 8/6	2000	Nil	3600	+ 1056

(1) Including unrecorded repayment of £95

(b) Excluding temporary accommodation by relatives



APPENDIX X

Table 2

Debt Composition : 1763-1795

1	2		3			4				5	
Year	Annuities		Mortgages			Bonds and Notes <sup>(1)</sup>				Relationship of mortgages to total debt (cols. 3 and 4)	
1 January	No.	Total	No.	Total	Largest	Smallest	No.	Total	Largest	Smallest	
				£ ('000s)	£ ('000s)	£ ('000s)		£ ('000s)	£ ('000s)	£ ('000s)	
1763	4	n.s.	4	12.9	4.4	1.5	23	6.393	1.25	.02	66 (%)
1765	4	"	4	13.4	4.4	2.0	28	4.381	1.25	.02	75.3
1767	3	"	3	9.4	4.9	2.0	32	8.05	1.25	.008	53.8
1769	2	"	3	9.9	4.9	2.0	37	7.546	1.25	.006	56.7
1771	2	"	5	19.15	8.0	1.25	27	6.22	1.4	.1	75.4
1773	2	"	4	16.15	8.0	1.25	28	6.55	1.5	.1	72.0
1775	3	"	5	20.15	8.0	1.25	26	6.25	1.6	.1	76.3
1777	3	"	6	20.15 <sup>(2)</sup>	8.0	1.25	23	8.42	2.3	.1	70.9
1779	2	"	2	24.0	20.0	4.0	15	12.015	5.0	.1	66.6
1781	3	"	2	24.0	20.0	4.0	15	12.585	5.0	.1	65.6
1783	2	"	2	24.0	20.0	4.0	13	11.75	5.0	.1	67.1
1785	4	"	2	24.0	20.0	4.0	8	9.1	4.0	.1	69.8
1787	4	"	2	18.2	14.0	4.0	8	12.2	4.0	.1	59.5
1789	5	"	2	16.0	12.0	4.0	7	9.9	4.0	.1	73.0
1791	5	"	3	16.0	8.0	4.0	5	5.92	3.0	.12	72.9
1793	5	"	4	12.0	4.0	2.0	3	5.6	3.0	.3	68.1
1795	3	"	3	9.0	4.0	2.0	2	5.3	3.0	2.3	61.6

(1) No firm distinction was drawn between bonds and notes

(2) Swollen by £11,500 during the year to £31,650

Principal Source: CR136/V/119

APPENDIX X

Table 3

Supplementary Credit (unrecorded), 1763-1795

(In conjunction with Table 2)

Received during the year	Total	Number
	£	
1763	120	2
1767	20	1
1771	235	3
1775	400	1
1779	-	-
1783	-	-
1787	-	-
1791	120	1
1795	-	-

Source: As for Table 2

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APPENDIX X

Table 4

Rates of Interest paid by Sir Roger Newdigate, 1763-1795

1		2				3			
Year		Mortgages				Bonds and Notes			
1 January	5%	4½%	4%	Indeterminate	5%	4½%	4%	Indeterminate	
1763	1	-	3	--	7	-	15	2	
1767	-	-	5	--	3	-	23	6	
1771	-	-	5	--	-	-	27	-	
1775	-	-	5	--	-	-	26	-	
1779	-	1	1	--	-	1	13	1	
1783	-	1	1	--	1	4	8	-	
1787	-	1	1	--	1	1	5	-	
1791	-	1	1	--	-	-	5	1	
1795	-	1	2	--	-	-	2	-	

Source: As for Table 2

APPENDIX Y

I

Tax Collectors and the Provision of Capital

The precise extent to which local tax collectors employed national revenue to increase the supply of short term finance<sup>(1)</sup> during the latter half of the eighteenth century is uncertain. There is evidence, however, to suggest that their influence was by no means unimportant in the Coventry area where industrial development was concerned. Both Thomas Little and Benjamin Troughton<sup>(2)</sup> were appointed area collectors<sup>(3)</sup> and combined their banking and revenue functions with the promotion of the Oxford Canal<sup>(4)</sup>. Thomas Little, one of its Treasurers, was expected by the shareholders, as part of his duties to the Company, "to advance cash.....as hitherto....."<sup>(5)</sup>, a task which would have been greatly simplified during periods of financial stringency by the regular collection of state revenue.

(1) i.e. for periods of less than two years.

(2) Of Little and Woodcock, and Troughton and Bryan, respectively.

(3) (i) Thomas Little, appointed Receiver-General for the Land Tax in Warwickshire in 1784.

Two years later both Coventry and Oxford Canal Companies were able to raise finance to complete their projects.

(ii) Troughton and Bryan were recorded by the Baronet as "Receiver-General" in 1791 and as "Collectors of Income Tax" by 1800. It was through the latter firm that he paid his income tax.

(4) Two of the early Treasurers of the Company were Collectors and the third a stationer who distributed stamps. L. S. Pressnall (op. cit. p.272) infers that they were able to employ government revenue in their business.

(5) L. S. Pressnell: Country Banking in the Industrial Revolution, p. 390 (1956 Ed.).

Such a practice was by no means dishonest. Revenue transmission to the London agent of the Crown could, in many cases, be legitimately delayed for as much as a year, sometimes more, and was often regarded as a "perquisite" on account of the low rate of remuneration of local collectors<sup>(6)</sup>. Such delays added directly to the local money supply<sup>(7)</sup> and thereby influenced the ability of receivers to expand private credit. Whilst Francis Parrott might have been glad of this practice indirectly, in view of his dealings with Little and Woodcock in the 1790s it is almost certainly the case that the provision of short term finance for Griff Colliery was never directly influenced by the local money market after 1778.

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(6) T. S. Ashton: An Economic History of England, the Eighteenth Century, p.182

(7) Tax collectors were active in this field during the first half of the century. The Receiver of the Excise in Coventry, prior to 1732, apparently lent sums to the coalmaster Stonier Parrott, father of Richard and Francis Parrott, which Parrott failed to repay.

H.M.B. 1/47: Chancery Depositions (1736/40), passim. W.S.L.

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APPENDIX Y

II

A Note on the Early History of the Coventry Canal Navigation Company

The Coventry Canal project was conceived as part of a scheme for linking the industrial areas of Liverpool and Hull with the Midlands, Bristol and London. Surveyed in 1767 and authorised<sup>(1)</sup> in 1768 it was intended to run from the Trent and Mersey Canal on Fradley Heath, near Birmingham, for  $37\frac{3}{4}$  miles via Fazeley (Tamworth), Atherstone and Nuneaton to Coventry. Considerable enthusiasm was displayed when the venture was announced, and 116 subscribers incorporated<sup>(2)</sup> as "The Company of Proprietors of the Coventry Canal Navigation" were empowered to raise an initial capital of £50,000<sup>(3)</sup> and to provide a reserve fund of £30,000 should this be necessary.

That the project was deemed to be highly beneficial to agriculture, trade and industry may be inferred by the tonnage charges to be paid. Coal, timber, stone, wares and merchandise were to be borne at a standard charge of  $1\frac{1}{2}$ d. per ton per mile throughout its entire length. Lime and limestone were to be carried at one-third of this rate whilst marl, manure, paving slabs, sand, soil and gravel were virtually exempt from all imposts.

(1) 8 Geo. III C36.

(2) "Coventry Navigation: First List of Subscribers". No. 265762. B.R.L.

(3) In 500 shares of £100 value; no person to have more than ten.

Unfortunately the project ran into trouble at an early stage, local interest waned and the canal was not finally opened throughout its full length until 1790.

This short note seeks to show that the delay in completion was not entirely disadvantageous to some of its early supporters, and that as long as no direct threat to the local coal monopoly was posed by other Midland canal promoters they were content to let matters drift.

Some light is shed on the enthusiasm which this project aroused by Sir Roger Newdigate's own diary of events since the baronet, like his grandfather in 1700, was keenly interested in the building of a network of canals linking the Trent with the Severn. The preliminary meeting was held in Coventry in 1767<sup>(4)</sup> at which twenty persons subscribed £200 for a survey by James Brindley. Results were satisfactory and by August a decision had been made to go forward with the proposed undertaking. At the first "Navigation Meeting" the following month £15,300 was raised, a sum which jumped to £35,000 within seventeen days. Brindley's predilection for underestimating the expense of building canals revealed itself in November at a further meeting in Coventry when the baronet proposed the raising of a further £10,000 over and above the £49,000 suggested by the surveyor. The proposal and its note of caution, however, were disregarded, but within forty eight hours a further £10,000 had been pledged by a further thirty four subscribers, making a grand total of £47,000, one week before the Coventry Canal Navigation Bill was presented to Parliament. It would appear, therefore,

(4) CR136 Diary

16 January 1767

that had a larger initial capital been demanded it would in all probability have been provided. The Royal Assent<sup>(5)</sup> was given early in 1768 and on 25 April the baronet recorded that "30 men from Staffordshire began to dig the Navigation Canal on Foleshill (Coventry) Heath".

Good progress ~~was~~ made during the first eighteen months. In August 1769 the first boatloads of coal from Bedworth pits were brought to Coventry and work continued northwestwards for 17 miles as far as Atherstone. At this point proceedings came to a halt in 1772 through lack of funds and no further progress was made during the following ten years.

Entries in Sir Roger Newdigate's diaries during these years suggest strongly that at an early stage in its life the Company was riven by dissenting factions on the twin questions of the line of the canal near Longford and a proposed junction between it and the Oxford Canal at the same point. It also appears that the subscribers themselves were divided over the administration of the Company<sup>(7)</sup> and this may have provided the excuse whereby the greater coalmasters and their friends withdrew active support from the venture. It is significant that the original capital of £50,000 sufficed to enable the canal to be cut from its most southerly point (Coventry) just far enough northwards to accommodate the bulk of the Warwickshire mines<sup>(8)</sup>. In consequence, collieries between

(5) CR 136 Diary

29th January 1768

(6) B. Poole (Ed.) Taunton's History and Antiquities of Coventry,  
p.347, (1870 Edn.)

(7) CR764/264/2 "The Case and Papers relative to the Navigable Canal  
to be made from.....Wednesbury.....to Fazeley considered."

(8) Plan 5.



Baddesley (Atherstone) and Foleshill (Coventry) were able to monopolise all water-borne coal traffic to the Coventry and North Oxfordshire markets for the following eighteen years. This amply compensated the coalmasters for the meagre annual return on their canal investments. Briefly, dissension and discontent in the Coventry Company played directly into the hands of the coalowning faction. The vital waterways to Coventry, and to Rugby and Banbury had been, or were on the point of being, completed. There was no need for them to contribute to the reserve fund allowed under the provisions of the 1768 Act, or to encourage others to join the lists. By standing aside they postponed the day when Staffordshire collieries would have obtained direct access to their markets<sup>(9)</sup>.

Victory appeared to have gone decisively to the coalmasters and their allies, and indeed for the following ten years the Coventry Canal Committee was powerless to change circumstances. By 1782, however, it was the turn of the coalmasters to take fright. Delegates from the Coventry, Oxford and Trent and Mersey Companies met subscribers to the proposed Wednesbury-Birmingham-Fazeley Canal at Coleshill to formulate fresh plans for the completion of the Coventry Canal as part of a more general scheme for linking Midland waterways. The price to be paid included the surrender of five and a half miles of the uncompleted course of the Coventry Canal to the Fazeley Company and a reduction of one-third in the tonnage charges to be levied upon Birmingham coal

(9) Sir Roger Newdigate, for example, was fearful of Staffordshire competition twenty years before it became a reality.

supplies passing along both Coventry and Oxford Canals<sup>(10)</sup>. These proposals were confirmed by Articles of Agreement signed by the interested parties during the following year and parliamentary ratification was sought by the Trent and Mersey Company in 1785.

Predictably the Warwickshire coal faction reacted sharply<sup>(11)</sup> to this threat which would, in fact, have had a more serious impact upon their markets along the Oxford Canal than in Coventry<sup>(12)</sup>. Considerable support was aroused and Parliament was successfully petitioned in 1785 to ensure that the offending clause in differential tonnage rates was deleted<sup>(13)</sup>. Nevertheless the domination of local canal interests by the Warwickshire coalmasters had been broken. During the following year a second Act<sup>(14)</sup> was secured by the Coventry Canal Navigation Company by which £40,000 was borrowed on its tolls and four years later<sup>(15)</sup> the waterway was completed. Henceforth the coal market in the south Midlands was open to supplies from both Staffordshire and Warwickshire and within two years prospects for customers brightened still further with news of proposals for a third canal, this time to bring coal from Leicestershire pits southwards into the area which had so recently been the exclusive preserve of Sir Roger Newdigate and his allies.

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(10) B.M. (Maps) 24. E. 14: "The Case of the Coventry Canal Company".

(11) Many of the broadsheets published by both sides are listed in the County Record Office, Warwick, under accession numbers CR764/264 and CR.1022.

(12) Appendix U, Table 3: "A Comparative State of the Price of Staffordshire and Warwickshire Coals".

(13) 25 Geo. III c99 (S.8).

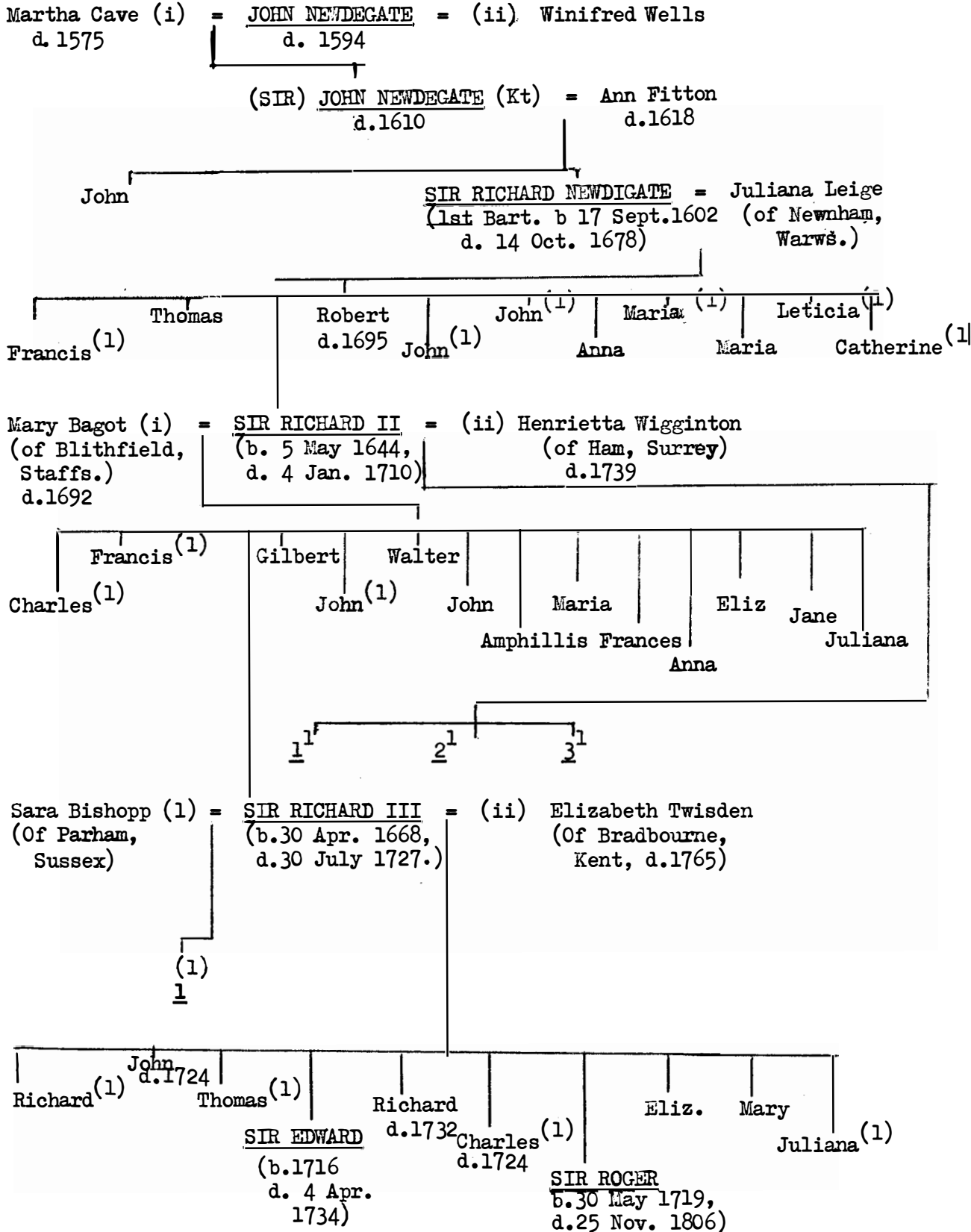
(14) 26 Geo. III c 30.

(15) June, 1790.

APPENDIX Z

Table 1

Pedigree of the Newdigate family, 1541-1806



Sophia Conyers (i) (Of Copt Hall, Essex) d.1774	= <u>SIR ROGER</u>	= (ii) Hester Mundy (Of Allstree and Shipley, Derbs.) d.1800
No issue		No issue

(1) Died in early childhood

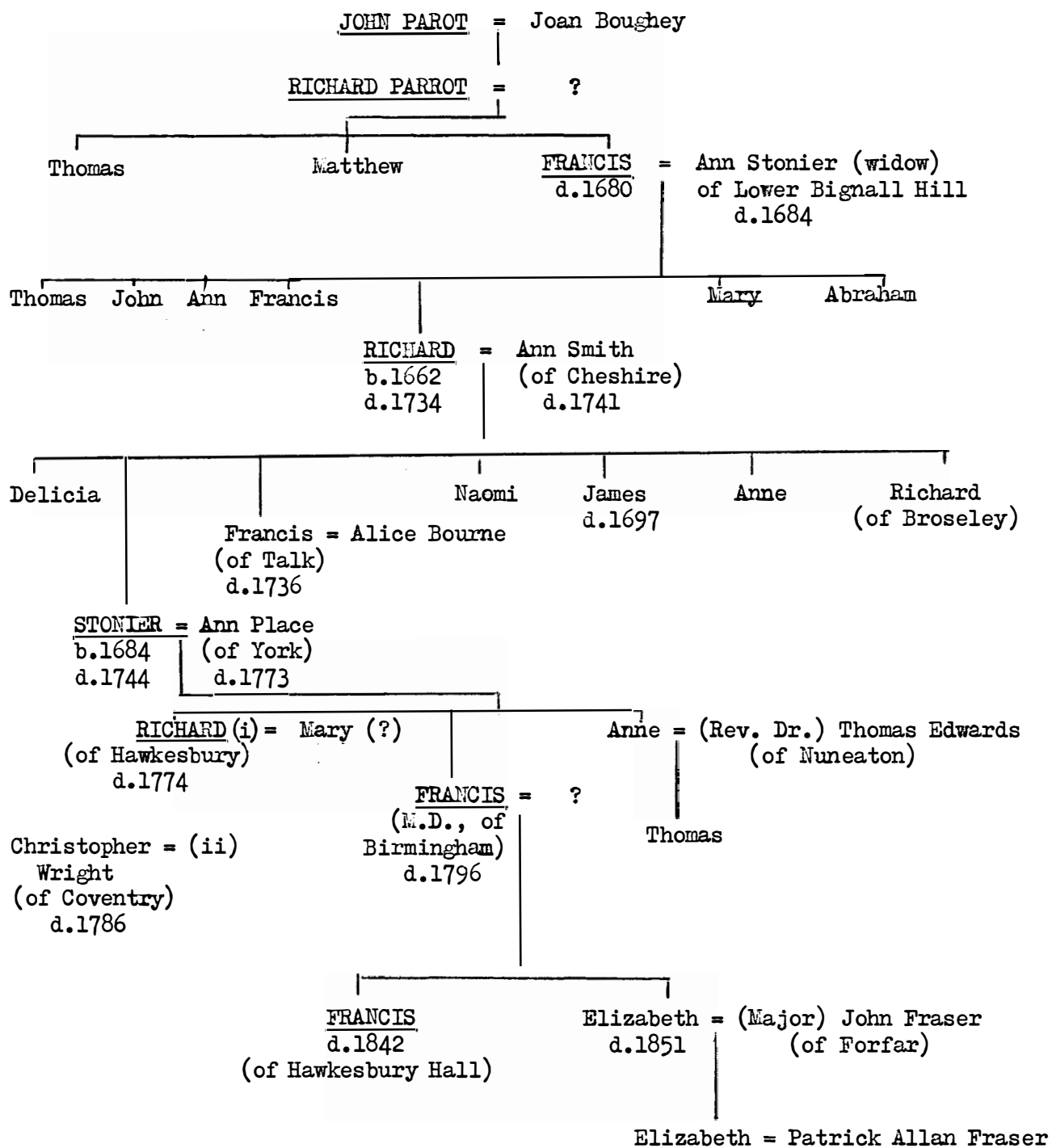
Note

- (a) In the case of the first three baronets it is by no means certain that the order of birth of children is entirely correct.
- (b) It was not unknown during the seventeenth and eighteenth centuries for the christian name borne by an earlier child to be granted to a later brother or sister.

APPENDIX Z

Table 2

Pedigree of the Parrott family from the early seventeenth century to 1851



PRINCIPAL SOURCES AND BIBLIOGRAPHY

PRIMARY SOURCES

(A) <u>PRINCIPAL MANUSCRIPT COLLECTION</u>	<u>LOCATION</u>
The Newdigate MSS.	W.C.R.O.
<p>(a) <u>Leases</u> CR136/C38(a), C616, C623, C624, C3150 C3152, C3156, C3158, C3159, B5236.</p> <p>(b) <u>Licence and Mortgages</u> CR136/3158; CR764/67/3,5,8, CR764/58.</p> <p>(c) <u>Correspondence</u> CR136/C625, C634, C640, C642, C643, C645, C646, C647, C648. CR136/B1599-1603, B1739, B1771, B1772, B1793, B2199, B2216, B5336.</p> <p>(d) <u>Proposals, Reports, Summaries</u> CR136/B3068, B3070, B3061, B3912. CR136/C495, C566(a), C618, C619, C620, C627, C633, C636, C637, C638, C639, C692, C1089, C1237-9, C1240, C1242, C1247, C1978, C3553. CR136/B939, B1299, B2508(A-G), B2625, B2632, B2636, B2637, B2681, B2684, B3045, B3068, B3515, B3584, B3719, B3778, B3909, B4334, B5237-9, B5248, B5302. CR764 (Unnumbered). CR764/264(1-2), 263, 275. CR1022/2</p> <p>Diaries of Sir Roger Newdigate CR136--</p> <p>(e) <u>Volumes</u> CR136/8, 10, 12, 13, 15, 16, 22, 26, 29, 31, 40, 47, 56, 59-63, 68, 69, 85, 89, 90, 92-96, 101, 102-106, 109, 119, 120, 126,</p>	

CR136/127, 129, 131, 138, 144, 146, 147, 177,  
182, 183.

CR136/A247

CR270.

(f) Maps, Plans, Sketches

CR136/M1, 2, 6, 7, 10-11, 14, 16, 18, 19, 21-34,  
37, 38, 39-51, 53-62, 65-68, 72-82, 91-92,  
95-96.

CR136/B5129.

CR136/C628, C629, C630, C632, C635, C638, C691, C1417.

CR319/60.

CR764/104, 106, 107.

CR764/264/1.

CR136/V/64-66.

(g) Marriage settlements, Wills

CR136/B3718, B3719, B4575, B4590.

CR136/C1911, C1952, C1953, C1959, C1976, C1981

C1982, C1984, C1994

C3566, C3716

CR764/56, 65, 83.

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(B)

DUGDALE MUNIMENTS

(Stratford-Geast-Dugdale MSS.)

LOCATION

In the private ownership of Sir William Dugdale, Bt.

CLASS

- |   |   |
|---|---|
| (a) <u>Leases:</u>                      | D.M. 83, 198, 942, 1401(A)<br>1410(A & B), 13X.                       |
| (b) <u>Reports</u>                      | D.M. 173, 1546, 2546  |
| (c) <u>Account books:</u>               | D.M. 1478, 23V, 24V.  |
| (d) <u>Litigation documents:</u>        | D.M. 1869-1875 (incl.)  |
| (e) <u>Affidavits:</u>                  | D.M. 173-179 (incl.)  |
| (f) <u>Miscellaneous correspondence</u> | D.M. 997, 1015, 1103, 1546,<br>1625, 1870, 1873, 1876,<br>1880, 2270. |
| (g) <u>Maps and sketches:</u>           | D.M. 76, 1891.  |
| (h) <u>Colliery papers:</u>             | D.M. 973c-999 (incl.)   |
-

(C) <u>OTHER MANUSCRIPT COLLECTIONS.</u>	<u>LOCATION</u>
1. <u>Anglesey MSS.</u> (a) Uncatalogued Surveys D(W)1734	W.S.L.
2. <u>Aqualate MSS.</u> (a) D1788/29/17. (b) D1788/40/6. (c) D1788/61/IX	S.C.R.O.
3. <u>Boulton and Watt MSS.</u> (a) Folios 20, 241, 563, 625, 627. (b) Correspondence: Letter Books (Office), Series 1775-1798 Letter Book (Manufactory) 1778 (c) "Hawkesbury Colliery", Parcel F(H). (d) "Bedworth Colliery", Box 6. (e) Colliery boxes 4(T), 2(P) and 3(P). (f) Boulton and Watt: <u>Catalogue of Old Engines</u>	B.R.L.
4. <u>Boulton and Watt MSS.</u> (a) Notebooks, NB 11, 13, 14, 16, 18, 61, D1780. (b) Letter Books P1/71, F1/97, H1/108, P2/42.	A.O.(B)
5. <u>Bree of Allesley</u> (a) CR1300/66/EM3	W.C.R.O.
6. <u>Caddick and Yates MSS.</u> (a) 50 (1 and 2), 52, 53(2), 54, 55(B), 56(2), 64, 81/1, 83(9a).	B.R.L.
7. <u>Compton-Bracebridge MSS.</u> (a) HR 35	W.C.R.O.
8. <u>Coventry Corporation (Municipal Records)</u> (a) Coal leases D Coll 5. (b) Sir T. White's Charity Records, Bundle 15. (c) Corporation Minute Books:- A 14(c), A 14(e), A 14(f), A 14(g), A 14(i), A 14(k), A 14(m). (d) Diaries "18".	C.R.O.

9. Craven MSS
    - (a) CR8/91
    - (b) CR8/174
    - (c) CR8/184
    - (d) CR8/187W.C.R.O.
  10. Dudley MSS
    - (a) CR110/170P.R.O.
  11. Eld MSS
    - (a) A159
    - (b) A216
    - (c) A221C.R.O.
  12. Hand, Morgan MSS.
    - (a) 46W.S.L.
  13. Hand, Morgan, Bourne MSS.
    - (a) 31
    - (b) 1/47W.S.L.
  14. Heath of Blenkinsop MSS
    - (a) CR935W.C.R.O.
  15. Irby MSS
    - (a) 1954/28C.R.O.
  16. Moulton, Keen MSS.
    - (a) 416B.R.L.
  17. Norton MSS
    - (a) 24 (1115)
    - (b) 437 (1198)B.R.L.
  18. Parish Records (Kenilworth)
    - (a) DR296/116/2-6W.C.R.O.
  19. Paul of Tamworth
    - (a) CR153/84-91W.C.R.O.
  20. Woolcombe-Adams MSS
    - (a) CR285/B2W.C.R.O.
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(D)

BANKS

- |   | <u>Source</u>                            |
|---|--|
| 1. <u>WILLIAMS AND GLYN'S BANK LTD.</u>                 |  |
| (a) Correspondence                                      |  |
| Robert Child to Sir Roger Newdigate,<br>1778-1788       | (i) C.B.56                               |
|   | (ii) C.B.101(a)                          |
| (b) Selected items from pawn ("P") books <sup>(1)</sup> | (i) "P" Books                            |
| 2. <u>C. HOARE AND COMPANY</u>                          |  |
| (a) Mortgages 1726-1734                                 | (i) Henry Hoare:<br>Private Account Book |

(1) Supplied privately from the Archives Dept., Williams and Glyn's Bank Ltd.

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(E) LEGAL RECORDS AND OFFICIAL INQUIRIES.

1. Chancery Proceedings (Series I) (1602)  
C2/Jas. I, F4/53 P.R.O.
  2. Chancery: Judicial Proceedings (Equity Side), 1722-40  
C11/141/22, C11/470/50,  
C11/301/10, C11/480/30,  
C11/300/42, C11/499/32,  
C11/376/32, C11/501/33,  
C11/435/6, C11/1212/15. P.R.O.
  3. Exchequer Depositions by Commission, (1684)  
36 Chas. II, Mich 43. P.R.O.
  4. Quarter Sessions (Warwickshire) 1763-1780  
(i) Order Book Q.S.40/1/10-12  
(ii) Minute Books Q.S. 39/7, 39/8 W.C.R.O.  
(iii) Inclosure Records Q.S. 75/34  
(iv) Land Tax Returns Q.S. 77/1-6
  5. Wills  
(i) Prob./11/1272/140 (1796) P.C.C.  
(Francis Parrott)  
(ii) Prob./11/1452/953 (1807) P.C.C.  
(Sir Roger Newdigate)
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(F)

PARLIAMENTARY LEGISLATION

(Other than relating to inclosure, 1756-1774)<sup>(1)</sup>

A. Coventry Canal Navigation

(i)	8 Geo. III	C36	(1768)
(ii)	26 Geo. III	C30	(1786)
(iii)	59 Geo. III	C62	(1819)

B. Oxford Canal Navigation

(i)	9 Geo. III	C72	(1769)
(ii)	15 Geo. III	C9	(1775)
(iii)	26 Geo. III	C20	(1786)
(iv)	34 Geo. III	C103	(1794)
(v)	39 Geo. III	C5	(1799)

C. Ashby de la Zouch Canal Navigation

(i)	34 Geo. III	C93	(1794)
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D. Turnpikes

(i)	28 Geo. II	C40	(1755)
(ii)	29 Geo. II	C66	(1756)

E. Mines

(i)	5 and 6 Vic.	C99	(1842)
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F. Minerals

(i)	1 Wm. and M.	C30	(1789)
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(1) See Appendix C, Table 1

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(G) PRINTED DOCUMENTS AND OFFICIAL PAPERS.

- | <u>A. Parliamentary Reports</u>   | <u>Location</u>     |
|---|---------------------|
| 1. Committees of the House of Commons (The Coal Trade 1785-1801), X   | B.R.L.              |
| 2. Committees of the House of Lords (Session 1830), VIII  | B.R.L.              |
| 3. Reports (First and Second) of the Minutes of evidence taken before the Committee appointed to consider the several petitions relating to ribbon weavers ..... (1818) | C.W.C.              |
| 4. Census Reports: Comparative Account of the Population of Great Britain (1801-1831), as required by II Geo. IV, C30.  | B.R.L.              |
| 5. Report of the Children's Employment Commissioners (Mines) (1842)   | Univ. of Birm. Lib. |
| 6. Report (First) of the Midland Mining Commission, (South Staffordshire). (1843)   | B.R.L.              |
| 7. Report of the Royal Commission on Canals and Waterways (IV and VI) (1908)  | B.R.L.              |
| <br><u>B. Parliamentary Proceedings</u>   |                     |
| J.H.C., XXI, XXVII, XXVIII, XXIX, XXXI, XXXII, LVII   |                     |
| <br><u>C. Patents</u>   |                     |
| 1. Abridgements of Patent Specifications ( <u>Hydraulics</u> ) 1617-1865, XXXII. (1863)   | B.P.L.              |
| 2. Abridgements of Patent Specifications ( <u>Steam Engines</u> ) 1618-1859, II (1871)  | B.P.L.              |
| 3. Abridgement of Patent Specifications ( <u>Ventilation</u> ) 1832-1866 (1872)   | B.P.L.              |
| 4. The Patent Office: <u>Specifications</u><br>(i) 1773, No. 1044<br>(ii) 1789, No. 1681  | Orpington, Kent     |
| <br><u>D. Mines</u>   |                     |
| Catalogue of Plans of Abandoned Mines, III. (1929)  | H.M.S.O.            |
| <br><u>E. Land</u>  |                     |
| Returns of Owners of Land, II, (1875)   | H.M.S.O.            |
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(H) MAPS AND MANUSCRIPTS RELATING TO CANALS AND WATERWHEELS

(Other than those listed in MSS. Collections)

A. Canals (maps)

1. B.M. 24. E. 14 B.M.
2. B.M. 4. E. 13-15 B.M.
3. Maps and Plans relating to Midland Canals  
1750-1850 B.R.L.  
No. 436711

B. Canals (manuscripts)

1. Coventry Navigation: First and Second List  
of Subscribers B.R.L.  
No. 265762
2. Memorandum Book: Coventry Canal Navigation,  
1802-1808 B.T.C.  
No. CVC4/156
3. Also item A(1), supra.
4. B.M. 24. i. 4 (103, 104, 119, 120) B.M.

C. Waterwheels

1. Engineering Designs, by John Smeaton, L.R.S.  
III Folios 99v-190
-



(A)

SECONDARY SOURCES

BOOKS ORIGINALLY PUBLISHED BEFORE 1850

Author	Title	Edition Consulted
Bailey W.	<u>Bailey's Western and Midland Directory</u>	1783
Brewer I. N.	<u>A Topographical and Historical Description of the County of Warwick.</u>	1820
C. - J	<u>The Compleat Collier, or the Whole Art of Sinking.....(1708)</u>	1968
Cooke G. A.	<u>The British Traveller's Guide</u>	c1820
Curr J.	<u>The Coal Viewer and Engine Builder's Practical Companion (1787)</u>	1970
Desaguliers J. T.	<u>A Course in Mechanical and Experimental Philosophy</u>	1729
Dunn M.	<u>An Historical, Geological and Descriptive View of the Coal Trade of the North of England</u>	1844
Farey J.	<u>A Treatise on the Steam Engine, Historical, Practical and Descriptive (I) (1827)</u>	1971
Hamper W. (Ed.)	<u>The Life, Diary and Correspondence of Sir W. Dugdale</u>	1827
Hickling W.	<u>History and Antiquities of the City of Coventry</u>	1846
Holland J.	<u>History and Description of Fossil Fuel</u>	1835
Jago R.	<u>Edge-Hill, or, The Rural Prospect Delineated and Moralized</u>	1767
Jars G. R.	<u>Voyages Métallurgiques</u>	1774

Author	Title	Edition Consulted
Marshall W.	<u>The Rural Economy of the Midland Counties</u>	1796
Murray A.	<u>General View of the Agriculture of the County of Warwick with Observations on the means of its Improvement</u>	1815
Pennant T.	<u>The Journey from Chester to London</u>	1782
Priestly	<u>Historical Account of the Navigable Rivers, Canals and Railways of Great Britain</u>	1831
Reader W.	<u>New Coventry Guide</u>	1810
Sharp T.	<u>The Coventry Guide</u>	1824
Wedge J.	<u>General View of the Agriculture of the County of Warwick, with Observations on the Means of its Improvement</u>	1794

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(B)

MODERN PRINTED WORKS

Author	Title	Edition Consulted
Ashton T. S.	<u>An Economic History of England: The Eighteenth Century</u>	1959
Ashton T. S.	<u>Economic Fluctuations in England, 1700-1800</u>	1959
Ashton T. S.	<u>Iron and Steel in the Industrial Revolution</u>	1963
Ashton T. S.	<u>The Industrial Revolution, 1760-1830</u>	1962
Ashton T. S. and Sykes J.	<u>The Coal Industry of the Eighteenth Century</u>	1929
Atkinson F.	<u>The Great Northern Coalfield, 1700-1900</u>	1968
Baxter B.	<u>Industrial Archaeology: Stone Blocks and Iron Rails</u>	1966
Bowden W.	<u>Industrial Society in England towards the end of the Eighteenth Century</u>	1965
Boyd R. N.	<u>Coal Pits and Pitmen</u>	1895
Burman J.	<u>Old Warwickshire Families and Houses</u>	1934
Burnett J.	<u>A History of the Cost of Living (Pelican)</u>	1969
Cameron R. and Patrick M. T.	<u>Banking in the Early Stages of Industrialization</u>	1967
Carus-Wilson E. M. (Ed.)	<u>Essays in Economic History (III)</u>	1962
Chambers J. D. and Mingay G.E.	<u>The Agricultural Revolution, 1750-1880</u>	1966

Author	Title	Edition Consulted
Chapman S. D.	<u>The Early Factory Masters</u>	1967
Chapman S. D. and Chambers J. D. and Sharpe T. R.	<u>The Beginnings of Industrial Britain</u>	1970
Church R. A.	<u>Kenricks in Hardware: A Family Business (1791-1966)</u>	1969
Clark G. (Sir)	<u>The Wealth of England, 1496-1760</u>	1961
Colville F. L.	<u>The Worthies of Warwickshire who lived between 1500 and 1800</u>	1869
Court W. H. B.	<u>The Rise of the Midland Industries 1600-1835</u>	1953
Davies W. J.	<u>The Token Coinage of Warwickshire and Descriptive and Historical Notes</u>	1895
Deane P.	<u>The First Industrial Revolution</u>	1965
Deane P. and Cole W. A.	<u>Monographs 8: British Economic Growth: 1688-1959</u>	1967
Dickson P. G. M.	<u>The Sun Insurance Office 1710-1960</u>	1960
Dickson P. G. M.	<u>The Financial Revolution in England: A study in the Development of Public Credit, 1688-1756</u>	1967
Dryden A. (Ed.)	<u>Memorials of Old Warwickshire</u>	1908
Eden F. (Sir)	<u>The State of the Poor</u> (Rogers Edition)	1928
Eliot G.	<u>Middlemarch</u> (Blackwood)	1913
Eliot G.	<u>Scenes of Clerical Life</u> (Blackwood)	1897
Eliot G.	<u>Felix Holt: The Radical</u> (Everyman)	1966

Author	Title	Edition Consulted
Flinn M. W.	<u>The Origins of the Industrial Revolution</u>	1966
Galloway R. L.	<u>A History of Coal Mining in Great Britain</u>	1969
Galloway R. L.	<u>Annals of Coal Mining and the Coal Trade (Series I and II)</u>	1971
Gonner E. C. K.	<u>Common Land and Inclosure</u>	1966
Gough J. W.	<u>The Mines of Mendip</u>	1930
Griffin A. R.	<u>Coalmining (Ind. Arch. Ser. 8)</u>	1971
Hackwood F. W.	<u>The Story of the Black Country</u>	N.D.
Hadfield C.	<u>The Canals of the East Midlands</u>	1966
Hamilton H.	<u>The English Brass and Copper Industries to 1800</u>	1926
Harris J. R. (Ed.)	<u>Liverpool and Merseyside: Essays in the Economic Social History of the Port and its Hinterland</u>	1969
Hartwell R. M.	<u>The Causes of the Industrial Revolution in England</u>	1967
Higgins J. P. P. and Pollard S.	<u>Aspects of Capital Investment in Great Britain (1750-1850): A Preliminary Survey</u>	1969
Poole	<u>Coventry: Its History and Antiquities</u>	1870
Jackman W. T.	<u>The Development of Transportation in Modern England</u>	1966
Jenkins R.	<u>Collected Papers</u>	1936
Jones E. L. and Mingay G. E. (Eds.)	<u>Land, Labour and Population in the Industrial Revolution</u>	1967
Lord J.	<u>Capital and Steam Power, 1750-1800</u>	1966

Author	Title	Edition Consulted
Mantoux P.	<u>The Industrial Revolution in the Eighteenth Century</u>	1961
Mathias P.	<u>The First Industrial Notion: An Economic History of Britain, 1700-1914</u>	1969
Mingay G. E.	<u>English Landed Society in the Eighteenth Century</u>	1963
Mingay G. E.	<u>Enclosure and the Small Farmer in the Age of the Industrial Revolution</u> (Studies in Economic History)	1968
Mining Association of Great Britain - The	<u>Historical Review of Coal Mining</u>	1925
Mitchell B. R. and Deane P.	<u>Abstract of British Historical Statistics</u>	1962
Musson A. E. and Robinson E.	<u>Science and Technology in the Industrial Revolution</u>	1969
Nef J. U.	<u>The Rise of the British Coal Industry</u>	1932
Newdigate - - Newdegate A. (Lady)	<u>The Cheverels of Cheverel Manor</u>	1898
Pevsner N. and Wedgwood A.	<u>The Buildings of England</u> (Warwickshire)	1966
Pickering A. J.	<u>The Cradle and Home of the Hosiery Trade</u>	1940
Pollard S.	<u>The Genesis of Modern Management</u>	1968
Potts W. A.	<u>History of Banbury</u>	1958
Pressnell L. S.	<u>Country Banking in the Industrial Revolution</u>	1956
Pressnell L. S. (Ed.)	<u>Studies in the Industrial Revolution</u>	1960

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Prest J.	<u>The Industrial Revolution in Coventry</u>	1960
Redford A.	<u>The Economic History of England 1760-1860</u>	1960
Richard R. D.	<u>The Early History of Banking in England</u>	1965
Roll E.	<u>An Early Experiment in Industrial Organisation: Being a History of the Firm of Boulton and Watt, 1775-1805</u>	1930
Roston <sup>w</sup> W. W.	<u>The Process of Economic Growth</u>	1960
Salis (de) H. R.	<u>Bradshaw's Canals and Navigable Rivers of England and Wales</u>	1928
Slater G.	<u>The English Peasantry and the Enclosure of Common Fields</u>	1907
Sweezy P. M.	<u>Monopoly and Competition in the English Coal Trade, 1550-1850</u>	1938
Tate W. E.	<u>The English Village Community and the Enclosure Movement</u>	1967
Timmins S (Ed.)	<u>The Birmingham and the Midland Hardware District</u>	1866
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Warner F. (Sir)	<u>The Silk Industry of the United Kingdom: Its Origin and Development</u>	N.D.
Williams B. R.	<u>Technology, Investment and Growth</u>	1967
Williams J. E.	<u>The Derbyshire Miners: A Study in Industrial and Social History</u>	1962

(C)

SERIAL PUBLICATIONS

Author	Article	Source, Volume, Date
Alexander A. P.	The Supply of Industrial Entrepreneurship	E.E.H., IV(S.S.)2, 1966-67
Allen J. S.	The 1712 and other Newcomen Engines of the Earls of Dudley	T.N.S., XXXVII, 1964-65
Allen J. S.	Some Early Newcomen Engines and the Legal Disputes surrounding them	T.N.S., XLI, 1968-69
Anderson B.L.	Provincial Aspects of the Financial Revolution of the Eighteenth Century	Bus. Hist., XI,1, 1969
Andersen B. L.	Money and the Structure of Credit in the Eighteenth Century	Bus. Hist., XII 1970
Anderson D.	Blundell's Collieries: Technical Developments, (1776-1966)	T.H.L.C., CXIX 1967
Ashton T. S.	The Coal Mines of the Eighteenth Century	Ec. Jnl. III 1928 (E.H.S.)
Ashton T. S.	Business History	Bus. Hist. I, 1 1958-59
Ashton T. S. and Daniels G. W.	The Records of a Derbyshire Colliery, (1763, 1779)	Ec.H.R., II 1929-30
Barker T. C.	Business History and the Businessman	Bus. Hist. I 1958-59
Beresford M. W.	Commissioners of Enclosure	Ec.H.R., XVI,2 1946
Bulley J. A.	"To Mendip for Coal"	P.S.A.S., XCVII, 1952
Campbell R. H.	The Financing of Carron Company	Bus. Hist., I 1958-59
Cardwell D. S. L.	Power Technologies and the Advance of Science (1700-1825)	T. and C., VI, 1, 1965
Chambers J. D.	Economic Change in the Vale of Trent, (1700-1800)	R.M.S., II 1958



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Chevalier J.	La Mission de Gabriel Jars dans les Mines et les Usines Britanniques en 1764	T.N.S., XXVI 1947-49
Church R. A.	An Aspect of Family Enterprise	Bus. Hist., IV 1961-62
Churton - Archdeacon	Sir Roger Newdigate: Obituary	G. Mag., LXXVII, 2 1807
Cochrane T. C.	The Entrepreneur in Economic Change	E.E.H., III(S.S.) 1965-66
Court W. H.B.	A Warwickshire Colliery in the Eighteenth Century	Ec.H.R., VII, 1 1936-37
Court W. H. B.	Industrial Organisation and Economic Progress in the Eighteenth Century Midlands	T.R.H.S., XXVIII(4th S.) 1946
Cule J. E.	Finance and Industry in the Eighteenth Century: The Firm of Boulton and Watt	E.H., IV, 15 1940
Dodd A. M.	The North Wales Coal Industry during the Industrial Revolution	Arch. Camb., LXXXIV 1929
Duckham B. F.	Some 18th Century Scottish Coal Mining Methods: The "Dissertation" of Sir John Clerk	Ind. Arch. V, 3 1968
Feller I.	Approaches to the Diffusion of Innovation	E.E.H., IV(S.S.)3 1966-67
Habakouk H. J.	English Landownership (1680-1740)	Ec.H.R., X(S.S.) 1939-40
Harris A.	The Ingleton Coalfield	Ind. Arch., V, 4 1968
Harris J. R.	The Employment of Steam Power in the Eighteenth Century	History, LII, 175 1967
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Jackson J. M.	Notes on Early Mining in Staffordshire and Warwickshire	T.I.M.E., XXVII 1903-4
Jenkins R.	Savery, Newcomen and the Early History of the Steam Engine (Parts 1 and 2)	T.N.S., III and IV 1922-24
Jenkins W. J.	The Early History of Coal Mining in the Black Country and especially around Dudley	T.N.S., VIII 1928
John A. H.	Insurance Investment and the London Money Market of the Eighteenth Century	Economica XX(N.S.) 1953
John A. H.	Aspects of English Economic Growth in the First Half of the Eighteenth Century	Economica XXVIII(N.S.) 1961
Jones E. L.	The Agricultural Labour Market, (1793-1872)	Ec.H.R., XVII(S.S.) 1964-65
Langford J.	Coal Output in South-West Lancashire (1590-1799)	Ec.H.R., XXV(S.S.)1, 1972
Martin J. M.	The Cost of Parliamentary Enclosure in Warwickshire	U.B.J., IX 1963-64
Martin J. M.	The Parliamentary Enclosure Movement and Rural Society in Warwickshire	Ag.H.R., XV, 1 1967
McKendrick N.	Josiah Wedgwood and Cost Accounting in the Industrial Revolution	Ec.H.R., XXIII, 1 1970
Moller A.	Coal Mining in the Seventeenth Century	T.R.H.S. VIII(4th S.) 1925

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Mott R. A.	The Newcomen Engine in the Eighteenth Century	T.N.S., XXXV 1962-63
Mott R. A.	English Waggonways of the Eighteenth Century	T.N.S., XXXVII, 1964-65
North D. C. and Thomas R. P.	An Economic Theory of the Growth of the Western World	Ec.H.R., XXIII(S.S.) 1, 1970
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Pelham R. A.	Corn Milling and the Industrial Revolution in England in Eighteenth Century	U.B.J. VI, 2 1958
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Raybould T. J.	The Development and Organisation of Lord Dudley's Mineral Estates	Ec.H.R., XXI(S.S.)3, 1968
Rimmer G.	Middleton Colliery, near Leeds, (1770-1830)	Y.B.E.S.R., VII, 1 1955
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Scherer F. M.	Invention and Innovation in the Watt-Boulton Steam Engine Venture	T. and C., VI, 1 1965
Smith R. S.	Huntingdon Beaumont: Adventurer in Coal Mines	R.M.S., I 1957
Smith R. S.	England's First Rails: A Reconsideration	R. M. S., IV 1960
Spring D.	English Landed Society in the Eighteenth and Nineteenth Centuries	Ec.H.R., XVII(N.S.) 1964-65
Stowers A.	Observations on the History of Water Power (Presidential Address, 1957)	T.N.S., XXX 1955-57

Author	Article	Source, Volume, Date
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Swan E. N.	A Durham Colliery's Stocktaking of 1784	T.N.S., XXIV, 1944-45
Swan E. N.	Sinking a Northumberland Colliery in 1761-2	T.N.S., XXV, 1945-47
Tate W. E.	Enclosure Acts and Awards relating to Warwickshire	T.B.A.S., LXV 1943-44
Tate W. E.	The Cost of Parliamentary Enclosure in England	Ec.H.R., V(S.S.)2, 1952
Weaver P.	The Arbury Canals	Rly. C.H.S.J. Jan. 1970
White A. W. A.	Early Newcomen Engines on the Warwickshire Coalfield (1714-1736)	T.N.S., XLI 1968-69
White A. W. A.	Coalminers and Coalmining in Warwickshire during the Early Years of the Eighteenth Century	M.E.E., CXXIX(117) 1970 (T.I.M.E.)
White A. W. A.	"The Christian Collier"	T.B.A.S., LXXXV 1972
Wilson C.	The Entrepreneur in the Industrial Revolution in Britain	History, XLII(145) 1957
Wilson P. N.	The Waterwheels of John Smeaton	T.N.S., XXX 1955-57
Wood A. C.	The Diaries of Sir Roger Newdigate	T.B.A.S. LXXVIII 1962

(D)

PAMPHLETS AND NEWSPAPERS

A. PAMPHLETS

<u>Author</u>	<u>Title</u>	<u>Date</u>
Homer H. (probably Homer W.)	<u>An Essay on the Nature and Method of Ascertaining the Specifick Shares of Proprietors upon the Inclosure of Common Fields</u>	1766
Lawrence A. H.	<u>Bedworth Church and its Rectors</u>	n.d.
Lawrence A. H.	<u>The Rev. Nicholas Chamberlaine, Rector of Bedworth: His Times and his Charity, 1715-1965</u>	1965
White A. W. A.	<u>Men and Mining in Warwickshire (Coventry and North Warwickshire History Pamphlets, No. 7.)</u>	1970

B. NEWSPAPERS

- (i) Aris' Birmingham Gazette
  - (ii) Coventry Standard
  - (iii) Gentlemen's Magazine
  - (iv) Jepson's Coventry Mercury
-

(E)

THESES

<u>Author</u>	<u>Title</u>	<u>University, Date</u>	
Bulley J. A.	<u>The Development of the Coal Industry in the Radstock Area of Somerset from Earliest Times to 1830</u>	London (M.A.)	1952
Marson G. L.	<u>Coventry: A Study in Urban Geography</u>	Liverpool (M.A.)	1949
Martin J. M.	<u>Social and Economic Trends in the Rural West Midlands 1785-1825</u>	Birmingham (M.Com.)	1960
Martin J. M.	<u>Warwickshire and the Parliamentary Enclosure Movement</u>	Birmingham (Ph.D.)	1965
Miles H.	<u>The Coventry Silk Ribbon Industry from the Introduction of the Use of the Dutch Engine Loom to the Cobden Commercial Treaty (1860)</u>	Oxford (B.Litt)	1930
Mimardiére A.M.	<u>The Warwickshire Gentry, 1660-1730</u>	Birmingham (M.A.)	1963
Raybould T. J.	<u>The Kingswinford Estate of Lord Dudley: Its Development and Organisation between 1774 and 1833</u>	Birmingham (M.A.)	1966
White A. W. A.	<u>Sixty Years of Coalmining Enterprise on the North Warwickshire Estate of the Newdigates of Arbury, 1680-1740</u>	Birmingham (M.A.)	1969

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(F)

MAPS AND PLANS

MAPS

1. Ordnance Survey: 1/2500 (1951)
  - (i) SP 3588; 3589
  - (ii) SP 3488; 3489
2. Ordnance Survey: 1/25000 (1957)
  - (i) SP28; 29
  - (ii) SP38; 39
  - (iii) SP48; 49
3. Ordnance Survey: 1/63,360 (1946)
  - (i) Sheet 132
4. Ordnance Survey: 1/10560 (1926)

Geological Survey of England and Wales  
(1926 Edn.) - Warwickshire, Sheet XVII, N.W.

PLAN

1. National Coal Board, South Midland Region No. 6  
(Land Survey Branch)

Sudeley Geological Section C-D  
No. 060422/27 (1967)

---

(G)

FIELD SURVEY

Griff Colliery, 1774-1789: A Report

A field survey and study of documentary evidence relating to the colliery undertaking of Sir Roger Newdigate at Collycroft (Griff) between 1774 and 1789, and carried out by a special class conducted by the author on behalf of the Department of Extramural Studies, University of Birmingham, in 1971.

Copy deposited in the library of the Department of Extramural Studies, University of Birmingham, in 1972.

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(H)

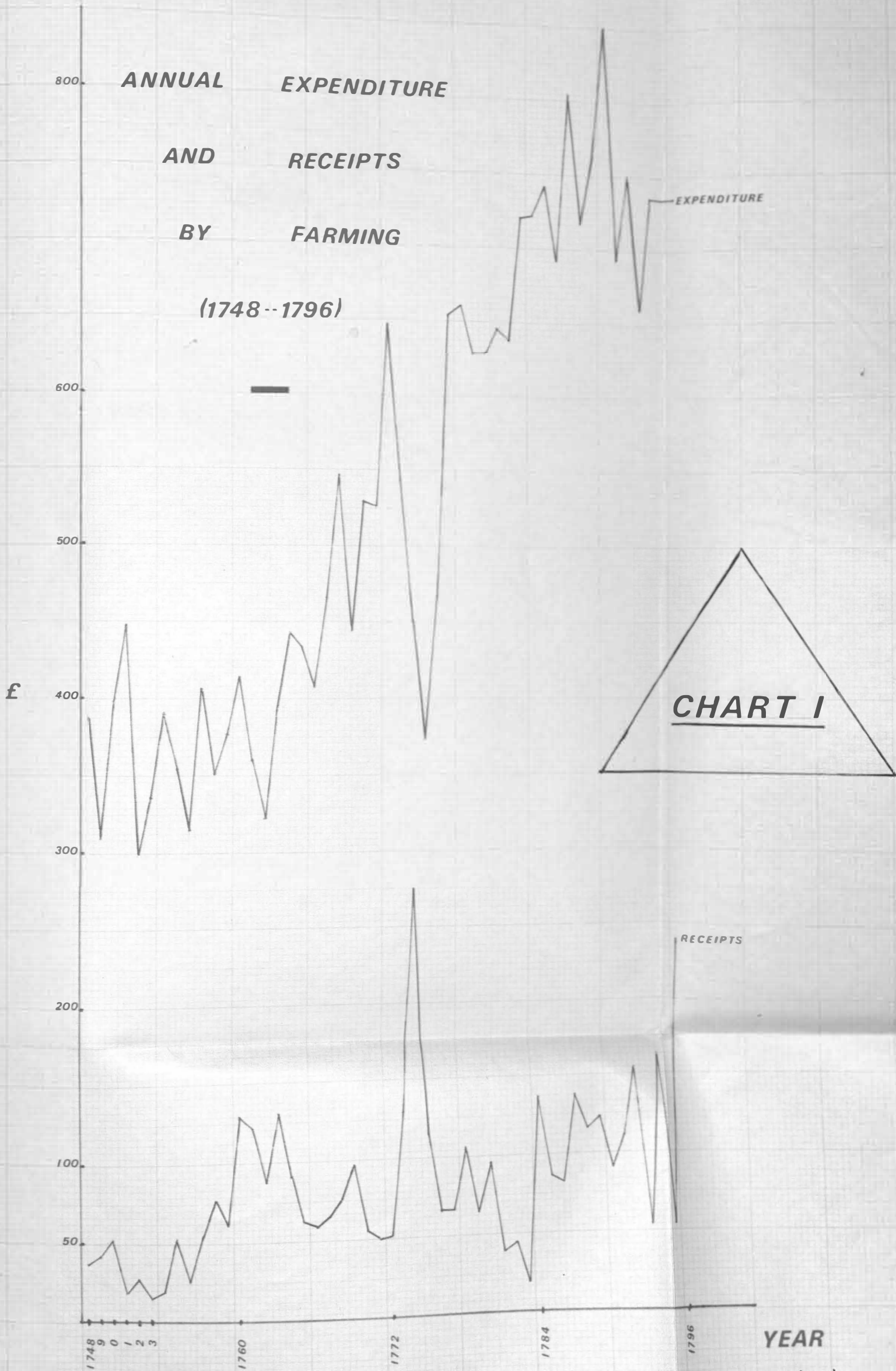
WORKS OF REFERENCE

		<u>Edition consulted</u>
A.	<u>Directories</u>	
(i)	Burke <u>Peerage, Baronetage and Knightage</u>	1953
(ii)	Burke <u>Landed Gentry</u> (Vols. I and II)	1893
(iii)	Gibb V. <u>The Complete Peerage</u> (Vol. II)	
B.	<u>Victoria County History</u>	
(i)	V.C.H. <u>Warwickshire</u> (Vol. VII, Birmingham)	
C.	<u>British Association</u> - Handbook	1950
	- <u>The</u>	
D.	<u>Geological Survey</u>	
(i)	British Regional Geology: <u>The Central England District</u>	1958
(ii)	<u>The Geology of the Warwickshire Coalfield</u> (H. M. Howell)	1859

---

CHART I

SIR ROGER NEWIDGATE'S ANNUAL EXPENDITURE AND RECEIPTS  
BY FARMING



**CHART I**

*A White '72*

**CHART II**

**MEDIAN COMMODITY PRICES IN LONDON  
1760-1772**

**MEDIAN COMMODITY**

**PRICES**

**LONDON 1760 - 1772 .**

**PRICE**

**IN**

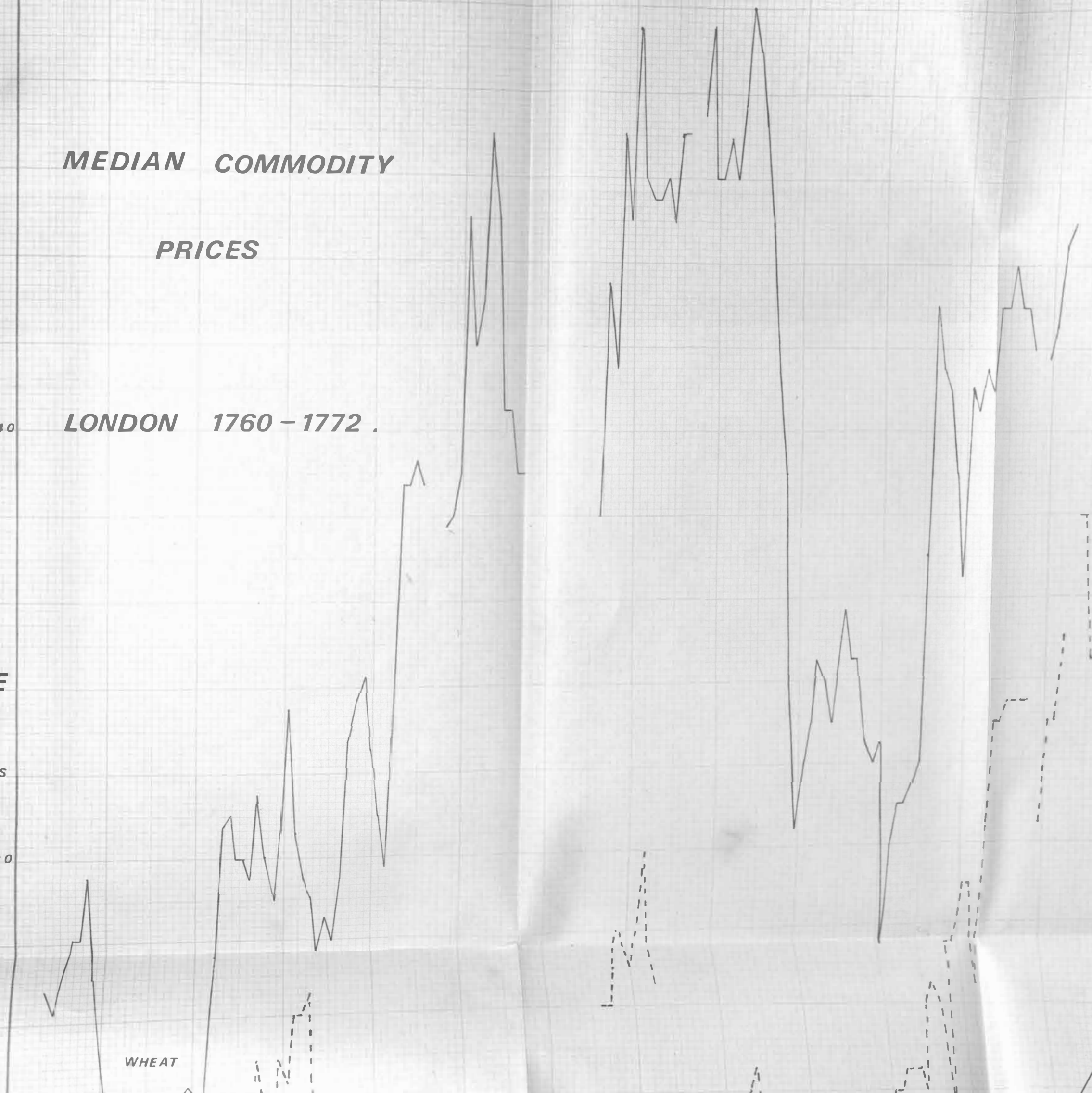
**SHILLINGS**

30

40

50

WHEAT



30

20

16

12

WHEAT

RYE

OATS

CHART II

YEAR

1760

62

64

66

68

70

1772

*White*  
*'72.*

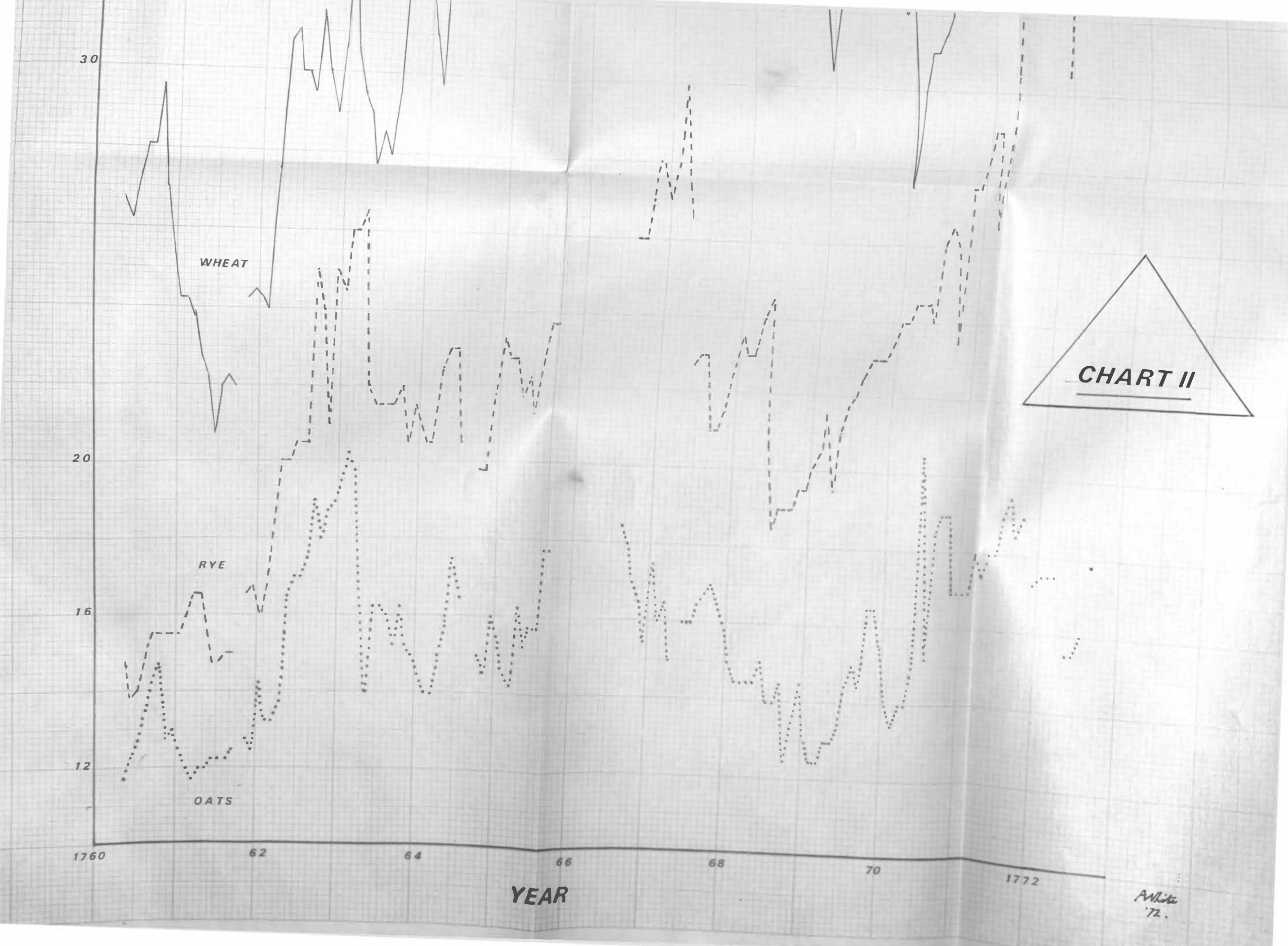


CHART III.

THE PROGRESS OF FARM, COTTAGE AND SMALL RENTS  
ON THE  
NEWDIGATE ESTATE  
1763-1768



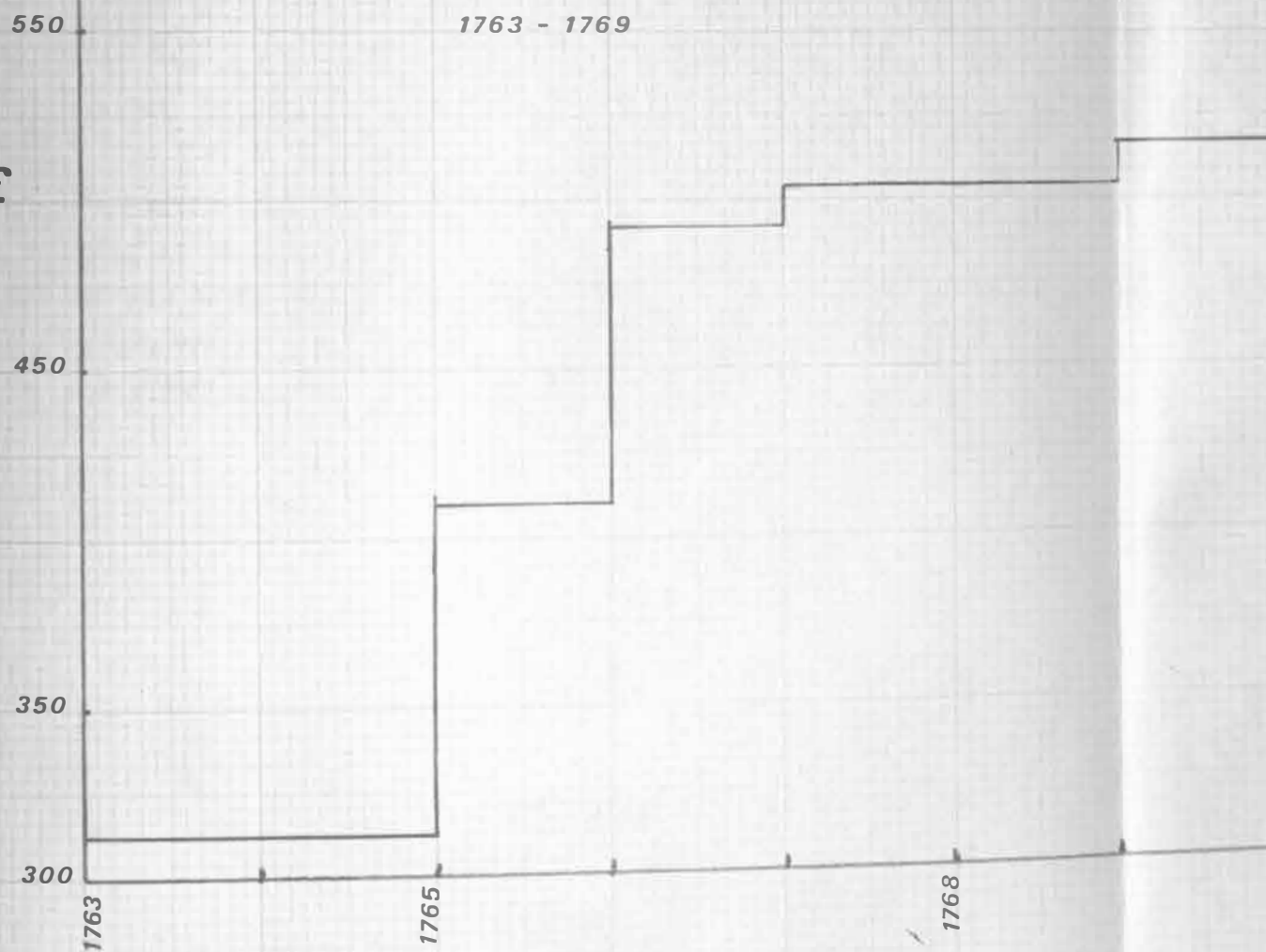
1

# Chilvers Coton

Increases in farm rents in the

"Common Fields"

1763 - 1769

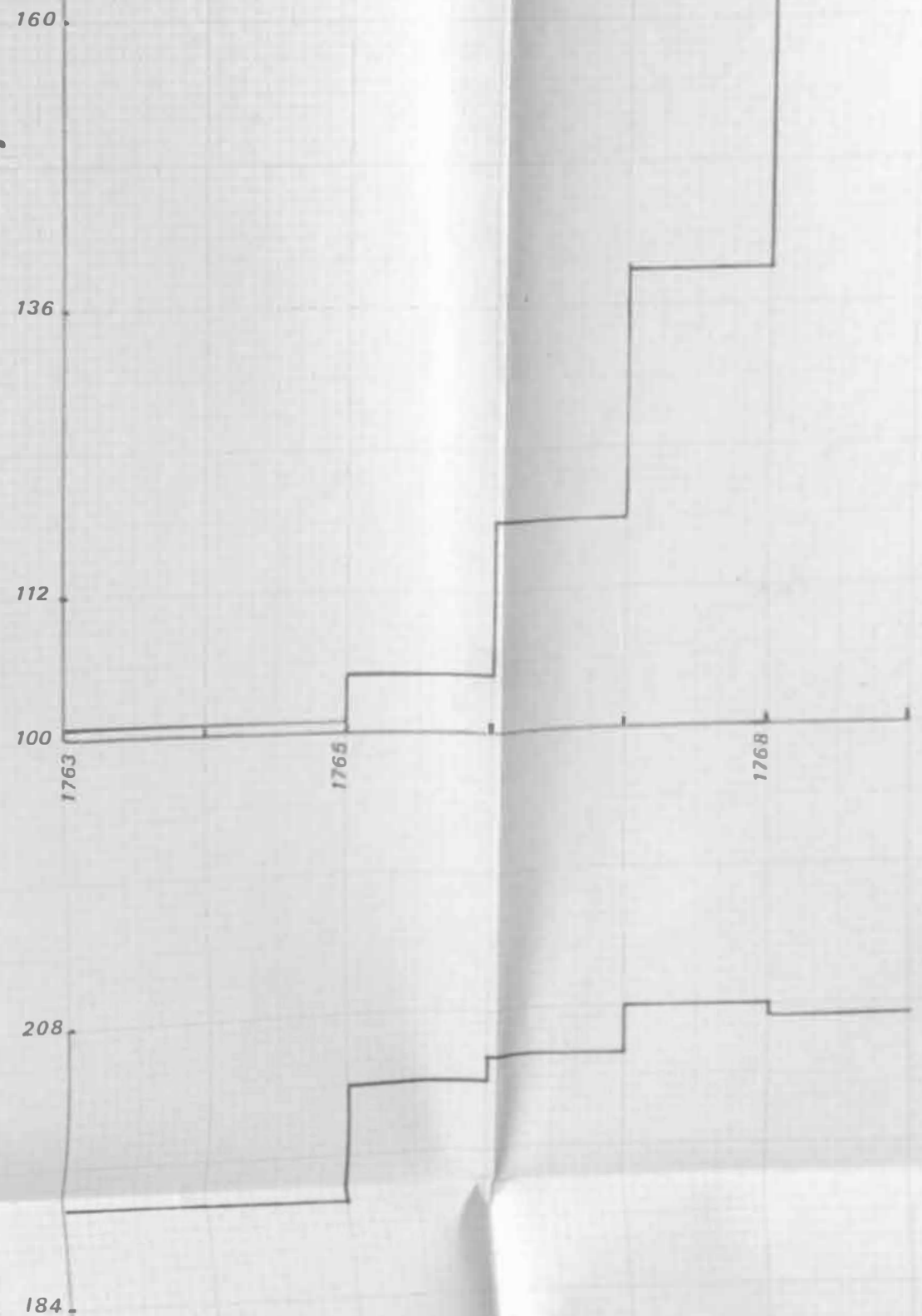


2

# Chilvers Coton

Increases in cottage and small rents

1763 - 1768





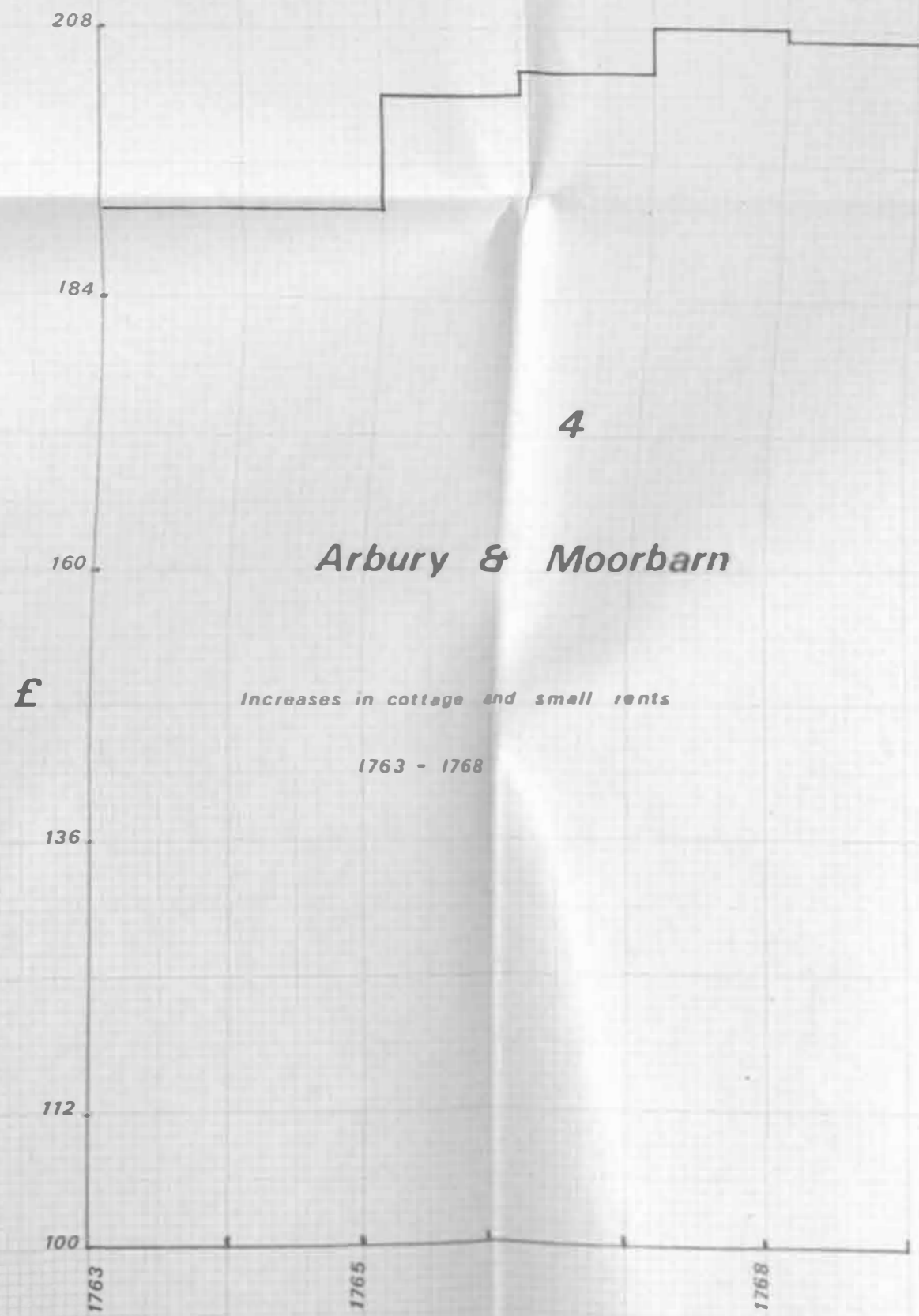
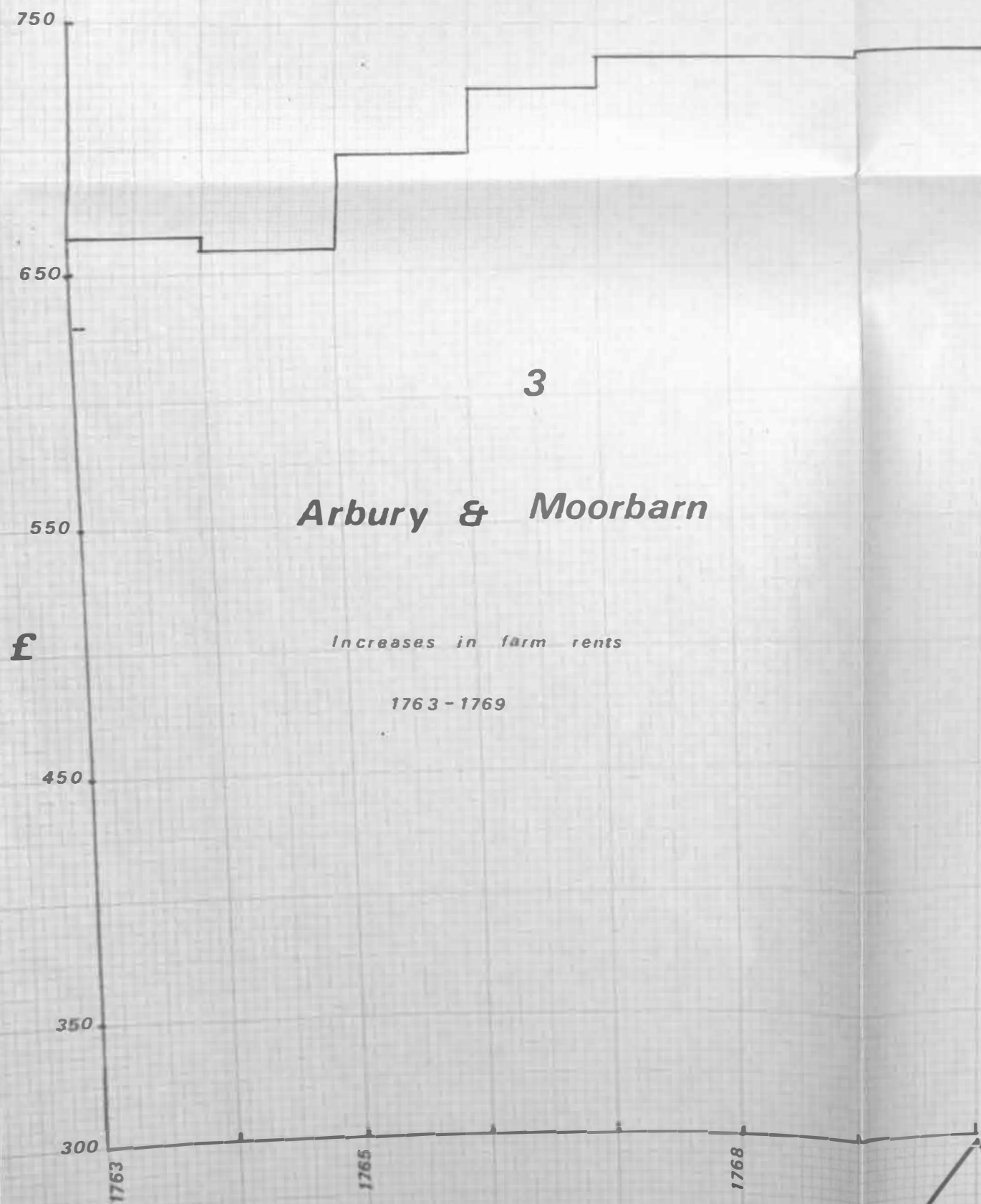


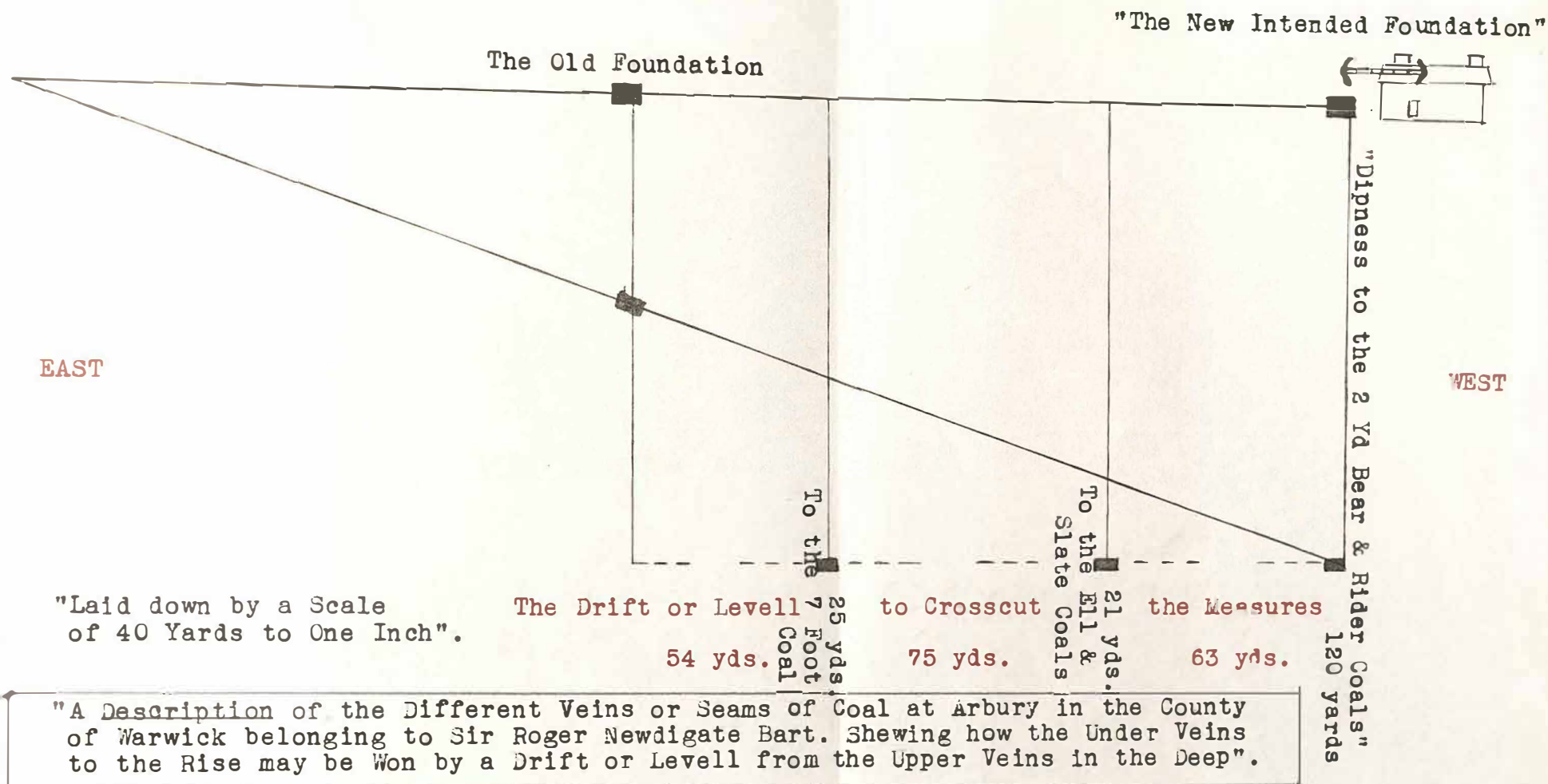
CHART III

White  
'72.

PLAN 1

"A DESCRIPTION OF THE DIFFERENT VEINS OR SEAMS OF  
COAL AT ARBURY IN THE COUNTY OF WARWICK BELONGING  
TO SIR ROGER NEWDIGATE BART. SHEWING HOW THE  
UNDER VEINS TO THE RISE MAY BE WON BY A DRIFT  
OR LEVELL FROM THE UPPER VEINS IN THE DEEP"

Source: CR 136/ C626



PLAN 1

White  
172.

PLAN 2

"1770 SECTION OF NEW FOUNDATION COALWORK"

"1770 Section of New Foundation  
Coalwork"

## PLAN 2

WEST

EAST

Level of Arbury Canal

Fire  
Engine Waterwheel

Level of Coventry Canal

165 Yards

New Foundation

Old Foundation

Old Hollows

Two Yard Bare & Rider Coals

Slate & Ell Coals

Seven foot Coal

Source: CR 136 / C629

A White  
'72.

PLAN 3

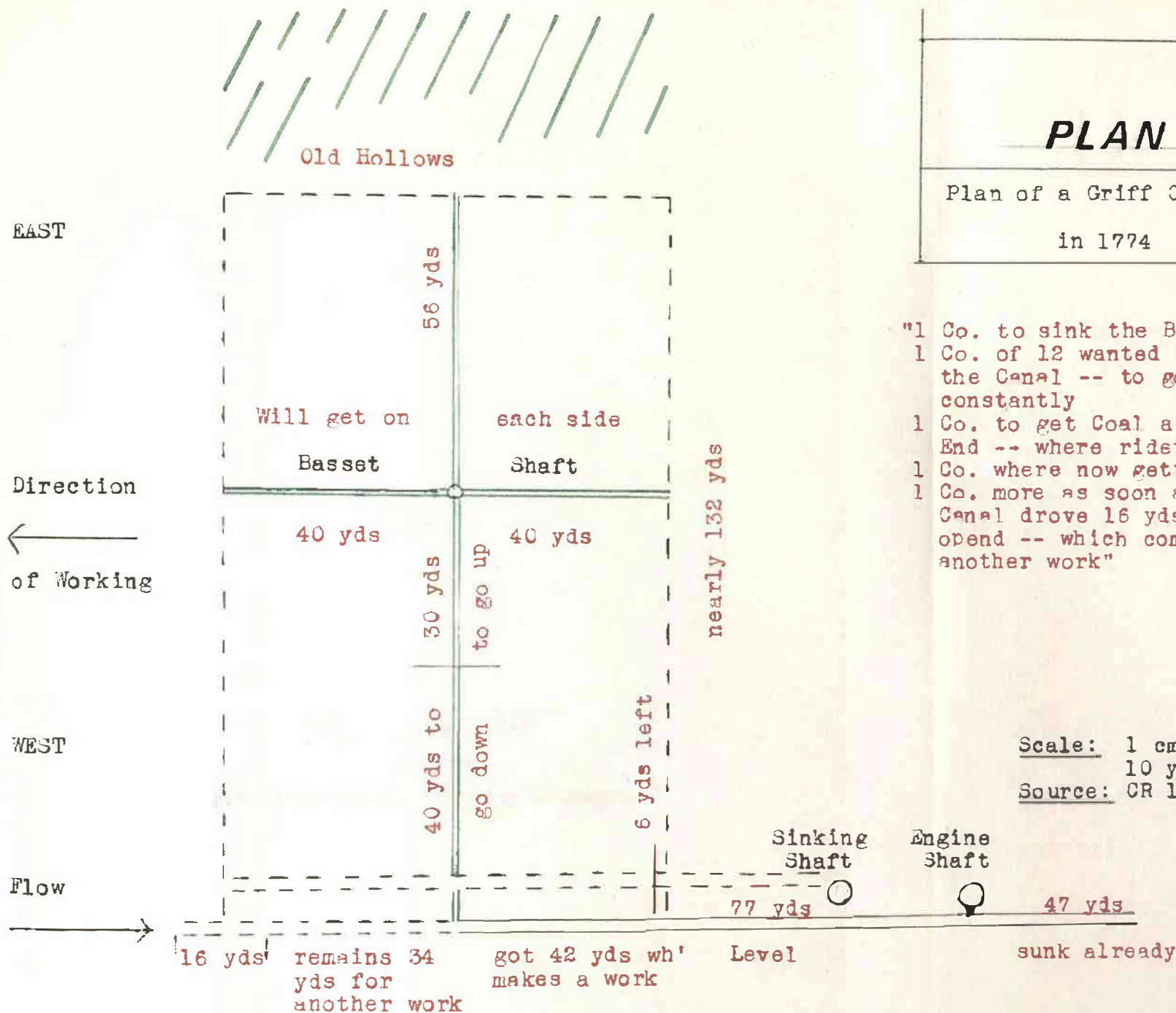
PLAN OF A GRIFF COAL PIT IN 1774

Plan of a Griff Coal Pit  
in 1774

in 1774

- "1 Co. to sink the Basset pit  
1 Co. of 12 wanted to drive  
the Canal -- to go on  
constantly  
1 Co. to get Coal at the South  
End -- where rider is left  
1 Co. where now getting  
1 Co. more as soon as the  
Canal drove 16 yds & heads  
opend -- which completes  
another work"

Source: CR 136/ C638



White  
'72.

PLAN 4

BARNES' REVISED PLAN  
OF 1775  
FOR CROSSCUTTING THE COAL MEASURES



Surface

Engine

Shaft

WEST

EAST

John Barnes' revised plan  
of 1775 for crosscutting  
the coal seams

Source: CR 136/ C639

**PLAN 4**

New Foundation

Old  
→  
Hollows

106 yards

Two Yard, Bare & Rider Coal

Two Yard, Bare & Rider Coal

21 yds

Slate & Ell Coal

Proposed Drift for future Winnings

Scale: 1 cm. equals  
10 yds.

PLAN 5

WARWICKSHIRE COLLIERIES AND THEIR RELATIONSHIP  
TO THE  
UNFINISHED COVENTRY CANAL  
IN 1785

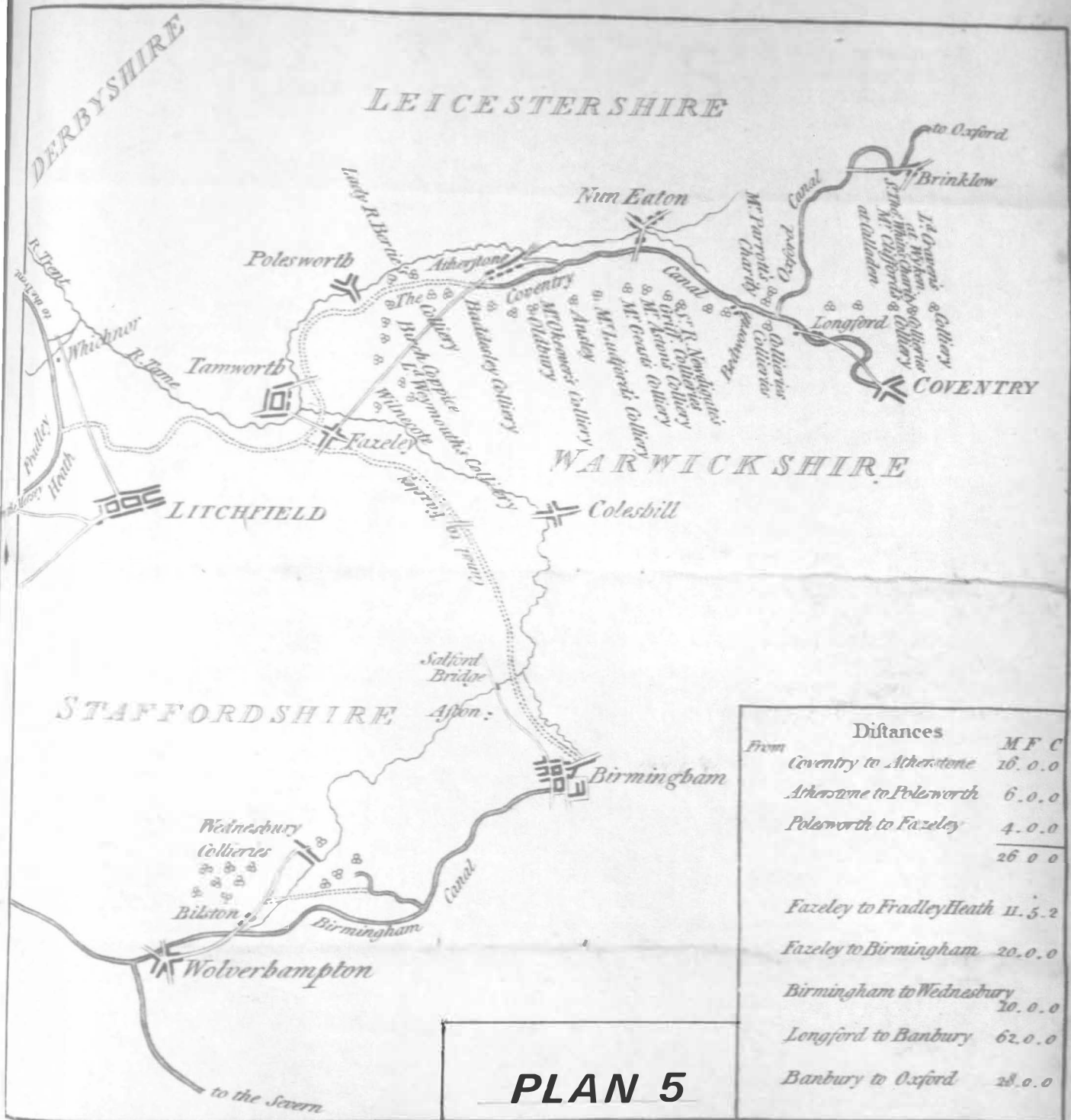


PLATE I

"HALF A YEAR ACCOUNT  
OF  
HAWKESBURY COLLIERY"  
(1785)



# Half a years Account of Hawthornburg Colliery 25 June 1705

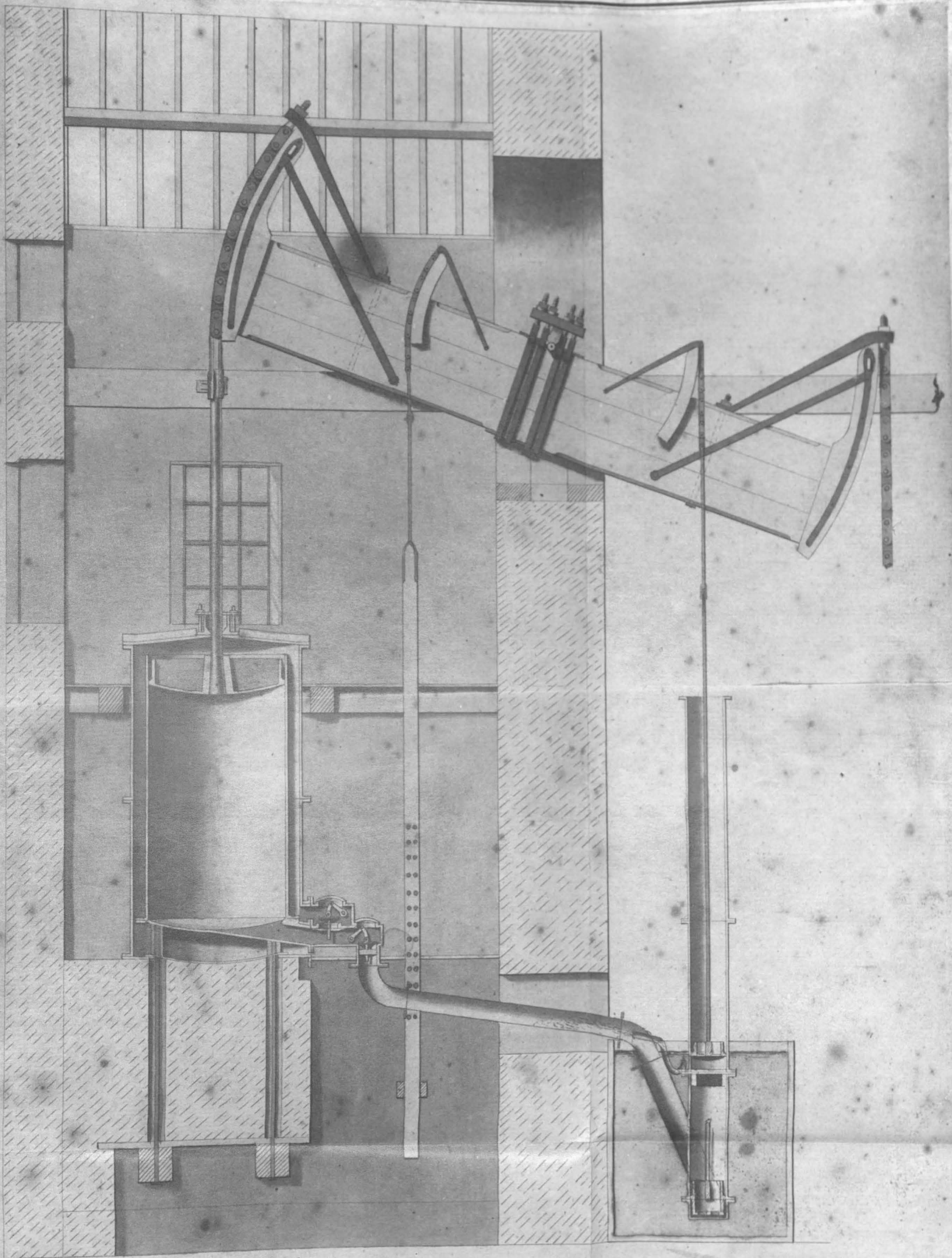
Farm & Cash

	Coal Got	Value Coal	Accidental Receipts	Chr	Heading	Engine	Conting	Stables	Wood	Proper	Coal Sold	Value Coal	Accidental Receipts	Recd	Paid
1705	Ton cw'	L S D	L S D	L S D	L S D	L S D	L S D	L S D	L S D	L S D	Ton cw'	L S D	L S D	L S D	L S D
January 01	404:5	202:2:6	2:10:2	57:5:6	110:14:11	5:11:3	33:13:6	31:13:2	272:7:0		401:5	202:2:6	2:10:2	15:0:0	1:4:4
22	636:6	310:3:0	2:10:1	64:12:6	121:10:11	6:10:6	21:16:7	13:7:3	54:11:5		636:6	310:3:0	2:10:1	19:2:0	9:2:9
Feb 5	025:16	112:10:0	2:6:5	117:13:2	96:3:10	5:10:5	20:6:23/4	66:13:6	130:16:9		025:16	112:10:0	2:6:5	29:4:0	16:7:6
19	700:15	350:7:6	3:3:13/4	101:5:7 1/2	30:14:2	6:7:0	23:16:1 1/2	90:17:0			700:15	350:7:6	3:3:13/4	23:5:0	20:7:2
March 5	962:5	401:2:6	2:7:10	207:19:0	32:19:0	7:0:3	21:5:10	16:12:0	13:1:4	3:19:0	272:5	136:2:6	2:7:10	21:7:0	3:0:0
19	010:2	109:1:0	0:3:0	101:10:10	60:3:0	5:9:0	26:3:0 1/2	11:0:7	0:16:0		600:2	311:1:0	0:3:0	3:10:0	3:0:0
April 2	090:3	119:1:6	6:11:0	195:17:11 1/2	55:5:0	16:12:0	29:10:5 1/2	39:3:5			1090:3	519:1:6	6:11:0		22:10:11 1/2
16	1009:4	511:12:0	7:10:6	231:17:0	41:4:10	7:13:3	26:10:13 1/2	10:2:0			1229:4	611:12:0	7:10:6	15:0:0	5:10:0
30	955:0	177:10:0	7:10:0	195:9:2	56:11:0	7:0:9	25:19:10 1/2	31:0:0			955:0	177:10:0	7:10:0	17:10:0	0:12:11 1/2
May 14	906:11	153:7:0	19:13:10	101:7:0	20:19:0	20:7:1	54:1:5 1/2	02:0:0	1:9:4	11:6:1 1/2	910:11	153:7:0	19:13:10	17:5:0	0:3:0
20	1055:13	527:16:6	11:14:0	225:11:1 1/2	20:15:0	5:5:6	36:0:3	3:2:0	71:12:6		1115:13	557:16:6	11:14:0		2:10:6
June 11	097:16	111:10:0	5:0:5	161:7:5	39:9:6	5:14:1	10:13:5 1/2	29:1:1	2:10:6		553:16	276:10:0	5:1:5	54:11:0	37:11:9 1/2
25	702:15	351:7:6	1:17:0	130:3:3	33:4:2	4:14:0	02:5:11 1/2	20:3:0	0:11:0		172:15	256:7:6	1:17:0		260:10:6
Got	10052:11	5116:7:0	73:7:11 1/2	2170:19:7	794:15:1	104:15:5	166:11:0 1/2	515:11:3	550:7:6	15:5:1 1/2	9062:11	4931:7:0	73:7:11 1/2	197:10:0	121:5:3
		73:7:11 1/2										73:7:11 1/2		197:10:0	
Value Coal & Stock	5119:11 1/2			Got Hawthorn	10052:11	Chr 2170:19:7					Value Coal & Stock	5001:11 1/2			
Colliery Paym	1656:5:0			Asstls	1150:11	Chr 207:17:11					Colliery Payments	1656:5:0			
Profit	0113:9:3 1/2			Chr of 12003:0		2370:17:6	3:11 1/2				Mallice	311:9:3 1/2	Total Recd	5001:11 1/2	1079:12:3
Stock Decr	2380:10	1190:5:0		Heading		794:15:1	1:33 1/2				Stock	3370:10	1605:5:0	Colliery Paym	1079:12:3
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2	0:0 3/4								
				Chr of 12003:0		2370:17:6	3:11 1/2								
				Heading		794:15:1	1:33 1/2								
				Engine		104:15:5	0:2: 1/2								
				Conting		166:11:0 1/2	0:9 1/2								
				Stables		515:11:3	0:10 1/2								
				Wood		550:7:6	0:11 1/2								
				Proper		15:5:1 1/2									

PLATE II

SECTION OF THE BEDWORTH ENGINE (1776)





SECTION OF BEDWORTH ENGINE

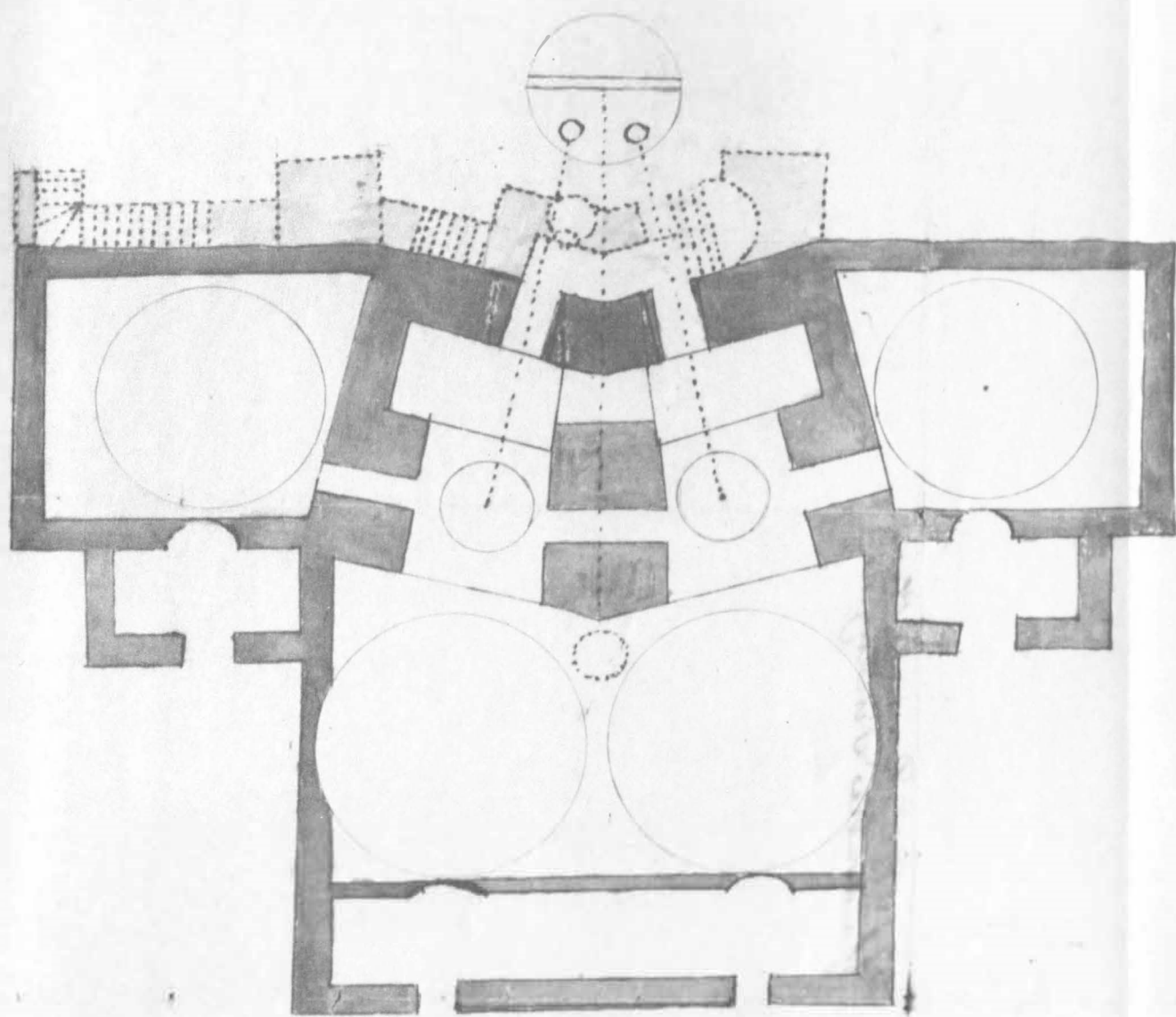
PLATE II

PLATE III

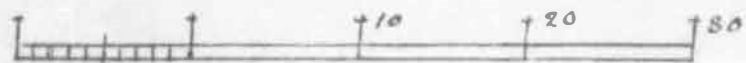
SIR RIGER NEWDIGATE'S "FIRE ENGINE" OF 1774



# PLATE III



*crossed square 8*



*Scale of Feet*

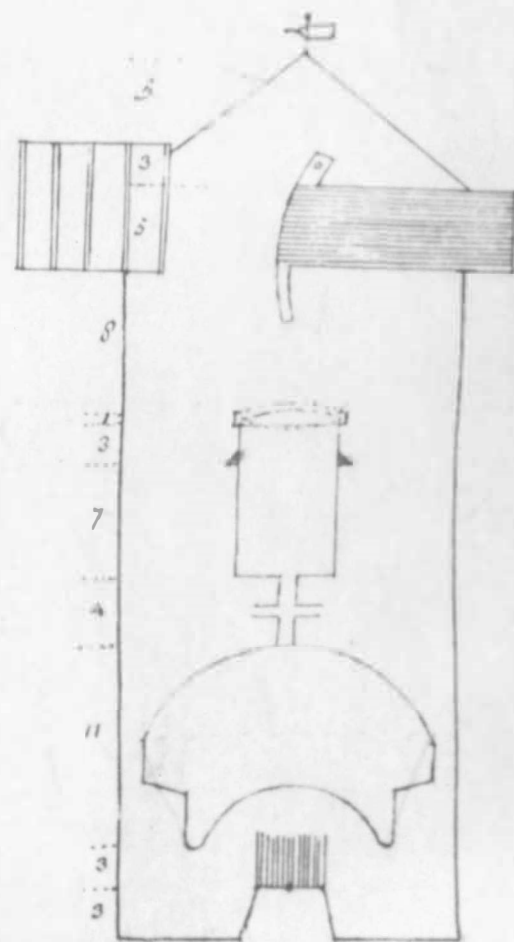


PLATE IV.

SECTION OF ALEXANDER DONALD'S ENGINE  
FOR NUNEATON COLLIERY  
IN 1797



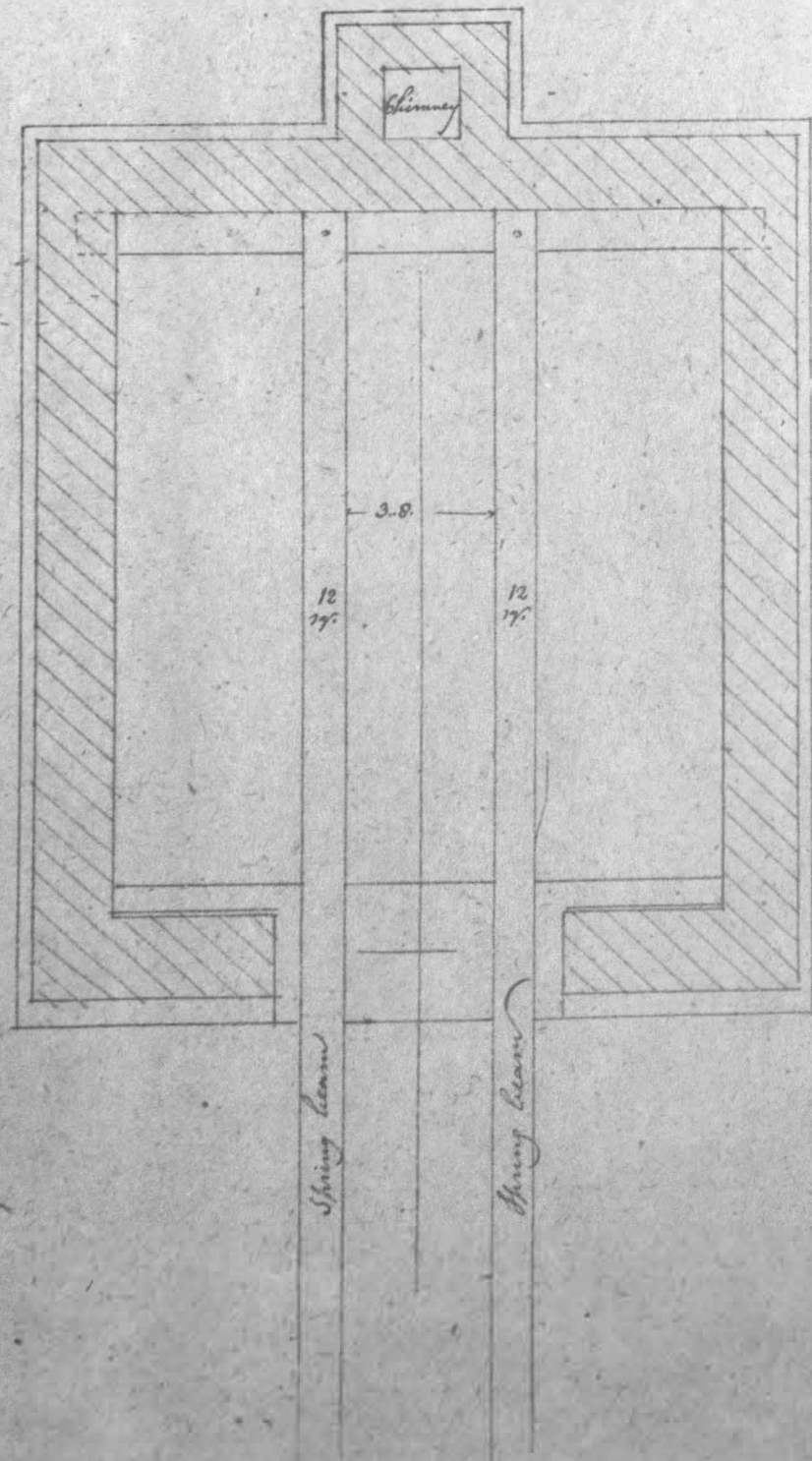
PLATE V

GROUND PLAN OF ENGINE HOUSE  
FOR  
NUNEATON COLLIERY



*DOT Reverse*

*Plan taken above the Spring beams*



*Meat. Donald Esq.  
to Smith to the foot Nov. 29<sup>th</sup> 1797*

*DOS Reverse*

*Ground Plan of the Engine house*

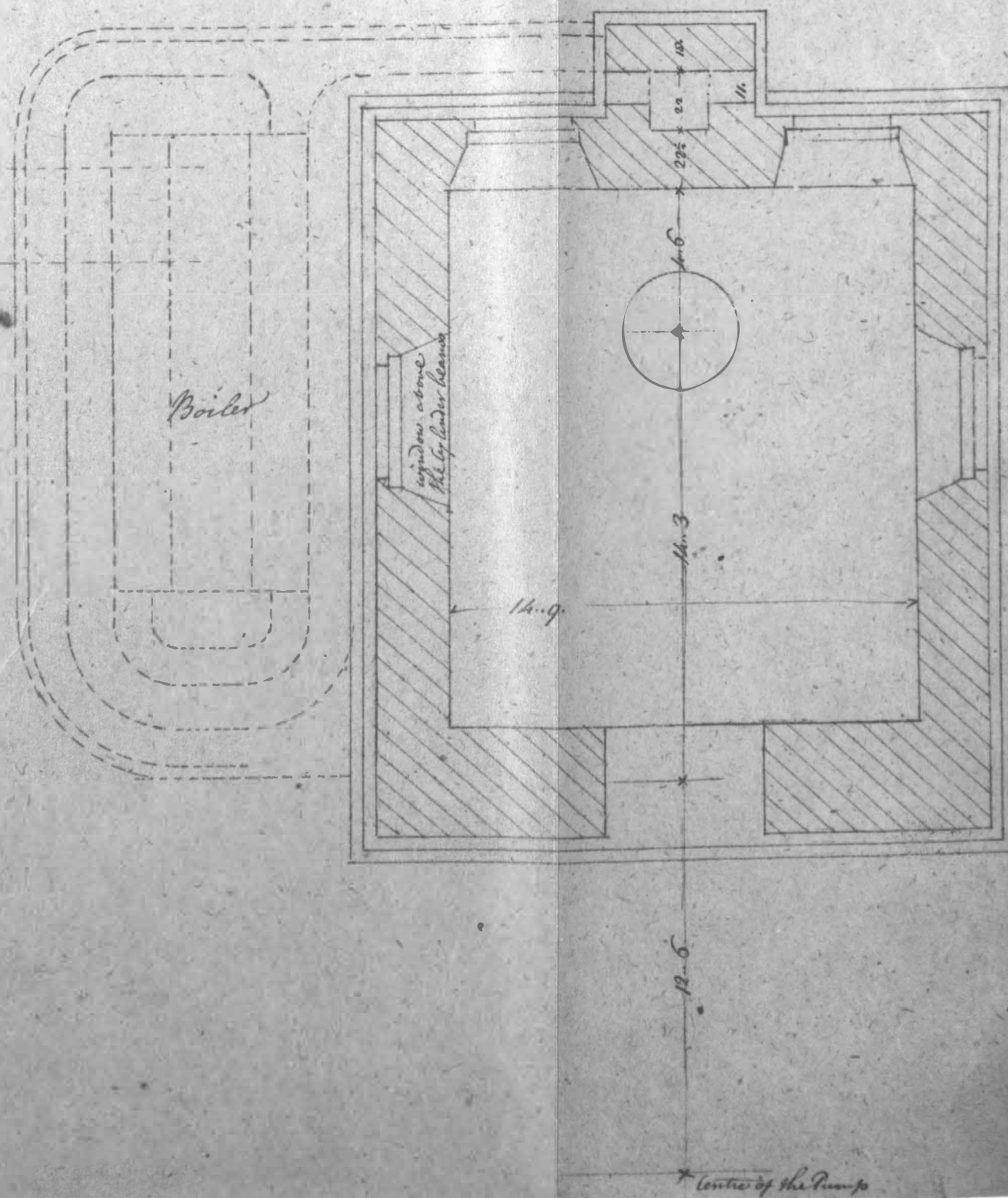


PLATE VI

SMEATON'S "DESIGN FOR A COAL DRAWING ENGINE AT GRIFF"  
(1774)

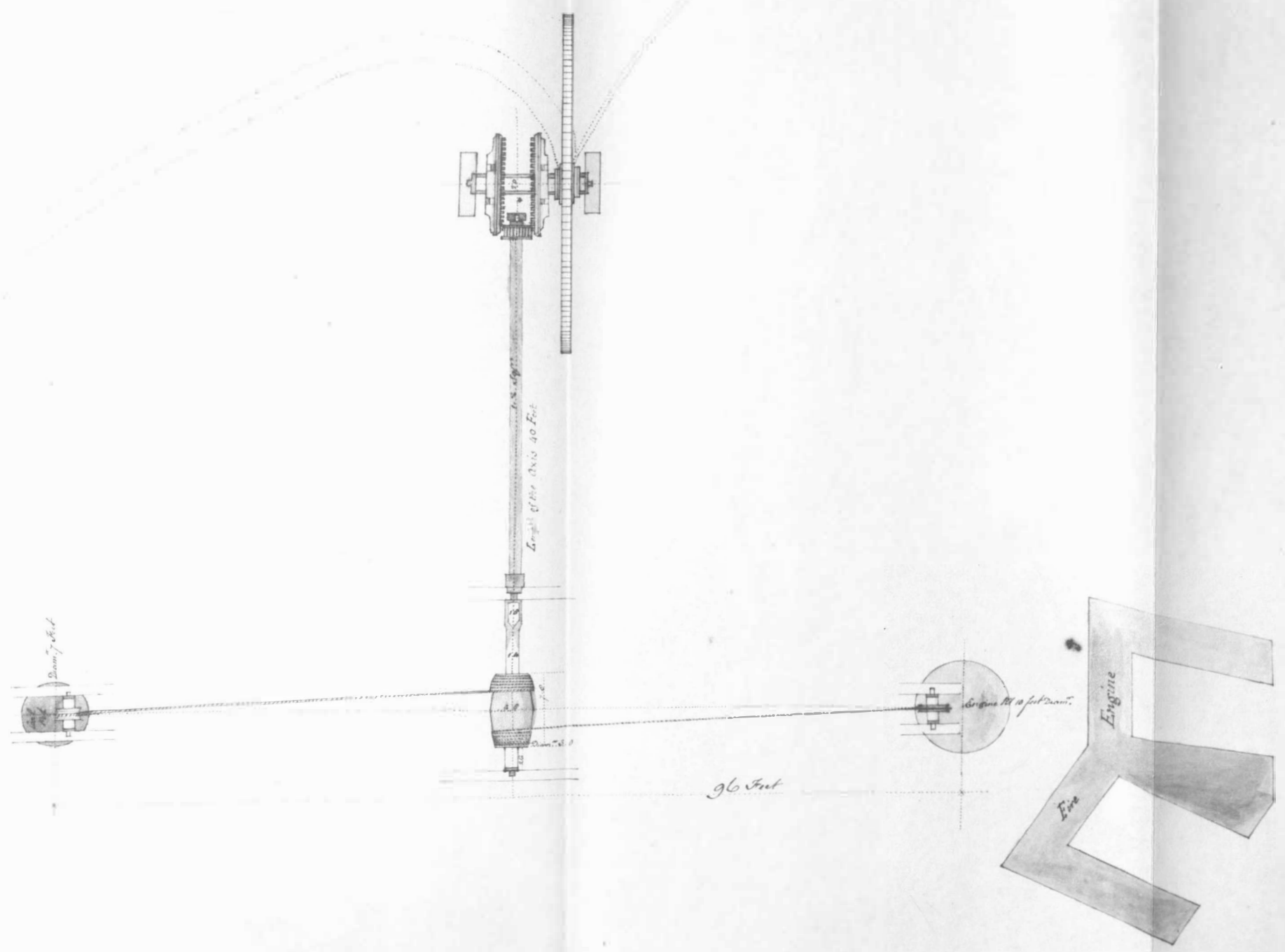
# Design for a COAL DRAWING ENGINE at Griff

Warwick County  
Record Office  
Ref. CR 136/MSO

Main Logg wheels 72 Logs at 5 1/4 Pitch 10 ft Diameter  
Hollows ... 21 Holes ... 2.11  
Holes 2 ft. ... 2.11



Canal



Reservoir

Engine

96 Feet

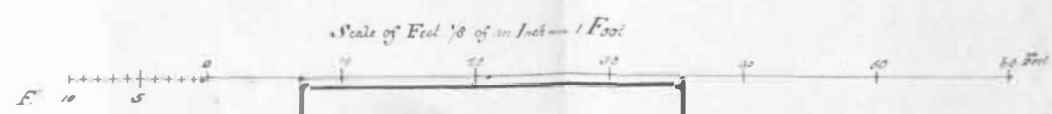


PLATE VI

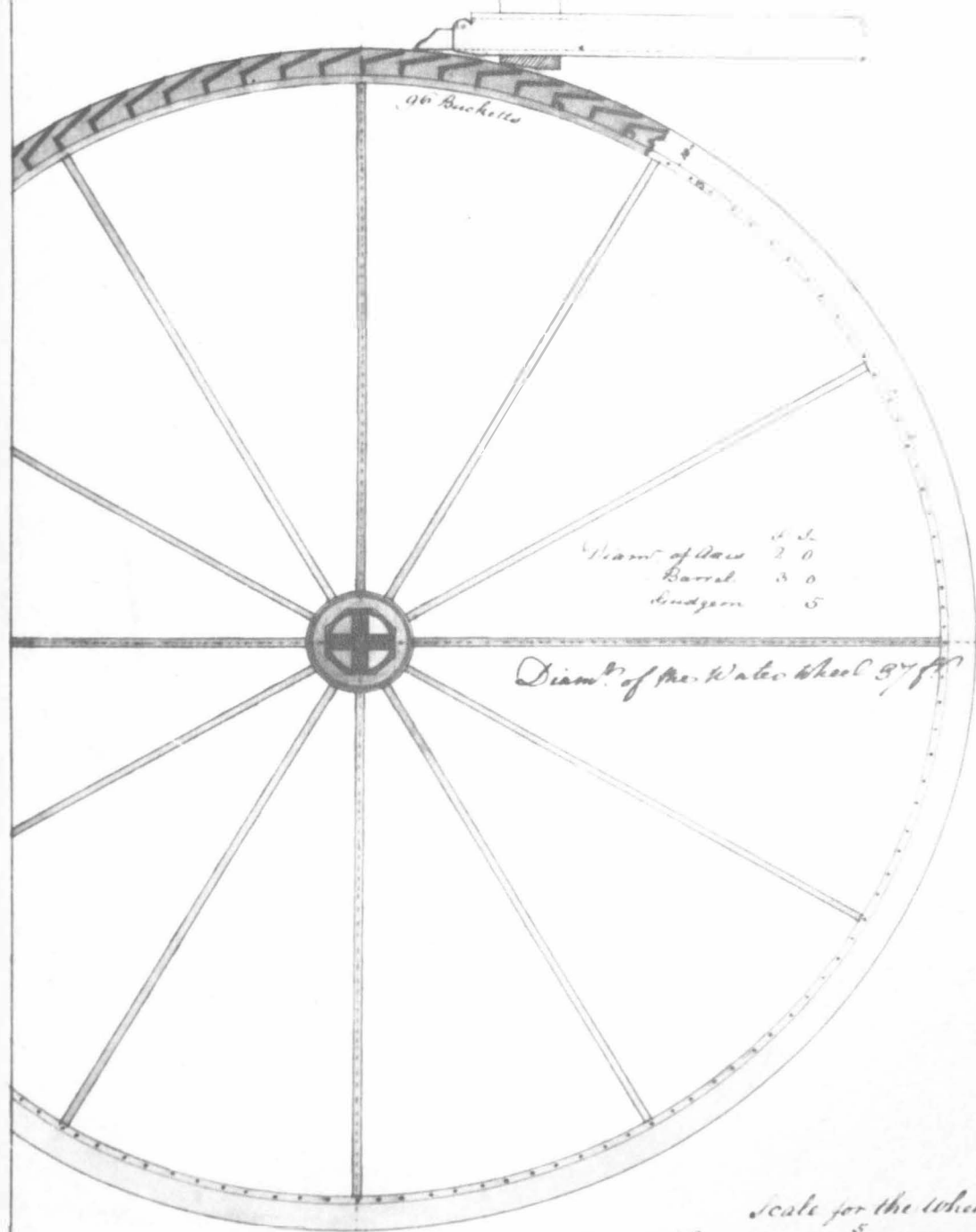
The Author

PLATE VII

SMEATON'S "WATER WHEEL FOR THE COAL DRAWING ENGINE AT GRIFF"

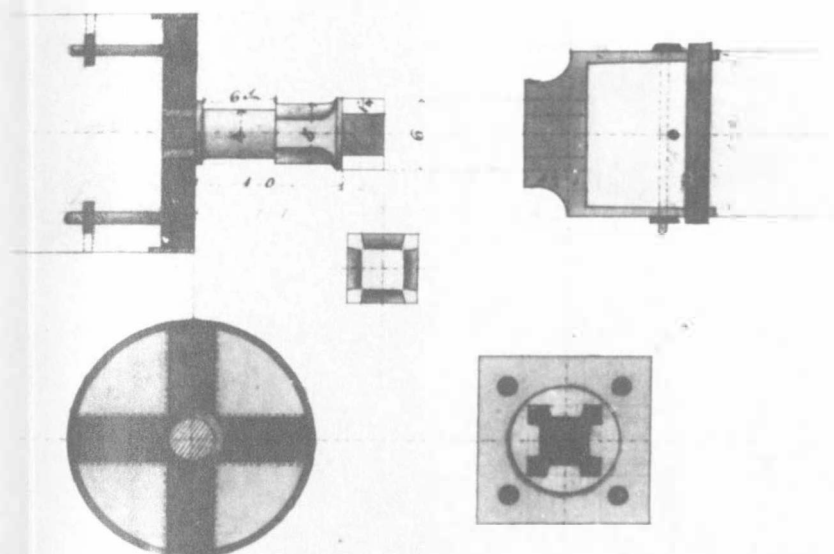


**WATER WHEEL**  
for the Coal drawing Engine  
at Griff.

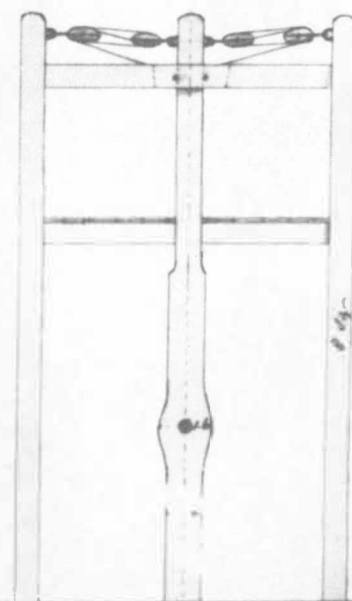


**PLATE VII**

*Design for the Iron Work for joining the Axes.*



*Scale for the Iron Work an Inch = a Foot*



*Upright  
of the Moveable Carriage  
for the Water wheel*

*Scale for the Wheel & Upright 1/2 Inch = 1 Foot*

*Simonton 1774*

PLATE VIII

WHITE'S "AIR MACHINE" OF 1789

A D 1789 MAY 12 N° 1681  
WHITES *Seal*

Warwick County  
Record Office  
Ref. CENTIMETRES  
INCHES

FIG. 1. *Profile of the Side of the Machine.*

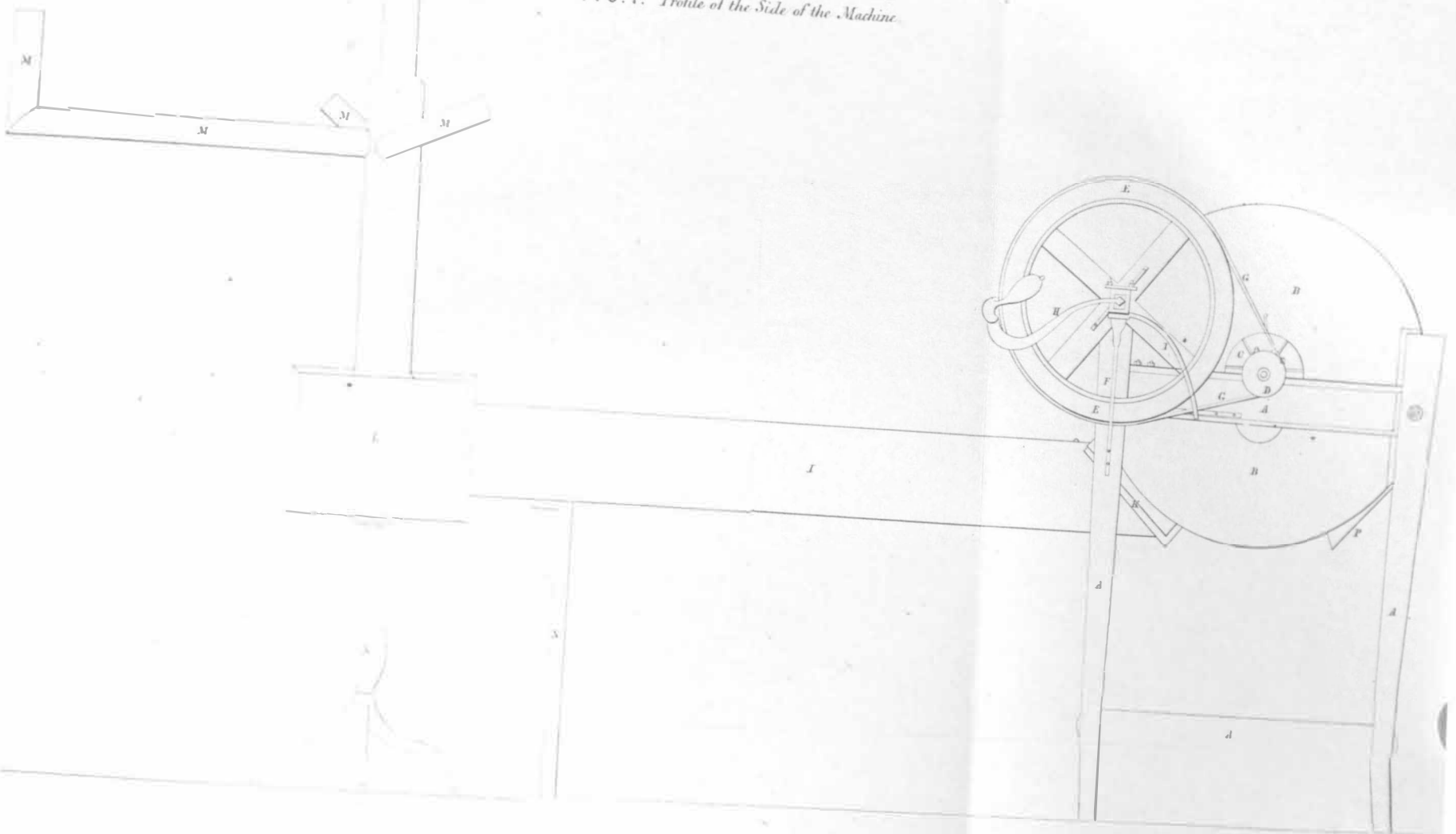


FIG. 2. *Profile of the Front of the Machine.*

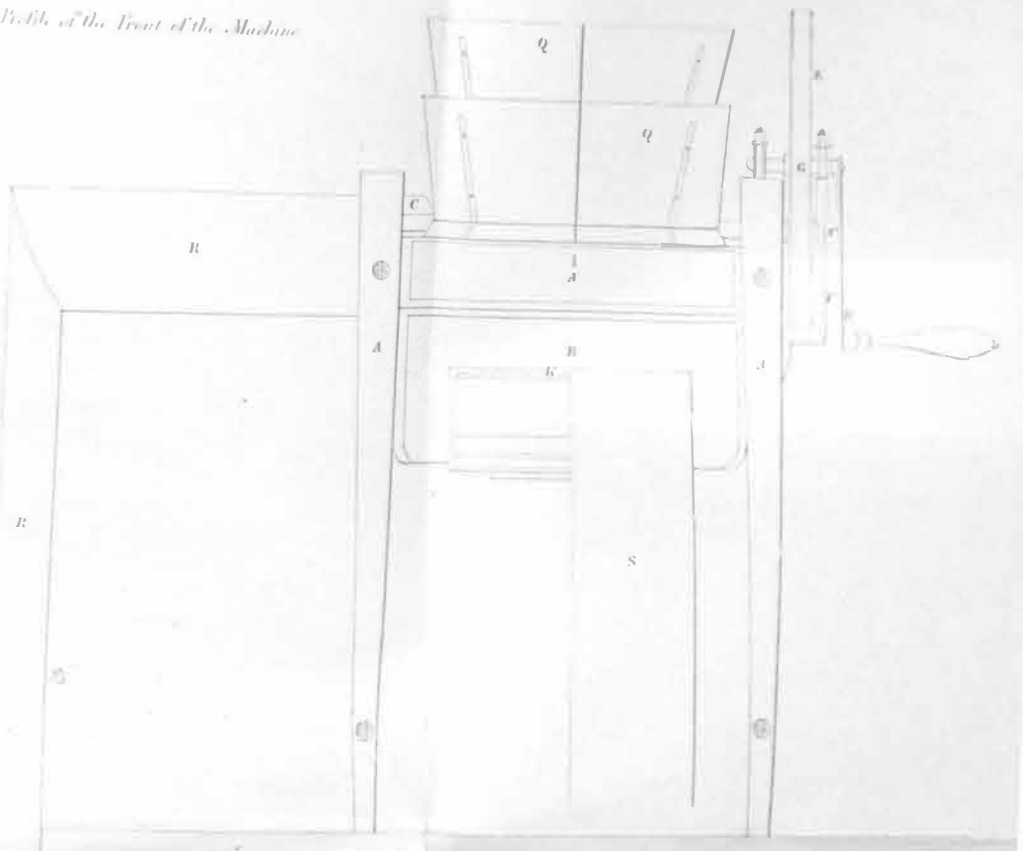


FIG. 3.

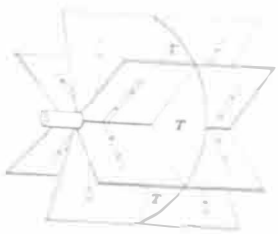


FIG. 4.



*This enrolled drawing is colored.*

LONDON: Printed by GEORGE EDWARD FINE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1856.

**PLATE VIII**

PLATE IX

HAWKESBURY ENGINE TESTS  
(1776-1779)

(111) Hanksbury, Old Engine

17<sup>th</sup> December 1776

Cyl. Dia. 61 Squ. 3721 Str. 6.4 Cont. 120, 39

Pumps. diam. 12 depth. 127 stroke 6.4 weight 10703 to cylinder 10703

Hou. Pp. 10 — 8 — 4.3 — 818 — 818

Total

19521 19521

Square inches Cylind. 2922, 4734 — Load per sq. inch 6, 679

Strokes in min. 8, 5  $\nabla$  per stro. 4, 96  $\nabla$  per min. 43, 16 —

$\nabla$  per hour 2529, 6 Coals per hour, by account

Coals per day

hours of working

Coals by exper.

Hot well  $\times \times =$  cube inches

Inject. cistern  $4\frac{1}{2} \times 10 \times 7\frac{1}{2} \times 10 \times 2\frac{1}{2} = 150100$  in 27 for res. cube inches

Heat 152° — 52° gained 100°  $\times 5055, 8 \text{ inch} = 505580 \text{ inches}$

$\div 860^\circ = 600, 9$  inches per stroke = 5707, 65 — per minute

= 347259 per hour = 200, 9 cube feet  $\div 10 \text{ cub} =$

cubic feet per

2529, 6  $\nabla$  per hour  $\times 381\frac{1}{2}$  high = 963777, 6 — Feet

to one foot high, by

Beam to cylinder to pumps

Boiler

Flues by grate

Chimney squ. high

Note, When the Experiment on other side was made, the Engine was wrought with two Cylinders. The quantity of coals we have not been able to learn exactly, but suppose about 1500 lbs per hour. The Engine was then in its original state, before they had begun to repair it —

Experiment 24 Apr. 1778. — by Mr Henderson and Mr Faylor

41 bu. of coals, made 2019 Strokes — 41 Strokes filled the Brick Cistern, containing 292 Cubic feet, but 95 feet being deducted for the Water raised by the Sack-head Pump, leaves 197 Cubic feet  $\div$  by 41 Strokes, gives 4, 8 Cubic feet per stroke  $\times 2019$  strokes = 9691 Cubic feet of  $\nabla$  — raised from the mine with 116 bu. of coals — to 23636 Cubic feet of  $\nabla$  —

No Sack head Pump 10 inches diam. area 78, 5 in ches which  $\times$  by 57 inches length of stroke gives 2  $\frac{322}{1000}$  Cubic feet which  $\times$  by 41 is 95 feet

5 January 1781 — 1

Some error is suspected in the Experiment — inserted on the other page, because as above the Sack head pump raised 4220 inches

$4220 \times 100 = 422000 \div 860^\circ = 490, 69$  in  $\nabla$  per stroke  $\times 8, 5 = 4170, 065$  Cub inches  $\nabla$  per minute  $\times 60 = 250201, 9$   $\nabla$  per hour = 144, 82  $\div 15 \text{ cu} = 9, 65$   $\nabla$  per  $\text{cu}^\circ$

(11) Hanksbury, Old Engine

17<sup>th</sup> December 1776

Cyl. Dia. 61 Squ. 3721 Str. 6.4 Cont. 120, 39

	diam. inches	depth. inches	Stroke inches	weight lb	to cylinder
Pumps.	12	127	6.4	10703	10703
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—

Hou. Pp. 10 — 8 — 4.3 — 010 — 010

Total 19521 19521

Square inches Cylin. 2922, 4734 Load per squ. inch 6, 679

Strokes in min. 8, 5 per stro. 4, 96 ▽ per min. 42, 16

▽ per hour 2529, 6 Coals per hour, by account

Coals per day hours of working

Coals by exper.

Hot well x x = cube inches

Injct. cistern 48 10 x 78 10 x 29 = 150100 in 27 for 29 = 150100 cube inches

Heat 152° — 52° gained 100° x 5855, 8 inch = 585580 inches

÷ 860° = 680, 9 inches per stroke = 5707, 65 — per minute

= 347259 per hour = 200, 9 cube feet ÷ 10 cub ft =

cubic feet per A

2529, 6 ▽ per hour x 381 ft high = 963777, 6 — Feet

to one foot high, by = per

Beam to cylinder to pumps

Boiler

Flues by grate

Chimney squ. high

Note. When the Experiment on other side was made, the Engine was wrought with two Sticks The quantity of boats we have not been able to learn exactly, but suppose about 15 per hour The Engine was then in its original state, before they had begun to repair it —

Experiment, 24 Apr. 1778. — by Mr Henderson and Mr Taylor

41 bu. of coals, made 2019 Strokes. 41 Strokes filled the Brick Oven, containing 292 Cubic feet, but 95 feet being deducted for the Water raised by the Sack-head Pump, leaves 197 Cubic feet ÷ by 41 Strokes, gives 4, 8 Cubic feet per Stroke x 2019 Strokes = 9691 Cubic feet of ▽ raised from the mine with 41 bu. of coals — 23676 Cubic feet of ▽ —

No Sack head Pump 10 inches diam. area 78, 5 in ches which x by 57 inches length of stroke gives 2220 Cubic feet which x by 41 is 95 feet

5 January 1781 — 1

Some error is suspected in the Experiment — inserted on the other page, Sections as above the Sack head pump raised 4220 inches

4220 x 100° = 422000 ÷ 860° = 490, 69 in the stroke x 8.5 = 4170, 065 Cubic inches of water x 60 = 250203, 9 ft hour = 144, 82 ÷ 15 = 9, 65 ft per

# 12 Hawkesbury Old Engine

January 1779

Cyl. Dia. 61 Squ. 3721 Str. 7.77 Cons. 157.69

diam. depth stroke weight to cylinder.  
Pumps. 12. — 127 — 93½ — 10703 — 10703

Hou. Pp. 10 — 0 — 52½ — 010 — 010

Total 19521 19521

Square inches Cylind. 2922, 4734 Load per squ. inch 6, 679

Strokes in min. 7.20 ▽ per stro. 6, 11 — ▽ per min. 44, 40 —

▽ per hour 2660, 0 Coals per hour, by account

Coals per day hours of working

Coals by exper. 9, 11 —

Hot well x x = cube inches

Injct. cistern x x = cube inches

Heat — gained x =

÷ = inches per stroke = per minute

= per hour = cube feet ÷ =

cubic feet per

. 2660, 0 ▽ per hour x 381 high = 10160 12, 0 Feet

to one foot high, by 9, 11 Cut. — = 111615 feet per Cut.

Beam to cylinder to pumps equal

Boiler

Flues by grate

Chimney squ. high

No	Date	Strokes	Coals	Hours	Coal per
44		Number	Time	Cons.	Hour
1	Jan 7/14	3655	7.0	2.19	6
2	. 19	1791	7.9	1.16	4
3	. 20	3869	7.9½	3.14	8
4	. 23	7220	7.10½	7.5½	16½
					1.0, 13

19 Jan/1779 The Old Engine in 6 minutes made 43 Strokes & filled the Brick Cistern. Contents 292½ — 109. feet of being deducted for Water raised by Jack head Pump leave 109 cub. feet — The length of stroke in great Pump was 7ft. 9 inches. house pump 10 inches dia. 5 3/4 inch stroke. — The great Pump ought to have raised 261, 6 feet but only raised 109. less 72 feet —

20th Jan/ 1779. Engine in 39 strokes of 7 feet 10 inches filled Cistern — Contents 292 6. feet deduct for Jack head Pump — 94  
Water raised by large Pump — 198  
Loft — 239  
41 cub. ft.

22 Jan/ 1779  
In 5 minutes made 38 strokes and filled the Cistern — length of stroke 7ft. 10½ inches —



# Hawkesbury Old Engine

5<sup>th</sup> & 7<sup>th</sup> March 1779 - Trial

Cyl. Dia. 61 Squ. 3791 Str. 7.75 Cont. 157.20

diam. depth stroke. weight  $\nabla$  to cylinder.  
Pumps. 12 - 127 - 7.75 - 10703 - 10703

Hou. Pp. 10 - 8 - 53 - 010 - 010

Total 19521 19521

Square inches Cylind. 2922,4734 Load per squ. inch 6,679

Stroke per min. 0  $\nabla$  per stro. 6.023  $\nabla$  per min. 40,664 -

$\nabla$  per act. 2919,04 - Coals per hour, by account

Coals per day hours of working

Coals by exper. 3406wt. in 40<sup>m</sup> 12<sup>h</sup> = 11,566 <sup>lb</sup> per hour

Hot well x x = cube inches

Injekl. cistern x x = cube inches

Heat — gained x =

$\div$  = inches per stroke = per minute

= per hour = cube feet  $\div$  =

cubic feet per

2919,04  $\nabla$  per hour x 301ft high = 1112459 ft Feet

to one foot high, by 11,566 <sup>lb</sup> = 96103,55 feet per foot

Beam to cylinder to pumps equal

Boiler

Flues by grate

Chimney sq. high

5 March 1779. 10<sup>h</sup> after 1<sup>st</sup> PM.  $\nabla$  in Pit was down to Blast holes in New Engine

O. Eng<sup>r</sup> began to work 10<sup>h</sup> after 2<sup>nd</sup> PM

7<sup>th</sup> 22<sup>h</sup> past 1. PM.  $\nabla$  was down to blast holes of O. Eng<sup>r</sup>, which then ceased to work. Coals burnt from 10<sup>h</sup> past 1. m 5<sup>th</sup> to 22<sup>h</sup> past 1 m 7<sup>th</sup> being 48<sup>m</sup> 12<sup>h</sup> was 3486wt. 35<sup>h</sup> Strokes filled a Cistern, Contents 292<sup>ft</sup>. Jack head pump 10 dia<sup>in</sup> Stroke 33<sup>in</sup>. Eng<sup>r</sup> made 8 Strokes <sup>ft</sup> of 7. 9. each = 14442 in 40<sup>m</sup> 12<sup>h</sup>.

from the whole Contents of Cistern viz 292<sup>ft</sup> deduct  $\nabla$  raised by Jack head pump in 35<sup>h</sup> = 85,2 leaves the  $\nabla$  raised by Great Pump in do = 206.8  $\div$  by 35<sup>h</sup> is = 5,9225. x 14442 = 84080,545 of  $\nabla$  in 40<sup>m</sup> 12<sup>h</sup>.

New Eng<sup>r</sup> raises 99711 of  $\nabla$  in 96,1.12 hours in 2 days O. Eng<sup>r</sup> raises 84080,545 - do 3486wt in 20<sup>m</sup> of 84080,545 of  $\nabla$  require 340 then 99711 will take 1412,65

But the New Eng<sup>r</sup> took only 96,3 consequently saved 316,35 <sup>lb</sup> of coals 1/3 of which is 105,45 which <sup>Share</sup> of agreement is our, for 2 days, or equal to 962,23 Tons of Annam For Hawkesbury New Engine See ( )



PLATE X

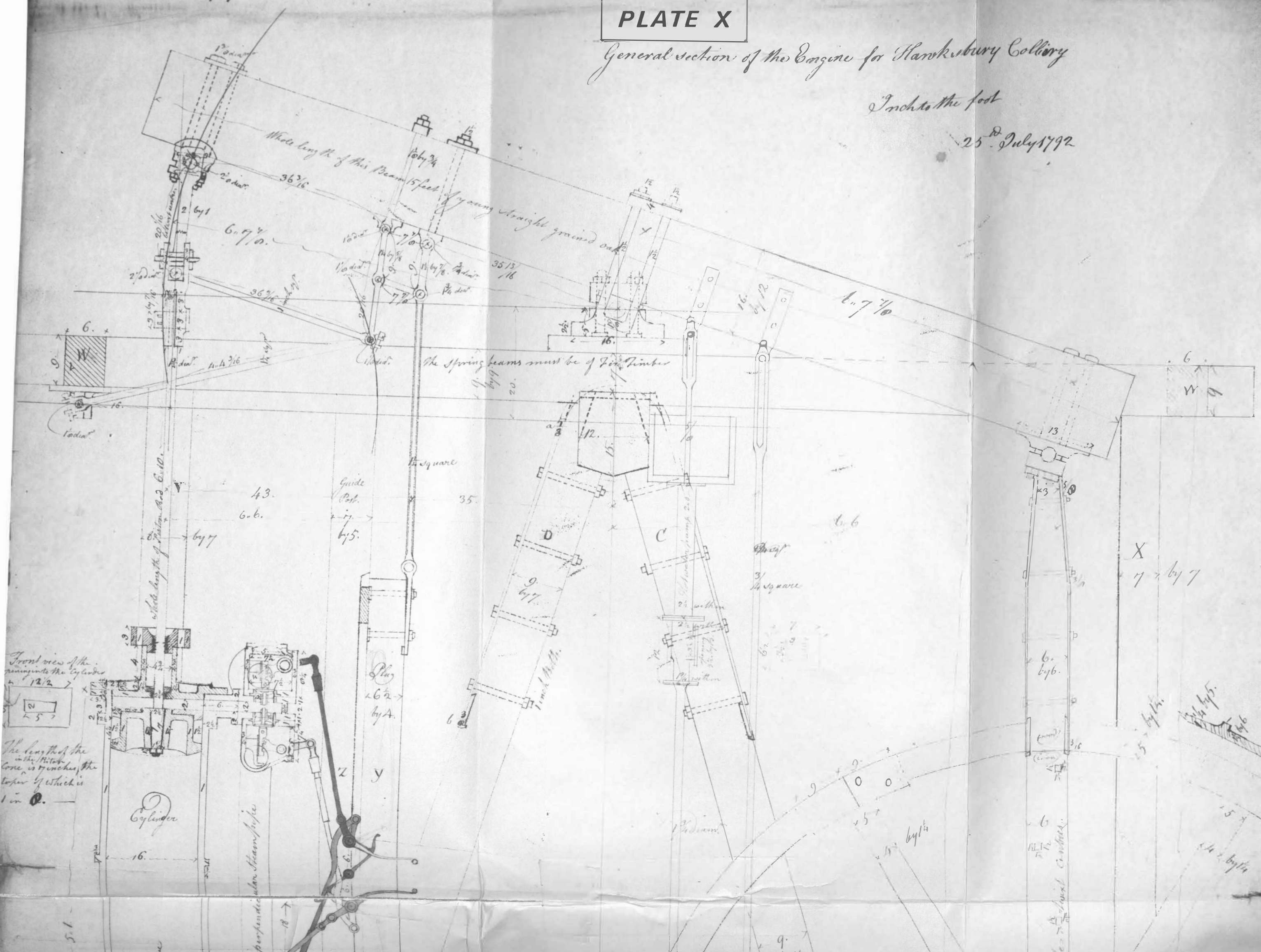
GENERAL SECTION OF THE BOULTON-WATT ENGINE  
FOR  
HAWKESBURY COLLIERY, 1792

# PLATE X

General section of the Engine for Hawksbury Colliery

Inch to the foot

25<sup>th</sup> July 1792





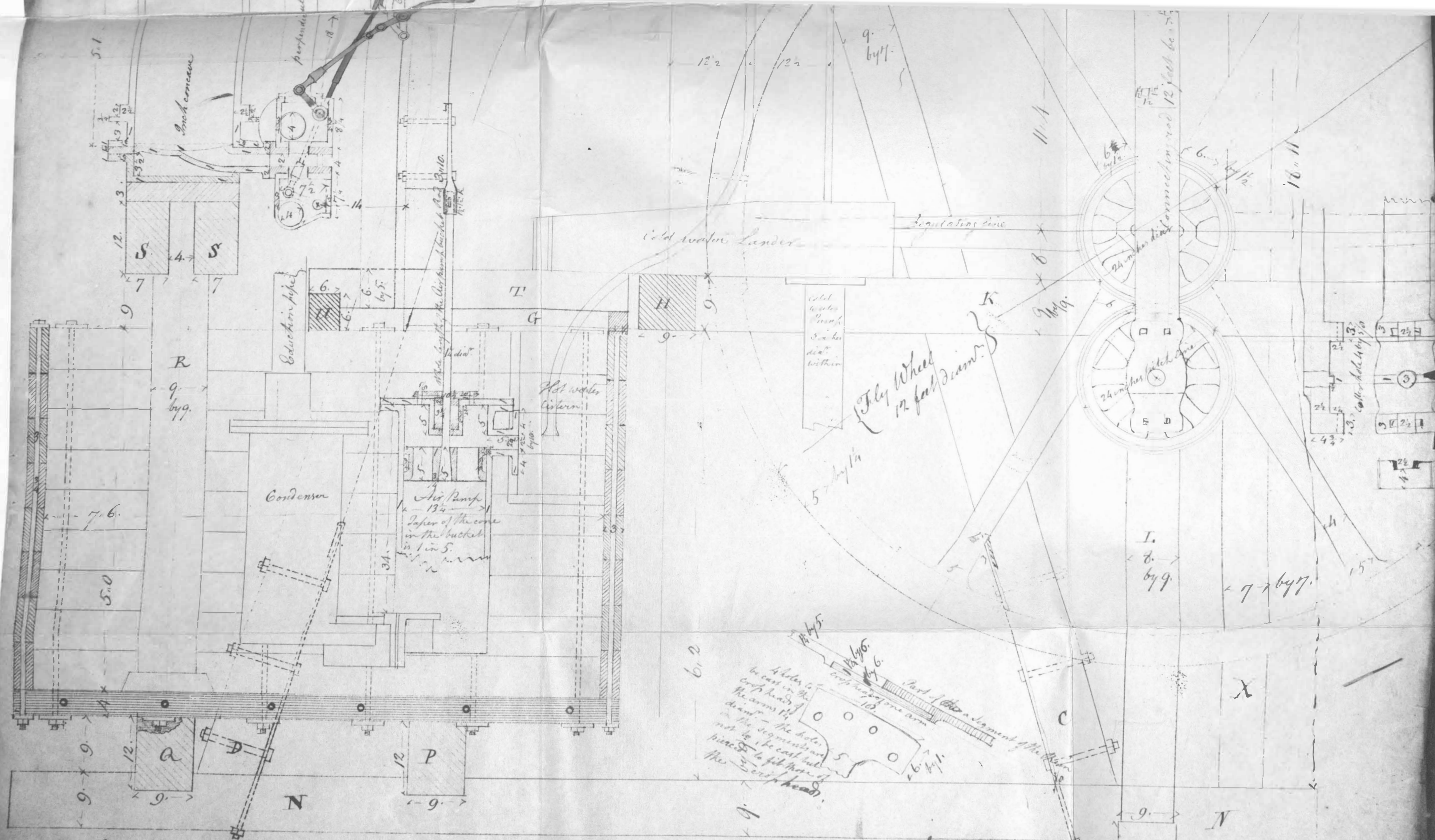


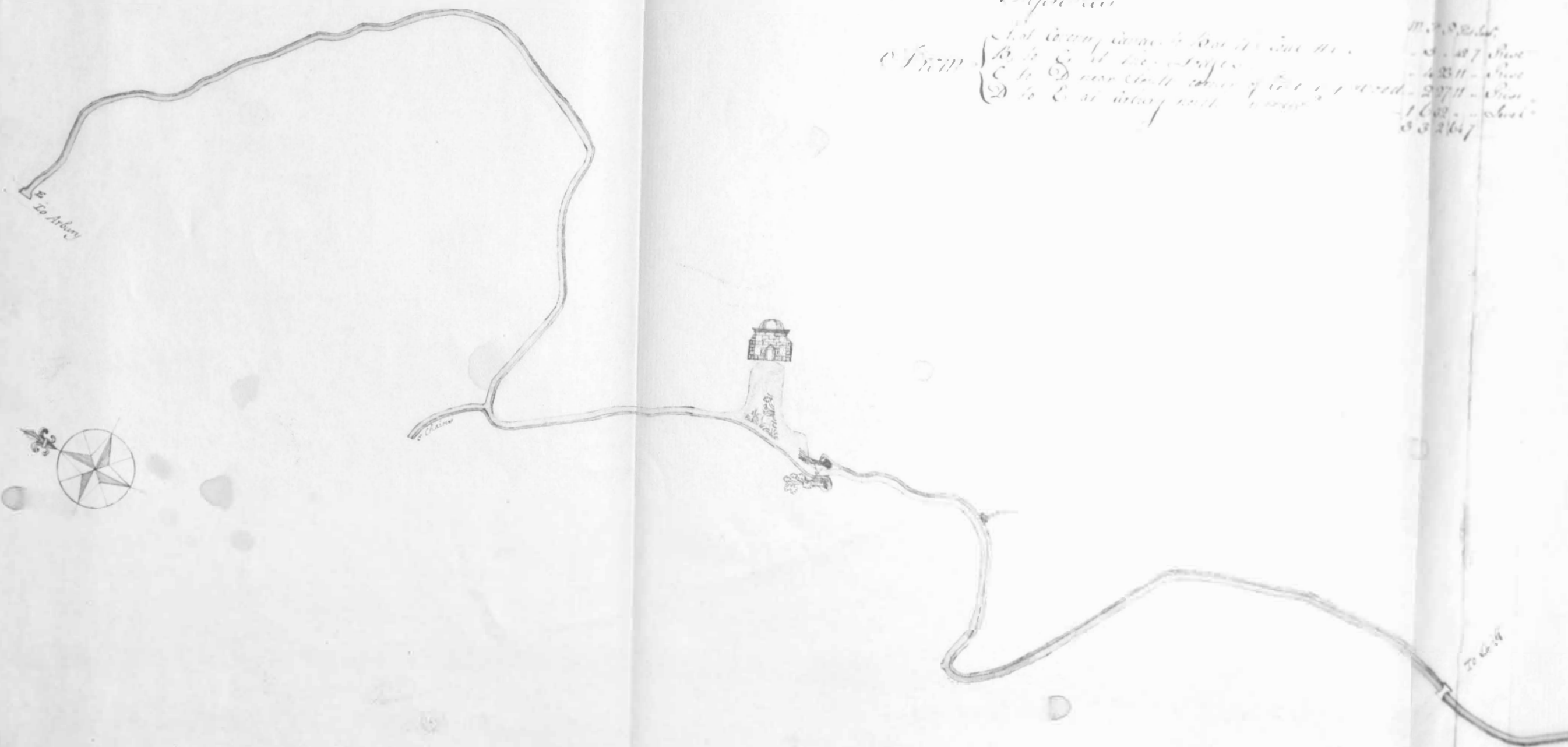
PLATE XI

"A PLAN OF THE NAVIGABLE CANAL NOW MAKING AT THE EXPENCE OF  
SR. ROGER NEWDIGATE BART. FROM THE NORTH AVENUE LEADING FROM  
ARBURY TO COMMUNICATE WITH COVENTRY CANAL NAVIGATION", 1771

APLANT of the navigable Canal now making at the expense of S<sup>r</sup> Roger Newdigate Bart. from the north archway leading from APLANT

With a section of the new intended Foundation

Surveyed April



Reported

From {  
 A to B along the bank of the river  
 B to C at the bridge  
 C to D near the mill  
 D to E at the end of the canal  
 E to F at the end of the canal

M. S. B. 147  
 3 - 47 Feet  
 4311 - Feet  
 29711 - Feet  
 1632 - Feet  
 33247

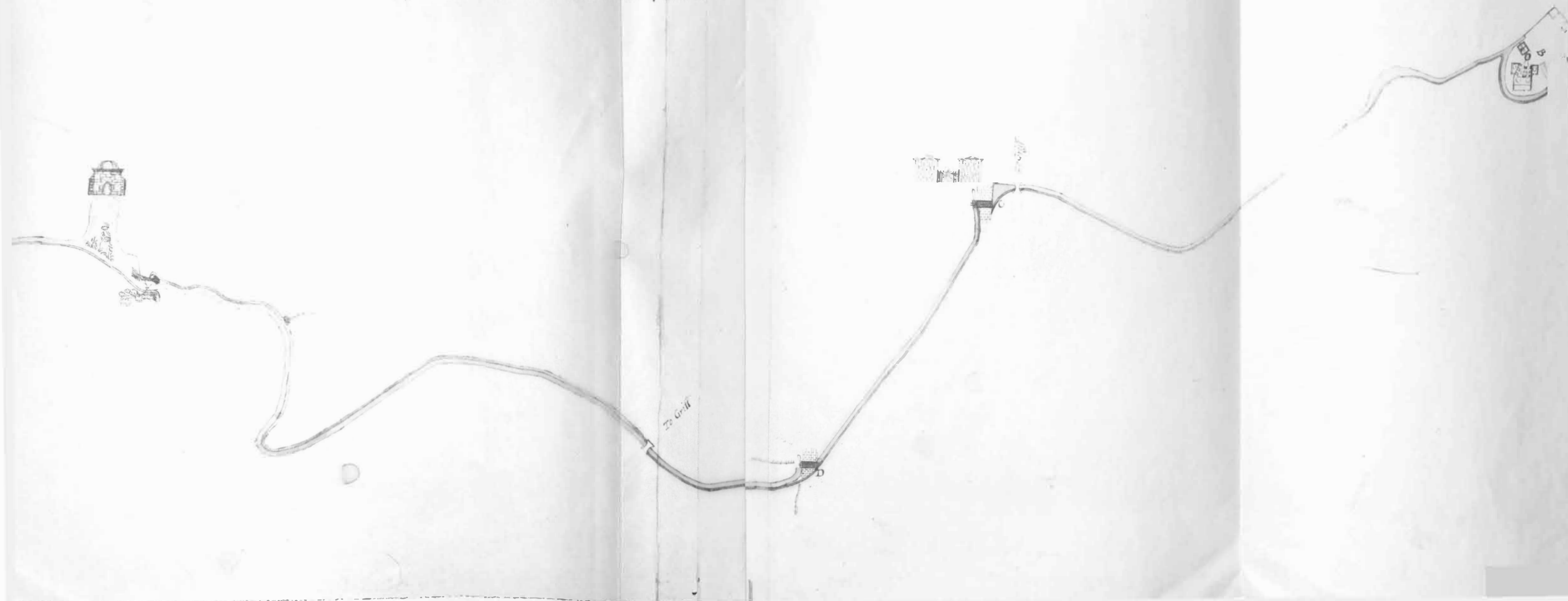
of S. Roger Newdigate Bar, from the north avenue leading from ARLBY to communicate with Coventry Canal Navigation

With a Section of the new intended Foundation at Griff Colliery

Surveyed April 10<sup>th</sup> 1771

References

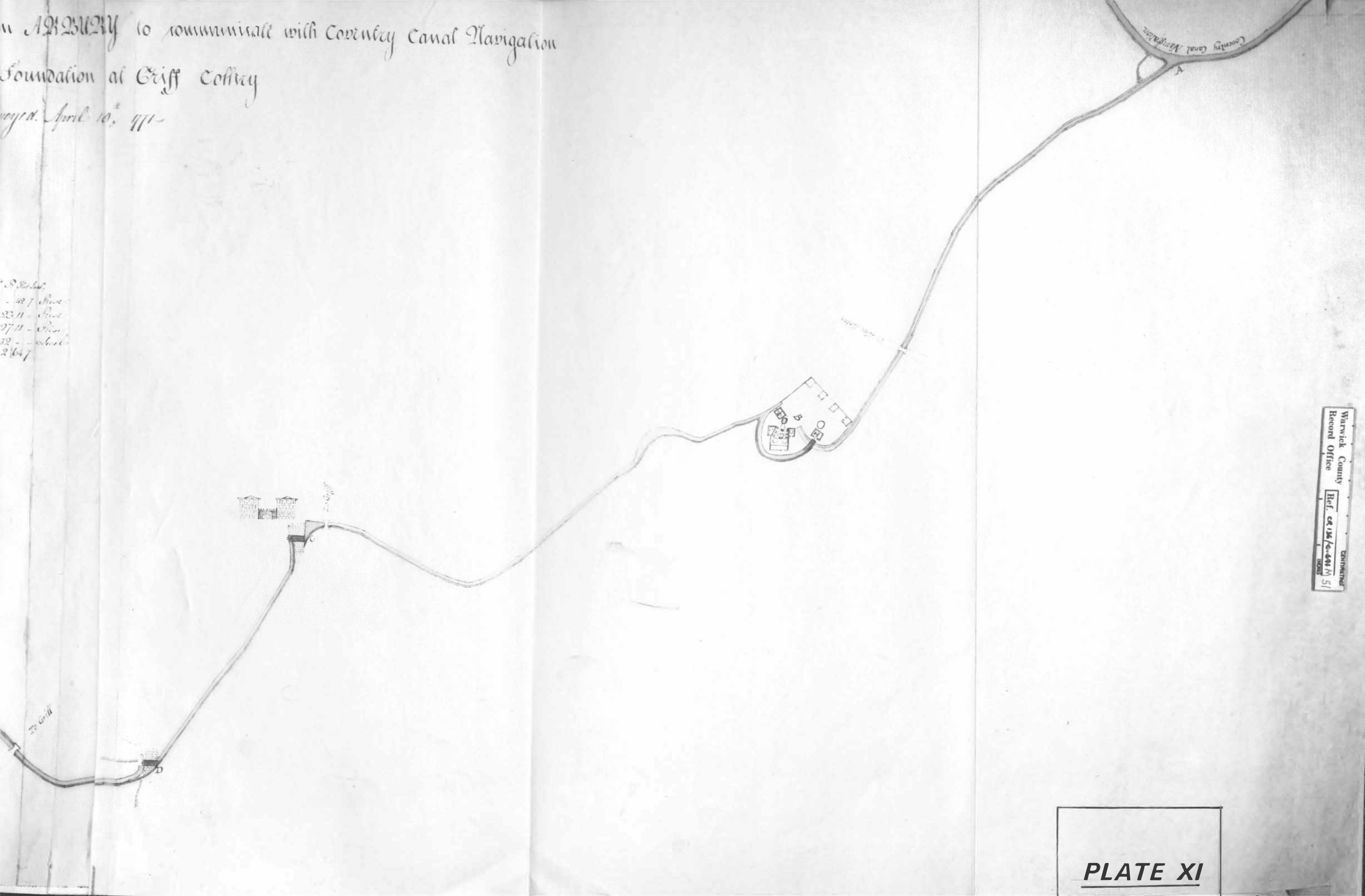
			M. P. & S. Bar.
FROM	{	At Coventry Canal to Boat the Coal Mine	5 - 427 Feet
		B. to E. at the Lodges	4 23 11 - Feet
		E. to D. near South corner of Coventry wood	2 27 11 - Feet
		D. to E. at Arkley north Avenue	1632 - Feet
			33 2 647





in A.D. 1244 to communicate with Coventry Canal Navigation  
 Foundation at Griff Colliery  
 opened April 10<sup>th</sup> 1771-

27<sup>th</sup> June  
 23<sup>rd</sup> 11 - 11  
 27<sup>th</sup> 11 - 11  
 22 - 11  
 2<sup>nd</sup> 1647



Warwick County  
 Record Office  
 Ref. 4134/6-641 M 51  
 10000

**PLATE XI**