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Source: *The Economic History Review*, New Series, Vol. 9, No. 2 (1956), pp. 332-342

Published by: [Wiley](#) on behalf of the [Economic History Society](#)

Stable URL: <http://www.jstor.org/stable/2591750>

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## SHORT ARTICLES

### THE ASSIZE OF BREAD<sup>1</sup>

By ALAN S. C. ROSS

THE principle of the English institution known as the Assize of Bread is a very simple one: there were different kinds of bread; the price per loaf was fixed for each kind of bread; the price of corn fluctuated;<sup>2</sup> hence the weights of the different loaves varied, so that, the higher the price of corn, the smaller the weight of a loaf of a given kind and a given price.

One of the clearest and most succinct accounts of the Assize of Bread is to be found in Studer (*Introduction* to vol. II) and I cannot do better than summarize it here.<sup>3</sup>

The immediate object of the Assize was to fix the size of the loaf of bread. Whatever might be the fluctuations of the corn-market, loaves were sold at a farthing, or a half-penny or a penny; the size of these loaves would therefore vary according to the price of corn, becoming smaller as the price of corn rose and larger as it fell.

The price of corn was fixed in every part of the country by the local magistrates—apparently after the Feast of St Michael—according to a more or less elaborate process.<sup>4</sup> When fixed, it was proclaimed as the statute price of corn for the coming year and utilized as the basis for calculating the weight of the various kinds of loaves. The Assize could be adjusted in the course of the year, if there was an appreciable change in the price of corn.<sup>5</sup>

The profit to which the baker was entitled, as well as the allowance he could

<sup>1</sup> Abbreviations: Cunningham=W. Cunningham, *The Growth of English Industry and Commerce*, vol. I (5th ed. Cambridge, 1922); *Liber Albus*=*Lib. Albus*, ed. H. T. Riley in *Munimenta Gildhallæ Londoniensis* (1859); Rogers=J. E. T. Rogers, *A History of Agriculture and Prices in England* (Oxford, 1866); Salter=H. E. Salter, *Medieval Archives of the University of Oxford* (Oxford, 1920-1); *Statutes*=*Statutes of the Realm* (1810-28); Studer=P. Studer, *The Oak Book of Southampton of c. A.D. 1300* (Southampton, 1910-1); Twiss=T. Twiss, *The Black Book of the Admiralty* (1871-6); Webb=Sidney and Beatrice Webb, *The Assize of Bread*, *Economic Journal*, xiv (1904), 196-218. My thanks are due to my colleagues Professor H. A. Cronne, Professor A. D. Hargreaves, Mr R. Hilton, and Professor C. A. Rogers for much kind advice in the context of the present article. Recently, Professor Harold W. Bailey (of Queens' College, Cambridge) and I investigated the etymology of the word *wastel* (our joint article thereon is at press for *English and Germanic Studies*, vol. VI). This investigation has not only led me to become cognisant of the dominant role played by *wastel*-bread in the Assize, but also to speculate upon the nature of this latter institution as a whole.

<sup>2</sup> The fluctuations were immense; in a good year the price might be as low as 12d. per qr. whereas in 1315, it reached 28s. 6d. per qr. (Rogers, I, 197).

<sup>3</sup> II, xxi *et seq.* The Webbs' article deals, in the main, with the history of the Assize in the eighteenth century.

<sup>4</sup> Cf. *Liber Albus*, pp. 349-50, where there is an interesting account of the method of fixing the Assize in the City of London. See, further, the description given in the Romney Customary (J. Lyon, *The History of the Town and Port of Dover* (Dover, 1813-14), II, 337-8).

<sup>5</sup> A complete record for the period extending from 12 October 1482 to September 1483 has been preserved among the archives of Southampton and, from this document we see that, in less than twelve months, the Assize was altered no less than six times. At Bristol, during the year 1801, the Assize went on being formally set each week by the Mavor (Webb, p. 214).

claim for expenses, were most minutely defined by law; he was also entitled to the bran and to the 'advantage bread': out of every quarter of wheat, he was supposed to sell 418 lb. of bread, and whatever he baked above that amount was 'advantage bread' for himself.<sup>1</sup>

From the outset, various kinds of bread were baked, and, though later legislation generally brought them under three headings, namely, 'wastel bread', 'bread of whole wheat' and 'bread treet' (afterwards known as 'white', 'wheaten' and 'household', respectively), yet the Statute<sup>2</sup> mentions no less than seven kinds of bread and the Table of the Oak Book of Southampton, which is based on the Statute and was probably drawn up in the reign of Edward II,<sup>3</sup> provides for nine different kinds.<sup>4</sup> These were:

(1) Wastel Bread (*wastellus*); in the Southampton Records of 1482, 1559, etc. it is always referred to as *panis albus*.

(2) Cocket Bread (also called *panis levatus*). It appears that two kinds of Cocket Bread were baked, namely (2a) Small Cocket (*cocket minor*), afterwards called 'white bread',<sup>5</sup> of the same quality of flour as Wastel, and (2b) Large Cocket (*cocket major*), made of corn of a lower price. In the Domesday of Ipswich, they are respectively called *primer coket* and *secund coket*.

(3) Simnel Bread (*symentellus*, *panis de siminello*, sometimes also called *panis artocopi*), a kind of cake baked twice.

(4) French Bread (*panis franciscus*, *pain fraunceis*, also called *pouf* or *panis levis*); this is not mentioned in the Statute, nor in the Domesday of Ipswich (unless the *peyn fyngete* of this text means the same thing) but the term occurs commonly on the Continent as early as the thirteenth century, and, in England, from the reign of Edward I onwards. French Bread was really a kind of milk bread, for the preparation of which the finest wheaten flour was used, whilst milk, butter and eggs were among the ingredients entering into its composition. According to the Oak Book, it was the most expensive kind of bread made at Southampton, but in other parts of the country it does not seem to have been of the same excellence.<sup>6</sup>

(5) Ranger Bread (*panis rangerus*) is also omitted from the Statute and it seems that references to it are of extreme rarity; but, to judge from its price, it may be inferred that it was made of ordinary wheaten flour and that it differed from 'whole wheat bread' in so far as the flour was first passed through a sieve (*ranger*).

(6) Bread of Whole Wheat (*panis integer*, *peyn enter de frument*, sometimes identified with *turta*—though the latter probably denoted a much coarser kind of bread), came to be known as 'wheaten bread' and was the kind in common use.

(7) Bread Treet (*panis de treyt*, etc. also *panis bissus*) was a coarse brown bread made of unbolted meal, afterwards known as 'household bread'.

(8) Bread of Common Wheat (*panis de omni blado*, *panis de quolibet genere bladi*, *peyn de tutz manere de ble*) was the coarsest kind of bread baked at Southampton. Seeing that it was only half the price of Large Cocket, it must chiefly have been made of refuse stuff.

The Law not only fixed the exact weight of each kind of bread, but it also

<sup>1</sup> The 'Baker's Gain' was frequently altered as time went on—both in respect of the number of pounds of bread per quarter of wheat and of expenses (see Webb, *passim*).

<sup>2</sup> P. 336.

<sup>3</sup> Studer, II, xxiv.

<sup>4</sup> P. 338.

<sup>5</sup> It was, however, more usual to apply the term 'white bread' (*panis albus*) to Wastel Bread.

<sup>6</sup> In London, for instance, it was sold at the same rate as Wastel (*Liber Albus*, I, 353).

regulated the smallest detail of the trade. Bakers could only make certain kinds of bread, and these in fixed proportions. Thus, in the Domesday of Ipswich, bakers are divided into four different groups. Bakers of the first group were allowed to bake Wastel, Small Cocket, and Bread Treet; those of the second group, Simnel Bread and Bread Treet; those of the third group, Bread of Whole Wheat and Large Cocket; those of the fourth group, only Bread of Whole Wheat and Bread of Common Wheat.<sup>1</sup>

At certain intervals, generally about once a month, and not less than four times a year, the bailiffs, or other officers specially appointed for the purpose, had to ascertain whether the Assize was being properly kept. All infractions were severely punished, offenders being fined, exposed upon the pillory, thrust into prison, or suspended from their occupation.

In order to understand the Table contained in the Oak Book,<sup>2</sup> it must be remembered that, during the reigns of the first Anglo-Norman kings of England, the pound in money was precisely the pound-weight of silver, and the penny in money was the pennyweight of silver (the only coin then current in the Kingdom). At this period, weights were therefore usually expressed in pounds, shillings and pence; but they were estimated by the 'Saxon' or 'Tower' pound, which was less than the pound troy in the proportion of 15 to 16. For instance, when the quarter of wheat was sold for 12*d.*, the farthing loaf of Wastel was to weigh £6. 16*s.*, which would correspond to 6.8 lb. troy (= 5.6 lb avoirdupois). Under the same conditions the farthing loaf of Small Cocket would weigh two shillings more than the farthing loaf of Wastel, i.e. £6. 18*s.* or 6.9 lb. troy (= 5.68435 lb. avoirdupois). The scribe of the Oak Book has worked out, not without making several blunders, the weight of the farthing, halfpenny and penny loaf of each of the kinds of bread for prices of corn from 12*d.* to 12*s.*<sup>3</sup>

The basic concept of the Assize of Bread is certainly ancient. It is not, however, to be traced to Anglo-Saxon Law;<sup>4</sup> rather are its origins to be sought in quite another direction and, in this latter connexion, in his Appendix on the Assize of Bread, Cunningham (p. 567) calls attention to a passage in the Frankfurt Capitulare (A.D. 794) which regulates the prices of corn and food.<sup>5</sup> I divide our early evidences for the English Assize of Bread into three Categories, A, B and C, for reasons which will appear below. Cunningham (pp. 567–9) prints a regulation (our sole evidence for Category A), then the complete rules for an Assize (these belong to my Category B), both from B.M. Add. MS. 14252; the first (fol. 118v) appears to be in a hand of c. 1200, while the second (fol. 85v) is apparently of the time of Henry II. I quote from these documents.<sup>6</sup>

#### CATEGORY A

Add. 14252 (1)

#### *Of the Constitution and of the Weighing of Bread*

On the Monday after St. Luke's [Day], it was decreed at the Guildhall that, when wheat shall be sold for 40 [pence] and the other [grain]<sup>7</sup> for 38*d.*, then the

<sup>1</sup> Twiss, II, 174.

<sup>2</sup> P. 337.

<sup>3</sup> P. 337.

<sup>4</sup> As suggested by Studer, II, xxi; Webb, p. 196.

<sup>5</sup> A. Boretius, *Capitularia Regum Francorum (Monumenta Germaniae historica: Legum Sectio II (Hanover, 1897))*, I, 74. Early French Law has an institution similar to the English Assize of Bread; cf. 'Reglement qui fixe le Prix du Pain selon les differents Prix du Bled', *Ordonnances des Roys de France de la troisième Race*, v (Paris, 1736), 499–502—an ordinance of Charles V (of 1372).

<sup>6</sup> Hereinafter referred to by me as 'Add. 14252 (1)' and 'Add. 14252 (2)'. Following the invariable practice of *The Economic History Review*, I translate all foreign-language documents.

<sup>7</sup> It is not clear what this 'other grain' is; cf. Cunningham, p. 569.

halfpenny Wastel [loaf] shall weigh 6os. and the halfpenny [loaf] of Bread Treet, nine marks—

and the regulation then goes on to another matter, *De conditione operariorum*.

## CATEGORY B

Add. 14252 (2)

This is the Assize for making and selling Bread which has been proved by the Bakers of [our] Lord King Henry II. Namely: that the Baker can sell as is written below; and [that], in respect of every quarter of wheat—two loaves having been taken away for the ‘baking fee’ (*ad fornagium*)<sup>1</sup>—he can [have] a profit of threepence and the bran and [also]: three-halfpence for four servants, a farthing for two lads, a halfpenny for salt, a halfpenny for yeast, threepence for wood, a farthing for the candle (*in candela*), a halfpenny for the bolting-cloth. When the Quarter of Wheat sells for six shillings, then the loaf must be good and white (*debet panis esse bonus et albus*) and weigh sixteen shillings of twenty ores [each] and the loaf of Common Wheat (*panis de toto blado*)<sup>2</sup> must be good—in that nothing may be subtracted from it—and must weigh twenty-four shillings of twenty ores [each]. When the Quarter of Wheat sells for five shillings and six pence, then it [*sc.* the Wastel loaf] must weigh 2os. and the other loaf,<sup>3</sup> 28s.—and so on, by sixpences down to 1s. 6d. per qr.<sup>4</sup>

This second citation—Add. 14252 (2)—is found again, with little variation, printed at pp. 480–1 of vol. II of H. R. Luard’s *Matthæi Parisiensis Monachi Sancti Albani Chronica Majora* (1872–83). This is not the place to attempt a discussion of the history and textual history of the *Chronica Majora*, and it will suffice to say that this passage is definitely stated by Luard<sup>5</sup> to be one of Matthew Paris’s<sup>6</sup> own additions.<sup>7</sup> But, in the *Chronica Majora*, the passage is attributed to the reign of John and the year 1202: ‘In the same year, the King had it generally proclaimed that the legal Assize of Bread must be observed without violation under penalty of the Pillory...’

## CATEGORY C

The Statute *Assisa Panis et Cervisie*, usually assigned to 51 Hen. III (i.e. 1266), is critically edited at *Statutes*, I, 199–200 (and there regarded as of *Temp. Incert.*). The main source of this edition is B.M. MS. Cotton Claudius D. II, fol. 252v and the collated sources<sup>8</sup> are:

(1) ‘An Exemplification, at the Request of the Bakers of Coventre, of the

<sup>1</sup> See J. A. H. Murray *et al.* *New English Dictionary* (Oxford, 1884–1933) s.v. *Furnage*; W. v. Wartburg, *Französisches etymologisches Wörterbuch*, III (Leipzig, 1934), 903.

<sup>2</sup> P. 333.

<sup>3</sup> I.e. the loaf of Common Wheat.

<sup>4</sup> See Table 1.

<sup>5</sup> II, xliii.

<sup>6</sup> Matthew Paris was born about the year 1200 and died in 1259 (F. Madden, *Matthæi Parisiensis, Monachi Sancti Albani, Historia Anglorum* (1866–9), III; xii, xxi). For some account of the difficult problems mentioned above, see the Introductions to the various volumes of the works of Madden and Luard just referred to.

<sup>7</sup> Mr R. Vaughan (Corpus Christi College, Cambridge) has been so kind as to confirm that this is indeed one of Matthew Paris’s own additions and to collate Luard’s text against the Original (Cambridge, Corpus Christi College, MS. 16, fol. 21v). Mr Vaughan says further that, so far as he is aware, the passage under discussion here is extant in no other of the manuscripts.

<sup>8</sup> I give the abbreviations for the sources which I use hereinafter in square brackets [ ].

Ordinances of the Assize of Bread and Ale', dated 22 March 1379, on Public Record Office, Patent Roll, 2 Richard II—Part II, Membrane 20<sup>1</sup> [*Rot. Pat.*].

(2) Two texts from Guildhall, *Liber Horn*,<sup>2</sup> one in French (fol. 121) [*Lib. H. Fr.*], the other in Latin (fol. 301v) [*Lib. H. Lat.*].

(3) A text at *Magna Charta cum Statutis quæ Antiqua vocantur... apud Richardum Tottelum* (1556), fols. 81v–83r [*Tottell*].

(4) The 'Printed Copies' [*PC*], that is, the early printed editions of the Statutes as listed *Statutes*, I, xxi–xxiv.

I translate from the text printed *Statutes*, I, 199–200 and collation.

### *The Assize of Bread and Ale*

[The King to all to whom, etc., greeting. We have examined certain ordinances of the Assize of Bread and Ale, of the composition of Money, and of Measures, made in the times of Our progenitors, sometime Kings of England; in these words:]<sup>3</sup>

When the Quarter of Wheat is sold for 12d., then the Farthing Wastel Loaf shall weigh six pounds and sixteen shillings; the Cocket Loaf of the same corn and the same fineness of sieving shall weigh two shillings more than the Wastel. [The Cocket Loaf] of corn of less price shall weigh five shillings more than the Wastel. And the Simnel Loaf shall weigh two shillings less than the Wastel because it has been baked twice. The Farthing whole-loaf of wheat<sup>4</sup> shall weigh a Cocket and a half. And the Treet Loaf shall weigh two Wastels. And the Loaf *de omni blado*<sup>5</sup> shall weigh two Cockets.<sup>6</sup> When the Quarter of Wheat is sold for 18d., then the Farthing Wastel Loaf—white and well-baked— shall weigh four pounds, ten shillings and eightpence. When [the Quarter of Wheat is sold] for two shillings, then it [*sc.* the Farthing Wastel Loaf] shall weigh 68s.—

and so on, by sixpences, to twelve shillings.<sup>7</sup>

And it is to be known that, in respect of every quarter of wheat, the Baker can, as has been proved by the Bakers of [our] Lord the King, [have] a profit of fourpence and the bran and two loaves for the 'baking fee'<sup>8</sup> (*ad furnagium*);<sup>9</sup> [also]: a penny-halfpenny for three servants, a halfpenny for two lads, a halfpenny for salt, a halfpenny for yeast, a farthing for the candle (*in candela*), twopence<sup>10</sup> for wood; for the bolting-cloth [he is] to have a penny-halfpenny.<sup>11</sup>

The Statute is also given in 'Fleta',<sup>12</sup> though, as Daines Barrington, *Observations on the Statutes* (1766), p. 29, observes, 'The author of Fleta hath made these

<sup>1</sup> Catalogued at *Calendar of the Patent Rolls preserved in the Public Record Office: Richard II. A.D. 1377–1381* (1895), p. 335.

<sup>2</sup> Cf. P. E. Jones and R. Smith, *A Guide to the Records in the Corporation of London Records Office and the Guildhall Library Muniment Room* (1951), p. 22.

<sup>3</sup> [...] from *Rot. Pat.*

<sup>4</sup> 'the Loaf of Whole Wheat' *PC*; 'of Whole Wheat at a Farthing' *Lib. H. Fr.*

<sup>5</sup> *communi blado Rot. Pat.*; *PC*; *touz bleds Lib. H. Fr.*

<sup>6</sup> *maiores PC.*

<sup>7</sup> The original calculation clearly stopped at twelve shillings, for it finishes at this point in MS. Cotton Claudius D. II, *Rot. Pat.* and *Lib. H. Fr.* (also in 'Fleta' and the Oak Book (p. 337)); it is, however, carried on to twenty shillings in *Lib. H. Lat.*, Tottell and at J. Cay, *Statutes at Large*, vol. 1 (1758), 20.

<sup>8</sup> 'For baking fee, the price of twopence' *Lib. H. Fr.*

<sup>9</sup> See p. 335.

<sup>10</sup> 'three-farthings' *Rot. Pat.*

<sup>11</sup> 'a halfpenny' *Rot. Pat.*; *Lib. H.*

<sup>12</sup> The second volume of the new edition of 'Fleta' by H. G. Richardson and G. O. Sayles has now appeared for the Selden Society (vol. LXXII). Professor Sayles (Aberdeen) was so kind as to send me the proofs of the relevant section (II, 117–18). He also tells me that it is safe to regard this treatise as having been written in—or very shortly after—1298 (the dating will be discussed in the forthcoming, first volume of this edition).



regulations part of his work, without taking notice that they arise from any authority of the legislature'.

The Rules and Table of the Oak Book, which were probably compiled in 1329,<sup>1</sup> are, very evidently, directly based upon the Statute. So, too, are several early documents on the Assize of Bread printed by Salter (pp. 131 *et seq.*).

The Assize of Bread, as laid down in the Statute, remained in force until 1709 when it was repealed by 8 Anne 19; other regulations were then, and later,

Table 1. *Weight of Farthing-Wastel-Loaf*

Price of corn per qr. s. d.	CATEGORY B		CATEGORY C							
	Correct and Add. 14252 (2) £ s. d.	MS. Cotton Claudius								
		Correct £ s. d.	D II £ s. d.	'Fleta' £ s. d.	Oak Book £ s. d.	Lib. Horn £ s. d.	Tottell £ s. d.	PC £ s. d.		
1 0	—	6 16 0	6 16 0							
1 6	3 6 0*	4 10 8	4 10 8		—					
2 0	3 0 0	3 8 0	3 8 0		3 10 6					
2 6	2 14 0	2 14 4 $\frac{3}{4}$	2 13 4 $\frac{3}{4}$ †	2 14 4 $\frac{3}{4}$	2 14 4 $\frac{3}{4}$	2 14 4 $\frac{3}{4}$		2 14 4 $\frac{3}{4}$		
3 0	2 8 0	2 5 4	2 8 0				2 5 4			
3 6	2 2 0	1 18 10 $\frac{1}{4}$	2 2 0				1 18 10 $\frac{1}{2}$			
4 0	1 16 0	1 14 0	1 16 0				1 14 0			
4 6	1 10 0 $\frac{1}{2}$	1 10 2 $\frac{3}{4}$	1 10 0				1 10 2 $\frac{1}{4}$			
5 0	1 4 0	1 7 2 $\frac{1}{2}$	1 7 2 $\frac{1}{2}$							
5 6	1 0 0	1 4 8 $\frac{3}{4}$	1 4 8 $\frac{1}{4}$							
6 0	16 0	1 2 8	1 2 8 $\frac{1}{8}$	1 1 8 $\frac{1}{4}$	1 2 8	1 2 8 $\frac{1}{2}$	1 2 8			
6 6	—	1 0 11	1 0 11		—					
7 0	—	19 5 $\frac{1}{4}$	19 1	19 5	19 5	19 5	19 5 $\frac{1}{4}$			
7 6	—	18 1 $\frac{1}{2}$	18 0 $\frac{1}{2}$	18 1 $\frac{1}{2}$	18 1 $\frac{1}{2}$	18 3 $\frac{1}{2}$	18 1 $\frac{1}{2}$			
8 0	—	17 0	17 0							
8 6	—	16 0	16 0							
9 0	—	15 1 $\frac{1}{4}$	15 0 $\frac{1}{4}$		15 0	15 0				
9 6	—	14 3 $\frac{3}{4}$	14 4 $\frac{1}{2}$	14 4 $\frac{3}{4}$	14 4 $\frac{3}{4}$	14 4 $\frac{1}{4}$	14 4 $\frac{1}{4}$			
10 0	—	13 7 $\frac{1}{4}$	13 8 $\frac{1}{4}$	13 7 $\frac{1}{4}$	13 7 $\frac{1}{4}$	13 7 $\frac{1}{4}$	13 7 $\frac{1}{2}$			
10 6	—	12 11 $\frac{1}{2}$	12 11	12 11 $\frac{1}{4}$	12 11 $\frac{1}{4}$		12 11 $\frac{1}{4}$			
11 0	—	12 4 $\frac{1}{4}$	12 4 $\frac{1}{4}$	12 4	12 4	12 4				
11 6	—	11 10	11 10		11 11	11 9				
12 0	—	11 4	11 4							
12 6	—	10 10 $\frac{1}{2}$	—	—	—	11 0	10 10 $\frac{1}{2}$			
13 0	—	10 5 $\frac{1}{2}$	—	—	—	10 3 $\frac{1}{2}$	10 5 $\frac{1}{2}$	10 1 $\frac{1}{2}$		
13 6	—	10 1	—	—	—	10 1 $\frac{1}{2}$	10 0 $\frac{3}{4}$			
14 0	—	9 8 $\frac{1}{2}$	—	—	—	9 8	9 4 $\frac{1}{4}$	9 6		
14 6	—	9 4 $\frac{1}{2}$	—	—	—	9 2 $\frac{3}{4}$				
15 0	—	9 0 $\frac{1}{4}$	—	—	—	9 0 $\frac{1}{4}$	9 1			
15 6	—	8 9 $\frac{1}{4}$	—	—	—	8 8	8 9 $\frac{1}{2}$	8 9		
16 0	—	8 6	—	—	—	8 6				
16 6	—	8 3	—	—	—	8 3	8 2 $\frac{3}{4}$			
17 0	—	8 0	—	—	—	8 0				
17 6	—	7 9 $\frac{1}{4}$	—	—	—	7 8 $\frac{1}{2}$	7 9 $\frac{1}{4}$	7 10 $\frac{1}{2}$		
18 0	—	7 6 $\frac{3}{4}$	—	—	—	7 6 $\frac{1}{4}$	7 6 $\frac{3}{4}$			
18 6	—	7 4 $\frac{1}{4}$	—	—	—	7 4 $\frac{1}{4}$		7 4 $\frac{1}{2}$		
19 0	—	7 2	—	—	—	6 11 $\frac{1}{4}$	7 2	7 2 $\frac{1}{4}$		
19 6	—	6 11 $\frac{3}{4}$	—	—	—	6 9	6 11 $\frac{1}{2}$	6 10		
20 0	—	6 9 $\frac{1}{2}$	—	—	—	6 8	6 9 $\frac{3}{4}$	6 3		

\* *Chronica Majora*: £3. 17s. od.

† *Rot. Pat.*: £2. 14s. 4 $\frac{3}{4}$ d.

‡ *Chronica Majora*: £1. 12s. od.

§ *Rot. Pat.*: £1. 2s. 8 $\frac{1}{2}$ d.

<sup>1</sup> Studer, II, 28–37, 28 note 1.

substituted. The Assize of Bread was finally abolished for London by the Bread Act of 1822 (3 George IV, *c.* 106), which, in 1836, was followed by a similar act (6 and 7 William IV, *c.* 37) for the rest of the country.<sup>1</sup>

Table 2

		6s.			11s. 6d.		
		Correct			Correct		
		£	s.	d.	£	s.	d.
1. Wastel	$\frac{1}{4}d.$	1	2	8			
	$\frac{1}{2}d.$	2	5	4	1	3	$7\frac{3}{4}$
	1d.	4	10	8	2	7	$3\frac{1}{2}$
2a Small Cocket	$\frac{1}{4}d.$	1	4	8	13	10	
	$\frac{1}{2}d.$	2	9	4	1	7	$7\frac{3}{4}$
	1d.	4	18	8	2	15	$3\frac{1}{2}$
2b Large Cocket	$\frac{1}{4}d.$	1	7	8	16	10	
	$\frac{1}{2}d.$	2	15	4	1	13	$7\frac{3}{4}$
	1d.	5	10	8	3	7	$3\frac{1}{2}$
3. Simnel Bread	$\frac{1}{4}d.$	1	0	8	9	10	
	$\frac{1}{2}d.$	2	1	4	19	$7\frac{3}{4}$	
	1d.	4	2	8	1	19	$3\frac{1}{2}$
4. French Bread	$\frac{1}{4}d.$	18	8		7	10	
	$\frac{1}{2}d.$	1	17	4	15	$7\frac{3}{4}$	
	1d.	3	14	8	1	11	$3\frac{1}{2}$
5. Ranger Bread	$\frac{1}{4}d.$	1	14	0	17	$8\frac{3}{4}$	
	$\frac{1}{2}d.$	3	8	0	1	15	$5\frac{3}{4}$
	1d.	6	16	0	3	10	$11\frac{1}{2}$
6. Bread of Whole Wheat	$\frac{1}{4}d.$	2	1	6	1	5	$2\frac{3}{4}$
	$\frac{1}{2}d.$	4	3	0	2	10	$5\frac{3}{4}$
	1d.	8	6	0	5	0	$11\frac{1}{2}$
7. Bread Treet	$\frac{1}{4}d.$	2	5	4	1	3	$7\frac{3}{4}$
	$\frac{1}{2}d.$	4	10	8	2	7	$3\frac{1}{2}$
	1d.	9	1	4	4	14	$7\frac{1}{2}$
8. Bread of Common Wheat	$\frac{1}{4}d.$	2	15	4	1	13	$7\frac{3}{4}$
	$\frac{1}{2}d.$	5	10	8	3	7	$3\frac{1}{2}$
	1d.	11	1	4	6	14	$7\frac{1}{2}$

\* Altered from £2. 17s. 4d. in a later hand.

At this point in the discussion it will be convenient to introduce two Tables. Table 1 gives the weights of farthing-wastel for different prices of corn, according to the sources of Categories B and C that I have considered.<sup>2</sup> As Table 2, I print some specimen columns of Studer's form of the Oak Book Table.<sup>3</sup>

It remains to consider the actual numerical data of the Assize of Bread and its early congeners. Four points are for discussion: (1) the relation of the weights

<sup>1</sup> J. H. Beale, *A Bibliography of early English Law Books* (Cambridge, Mass., 1926), T. 252-8, lists some early printed books on the Assize of Bread.

<sup>2</sup> Add. 14252 (2) is our main text for Category B; I note the cases in which the passage in the *Chronica majora* differs. For Category C I have used MS. Cotton Claudius D. II as the main text as far as 12s., thereafter the Latin text at Liber Horn fol. 301 v and I have noted the cases in which the other sources differ. The entries of the columns marked 'Correct' are those calculated (to the nearest farthing) on the principles set out below (p. 340).

<sup>3</sup> I leave the manuscript errors uncorrected (thus not taking account of Studer's partial corrections—cf. p. 339), but, as in Table 1, I insert 'Correct' columns (cf. p. 339).



of other breads to that of the yard-stick, the farthing wastel; (2) the relation between the price of corn and the weight of the yard-stick, the farthing wastel; (3) the Baker's Gain; (4) the interrelation of our three Categories, A, B and C.

(1) Putting the matter in a more convenient and modern form, we may say that, if  $w$  is the weight (in shillings) of the farthing wastel for a given price of corn, then the weight of any other kind of farthing-loaf for that price of corn will be  $Aw + B$ , where  $A$  and  $B$ <sup>1</sup> are constants dependent upon the kind of loaf. The Introduction to the Table of the Oak Book<sup>2</sup> enables us to evaluate these constants:

Table 3

	<i>A</i>	<i>B</i>
[1 Wastel]	1	0
[2a Small Cocket] 'The Cocket loaf of the same corn and of the same fineness of sieving should weigh 2s. more than the Wastel'.	1	2
(2b Large Cocket] 'The greater Cocket should weigh 5s. more than the Wastel'.	1	5
[3 Simnel Bread] 'The Simnel should weigh 2s. less than the Wastel'.	1	-2
[4 French Bread] 'The French loaf should weigh 2s. less than the Simnel'.	1	-4
[5 Ranger Bread] 'The Ranger loaf should weigh a Wastel and a half'.	1.5	0
[6 Bread of Whole Wheat] 'The "whole" loaf should weigh a Cocket (of the greater weight) and a half'.	1.5	7.5
[7 Bread Treet] 'The Treet loaf should weigh two Wastels'.	2	0
[8 Bread of Common Wheat] 'A loaf <i>de omni blado</i> <sup>3</sup> should weigh two Cockets (of the greater weight)'.	2	10

The compiler of the Oak Book Table has evidently endeavoured to put these computational rules into practice, except in the case of No. 4 'French Bread', for which, throughout, he enters the same weight as that of the corresponding No. 3 'Simnel Bread'.<sup>4</sup> However, his arithmetic has, only too clearly, not been equal to this heavy task. Studer emends a few of his errors but, proportionately, not very many.

The Table of the Oak Book enables us to interpret the Statute of 1266—or, at the least, tells us how it was interpreted in 1329. I may thus rewrite the relevant section of my translation of the Statute as follows.

The Farthing Small Cocket Loaf (No. 2a)<sup>5</sup> of the same corn and the same fineness of sieving shall weigh two shillings more than the Farthing Wastel Loaf (No. 1). The Farthing Cocket Loaf of corn of less price [i.e. the Farthing Large Cocket Loaf (No. 2b)] shall weigh five shillings more than the Farthing Wastel Loaf (No. 1). And the Farthing Simnel Loaf (No. 3) shall weigh two shillings less than the Farthing Wastel Loaf (No. 1). The Farthing Loaf of Whole Wheat<sup>6</sup> (No. 6) shall weigh a Large Cocket Loaf (No. 2b) and a half. And the Farthing Treet Loaf (No. 7) shall weigh two Farthing Wastel Loaves (No. 1). And the Farthing Loaf *de omni blado* (No. 8) shall weigh two Farthing Large Cocket Loaves (No. 2b).

Turning next to the document for Category B, Add. 14252(2), we first observe that the weights given here are, just as in the Statute, the weights of the Farthing Loaves. A sufficient proof of this statement is afforded by the

<sup>1</sup> In shillings.

<sup>2</sup> Studer, II, 28, 30.

<sup>3</sup> See p. 333.

<sup>4</sup> Cf. the remark in Registrum A of the Statutes of the University of Oxford (fol. 98 v): 'And þe ferþyng frensh lof shall weye as moche as þe symnel' (cited Salter, p. 134).

<sup>5</sup> The numbers in brackets ( ) are those of p. 333.

<sup>6</sup> Taking the readings of Lib. H. Fr. and PC.

agreement between Add. MS. 14252 (2) and the Statute in respect of the four price-weight relations  $3s. od. : £2. 8s. od., 3s. 6d. : £2. 2s. od., 4s. od. : £1. 16s. od., 4s. 6d. : £1. 10s. od.$ <sup>1</sup> But the relationship between the prices of *panis albus* and *panis de toto blado* in Add. 14252 (2) is fundamentally different from the relations I have just discussed. *Panis albus* is certainly Wastel,<sup>2</sup> *panis de toto blado* can only be No. 6 Bread of Whole Wheat.<sup>3</sup> Here it is—to put the matter again in modern terms—as if the compiler, having in mind the formula  $Aw + B$ , kept  $A = 1$  and let  $B$  increase discontinuously as the price of corn decreased. Thus:

Table 4

Price of corn per qr.	$B^4$
6s., 5s. 6d., 5s.	8
4s. 6d., 4s.	10
3s. 6d.	12
3s., 2s. 6d.	18
2s.	20
1s. 6d.	22 <sup>5</sup>

(2) Despite the numerous arithmetical errors of our sources, it is not at all difficult to ascertain, by inspection, what is the arithmetical relation between the price per quarter of corn ( $p$ ) and the weight of the unit, the farthing-wastel-loaf ( $w$ ). Expressing both  $w$  and  $p$  in shillings, we have clearly:

Category C:  $wp = 136$ .

Category B:  $w = 8(8 - p)$  for  $p = 5s., p = 5s. 6d., p = 6s.$

$w = 12(7 - p)$  for  $p = 1s. 6d.$ <sup>6</sup> to  $p = 5s.$  inclusive.

(3) In Categories B and C, the Baker's Gain is clearly different.

(4) The price-weight relationships of Categories B ( $w = 12(7 - p)$ ), or, in the event,  $w = 8(8 - p)$ ) and C ( $wp = 136$ ) are, of course, fundamentally different.<sup>7</sup> Nevertheless, there is certainly some interconnexion between these two Categories, for three of the incorrect values of the Statute<sup>8</sup> agree with the corresponding values of Category B; namely, the values for 3s., 3s. 6d. and 4s.—48s., 42s. and 36s. in Category B and the Statute, but, correctly, 45s. 4d., 38s. 10½d. and 34s., respectively. We are, unfortunately, singularly ill-informed as to the nature of the arithmetical thinking of the English non-mathematician of this period (and, indeed, likely to remain so). It is, however, possible to understand the genesis of the priceweight relationships of our two categories and even to suggest an elucidation of their interconnexion. We may begin by observing that, of the two relations of Category B, the second,  $w = 12(7 - p)$ , is such as to make the weight

<sup>1</sup> See p. 337.

<sup>2</sup> Cf. p. 333.

<sup>3</sup> Cf. p. 333.

<sup>4</sup> If  $w$  is the weight (in shillings) of the farthing-loaf of *panis albus*, then  $w + B$  gives the weight (in shillings) of the farthing-loaf *de toto blado*.

<sup>5</sup> Both Add. 14252 (2) and the *Chronica majora* give 88s. as the weight of the farthing-loaf *de toto blado* when corn is 1s. 6d. per qr., but the former gives 66s. against the latter's 77s. for the corresponding weight of the farthing-loaf of *panis albus*; 66s. is, obviously, nearer the correct value (and may well be the correct value) and is therefore the variant taken here.

<sup>6</sup> Provided that we take the reading of Add. 14252 (2)—66s.—against that in the *Chronica majora*—77s.—for  $p = 1s. 6d.$ , as we have already done under (1) above—66s. may, in fact, now be taken as the correct value.

<sup>7</sup> Salter's remark (p. 130) 'the Statute... was nothing more than recognizing what existed already, and ordaining that the same scale should be used throughout the realm' is thus wrong.

<sup>8</sup> Not corrected until Tottell.

of the farthing-wastel-loaf increase (respectively, decrease) by a shilling for every penny the price of corn goes down (respectively, up); whereas the first one,  $w=8(8-p)$ , has a similar increase (respectively, decrease) of eightpence weight per penny price. If we imagine that the system originated at a time when the price of corn was subject to not much greater a fluctuation than that between 1s. 6d. and 4s. 6d. a quarter, further, that a start was made with a fixed weight for a fixed price (for instance, 60s. weight for 2s. price), then the application of the Principle of 'a shilling up on the weight for a penny down on the price'—certainly a not unreasonable or difficult Principle—would lead, quite naturally, to the Relation  $w=12(7-p)$ . But, at some period when the price of corn rose above about 4s. 6d., it might well have been felt that the weight calculated according to this was an unreasonably small one, leading to an undue profit for the Baker, and that the substitution of eightpence for a shilling in the Principle would lead to a fairer result; hence the relation  $w=8(8-p)$  for the higher prices of corn. However, at some period when the price of corn rose higher still—say above 6s., the point at which the Table of Category B ends—even the application of this new relation,  $w=8(8-p)$ , would no longer avail to keep the weight reasonably high. It would be clear that the whole system of Category B was breaking down and that some completely new one was necessary. This might well lead to the conclusion that the fair arrangement was for the weight to be directly proportional to the amount of corn that a baker could buy for a fixed sum of money, i.e. inversely proportional to the price. Now, it so happens that the relations  $w=12(7-p)$  (of Category B) and  $w p=136$  (of Category C) yield the same values of  $w$  for two values of  $p$  which lie extremely near to 'uncomplicated' and readily noticeable values figuring in the Table, namely 2s. 6d. and 4s. 6d.<sup>1</sup> Is it too far-fetched to suppose that someone, looking at the Category B Table in the manner suggested above, observed that the relation that he was seeking did, in fact, hold in the case of these two values, 2s. 6d. and 4s. 6d. and that he then proceeded to apply the Principle of Inverse Proportion to obtain other values, including the one later to become the basis of the Category C Table,  $w=136$  when  $p=1$ ?<sup>2</sup>

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<sup>1</sup> For the (two) roots of the equation

$$\frac{136}{p} = 12(7-p)$$

are (to the nearest farthing) 4s. 5½d. and 2s. 6½d.

<sup>2</sup> The other relation of Category B— $w=8(8-p)$ —would not have yielded a similar (and thus, possibly, rival) result, for there is no value of  $p$  which gives the same value of  $w$  for both  $w=8(8-p)$  and  $w p=136$  (for the (two) roots of the equation

$$\frac{136}{p} = 8(8-p)$$

are imaginary).

Our sole document of Category A is so short that it is difficult to draw any conclusion from it. However, we do see that, in it, *panis bissus* (which is No. 7 'Bread Trete—cf. *Liber Albus*, III, 411 and Studer II, xxxvi) is, indeed, twice the weight of Wastel, as it should be under the rules of Category C (p. 339) for, in Add. 14252 (1), the half-penny wastel-loaf weighs 60s. and that of *panis bissus*, 9 marks (= 9 × 13s. 4d. = 120s.). The weight of Wastel (thus, 30s. for a farthing-loaf) here bears, however, none of the three relations given above (p. 340) to the two prices of corn per quarter (40d. and 38d.)—if, as seems probable, these prices really are per quarter.

In the foregoing, I have postulated three classes of corn-prices as having been of importance for the arithmetic of the Assize of Bread, namely (1) between 1s. 6d. and 4s. 6d.; (2) between 4s. 6d. and 6s.; (3) above 6s. It is tempting to try to relate these classes to definite dates. Unfortunately,

there has been comparatively little publication of corn-prices prior to the second half of the thirteenth century (Rogers' *Tables of the Prices of Grain* (II, 4 *et seq.*) do not start until 1259-60, a period already too late for our purpose). However, N. S. B. Gras lists the 'Prices of Wheat sold on the Manors of the bishopric of Winchester, 1208-1299' at pp. 370 *et seq.* of his *Evolution of the English Corn Market* (Cambridge, Mass., 1926) and his Wheat Statistics at pp. 338 *et seq.* of his *Economic and Social history of an English Village (Crawley, Hampshire) A.D. 909-1928* (Cambridge, Mass., 1930), also begin in 1208. A glance at Gras's two Tables shows that to attempt to attach our Classes I (1s. 6d.-4s. 6d.) and II (4s. 6d.-6s.) to any definite periods is quite impracticable. But it is perhaps worth noting that there was a period of high prices not very long before the date to which the Statute is attributed (1266). I have in mind the years 1256-9. At Crawley the average prices were 7s. 6½d. in 1256-7 and 8s. 6d. in 1257-8 (the next entry is that for 1264-5). Gras does not give any further information for the Bishopric of Winchester for 1256-7 but he does give details for 1257-8 and 1258-9 (the next entry being that for 1262-3). In 1257-8 the prices range from 3s. 4d. (at Taunton) to 8s. (at many places) with an average, over all the entries, of 6s. 10d.; the corresponding figures for 1258-9 are 5s. (at several places—the entry 4s. 8d. at Waltham may be neglected as it is for such a very small quantity, namely, ¼qr.), to 11s. (at Ivinghoe), average 7s. 10d.