

A BRONZE STEELYARD WEIGHT.

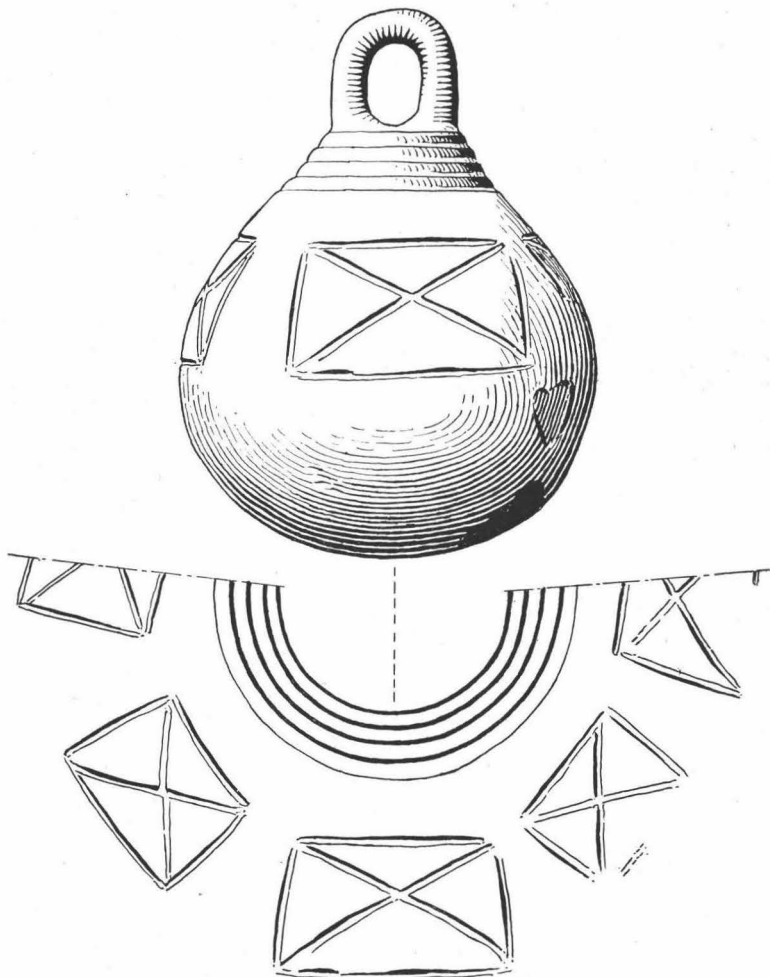
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A BRONZE weight, evidently belonging to a steelyard, was found when grubbing a hedge a mile and a half north-west of Kirdford Church, Sussex. Mr. G. H. Kenyon, to whom I am indebted for permission to describe this interesting specimen, and who has kindly presented it to the Society's Museum at Lewes, tells me that it was found in January, 1929, by Mr. F. Brookes, his head-man, buried about a foot down on the east side of a hedge-bank, and at a level above that of the surface of the adjoining fields. The bank itself runs across his property, and is situated 350-400 yds. north of Slifehurst House.¹

The weight is pear-shaped, and is surmounted by a plain oval loop rising out of a circular collar of four bands, as shown in the figure. The only ornamentation are four incised crosses within incised quadrilateral figures. In addition are two scars connected with the casting. Its weight is 11,740 grains (= about 1½ lbs.), and its bulk displaces sixteen fluid drachms.

Some question has arisen as to the period to which the weight should be assigned. The field in which it was found has yielded some fragments of Romano-British pottery; but so has it also yielded Bronze Age arrowheads and other worked flints. The steelyard was well known to the Romans, and several of their weights are in our museums. These are mostly in the form of sculptured bronze figures. There is in the Corinium Museum, Cirencester, a fine and perfect

¹ A brief note of the finding of this weight, from the pen of Mr. S. E. Winbolt, appeared in *The Times* of 16th February, 1931.



Extended diagram showing ornament.



Robert Curd. 1931.

specimen of a Roman bronze steelyard, together with its weights, discovered in 1850.² These weights are of quite a different shape to the Kirdford one, and are neither so large nor so heavy, though like it they have plain loops. So far I have failed to find any parallel to this weight from Roman sites in Great Britain. Enquiries addressed to nineteen of the leading museums in Belgium, France, Germany, Holland, Switzerland, Italy, and Spain, have produced three references. (1) A globular iron weight with loop from the site of a Roman smithy at the Heidenburg by Kreimbach,³ 6 cm. in diameter, but too rusty for its weight to be reliably checked; (2) A globular weight of lead with stumps of a broken iron loop at its upper part, 480 mm. in diameter, found in a Roman well at Klettenberg, Cologne, and now in the Wallraf Richartz Museum, Cologne; and (3) Dr. S. Reinach writes, "I know of no Roman weight of that appearance, but weights with curved loops at the top appear already in lacustrine dwellings." It thus appears that no parallel has been traced in Roman Europe, unless in the unlikely event of the Cologne specimen being but the lead core from which the bronze casing has been removed.

If of Roman origin the lack of parallels both in Britain and on the Continent is surprising, because they are not likely to have been overlooked had they existed.

At first sight the weight reminds one of the thirteenth century example found at Yapton in 1923,⁴ and presented to the Society's Museum by Mr. W. A. Hounsom. It is like it in that it consists of a thin casting of bronze filled with lead, and the scars on the side and near the base indicate that it also was cast by the *cire perdue* process; moreover, in both cases, the body carries four designs, and their weight and size are not greatly dissimilar. On the other hand in form it differs from most of the thirty-seven specimens of

² See *Remains of Roman Art in Cirencester* by Buckman and Newmarch.

³ *Altertümer unserer heidnischen Vorzeit*, V., taf. 46, 21a, and p. 263.

⁴ *S.A.C.*, LXVII., 189.

thirteenth century steelyard weights Dr. Dru Drury has been able to trace in Great Britain,⁵ in that these with few exceptions, are surmounted by pointed, not curved, loops which continue the lines of the sides, and which in all the examples project between horizontal cut-away shoulders. It differs from nearly all of them, too, in the matter of ornamentation, for the Kirdford weight carries four apparently meaningless incised ornaments in place of the four coats of arms of Richard, the second son of King John, borne in relief by most of the thirteenth century weights.⁶ It differs, too, from the Yapton specimen by the absence of the iron pins employed in the latter to keep the core and clay envelope apart during the process of casting. Dr. Drury noted such absence in some of the specimens he examined.

Taking the various points mentioned into consideration we feel that the balance of evidence is definitely in favour of a medieval date, and consider that the details in which this weight differs from those issued by Richard, Earl of Cornwall and King of the Romans, may merely indicate a somewhat later and decadent type.

Dr. C. H. Desch, of the Department of Applied Science, Sheffield, kindly examined the bronze casing, and sent me the following report:

The analysis of this weight has given the following figures:—

Copper	..	..	67·88	per cent.
Tin	..	..	2·79	„
Lead	..	..	17·61	„
Iron	..	..	2·27	„
Nickel	..	..	Nil	

In making the drillings the bronze wall was found to be very thin, so that the small sample taken for analysis includes some oxidised crust. The wall of the casting was very irregular, and some of the lead used as filling was entangled in cavities in the wall, so that there is no doubt that the lead value is much too high. I could not say whether the original bronze contained much lead without

⁵ "Thirteenth Century Steelyard Weights," by Dr. G. Dru Drury, *Dorset Nat. Hist. and Antiquarian Field Club*, 1926.

⁶ For the few variations see Dr. Drury's paper.

making so many perforations as to spoil the appearance of the weight. Immediately underneath the loop the drilling exposed the interior almost immediately, and the cavity was found to contain sand. I am not sufficiently familiar with the composition of Roman and Mediæval bronzes to say whether the analysis will throw any light on the date. The proportion of tin is very low, and lead must have been necessary to give sufficient fluidity to the metal, but I do not think that the bronze contains as much lead as is shown by the analysis. Evidently the inside of the casting is very rough.