

II.

NOTES ON OLD SCOTTISH MEASURES, WITH A NOTICE OF THE INVERKEITHING ELLWAND. BY J. BALFOUR PAUL, VICE-PRESIDENT.

The subject of Scottish Weights and Measures still wants a competent exponent, who will take the trouble to go into a somewhat abstruse inquiry. At present I can only give you a very cursory sketch of their early appearances, and briefly trace the legislative provisions regarding them.

The earliest measures used by man were naturally enough all taken from parts of the human body, because in that way the standard was always at hand. The foot and the pace were quite obvious means of measurement, while from the arm and hand we get the thumb, the palm, the cubit, and the ell; the oldest measures being generally the smallest. The Cymri measured by thumbs, inches, palms, and feet, four of the last making a *berjau* or short yoke, which was equal to 36 inches, or exactly our yard: the foot was 9 inches only, the measurement being probably taken originally from the unshod foot. In England the thumb had disappeared as a measure before the reign of Athelstane, and the barleycorn had taken its place, most likely because the latter were more generally of one size than men's thumbs. The palm survives to our own day, not indeed under that name, but as the 'hand,' though it does duty exclusively as a standard measurement for the height of horses: it is now four inches instead of three. The nail is, I believe, still a cloth measure. The Teutons had an ell or *gyrd* (from which our yard) of two feet, but the ell was of varying dimensions in different countries, depending on the part of the arm to which it was measured. It was usually a cloth measure; and it must be kept in view that before the introduction of coinage, cloth passed from hand to hand as a sort of currency in the North of Europe, where it was called *marc wadmal*. But the transition from cloth to coinage is not a subject on which I can now enter.

From very ancient times some kind of weights and measures must have been used, their necessity, in however primitive form, being obvious, even to races of very limited intelligence; but the earliest written record

relating to them in Scotland is contained in the laws of the Four Burghs, which is the most ancient collected body of laws which has come down to us. They owe their origin to David I., the Scottish Justinian, as he has been called, and represent the effect of a great Saxon movement which was taking place at his time simultaneously over all Great Britain. These privileges of the Burghs were evidently little more than a declaration of the common law, as settled by general consent and immemorial usage. "Ilka burges," they say, "may hafe in his hous a mesure to met his corne, ane elnewand, a stane and pund wecht for til wey. And al thir mesuris and wechtes sal be selyt with the seale of the burgh. And it is for to wyt that quhasa is fundyn with fals mesure or wecht sal pay a full amercyment."

While it is difficult to understand on what principles the different measures were originally based, it is interesting to be told the names of some of them, and their modes of computation. In an assize of the same king, David I., we are told that "The eln aw to conteyn in lenth xxxvii inch met with the thowmys of iii men, that is to say, a mekill man, and of a man of messurabil statur, and of a lytell man, but be the thoume of a medilkinman it aw to stand, or ellis after the lenth of iii bear cornys gud and chosen but tayllis: the thoum aw to be messurit at the rut of the nayll."

From the above it will be seen that it was not three thumbs that made an inch, as has been sometimes erroneously stated, but the average of the thumbs of three men of different sizes,—a very different matter, and one that is quite comprehensible.

In an *Iter Camerarii* or Chamberlain ayre, apparently of the end of the 14th century, and printed in the first volume of the Scots Acts, inquiries are directed to be made if the bailies of the different towns examined the weights, measures, and ells, and if two kinds of weights and measures were used, one for buying and another for selling. This was a common trick, not only of individual inhabitants of towns, but of the towns themselves, and continued for long to be declaimed against by the authorities. Complaints were made, for instance, to the Privy Council against the Burgh of St Andrews, both in 1579 and 1601, to the effect that the civic authorities were in the habit of using measures

sealed with the seal of the town in which rents were paid to the neighbouring landlords, but when the latter came to sell their grain in the market, they were bound to sell it "by the greit firlothe, and gif alsa charitie, as said is, to every boll of quheit half ane peck, and everie boll of beir and attis ane haill peck." This "charity to the boll" was a widely spread practice, and was the occasion of so much grumbling that Parliament itself had to take note of it, as we shall see.

In the Parliament of James I. held at Perth in 1425, it was ordered that the ell was to contain 37 inches, "as is contenit in the statute of King David the first, playnly maide thereupon."

During the 15th century Acts were from time to time passed, showing that the questions of Weights and Measures, and their accuracy, were not lost sight of by the Scots Parliament. In 1503 it was provided that they were all to be of one quality and measure, which were to be fixed at Edinburgh by the Chamberlain; and that all burghs were to send to Edinburgh and get a sealed standard of all the weights and measures. However good the intention of the legislature may have been, it cannot have been carried out with any great zeal, for in 1555 Commissioners were appointed to cause the ellwand and other weights and measures to be brought to them from Stirling, Linlithgow, and Lanark, and to make the system universal throughout the kingdom, except the water measure, which was to remain the same as before. Still, no good seems to have come out of this commission; and eight years after, another was appointed for the same purpose; and still another, twenty-four years later. This commission of James VI. in 1587 reported that they had considered the matter, and recommended that double standards should be made of all the weights and measures; one to be in the Register at Edinburgh, and another at the town to which it had been committed of old. (*Acta Parl. Scot.*, iii. 521.)

Notwithstanding all the previous attempts at legislation in the direction of regulating the weights and measures of the country, much inconvenience was still felt in 1617 at their diversity, and it was ordered that the standard of all measures to be used in future was to be that of Linlithgow, which it is stated "is now commonly used and has been used through the greater part of the kingdom for 50 or 60 years."

(But this really appears to be the firloft and its parts alone.) Commissioners were again appointed to bring the whole system into conformity with one standard (*Ib.* iv. 538). They reported in the following year, and a long Act was passed, which it was fondly hoped would settle the question. By this, five copies of all weights and measures were to be made, two to be kept in the Castle at Edinburgh, two in that of Dumbarton, and the other in the town which had the custody of them formerly. In this way, the ell was committed to Edinburgh, and was fixed at 37 inches; the pint stoup, to contain 3 lbs. 7 oz. weight of clear running water of the Water of Leith, was given into the custody of Stirling; the French troy weight, of 16 lbs. to the stone and 16 oz. to the lb., went to Lanark. The firloft, of which Linlithgow got the keeping, was to measure $19\frac{1}{8}$ inches across by $7\frac{1}{3}$ deep: it was to have a triangular iron bar across its mouth, the edge of one of the angles resting on the rim, and another coming up from the bottom of the measure to meet it. This was to ensure that whatever was measured should not be heaped up, but should only come so far as the edge of the iron cross-bar. This was called the straik firloft; but as certain commodities, such as malt and oats, had always been sold by the heaped measure, it was found expedient not to allow them still to be sold in such a haphazard fashion, but to make a larger firloft, so that while it was still a straik firloft, it made allowance for the former heaps, and held about a third more than the smaller or ordinary firloft.

The Scottish people, however, have always been difficult to move. Although the Act of 1617 was ratified in 1621, yet four years later we find the melancholy admission that in some places it had fallen into desuetude, everyone making choice of measures "according to their unrewlie appetite, and as their avaritious and greedie humour leadis them"; and that maltmen, bakers, and others were in the habit of exacting a peck or more, under the name of "charity to the boll." Parliament made the usual order that no victuals were to be received or delivered except with the measures appointed in 1617, and expressly prohibited the practice of exacting charity for the boll.

But local customs, especially in Scotland, are very conservative, and

were even more so in the seventeenth century, so it is not surprising to find that within a very few years (1630) complaints were made that the Acts were not enforced. The Lord Treasurer and the Exchequer were appointed to try offenders against the statute, but the complaints still went on. In 1633, for instance, the counties of Perth, Angus, and Fife complained that the town of Dundee exacted a ladleful of all kinds of victual, ground and unground, which was sold in the market there (*Ib.* v. 48); and in 1641 there was a complaint that Wigtown would not use the standard measures, but stuck to their own local ones (*Ib.* v. 676). Little progress, indeed, seems to have been made towards the adjustment of the weights and measures to a common standard, as in 1661 Parliament admitted that sensible prejudice was seen and felt through many parts of the kingdom, by reason of the diversities of weights and measures used in the same: it enacted the Linlithgow measure to be the standard for the future, and a commission was, as usual, appointed for the carrying out of the Act: this of course only referred to the dry measures of which Linlithgow had been previously appointed custodian, and even to these there were exceptions, as two years afterwards it was found necessary to state that the standard chalder by which coals were to be sold was to be the Culross chalder (*Ib.* vii. 488). Other kinds of measures, too, had not been sufficiently regulated for a long time, as in 1683 it was found that, notwithstanding by the ancient laws of the kingdom the ell had been fixed at 37 inches, yet many persons were in the habit of using inches by which the ell was divided into 42 parts, and that in consequence the foot measure was made of a smaller proportion than it ought to be: this irregularity, it was stated, was owing to the fact that no standard had hitherto been appointed for the foot, so the latter measure was fixed to be 12 of those inches of which the ell had 37. A standard of iron or copper was appointed to be made and kept at Edinburgh, and all burghs were ordered to have a measure made by it, and hung at their tolbooth doors and market crosses (*Ib.* vii. 488).

Another peculiar measure was brought under the attention of the legislature in 1681, and it was arranged that the measure for salmon was to be that of Aberdeen (*Ib.* vii. 400).

The last enactment relative to measures passed by the Scottish Parliament was in 1685, when it was officially ordered that—

3 barleycorns set lengthwise	= 1 inch.
12 inches	= 1 foot.
3 feet = 1 yard, or 3 feet 1 inch	= Scotch ell.
1760 yards	= 1 mile.

And in 1707 the whole of the weights and measures were, nominally at least, assimilated to those of England by the Treaty of Union, though, as we all know, local practices continued to be carried out down to very recent times.

The Inverkeithing Standard Ellwand is a thin bar of brass or bronze, $1\frac{5}{8}$ inches in width and fully $\frac{1}{8}$ inch in thickness, strengthened by being clamped between two rods of iron, each $\frac{1}{2}$ inch in width, $\frac{1}{4}$ inch in thickness at the edges, and slightly bevelled to the middle, where the thickness is $\frac{3}{8}$ inch. These rods are clamped down the middle of the brass bar by rough iron rivets, with square heads on one side and round heads on the other alternately, placed about $9\frac{1}{2}$ inches apart, the two



Fig. 1. The Inverkeithing Ellwand.

nearest the ends coming within 2 inches of the extremities. The brass bar shows a strip $\frac{1}{2}$ an inch in width on either side of the iron rods, extending from end to end, but portions of this strip have been cut away at different distances, one side showing a long cut, and the other side two short ones. The long cut on the one side measures exactly 37 inches, and may be taken as the standard ell. The short cut on the opposite side measures 2 inches only, the distance between that and the next cut $10\frac{3}{4}$ inches, and to the second cut $16\frac{7}{8}$ inches.

It does not look as if there was any standard here except the Scotch ell, which was a fraction over 37 English inches.

On the brass band at one end of the ellwand is the inscription in black letter :—

Willms Carmichel anno dñi millesimo quingentesim.