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FULCRUM is a newsletter for collectors of antique weighing and measuring equipment and enthusiasts of historic metrology. It is published in February, May, August and November. Contributions should be sent to the Editor, John Knights.

Who'd Have Thought It?



Way back in Edition 50 I mentioned a somewhat unfortunate occurrence in October 2019 at Woodbridge, Suffolk. On that occasion a large goods lorry was hurtling along New Street, in the town when it collided with the projecting housing of the 17th century cart steelyard at the Bell and Steelyard public house.

The Woodbridge steelyard is an almost unique example still in place, in the UK, so the collision and resulting damage to the device was particularly unfortunate.

I say almost unique because there is, of course, one other example in the small Cambridgeshire town of Soham which has also been carefully preserved over the years. Thank goodness then that this machine was still alright.

Wrong! It transpires that some two years earlier in September 2017 a lorry was hurtling along Fountain Lane in the town when it collided with the projecting housing of the historic scale or 'contraption' as it was described in the Ely Standard.

It appears that both these occurrences could be blamed, to an extent, upon the slavish adherence by drivers to ‘sat-nav’ directions. These seem to send vehicles on the shortest or seemingly quickest route, irrespective of the unsuitability of the road and other impediments that might be encountered. Presumably low bridges, weight restrictions etc will be shown on heavy goods vehicle systems but clearly not all hazards merit a mention.

The damage, in the latter case, was mainly confined to the lower part of the housing and fortunately, the most historic timbers forming the crane mechanism and the steelyard itself seem to have avoided serious harm.



The Heavy Brigade



I recently received another couple of pictures of metrological items from one of my roving correspondents, who send pictures of such things to the ‘mad scale bloke’ when they come across them during their travels. The item on the right is an old Parnall platform scale, clearly not in the best of condition which has been dumped in the grounds of a public house with a few plants on it. The glory of this scale is of course the intricate casting of the iron back plate. This one is all very organic with intertwined tendrils and fulsome fruits. This is an item well worth preserving just for the ironwork. The other scale, found in an antique centre, is nicely preserved and has been spared the customary coat of Hammerite. It’s a nice early ‘HERBERT’ (apparently) butcher’s scale, spoiled only by an unfortunate replacement goods plate. The H of ‘Herbert’ has been lost during manufacture by the insertion of the goods’ side, stay bearing, which is a bit strange. It looks a little on the rustic side for a Herbert, a maker better known for their more delicate Lion Imperial models, although it is of course a much earlier machine.

How the coal trade in England has declined within my lifetime (by Mike Sharpe, aged 63)



Coke bagging plant Strood, Kent

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This is a nostalgic image for me. Although it dates from the 1950s, it shows a scene which was still familiar when I started in Weights & Measures in the early 1980s.

England, Scotland and Wales were rich in coal. Historians credited it with being the fuel that sustained our First and Second Industrial Revolutions over 200 years.

In 2022, the UK Government is happy to restrict its sale to almost nothing. That's on the basis that it produces greenhouse gases when it's burned.



In 1922 almost every household, office and factory needed its share of coal for heating, cooking, gas and power generation.

Weighing the 'black gold' out as it made its way through the distribution system was a major endeavour. This process determined costs, delivery amounts and profits. It had been controlled in the big cities since the Victorian age. In 1926 the UK Government made the national Sale of Coal Act in the interests of fairness to the consumer, and fairness in

competition between suppliers at whatever level – coal mines, bulk transporters, merchants and public utilities.

The photo itself captures some of the rough and ready nature of the work – outside in all weathers, lugging heavy loads, finding an excuse for humour.

The coke types named on the central panel in the pic are ‘shinburners, feet toasters and hotglow nuts’. Such marketing names might raise an accidental smile in our modern world of double meanings – but the introduction of gas central heating to 85% of British homes has changed a whole outlook on life.

The location of the photo is Strood, the industrial part of Rochester on the River Medway in Kent (The Garden of England).

Looming through the mist on the right is the mediaeval bulk of Rochester Cathedral (immortalised as Cloisterham Cathedral in Charles Dicken’s final and unfinished work ‘The Mystery of Edwin Drood’). Even the Dean and Chapter of the Diocese had need of Arthrell’s deliveries to heat their draughty but well-filled ecclesiastical buildings.

On display are three ‘scoop’ weighing machines which made the bagging after weighing easier. Coke, being lighter than coal, was bulkier. To get the required 112-pound / hundredweight in the re-usable hessian sacks, without spilling any, was a mucky yet skilful art. There were no sealed plastic bags then!



One job for Inspectors of Weights & Measures was checking that the filled sacks in the course of a roadside delivery did in fact contain at least 112lb (140lb in Scotland!), later 50kg.



Open coal sacks were required to be marked with the contents weight by means of a metal tag

Here’s a photo of the post-WWII London scene, where the well-heeled London County Council ‘coal meter’ / inspector could depend on a specially-adapted motor to

provide a convenient weighing set-up.

On the right is the ‘coal-hole’ down which the sacks were poured. Some homes and buildings would have a weekly delivery, with payment in advance in cash, or on account. Without the spot checks, there was little chance for the customer to ascertain the actual amount received.

Counting the empty bags (20 to a ton) wasn't a certainty. If each bag had been 'skimmed' then short weight was still a possibility.

There were tales that some coalmen's fortunes had been made on the deft handling of the empty sacks to make 10 look like 20 by the simple origami of folding.

Back in the yard, the checking of the weighing machines and the 56lb weights most often used was best done by inspectors early in the morning. The equipment used for these tasks – 'travelling' 56lb beam scales with tripods, brass working standards and 'bob-up' sack weighers – is still preserved by some collectors today. Accurate with or without the coal-dust!



An example of a 56lb 'outdoor' inspector's beam, preserved in a UK collection. It could be easily packed away into its carrying box and taken to the coal-yard. 56lb weights were checked to an accuracy of 50 grains (just over 3g)

The Man with the Stick (By John Knights)

Some years ago I used to attend a weekly collectors' group where the members would get together to discuss antiques and listen to guest speakers. They were a varied bunch with interests in all areas of collecting. One particular chap was a great fan of walking sticks, some of which were much more than mere ambulatory aids. These are known as 'gadget sticks' and include sword sticks, shooting sticks, sticks with spirit flasks inside them, sticks with horse measuring rules concealed within and sticks that converted into camera tripods. The essential requirement is that the item has to perform a secondary purpose in addition to its role as a walking stick.



Some of those, in his collection were glorious and ingenious in their complexity and were often richly adorned with collars and plaques of precious metals etc. With, I must admit, a sense of some mischief I turned up, one day with a stick of spectacular plainness and proceeded to wax lyrical about its great purpose over and above its use as a third leg.

The stick was just that! It was a turned piece of wood with a domed knob on one end and a metal ferrule on the other as its sole item of adornment. There were no concealed cavities, slidey bits or hinged attachments; nothing! It was essentially a piece of wood that hadn't even been varnished. Faced with a sea of bemusement I proceeded to explain that its novelty lay in the fact that it measured exactly 36 inches in length!

It was what is known as a 'Deputy Stick' and was once a feature of the coal mining industry (remember that?). The great county of Lincolnshire, where I live, was never greatly known for its participation in fossil fuel extraction so as I waxed lyrical about this item's role in the industry, I have to admit I was winging it a bit. I vaguely knew that the 'Deputy' in a coalmine was some kind of foreman who supervised activities underground, in the interests of safety and production. The sticks were issued to these officials and were used for general poking, prodding and tapping purposes to check on the safety of the working area. I had heard that as the stick was also a measuring rod, it could be used to establish the volumes of material that had been extracted from seams of coal. I wasn't wholly convinced about this as I was aware that mines were liberally equipped with weighing devices which I took to be the method of ascertaining output and payment. Not wishing to allow truth to get in the way of a good story however, I dived headlong into the seam measuring stuff (I seemed to remember that 'stints' came into it somewhere) for the purpose of my talk to the antique group. Nobody shot me down in flames so I breathed a sigh of relief and moved on to other matters.

It was not until last year that the subject came back to me as I was wandering around the October antique fair at Newark. At these large fairs one often encounters the phenomenon of 'omni-presentism' (not a real word) whereby you keep seeing the same type of item on stall after stall. On this occasion it was Deputy Sticks that kept popping up on tables that I passed. As previously mentioned the Deputy Stick is essentially a somewhat boring artefact so I initially took little notice. One example however caught my eye when I saw that not only was it the standard one yard long but it had been subdivided into four lengths of six inches and one length of one foot. These sticks were commercially produced and provided to the industry by suppliers of mining equipment. It was clear however that the subdividing of this stick was not factory standard as the marks had apparently been scratched on by someone using his feet to hold a penknife. The fact that it was subdivided did however raise the issue again about the use of the stick as a subterranean measuring device. Clearly the owner considered that a little more precision was required than would have been necessary if its only use was measuring the space between pit props etc. Maybe some of the 'BS' that I'd peddled to the hapless antiques group may have possessed at least an iota of truth.