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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.

Old Street Re-visited (again)

In the last issue I mentioned the final AGM of the European society which took place at the Rothamsted Research Station near Harpenden. One of the scales from their collection, put on display for us was a rather hefty deadweight machine. So taken was I with this behemoth that I thought I would revisit it in this edition. Apart from its size it was of interest because it was yet another product of that erstwhile Scaleopolis that was Old Street in East London.

This time the maker was neither Stillwell nor Miles but Walter Parry.

The scale is a wooden framed, high pattern reinforced with steel and iron fitments.

It was intended to be towed around the site although the wheels currently fitted appear to be of later origin. A wonderful survival!

Baltic Blackheads

When it comes to scales we always like to see the strange and downright peculiar as there are only so many Avery fan scales you can enthuse over.

Our good friend Diana Crawforth-Hitchins certainly produced such an oddity when she sent some photographs of a scale (we know it's a scale because it has some numbers and a pointy thing at the top) which she encountered in Riga, the capital of the Baltic State of Latvia. The device was discovered in the cellar of the 'House of the Blackheads' (it may lose something in the translation). The Blackheads were apparently a medieval mercantile organisation and judging by their house they were quite a substantial organisation. Regrettably, through the combined auspices of the Nazis and Soviets the original medieval building was destroyed so the current edifice is a reconstruction finished in the 1990s. This is an all too common situation in Eastern Europe. I was once on a conducted tour of Potsdam near Berlin and we were presented with the vista of an elegant 18th century palace on the right hand side of the road and a rather unpleasant 1960s tower block on the left. It was suggested that the tower was lowering the tone of the area and should be demolished so as to enhance that sublime Frederick the Great experience. The guide, somewhat wearily, pointed out that the tower block actually predated the recently reconstructed palace by a considerable number of years. This also applied to several other adjacent Brutalist blocks, constructed during the post-war years of communist rule.

Back in the Latvian cellar the scale must have survived the annihilation of chez Blackhead, presumably because it was in the cellar, as there it stands to this day. Diana

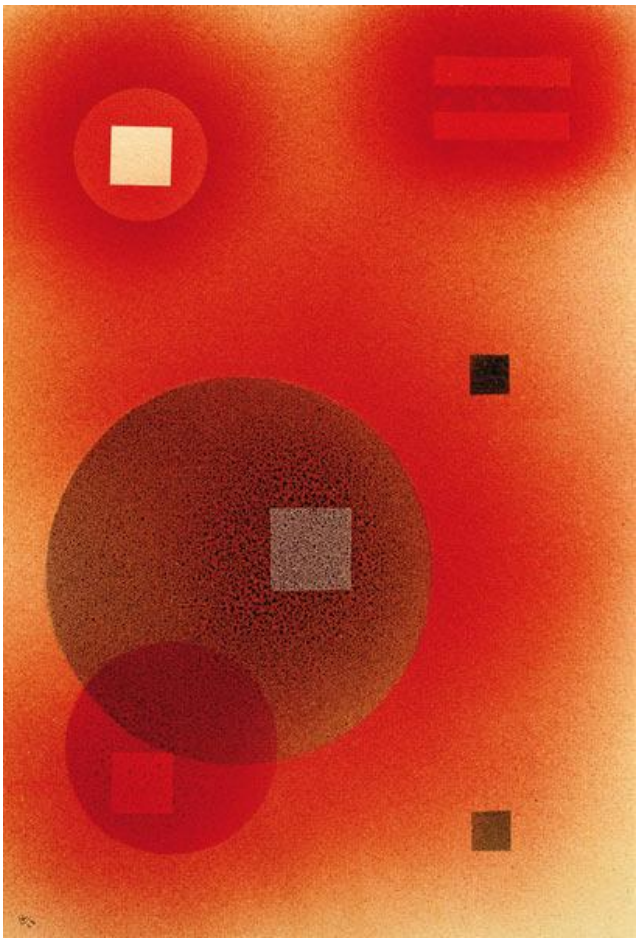
was a little perplexed by the scale and its modus operandi. She wondered if I could suggest anything of interest, knowing my predilection for cams, levers, springs and the like.

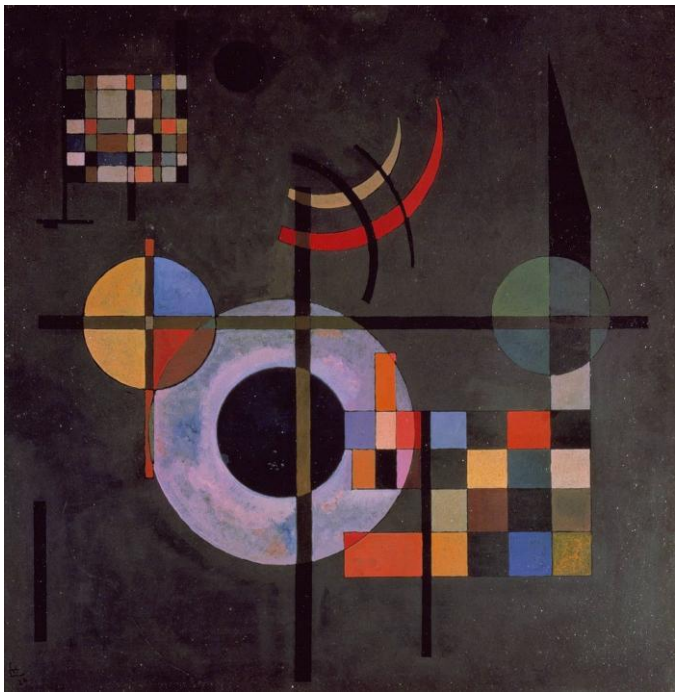
Having examined the photographs I had to admit an equal degree of perplexity as the scale was certainly unlike anything I had ever seen before with a complexity of action that seemed both baffling and unnecessary.
The scale has a 'one off' look about it with rudimentary chart and bottom work and a confusing collection of links and levers connecting the two.
The chart is unequally divided suggesting the lack of any cams or springs that would achieve a uniformity of sub-division and there does appear to be the suggestion of a pendulum resistant.
There is no indication of the weighing capacity but the chart is graduated from 1 to 14 Podi or 1 to 120 kg. We are advised that 1 pod = 8.4 kg which is just as well as otherwise I would have no idea what a pod is. There does appear to have been a Russian unit called a Pood, equal to 40 Funts (I'm not making this up honestly. I know Funts are a thing as they are mentioned in Chekhov's play Uncle Vanya, a work of the late 19th century) which equated to 16.38kg but that does not equate with the units on the scale.
In any case the scale is decidedly un-ambitious as to the level of discrimination. Each graduation is equal to 1pod or 8.4 kg. There would seem to be plenty of room for minor subdivisions but they have clearly not bothered.
It's difficult to date the device. The Soviet Union adopted the metric system in the 1920s so it would seem to postdate this. Latvia enjoyed a brief respite from the Soviet occupation between the wars but some alignment with the neighbouring metrology would have persisted.
The scale's purpose is equally enigmatic. The degree of discrimination is laughably large given the apparent capacity and this would seem to categorise it as an approximate weigher. Finding out how much something weighs to the nearest 4 kilograms is, after all, little better than guesswork.
If any Latvians know anything about this enigmatic device please get in touch.

What a belter!

Yet another friend of mine decided to share a photograph of a 'scale' that he encountered whilst at the Kelham Island Museum at the English city of Sheffield.
He recognised the device as a scale because, like the Lithuanian device above, it had some numbers and a pointy thing at the top. Lest there be any residual doubt he noted

the name W&T Avery (a well known manufacturer of scales and weighing machines m'lud) blazoned on the front.
Being thus assured of its identity he took a photograph (left) and sent it to the scale idiot.
As I and doubtless you probably realise, it's not a scale!
Kelham Island is a museum and predictably now-a- days, a venue for weddings and other festivities. It holds a host of exhibits which illustrate the history of the steel industry for which Sheffield is still renowned.
The Izod machine is in fact a device known as an impact tester which is used to test the shear strength of metals and other materials.
Dating from the early 1900s, the Izod tester assesses the shear strength of the material by smacking it with a large swinging hammer. This differs, of course, from the Charpy impact tester which assesses the shear strength of the material by smacking it with a large swinging hammer. I hope that's cleared that up!

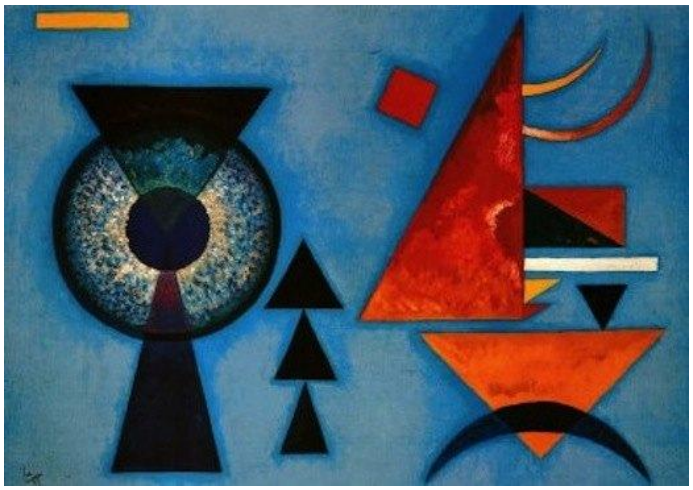




Kandinsky

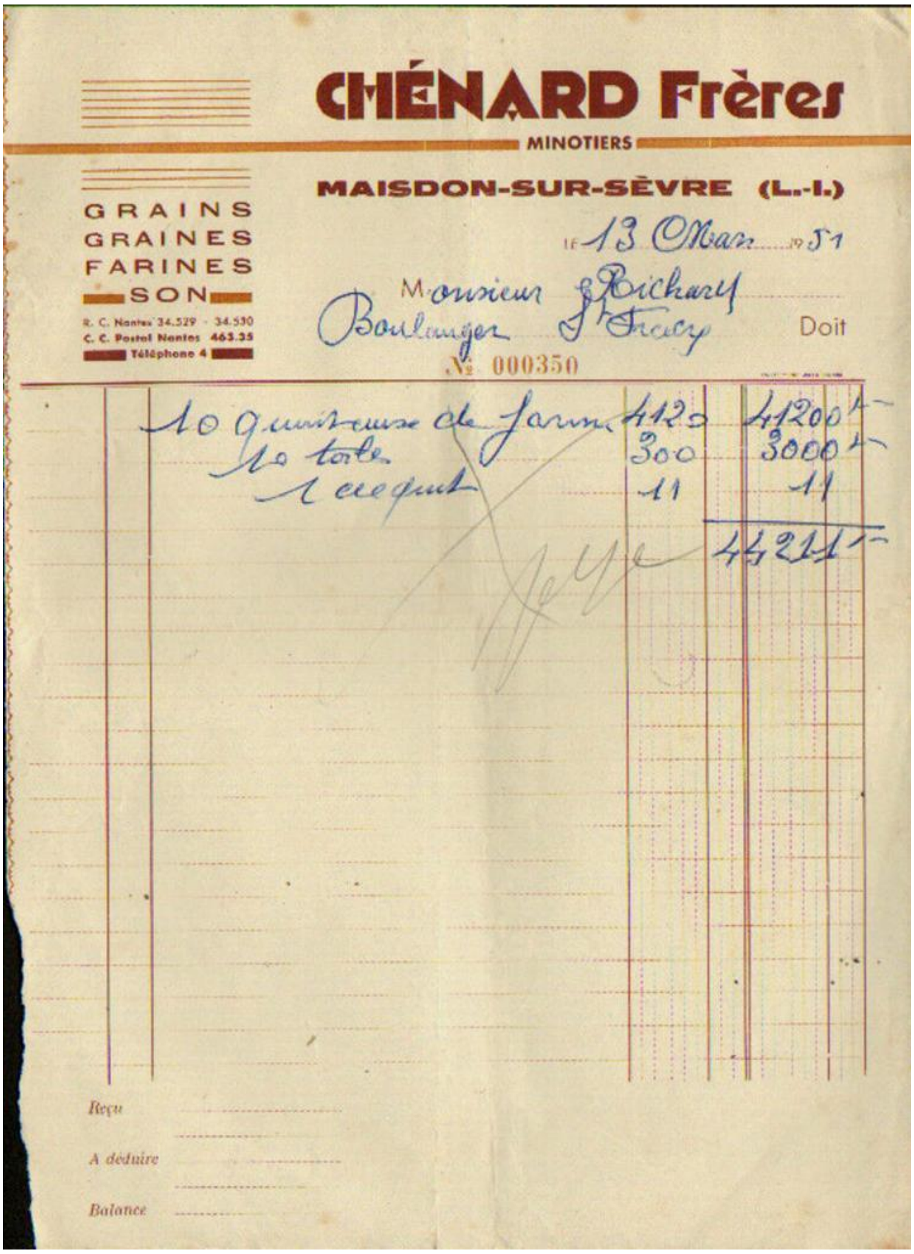
Scales regularly feature in art, often in some allegorical religious context or as a representation of human avarice.
Such works usually feature in works from the Renaissance or Classical periods so I was a little surprised to encounter works from a much later period featuring weighing.
The one on the left goes by the name of weighing down and the one on the right is called counter weights. The works date from the 1920s and are by Wassily Kandinsky one of

the most prominent and popular artists of the 20th century. These works date from his Bauhaus period when he was into precise geometric forms having moved away from his earlier expressionistic landscapes.
A number of these works have linear elements redolent of pointers, clock like faces and other indicative features (Below). These works usually have somewhat anodyne names such as 'Small Worlds', 'Soft Hard', 'On White' etc. The ones with the weight related titles appear to me to have little to do with the concept. But what do I know? He sells a lot more pictures than I do!



Quintal, Cental

The British Imperial system was a thing of mystery and arcane complexity. For those of us who were a bit thick in the mental arithmetic department it was also something of a nightmare. All those strange numbers (437½ for goodness sake) were designed to aggravate the innumerate. As if the equally irrational £sd money was not bad enough. When it came to doing science in imperial units, things became exponentially worse. Foot-pounds, pound-feet, poundals, horse power, British Thermal Units, slugs (sic) etc were instruments of torture for spotty numberly incompetents such as me. It's quite impressive that we ever managed to invent steam engines, jet engines, hovercrafts or the Austin Allegro when we were burdened by such nonsense.
At some point in history there was an attempt to take pity on the victims of septimal angst as we also had a system of imperial weights based on a 100 pound unit. This unit was known as a cental but a physical weight of 100 pound never actually existed. When I worked in a weights and measures office that held a collection of local standards we had a 50lb, 20lb, 10lb and 5lb weight lurking at the back of the cupboard from where they never emerged as the system itself never actually caught on in the world of commerce. We might have encountered the odd 5lb weight in the occasional frozen pea factory where we had to hope it was not being confused with a 4 or 7. The weights of the cental series were made in a distinctive irregular octagon shape to avoid any such misunderstanding but not many people knew that. There was no decimalisation of the ounces which stayed stubbornly 16 to the pound and the larger values remained universally based on the quarter of 28 lbs, the hundredweight of 112lbs and the ton of 2240lbs. This latter unit was historically referred to as a long ton to distinguish from the decimal or short ton of 2000lbs which was used elsewhere but never in the UK.



CHÉNARD Frères
MINOTIERS
MAISDON-SUR-SÈVRE (L.-I.)

GRAINS
GRAINES
FARINES
SON

R. C. Nantes 34.529 - 34.530
C. C. Postal Nantes 463.35
Téléphone 4

Le 13 Mars 1951

Monsieur Richard
Boulanger St Fiacre

Doit

N° 000350

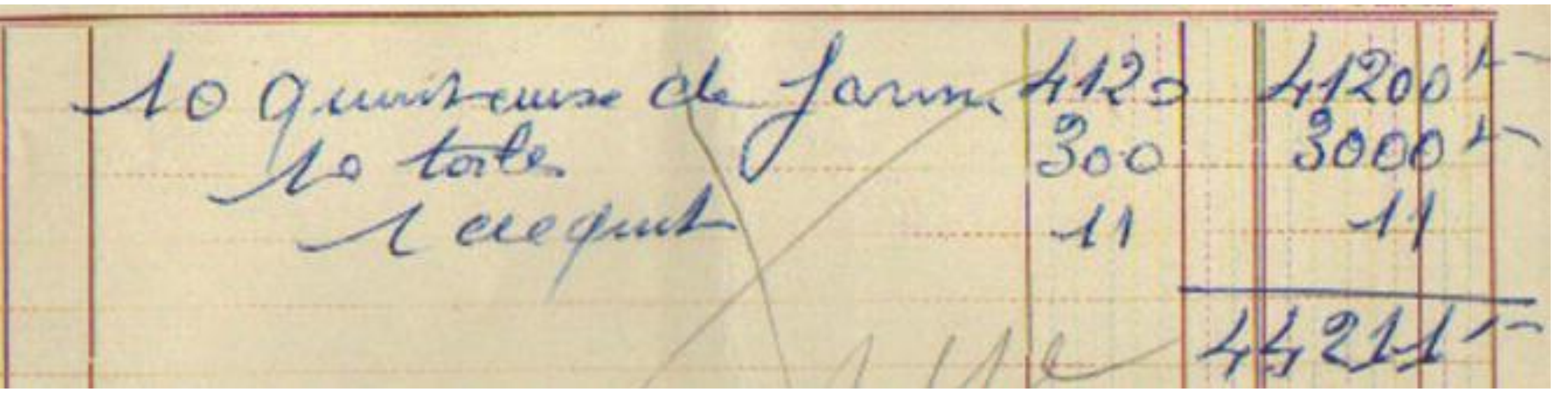
10 quintaux de farine	4120	41200
10 toile	300	3000
1 acquit	11	11
		44211

Reçu
A déduire
Balance

It might be assumed that in the metric world all would be order and uniformity but whilst the theoretical units were well established, out in the wide world non standard terms were in use.

Surprisingly it was the French (who still talk about the milliard where the English speaking world refers to a billion) who seemed determined to use alternative names for metric units for which perfectly good names were well established.

They hung on to the myriagramme for a 10 kilo unit. This refers to a weight of 10,000 grams and seems to hark back to the centigram, gram, second system that was used until the current metre, kilogram, second system became the norm. This also applied to the metric tonne which was referred to as a millier or one million grams. A particularly weird example is the quintal, a unit whose very etymology is a



thing of mystery. Quite why a unit of 100 kg should be called a quintal with its echoes of a unit of 5 somethings is not readily apparent. I can only assume it is a term from pre-metric days, such as arpent, that has been carried over to the modern system. I came across the above invoice from a French miller in 1951, referring to 10 quintaux of flour. This would seem to indicate it was routinely used in everyday trade at that time. The word still appears in modern dictionaries so maybe SI prefixes have not yet have totally prevailed.