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At last the long wait through summer was over, and some of the fields where I have search permission were starting to be harvested. The first field to become available had only recently been cut and was still in stubble, but fortunately the remaining stalks were quite short. It did not take long to get back into the familiar routine, and within a few minutes I had started to recover the usual bits and pieces of scrap lead. A few yards further on, though, I recovered something totally different, a hammered silver sixpence of Charles I (Fig.1.). As this was the first hammered coin I had recovered for this season it brought something of a warm glow, and I placed it into my padded tobacco tin for sake keeping. At first

glance it appeared to be very "spend worn" but close examination proved this not to be the case. Most of the wear seemed to have occurred from the coin being rolled around in the soil during ploughing.

I decided to concentrate on the immediate area just in case the coin was not a casual loss. Due to the recent rain the ground was very soft and easy to dig, but it was also darker and more friable than the usual Essex clay on most of my sites.

My next find was laying on the surface and was a small mid-18th century breech buckle (Fig.2.), unfortunately with its centre missing. Everything seemed to be going well until I recovered a large homemade lead weight (Fig.3.). The signal from this was very "iffy" and my first impressions were

that the detector was indicating a tiny fragment of non-ferrous scrap just under the surface. Such was not the case, and the target proved to be a 4oz lead weight located at a depth of 10in. I felt that such a large object should have given a far clearer signal, and I re-buried it a few inches down where it gave a loud response.

The only explanation for this type of "cut back" was that the ground was heavily mineralised. It seemed to follow on that if I had almost missed such a large target, then I was certainly missing out on smaller objects that would normally be within range. My search over the next hour or so seemed to provide confirmation of my theory. My finds all came within the comparatively shallow depths of 4in to 6in (depending



Fig.1. Charles I sixpence.



Fig.2. 18th century breech buckle.



Fig.3. Home made lead weight.



Fig.4. Copper coins including a George I Irish halfpenny.

Fig.5. Lady's livery button, dating late 18th to early 19th century.



Fig.6. 17th century buckle with replacement pin.

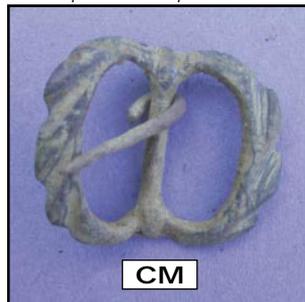


Fig.7. Lead palm guard.



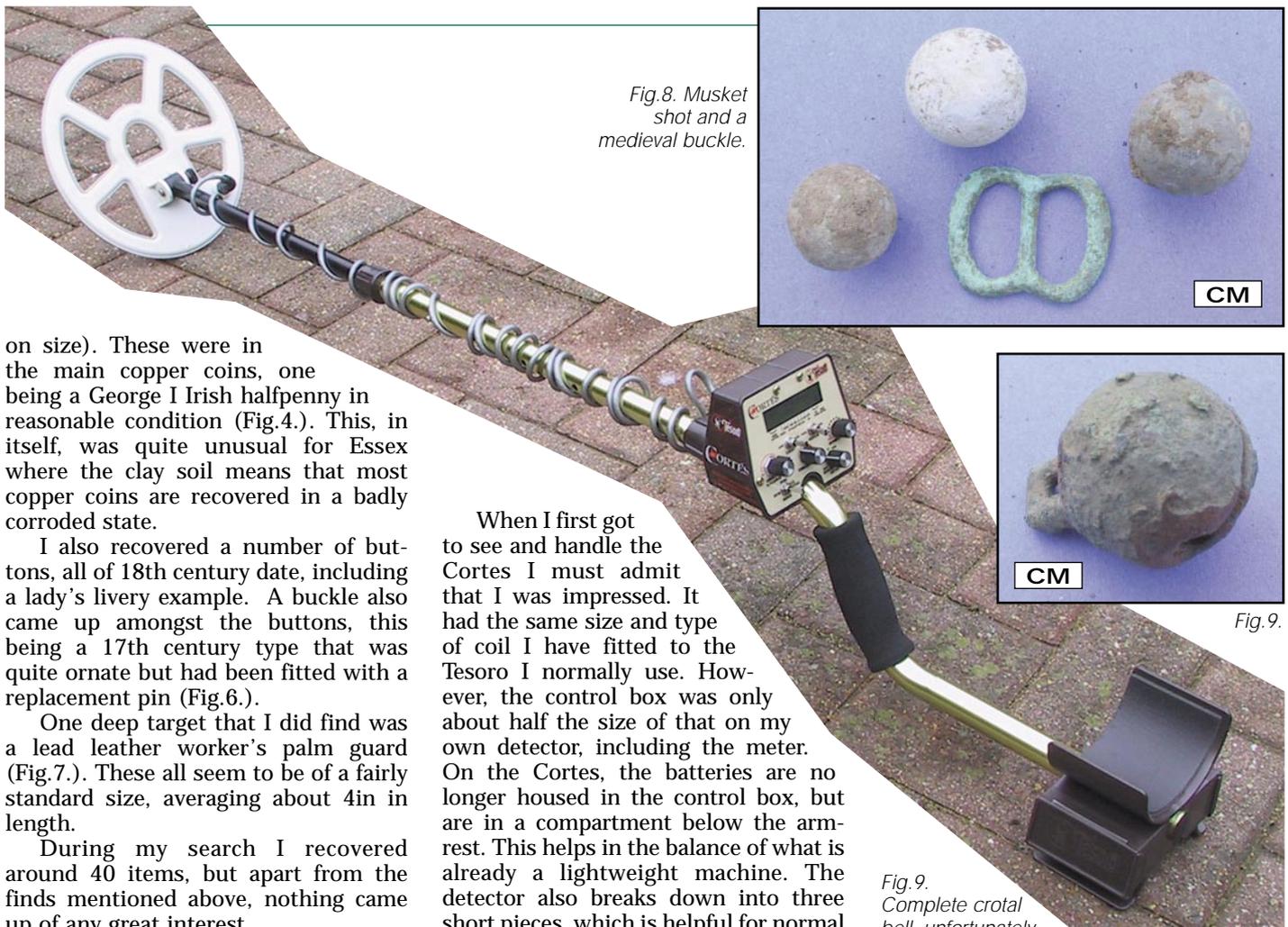


Fig. 8. Musket shot and a medieval buckle.

Fig. 9.

Fig. 9. Complete crotaal bell, unfortunately with damaged surface.

on size). These were in the main copper coins, one being a George I Irish halfpenny in reasonable condition (Fig. 4.). This, in itself, was quite unusual for Essex where the clay soil means that most copper coins are recovered in a badly corroded state.

I also recovered a number of buttons, all of 18th century date, including a lady's livery example. A buckle also came up amongst the buttons, this being a 17th century type that was quite ornate but had been fitted with a replacement pin (Fig. 6.).

One deep target that I did find was a lead leather worker's palm guard (Fig. 7.). These all seem to be of a fairly standard size, averaging about 4in in length.

During my search I recovered around 40 items, but apart from the finds mentioned above, nothing came up of any great interest.

On my return home I received a phone call asking whether I would be willing to carry out a field test on a newly-released detector. I must admit that I was a bit apprehensive about taking this on as the season had just started and the task of finding my way around a new machine could have meant lost search time. However, the detector was of the same make (Tesoro) as that I normally use and I therefore agreed. This was on the condition, though, that I would have more than just a week or two to come up with an evaluation. The UK importer of the detector, Frank Mellish of Treasure World agreed, and stated that in his view the only way to get a true feel of a new machine was to spend a month or two in putting it through its paces.

The detector concerned, the Tesoro Cortes, was the first detector that I have ever field tested with an LCD read-out. In the past I have had little confidence in such machines. I know that there are many readers out there who swear by them and have come up with some great finds by using them. However, I have always worked on the principle of "when in doubt dig" and I did not see how a LCD display could provide any benefits over the equipment I was already using.

When I first got to see and handle the Cortes I must admit that I was impressed. It had the same size and type of coil I have fitted to the Tesoro I normally use. However, the control box was only about half the size of that on my own detector, including the meter. On the Cortes, the batteries are no longer housed in the control box, but are in a compartment below the arm-rest. This helps in the balance of what is already a lightweight machine. The detector also breaks down into three short pieces, which is helpful for normal transportation and perfect if you are planning to take it on holiday.

Before taking the Cortes out in the field I carried out a few bench tests on it at home. My first surprise was that there were no faint signals; when the detector reached its maximum range - which appeared very good - that was it.

My intention for the first outing was simply to acquaint myself with its performance, peculiarities and controls; after that I felt that searching could begin in earnest. I set discrimination at the position halfway between zero and iron. This eliminated all unwanted targets up to the size of 6in bolts. The setting worked very well in the first area I searched, which I knew to be contaminated with lots of small pieces of iron along with some larger pieces.

The search area was chosen deliberately, as I had detected over it many times in the past and it could be described as "very well hit". I doubted that there would be a single non-ferrous item remaining to be found, but was quite shocked when - within a short time of switching on - I recovered three large musket balls and a small medieval buckle (see Fig. 8.).

The Cortes managed to eliminate the smaller pieces of iron without any trouble and when the larger pieces

came through on the audio, the LCD gave a reading of "Iron or Foil". Naturally, I dug up all such targets to make sure that the detector had identified them correctly; in every case it had.

My next concern was the term "Foil" that came up on the meter. The conductivity of foil is very close to that of medieval hammered silver coins, which are obviously not found in America where the detector was manufactured. I therefore dug each foil signal to once again make sure that what I was being told was correct.

By the end of my first search I was feeling confident that success on future outings would depend on myself rather than in any shortcoming in the equipment I was using.

On the following day I returned to the stubble field mentioned in the opening paragraphs. I was confident that I had searched this fairly thoroughly, and while conscious of the fact that it is always possible to miss the odd item, I did not think that I had missed very much. I returned directly to the area where I had found the Charles I sixpence and therefore, on my last visit, had given a particularly methodical search. For some reason the

FIELD TEST



Fig. 10. Targets found at a great depths: copper coins, a broken spur and a spindle whorl.

seeds from last season's sowing had not taken on this patch, and I was therefore searching flat soil that remained void of crops. However, the whole area was covered with filled in holes from my last visit.

From the first target recovered I became concerned at what I had missed previously. This find was only inches away from where I had recovered the sixpence and was a crotal bell (Fig. 9.), admittedly buried at some depth. Within the immediate area I recovered a further five targets comprising a broken spur, a spindle whorl, and three copper coins (Fig. 10.). At this point it dawned on me that I had not missed these targets, it was just that they were out of range of my normal machine.

The remainder of the field was still covered in stubble, the stalks being a minimum of 6in tall and in some areas a lot higher. I decided to continue searching the rest of the field, but in view of the stubble expected only surface finds. This conclusion was to prove quite wrong. Initially, I used the search coil to push the stubble down but this was exhausting work and I gave up eventually and just skimmed the head over the top.

I recovered quite a few targets but these were in the main pieces of lead, with the odd worn copper coin thrown in. I had started off in the hope that there would be some targets near the surface, but I needn't have worried too much for even with the spacing off caused by the stubble the Cortes is still making recoveries well into the soil.

Over the next few days all of the

sites I visited were still covered with stubble, but fortunately two of the fields had been planted with corn and the stalks were soft allowing me to get nearer to the ground surface.

The first of these fields had not been a busy one in my previous searches and, fact, could be described as close to barren. However, I thought this would be a good test for the new detector.

For the first 10 minutes the Cortes did not register even so much as a whisper, but then came a double signal. At first I thought I had found a large piece of iron, for there was no difference in the audio. However, the read out was good so I concluded that I must have located two targets and this proved the case. The first find was a very small pewter button, but only a few inches away from this was a groat of Henry VII (Fig. 11.).

This naturally caused me to stay in the area for some time and conduct a careful search, but nothing further of interest came to light. It then dawned on me that although I had found nothing of worth since the groat, I had been digging up numerous targets. At this stage I stopped, emptied my finds bag and made a count. Since finding the groat I had recovered 20 pieces of non-ferrous, all from what I had previously thought to be a dead field.

I also realised that I had become carried away with my own detecting experiences and was not paying proper attention to what I should be doing - testing the detector. Fortunately the field is a fairly small one and I therefore went for a "walk about". From previous



Fig. 11. Groat of Henry VII in reasonable condition.



Fig. 12. Crotal bell in good condition. This shows the founder's mark represented by a hammer.

searches I knew that there was one patch of the site that is heavily infested with nail and small pieces of iron and I made for this. As I approached the area I increased the discrimination up to the iron mark. My search here was more to see how the Cortes would cope with such conditions than the hope of any finds; in fact, in the past I had made it a point to avoid this area.

The first response came from a very large piece of iron and the read out on the meter indicated "Lift Coil". The Cortes is a powerful, deep-seeking detector and this facility is provided to deal with signal overload. I lifted the coil as instructed and the meter flickered between iron to coin, and back to iron again. When I investigated the target it proved to be a huge piece just below the surface; in was so big, in fact, that I left it where it was rather than attempting to carry it to the nearest ditch. I doubt if any detector available today could be certain of the identity of this target (unless it had a magnet on the end of it!).

A yard or so from the iron the detector gave another loud signal. This time, however, the meter remained nice and stable with the number on the right being high. Although I expected a surface find the target was some 12in down and was the crotal bell shown as Fig. 12.

By now I knew that I could rely on the meter should the need arise. This did help me out a few times during my search as some signals came through as positive on the audio but were identified by the meter as iron. The reason



Fig. 13. Lead seal matrix with the inscription "SWALTER SON OF SIMON CEROL".



Fig. 14. Penny of Edward I, Canterbury mint.



Fig. 15. Heavily cast Tudor thimble.



Fig. 16. William & Mary halfpenny in reasonably good condition.

for this was that I was working at a very low discrimination setting where large iron tended to come through as positive on the audio. It is possible to wind up the discrimination to eliminate such iron altogether and no audio comes through, but I prefer to work at lower settings and tolerate the occasional iron signal.

Eventually I decided that I had recovered most of the finds available from this site and I decided to make my way back to the car leaving the detector switched on. I was about halfway through the walk when the Cortes gave another signal. As with that produced by my other finds, this was once again very loud and positive. For some reason the soil in this area seemed to be particular hard and it took some time just to crack through the surface. (It is on occasions such as this when I think that a small JCB would sometimes come in handy!). It took me about five minutes to dig down about 12in at which point

I could see a lump of oxidised lead. My first thoughts were that all my efforts had been for nothing, but on retrieving the lead from the hole I soon changed my mind. What I had actually found was a 12th century vesica-shaped lead seal matrix in nice condition (Fig. 13.). On my return home I was able to read the inscription S/WALTER SON OF SIMON CEROL.

After this find I decided that it would be wise to give the field another quick once over. I knew that I should be continuing with the field test, but reasoned that for the next hour or so it wouldn't hurt to mix pleasure with evaluation.

This more relaxed search mode - where I was no longer worrying about taking note of how the Cortes reacted to certain targets and the read out it gave - seemed to have helped. Within a short space of time I had found a silver penny of Edward I (Fig. 14.) somewhat



Fig. 17. Threepence of Elizabeth I dated 1573.

battered by many centuries of being in the soil. I had some concern that the meter might indicate small hammered coins as "foil", their conductivity being similar; but such was not the case as this coin proved.

My final mop-up operation proved that I had not missed too many targets, and where this was the case I felt it to be down to human error rather than any failings in the detector.

Front and back of control box.



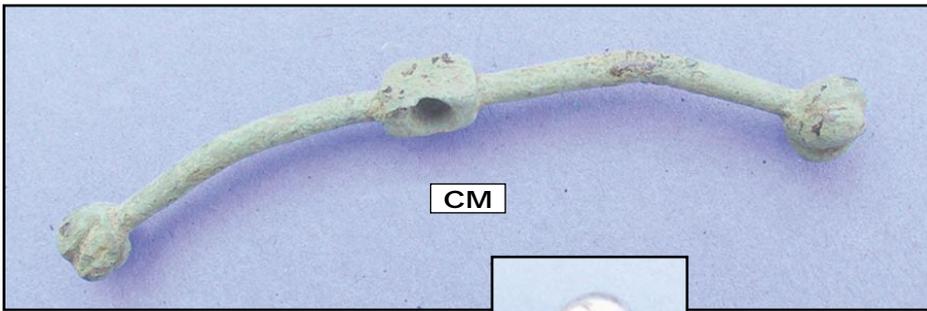


Fig.18. Purse bar missing its suspension loop.

Apart from the odd bits of lead, there were two finds that made my final search worthwhile. One was a heavily cast Tudor thimble (Fig.15.), and the other a William and Mary copper halfpenny (Fig.16.).

I would have liked at this point to have tried the Cortes out on ploughed land, but all the fields available were still in stubble.

The next field I tried had yielded numerous Georgian buttons and the odd copper coin in the past, but nothing earlier than this period. Whether the next find was down to fate, luck, the x-factor, or an innate dowsing ability I don't know. I walked onto the field and turned on the detector. The screen read "Lift Coil" which I did. As I brought the coil back to the ground it gave a loud signal that resulted in a threepence of Elizabeth I dated 1573 (Fig.17.). In all my years of detecting this was the quickest time of starting a search before finding a hammered coin.

So far, in performance terms, the Cortes was living up to the claims made by its manufacturers. However, I also like to assess whether there is any scope for improvement in the actual physical design and construction. As stated earlier, the detector is very lightweight with a small compact control box, three-piece stem etc. The only alteration that I would like to see concerns the jackplug socket. This is currently situated at the back of the



Fig.20. Silver button of 18th century date.

control box, but I would have preferred to see it at the top of the shaft near the battery compartment. In the later case the headphone lead would be less likely to get caught up, and there would be less strain on its connections.

There is a warning in the instruction booklet that if you use this detector you should be prepared to dig up some deep targets. Within reason it is possible to judge the size of the target, but not necessarily its depth from the read out on some types of objects. However, if you feel this facility to be important it is possible to keep raising the coil until the target ceases to give a signal and from this it will be possible to assess the depth at which it is buried. One such target I encountered was a purse bar missing its loop (Fig.18.), which gave a large signal due to its length.

By now I had found two items pre-dating the 18th century. I found that particularly encouraging when taking into account that I was still searching in stubble. I also have to say that the coil was totally unaffected when it was used in stubble. There are some detectors that give a false signal should you hit a particularly resistant stalk, and this can be frustrating, as you have to keep stop-



Fig.19. Penny of Edward I, London mint, in reasonable condition.

ping to check whether or not they are phantom responses.

As in past searches I was recovering small pewter and copper buttons, but it was not until I stopped to take a drink from my flask that I realised just how many I had found. I had only one occasion to dig iron, but this was a ploughshare and any machine could be forgiven for that oversight.

As I continued my search I felt that I had been using the Cortes for years rather than days. This was a good feeling for now instead of just testing the machine, I was using it as it should be used with great confidence.

Another hammered coin soon came to light, this time a penny of Edward I London Mint (Fig.19.). My thoughts at this point were that if I am recovering this amount of material from a stubble field, then how much could be found once the site had been ploughed and rolled.

On returning home I counted the final button yield that came to 20, and one of these, when cleaned, proved to be silver (Fig.20.). I had also found 12 copper coins, all of 18th century date.

Next Month

Besides continuing to describe my field experiences with the Tesoro Cortes and a summing up of the results, I will explain about how it is set up and operated and give its technical specifications. **TH**