

SALT WORKS AT HOOK, WARSASH, HANTS

By C. FRED. FOX, F.S.A.

ON June 20th, 1930, I had a request through Col. C. French, acting for Sir Warden Chilcott, the owner of the property, to inspect a site on which strange "cylinders of brickware" were being turned up. Col. French had submitted them to Mr. Reginald Smith, F.S.A., at the British Museum, who suggested that I should be asked to investigate, as additional information was required on what he believed to be early Salt Works, and in the process of extraction these "cylinders" were possibly used.

Mr. O. G. S. Crawford, F.S.A., in a letter to me dated July 30th, 1927, had also called my attention to certain "fingers of clay" which had been brought to him by a land-worker from Warsash and which Crawford "could make nothing of," and later my friend Mr. C. J. Mogridge, now Warden of the City Museum, Winchester, had been bringing me similar objects found in the locality.

On June 23rd, 1930, I visited the site situate on the shore, E. of the mouth of the Hamble River S. of Hook House, on the edge of the private golf links which Sir Warden Chilcott was then laying out, and where workmen were screening gravel excavated off a section of a low plateau which rises a few feet above the adjoining marsh and extends in length to some 450 yards. The breadth was difficult to assign as the tides had sapped its entire length. This plateau is wholly composed of sandy shingle, presumably thrown up by the sea, and is covered with scrub and rough herbage other than where it has been cleared for the gravel.

Being struck with the importance of the site and pottery finds, which latter the men had collected in a heap, I turned them on to a spot where red burnt earth was very marked on the surface under the humus, which had been previously removed, and here uncovered a small oblong clay floor approximately 6ft. 4in. long by 4ft. wide, with a depth of 9in. to 1ft. The extreme depth, as originally built up, was difficult to decide as the firing had but barely penetrated below 9in. and the red earth had petered out.

It at once occurred to me that I had possibly exposed a pottery kiln of primitive type contemporary with some of the pot sherds which I attributed to 1st century *circ.*, and considered it incumbent on me before further disturbance of the floor to enlist the services of Mr. Heywood Sumner, F.S.A.

With his assistance in view, Sir Warden Chilcott allowed me to protect the "floor bed" against injury until further investigation, for which to him and his men I am deeply indebted, in addition for permission to investigate at any time.

On June 27th Heywood Sumner and our President, Dr. Williams-Freeman, with myself, further examined the floor bed, but, as he could find no evidence of flue, stokehole or combustion chamber, he very definitely ruled out a kiln for pottery purposes, whatever it may prove hereafter to be.

After this combined investigation I carried on further research alone.

This "floor-bed," or platform, was exceedingly friable, with exception of some two inches in depth, showing evidence of considerable heat which had converted the whole bed below the crust into a red earth easily disintegrated and, after one firing, I suggest had been discarded and a fresh platform erected elsewhere. I had definite evidence of this, for, on further search over the area, I discovered another similar floor-bed of equal dimensions on the littoral at mid-low water level which a recent tide scour had exposed. Unfortunately I have been unable to locate this since, probably through a fresh deposit of mud and shingle.

A curious and *pertinent* feature of both floor-beds was that partially imbedded on the surface were two of the square-rod type struts (Fig. i), pointing to the conclusion that floors and rods were in a "green" state and fired simultaneously: the rods, whatever they had supported, had collapsed and sank into the "green" soft floor-bed before effective firing had taken place.

Further supplementing my opinion of temporary floor-beds, I found in the excavated area small pieces of apparently thick blocks of partially fired clay with similarly two square-rod impressions on the surface evidently being the broken-up portions of old floor-beds which had survived disintegration (Fig. ii).

Of the similarity between the perfect floor-beds and these blocks there was in my mind not a shadow of doubt.

That the original and primary firing in its intensity was unadapted for subsequent purposes was evident by the friability of the floor-bed for, after a few weeks of exposure I found it had disappeared, in fact crumbled away, only owing its preservation through the ages by its covering of humus and blown sand, while that on the strand had been protected by littoral mud.

In view of the abundance of fragmentary "briquetage" found on the site, the inference is that more of these working floor-beds are in existence under the scrub unless despoiled at some prior date before the accumulation of a protective top soil.

The closest parallels to Hook are to be found in the Red Hills on the Essex coast, where site characteristic "briquetage" is so similar that I think there can be no doubt that the industry carried on at both were of like nature. At Hook we have the valuable evidence of working floors, which Red Hills have not, unless the

PLATE I.



FIG: i

SQUARE ROD TYPE

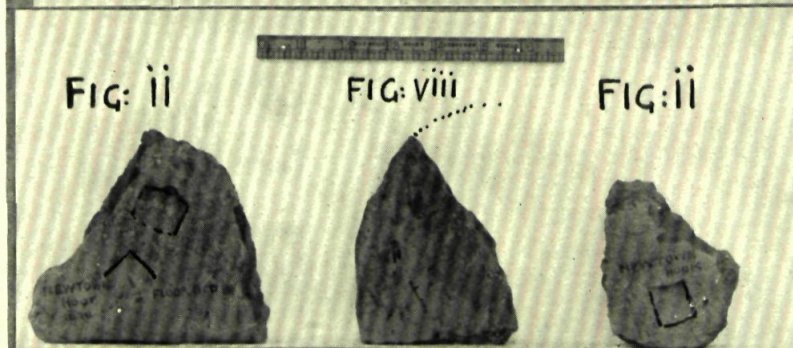


FIG: ii

FIG: viii

FIG: ii

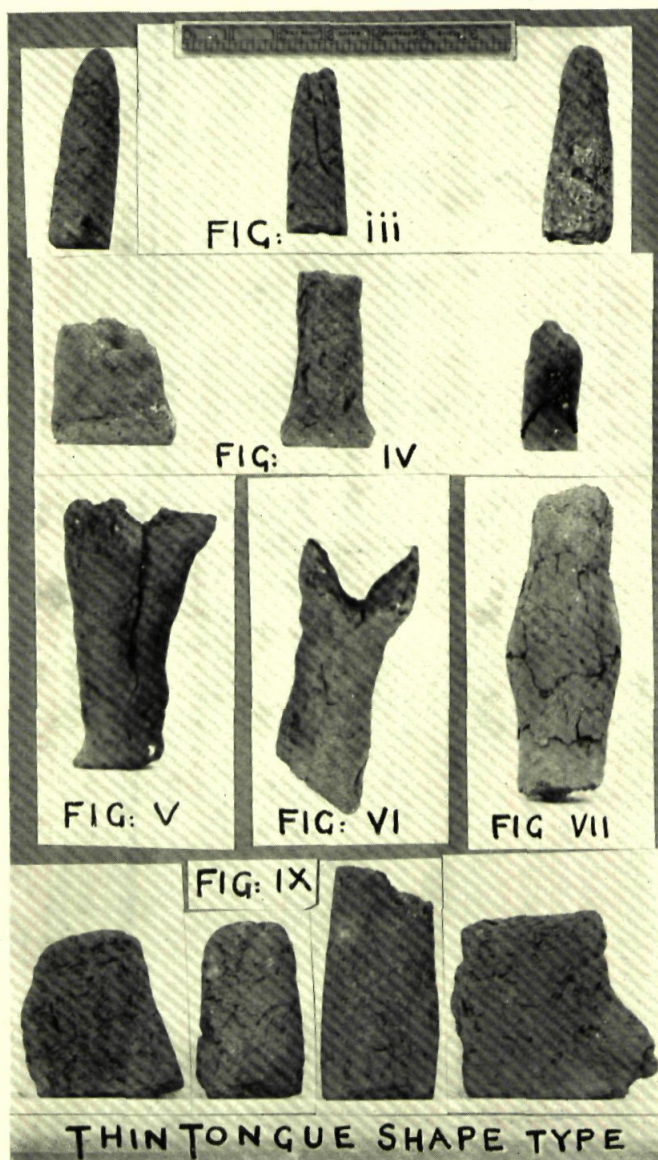
FLOOR BED

THIN DISC

FLOOR BED



FIG: vii



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"BRIQUETAGE" FROM HOOK.—Plate 2.

"compact masses of burnt earth varying shades of red"¹ may point to such, and there may also be an affinity with H. H. Swinnerton's *Sites on the Lincolnshire Coast*.² Following this line of investigation, I found no trace of contemporary occupation; neither ditch nor bank, no slag, charcoal, or skeletal animal matter, to denote habitation; no red earth, beyond the definite limits of the working floors, and nothing in the nature of construction in the area exposed, which however may be accounted for in a measure owing to its exposed situation on a windswept coast.

There was no appreciable quantity of "briquetage" near the working floor but widely scattered below the humus and thrown out by rabbits, again strengthening my many working floor-bed belief.

From the cumulative evidence of the Red Hills and Hook sites, the comparative scarcity of domestic pottery, other than the many so-called struts embraced under the descriptive title of "briquetage," I am of the opinion that in both places the salt-evaporating industry was largely and solely carried on, the domestic pottery being "imported" from elsewhere.

These struts take a variety of forms, square rods (Fig. i), accurately squared of varying diameter, rounded rods—Crawford's "fingers of clay" (Fig. iii)—pointed at one end, some chisel-shaped (Fig. iv), others twin-shaped intentionally and not joined together in the firing (Fig. v), while another is bifurcated as if to support a rod in the crutch (Fig. vi), and these latter roughly made, apart from the more careful modelling of the square and finger type.

I now venture to suggest that these struts would appear to have supported shallow earthenware pans filled with sea-water under which fires of brushwood or sedge were lighted and the residual salt collected after total evaporation.

The struts, mis-shapen and contorted (Fig. vii), other than the square rod and finger type which have retained their original shape, would be thrown aside, abundance of littoral clay being at hand for a further supply, as no further use can be conceived for the holding up of pans after one firing with such defective material.

Against my reconstruction, and should the domestic pottery have had any connection with the industry, it should be recorded that out of the fragmentary sherds I have only been able to discover one shallow pan sherd which could be attributed to its possible use. The finding of thin fired clay discs rounded at the perimeter with a diameter of approximately 10 in. first suggested "saggars" (Fig. viii), while other fragments had an intentional domed tendency apart from accidental warping; but the kiln being ruled out,

1. Horace Wilmer in *Antiquary Journal*, Vol. xxii, 2nd Sec., 1907-1909, pp. 164 *et seq.*

2. "Prehistoric Pottery Sites" of the Lincolnshire Coast, Swinnerton. *Antiquary Journal*, Vol. xii, 1932, pp. 239 *et seq.*

I hazard the suggestion that these thin discs were heated and salt-water dropped on the surface and the salt collected after evaporation, otherwise I can arrive at no conclusion.

This method of extraction would be an improvement on the primitive process of setting fire to a pile of wood and pouring salt-water on the ashes. The late T. W. Shore quotes this method, but fails to give his authority.¹

It is a problem to what use other long thin slabs could be put. From the fragments found it is impossible to gauge the original lengths; they vary in breadth from between 2in. to 4in., with a uniform thickness of half-inch with square ends, some, however, being tongue-shaped (Fig. ix).

Another curious feature of the "briquetage" is that all the objects noted, including the working beds to a lesser degree, were largely mixed with coarse grasses, as noted by Wilmer, and as no valid reason for this has been assigned, might I suggest that it was a primitive device to "re-enforce" the "green" clay, as in ancient brick-making, and thus enable the struts to stand up against the firing, although I am unable to assign a reason for building up the working floors by the same method? While the strut technique was definitely intentional, the working floor may have been marsh clay with its fibrous growth set up as dug out from the bed.

One interesting strut I found has a base-spread of some 5in., and shows very definitely the method of looting in its "green" state to the "green" floor-bed (Fig. vii). A thick roll of clay was roughly squeezed by hand, pressed down on to the floor-bed and the base thumbled out to form a broader and firmer stand, which to this day has carried the deep impression of the potter's huge finger-prints. The square struts appear to have been simply jabbed into the floor-bed (Fig. ii).

The knowledge of the method for making domestic pottery, or even pans for their industry, must have been non-existent, for out of the many sherds I could find no resemblance to the clays out of which the "briquetage" was formed, so that it can be definitely affirmed that the former was "imported" and used on the site for the salt industry, perhaps in existence here by a primitive colony before the introduction of domestic pottery reached them. In addition there would appear to be no effort to produce a vessel to serve a like purpose to that "imported," otherwise I think out of the sherds I have handled I should have found evidence of the attempt.

My son, Sir Cyril Fox, F.S.A., commenting on this, says "that specialised communities always confine their creative labours to their own job and import their domestic requirements."

1. Shore Memorial, "Hayling Island," Vol. 1911, H.F.C.

Doomsday Book would appear to mention some twenty-seven Salterns in Hampshire: some survived until the repeal of the Salt Duty, 1824.¹ Further up the river at Hamble and Bursledon Salterns are marked on the O.S. Map, so it may be presumed that the Hook works had long disappeared and, if the pottery is evidence of activity, they had no continuity after the 1st century A.D.

I have searched rabbit casts over the whole area for mediaeval ware, and while fragments of late La Tène are frequent I have found no trace of later occupation, or local place-names, to indicate the industry, nor have I been able to trace any site which may have sheltered the industry.

In the light of the two sites, Red Hills and Hook, and the problem still unsolved as to the use the "briquetage" was put, I have after much consideration and diffidence ventured to put forward the foregoing suggestions in order to invite discussion over the objects here illustrated, so that they might in a measure strengthen, or otherwise, my tentative theories as to their purpose what undoubtedly was in connection with a primitive salt industry.

Since the above was written and theories formulated I submitted the domestic pottery to Mr. Christopher Hawkes, F.S.A., of the British Museum, for his opinion as to the range of forms, so that I might be able to fix the total period of occupation, but did not inform him of my object. He gives from "1st century B.C. to 1st A.D., with some amount of run-on into mid-Roman." *v. Report, C. H., 18-4-33.*

Addendum.

On the site I found two flint implements, both being worked and shewing evidence of use: one leaf-shaped formed out of a water-worn "pebble," the other from a slab of tabular flint worked on all sides but of no known type. These may have no bearing on the industry but should be recorded.

I would here emphasise the fact that owing to the removal of gravel from this site, and consequent distribution over other areas, "briquetage" so found may lead to some confusion as to its original provenance.

I am much indebted to our President, Dr. Williams-Freeman, Mr. Heywood Sumner, F.S.A., and my son, Sir Cyril Fox, F.S.A., for valuable assistance in preparing this paper and for encouragement in my endeavour to solve the problem of the "briquetage" and its use.

1. My friend, Mr. E. S. McEuen, F.S.A., of Hayling Island, writes me: "I have been talking to the son (aged 80) of the late salt-maker, Geo. Cole, who died in August 1875. He ceased to make salt here towards end of 1874, and I have come across a man who fetched it from Great Salterns in 1874."