# Notes and News

## An element of Egyptian horse harness

PLATE XXXV

In 1923 a curious object was found by Newton and Griffith in the excavation of a private house—probably that of the steward Akhetaten—at Amarna.* This consisted of a slender rod, made from the wood of a deciduous tree, topped by a spindle-whorl-like disk; short bronze spikes protruded from the edge of the latter. The disk and rod were inlaid with coloured bark in patterns (Rieth, 1957, 148–9). At the centre top of the disk was what appeared to be a small, round, sunken hole. Although the German excavators in the previous decade had identified sites of stables and carriage houses and found fragments of leather harness and a pair of bronze bits at Amarna (Borchardt, 1911, 16–17, 26 with Abb. 7; 1912, 35–6), no one would have guessed that the 'mace' was in fact an element of harness, had not similar objects been discovered soon afterwards in the tomb of Tut'ankhamūn (PL. XXXV*a*). It was then recognized as part of what, in representations, could be taken for a second rein running back from the bit to the yoke saddle, with an unexplained diamond-shaped object placed in the centre of it (PL. XXXV*b*). This shape was evidently an awkward attempt to show a centrally thick disk edge-on. Carter described these rods with disks as 'goads', 'to prevent the horses from breaking from the line of draught' (Carter, 1927, 112–13).

In 1957 A. Rieth published the Amarna fragment and one complete pair of the Tut'ankhamūn 'goads' as *Halssporen* (Rieth, 1957, 148–54). There were seven more examples of these from the tomb of Tut'ankhamūn, two pairs and three odd ones.† They varied in overall length from 0·185 . to 0·565 m., with the majority being 0·53 m. or over. The diameters of the rowels (without the spikes) ranged from 0·055 m. to 0·085 m. The Amarna ones, with an extant length of *c.* 0·33 m. and a rowel diameter of 0·092 m. must have been even bigger. Does this indicate that these bridle accessories were still in an experimental stage, or did it simply result from the preferences of individual drivers? The sizes of the chariot animals would not vary in anything like a corresponding degree.

A small hole pierced the shaft near either end, and in some of these are still traces of the leather thongs that attached them to headstall and yoke, respectively. Even the longest examples would probably fall short of the entire distance between these two areas; they must have been extended by the attachment thongs, which would thus allow the play necessary for the movements of the neck and head. Since the disks on the Cairo 'goads' revolved on the rods and were held in position by circular flanges apparently slipped over the latter and glued, the rods must have been continuous. This would be a stronger construction than if made in two pieces, one end of each being sunk into either face of the disk with no apparent adhesive except glue, as postulated by Rieth (1957, 149–50). Tension would tend to pull these apart, unless the whole element were very slackly attached. Yet the fact that the Amarna example seemed definitely to have a fixed rowel and a socket for the other piece of rod was puzzling. Dr Moorey has

* I am greatly indebted to Dr P. R. S. Moorey for his help with this note. He not only examined the Ashmolean fragment for me, but provided me with a copy of H. W. Fairman's transcript of Griffith's field notes for 30.12.1923. This was Griffith's only mention of this object, and it was Fairman who deduced that the find place must have been the house of Akhetaten.

† I owe this information to Howard Carter's notes, which are preserved in the Griffith Institute, and to the courtesy of Dr G. E. Mouktar and Dr H. Riad. Through them I was able to examine the Cairo material, together with J. H. Crouwel, with whom I am collaborating on the publication of the Tut'ankhamūn chariots for the Griffith Institute.

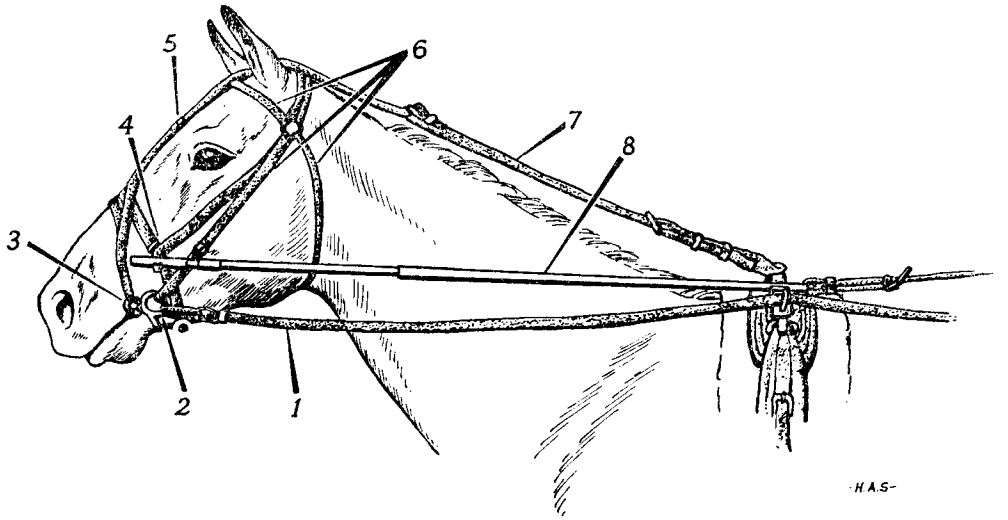


*Fig. 1. Head pole on harness horse (drawn by H. A. Shelley, after J. C. O'Brien in Harrison, 1968)*

kindly examined the fragment for me in the Ashmolean and states that he believes that this disk, too, once freely revolved on a continuous rod. 'The hole in the disk is now partly obscured by the wax/glue used to restore it; but it looks to me as if the rod broke off in the hole. . . .'

Carter believed that the 'goads' were purely for keeping the animals in the line of draught, but Rieth added to this the suggestion that they helped to spur the horses on at faster gaits, when the movement would particularly animate the rowels (Rieth, 1957, 151). Neither of these explanations seems satisfactory. If the 'goads' prevented the horses from moving out of a straight line, one wonders how it would have been possible to turn the team. And, if their action became accentuated at faster gaits, they would have been a hindrance in slowing the animals down or stopping them. In reality, a horse moves his head and neck up and down most at the walk and, were it movement that activated the effect of the *Halssporen*, the charioteer would have had particular difficulty in keeping the horses down to this slow gait when it was necessary.

A modern parallel to these rods suggests their real purpose. On the trotting-horse track today—that is, where horses are raced at a trot, hitched to light, two-wheeled vehicles, there is an object known as a 'head pole' (FIG. 1). This extends from the bridle near the bit to the harness saddle behind the withers and, since the most modern examples are telescopic in construction, they need no slack line at either end. The purpose of this pole is to keep the horse from carrying his head crookedly, a fault that may spoil his gait or even slow him down a fraction. This would not matter in chariot usage, but where seconds count it is important. The pole does not, however, prevent him from making a normal turn. 'If a horse is turning his head to the right . . . the head pole is placed on the left side. . . . If the horse wants to carry his head to the left, the head pole goes on the right side.' When the horse bends his head sharply in one direction, the middle of his neck (particularly thick in stallions, of which chariot teams were composed) bulges out in the opposite direction. With stubborn cases, a 'burr' or a 'ball' (FIG. 2)—which between them divide the honours of the Egyptian disk—is placed on the pole. When the horse turns his head sharply in the opposite direction from the pole, his neck is pressed by one of these 'gadgets', and he tends to straighten it quickly to avoid discomfort.

The Egyptian poles were not more than two to a team, and they were placed on the outside

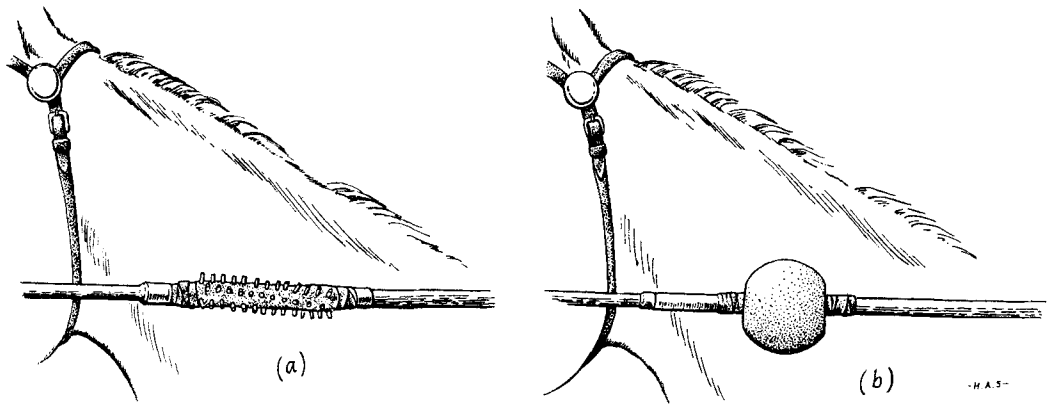


*Fig. 2. 'Burrs' and 'balls' on head poles (drawn by H. A. Shelley, after J. C. O'Brien in Harrison, 1968)*

of the horses. Hence their purpose would have been to prevent the animal turning his head sharply towards his team mate; in other words, it had nothing to do with keeping him in the line of draught. The chief reason that would cause him to make this movement would be the natural intolerance of one stallion for another and their considerable disposition to bite; a bickering chariot team would hardly have been desirable. The difficulty encountered in this respect with earlier onager teams is well evidenced by the muzzles in which they were driven (Littauer, 1969, 296 with Fig. 6). Even Greek horses 800 years later still wore muzzles when led, even if these were removed in the bridling (Buschor, 1969, pls. 132, 151).

Rieth has a note to the effect that Vienna fiacre drivers attached thick knobs to the outer traces of their horses on the level of their flanks to keep them from breaking from the line of draught (Rieth, 1957, 153 n. 11). It is with his relatively freer hind quarters that the animal *is* able to swing out, but in ancient harnessing, in particular, the yoke would have kept the forehand quite rigidly in place.

The head poles are first depicted in Egypt in the Amarna period, and there is no evidence of them later than the Ramessides, although the latter circumstance may be due to paucity of figured documents. There is no evidence for them outside Egypt and, so far as we know, even Egyptian artists never illustrate them on foreign teams. MARY AIKEN LITTAUER

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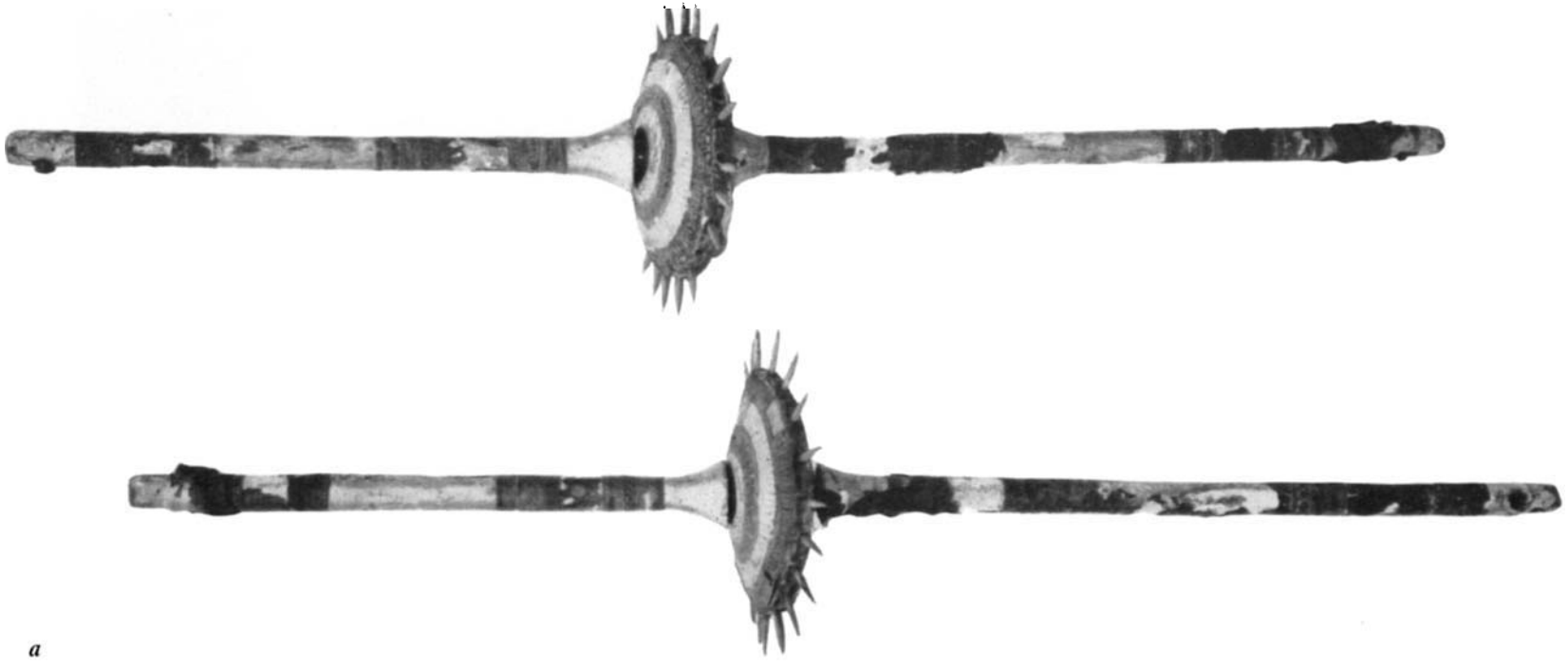
## Aerial reconnaissance: recent results, 36

PLATE XXXVI

In archaeology the use of air photography as an instrument of discovery, as well as the value of photographs for showing a site in its present setting are the aspects most frequently emphasized. However, photographs taken under suitable conditions may also illustrate the natural surroundings, their present and their former condition, and may even be used to reconstruct past environments which, in Britain, were usually very different from those of today's man-made landscape, a creation largely of the last few hundred years. A field



*a*

*b*

PLATE XXXV

AN ELEMENT OF EGYPTIAN HORSE HARNESS

*(a) Pair of head poles from the tomb of Tut'ankhamūn. Length: 0·54m. Diam. rowel without spikes: 0·085m.*

*(b) Egyptian horse with 'head pole'. From Amarna.*

*See pp. 293–5*

*Photos: (a) Griffith Institute, Ashmolean Museum*
*(b) Metropolitan Museum of Art, New York*