

# How to construct a grid frame for drawing plans on site

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DURING LAST YEAR'S season of excavation we had several enquiries about the availability of the grid frames we were using for drawing the excavation plans (Fig. 1). These grid frames were 'home-made', and to our knowledge such frames cannot be bought ready made. Although there are several good sources of reference explaining how to use these frames (such as Coles, J. M. 1972 — *Field Archaeology in Britain* and Barker, P. 1977 — *Techniques of Arch-*

*aeological Excavation*), we could not find any reference on how to make them, and so the following notes may be useful in helping to keep the time, effort and money involved in the construction to a minimum.

By far the best material we have found to use for the sides of the frame is 1 inch (25 mm) square alloy tubing, which can be difficult to obtain except from good ironmongers and builders' merchants. It is often sold in 2 metre (6½ft) lengths so there need be no wastage. This material is rigid, light enough to be easy to handle, but not so light that it is dislodged in strong winds, and does not rust or need painting. A 2 metre length of this tubing costs just under £3<sup>1</sup>.

An alternative material is a hardwood (as opposed to a softwood which is cheaper but will warp much more readily), which is easier to obtain than alloy tubing. In order to obtain a suitable degree of rigidity (particularly with a frame larger than the versatile 1 metre by 1 metre size), the hardwood must be at least 1¼ inches (32mm) square in section. Hardwood is much heavier than alloy tubing, needs to be painted or varnished, and may warp when subjected to extreme conditions. Also the cost of 1¼ inch square hardwood is approximately £3.50 per 2 metre length, so that alloy tubing is the preferable material.

Whether using alloy tubing or hardwood, the corners of the frame are best made by joining the sides of the frame together with *corner plates* (sometimes known as *corner braces*) (Fig. 2). Corner plates are flat, right-angled metal plates ready drilled for screws or bolts and which are made in several sizes. By using two of these plates, adjacent sides of the frame can be rigidly joined at a right-angle (Fig. 3). It is most convenient to use nuts and bolts to fix these plates, since this allows the frame to be easily dismantled for storage. These plates are easily obtainable from ironmongers for about 15 pence each and suitable nuts and bolts cost around 50 pence for four.

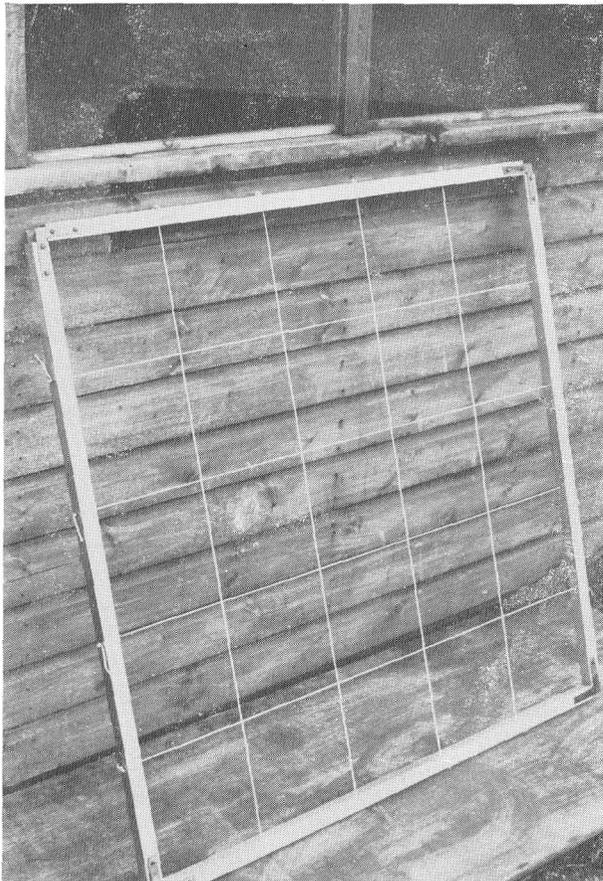


Fig. 1: A 1-metre x 1-metre Tubular Alloy Grid Frame

1. This, and all other prices quoted, are the current prices in May 1982.

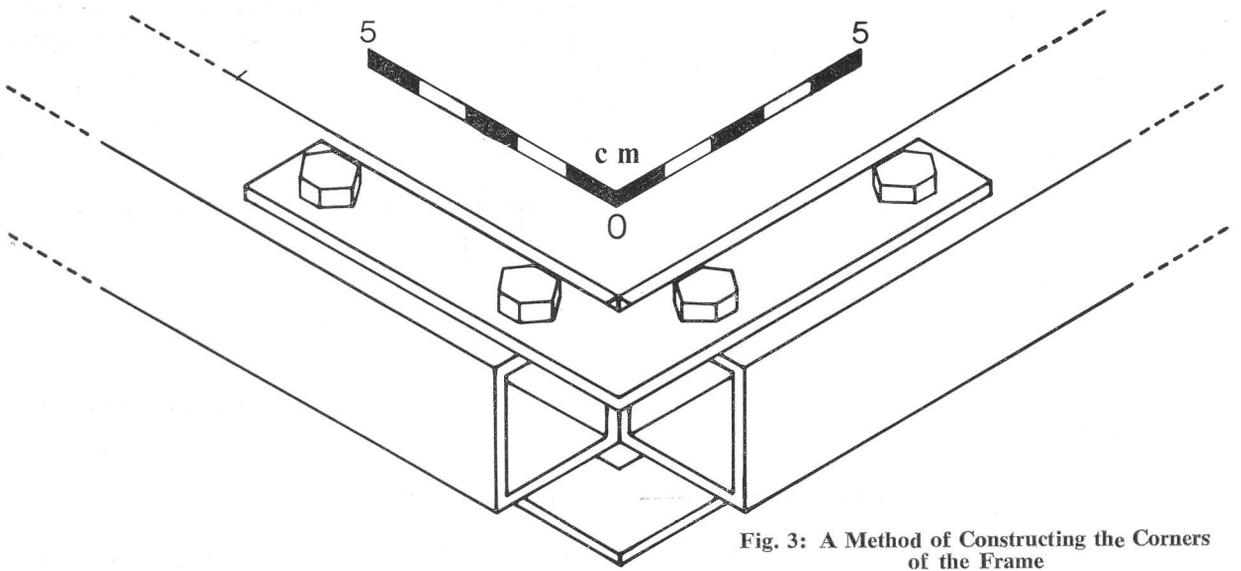


Fig. 3: A Method of Constructing the Corners of the Frame

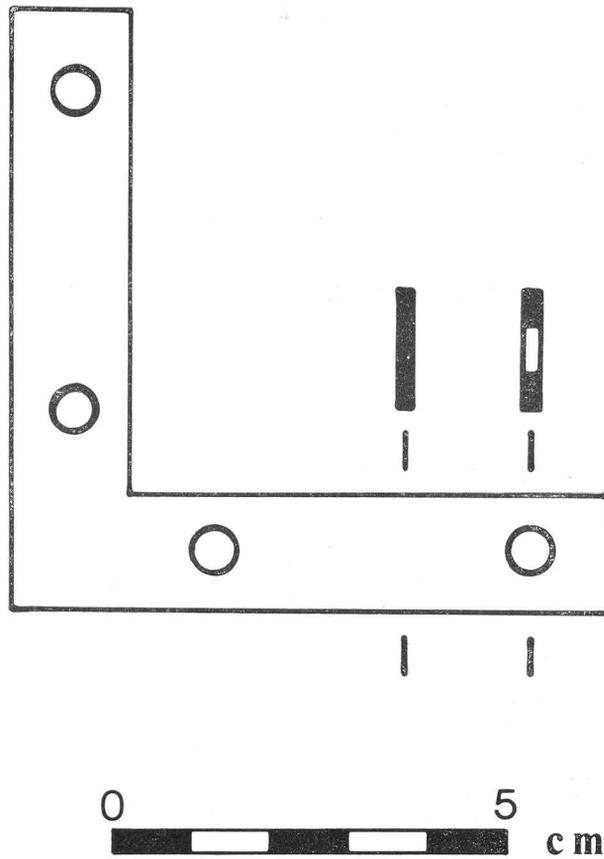


Fig. 2: A Corner Plate

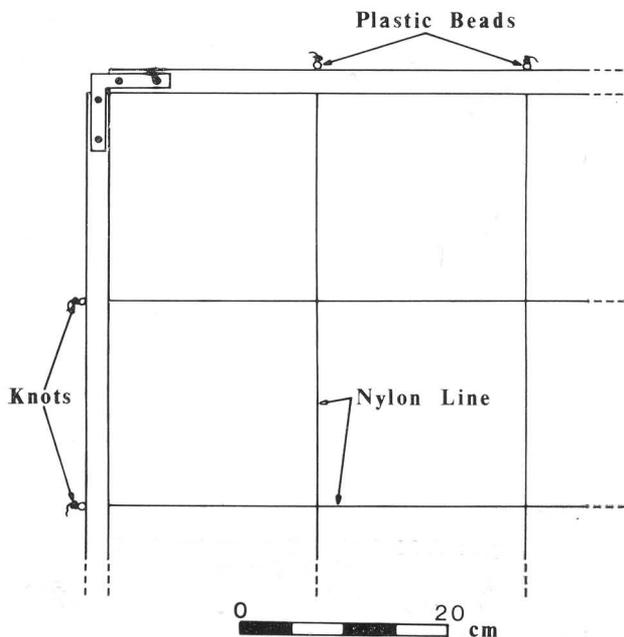


Fig. 4: A Method of Attaching the Nylon Line

Once the frame itself has been constructed, holes need to be drilled through the sides so that the string grid can be threaded through. The spacing of these holes depends on the scale of the drawing for which it is going to be used. The most common scale for excavation plans is 1:20, and for this the holes in the frame need to be 20 centimetres apart so that the distance between the strings corresponds to one centimetre on the actual drawing. Rather than string, it is better to use nylon line or cord since a greater tension can be achieved with the nylon, which is also more hard-wearing. Suitable nylon cord of about 100lb breaking strain can be obtained from many ironmongers and costs around 8 pence per metre. Even nylon line will chafe and wear at the points where it is threaded through the frame, but this can be reduced by threading small plastic beads onto the line at these points to prevent the line touching the edge of the hole through the frame (Fig. 4).

Using these construction methods a hard-wearing, easy-to-use, and easily dismantled alloy grid frame, covering an area of one square metre can be made from raw materials costing a little over £12.00.

## Excavations & post-excavation work

**City**, by Museum of London, Department of Urban Archaeology. A series of long term excavations. Enquiries to DUA, Museum of London, London Wall, E.C.2. (01-600 3699).

**Beddington**, by South West London Archaeological Unit. Excavation of R.B. villa. Also processing of finds. Enquiries to Roy & Lesley Adkins, 25 Union Road, Croydon (01-683 1326).

**Brentford**, by West London Archaeological Field Group, Excavation and processing. Enquiries to 71-72 Brentford High Street, Brentford, Middlesex. (01-560 3880).

**Croydon & District**. Processing and cataloguing of excavated and museum collections every Tuesday throughout the year. Archaeological reference collections of fabric types, domestic animal bones, clay tobacco pipes and glass ware also available for comparative work, Hon. Curator, Croydon Natural History & Scientific Society Ltd., Museum Building, Croydon Biology Centre, Chipstead Valley Road, Coulsdon, Surrey. (01-660 3841 or 22 43727).

**Hammersmith**, by Fulham Archaeological Rescue Group.

Processing of post-medieval material from Sandford Manor and medieval material from Fulham Palace. Tuesdays, 7.45 p.m.-10 p.m., at Fulham Palace, Bishops Avenue, Fulham Palace Road S.W.6. Contact Keith Whitehouse, 86 Clancarty Road, S.W.6. (01-731 0338).

**Inner London Boroughs**, by the Inner London Unit. Several rescue sites in various areas. (01-242 6620).

**Kingston**, by Kingston-upon-Thames Archaeological Society. Rescue sites in the town centre. Enquiries to

Marion Hinton, Kingston Heritage Centre, Fairfield Road, Kingston (01-546 5386).

**North-East Greater London**, by Passmore Edwards Museum. Enquiries to Pat Wilkinson, Passmore Edwards Museum, Romford Road, E.15. (01-534 4545).

**South West London Boroughs**, by the South West London Unit, excavations and processing. Enquiries to Scott McCracken, St. Luke's House, Sandycombe Road, Kew (01-940 5989).

**Southwark**, by Southwark and Lambeth Archaeological Excavation Committee. Several sites from the Roman period onwards. Enquiries to Harvey Sheldon, S.L.A.E.C., Port Medical Centre, English Grounds, Morgan's Lane, SE1 2HT. (01-407 1989).

**Surrey**, by Surrey Archaeological Unit. Enquiries to David Bird, County Archaeological Officer, Planning Department, County Hall, Kingston, Surrey. (01-546 1050 x 3665).

**Vauxhall Pottery**, by Southwark and Lambeth Archaeological Society. Processing of excavated material continues three nights a week. All enquiries to S.L.A.S. c/o Cuming Museum, 155 Walworth Road, S.E.17 (01-703 3324).

*The Council for British Archaeology produces a monthly Calendar of Excavations from March to September, with an extra issue in November and a final issue in January summarising the main results of field work. The Calendar gives details of extra-mural courses, summer schools, training excavations and sites where volunteers are needed. The annual subscription is £4.50 post-free, which should be made payable to C.B.A. 112 Kennington Road, S.E.11.*