

## A BERKSHIRE FOUNDRY

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**I**N the centre of Bucklebury (SU 552 710) a group of buildings surmounted by a fine chimney has been the home of a working foundry and blacksmith's shop since the early 18th century and possibly earlier. This site for a foundry is an unusual one, as it is three miles from the Kennet Navigation at Woolhampton over a high ridge, and this would have made the carriage of iron bars, pig iron and coal or coke difficult.

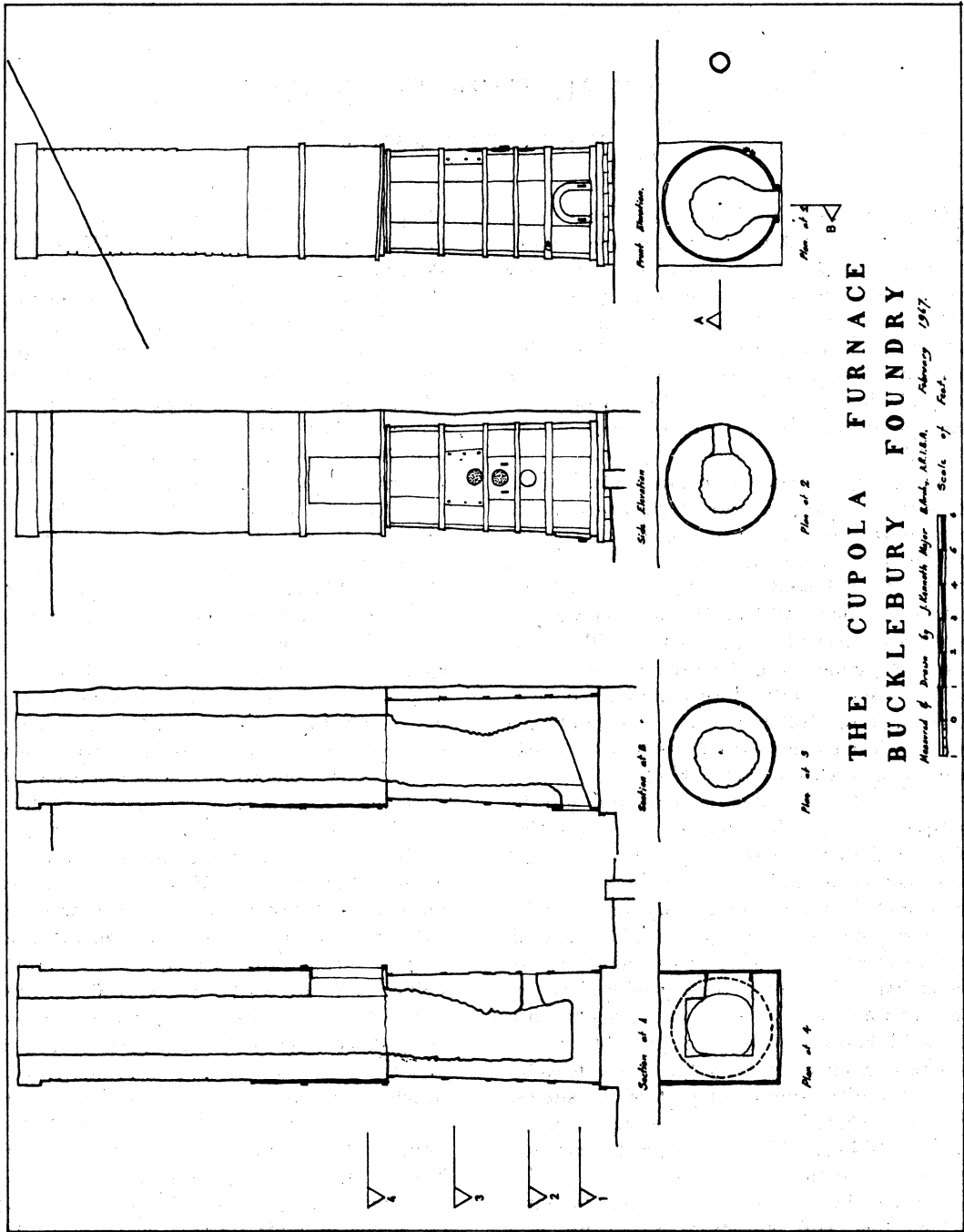
The group of buildings is now in use for light engineering, garage work and sheet metal work but these activities have not really affected the layout of the group. The river Pang forms the northern boundary of the site, though the cottage on the north bank of the stream was at one time attached to the foundry. The little lane connecting the cottage to the main street of the village separates the group into two parts. The range of buildings to the west contained the workshops associated with the wood-working and wheelwright part of the business. At the south end of this range there is still the tyreing furnace and beside it the cast iron tyreing plate, and to the north of this there are the open cart sheds and woodworking shops. The interior of these is so altered that the particular use of any one is not recognizable. On the back wall there are a row of racks for the storage of metal bars which have been produced as flat bed castings and consist of uprights with hooked brackets cast on to the uprights.

The east range of buildings of the foundry forms the more important part of the site for there the whole history of the group is shown in the buildings. The building with diamond panes next to the river is the original smithy which has been absorbed into the foundry. Behind that, still bordering the stream, is a large workshop with a heavy truss roof, dated

1844. The workshop contained, at its western end, the hearths and benches associated with the smiths and engineers who made or repaired the agricultural machinery which was the mainstay of the foundry. To the south of this workshop there is a parallel building, which may be of the same date, which was the shop where pumps and engines were made or repaired. The metal-working lathes had very long beds for turning the cores of the pumps and engine parts. The south west corner of this shop was the engine house to which the chimney was attached. Some form of horizontal steam engine was put in to drive the lathes and other machinery. The chimney is dated 1876 and it is possible that the engine was installed at the same time. The two workshops are approximately fifteen feet wide and sixty feet long. In the centre of each main wall there is a full-height double door so that steam engines and other large vehicles could be taken in for repair. The windows of these workshops are made of cast iron and are marked with the foundry's name 'Hedges'.

To the east of the north workshop there is a small compartment which houses the two furnaces, and beyond that is the pattern shop and the pattern store. In the grounds there are further sheds which served as wood stores, stables and cart sheds. There is also a frame in which oxen were tethered when they were being shod. The most modern part of the complex is a little brick office block and washroom which serves the petrol pumps in the forecourt.

Day books exist for the smithy which date from 1736 to 1764. These books show the Hedges family, as the local smiths, repairing farm machinery, shoeing horses and serving the needs of quite a large community. This family owned the foundry until 1908. The



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records show several John Hedges and a Nathaniel Hedges in charge, but for a large part of the middle of the 19th century the firm was controlled by Sarah Hedges. In 1908 the firm was bought by the Kings and operated by them until taken over by the Whatley brothers in 1947.

The foundry side of the business started about 1820. This date is confirmed by dated castings on the churchyard railings of Bucklebury and Frilsham of 1827 and 1824 respectively. The last dated casting is a tombstone made in 1957 in Bucklebury churchyard though the points for mechanical rakes have been cast since then. Patterns covering the whole period of the foundry's production are stored in the loft over the pattern shop. This loft is a wild clutter of uncatalogued pieces from waterwheels to windows, and from tombstones to troughs. Many gear patterns lie around; these were all hand carved and not cut on a machine as was the case in large foundries.

The most important item in the foundry is the cupola furnace which was used until quite recently and which was without doubt the furnace which was the basis of the foundry's business when it first started casting. This cupola is a stave cupola, that is it is made up of cast iron segments built up and held together like the staves of a barrel. The eight staves stand about seven feet high and are mounted on a cast iron plate. The top carries a square cast iron box which is the base of the flue which projects four feet above the roof. The centre stave at the front has the small door hole through which the iron was tapped. The side stave has three tuyère holes through which the blast was introduced. There is no doubt about the age of this form of furnace for it is shown in mid-19th century textbooks on foundry work with the caption 'the old type of cupola furnace'. The second cupola at the foundry is quite a

standard cupola furnace with a ring of tuyères and an all metal casing standing on four iron posts. At the end of the foundry's life this had long been abandoned in favour of the older one. The air to the tuyères of both furnaces was provided by a series of channels under the floor which were fed by a fan. The power for the fan was provided by the present waterwheel. This wheel is an undershot wheel cast in the foundry about 1875, for which the patterns still exist.

The products of the foundry can be found throughout the local area. Some can be tracked down from the day books which exist from the latter part of the 19th century. For instance, the pump which stands at SU 516 674 on the A4 in Thatcham was supplied to the Thatcham Guardians in the 1870s; also the fine large stepped pyramid tomb in Hampstead Norris churchyard for the Lousley family in 1855 to which memorial plates were added up to 1962. The waterwheels at Woolhampton Mill, River Barn Marlston, and the Bucklebury Manor Farm mill were all built by the foundry. At River Barn and the Manor Farm the foundry produced an important form of farm mill with a single pair of millstones. From the patterns other castings can be traced back to Bucklebury; the railings at Hampstead Norris Church which are not marked are none-the-less the work of the Hedges family.

This short note covers only a fraction of the work and recording which has been done on this important industrial monument. A scale model of the cupola has been built for the International Foundry Congress held in Brighton this year. Photographs have been taken to record the patterns produced by the foundry; the waterwheel and mill at River Barn have been recorded as measured drawings. Indeed the inhabitants of the Pang valley must be worried about all the people who peer at their railings, gateposts and garden troughs.