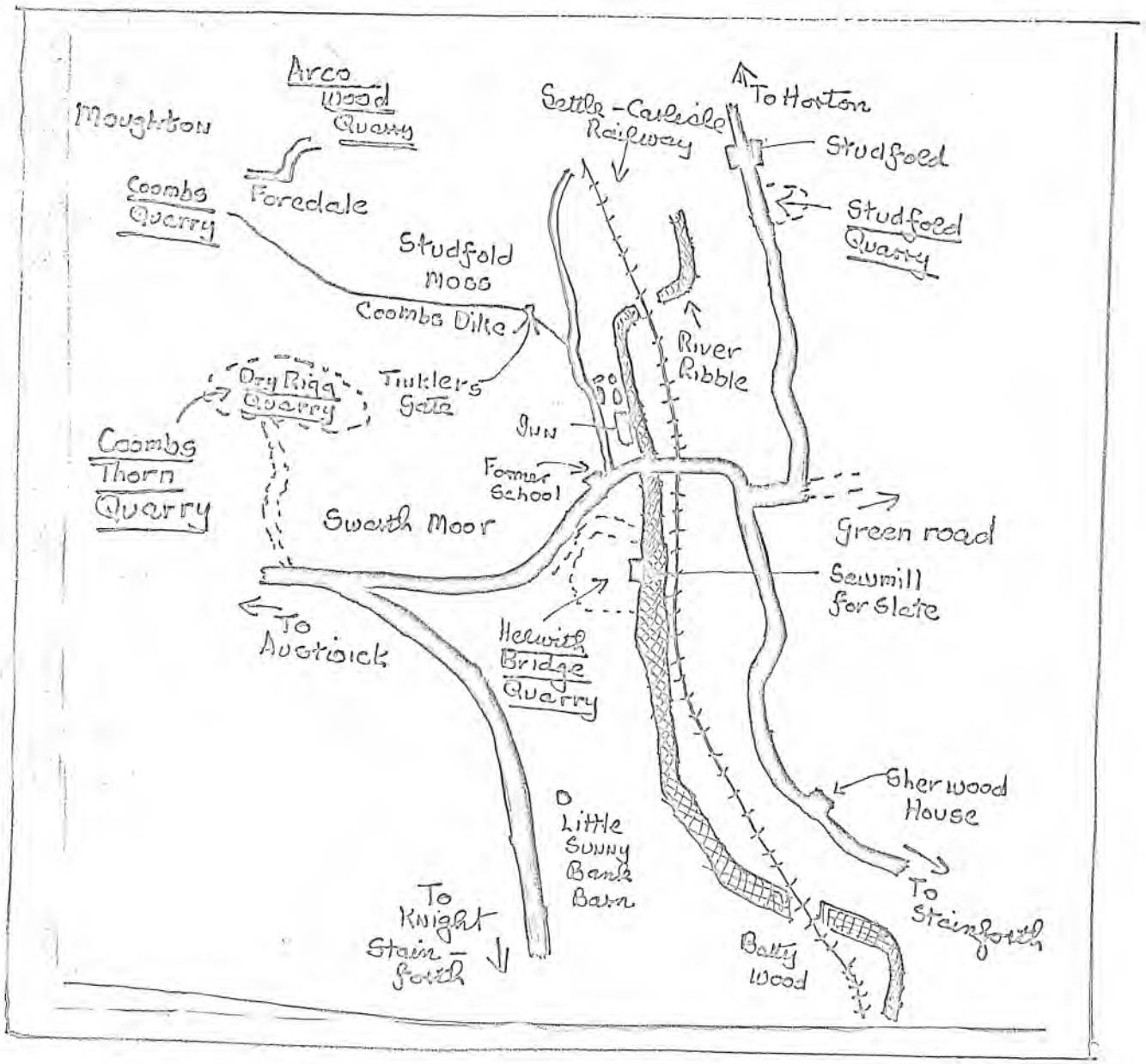
THE INDUSTRIAL ARCHAEOLOGY
OF NORTH RIBBLESDALE - 1.

THE HORTON FLAGS

An inquiry by W.R.Mitchell,
with the help of many local people.



18 Yealand Ave.,
Giggleswick, Settle,
North Yorkshire

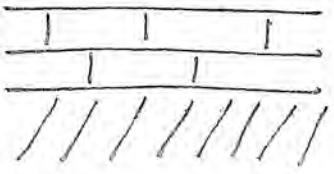
1980-1.

G E O L O G Y

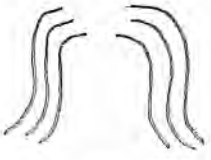
HORTON FLAGS are sedimentary rocks, of the Lower Palaeozoic (Silurian) age, being around 350 million years old. The Flags are, indeed, a Mudstone, and underlie Moughton Fell, being also very evident in Ribblesdale, between Stainforth and Horton. The Flag contains about 5% calcium carbonate, 87% silica, resulting in an especially hard stone: harder, indeed, than some of the granites.

Local people refer to Horton Flags as blue flags, granite, slate.

The Flags are present as steeply-dipping folds. At Coombs quarry, near Ferndale, eroded Flags which dip towards the south are seen to be strikingly overlaid by the horizontal beds of Carboniferous Limestone:



(At Arco, where the same effect might have been seen, the junction between the Flags and the limestone was marked by some deep crevices that once were used as setts by badgers; in one crevice there was enough space for a man to crawl within, and he was actually able to examine the badger's main living chamber). An old flag quarry at Arco has now been excavated to a depth of some 200 feet; during this activity the ends of the main anticline were seen to have parted as the result of extreme pressure during the upthrust (folding took place c320 million years ago):



Horton Flags are laminated, and the best of them were obtainable at Helwith Bridge; elsewhere, some of the Flags were very thinly laminated, tending to be flaky. There are slight variations in tone. The Flags are generally blue-grey when dry, but can look dark blue when they are wet.

The Silurian attains its highest elevation (1,160 feet) at the south-east side of Moughton. Few fossils have been found. George H. Brown noted in 1896: "Fossils are scarcely ever met with, but when the two surfaces of an 'open rive' are parted, 'worm-tracks' are sometimes seen." Small quantities of iron pyrites ("fool's gold") and felspar have been noted.

As roadstone, Horton Flags have a high PSV (Polished Stone Value). Ingleton "granite" is greenish, with a yellow sheen, and a greater amount of felspar. Such stone, used on the roads, glistens in the light of car headlamps, whereas in the same conditions Horton Flags appears to be "dead stuff". At the so-called Granite Hole at Beecroft, the Flags were green, and quarrymen also encountered a band of iron.

Associated with the Flags was Moughton Whetstone, a piece of which might once be found at almost every house in Austwick, where it was used for sharpening tools. The Whetstone occurs on the western slope of Moughton, "jutting up into the limestone."

Moorthwaite, in the quarrying area, is overlaid with peat, the rights exercised by local people being indicated by moor-stones of Flag.

HISTORY

CERTAIN USE of the Horton Flags in local structures dates from the early part of the 18th century; Flags then began to be featured in the structures of farmhouses, and also occurred as tombstones and memorials in local churches (Flag does not appear to have been a significant part of the structure of the churches themselves). Flag was last quarried commercially for domestic and industrial use in the early 1920s, since when it has been blasted from its beds and crushed as roadstone or aggregate for concrete.

With Flag readily available, Foredale Farm and its outbuildings consist almost entirely of this material. The farmhouse is dated 1731. That a small number of quarries existed in 1774 is indicated by the case made out at that time in favour of a canal for Settle (a venture which did not materialise). It was stated that "there are many inexhaustible quarries of blue-flags, grit flags, excellent blue slate, and grit-slate in the neighbourhood of Settle, which will undoubtedly pass along this branch..." Early in the 19th century, Flag was being used at the Tannery at Settle, where its special qualities were ideal for holding liquids. Another tannery was established at Moorbeck, with 57 tan pits. It is believed that the buildings concerned with tanning were roofed by blue-flags, and that they were the type of material used for the pits themselves.

As early as 1722, Flags which had been sawed and smoothed were being reared in the yard at Horton, the earliest having tomb-plates set upon them. 1722: To Robert and Ursula, only offspring of Robert Mason, formerly of [illegible], "who used to trade profitably in wool", and Elizabeth his wife. 1726: John Armistead, formerly of Dubcote, "a man revered alike for his piety and uprightness to whose pre-eminent love of letters the endowing of Horton School with lands and monies worth approximately £40 gives abundant testimony." 1736: Elizabeth. Her remains "are buried in the centre between those of her husbands, Robert first and Richard latterly occupying the marriage bed. She was a decorous woman, a householder given to hospitality." 1744: Richard Thornton, who was a short time before the schoolmaster, "an honest man, fleeing from the law, anxious to prove his innocence", and also Elizabeth his wife. Catharine, their only daughter, erected "these tombstones" at her own expense, "as a token of appreciation of the life of her dead parents." The tomb-plates were removed from their Flag supports and were taken into the church for safe-keeping; they are fixed to one of the window ledges. The holders of peat-digging rights on Swarth Moor marked their plots with blue-flags, some of which were initialled; one writer compared them with "miniature grave headstones."

It was not until the 1760s that Flag became a favourite material for tombstones, by which time there were men skilled in carving both inscriptions and also (in the case of a number of tombstones in Horton churchyard) a moderate amount of decoration, including a neat flower-like emblem and decorative cuts at the upper edges of a stone. Many of the oldest tombstones in the yard at Settle (opened 1699) are of Flag.

The first detailed reference to a Flag quarry concerns Coombs, high on Langcliffe Fell. John Hutton, in "Tour to the Caves" (first edition, 1780) found "the stones are of a blue kind, like slate, from one to three inches thick; some are two or three yards broad, and five or six yards long." Hutton mentions a variety of uses, but does not include "tombstones" in the list. The old quarry at Studfold, which is handy to the main dale road, appears to have been used greatly for this purpose. An inscription on a piece of slate, now on a garden wall at Studfold, may have been the work of an apprentice carver. The inscription is dated 1810 and reads: "Here lies Jack Thot/ly trade a bun/then he died the/Devil cried/Come John." Elsewhere on this piece of Flag are marks indicating that the carver was experimenting with tools of various widths. On another piece of Flag (in a garden at Studfold) a carver practised his work, using a repetition, in various styles, of "Sacred to the

Memory". (There is a folk memory associating the Morphet family with the "flag business" at Studfold; two generations were both named Jonathan. The names best remembered locally are those of the Shepherds. Carved slate relates to W. Shepherd, 1809, G.J.Shepherd, of unknown date, and E.R. Shepherd, 1935).

In a conveyance relating to the property 18 Victoria Street at Settle, the document being dated December 27, 1872, the new owner, William Ralph, is described as a "flag dealer and quarryman." (William died on April 14, 1895; he was succeeded here by Christopher Charles Ralph, usually known as Kit, who died at 2 Queensway, Whitkirk, Leeds, on May 28, 1945, but whose remains were interred at Settle).

The first of several Victorian writers who mentioned the flag quarries was Frederick S. Williams, in his history of the Midland Railway (1877). He noted: "The stones come out in bedded slabs, perhaps 15 feet wide and 10 feet long, varying from six inches to two feet in thickness, according to the natural beds." (Williams adds that the Settle-Carlisle line "passes along what was once the bed of the river, which had to be diverted along a new course blasted out for it; and by the side of the river a long wall has been erected to protect the embankment from floods.")

All the skills for quarrying and handling flag were well developed by 2000, when Rochdale built Hartcliffe House, at Austwick, the premises being composed of two dwellings, with a meeting place on the top floor reached by an exterior staircase. Flags were incorporated in the structure as plinths and floors; they also formed gate steps, paths and path edging, and (laid flat) the tops of the walls.

Railway engineers had to blast through a considerable deposit of the Flags near Eastwood House. Dunbar, in The Lancaster Guardian (1873) wrote of "Elwith Bridge", noting that "near this bridge, on the south side of the stream, a lusty workman, just commencing business for himself, built a small sawmill for flags, after other landowners had got notice from the Midland Company to quite the land through which the railway would run, but as he, in the multiplicity of business, had been overlooked, report says that he secured £700 as compensation; thus was the old saying 'It's an ill wind that blows no one good' again fulfilled."

George H. Dunn, writing of the "Swarthmoor quarries" in 1895, states that "the two quarries are about three-quarters of a mile apart. In the one, the rock dips to the north at an angle of 45 degrees, and in the other to the south at an angle of 15 degrees. The strata vary in thickness from 2½ inches to 3 feet. One stratum is marked off from another by what the workmen call the 'open sive' ...Flags are here quarried of all sizes up to 15 feet square; and of 1 inch and up to as much as 10 inches in thickness. On account of the 'bate' of the rock, the flags cannot be trimmed by hammer and chisel to a clean straight edge. The edges are sawn square and smooth by water-power."

A Harwood Dalesman (1907): "The Helwith Bridge Silurian Slate Quarry was being worked by Mr. C. Ralph. Flags were quarried, squared and smoothed. The largest flags quarried measured 15 feet each way. In the mill they are sawn square by means of an iron straight-edge, driven backwards and forwards in sand and water; it being impossible to get a square-edge with hammer and chisel on account of the 'bate', or line of cleavage."

The quarry at Dry Rigg yielded a type of roofing flag known as a Swarthmoor flag. Quarrying it was undertaken by local builders, such as the Braithwaites, and the flags were hammer-trimmed. Dick Pritchard, who lived at Feizor, at one time owned Dry Rigg. Flags from here were transported to Feizor, where he built himself a house. (That house, now extended, is the local post office).

THE QUARRIES

COOMBS QUARRY was last used as the site of the magazine connected with the limestone quarry. Jack Marklew recalls working at Foredale Farm when "we used to put six barrels of gunpowder into the cart. There'd be a horse in the shafts, and a chain horse in front. The powder came in railway vans to the sidings at Nibble." (In the 1926 general strike, the power stored here had to be moved into the safe custody of an explosives company).

The late Frank Bentham related that a small sawmill stood between Coombs Quarry and Foredale Cottages; here the flags from Coombs were sawn, using wire. The power was provided by a "donkey engine".

Arco Wood is remembered as an area where there was a small quarry and an abundance of hasel trees, with a few rowans. Mr. Marklew recalls seeing cabins made of "blue slate", each roofed with "three great overlapping slabs...One building was the blacksmith's shop; there was a fire range in it, but I don't remember it being used."

The area of Coombs Thorn Quarry was obliterated with the extension of Dry Rigg for roadstone. As recently as 1947, two old pits existed, and it appears that flag had been taken from them. One had a face 15/20 feet deep; the road to the quarry was eventually built across it, leaving only a quarry with a deeper face (about 25 feet) to the east. There was evidence that flags had once been "sawed and planed" in this quarry, which also held a pool of water, varying in depth by no more than two inches, in summer or winter. "It took a very hard frost to freeze it."

Flag quarried at Dry Rigg was taken to Silloth House, which stands by Austwick beck, near the hamlet of Wharfe. Here it was sawn and polished at a mill operated by water power.

Dry Rigg was opened as a quarry by Mr. Walter, who owned Cullingworth quarry, in January, 1938, and about a year had been spent in erecting the plant. The work was supervised by Joe Hilton, of Stainforth. Harry Kelly, of Settle, was in charge of roadside production.

No one remembers when Studfold quarry was used for the production of flagstones. The flags here had thicker laminations than those obtained at Dry Rigg or Arco; they were also harder and less inclined to show the effects of weathering. In 1941-2, the mineral rights were owned by George Greenwood, of Halifax, and flag that had already been quarried, and was lying in heaps, was sent to Halifax to be crushed as aggregate. Workmen saw a large water cistern, a large number of metal wedges, each about four inches long, and a number of incomplete tombstones. Several substantial buildings lower down the quarry (buildings which today are represented only by the foundations) were presumably used as "carving places" or shelter by the quarrymen. (Greenwoods' hoped to develop the quarry, but it was considered to be too near the road; a plan to approach it by road from the rear was not adopted because of the high cost).

The last quarry to be operated in the traditional way was Helwith Bridge, south of Ewarth Moor, where for some years up to the 1914-18 war it was used by Christopher Ralph, with only two helpers. "Kit" Ralph owned the inn, the quarry and some land on which he kept two horses; he made hay in sufficient quantities to feed the horses through the winter. Kit, "a robust sort of fellow", employed his brother Jack as "saw man" and Samuel Marklew as the carter. The horses, Dick and Dolly, were stabled in one of the outbuildings near the inn. Jack Marklew recalls that Kit also "kept a cow or two for milk."

Among Kit's customers at the quarry was a small hump-backed man called Dicky Gornall (about whom William Riley was to write in his book "A Village in Craven" - Stainforth). Dicky lived at a house on the hillside at Studfold, but eventually resided with the Ralph family at Helwith Bridge. It is said that Dicky owned some property at The Flags, Giggleswick, and would walk down through Stackhouse to collect the rent. Once he carried on his back two huge pieces of "slate" intended for repairs at The Flags. (He is recalled, indeed, as walking "almost on all fours, with two little sticks to support him").

Kit Ralph eventually gave up the inn - a long building, in three sections: living accommodation, Select Bar and the Tap Room. The premises were let to a number of men who formed a workingmen's club. Kit lived at The Mill, and his wife kept a shop at which "toffee and that sort of thing" were sold. In due course, Kit retired and left Helwith Bridge; he died in Leeds.

Jack Ralph, who formerly lived at the Locks, Langcliffe, daily walked to his work at Helwith Bridge. His daughter, Mrs. Nellie Bullock relates that at the time he lived at the Locks his wage was 22s a week. She once accompanied him, on a Saturday morning, when he delivered a large water cistern to a farm on Newby Moor; the pieces were conveyed by horse and cart. Jack Ralph, who was later employed by Messrs Brassington, died on December 16, 1955, and was interred at Settle.

Kit Ralph sold the Helwith Bridge quarry to Henry Whittaker, who had been a major in the army and who had seen some service in Hong Kong. He had no experience of quarrying. Whittaker married a Miss Hodgson. He owned the quarry for only about two years, and it was then purchased by Mr. William Dawson, a Bingley mill-owner, in 1922. Dawson moved to Ingfield Lodge, at Settle. He had employed Mr. Frank Maude at Bingley, and Mr. Maude was now installed at Helwith Bridge. There was no call for flag in large pieces, and plant was installed for the production of roadstone. During Mr. Dawson's ownership, a conveyor was fitted to carry stone across the Ribble to sidings on the eastern side.

Mr. Dawson died at Ingfield Lodge. The new owner of Helwith Bridge quarry was Mr. Albert Braithwaite, a Leeds industrialist, who had served a term as Lord Mayor of that city. He was "a kind and thoughtful man".

The Granite Hole at Horton quarry yielded stone for the roads until, with the development of the Arco quarry, before the 1939-45 war, trade declined; the pumps were stopped and the Granite Hole filled with water. By this time it was over 100 feet deep.

PRODUCTS OF THE QUARRIES

THE UPTILTING beds of flag which in later times were difficult to drill and blast for roadstone where ideal in the old days. The quarrymen could easily remove it in large pieces; they simply found the "open ends" and "barred them out." Because the flags were especially hard, they did represent a danger to any quarrymen who habitually breathed the dust when, as occasionally happened, blasting took place.

The few references to the products of the quarries in various books are here presented in chronological order:

1780 - John Hutton. Flags used for floors in houses, "being sometimes laid over collars on joists; they are also used for gate-posts, foot-bridges, and partitions between the stalls in stables and cow-houses."

1874 - Wildman's Household Almanack. For paving slabs, landings, troughs, &c.

1877. Williams. For "tanks, pavings, landings, troughs and tombstones."

1896. Brown, George H. "Largely for cisterns and for brewers' vats."

1914. Riley, Frederic. "Largely for vat-making."

1924. Kendall and Wroot. "At Helwith ... a slate mill is conspicuous with its great pile of slate debris. Slates are prepared here for roofing, bridging and gateposts."

1932. Brayshaw and Robinson. Slates are found "forming floors for dairies, cool shelves upon which to stand the milk cans, sides for water cisterns, paving or sides for garden paths, and roofs for smaller outbuildings."

1956. Hartley and Ingilby. "To pave cottage floors, and to make doorsteps, cisterns, tombstones, porches, gate-posts, and partitions in cow-sheds..."

c1910. (Recollection of Jack Marklew). Kit Ralph made "window cills, lintels for doors and the 'soft water tanks'; he once had an order for garden edging stones, each stone having a depth of 1 foot and a width of 2 inches."

OPERATIONS AT HELWITH BRIDGE

IN THE TIME of Kit Ralph, the quarry face was up to 30 feet deep and some 200 yards in length. Jack Marklew recalls that stone was blasted with black powder, the holes for it being bored at the base of the quarry face with the help of "jumpers". These were metal bars, sharp at the operating end, which were struck by hammer and turned slightly between each blow. "When getting slabs for troughing, the men had to mind how they blasted it; they bored so many holes, low down, and blasted a lump down...they then split up the piece into flags using metal plugs; they were four or five inches long and tapered."

A slab on the quarry face was split from the top with iron wedges, and by cutting across the bottom it was freed from its position; many wedges were used. The flag was then let down on to wooden rollers to a loading point. If a piece of flag was found to have a "bit of rough" left on it, this was dressed by hammer and chisel.

A tramway extended from the quarry face. It was in two sections, the first being an incline, the second traversing flat ground. A four-wheeled flat bogey was used to transport the flag. (Children attending Helwith Bridge School were fond of running across to the quarry at playtime and having a ride on the bogey). The bogey's speed was controlled by pressure from a piece of wood applied to a wheel. A sprag was also available.

At the approach to the sawmill, the ground had been excavated so that the top of the bogey was level with a slab of slate near the entrance to the mill; the flag on the bogey could thus be moved on rollers direct from the bogey to the area of the saws. (Similarly, another excavated area enabled horses and carts to be reversed into a position level with the slate loading area; cut and polished flags could thus be 'rolled' easily from the mill on to the back of the cart).

Two waterwheels are known. One stood beside a building near the inn - a building still known as Mill House - and received water from the Ribble via a 200-yard long culvert; the culvert was "roofed" with blue flag. This wheel was undershot, and at times of flood might lift with the weight and strength of the water flowing against its frame. (This fact saved the life of a girl who fell between two flags into the water and was borne by the wheel and out into the Ribble; she became unconscious - and lost a favourite shawl - but survived to old age).

The sawmill by the Ribble was constructed of slate. Although the area was used for tipping spoil from the quarry when it was devoted to roadstone, two complete walls survive. It was a single large room. The undershot wheel had its power transferred on vertical shafting to shafting high in the building, from whence it was transferred to various appliances for sawing and polishing. The types of saw employed were pieces of metal which were toothless, the sawing action making use of the abrasive power of sand in water. The saws were of varying lengths, and one ingenious type was circular. Jack Marklew says it worked "backwards and forwards, cutting out the bases for footscrapers, and also being used now and again for manholes." For grooving water cisterns, the saw was used to cut slate to the appropriate depth; a man then gouged out the space between two cuts with a chisel, the laminated nature of the flag enabling this to be done quickly and neatly. (At one time, an effort was made to use leather belts rather than a succession of cogs at the sawmill; it was not successful - the belts slipped).

Jim Ward, who removed the wheel and transported it to Horton, recalls that in 1935 he asked Mr. Frank Maude, manager of the quarry, if he could purchase the wheel. He wanted to adapt it for the generation of electricity at Horton. Mr. Maude replied: "If you can get it out, you can have it." The wheel consisted of cast iron spindle and bearing house, in which the bronze bearings were almost worn through. There were cast iron rims and wooden 'paddles'. Each rim was made up of segments, six in number, and these were bolted together. A segment weighed about 2½ cwt. A wooden 'paddle' was five feet in length, and the ends of each board slotted into recesses in the appropriate segment of the wheel.

When the wheel was re-assembled at Horton (without the woodwork, which was rotten) it was found to weigh about 24 cwt. Mr. Ward and Isaac Sarginson designed some buckets for the wheel. In its new position, beside Bransgill Beck at Horton, it became an overshot wheel, fed by water via some wooden troughing. The total output of the water-powered generator was about 7 h.p. Mr. Ward supplied the local inns, also his own home.

Of the sawmill at Helwith Bridge, he says: "The saw was a bar of metal; the sawing action was brought about by the abrasive action of sand which was fed to the cutting edge. The shaft from the wheel drove a device which had a reciprocating action, the other end of the saw having a weight dangling from it so that the edge of the saw was kept tight against the slate that was being cut."

(At Horton, the old wheel replaced one of wood and continued in service until 1948, first for the Davidson family and then for the Capstickes; it was eventually sold for scrap. The only part of it remaining at Horton is the spindle. The scrap merchant found its size and weight unhandy; it now lies deep below ground level, having been covered with earth during alterations. Water had reached the wheel, from Bransgill Beck, in three stages. 1. An underground channel, the sides and top being formed of blue flags. (This channel, in the 18th century, fed water into a system directed to the wheel at a local mill). 2. An open flag channel, 3 ft wide and about 1 ft deep. The channel depended on a good flow for it was not watertight and leaked badly. 3. A wooden trough which carried water to the wheel, from a high bank to a height of 11 ft, from which position it fed the wheel.)

T R A N S P O R T ....

THROUGHOUT most of the period, the horse and cart (possibly at one time, a sled) was used to transport the flags from the quarries to the customers. The coming of the Settle-Carlisle railway in the 1870s did not immediately help the quarries. It was originally intended to build a station at Helwith Bridge, but this idea was discarded. For many years, the nearest railpoint was Giggleswick, on the Little North Western (later Midland) line from the West Riding to Carnforth, and via Clapham and Ingleton to Lowgill, on the Lancaster-

Carlisle system.

Samuel Marklew, using two horses and a four-wheeled cart, transported a brewer's vat (in sections, each lying flat) from Helwith Bridge to Tadcaster. The task would take the greater part of a week. (Jack Marklew recalls that each pair of wheels was connected to an axle, and additional rigidity was given by a long pole which extended from the centre of the front axle, across the centre of the back axle, and stuck out at the rear).

Helwith flags were carted to Settle railway station. Some of it was consigned (as vats in sections) to breweries in Northern Ireland.

Tommy Moorby, a carter with Brassingtons for over 50 years, helped Kit Ralph, and Tommy recalled to Mr. W. Hodgson when he took a horse and lorry to Helwith Bridge to collect flags. Each flag was loaded using primitive three-legged lifting tackle. The heavy chain was rusty; it cracked and creaked alarmingly under the strain.

In the period 1905/6, Jackie Richardson, who lived at Ponyghent House (his father was gamekeeper for the Morrisons) carted flags from Helwith Bridge to Littondale, for the making of bookins.

Herbert Ralph, a carter, conveyed flags from Dry Rigg quarry to breweries at Blackburn. Major Whittaker, who succeeded Kit Ralph at Helwith Bridge, had a motor wagon. This was employed taking sections of vats to Tadcaster and, recalls Jack Marklew, "we used to bring back barrels of beer."

When Frank Maude presided over the roadstone quarry at Helwith Bridge, he used a steam wagon to take the stone to the railway station at Horton-in-Ribblesdale. At this time, in the 1920s, "there was no call for flags at all. Someone might come along for a piece of flag for a gravestone."

THE QUALITIES OF FLAG ....

FLAG IS DURABLE when its edges are protected from the weather. In course of time, an unprotected edge tends to become flakey, being especially vulnerable to frost.

On buildings, it proved its worth as lintels and porches. Large flags used as paths show little wear after many years. Large flags used as the roofs of outbuildings have endured because the joints were crossed. Three flags were sufficient to cover a quite large outbuilding.

Used as a walling material, it has been neat and substantial. On Moughton Fell, a wall was built partly of large upended flags taken from a nearby outcrop. Walls dividing gardens at the back of Victoria Street were composed of large pieces of flag, sunk in the ground and bolted together for extra rigidity.

Water cisterns have been prone to crack, especially when water within has formed a solid block of ice in winter. The best quality flag (i.e., beds with the fewest laminations) was used for cisterns, and it was not necessary to cover the upper edges, though some cisterns are covered by several pieces of flag fitting snugly together. When the holes made at the ends to accommodate metal bars have been eroded, it has been necessary to reinforce a cistern by fitting bars down either side, bolting these together at the ends.

Flag was difficult to work; one hoped to find a piece of the appropriate size. Virtually the only way of cutting flag was by saw, for if hand-tools were used "pieces of flag would fly in all directions." Hammer-trimming could be employed to reduce the width of the edges, as on the edges of gate-steps and roofing material. Laying a flag floor was a skilful occupation. The flags were moved into position on rollers, being deposited on beds of

sand. (It is related by a Clapham farmer's wife that her children were fond of playing with dry peas, some of which became lodged in cracks between the "blue flags". It was known for these peas to sprout and grow within the house).

Flag "sweat", and was "always wet in winter." A farmer's wife knew when there would be a change in the weather by looking at the flags. "If the flags went damp, the weather was going to take up; the temperature was rising." When wet, flags are very slippery (a problem occupying the minds of churchgoers at Norton and Giggleswick, who walk to church on Helwith flags). Blue flags laid indoors were invariably washed with "blue milk" and became glossy.

Flags used in dairies as shelving (banks) had two great advantages. They were always cold, which was vital in hot weather when food or liquid had to be preserved, and they were capable of being kept clean. When pieces of pork were salted in "leads" that were placed on the banks, it did not take long to wipe away traces of fat and blood, for this did not penetrate the flag.

C O N T A I N E R S F O R L I Q U I D S ....

Brewers' Vats. These fermenting vats were known at Tadcaster as "Yorkshire Squares". Some are still being used at the brewery of Samuel Smith, but at John Smith's they were removed early in 1970 and replaced by vats of stainless steel. The old vats were sterilised with a solution of lime. Beer, being only slightly acidic, did not permanently affect the flags; strong acids would eat away the carbonate in the rock.

A. Ross, Production Director at Samuel Smith, observes: "It is suggested that this style of fermentation results in less loss of alcohol from the beer due to the liquid being entrapped under the platform. In practice, the difference in alcohol level between this and any other type of fermenting vessel is not particularly significant. We think it is more likely the case that blue flag or slate was used for Yorkshire-Square Fermenting vessels because the material was relatively cheap, available in the north and could be fashioned into vessels of an adequate size for breweries of that era. This, being Yorkshire's oldest operating brewery, has this type of vessel still in use and there is no denying such a style of vessel gives this brewery a certain amount of charm, which one does not experience in modern fermenting plants."

The platform to which Mr. Ross referred is fitted to each of the slate or blue flag vessels; into each platform is cut a circular manway. The inquiry to Samuel Smiths was prompted by a story, told at Silloth House, that circular pieces of flag were left here after having been sawn from larger pieces supplied to breweries. The dimensions of holes in the platforms at Tadcaster are 2$\frac{3}{4}$" diameter, slab thickness 2$\frac{3}{4}$". The measurements are slightly larger than the pieces left at Silloth House but could be of more recent date. (Mr. Ross notes: "We suppose they could have been cut undersize for trimming up on site, but that does not explain the difference in thickness. It is just possible that the material was used in vessels of an earlier generation - the tendency being to have manways larger for whatever purpose as this century has progressed. The technical reason for the manway, apart from providing access for cleaning, is that the opening is capped by a heavy brass rim approximately 6" in height. The style of fermentation was to fill just to the underside of the platform - equal to approximately two-thirds of the total vessel volume - so that as yeast was formed during the fermentation, it became deposited on the upper deck, and any barm ale draining back would be returned to the lower deck by way of an "organ" pipe inserted as a flush fitting through a smaller opening in one corner of the platform.")

It is interesting to speculate on the profusion of foot-scrapers with circular pieces of flags as bases; were these pieces originally cut-away?

Water Cisterns (or "Soft Water Tanks"). Rainwater falling on the roof of a building might be stored by being diverted along guttering and through a downspout into a large container. A water cistern might be kept inside or outside a house or outbuilding; it is most often outside. The cistern was raised, so that there was gravity flow into the kitchen, by way of a lead pipe passing through the wall. The height also made it less likely that an inquisitive child would be drowned. At Wharfe, where the rainfall is 50" per annum, there were none the less periods when the cistern was almost empty. "If we had a period of drought, and they wanted rain, grandma would say: 'I wish you'd clean out that water tank, and then it'll rain'; and it generally did." Mud accumulated at the bottom, together with "little worms and all sorts of things." A cistern at Harebeck, near Settle, had deposits of sand, the roof being of gritstone. Soft-water was used for washing woollen and flannels. Wounds were bathed in soft water. "It was beautiful if you washed your hair in it." It was claimed to give its users a good complexion. Some farmhouses, which did not have an alternative supply, used a large amount of soft-water, but not for drinking. This water came from the nearest spring.

Many water cisterns were installed against outbarns at which there was no convenient stream. One, near Giggleswick, feeds a trough which was used by the cattle as they were let out to drink each day in winter, and also by the summering stock which had free range in the field. The most impressive cisterns in the district are two in the large barn at Grains House; they hold a total of 1,400 gallons, and the water is piped to a stable beneath, thence across the yard to the farm kitchen. These tanks are cleaned out at intervals of several years, most of the deposit being rotted down leaves.

A cistern consists of five (sometimes six) pieces of flag: two sides, two ends, a base and cover, the latter in several close-fitting sections. The base and sides of a cistern are grooved. When the cistern was being assembled, the joints were made watertight by the use of white or red lead, sometimes mixed with putty. Extra rigidity was provided by bars of iron at the ends. Less commonly, the corners were fitted flush, and corner pieces of metal were bolted into place. With a large cistern, there would be two pieces at each corner.

At Craggdale Farm, Settle, a piece of flag 8 ft by 4 ft 6 ins was first used as the base for a cistern; then it served as a flag on the floor of the barn. Mr. Hodgson, with four helpers, using rollers, moved it to a position out of doors. Cisterns were commonly found behind Victorian houses at Settle. Mrs. Frank Maude relates that when she and her family moved to Craven Terrace in 1929, all the houses had such containers, and the water was invaluable on wash-day because of its softness (Settle 'tap water' tends to be hard). That was the period before special soap powders and detergents had been developed.

A larger number of cisterns have had "t'big hammer takken to 'em." Some pieces proved too large to be moved, even with the powerful scoops of tractors. At Wharfe, "when we decided to get rid of our 'tank', we gave it one tap, and the thing came apart like a cardboard box collapsing. We didn't want it any more. We had our own water supply; it was fed by a spring at the back."

Troughs. Much smaller versions of the cisterns from the point of view of production and styling. Generally quite small. An example, at Goat Cap Farm, has a length of 5'6" x 1 ft 6" x 2 ft 3½", the sides being 2½" thick and the end pieces 2" thick. Great ingenuity was shown. Some troughs were made to fit through a wall, to provide water for stock in two fields, and a special piece of flag was added to provide a chamber for the water valve. A trough at Low Winskill has sides that slope gently outwards with height; the pieces are fitted together flush and iron pieces used to secure the ends. One end of an iron piece is bolted through the flag, the inner end knocked flat,

and the other end tapers, with a "claw" that fits tightly into a hole which does not extend through the flag.

Sor-pits. The term "sor" is possibly derived from "sever", such a pit being used for liquid fertiliser, the tank being set into the farmyard, with channels leading to it from the shippons. A tight fit was needed to retain the liquid; the top must also be well made, so that no surface water would enter and dilute the urine, which was to be used as fertiliser. The top of a sor-pit, which was at ground level, usually consisted of several pieces of flag fitting snugly together. It was easier, then, to remove the top when the pit was pumped out into a mobile tank from which it was spread across the land. It has been known for some water cisterns to be adapted for use as sor-pits.

B E N K S ....

THE TERM is used for the shelving in dairies. Most commonly, long piece of flag were sitted side by side, supported, at the joints, by verticals made of brick, stone and rarely flag itself. When a dairy was whitewashed, with the exception of the top surface of the "benk", it looked most attractive. Because blue flag was also used in pantries, a variety of terms evolved for the shelvings: benk, bink, nott, slab, bench. The "benk" was usually the lower shelf, which might also be a working surface, raised some 3 ft from the ground. The term "benk" was also used when a piece of flag was set up in the garden as a seat!

One of the oldest examples of such shelving is found at Lumb Farm, near Cliffe wick, where the flags are fairly rough, irregular in width. In 19th century farmhouses, "benks" might be beautifully sawn and polished, the surface kept to a marble-like sheen by frequent spillage of milk. Some are smooth on the topside only. The majority have smooth edges, some are rough. Where food or milk were being used, smoothness was important. The shelving could be cleaned down, reducing the risk of infection.

At Wharfe: "The dairy faced the north, and it was always cool there. You could get eggs frozen in winter." (In those days, eggs were usually cleaned and put in a water-glass to be kept for a long period).

A common sight, before separators were introduced, was that of milk in "leads", which were metal trays, with sloping sides and a hole at the bottom which was occupied by a plug during the separation process. The plug could be removed to allow the "blue milk" to flow into a pail; the cream which adhered to the sloping sides and base of the "lead" was scraped up to be placed in a crock and kept until churning day.

"Leads" no longer needed for milk separation might be kept for salting the pig-meat; so much salt was used that part of it impregnated the wall and causing the plaster to flake away! Salt was bought in blocks; "you grated it down as you wanted it." Salt petre was also used. The process of curing began when the pork was placed "flesh down" on flags for 24 hours. Any blood was wiped away; the salt was rubbed well in, the flag sprinkled with salt and then the pieces were turned, so that the "skin side" was downwards. The salt was then applied to the fleshy part. "Rolling pieces" of pork were kept in salt for 10 days, hams and shoulders for a fortnight. At Wharfe: "We put the bacon in a milk lead - flitches at the bottom, then the hams, then the cheeks and feet. Dry salt was sprinkled over. When the salting was completed, the leads were sealed and cleared away."

Flag had its use in butter production. "We had a piece of flag on which we put the butter just after it had been patted and made into shape. The blue-flag was then carried into the dairy, and kept here from Friday till Tuesday, when you took the butter to market. The flag was scrubbed first with boiling water, then with cold water, and left to drip and drain - till next week."

W A L L S ...

AROUND HELWITH BRIDGE, the walls are composed almost entirely of pieces of flag; elsewhere, flags may be used simply as "throughs" and gate-stoops. A "through" is a large stone which, built into a wall, and extending throughout its width, helps to bind together the two sides of the wall. If two courses were incorporated in a wall, the top "through" might be 1 ft 6" or 2 ft, the bottom through about 2 ft 6".

J.M.Brassington recalls going to Helwith Bridge with a motor lorry in the 1920s to collect pieces of flag for walling. They were to be used specifically as "throughs". In 1923, the Hirds of Raulinshaw contacted Dick Pritchard, who worked the quarry at Dry Rigg, and asked him if they could buy some pieces of flag as "throughs" for a new 200 yd. wall. He said: "Get 'em yourself at a shilling a cart load." While father selected good pieces of flag, his son Rob carted the material using an ordinary farm cart and two horses, one in the shafts, the other to be used in chains when the cart was loaded. Rob. Hird recalls that the track to Dry Rigg was so rough, the cart had the action of a ship in a stormy sea.

Gate-stoops varied in size, thickness and pattern. Generally, a piece of flag was shaped to the wall, to create a good appearance. A typical size might be 3 ft 7" x 1 ft 7" x 2" thick. One form of stoop had three holes, into which one end of wooden bars might be slipped to provide a barrier in the absence of a gate. Near Horton, a stoop has three such holes, and also metal hangings for a gate, reflecting a change in the method of using it.

The use of large pieces of flag extending through a wall made it possible for effective and durable stiles to be made.

Flag was sometimes used for the inner walls of houses. When a farmer at Wharfe investigated an area of wall which became damp in hot weather some wallpaper was peeled away and the wall itself was found to consist of a very large flag, set on end, possibly filling a gap after the removal of a door. It was a cool room. In summer, the warm air entering the room had condensed on the flag.

B O S K I N S ...

THESE WERE the divisions between stalls in a shippon. Jack Ralph, the brother of Kit the quarryman, visiting Raulinshaw Farm in the 1930s, saw some flag boskins in a shippon and said: "It's a day or two since I cut them out."

One should distinguish between boskins in shippons and boskins in stables, those intended for horses being larger and a little more substantial.

At Crooklands, near Newby, a stable was converted into a shippon for four cattle; the flag boskin was cut away near the wall in the days when horses were kept to admit a manger. The facing partitions were of extremely large pieces of flag, with a piece cut away from the top of each flag to allow for a wooden door to be attached (by bolt, through the flag). The door would be necessary for, when not being used for feeding, the space would have to be closed to avoid draughts.

Flag boskins are fairly commonly found in large barns which are no longer used and in many field barns, which are also suffering from neglect now that cattle are kept in large modern structures near the farmhouse.

F O O T - S C R A P E R S ....

MANY EXAMPLES remain, some of them dated (mainly from the latter part of the

19th century). An example outside the porch of Horton church has a diameter of 17$\frac{5}{8}$" and a thickness of 3$\frac{1}{4}$". (It was theorised earlier than some foot-scrapers might have as their bases pieces cut from large pieces of flag for brewers' vats).

TOMBSTONES AND MEMORIALS ....

POTENTIALLY a fascinating study. A brief investigation of those in the yards at Horton, Giggleswick and Settle reveals a flag tombstone of the Green family dated 1767 at Horton, an oblong flag to the Dolland family (1774) composing part of the church path at Giggleswick and, inside Horton church, a two-piece memorial to Procter of Studfold, yeoman, dated 1789.

Here are some pieces of blue-flag used as tombstones and memorials which are particularly noteworthy:

Giggleswick Church. Inside: slate, inscribed, forming part of memorial of late 17th century date; the memorial has a marble surround. Flags on the floors of the aisles to which have been fixed brasses: Swale (1796), Redmayne (1799), Rev. William Paley (1799), Mary Paley of Knaresborough (1813), Mary and Elis. Paley (1812 and 1819), Goldard (1852 - in addition to brass, flag inscribed G). Two-piece flag base to Birkbeck Memorial, with flag inscribed: "Leyland and Dromley, sculptors, Halifax and Leeds." Flag, relating to Frank-land (1803), to be found in porch; this flag is an impressive 6' 6" x 3'.

In the yard: tombstone to Procter (1840), maximum height 7 ft x 3 ft 1$\frac{1}{2}$" wide. On the church path: Dolland (1774), M.P. (1786), Scott (1823), Dixon (1824), Dolland (1830), Dixon (1834), Nicholson (1868), Leach (1883), Batten (1900).

One tomb composed of well-sawn and polished flags.

Horton-in-Ribblesdale. In the yard a batch of yeomen: Green (1767), Clapham (1787), Foster (1782), Holden (1794), Tennant (1798), Whaley (1799), Gorman (1815), Tennant (1834). The brasses once attached to tombstones (and referred to earlier) were removed for safe-keeping to a position inside the church; the work was done during the incumbency of Mr. Slinger.

Settle. Special use of flag as the base to the marble monument erected by the Midland Railway and fellow workmen to the memory of those who died during the construction of the Settle-Carlisle railway (1869-1876). In the churchyard, a flag to the memory of Luke Ralph, blacksmith (who died in 1849), and of whom the following inscription was composed: "My Sledge and Hammer both declined/ My Bellow they have lost the wind/ My Fire extinct my Forge decayed/And in the dust my vice is laid/My coals are spent, my Iron gone/My Nails are drove, my work is done."

(In most cases, tombstones are simple in form and adornment, yet at Horton some ornamentation has been made along the upper rims of the flag, and a neat motif, apparently a flower head, appears on several tombstones).

A SUMMARY ....

HORTON FLAGS must have been used since the earliest times. Although not conspicuously represented in the fabric of the old churches, it was found to have a variety of uses during the latter part of the 17th century, and the early part of the 18th century, when yeoman farmers and old families expressed their new-found status and wealth by rebuilding their homes and buildings in stone. During the Enclosures, flag was a handy and suitable material for wall-building, and though not used as a primary building material in field barns and outbarns, it was none the less employed for such as "throughs", lintels, bedding and doorsteps. It also found use as a roofing material, mainly for very small outbuildings, where three late flags were enough to provide cover.

The presence of quarries, and a high degree of skill in cutting and inscribing flag, are testified by the dignified, sometimes well adorned, tombstones and monuments at local churches. By the mid-19th century, flag-workers and local blacksmiths were providing cisterns and troughs needed by farmers and the residents of larger houses.

The general use of Horton Flags did not extend far beyond the quarries, except for brewers' vats, when - despite the long distances involved - the material was economical as well as suitable as fermenting vessels.

The railways which enabled some Horton Flags to be despatched to distant places also brought into the district large quantities of true slate, from North Wales and the Lake District. (Especially Welsh slate, used commonly for roofing). When the Midland company built its railway stations in the 1870s, slate was absent, for by that time the line was in position and it was easily possible to bring into the district sandstone quarried and dressed in the Bradford area.

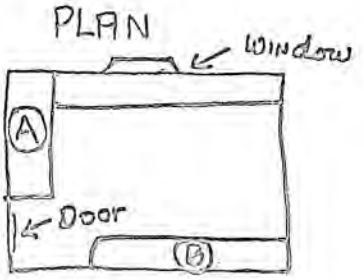
The flag-quarrying ended in the 1920s. From this time, quarrying in the district was for roadstone, and the coming of the railway encouraged large-scale limestone quarrying.

The blue-flag of North Ribblesdale was quarried for over 200 years to serve the local people. Proof of its fitness and durability is seen at almost every old building in the area.

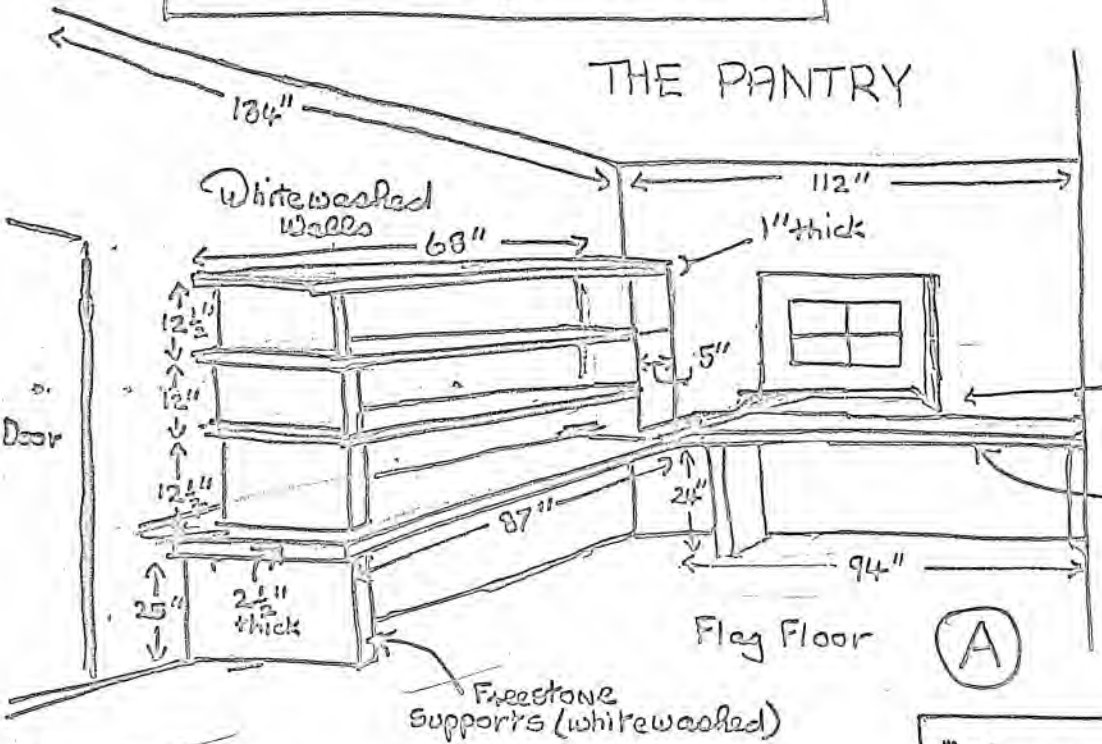
A C K N O W L E D G E M E N T S ...

The help of the following is warmly acknowledged: Jack Marklew, John Robinson, A. Seggar, B. Braithwaite-Exley, J.M. Brassington, Fred Capstick, Mrs. Mabel Mason, Mrs. Fred Pullock, Mr. Anthony Greenbank, W. Hodgson, Mrs. Frank Maude, Stanley Potts, N. Booth, W. Dugdale, C. Ellig, J. Ward, B. Sherrock, D. Soames, H. Maudsley, M. Wood, C. Fryer, F. Beresford, B.C. Whinray, Lt-Col. Field, Anthony Bradley, Mrs. D. Harrison, Fred Lord, Mr. and Mrs. Fortescue, and the farmers at Rome, Sherwood, Goat Gap, Black Dash, Rumley Bridge, Foredale and Cowside.

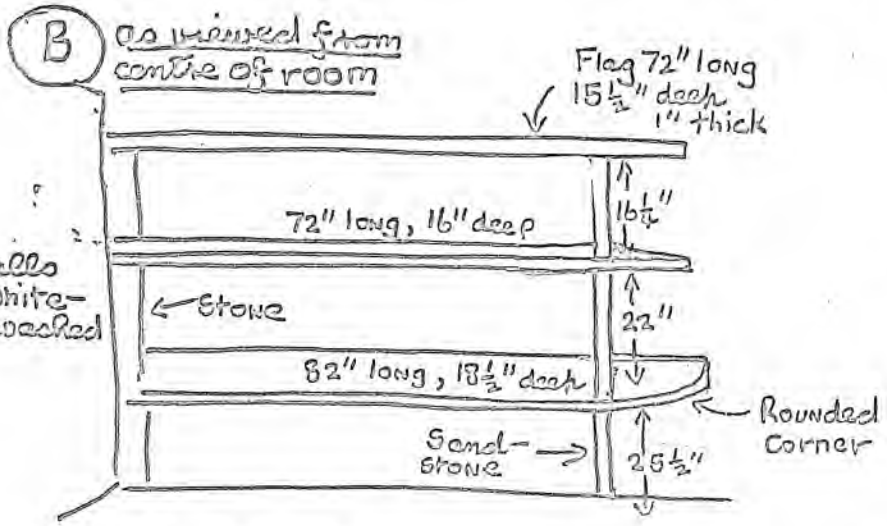
Beecroft Hall



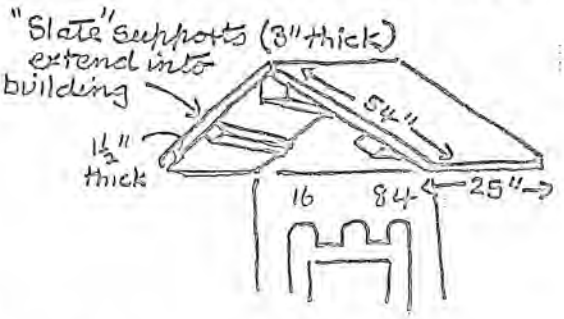
THE PANTRY



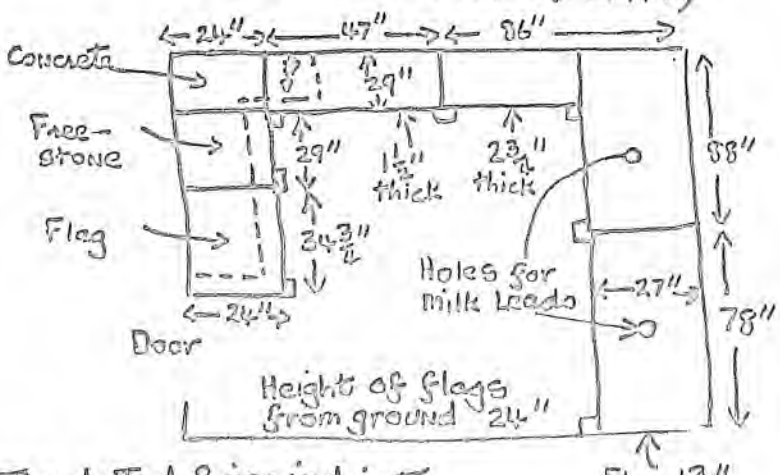
Miscellaneous



PORCH AT FIELD GATE, GIGGLESWICK

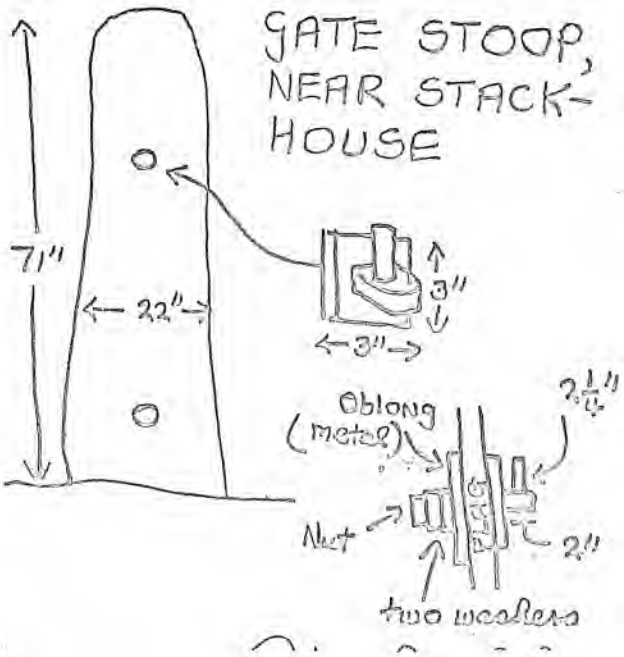


THE DAIRY (PLAN)



The dotted lines indicate a substantial stone support, now faced with

GATE STOOP, NEAR STACK-HOUSE

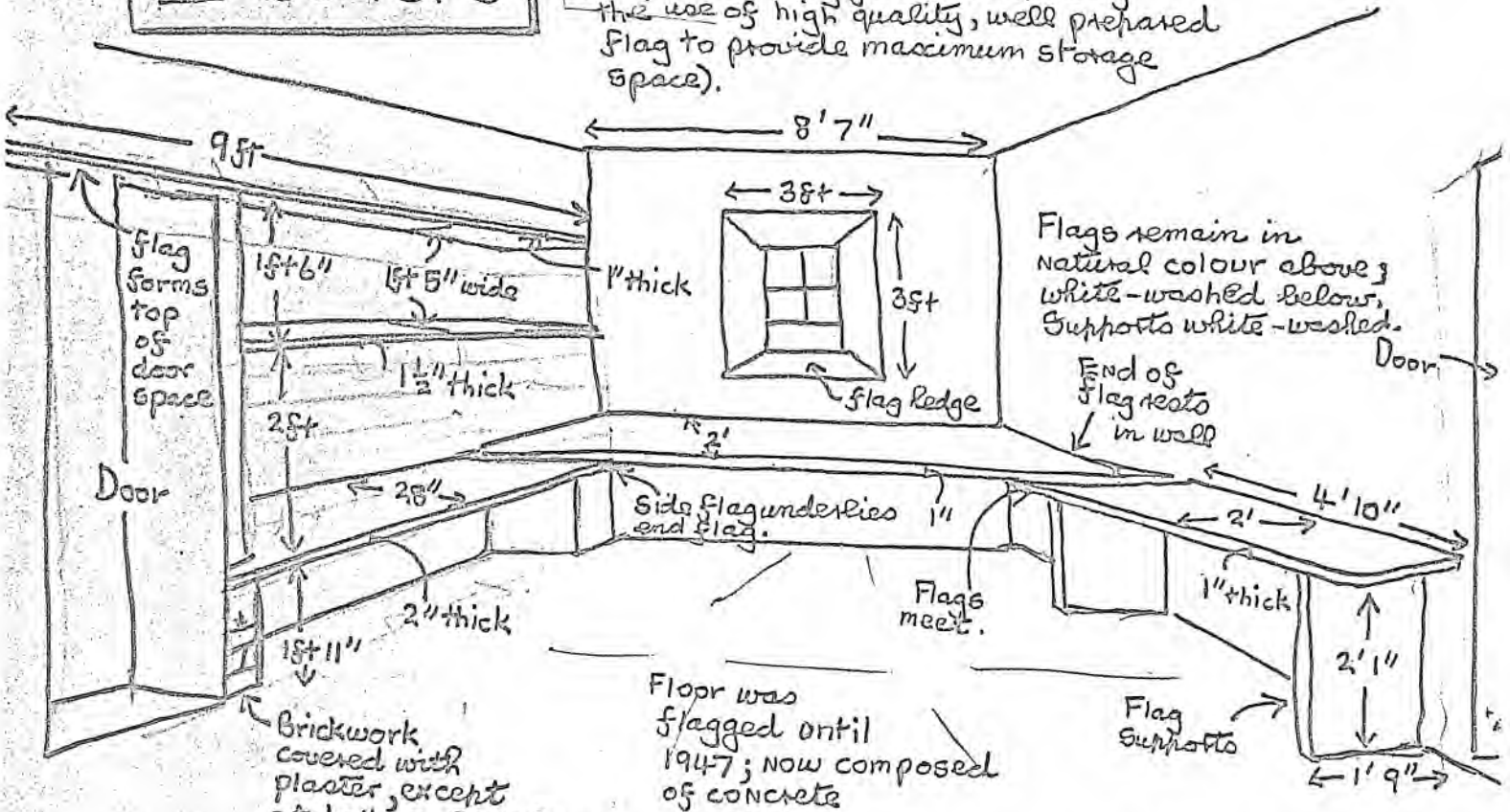


Interiors

(Not to Scale)

PANTRY AT CLAPHAM

(a particularly fine example of the use of high quality, well prepared flag to provide maximum storage space).



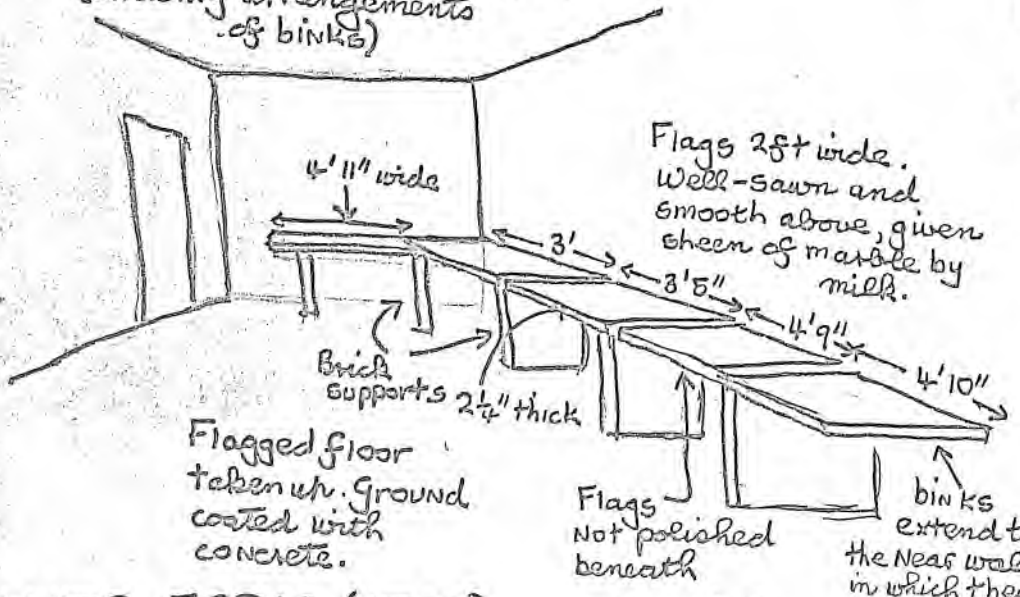
Brickwork covered with plaster, except at bottom. Soot from pig-curing blamed for loosening the plaster.

Flopr was flagged until 1947; now composed of concrete

The high-level flag on the left extends to wall and is overlapped by flag running almost full length of wall NOT shown.

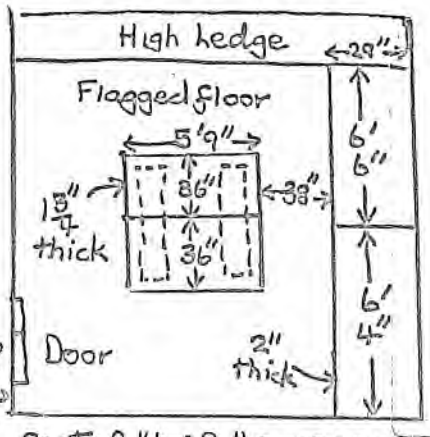
DAIRY AT CLAPHAM

(showing arrangements of binks)



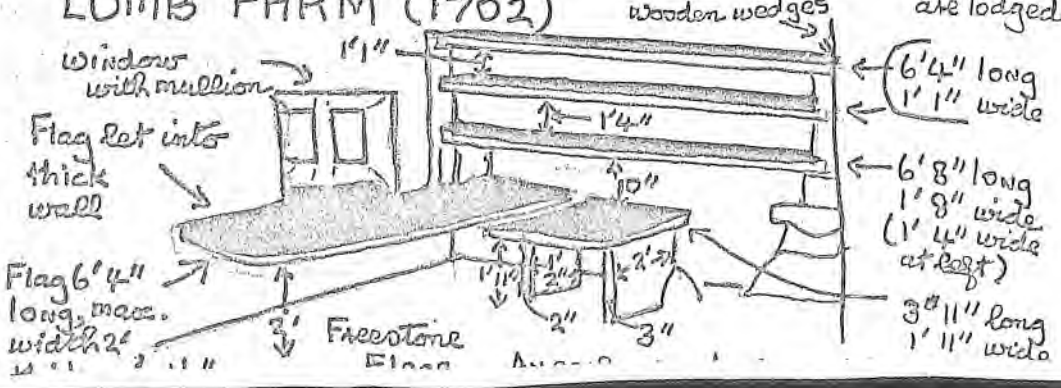
LITTLE BANK

Plan of one of several cellars in the Victorian part of the house.



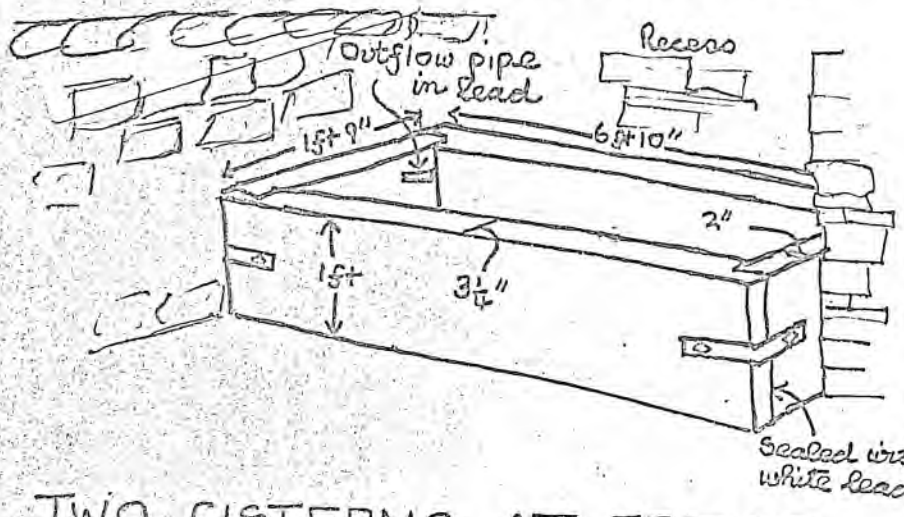
Central "table" composed of two large flags of high quality. Brick supports indicated by dotted lines. Flags raised 2'6" from ground. Binks have brick supports, that at centre being 9" wide, 2'3" high, 1'11" deep.

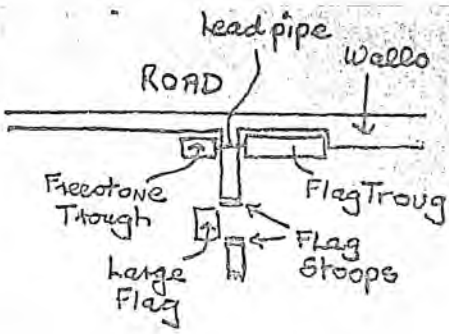
LUMB FARM (1702)

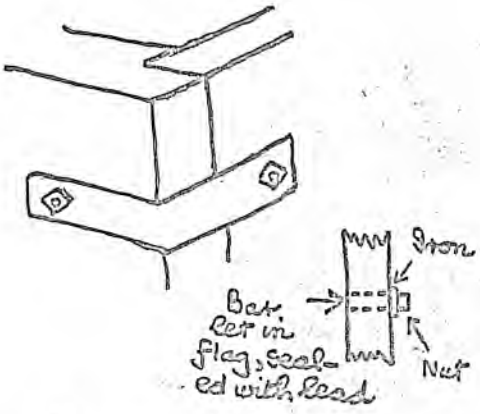


Cisterns and Troughs

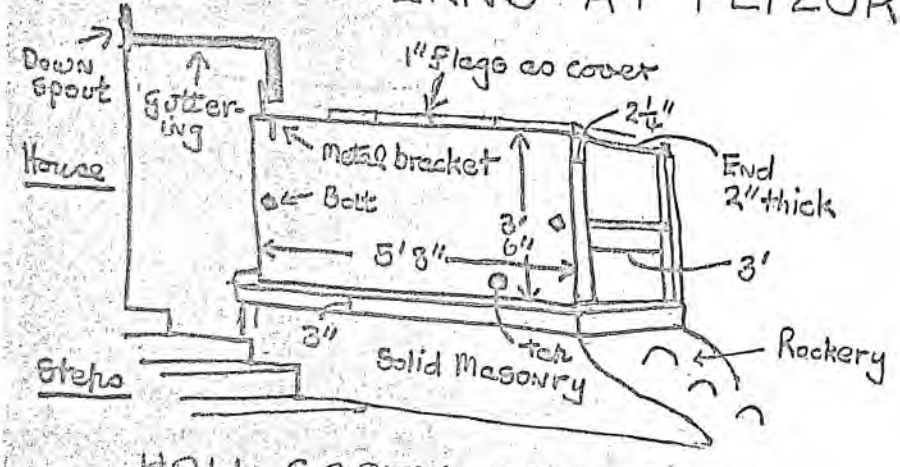
NEWFIELD HOUSE, WHARFE

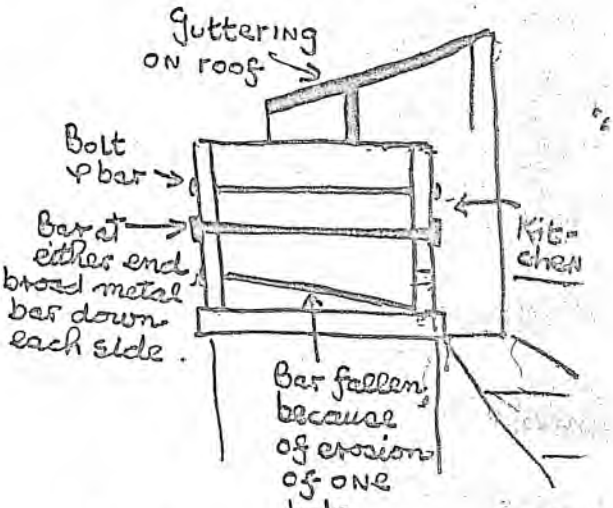




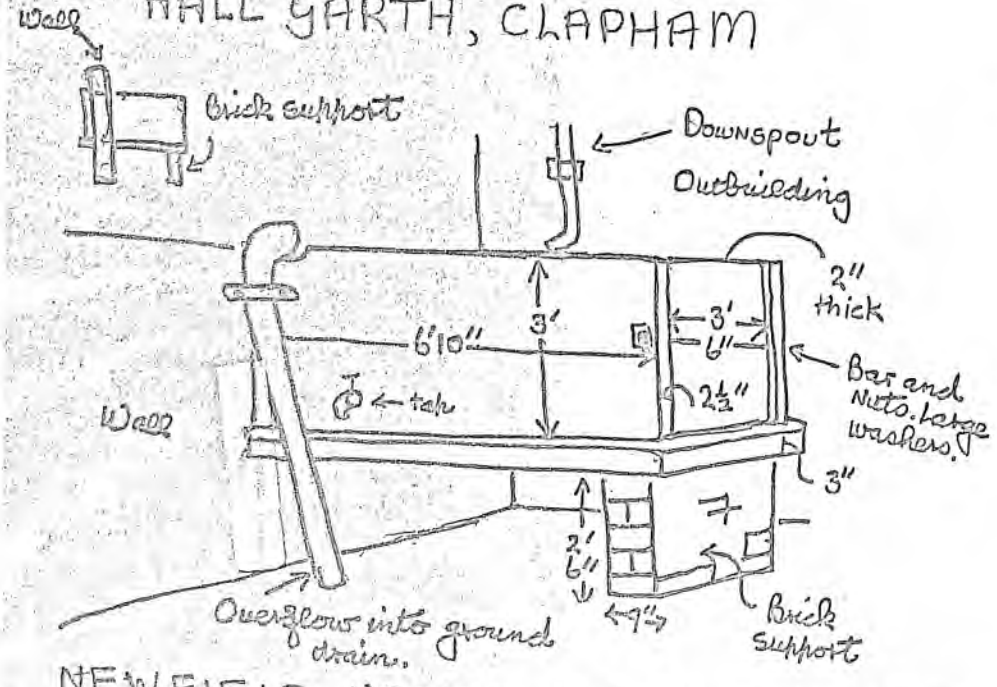


TWO CISTERNS AT FEIZOR

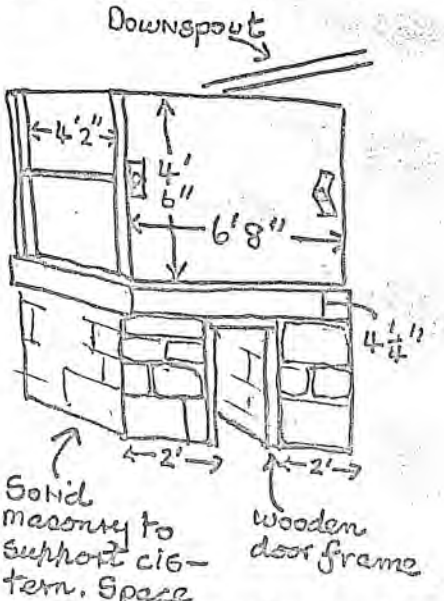




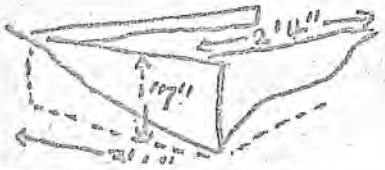
HALL GARTH, CLAPHAM



NEW HALL



NEWFIELD HOUSE, NEAR WHARFE

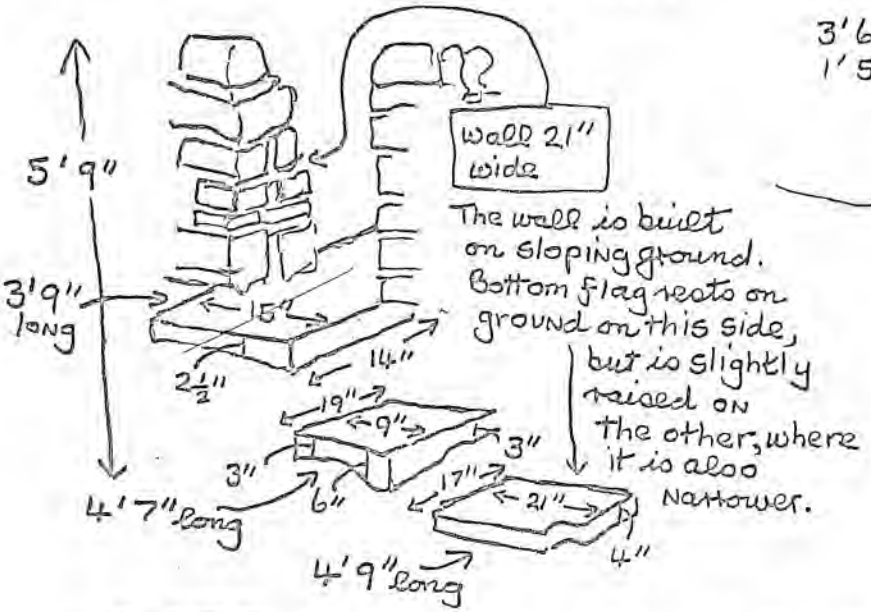


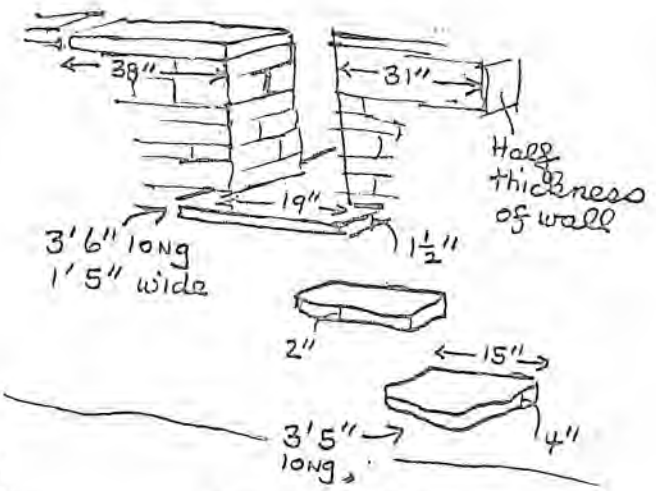
Two flags on the side of Moughton mark a spring and were used to retain water. Now badly silted, water flowing through

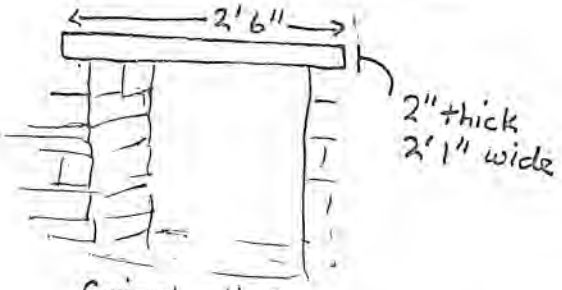
Walls

Built of local stone, They faithfully indicate the geology of the district!

STILES ON MOUGHTON

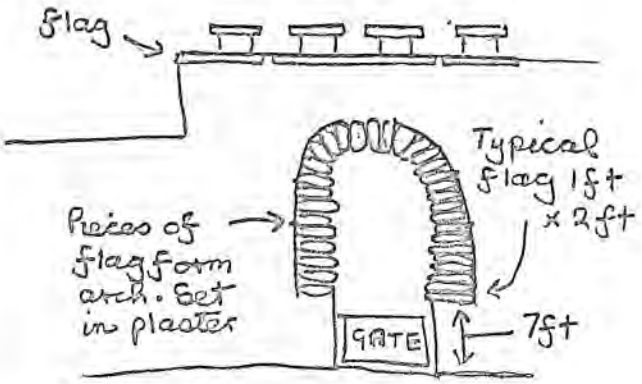






Cripple-Hole
(permits mixed grazing, cattle and sheep)

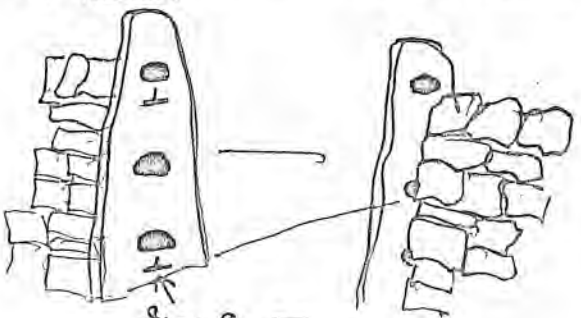
GATEWAY AT LAWKLAND GREEN



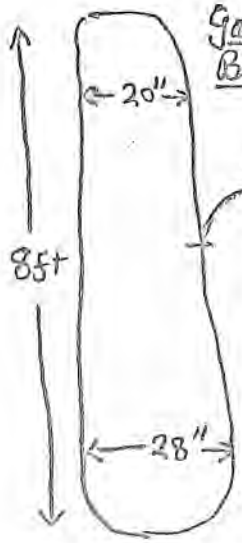
A lime kiln on Cave Ha' is similarly arched with small flags.

AT RAWLINSHAW FARM

Flag stoops, with holes for poles or rails.



Iron fasteners for hanging gate.



Gate stoop at Bleak Bank, Cold Cotes

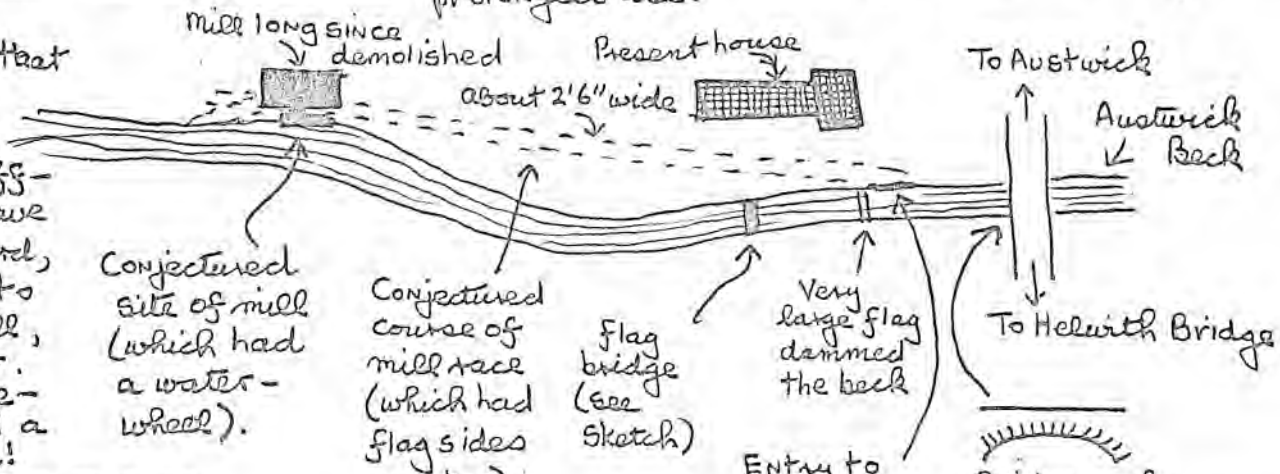
Farmer says that a good stoop should be "five feet out and three feet in."

William Rintchell

Silloth House

On site of a saw mill for flag, much of it brought from Dry Rigg. Little historical information, but evidence from remains of prolonged use.

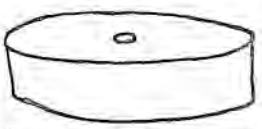
It is related that Silloth House was built, from "flag off-cuts", by "Dave Jack" Pritchard, on contract to Neddy Gorrall, of Lancaster. Dave Jack received 2s 6d a square yard!



FLAG BRIDGE

Six large flags from bank to bank with slate supports at ends and in the middle. The middle support is protected from erosion by two large flags reared vertically and angled to "cut" the flow of the beck. The flags of the bridge were covered over but can be seen from underneath.

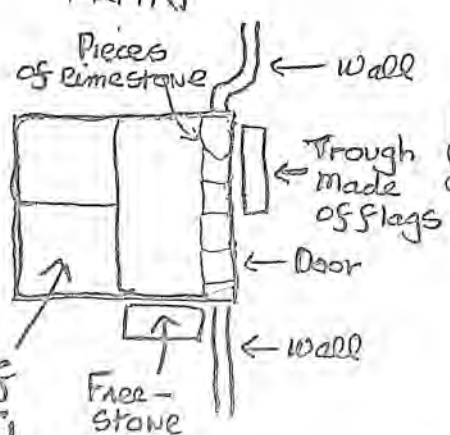
FROM BEER VATS

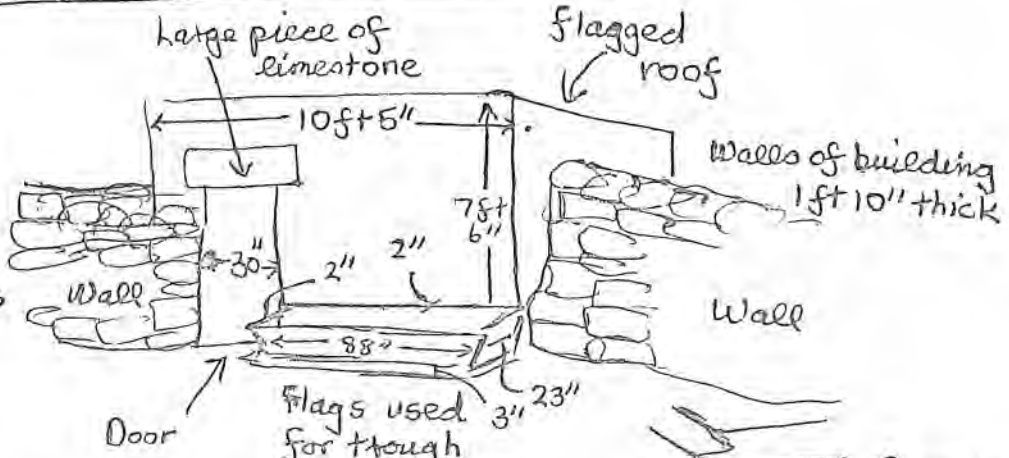


Two pieces of flag which are circular are said to have been cut to order from large flags intended as sections of brewers' vats. Shallow hole was for centring. Diameter of 17", depth of one 5" and of the other 4".

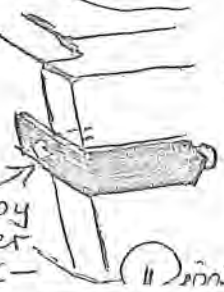
Outbuilding at Low Winskill

PLAN



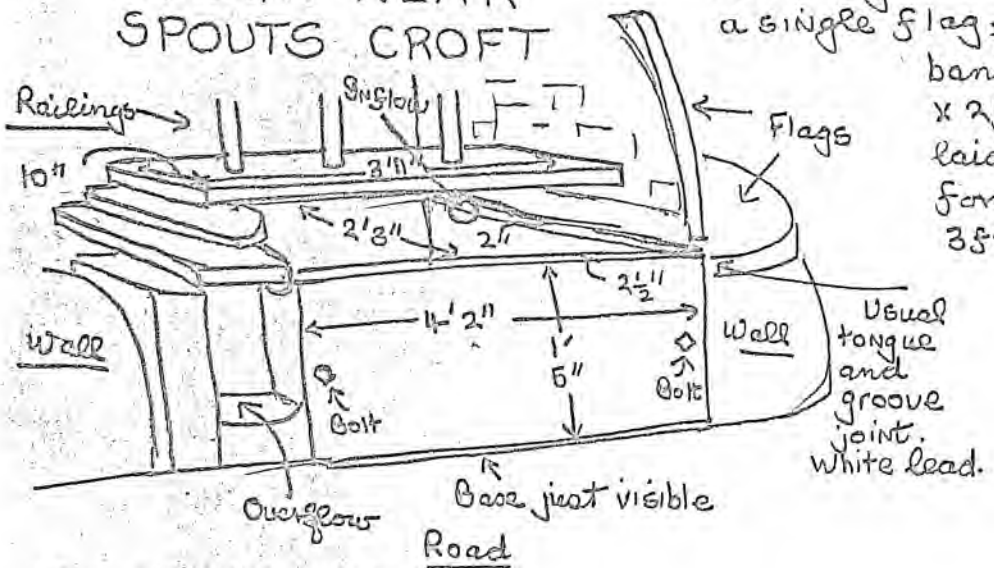


Sides of trough slightly out of



Austwick

TROUGH NEAR SPOUTS CROFT

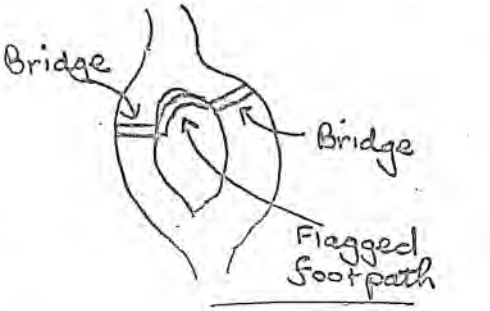


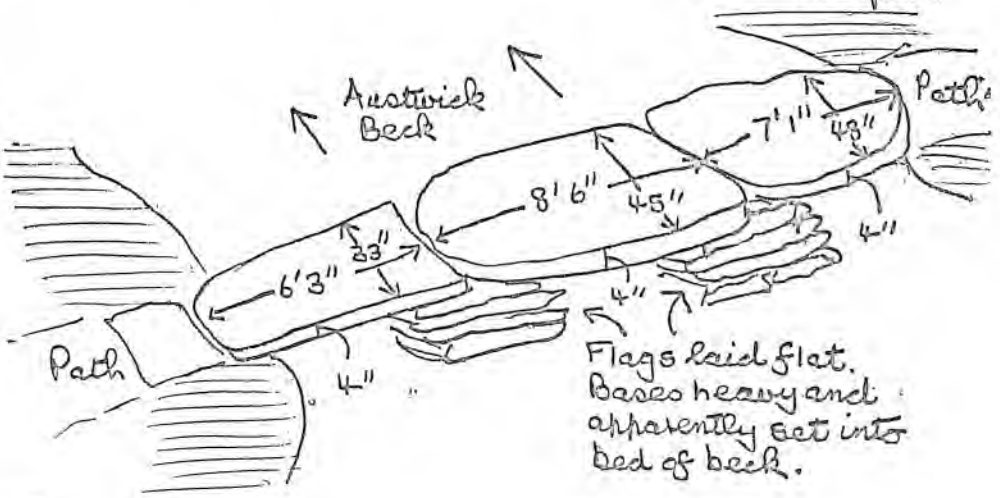
The water (above) flows through an outbuilding at Spouts Croft, thence to the trough. It flows under the road and waters several fields on its way to Austwick Beck.

"STARPS" BARN

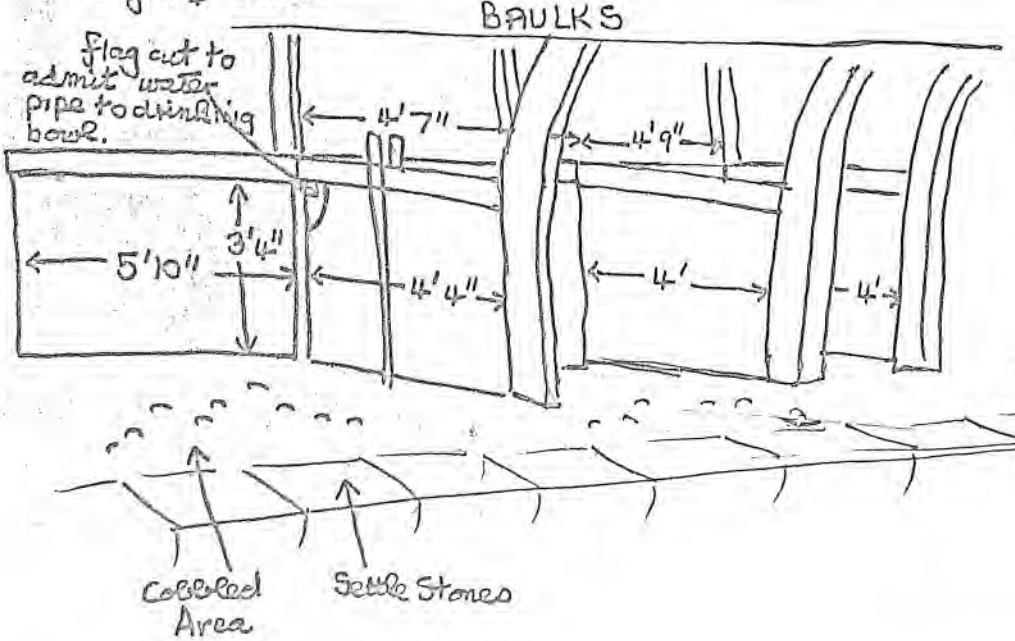
(by the road, not far from Austwick Cemetery)
Flag boskins and "backs" Flags 1¼" thick.

THE PANT much "bare flag" was used to bridge and to provide a path where Austwick Beck divides, the two becks to reunite within a short distance. There are two bridges — one a simple structure of a single flag, extending from bank to bank. The flag measures 12ft 6" x 2ft 11" x 4" thick. A flag laid on the footpath, here forming a bank, is 13ft 9" x 3ft 10" and up to 7½" thick.

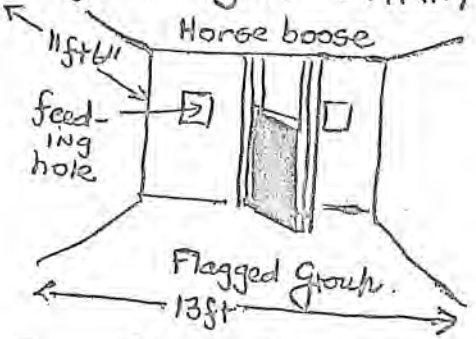




BAULKS



GOAT GAP FARM

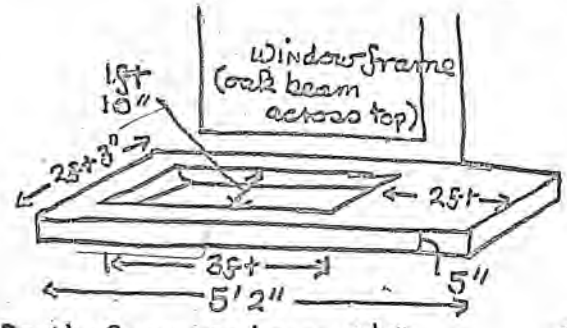


Flag used as boskin 5'8" wide by 3'11" deep.

William Rhitchell

Farmhouses

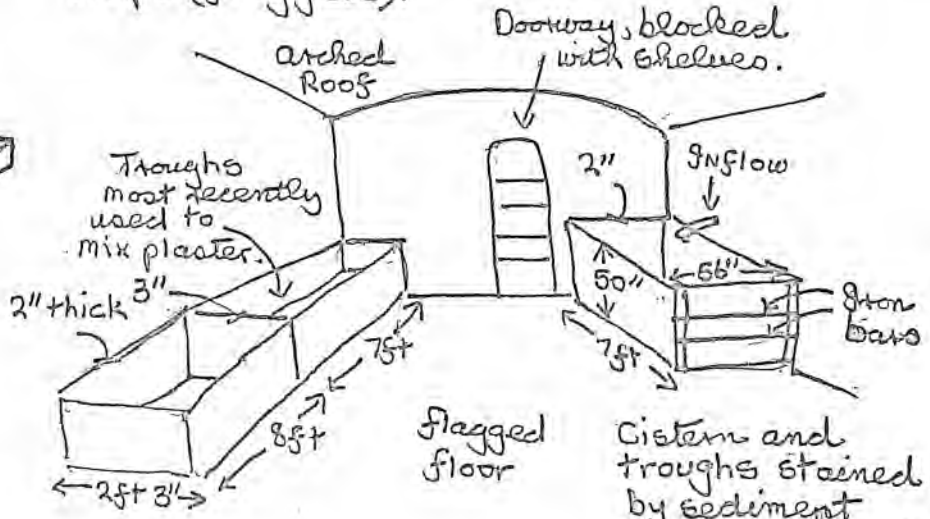
FLAG SLOPSTONE, HESBERT HALL



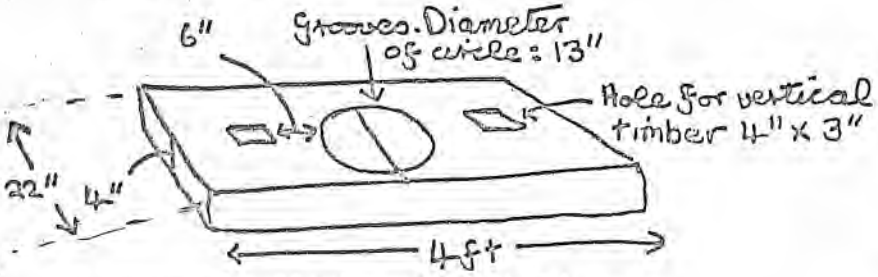
Depth of recessed area 2¼"
Height of slopstone above floor = 1ft 9"

CELLAR AT LAWKLAND GREEN

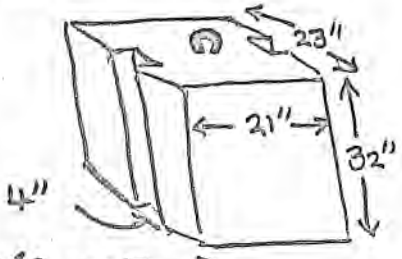
The cellar of this Georgian type house is divided into several rooms. The area reviewed is below saturation level and is subject to periodic flooding. It is approached from outside by a flight of steps (flagged).



CHEESE PRESS, NEWFIELD HALL



An especially thick piece of flag, generally rough in character and well-worn.

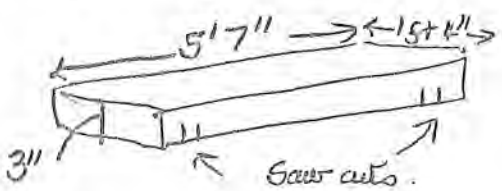


Weight (freestone)

When Mr. Slinger, of Newfield, quarried flag from above the house for projects on the farm, he had an aerial ropeway, and the stone of the cheese press was used as a counter-weight.

BLEAK BANK, COLD COTES

Base of trough on garden wall.



WOOD THORPE, COLD COTES

(A) 

Pieces of freestone set into wall. Flag held at top between freestone.

(B) 

Wooden supports into wall. Flag 1" thick

(C) Flag used as gate stoops 1ft at top, 1ft 5" wide at bottom; 5 inches in thickness.

(D) Piece of flag forms ledge of forking hole.

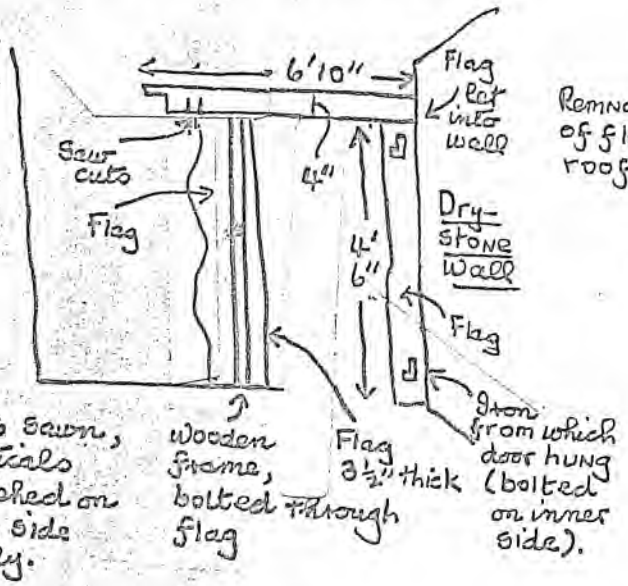
(E) Freestone, dated 1702.

(F) Flag forms area outside door.

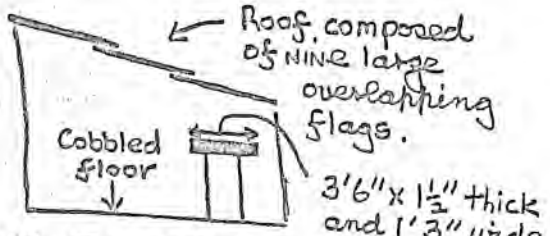
William Ritchell

Outbuildings
(Not to scale)

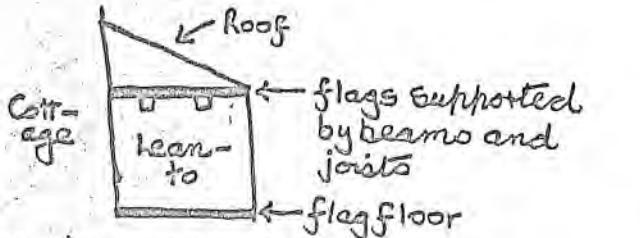
A FLAG DOORWAY



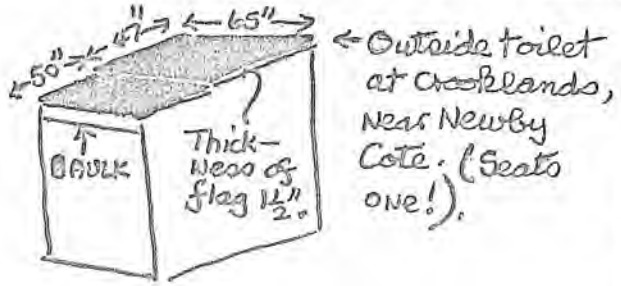
AT FEIZOR



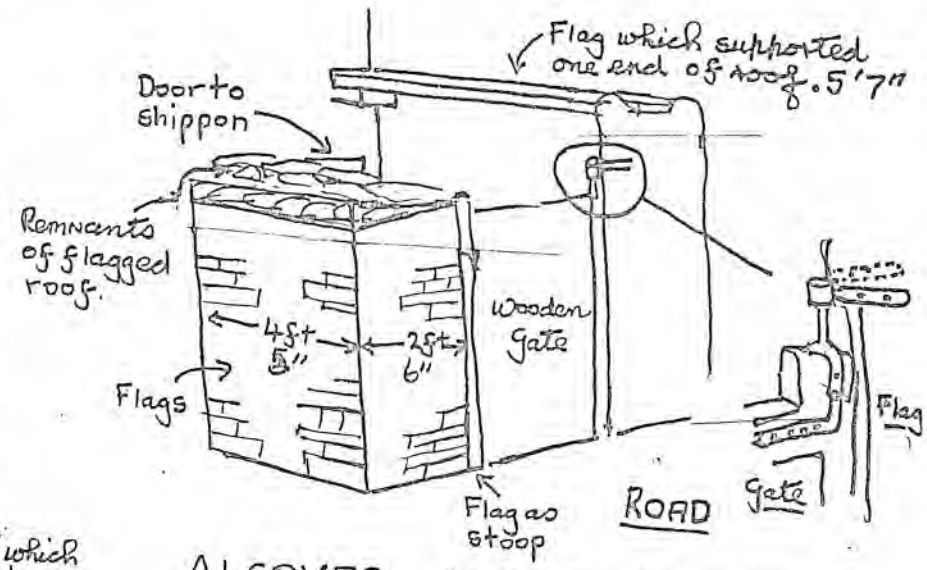
Simple structure, limestone walls, flag roof and lintel. Structure has length of 18 feet and width (shown here) of 12 feet 5 inches.



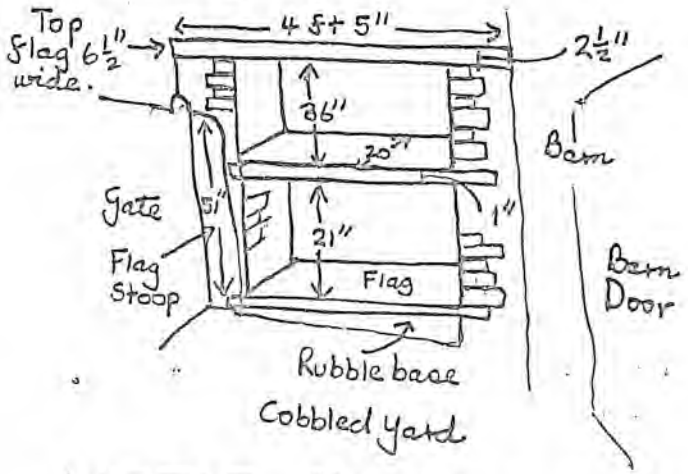
lean-to, rear of cottage. Cottage itself has flags at ground level. One measures 5'10" x 7'6" x 2" thick. Flags rest on solid earth.



NEWFIELD HOUSE, WHARFE

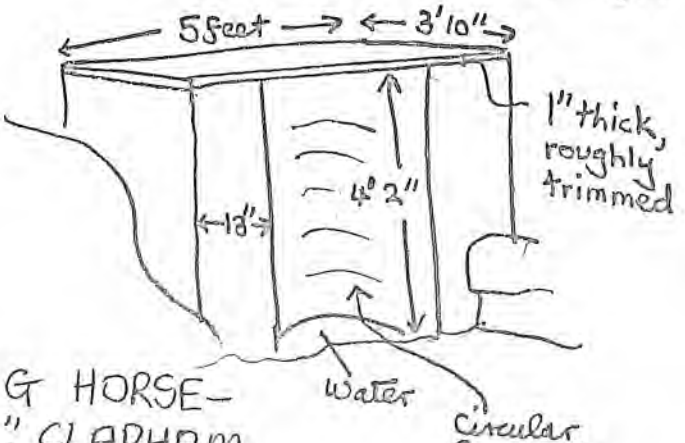


ALCOVES IN THE ABOVE BUILDING



LITTLE BANK, NEAR GIGGLESWICK

(canopy for a small well, roof flagged — a single piece of flag).



"FLYING HORSE-SHOE", CLAPHAM

Displaced "bank" 8 ft long, 3 ft wide, 3" thick. Rounded corners.

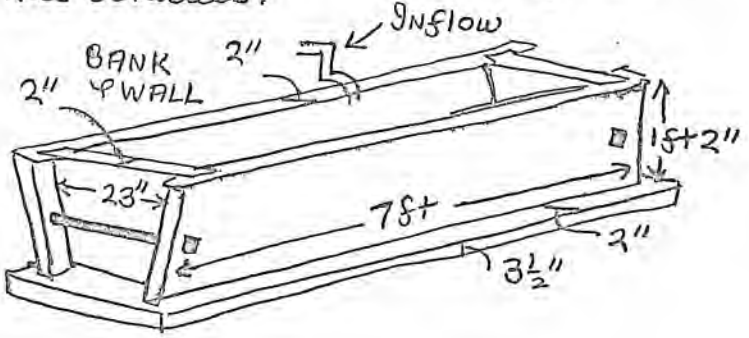
William Ritchell

Crooklands

Near Newby Cote
(not to scale)

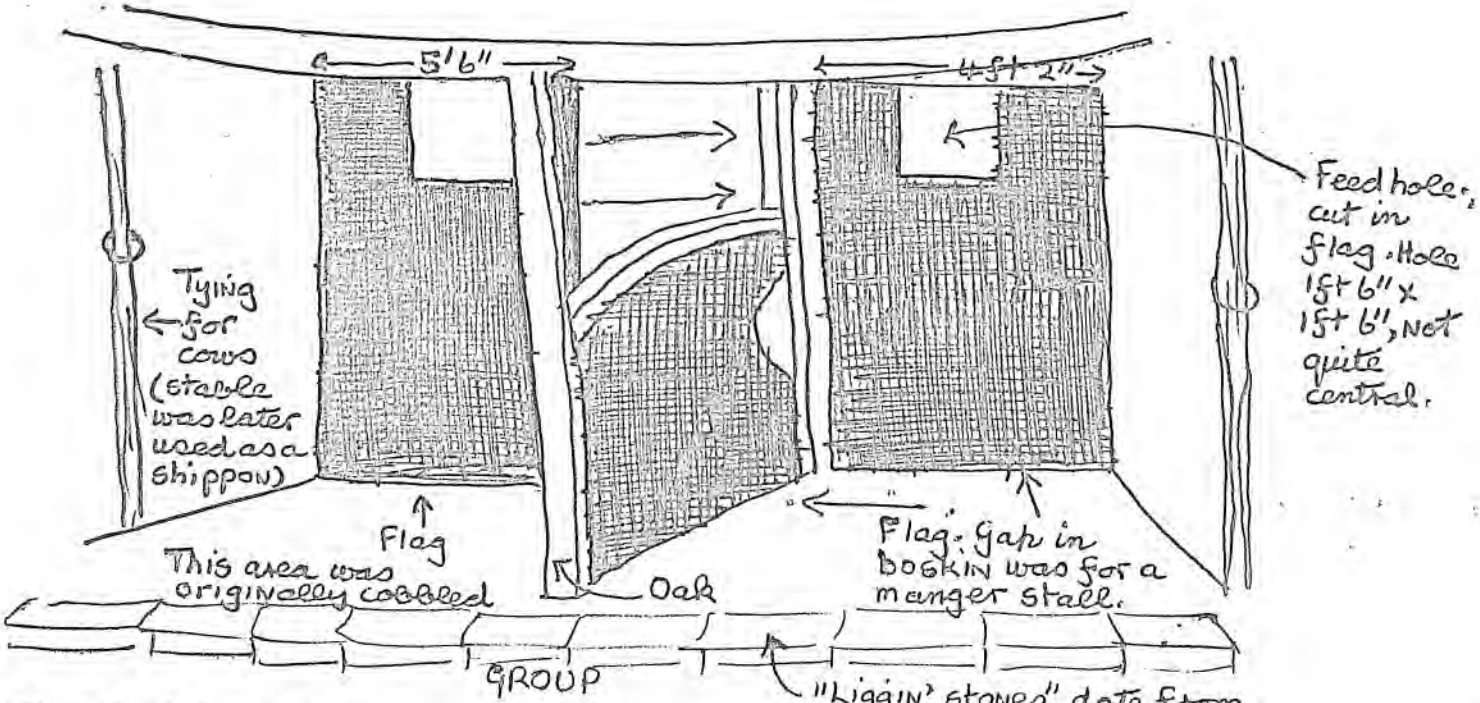
TROUGH IN FARMYARD

It is fed by water from a spring; the overflow passes along drain to nearby roadside. The sides of the trough are not true verticals.

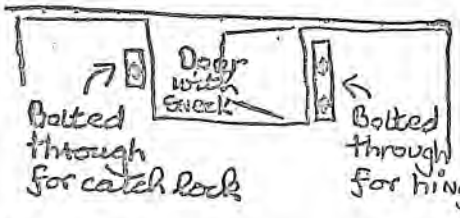


STABLE FOR TWO HORSES

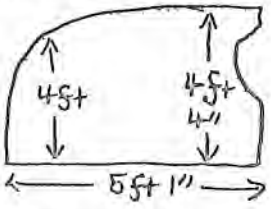
Notable because large flags have been used for the wall separating the stable from the shippons; these flags have been pierced for a wooden door.



Detail of feed-hole:

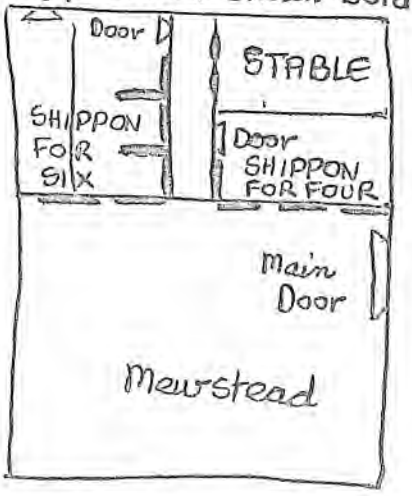


Boskin:

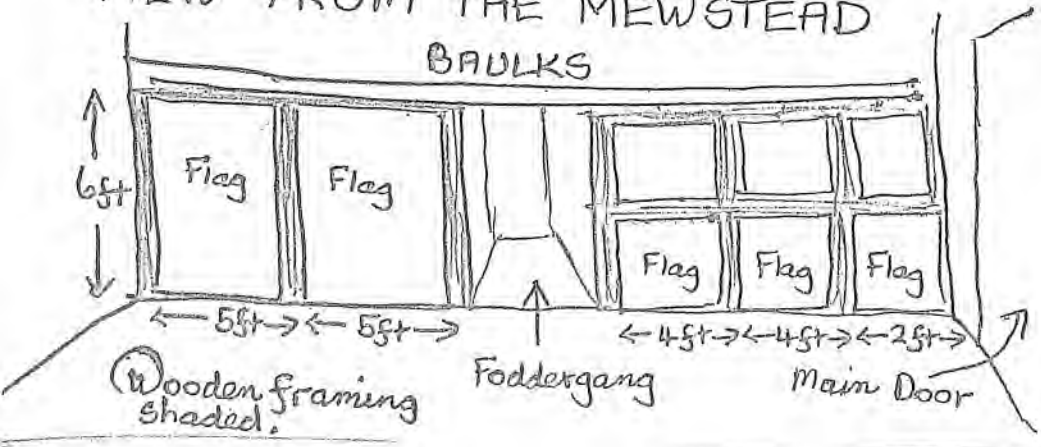


PLAN OF BARN

(Flag partitions shown boldly)



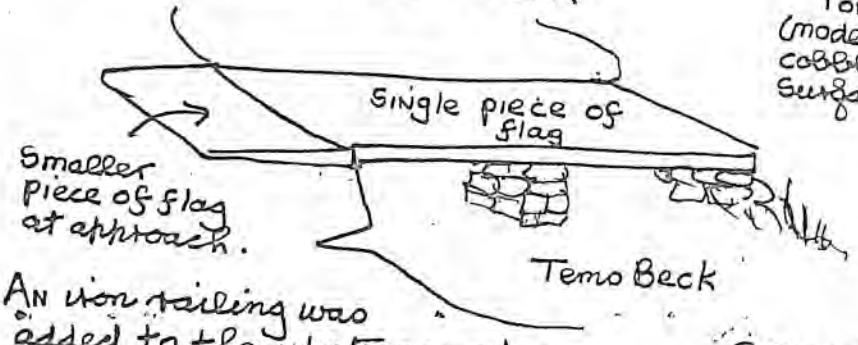
VIEW FROM THE MEWSTEAD



William R Mitchell

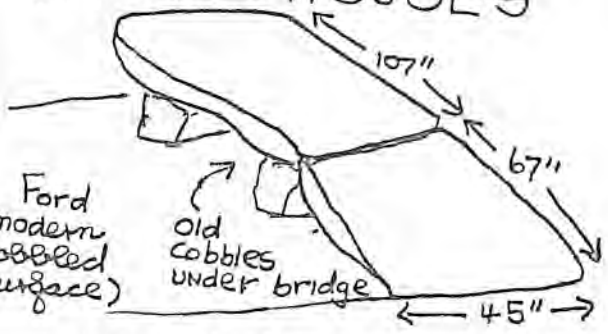
Clapper Bridges
(general impression)

AT GIGGLESWICK



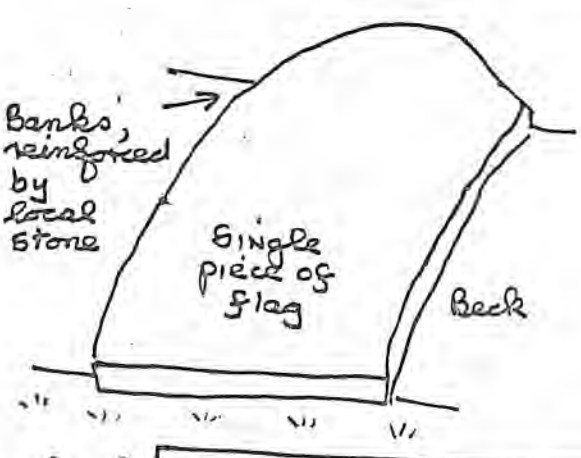
An iron railing was added to the upstream edge

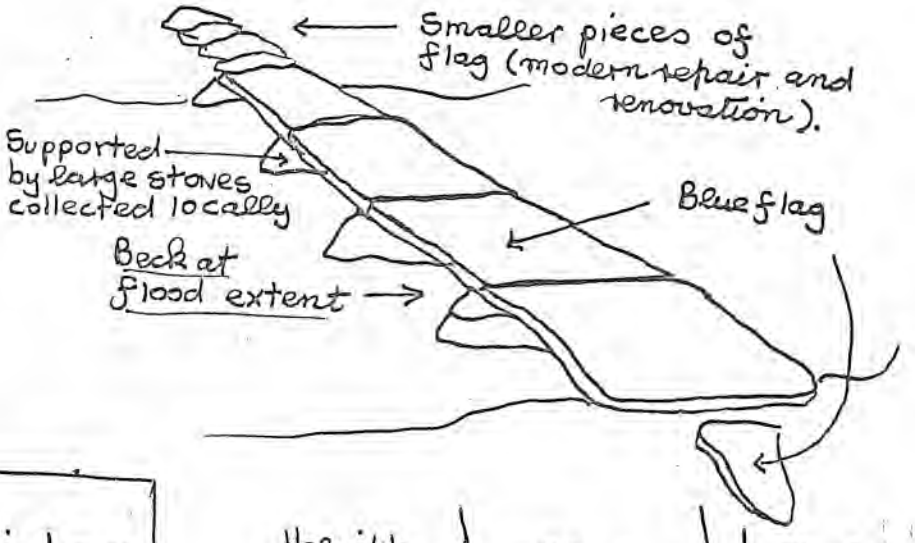
AT NEW HOUSES



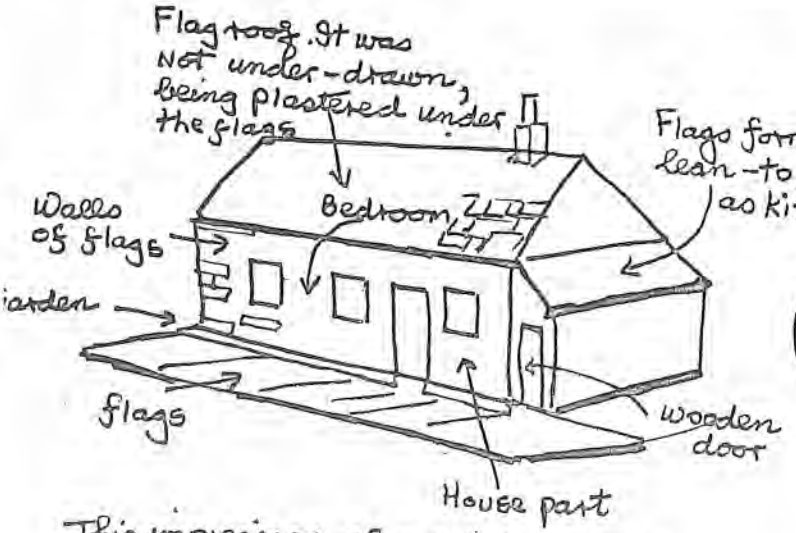
large, thick, rough-hewn pieces of flag.

CRUMMOCKDALE

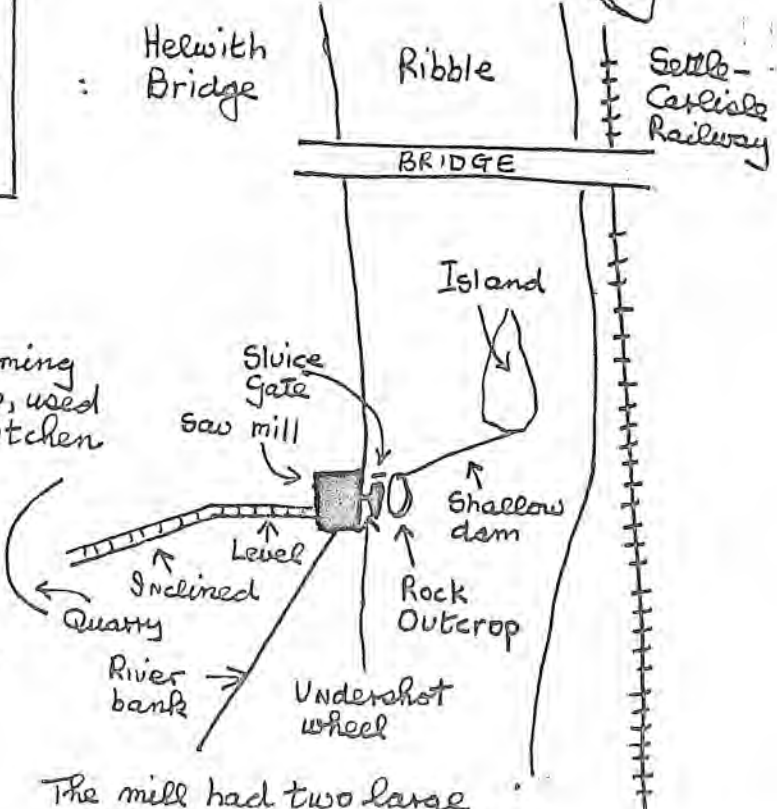




Helwith Bridge Quarry
An impression



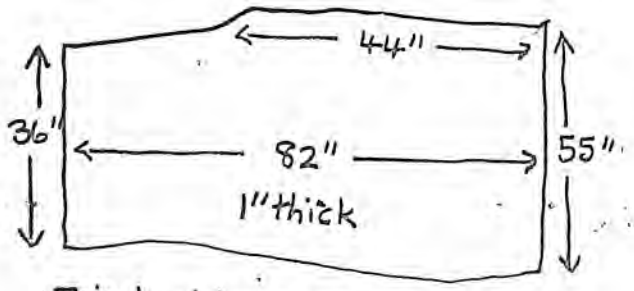
This impression of a single-storey dwelling which stood in the yard at Helwith Bridge, and was composed almost entirely of flags, is based on a description by Jack Markews. The last resident was old Mrs. Yates; the



The mill had two large sliding doors; they slid to the middle. When one was opened, the other must remain closed.

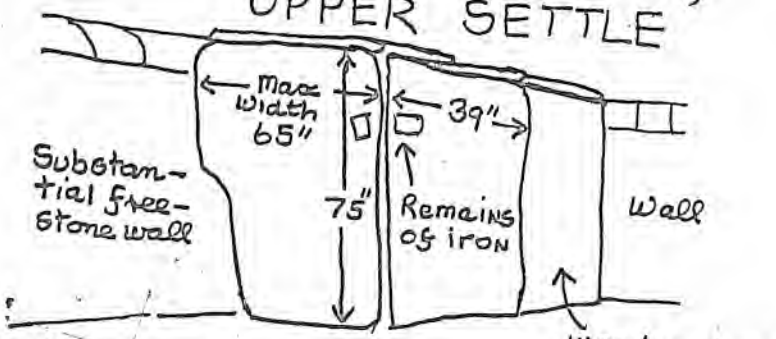
Miscellaneous

"BOSKIN" IN A STABLE, GOAT GAP



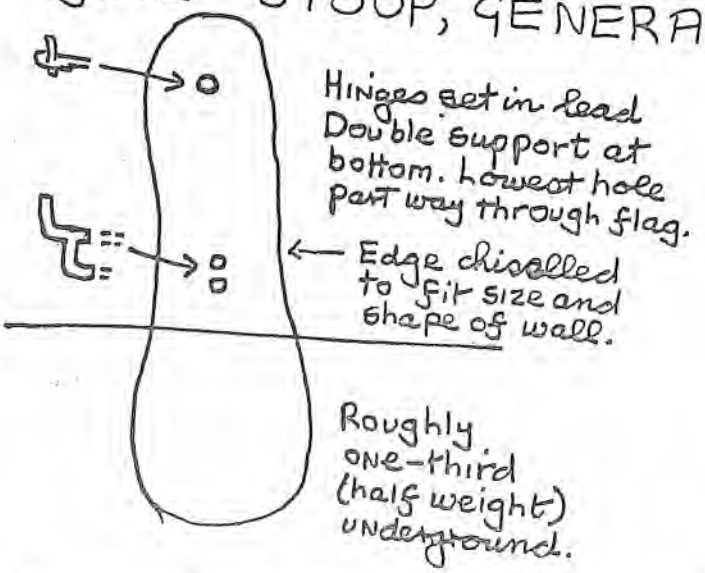
This had been removed from the building, where it was encased in wood.

"SLATE" OUTBUILDING, UPPER SETTLE



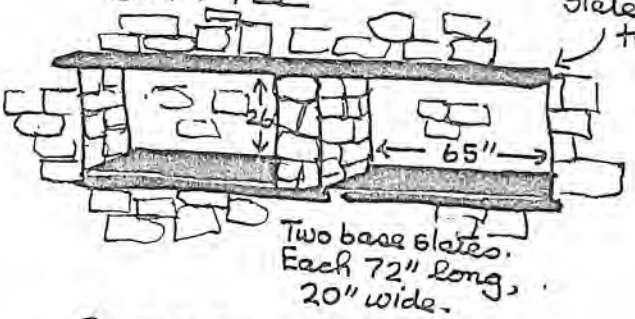
Roof consists of several large pieces of flag, main pieces 42" wide, overlapping sides by 4" wide. Walls unsawed and not polished.

GATE-STOOP, GENERAL

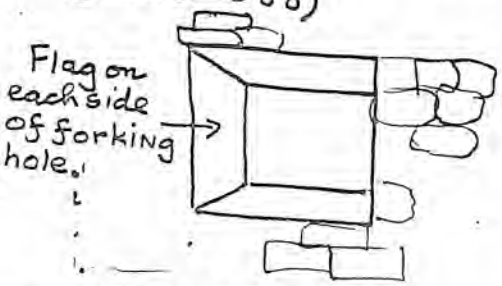


Many gate-stoops have been replaced by posts of wood or concrete, some as a result of gate-widening

BEE-BOLE, UPPER SETTLE

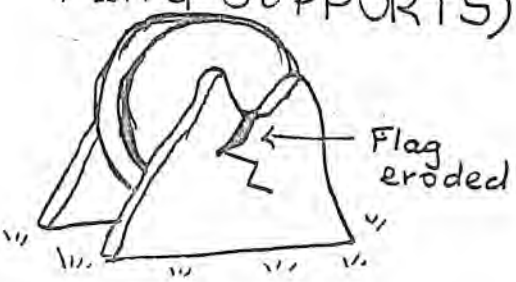


CLOSE HOUSE BARN (dated 1688)

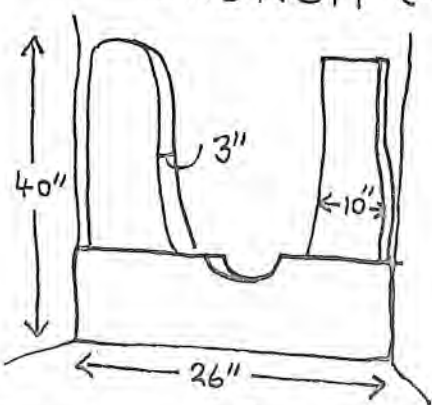


VIEW FROM SIDE

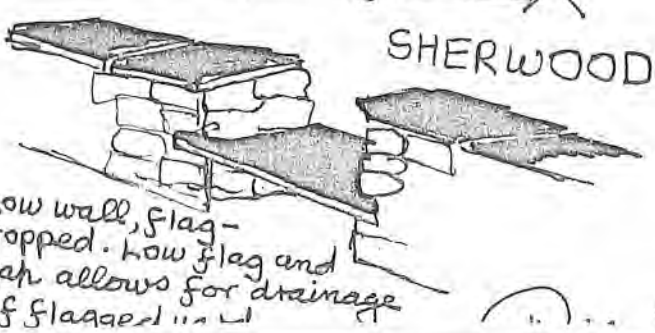
CLOSE HOUSE GARDEN (GRINDSTONE: FLAG SUPPORTS)



STILE, HORTON CHURCH (Not to scale)

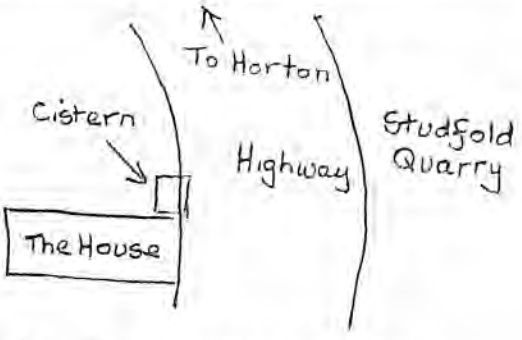


SHERWOOD

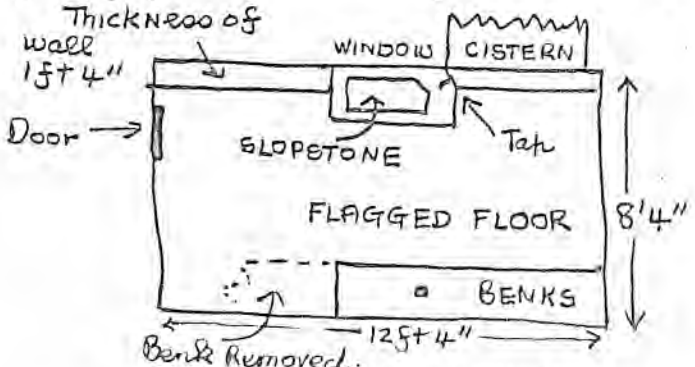


How wall, flag-topped. How flag and gap allows for drainage of flagged

Studfold House

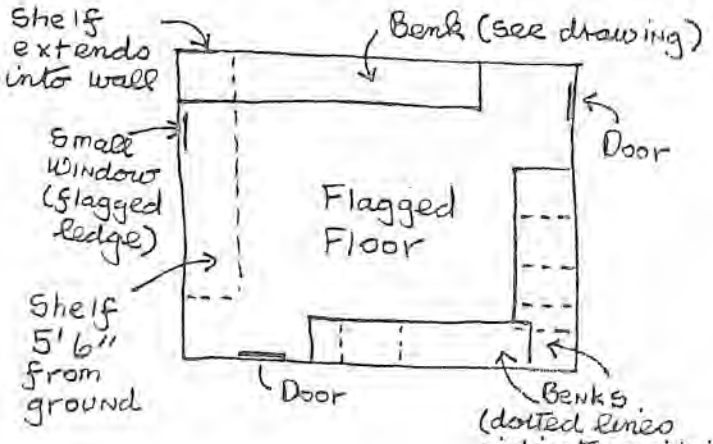


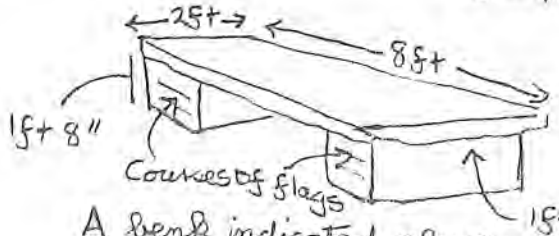
THE OLD KITCHEN



The kitchen lies almost entirely below the modern road level. The inner wall, against which stand the benks, is now of brick (the old kitchen was considerably larger). The original water supply was a well, some 20ft. deep.

A FLAGGED CELLAR

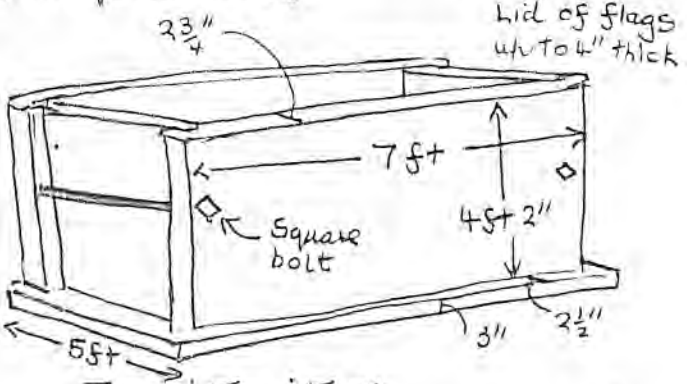




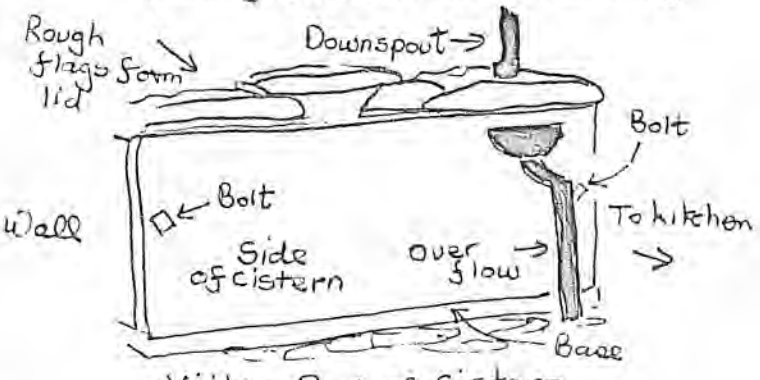
A benk indicated above. Not polished, 4" thick, roughly trimmed at edges.

WATER CISTERN

(which now extends under part of the public road)



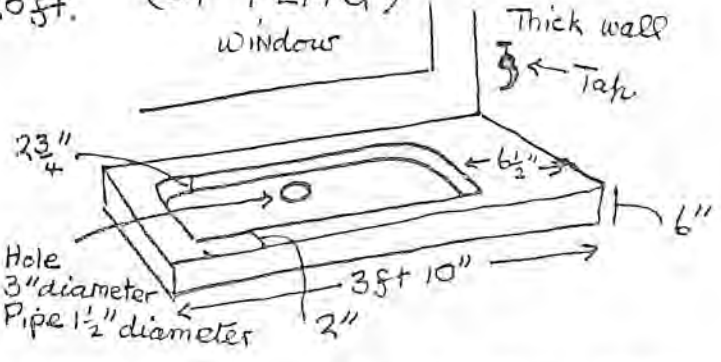
The cistern itself (most of which is now obscured)



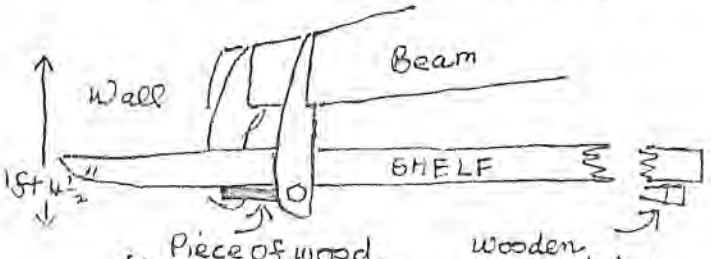
Visible Part of Cistern

(base rests on several courses of flag)

THE SLOPSTONE (OF FLAG)



METHOD OF SUPPORTING FLAG AS SHELF

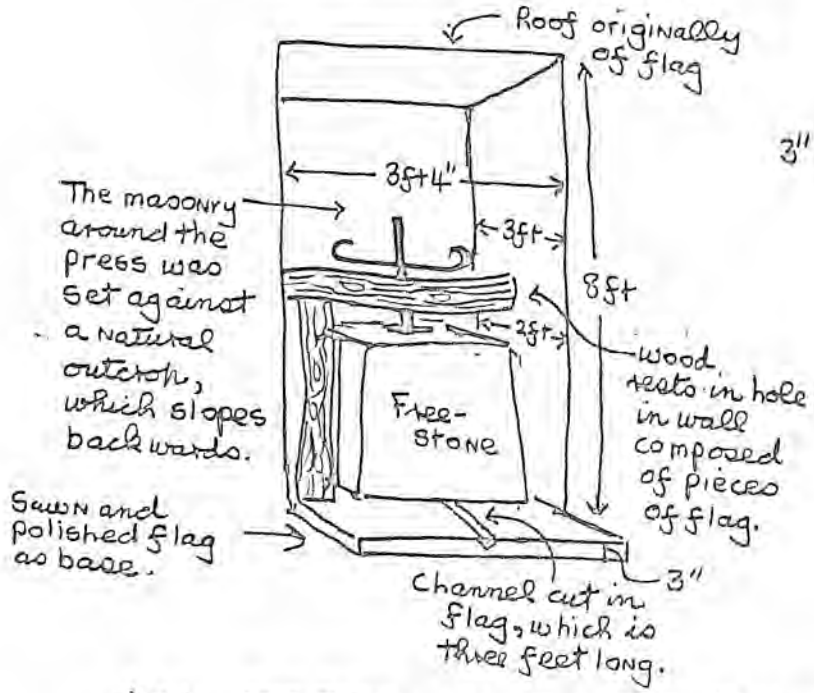


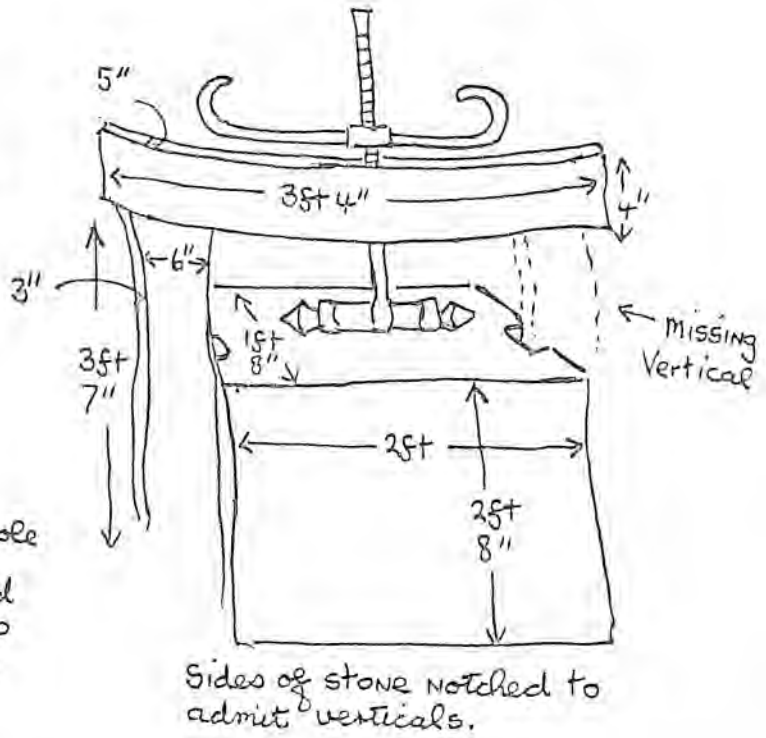
The flag used for the shelf is 8ft 9" long, 1ft 6" wide and 1¼" thick.

Mrs. Pitman

Studfold House

A CHEESE PRESS

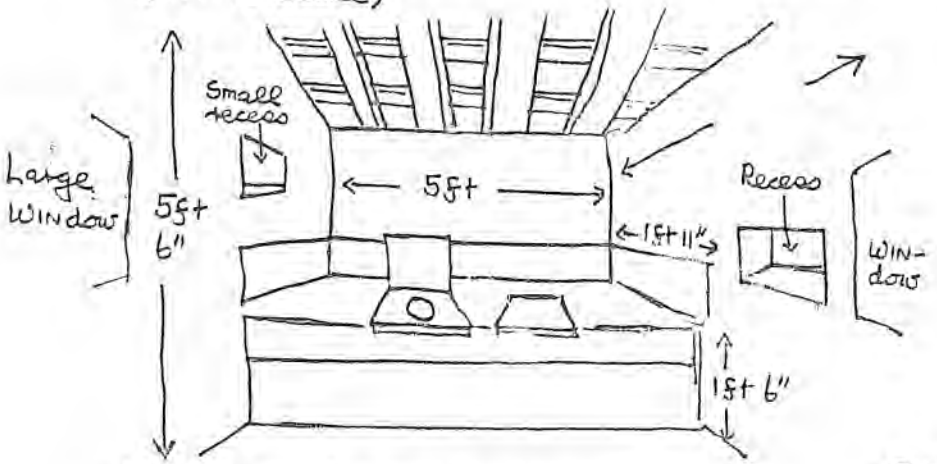




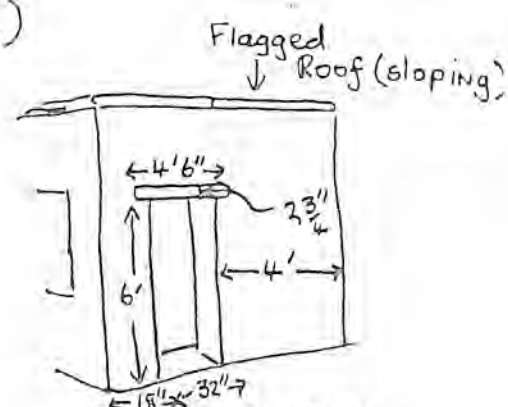
Sides of stone notched to admit verticals.

AN EARTH CLOSET (SEATS TWO!)

(Not to scale)

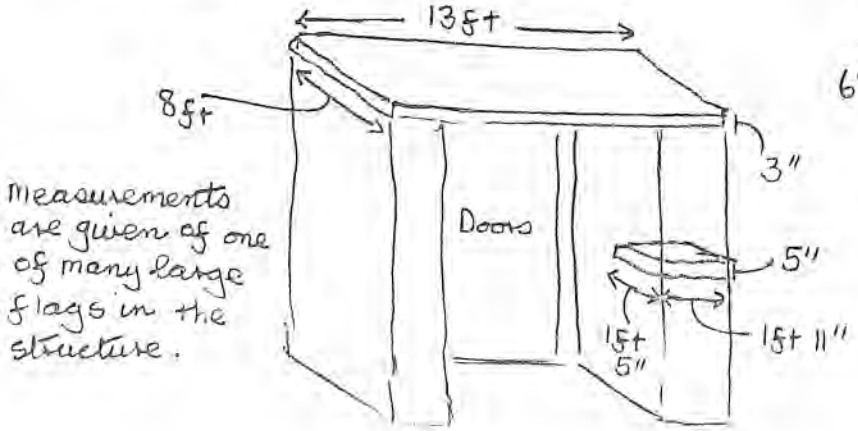


Flags composing roof undrawn by lath and plaster

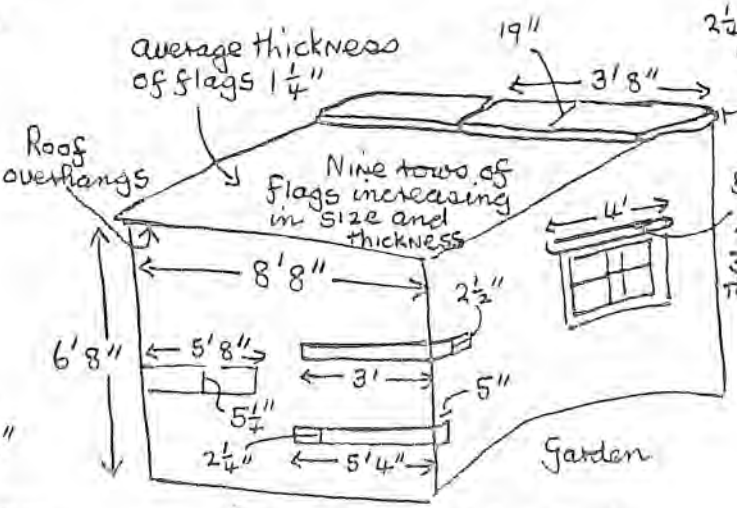


Door and front of structure

PORCH AT NEARBY BARN....



Measurements are given of one of many large flags in the structure.



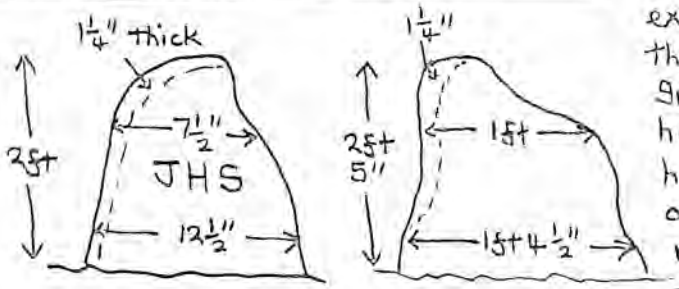
Rear view of the closet (some particularly large flags in the back wall are indicated)

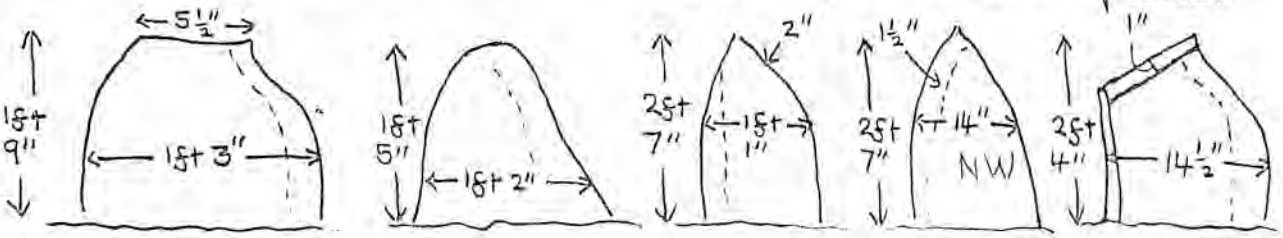
William Rhitchell

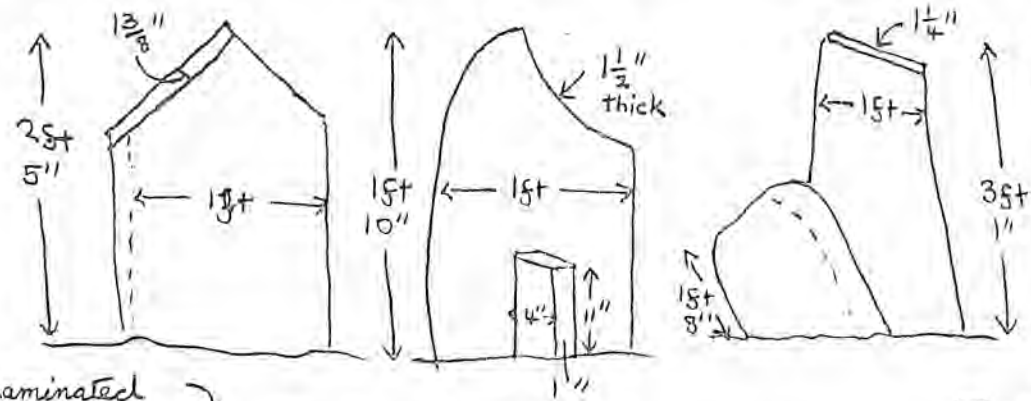
Swarth Moor

MERE-STONES OF FLAG

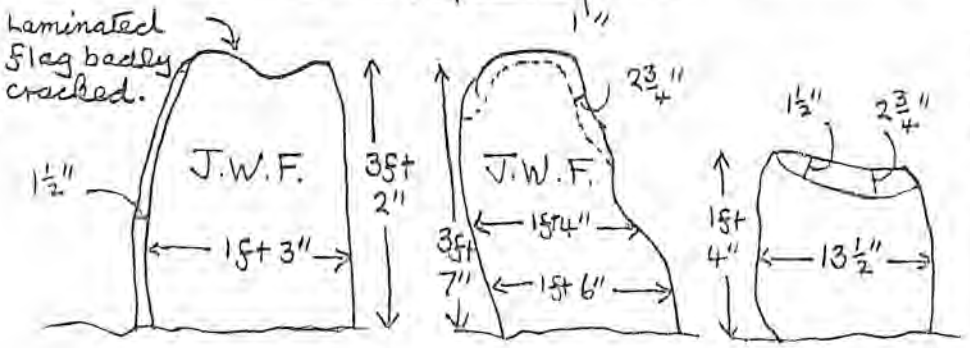
They were erected to mark the boundaries between areas in which peat rights were exercised. Dotted lines indicate where they have been roughly (hammer) trimmed. In most cases this occurred on the left hand edge of one side and the right hand of the other side. What proportion of the mere-stone lies underground is not known. Most stones are found in two lines, and are well-spaced.







The stones shown on the left are of special interest. A very old, squat, weathered stone remains but a newer boundary stone was set up alongside it.

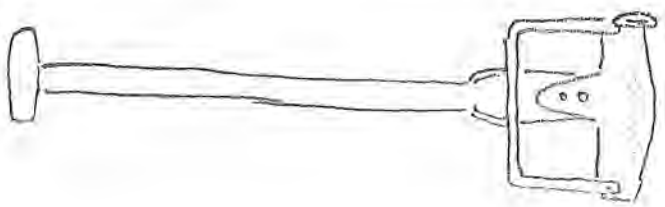


The small thick stone (left) is clearly of great age. Some stones on the moor have cracked and disintegrated. Others have sunk almost out of sight.

A FLAG BRIDGE

This bridge, on the Moughton side of the Moor serves an old track on higher, "white ground" between bogs

The Moor, and Helwith bogs, occupy a depression to the South-east of Moughton. The peat drift lies between a roadstone quarry and firm agricultural land. Frederic Riley wrote of the mere (or meer) stones: "The initialled blue flags are set edgeways like miniature grave stones!"



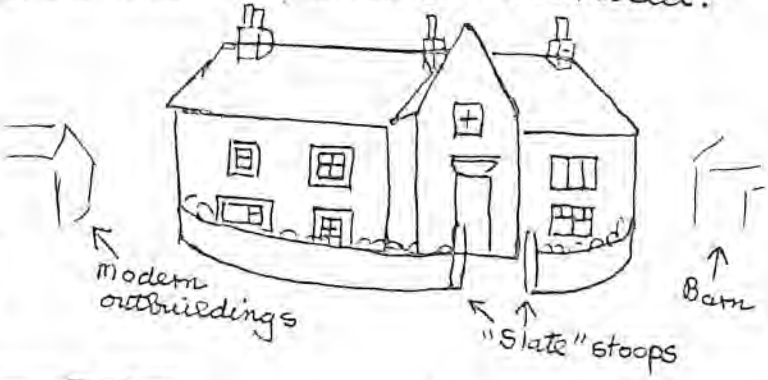
A type of peat spade from North Ribblesdale (from a drawing by Marie Hartley)

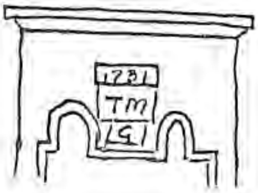
William Mitchell

Foredale Farm

(Dated 1731)

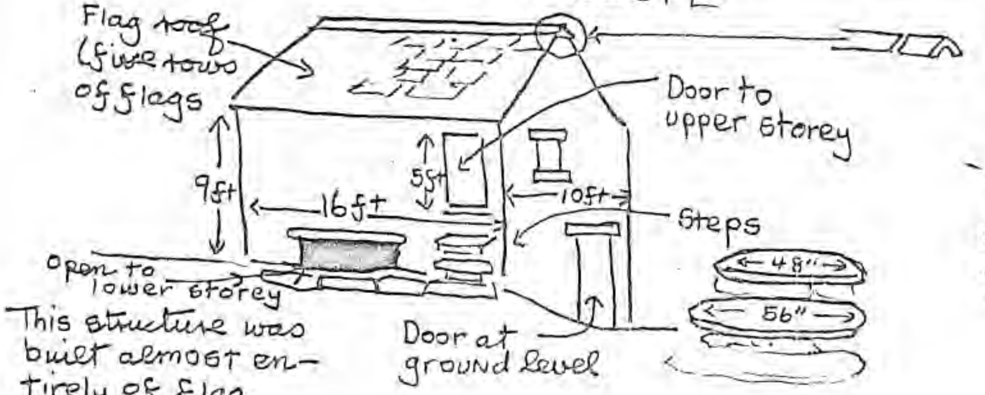
An old farm, close to the heart of the flag country. House re-roofed, outer walls pebble-dashed, windows modernised.



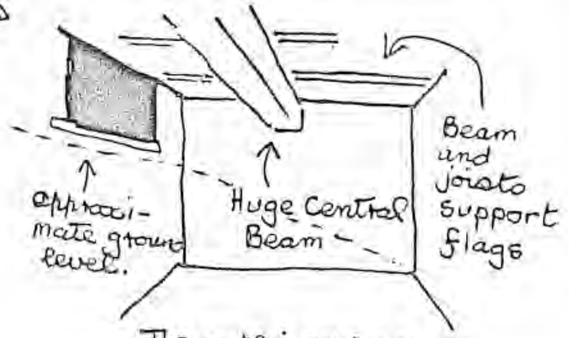


← DOORHEAD

↓ TWO-STOREY OUTBUILDING ON A SLOPE

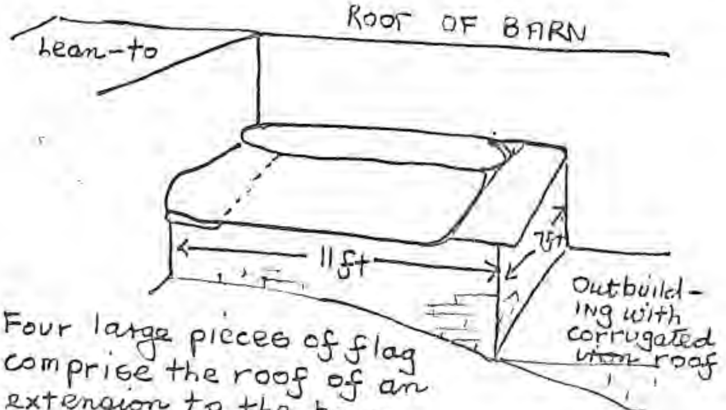


This structure was built almost entirely of flag.



The outbuilding: ground level

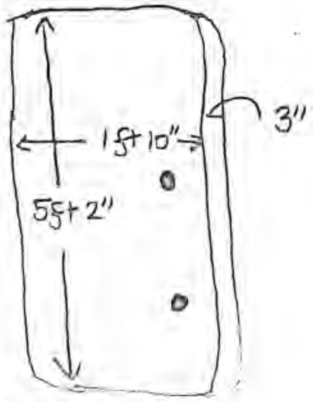
AT THE REAR OF THE BARN



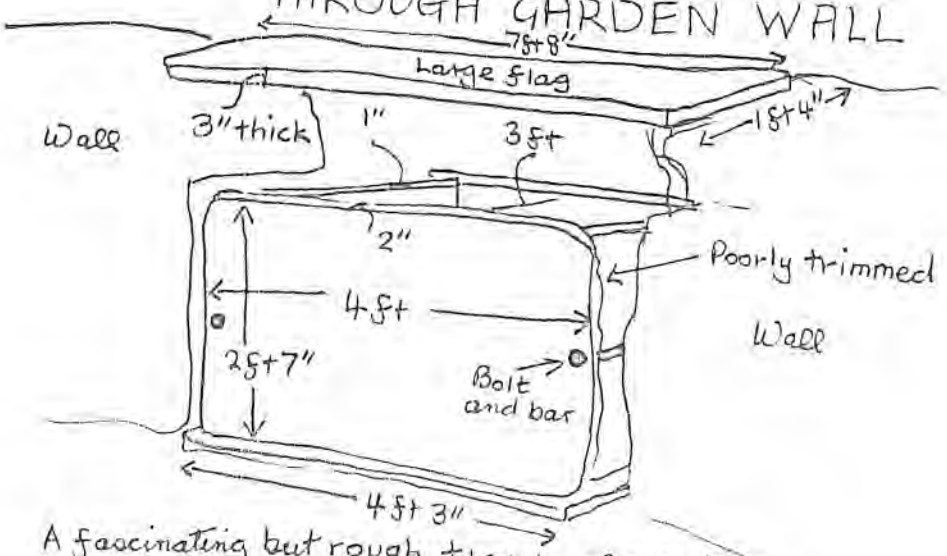
Four large pieces of flag comprise the roof of an extension to the barn.

Large sheep house built entirely of flags

TROUGH EXTENDING THROUGH GARDEN WALL

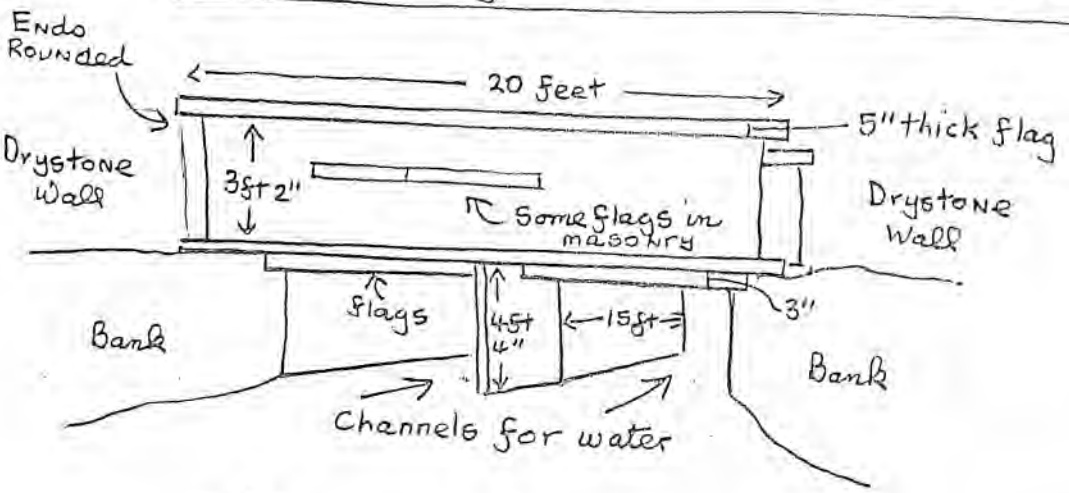


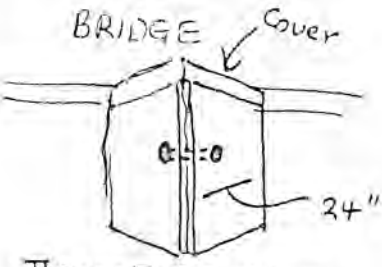
Neat piece of flag used as stoop of garden gate.



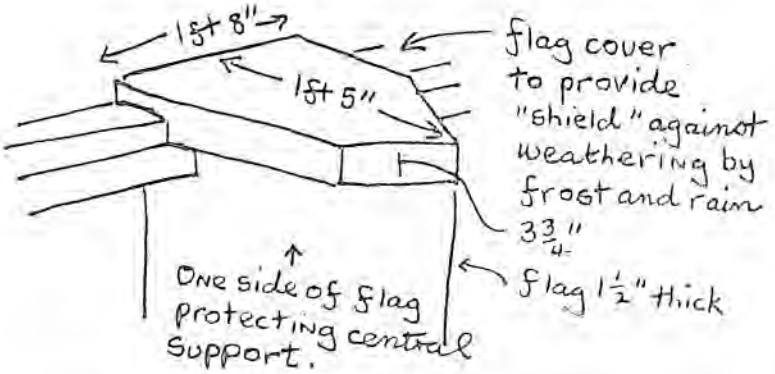
A fascinating but rough trough, of great age. Base not squared off, thickness averages 2¼".

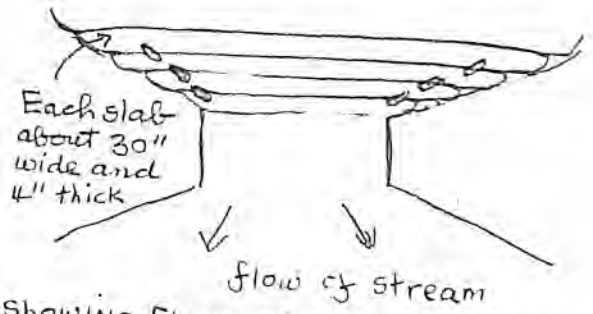
A Bridge Near Cowside





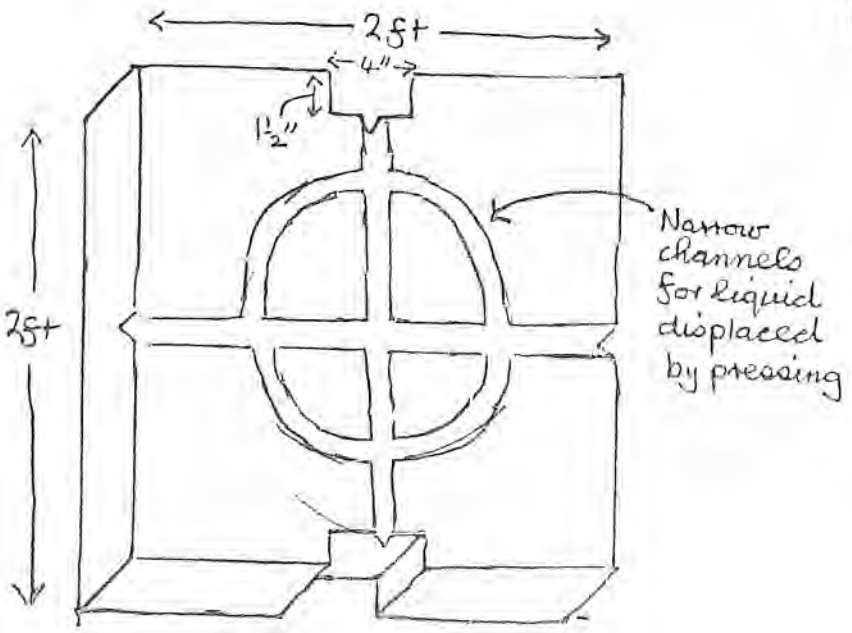
The central support is protected by flags, two having been angled to deflect the stream. Held firm by bolts, as shown.



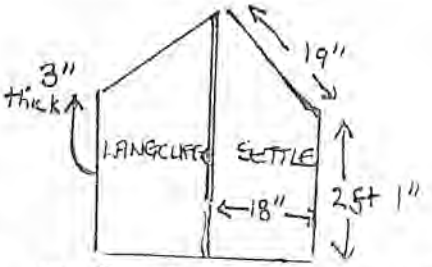


Showing flags above one of the two channels. Six large flags on each side, secured as roughly indicated by pieces of iron, bolted. Each piece of iron 16½" long, bolts 2"×2".

THE BASE OF A CHEESE PRESS AT COWSIDE



PARISH BOUNDARY MARKER



Marker in two pieces. Layer of flag peeled off but inscription deep and clearly legible.

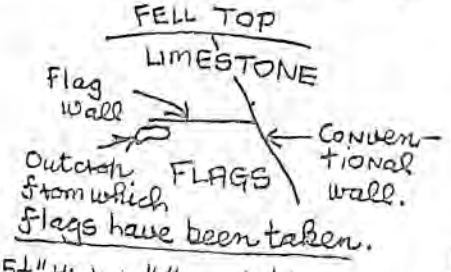
William Whitehead

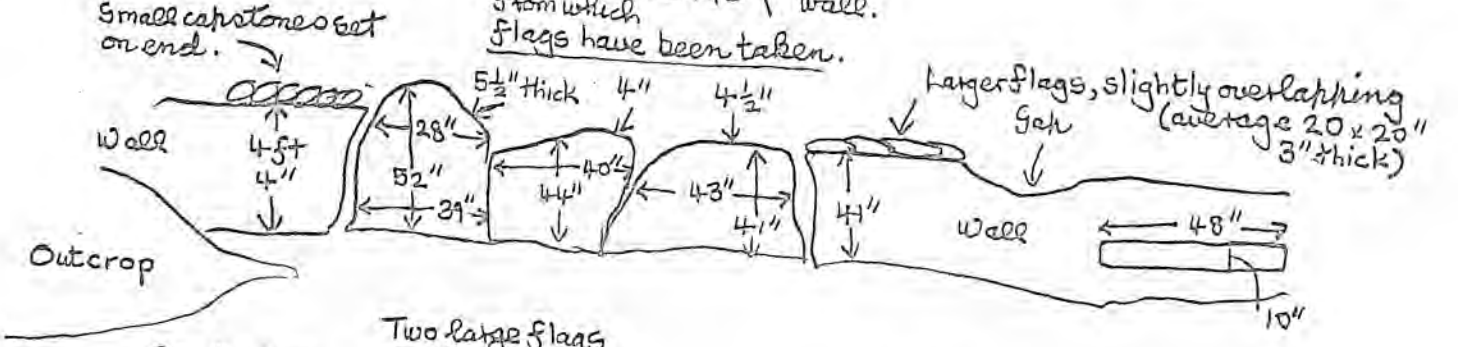
Walls on Moughton

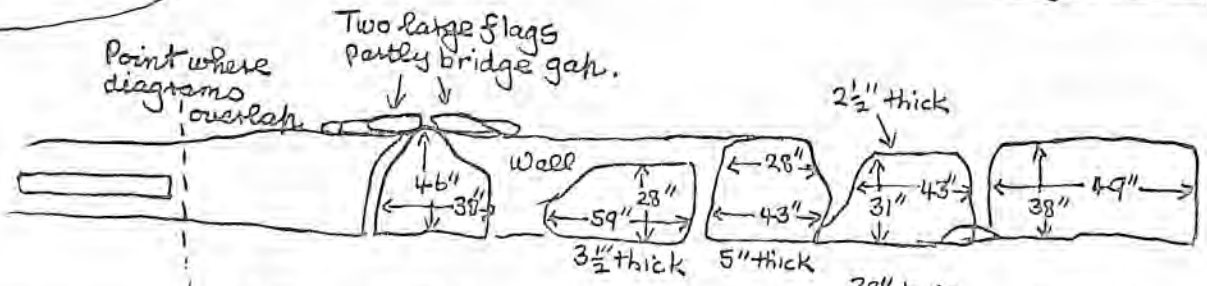
One is composed in part of flags set on end and in part of small pieces as a drystone wall. In places the wall ends have been shaped to fit the line of a flag, and some stretches have flag and low wall side by side. All roughly-trimmed.

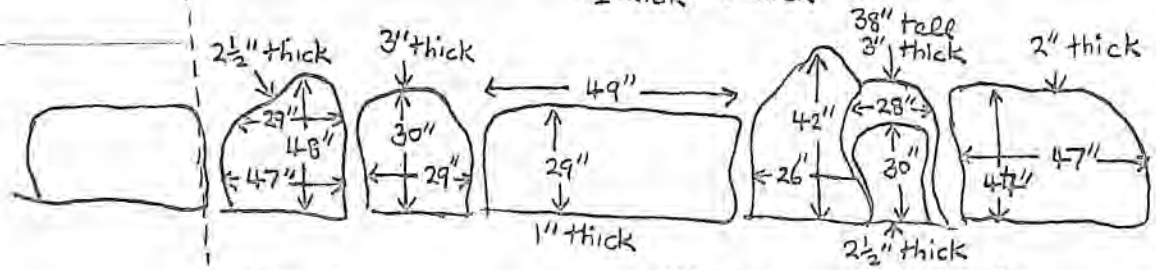
FLAG WALL ABOVE NEWFIELD

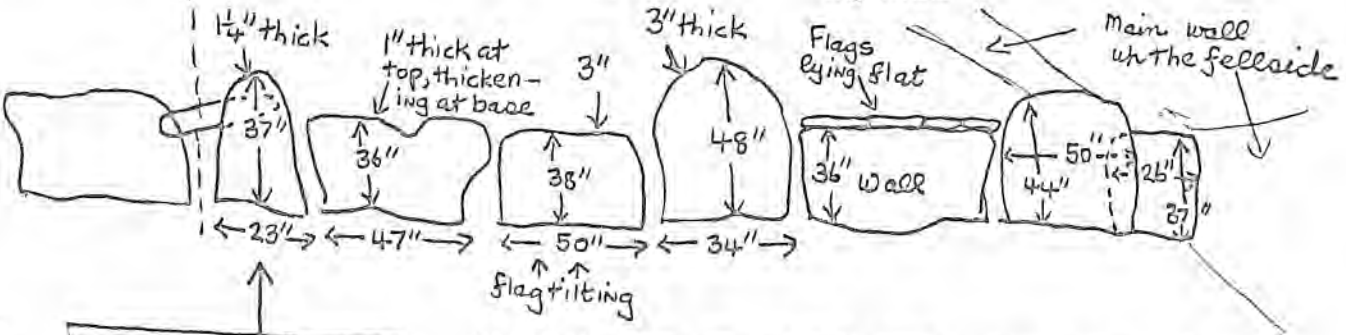
The diagram shows sections of wall; they inter-connect.



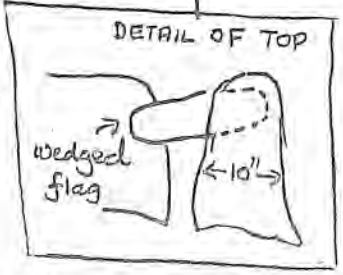




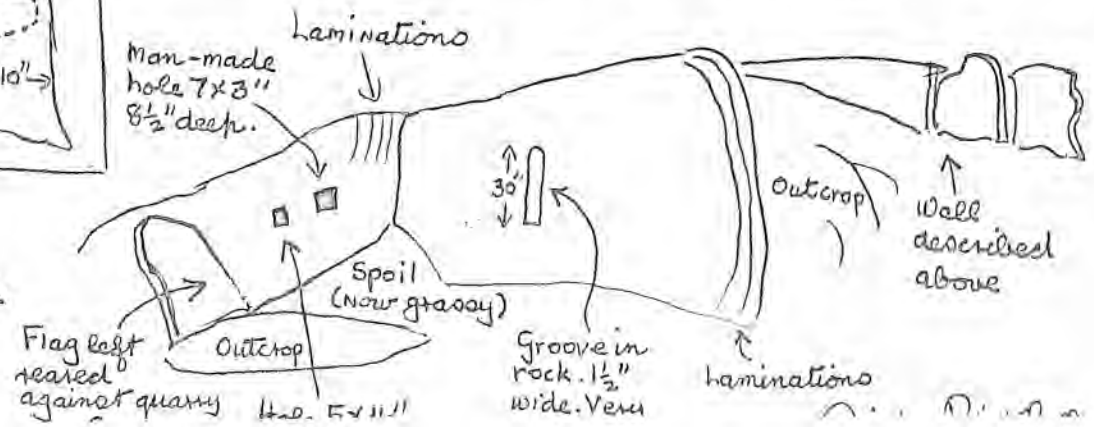




The flags have been richly colonised by lichen.



VIEW OF QUARRIED OUTCROP

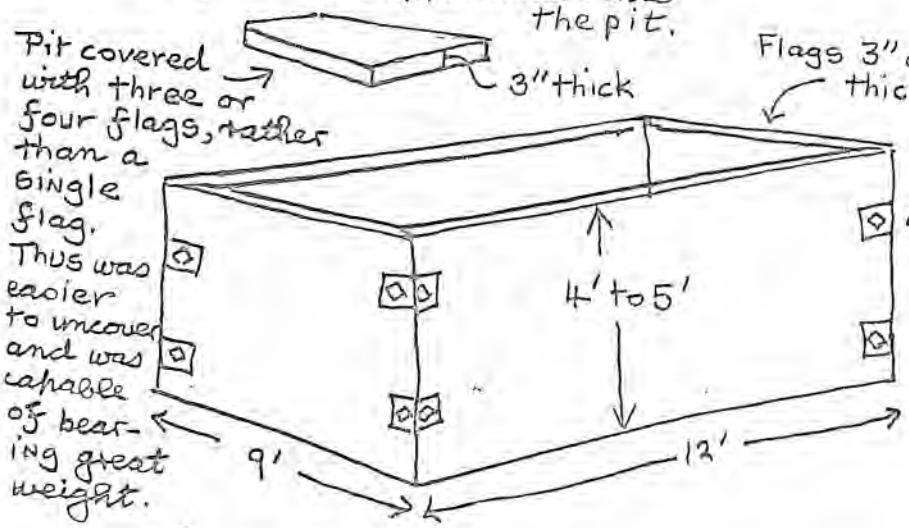


Clever exploitation of an outcrop of well-laminated flag to provide field boundary, augmented by much drystone walling.

Cowside Farm

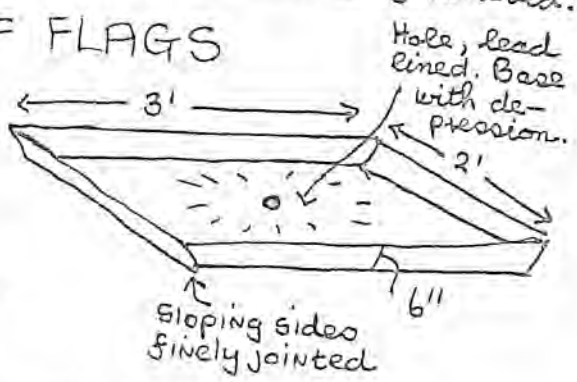
SOR-PIT IN THE FARMYARD

A "sor" or "soar" pit (from "sewer"?) was sunk in the ground and used for the collection of liquid manure which was then spread on the land. The Cowside pit is here used as an illustration of the basic size and pattern of a Dale pit. A "chain pump" was used to empty the pit. Sludge that accumulated was periodically removed.



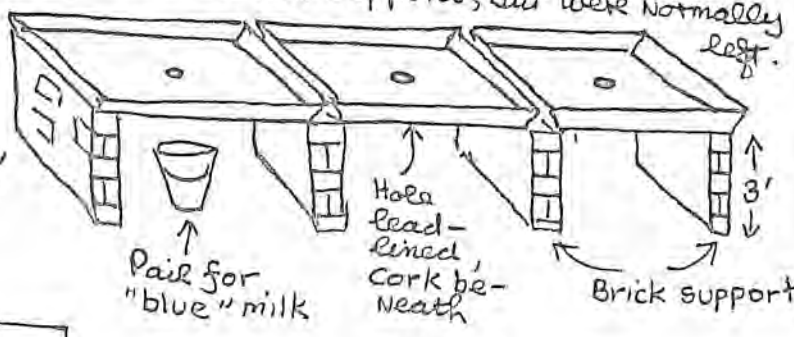
"LEADS" FOR DAIRY MADE OF FLAGS

"Leads" were used for the separation of the cream from milk, which was poured into this container and allowed to stand for perhaps 24 hours. "Leads" were originally made of "lead", but in later times metal was used. This example is rare, in being made of flag.



It was customary to "scald" the flags with soda and water; they were well scrubbed, hygene being vital in the dairy.

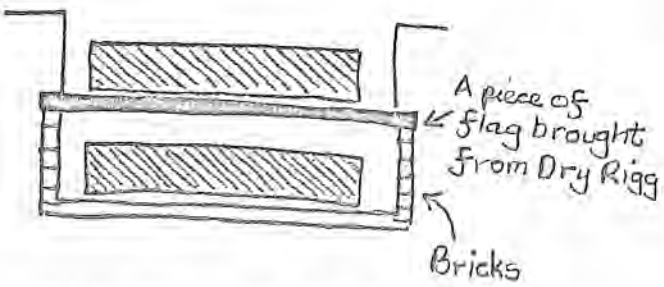
The "leads" could have been removed from the brick supports, but were normally left.



Austwick

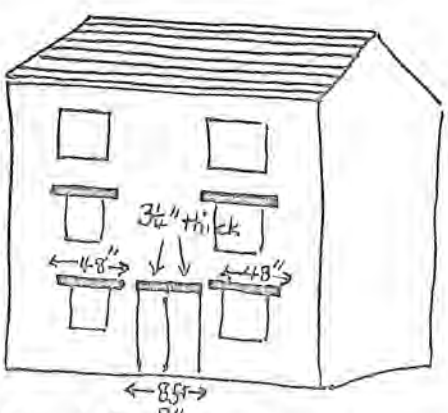
NORCLIFFE HOUSE, AUSTWICK

(built by the Rechabites in 1818)



A double-grave, of the type made by Will Pritchard. He was grave-digger at Austwick for many years.

Flag used for lintels, also gate stoops, paths, tops of walls, inner floors



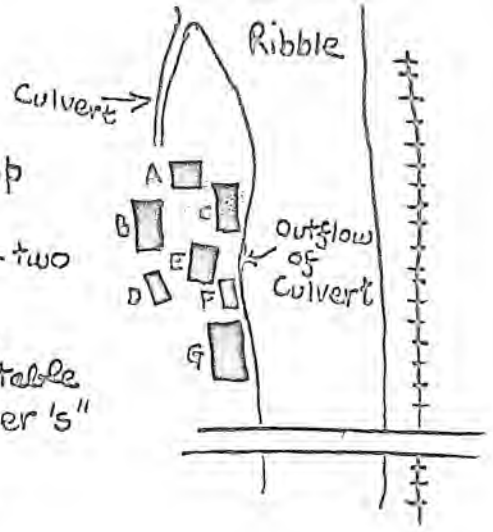
Two houses, with a meeting place on the top floor, reached by outer staircase.

Wm. Dixon

Helwith Bridge

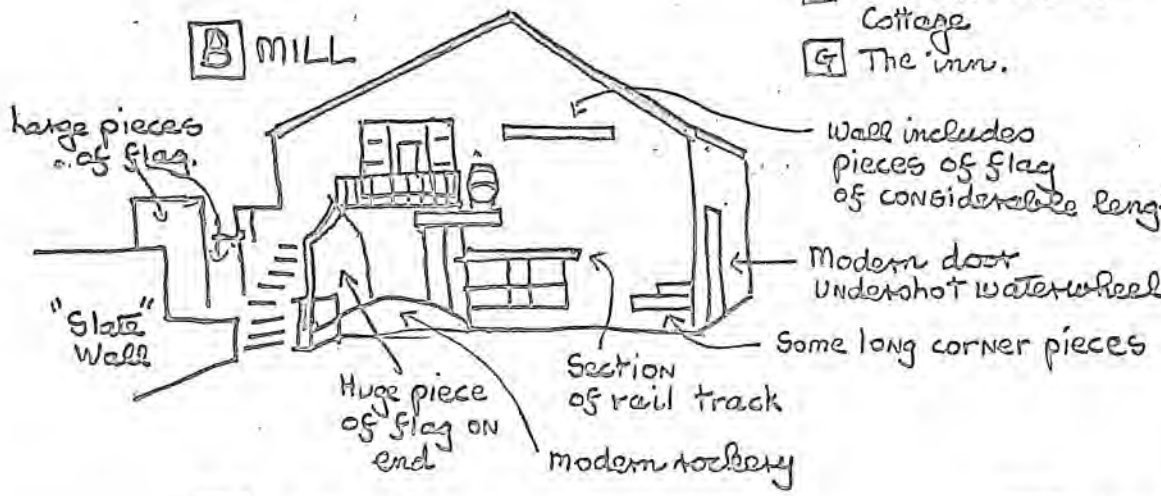
A hamlet built of flag-

(Drawings NOT to scale)



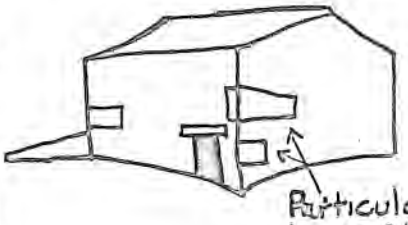
A Dressing Shop
B Mill
C "The Flags" – two cottages
D Trap House
E Barn and Stable
F "Old Drummer's" Cottage
G The inn.

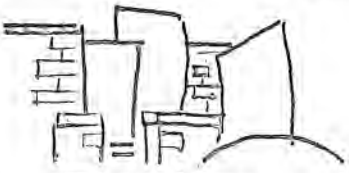
B MILL



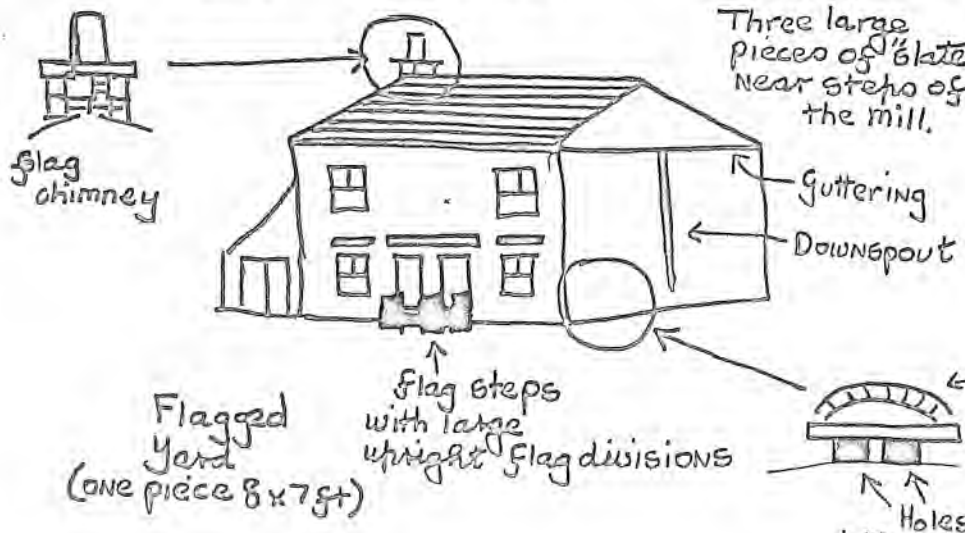
D TRAP HOUSE

D VIEW OF REAR





C "THE FLAGS"



F COTTAGE

A Building in which slates were dressed. Here Kit Ralph kept his supply of red lead. Now a dwelling.

B Within living memory, mill below, house above. Now dwelling.

C Two cottages, known as "On t'Flags". One formerly occupied by Jack Ralph, one by Samuel Marklew. Have been cut off by floods.

F "Old Drummer" was Ben Metcalfe.

G The inn has been much modified. Formerly a toilet consisting of large flags stood by the Northern wall

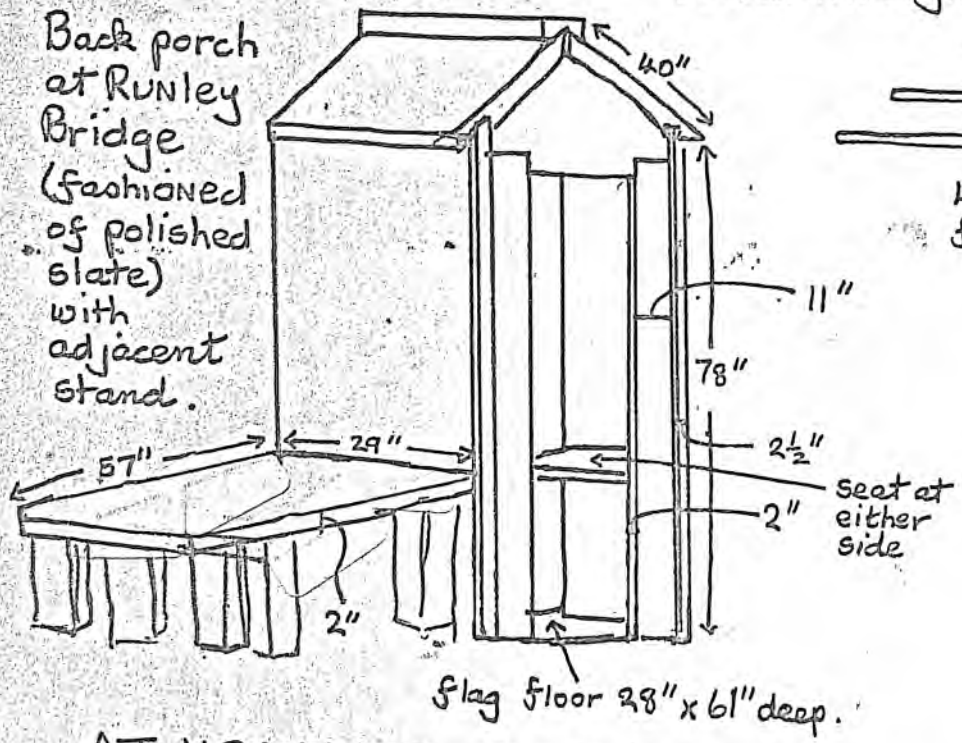
William Pittsfield

Porches
(not to scale)

Porch (lych gate) at Horton-in-Ribblesdale. Flags secured by piece of iron bolted through.

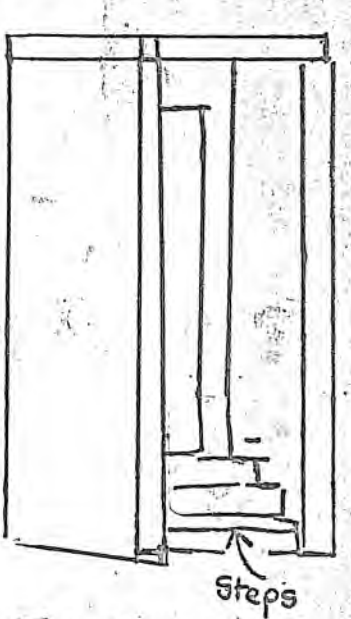
Lengths of flag on edge forming wide, shallow steps.

Back porch at Runley Bridge (fashioned of polished slate) with adjacent stand.

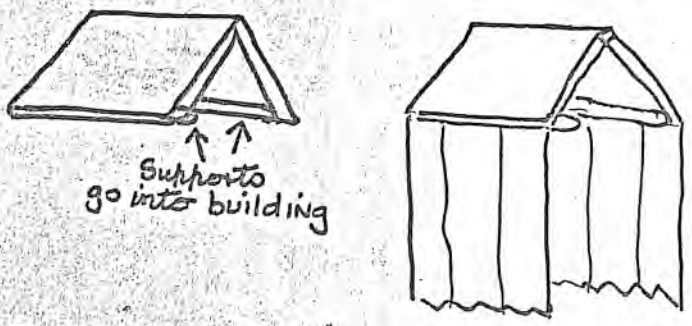


AT HANNAM COTTAGES, HORTON-IN-RIBBLESDALE

LINTON COURT, SETTLE

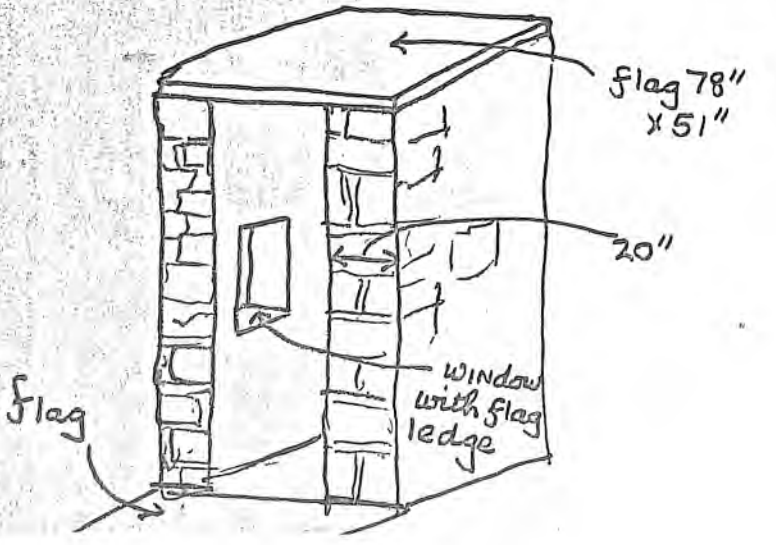


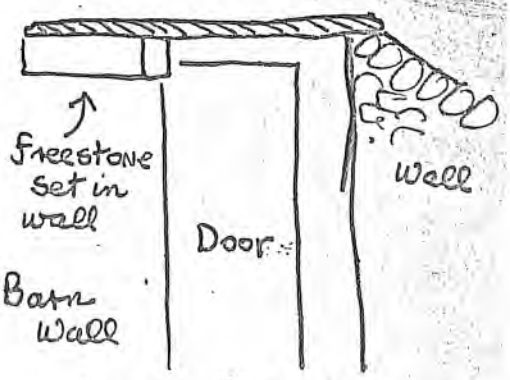
The above porch consists of three massive pieces of well-dressed and polished flag.



GOAT GAP, NEWBY MOOR

OUTBARN AT ROME



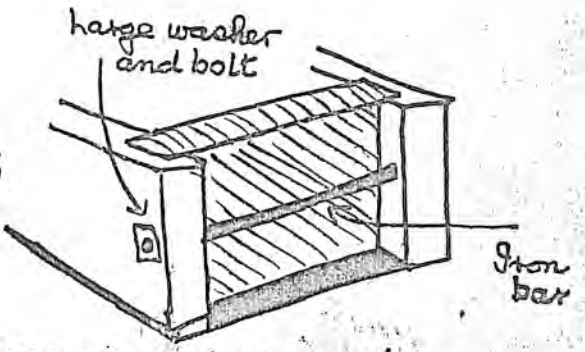


large piece of tough flag rests on wall.

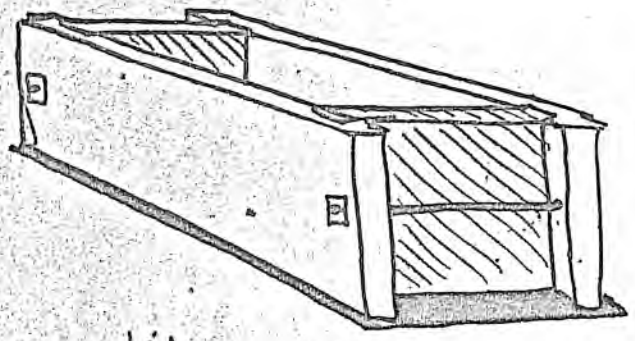
Water Cisterns
(Not to scale)

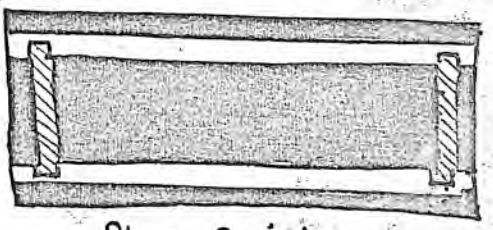
Sides Ends Base

SOME TYPICAL SPECIMENS

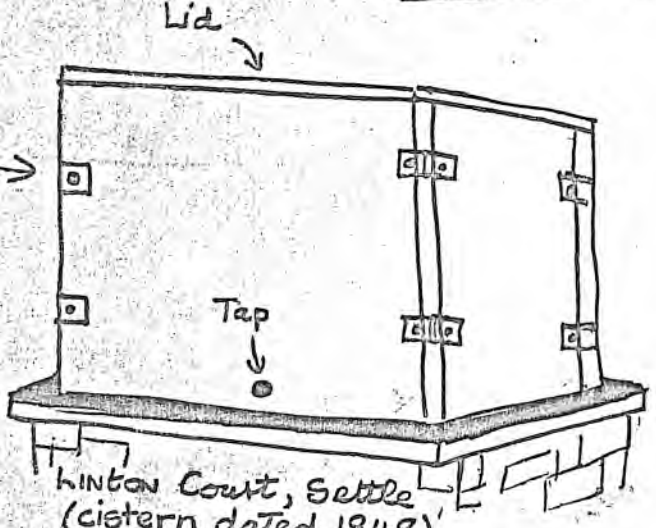


Common method of securing ends of cistern

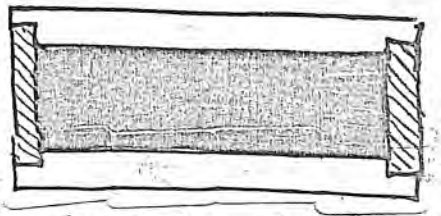




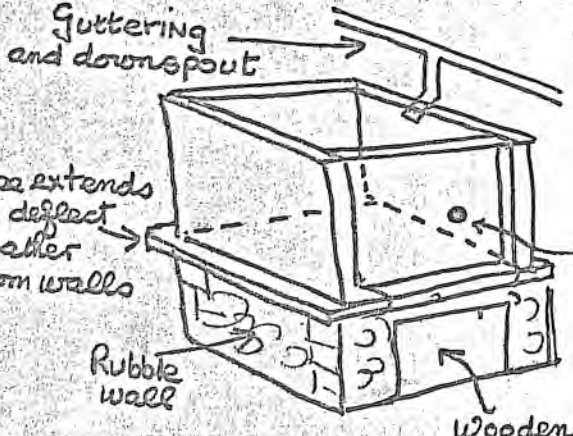
Plan of cistern



Hinton Court, Settle (cistern dated 1848)

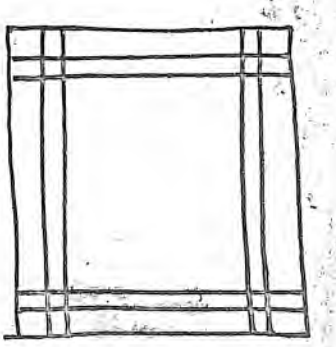


Small trough at Settle

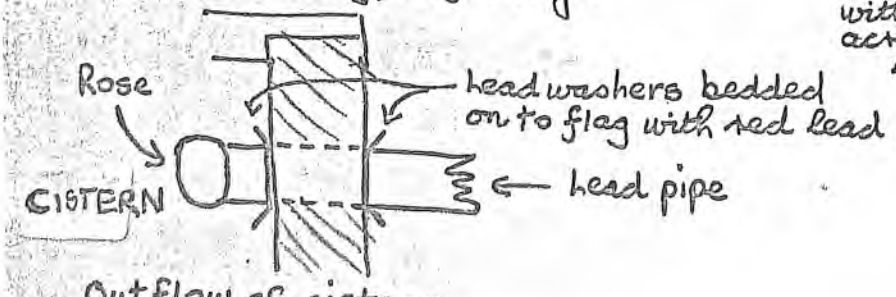


Space under cistern used for storage (i.e., sticks for kindling) or for dogs.

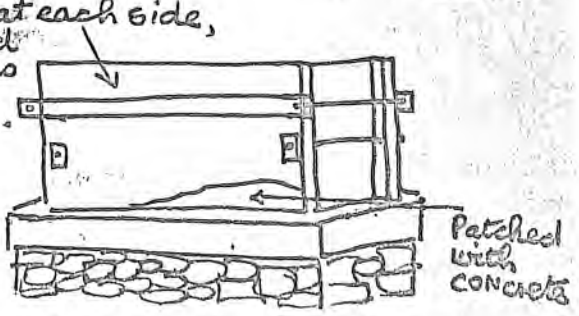
Little maintenance required. Cistern cleaned out at intervals of several years to remove leaves.



Base of cistern. Grooves sawed, then chiselled out.



Outflow of cistern



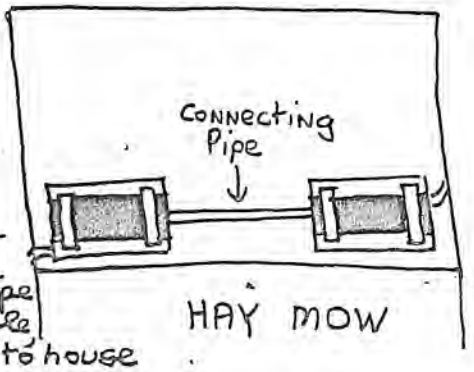
Repairs to cistern at Close House, Giggleswick

Diana Drinkhall

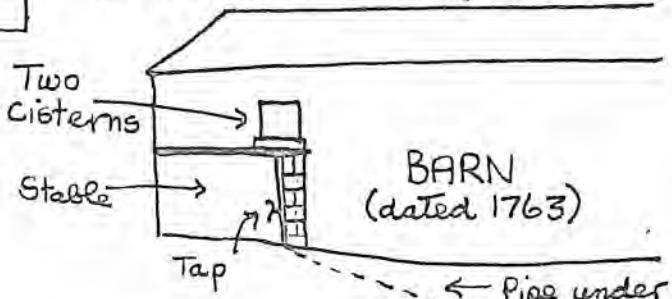
Water Cisterns
(Not to scale)

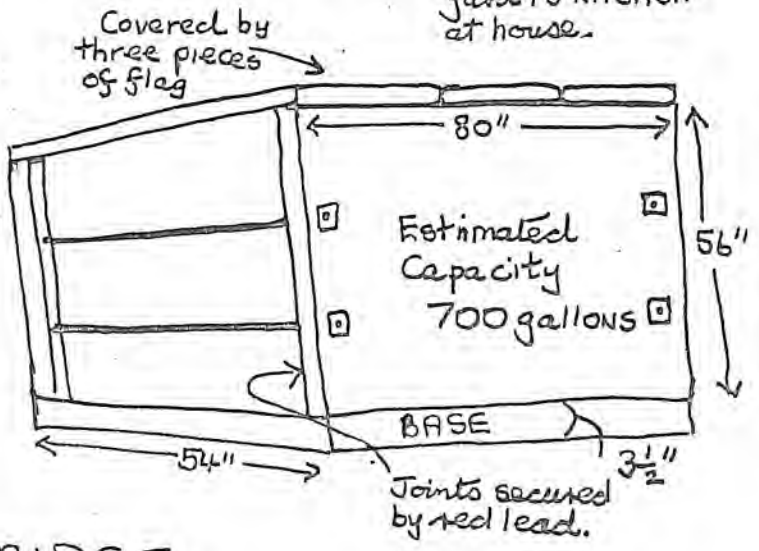
GRAIN HOUSE, GIGGLESWICK
(home of the Maudsleys since 1787)

PLAN



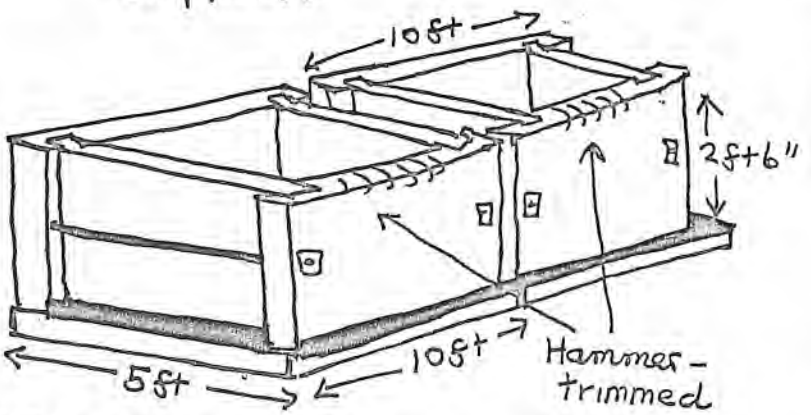
water flows down pipe to stable thence to house

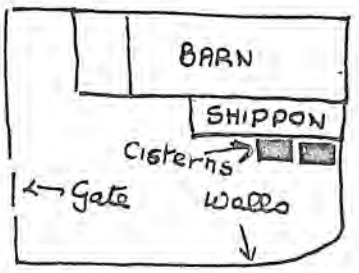




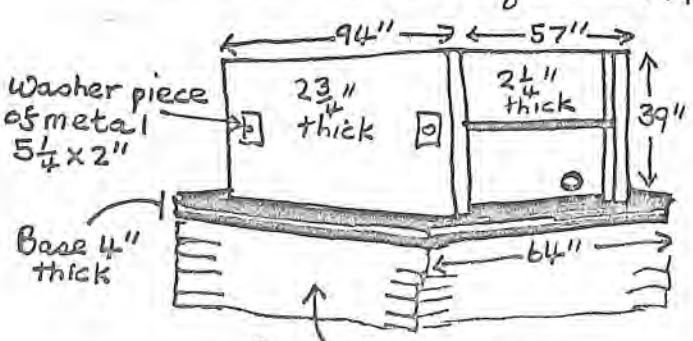
At Grain House, drinking water comes from a spring. "Soft water" from the cisterns emerges at one of three taps above the sink, being gravity fed from the cisterns in the barn. When they were cleaned out several years ago, it was found that dead leaves had accumulated to a depth of 6".

BARN NEAR HELWITH BRIDGE
(Drinking Troughs beside lean-to shippon).

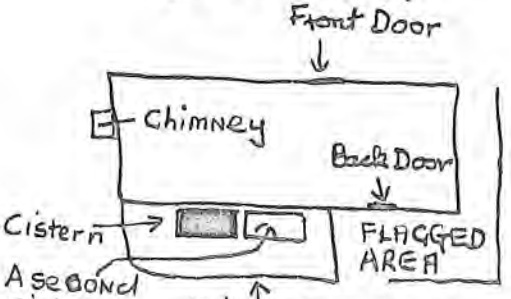




SHERWOOD, STAINFORTH
(home of the Metcalfes since 1932)



SHERWOOD HOUSE, STAINFORTH
(Built -1703)



William R Mitchell

Field Barns
(not to scale)

Forking hole

Barn
(baulks above shippon)

Door

Flag

GROUP

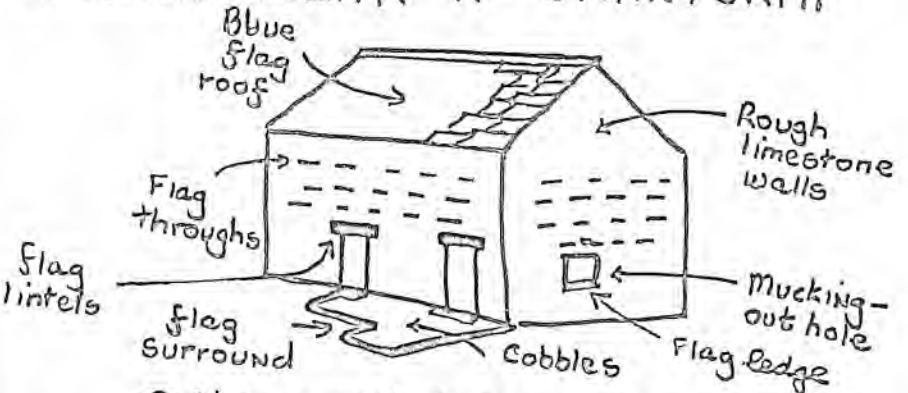
Flag boskin
(wood surround)

Door

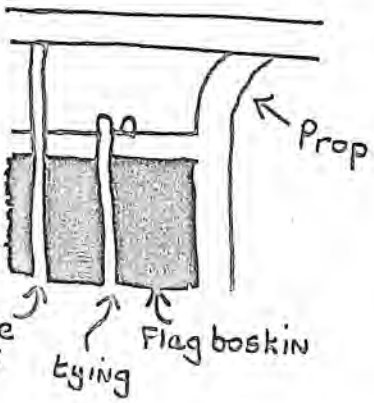
Mucking-out hole

Kettle-stones
(freestone)

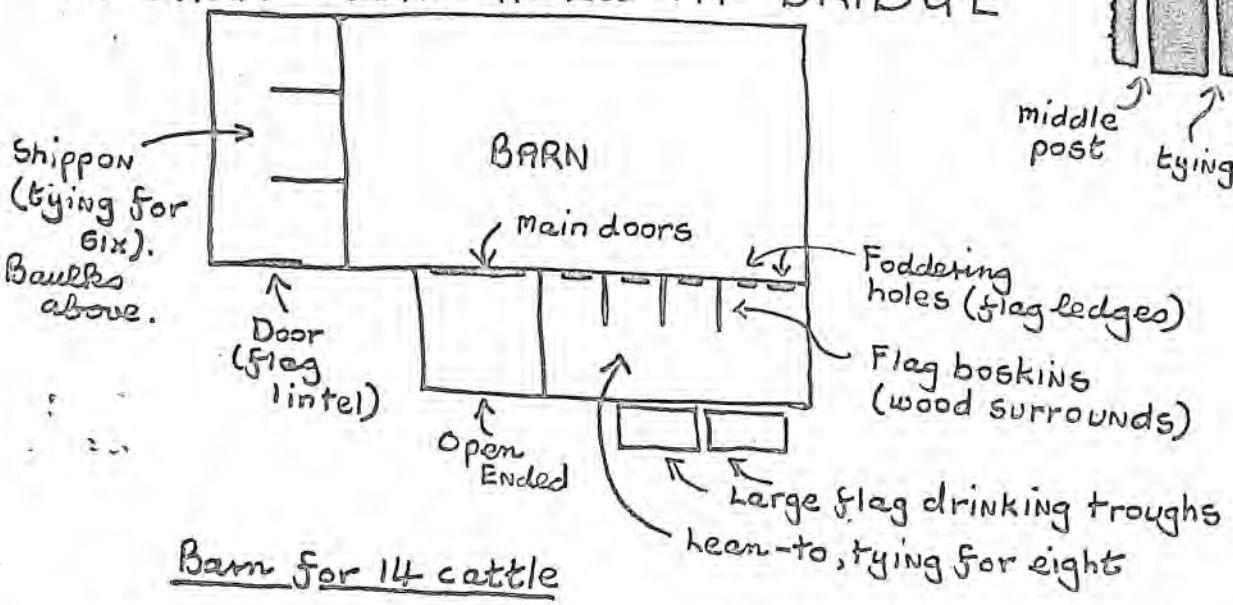
A BARN NEAR KT. STAINFORTH



Outbarn with tying for six cattle

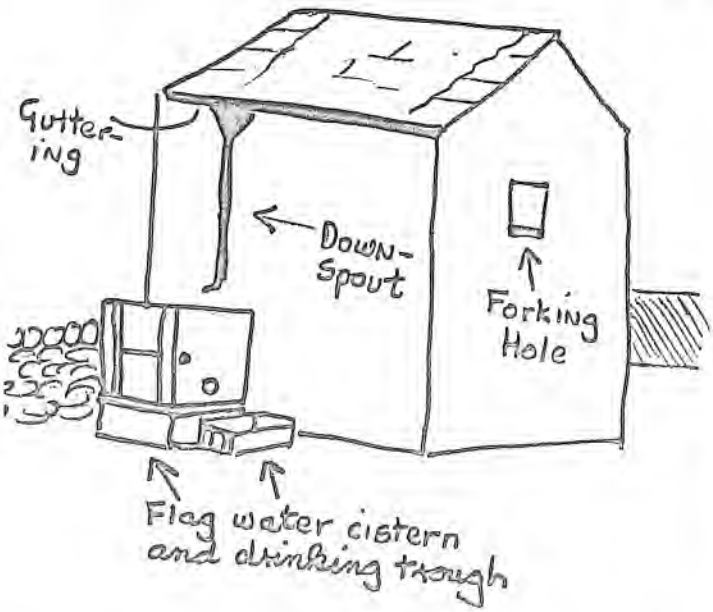


A BARN NEAR HELWITH BRIDGE

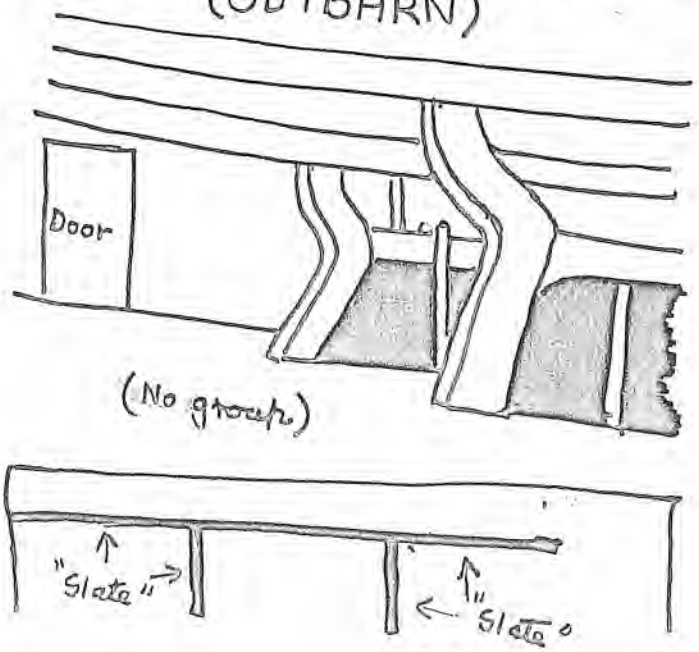


Barn for 14 cattle

OUTBARN WITH TROUGHS



"SLATE" BOSKINS, GIGGLESWICK (OUTBARN)

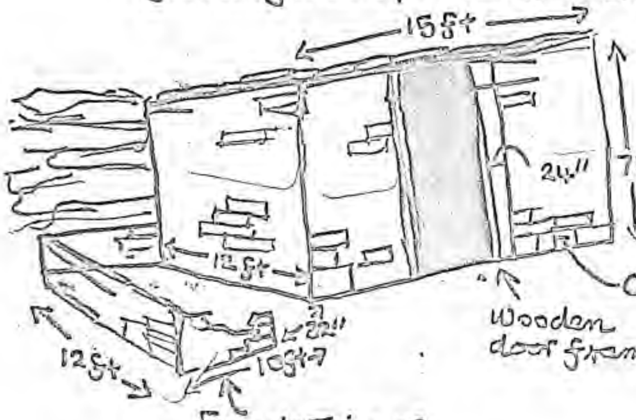


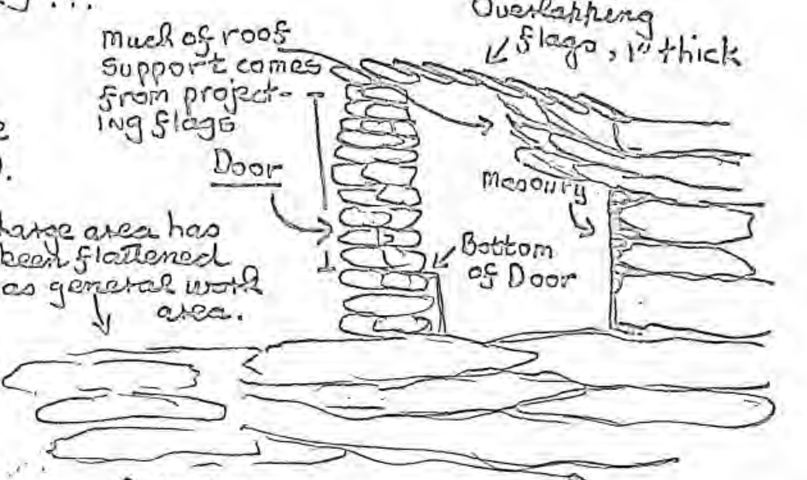
William Ritchell
1981

Foredale

SLATE BUILDING IN COOMBS QUARRY...

The last use to which Coombs Quarry appears to have been put is as the site of the magazine (holding black powder for Foredale).



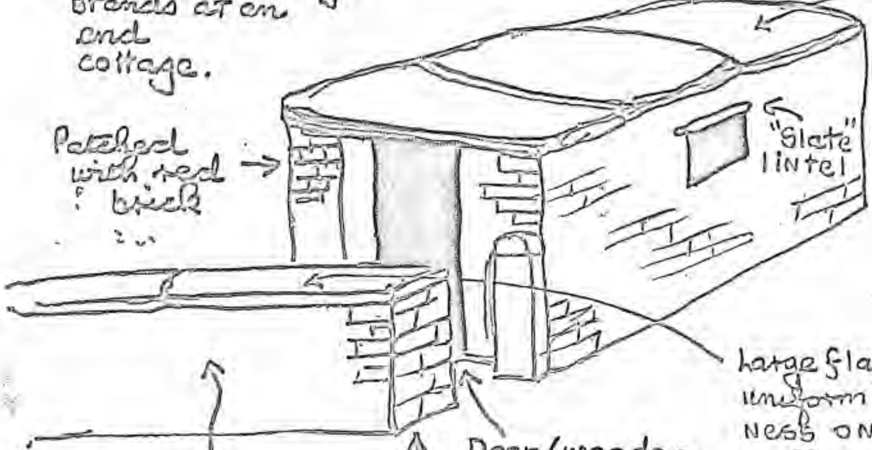


Interior: 90" long 65" wide

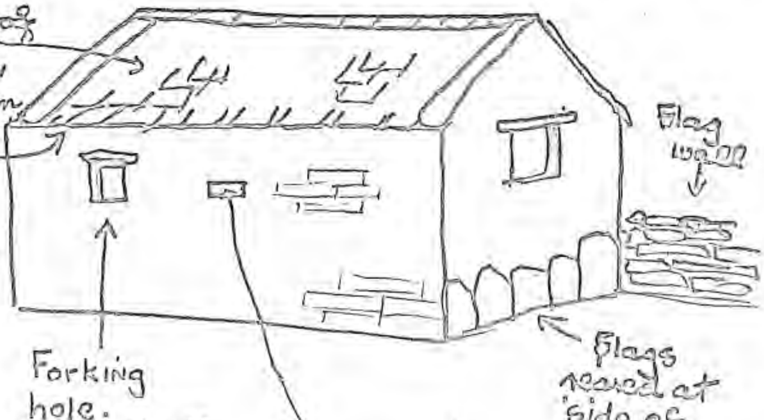
The roof slopes back, the maximum (interior) height being 96", at the front, 72" at rear

OUTBUILDINGS AT FOREDALE COTTAGES...

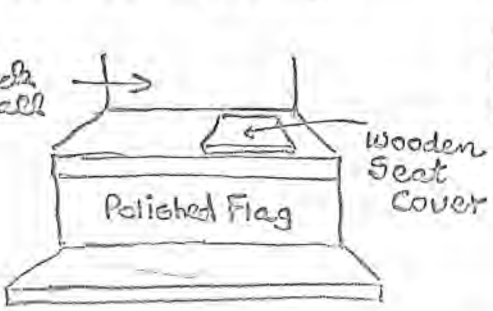
This outbuilding stands at an end cottage.



BARN AT FOREDALE FARM



EARTH CLOSET AT BEECROFT



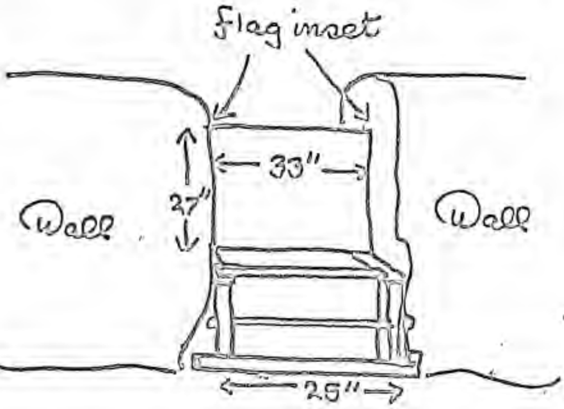
Flag was frequently used for the roof and floor of an out building.

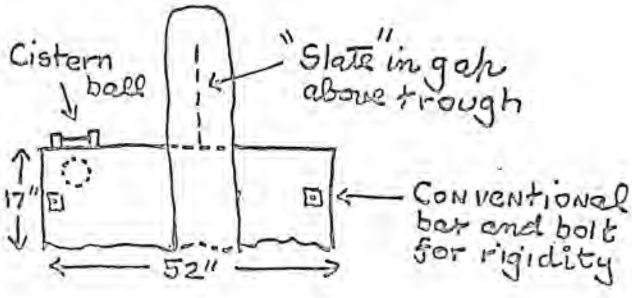
Tim Booth

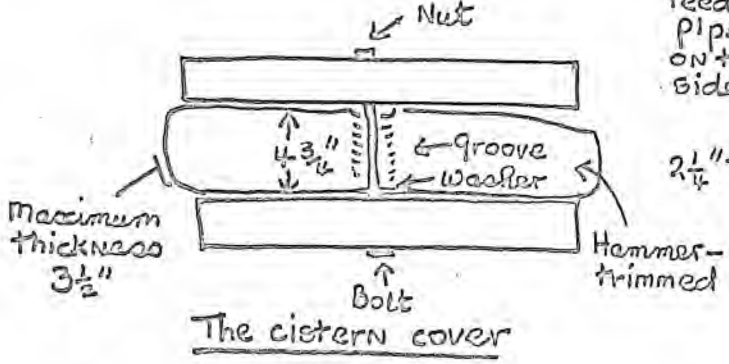
Field Troughs

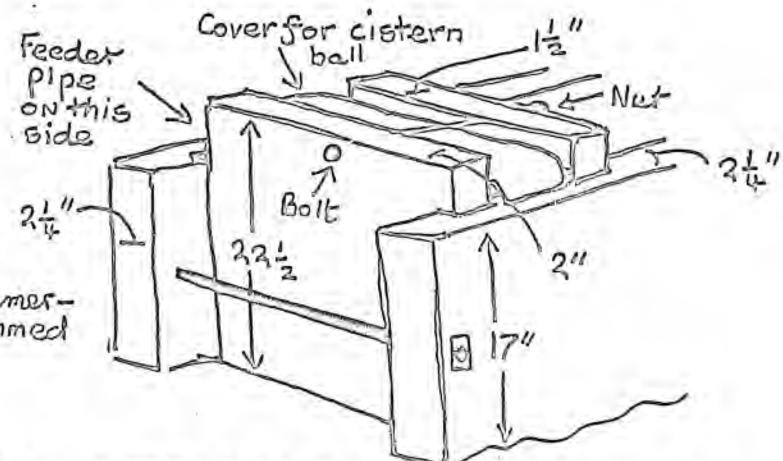
NEAR STACKHOUSES

(a trough composed of flags that extends through a wall and serves two fields).

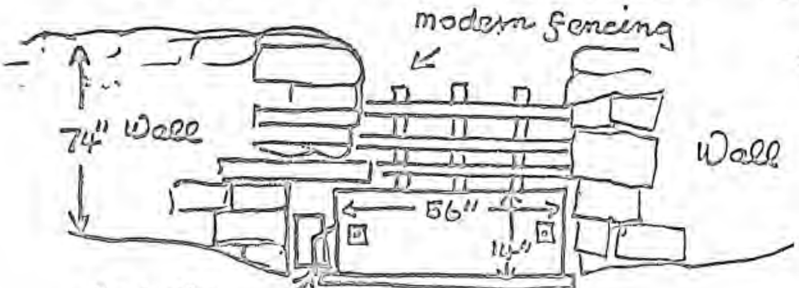




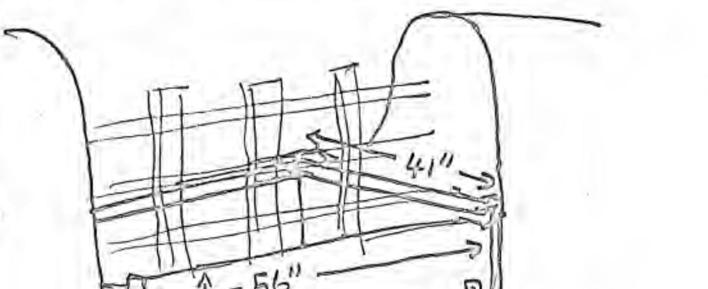




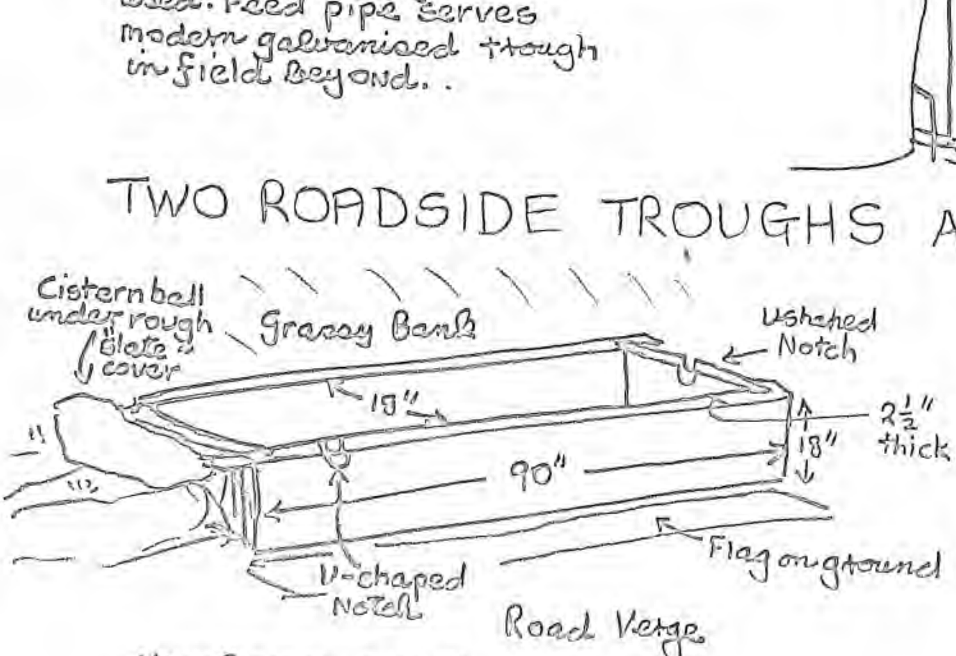
A(DISUSED) TROUGH SERVING TWO FIELDS



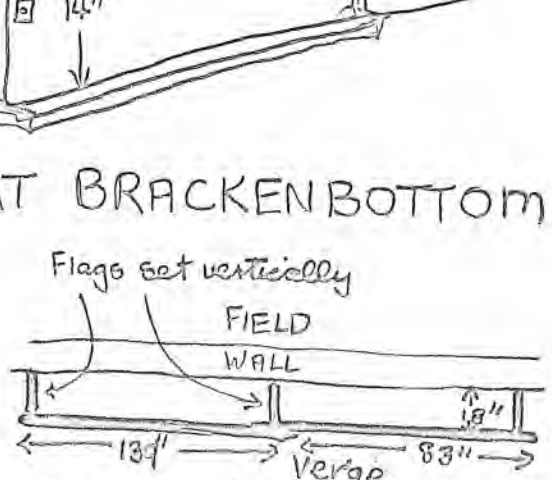
Small Cistern no longer used. Feed pipe serves modern galvanised trough in field beyond..



TWO ROADSIDE TROUGHS AT BRACKENBOTTOM



Usual arrangement of iron bar at ends.



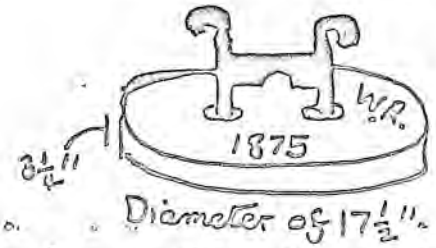
The above long low trough was intended to retain some water draining from a field at higher level. 8" high, main flags 2½" thick.

(William Ritchie)

Domestic

No. 18 Victoria Street, Settle, home of William (later Kit) Ralph, quarry-owners.

FOOTSCRAPER

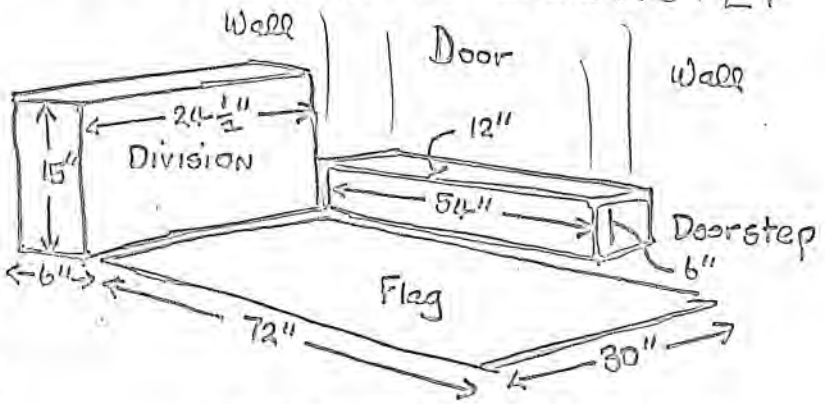


Diameter of 17½".

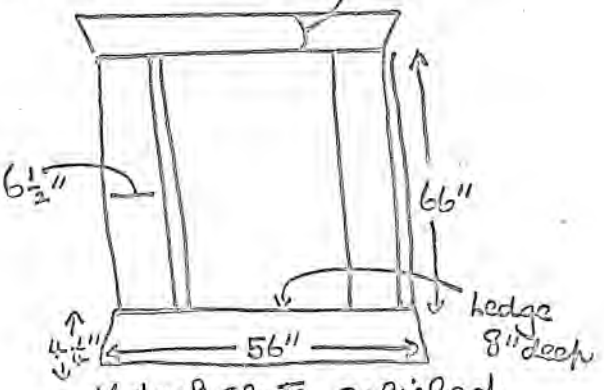
Iron work in three pieces, bonded. Bar used for an upright flattened and bent at top. Set in hole; held firm by lead.

Identical footscraper next door

"SLATE" COMPONENTS OF APPROACH, AND DOORSTEP



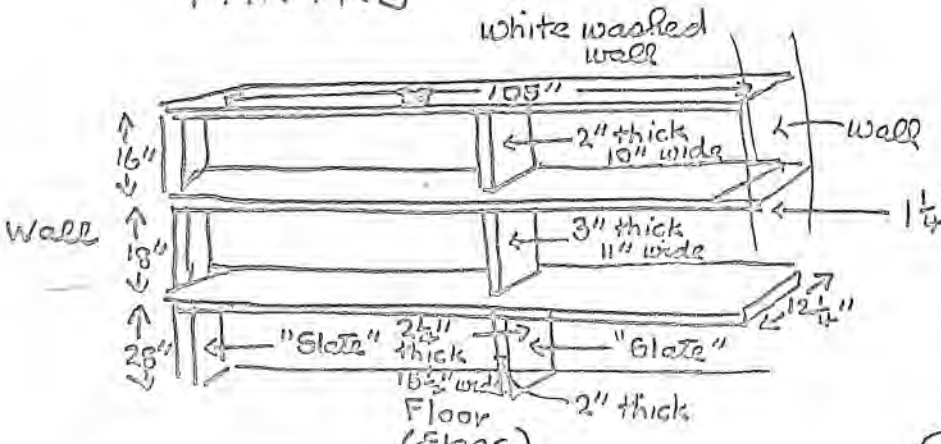
WINDOW FRAME, Crack



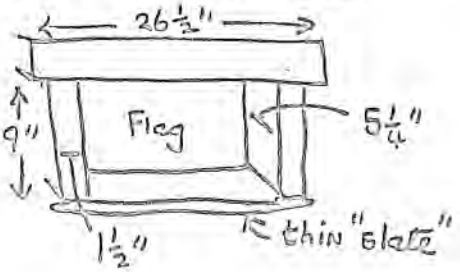
V. dark slate, polished

The bottom floor of this property is flagged, the flags supported by floorboards and joists (there is a large cellar). 1" thick flag has been used on the floor of the cellar, which is reached via a curving stairway, each of 12 steps a piece of flag varying in thickness from 2" to 4". Length 39", width 10".

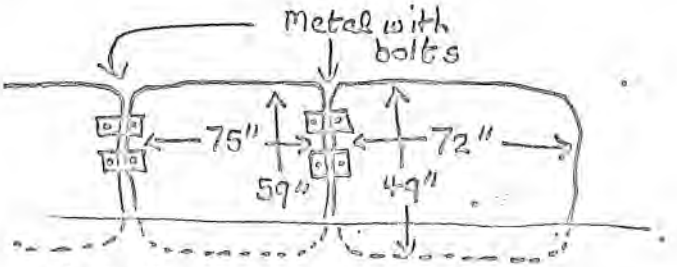
PANTRY



RECESS IN GARDEN WALL



At this house, the garden path was flagged, and long pieces of flag were set vertically as edging. All the flags in the pantry were well-cut and polished.



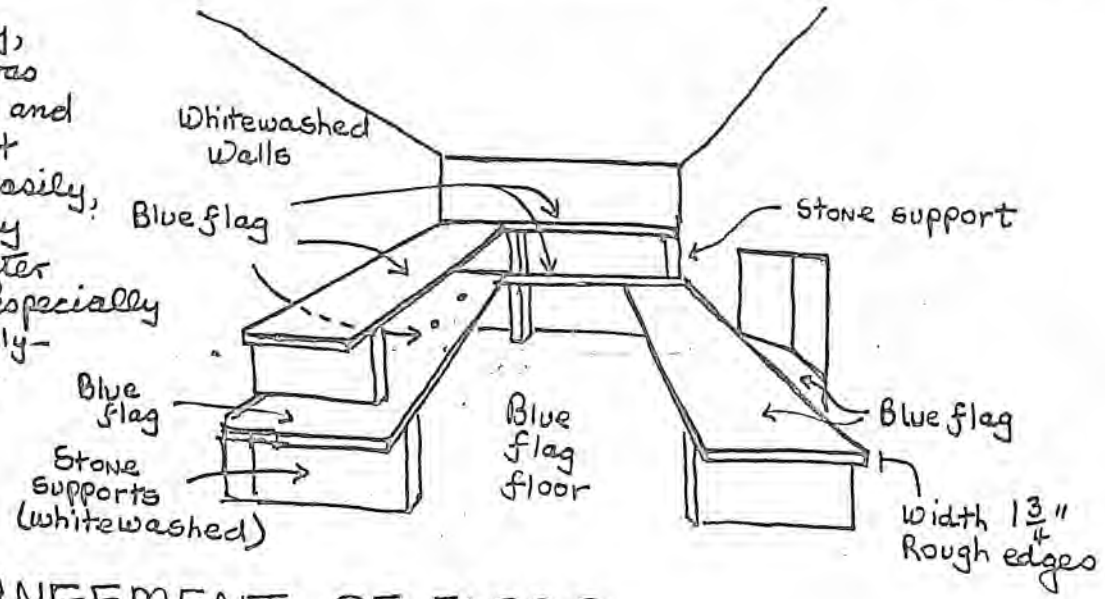
A method of securing flags in a garden wall.

Rebecca Whitehead

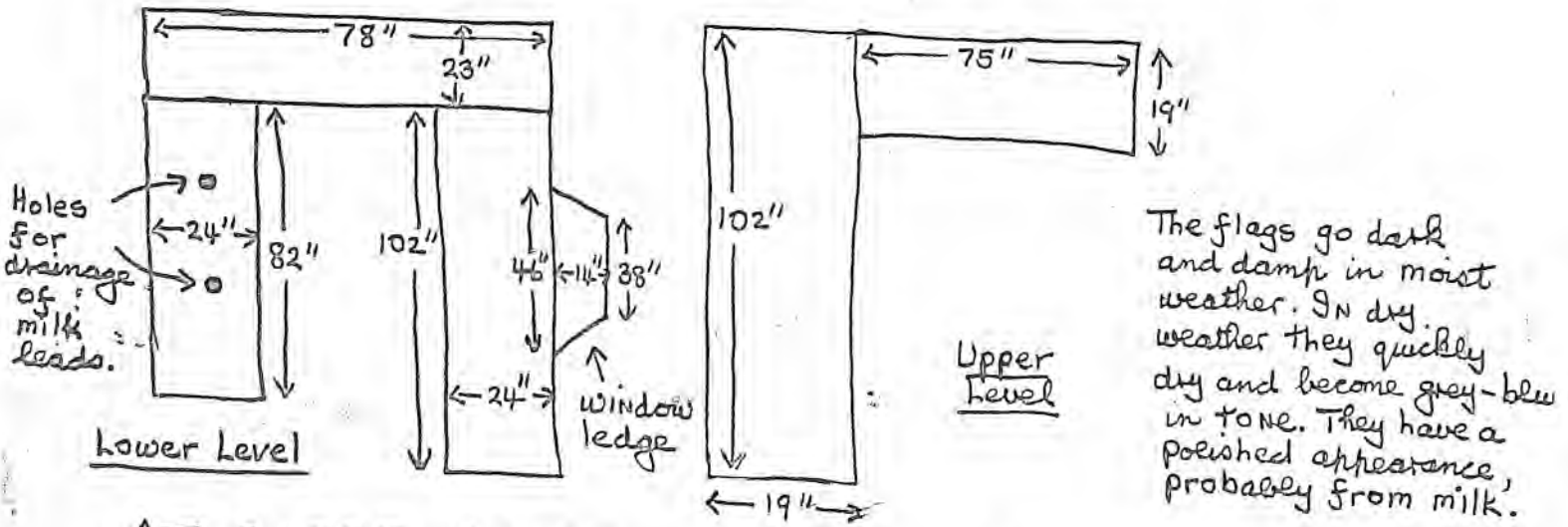
The Dairy

A TYPICAL DAIRY, BASED ON FIELD HOUSE, GIGGLESWICK

In the dairy, blue flag was cold, hard and smooth. It could be easily, hygenically cleaned after use, and especially when freshly-killed pork had been cured here.

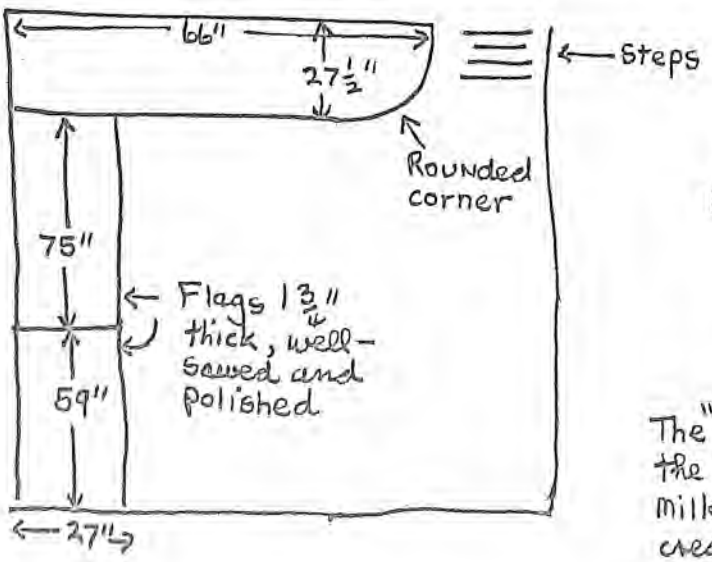


ARRANGEMENT OF FLAGS

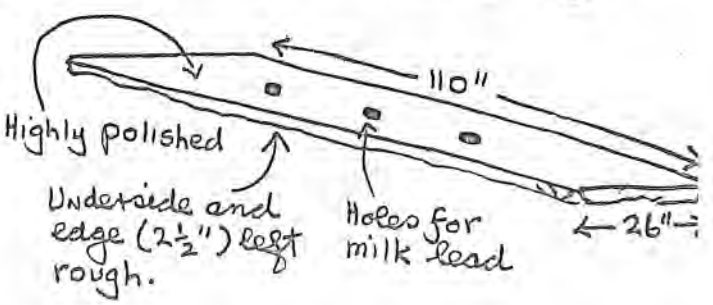


The flags go dark and damp in moist weather. In dry weather they quickly dry and become grey-blue in tone. They have a polished appearance, probably from milk.

AT CLOSE HOUSE



GRAIN HOUSE
(Details of one piece of flag)



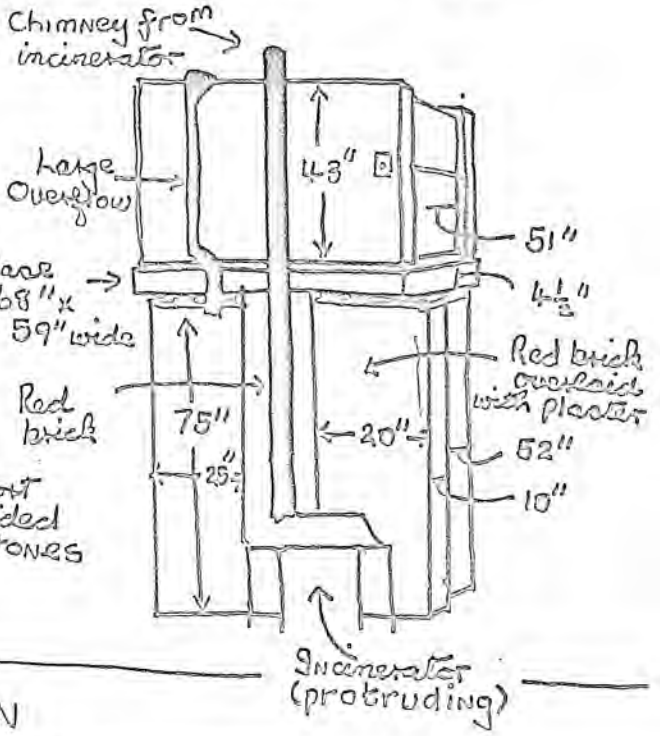
The "lead" was originally of lead but the later type was of galvanised material. Milk was poured into it and, when the cream had separated, the "blue" milk was drained into a pail for feeding to young stock, hence the hole in the flag.

Rebecca Whitehead

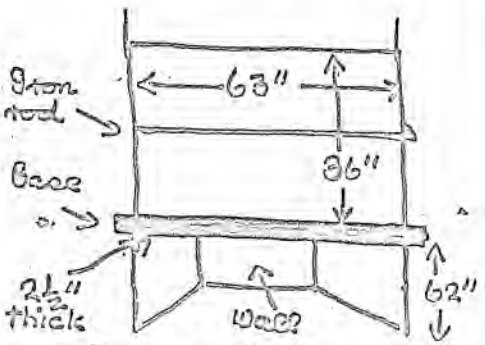
Cisterns
(Not to scale)

OFF DUKE STREET, SETTLE

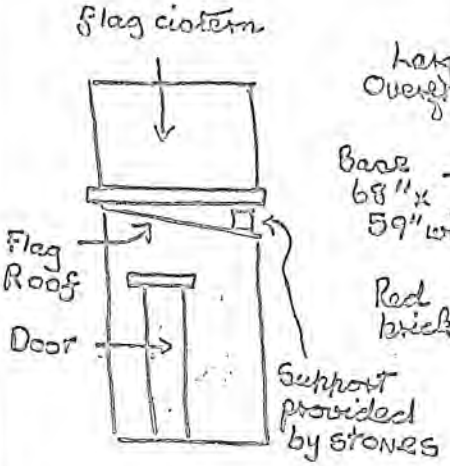
Cistern over flush toilet



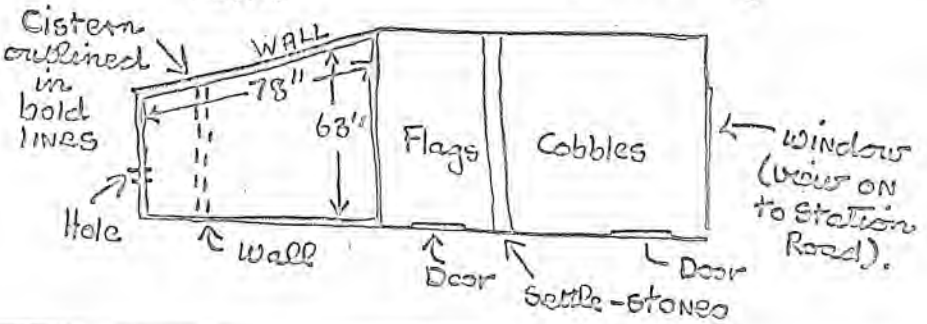
OLD POLICE STATION, SETTLE



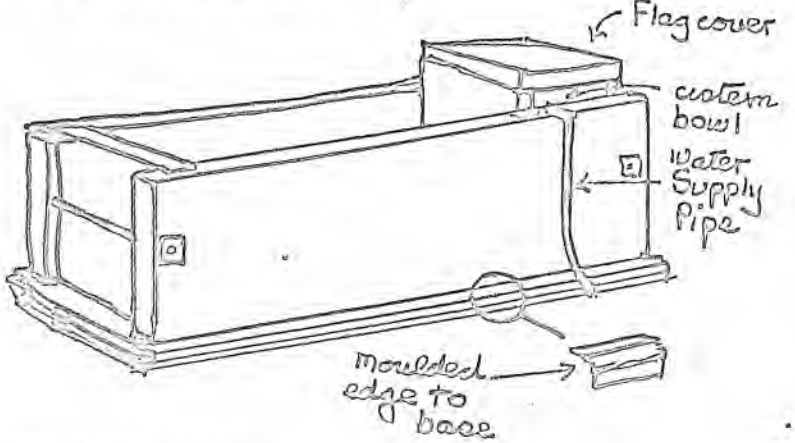
Cistern of irregular shape fits into narrowing end of stable, extending over low wall into adjacent wash-house, in which stood a boiler that provided central heating to courtroom above. Flags fit against walls on two sides



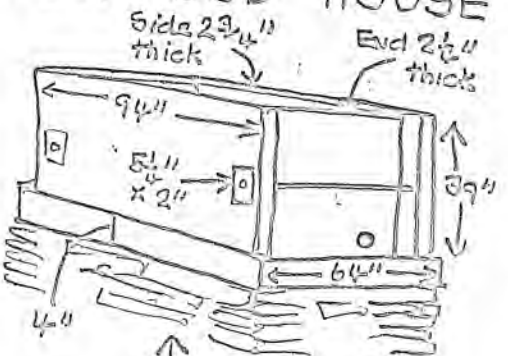
PLAN



FIELD TROUGH, WOODLANDS, GIGGLESWICK



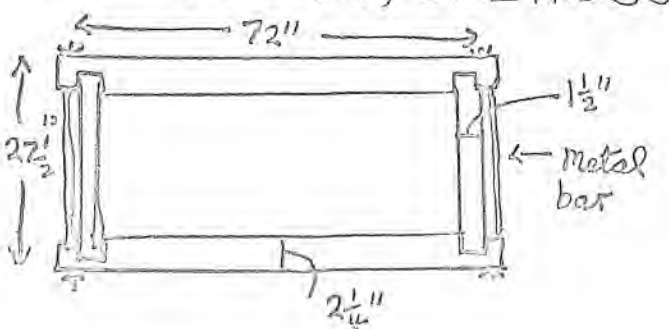
SHERWOOD HOUSE



Supported on five courses of flag.

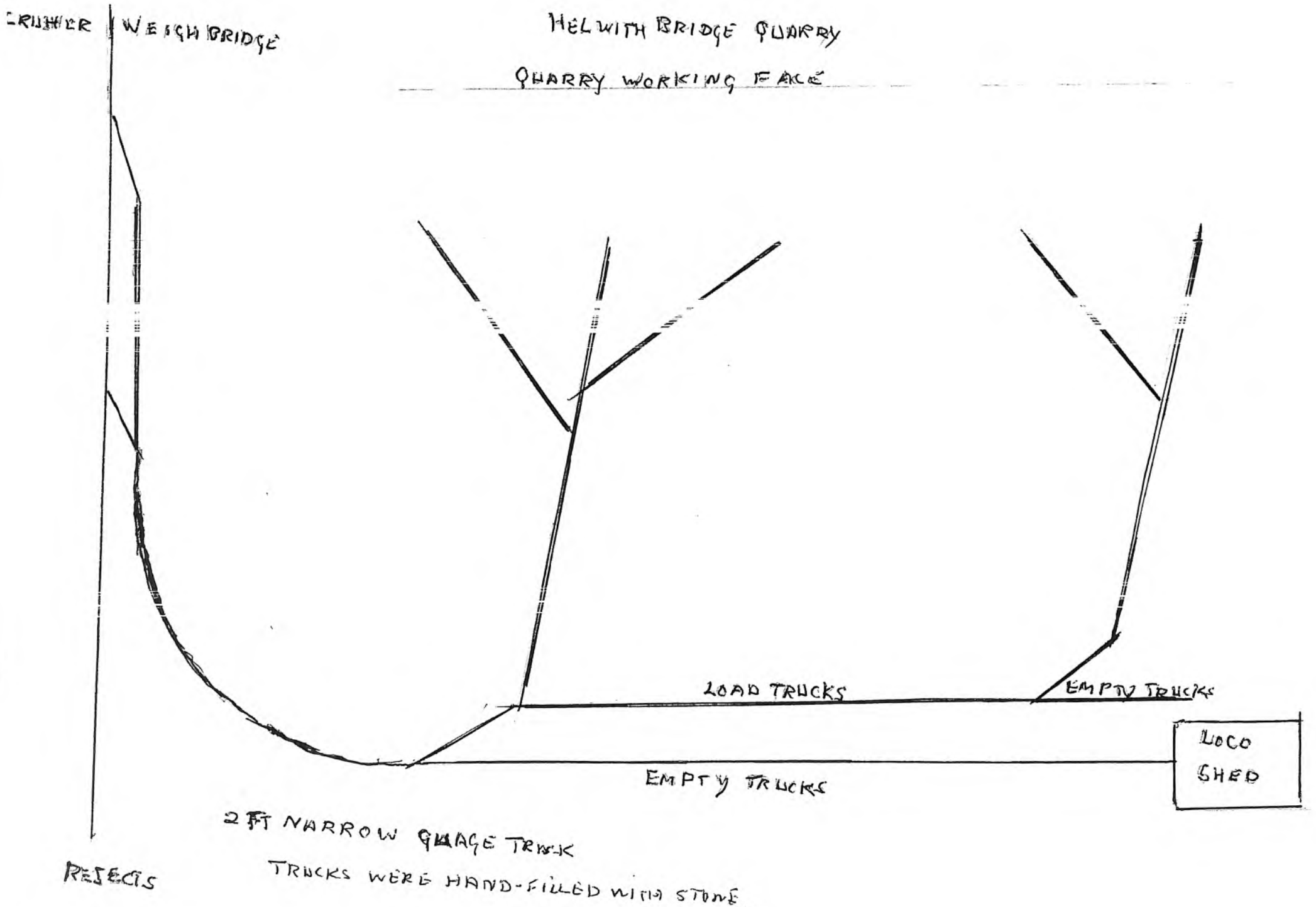
One side of the Sherwood cistern was cracked during a keen spell early in 1947, when the water within froze into a solid block.

DISUSED TROUGH, SHERWOOD



The field trough (left) was no longer needed and stood in a field, not in the normal position, because the owners were reluctant to destroy it.

William Rimbell


CRUSHER
WEIGH BRIDGE
HELWITH BRIDGE QUARRY
QUARRY WORKING FACE
LOAD TRUCKS
EMPTY TRUCKS
LOCO SHED
EMPTY TRUCKS
2 FT NARROW GAUGE TRACK
REJECTS
TRUCKS WERE HAND-FILLED WITH STONE.